The Euro

There is no future for the people of Europe other than in union.

Jean Monnet, a “founding father” of the European Union

This Treaty marks a new stage in the process of creating an ever closer union among the peoples of Europe, in which decisions are taken as closely as possible to the citizen.

Maastricht Treaty (Treaty on European Union), 1992, Title I, Article A

Political unity can pave the way for monetary unity. Monetary unity imposed under unfavorable conditions will prove a barrier to the achievement of political unity.

Milton Friedman, Nobel laureate, 1997

In 1961 the economist Robert Mundell wrote a pathbreaking paper discussing the idea of a currency area, also known as a currency union or monetary union, in which he considered the circumstances in which it might make economic sense for states or nations to replace their national monies with a single, common currency.

At the time, almost every country was a separate currency area, so Mundell, like many others, wondered whether his research was a hypothetical exercise of limited practical relevance: “What is the appropriate domain of a currency area? It might seem at first that the question is purely academic since it hardly appears within the realm of political feasibility that national currencies would ever be abandoned in favor of any other arrangement.”

But almost 40 years later, on January 1, 1999, 11 nations in Europe joined together to form such a currency area, now known as the Euro area, or Eurozone. Later that year, Mundell found himself the recipient of a Nobel Prize.

The Eurozone has since expanded and continues to expand. By 2016 it comprised 19 of the 28 member states of the European Union. They use the notes and coins bearing the name euro and the symbol € that have taken the place of former national currencies (such as francs, marks, liras, and so on).

The euro remains one of the boldest experiments in the history of the international monetary system. It is a new currency that is used by more than 340 million people in one of the world’s most prosperous economic regions. The euro is having enormous economic impacts that will be felt for many years to come.

The goal of this chapter is to understand as fully as possible the euro project: its economic as well as political logic, its institutional form and how it actually operates. We first examine the euro’s economic logic by exploring and applying theories that seek to explain when it makes economic sense for different economic units (nations, regions, states) to adopt a common currency and when it makes economic sense for them to have distinct monies. To spoil the surprise: based on the current evidence, most economists judge that the Eurozone may not make sense from a purely economic standpoint, at least for now.

We then turn to the historical and political logic of the euro and discuss its distant origins and recent evolution within the larger political project of the European Union. Looking at the euro from these perspectives, we can see how the euro project unfolded as part of a larger enterprise. In this context, the success of the euro depends on assumptions that the European Union functions smoothly as a political union and adequately as an economic union—assumptions that are constantly under question.

The Ins and Outs of the Eurozone

Before we begin our discussion of the euro, we need to familiarize ourselves with the European Union and the Eurozone. Way back at the start of the euro project, policymakers imagined that the euro would end up as the single currency of all the member states of the European Union (EU). The EU is a mainly economic, but increasingly political, union of countries that is in the process of extending across—and some might argue beyond—the geographical boundaries of Europe. The main impetus for the euro project came in 1992 with the signing of the Treaty on European Union, at Maastricht, in the Netherlands. Under this agreement, known as the Maastricht Treaty, the EU initiated a grand project of Economic and Monetary Union (EMU). A major goal of EMU was the establishment of a currency union in the EU whose monetary affairs would be managed cooperatively by members through a new European Central Bank.\(^2\)

The map in Figure 21-1 shows the state of play at the time of this writing in mid-2016. The map depicts some of the EU’s main political and monetary alignments. The two are not the same: different countries choose to participate in different aspects of economic and monetary integration, a curious feature of the EU project known as variable geometry.

- As of 2016, the EU comprised 28 countries (EU-28). The six oldest members were the original founders. Of the 13 newest members, 10 had joined as part of a major enlargement in 2004; Romania and Bulgaria later joined in 2007, followed by Croatia in 2013. Six more official candidate countries were formally seeking to join the EU—Albania, Iceland, Macedonia, Montenegro, Serbia, and Turkey. One country, the United Kingdom, was also on a course

\(^2\) Some very small non-EU, non-Eurozone states and territories also use the euro. Four micro-states outside the EU, Monaco, San Marino, Vatican City, and Andorra, have legal agreements allowing them to use the euro as their de jure currency (they had previously used the national currencies of their neighbors). All these countries except Andorra can mint their own euro coins. Some other economies also use the euro as their de facto currency, notably Montenegro and Kosovo, plus four French and one U.K. overseas dependent territory (Mayotte; Saint Barthelemy; Saint Pierre and Miquelon; the French Southern and Antarctic Lands; and Akrotiri and Dhekelia).
to leave the EU. This event (known as “Brexit”) was triggered by a June 2016 referendum. ³

■ A country can be in the EU but not in the Eurozone. It is important to remember who’s “in” and who’s “out.” In 1999 just 3 of 15 EU members opted to stay out of the Eurozone and keep their national currencies: these “out” countries

³ Until a naming dispute with Greece is resolved, Macedonia is often referred to in official communications as the Former Yugoslav Republic of Macedonia or, if you prefer acronyms, FYROM.
were Denmark, Sweden, and the United Kingdom. The other 12 all went “in” by 2001. From then until 2013, a total of 13 new entrants joined the EU, with all of them initially “out” of the euro. Soon, the first of these countries, Slovenia (in 2007) became a member of the Eurozone, followed by Cyprus and Malta (2008), Slovakia (2009), Estonia (2011), Latvia (2014), and Lithuania (2015). As of 2016, the other six new entrants still remained “out” of the Eurozone.

Most of the “outs” want to be “in.” The official procedure to join the Eurozone requires that those who wish to get “in” must first peg their exchange rates to the euro in a system known as the Exchange Rate Mechanism (ERM) for at least two years and must also satisfy certain other qualification criteria. Only one country, Denmark, was part of the ERM as of 2016. We discuss the ERM, the qualification criteria, and other peculiar rules of the Eurozone later in this chapter.

1 The Economics of the Euro

In the nineteenth century, economist John Stuart Mill thought it a “barbarism” that all countries insisted on “having, to their inconvenience and that of their neighbors, a peculiar currency of their own.” Barbaric or not, national currencies have always been the norm, while currency unions are rare. Economists presume that such outcomes reflect a deeper logic. A common currency may be more convenient and provide other benefits, but it also has some costs. For the “barbarism” of national currencies to persist, the costs must outweigh the benefits.

The Theory of Optimum Currency Areas

How does a country decide whether to join a currency union? To answer this question, let’s see if one country, Home, should join a currency union with another country, Foreign. (Our analysis can be generalized to a case in which Foreign consists of multiple members of a larger currency union.)

If countries make a decision that best serves their self-interest—that is, an optimizing decision—when they form a currency union, then economists use the term optimum currency area (OCA) to refer to the resulting monetary union. How can such a decision be made?

To decide whether joining the currency union serves its economic interests, Home must evaluate whether the benefits outweigh the costs. This decision is similar to the decision to select a fixed or floating exchange rate, which we discussed in an earlier chapter. Two familiar ideas from that previous discussion can be applied and extended to the currency union decision.

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4 Many currency unions involve the unilateral adoption of a foreign currency by a country that plays no role in managing the common currency (e.g., Panama’s use of the U.S. dollar). Even when a foreign country adopts a currency other than the dollar, this situation is often called dollarization. In only a few cases are currency unions multilateral, in which all member countries participate in the monetary affairs of the union. The Eurozone is the most notable example of a multilateral currency union.
Market Integration and Efficiency Benefits  Adopting a common currency implies that the two regions will have an exchange rate fixed at 1. Hence, the same market integration criterion we used to discriminate between fixed and floating regimes can be applied to the case of an OCA:

If there is a greater degree of economic integration between the home region (A) and the other parts of the common currency zone (B), the volume of transactions between the two and the economic benefits of adopting a common currency due to lowered transaction costs and reduced uncertainty will both be larger.

Economic Symmetry and Stability Costs  When two regions adopt a common currency, each region will lose its monetary autonomy, and the monetary authorities who have control of the common currency will decide on a common monetary policy and set a common interest rate for all members. Hence, the similarity criterion we used to discriminate between fixed and floating regimes can be applied to the case of an OCA:

If a home country and its potential currency union partners are more economically similar or “symmetric” (they face more symmetric shocks and fewer asymmetric shocks), then it is less costly for the home country to join the currency union.

Simple Optimum Currency Area Criteria  We are now in a position to set out a theory of an OCA by considering the net benefits of adopting a common currency. The net benefits equal the benefits minus the costs. The two main lessons we have just encountered suggest the following:

■ As market integration rises, the efficiency benefits of a common currency increase.
■ As symmetry rises, the stability costs of a common currency decrease.

Summing up, the OCA theory says that if either market integration or symmetry increases, the net benefits of a common currency will rise. If the net benefits are negative, the home country would stay out based on its economic interests. If the net benefits turn positive, the home country would join based on its economic interests.

Figure 21-2 illustrates the OCA theory graphically, using the same symmetry-integration diagrams used in Chapter 20 on fixed and floating exchange rates. The horizontal axis measures market integration for the Home–Foreign pair. The vertical axis measures the symmetry of the shocks experienced by the Home–Foreign pair. If the Home–Foreign pair moves up and to the right in the diagram, then the benefits increase, the costs fall, and so the net benefit of a currency union rises. At some point, the pair crosses a threshold, the OCA line, and enters a region in which it will be optimal for them to form a currency union based on their economic interests.

The figure looks familiar. The derivation of the OCA line here is identical to the derivation of the FIX line in Chapter 19, which raises an important question.

What’s the Difference Between a Fix and a Currency Union?  If choosing to fix and choosing to form a currency union were identical decisions, then the FIX and OCA lines would be one and the same. In reality, we think they are likely to differ—and that the OCA line is likely to be above the FIX line, as drawn in
Figure 21-2. Thus, when countries consider forming a currency union, the economic tests (based on symmetry and integration) set a higher bar than they set for judging whether it is optimal to fix.

Why might this be so? To give a concrete example, let’s consider the case of Denmark, which we studied in an earlier chapter on exchange rates, as an example of the trilemma in Europe. The Danes are in the ERM, so the krone is pegged to the euro. But Denmark has spent a long time in the ERM and shows no signs of taking the next step into the Eurozone. This preference has been democratically expressed—proposals to join the Eurozone have been defeated by referendum. The Danish position looks slightly odd at first glance. Denmark appears to have ceded monetary autonomy to the European Central Bank because its interest rate tracks the euro interest rate closely. Yet the Danes do not gain the full benefits of a currency union because transactions between Denmark and the Eurozone still require a change of currency.

Even so, one can still make a logical case for Denmark to keep its own currency. By doing so, it better preserves the option to exercise monetary autonomy at some future date, even if the option is not being used currently. For one thing, even under the ERM, although the krone is pegged very tightly to the euro within ±2% by choice, the Danes could employ the full ±15% band allowed by ERM and give themselves much more exchange rate flexibility. (A ±15% band isn’t a very hard peg—recall that the standard de facto threshold for a peg is no more than ±2% variation in one year.)
And because they have only gone as far as pegging to—and not joining—the euro, the Danes are always free to leave the ERM at some future date (as Sweden and the United Kingdom have done) if they want the even greater flexibility of a more freely floating exchange rate.

Now, contrast the position of Denmark with that of Italy, one of several countries in which rumors of departure from the Eurozone have surfaced from time to time (Greece is another example). Compared with a Danish exit from the ERM, an Italian exit from the euro would be messy, complicated, and costly. The actual process of retiring euros and reprinting and reintroducing new lira as money would be difficult enough. More seriously, however, all Italian contracts would have to be switched from euro to lira, in particular the private and public debt contracts. There would be a monumental legal battle over the implicit defaults that would follow from the “lirification” of such euro contracts. Some countries have tried these kinds of strategies, but the examples are not too encouraging. In the 1980s Liberia de-dollarized (and descended into economic crisis) and in 2002 Argentina legislated the “pesification” of its dollar contracts (and descended into economic crisis).

Because the future cannot be known with certainty, countries may value the option to change their monetary and exchange rate regime in the future. Exit from a peg is easy—some might say too easy—and happens all the time. Exit from a common currency is much more difficult (the Eurozone has no exit procedure) and is expected to be costly. We conclude that because a country’s options are more limited after joining a common currency than after joining a peg, the country will set tougher conditions for the former; thus, the smaller OCA region must lie within the larger optimal fixing region (which extends below and to the left), as shown in Figure 21-2. Put another way, the bar for joining a common currency is higher than the bar for pegging to that same currency.

**Other Optimum Currency Area Criteria**

Our simple model in Figure 21-2 illustrated two basic motives for joining a currency union, but there could be many other forces at work. These other considerations can still be examined using the same framework, which allows us to consider several additional arguments for joining a currency union.

**Labor Market Integration** In the analysis so far, the home and foreign countries trade goods and services, but labor is immobile between the two countries. But what if we suppose instead that Home and Foreign have an integrated labor market, so that labor is free to move between them: What effect will this have on the decision to form a currency union?

Labor market integration allows for an alternative adjustment mechanism in the event of asymmetric shocks. For example, suppose Home and Foreign initially have equal output and unemployment. Suppose further that a negative shock hits Home, but not Foreign. If output falls and unemployment rises in Home, then labor will start to migrate to Foreign, where unemployment is lower. If this migration can occur with ease, the impact of the negative shock on Home will be less painful. Furthermore, there will be less need for Home to implement an independent monetary policy response for stabilization purposes. With an excess supply of labor in one region, adjustment can occur through migration.
This reasoning suggests that the cost to Home of forming a currency union with Foreign, due to the loss of monetary policy autonomy, will be lower when the labor market integration between Home and Foreign is higher, because labor mobility provides an alternative mechanism through which Home can adjust to the shock. All else equal, the possibility of gains of this sort would lower the OCA threshold, as reflected in the shift down of the OCA line from OCA\(_1\) to OCA\(_2\) in Figure 21-3. This shift expands the shaded zone in which currency union is preferred: countries are more likely to want to form a currency union when their labor markets are more integrated.

**Fiscal Transfers** We have now examined two possible mechanisms through which countries in a currency union can cope with asymmetric shocks: monetary policy and labor markets, the key OCA trade-off emphasized by Robert Mundell. We have ignored fiscal policy. All else equal, one might argue that a country’s fiscal policy is autonomous and largely independent of whether a country is inside or outside a currency union. But there is one important exception: fiscal policy will not be independent when a currency union is built on top of a federal political structure with fiscal mechanisms that permit interstate transfers—a system known as **fiscal federalism**, or a **fiscal union**.

If a region also has a fiscal union, then a third adjustment channel is available: when Home suffers a negative shock, the effects of the shock can be cushioned by fiscal transfers from Foreign, allowing more expansionary fiscal policy in Home than might otherwise be the case. For this argument to be compelling, however, the fiscal transfers must be large enough to make a difference. They must also help overcome some limit on the exercise of Home’s fiscal policy, that is, the transfers must finance policies that Home could not finance in some other way (e.g., by government borrowing).
If these conditions are satisfied, then the presence of fiscal transfers will lower the costs of joining a currency union. We show the possibility of gains of this sort in Figure 21-3, where, all else equal, enhanced fiscal transfers mean a lower OCA threshold and a shift down from OCA₁ to OCA₂. This shift expands the shaded zone in which currency union is preferred: the better are the transfer mechanisms in the fiscal union, the more the countries are likely to want to form a currency union, an alternative but important OCA criterion stressed by the international economist Peter Kenen.⁵

**Monetary Policy and Nominal Anchoring** One important aspect of Home joining a currency union is that Home’s central bank ceases to manage monetary policy (or ceases to exist altogether). Monetary policy is then carried out by a common central bank, whose policies and actions may be subject to different designs, objectives, and political oversight. This may or may not be a good thing, depending on whether the overall monetary policy performance of Home’s central bank is (or is expected to be) as good as that of the common central bank.

For example, suppose that Home suffers from chronic high inflation that results from an inflation bias of Home policymakers—the inability to resist the political pressure to use expansionary monetary policy for short-term gains. In the long run, on average, inflation bias leads to a higher level of expected inflation and actual inflation. But average levels of unemployment and output are unchanged because higher inflation is expected and inflation has no real effects in the long run.

Suppose that the common central bank of the currency union would be a more politically independent central bank that could resist political pressures to use expansionary monetary policy for short-term gains. It performs better by delivering low inflation on average, and no worse levels of unemployment or output. In this case, joining the currency union improves economic performance for Home by giving it a better nominal anchor: in this scenario, loss of monetary autonomy can be a good thing.

There is a possibility that this criterion was important for several Eurozone member states that historically have been subject to high inflation—for example, Italy, Greece, and Portugal. We can represent the possibility of monetary policy gains of this sort in Figure 21-3, where, all else equal, a worsening in the home nominal anchor (or an improvement in the currency union’s nominal anchor) shifts the OCA line down. For countries with a record of high and variable inflation, the OCA threshold will fall, so again the OCA line moves down from OCA₁ to OCA₂. This shift also expands the shaded zone in which currency union is preferred: given levels of market integration and symmetry, high-inflation countries are more likely to want to join the currency union and the larger are the monetary policy gains of this sort. (Later on we consider the concerns of the low-inflation countries in this scenario.)

**Political Objectives** Finally, we turn to noneconomic gains and the possibility that countries will join a currency union even if it makes no pure economic sense for them to do so. For instance, one can imagine that Home’s “political welfare” may go up, even if pure economic welfare goes down. How?

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Suppose a state or group of states is in a situation in which forming a currency union has value for political, security, strategic, or other reasons. For example, when the United States expanded westward in the nineteenth century, it was accepted, without question, that new territories and states would adopt the U.S. dollar. In recent times, eastward expansion of the EU comes with an assumption that, in the end, accession to the union will culminate in monetary union. These beliefs, assumptions, and accords did not rest very much, if at all, on any of the OCA criteria we have discussed so far. Instead, they were an act of political faith, of a belief in the states’ common political future, a statement about destiny. For example, during and after the crisis of 2008, commentators and politicians speaking about states in the Baltics and Eastern Europe argued that these countries were willing to put up with the economic pain of being in the Eurozone during such an event because they had their eyes on the enduring political and security benefits that they hoped would accrue in their long-run post-Soviet existence.

Political benefits can also be represented in Figure 21-3 by the OCA line shifting down from OCA1 to OCA2. In this scenario, for countries between OCA1 and OCA2, there are economic costs to forming a currency union, but these are outweighed by the political benefits. The political dimension has played a significant role in EU and Eurozone history, and it is a major topic that plays a big part later in this chapter.

APPLICATION

Optimum Currency Areas: Europe Versus the United States

At first glance, the theory of OCAs helpfully sets out the important criteria by which we can judge whether it is in a country’s interest to join a currency union. But while the OCA criteria work well in theory, in reality, the costs and benefits of a currency union cannot be measured with any great accuracy.

Recognizing this, we can try an alternative approach and use comparative analysis to shed some light on the issue by answering a slightly different question: How does Europe compare with the United States on each of the OCA criteria? Clearly, if one took the view that the United States works well as a common currency zone, and if we find that Europe performs as well as or better than the United States on the OCA criteria, then these findings would lend indirect support to the economic logic of the euro.

Goods Market Integration European countries trade a lot with one another. But as far as we can tell (the available data are not entirely comparable), the individual states within the United States trade even more with one another. For the 50 U.S. states shown in Figure 21-4, panel (a), inter-state trade is about 66% of U.S. GDP. The figure for 17 Eurozone (EZ) countries is typically much smaller, and their trade with one another is only about 17% of Eurozone GDP. At best, it might be argued that the creation of a “single market” in the EU is still a work in progress (as we see in the next section), and so these intra-EU trade flows will likely rise further as the EU’s internal market becomes more integrated. On this test, Europe is probably behind the United States for now.

Symmetry of Shocks A direct way to look at the symmetry of shocks is to compare the correlation of a state or region’s GDP annual growth rate with the annual GDP growth of the entire zone. These data are shown in Figure 21-4, panel (b), and the Eurozone countries compare more favorably with the U.S. states and regions on this test: for 50 U.S. states and 17 Eurozone countries, the average correlation with the entire zone’s GDP growth rate is close to 0.5 (the much larger eight U.S. census
regions show a much higher correlation with the nation, of course). This result is not too surprising: there is no strong consensus that EU countries are more exposed to local shocks than the regions of the United States. However, as we see in a moment, one potential problem for the EU is what happens in the future: one effect of greater...
EU goods market integration could be that EU countries start to specialize more, and thus become more dissimilar. In that case, the risk of asymmetric shocks will increase and the EU will be less likely to satisfy the OCA criteria.

**Labor Mobility** The data in Figure 21-4, panel (c), show what is well known: labor in Europe is much less mobile between states than it is in the United States. More than 40% of U.S. residents were born outside the state in which they live. In the Eurozone, only 14% of people were born in a different country than the one in which they live. (The same is true, as one would expect, of the year-to-year flow of people between regions: it is also an order of magnitude larger in the United States than in Europe.) There are obvious explanations for this: differences in culture and language present obstacles to intra-EU migration that are largely absent in the United States. In addition, although the EU is working to ease such frictions, the local regulatory environment and red tape may make it difficult for Europeans to live and work in another EU country, even if they have a legal right to do so. Finally, labor markets in Europe are generally less flexible, making it harder to hire and fire workers, something that may dissuade workers from moving from one place to another in search of better opportunities. Economists have found that differences in unemployment across EU regions tend to be larger and more persistent than they are across the individual states of the United States. In short, the labor market adjustment mechanism is weaker in Europe. On this test, Europe is far behind the United States.

**Fiscal Transfers** The data in Figure 21-4, panel (d), from a survey of the literature, show that when a U.S. state goes into a recession, for every $1 drop in that state’s GDP, the federal government compensates with an offsetting transfer of between 10 cents and 30 cents (this range may be too low: the 28-cent figure is the most recent and is based on federal income tax variation alone). Stabilizing transfers of this kind are possible only when states agree to a fiscal union that gives substantial taxing-and-spending authority to a central authority. The United States has had a fiscal union with such stabilizing transfers for a long time, but the EU and the Eurozone have not, as yet, and there is no prospect for such a union any time soon. Although individual states in the Eurozone achieve similar results within their own borders, at the level of the Eurozone as a whole, the fiscal transfer mechanism is nonexistent, offsetting less than 1 cent for every €1 of a nation’s GDP decline. (The EU budget is little more than 1% of EU GDP and is devoted to other purposes, notably agricultural subsidies, which do not vary much over the business cycle.)

**Summary** On the simple OCA criteria, the EU falls short of the United States as a successful OCA, as shown in Figure 21-5. Goods market integration is a little bit weaker, fiscal transfers are negligible, and labor mobility is very low. At best, one can note that economic shocks in the EU are fairly symmetric, but this fact alone gives only limited support for a currency union given the shortcomings in other areas.

Some economists argue that the economic stability costs are exaggerated: they have doubts about stabilization policy in theory (e.g., the Keynesian view that prices are sticky in the short run) or in practice (e.g., the caveats about policy activism noted in Chapter 18 on short-run macroeconomic policies). But most economists think there are still costs involved when a country sacrifices monetary autonomy. They worry that some, or all, Eurozone countries now have an inappropriate one-size-fits-all monetary policy that hinders the achievement of macroeconomic stability, especially when there is no fiscal union. Economists also worry that there are significant financial stability risks, not only because there is no well-defined and properly financed lender-of-last-resort...
mechanism to support the Eurozone banking system, but because there is not even a banking union, a minimal fiscal union that fulfills the deposit insurance functions taken for granted in the United States and other advanced economies.

On balance, economists tend to believe that the EU, and the Eurozone within it, was not an OCA in the 1990s when the EMU project took shape and nothing much has happened since then to alter that judgment. Indeed, the crisis of 2008 and its aftermath only strengthened their doubts.

Are the OCA Criteria Self-Fulfilling?

Our discussion so far has taken a fairly static view of the OCA criteria. Countries treat all of the conditions just discussed as given, and, assuming they have adequate information, they can then judge whether the costs of forming a currency union outweigh the benefits. However, another school of thought argues that some of the OCA criteria are not given (i.e., exogenous) and fixed in stone, but rather they are economic outcomes (i.e., endogenous) determined by, among other things, the creation of the currency union itself. In other words, even if the Eurozone isn’t an OCA now, by adopting a common currency, it might become an OCA in the future.

Consider goods market integration, for example. The very act of joining a currency union might be expected to promote more trade, by lowering transaction costs. Indeed, that is one of the main supposed benefits. In that case, if the OCA criteria were applied ex ante (before the currency union forms), then many countries might exhibit low trade volumes. Their low integration might mean that the OCA criteria are not met, and the currency union might not be formed based on those characteristics.
However, if the currency union went ahead anyway, then it might be the case that _ex post_ (after the currency union is up and running) countries would trade so much more that in the end the OCA criteria would indeed be satisfied.

This kind of argument is favored by euro-optimists, who see the EU single-market project as an ongoing process and the single currency as one of its crucial elements. This logic suggests that the OCA criteria can be self-fulfilling, at least for a group of countries that are _ex ante_ close to—but not quite—fulfilling the OCA requirements. For example, suppose the EU started out at point 1 in Figure 21-6, just below the OCA line. If the EU countries would only “just do it” and form a monetary union, then they would wake up and discover that they had jumped to point 2 once the common currency had boosted trade among them, and, hey, presto: while monetary union didn’t make sense beforehand, it does after the fact. Thus, even if the EU or the Eurozone does not look like an OCA now, it might turn out to be an OCA once it is fully operational. However, Euro-pessimists doubt that this self-fulfilling effect will amount to much. Evidence is mixed, and the exact magnitude of this effect is subject to considerable dispute (see _Headlines: Currency Unions and Trade_).[^6]

[^6]: Some believe a common currency will have other effects, perhaps also encouraging labor and capital mobility within the Eurozone. These might also change the OCA calculus, but significant evidence on these effects has not been found as yet.
Currency Unions and Trade

Will Eurozone trade rise as a result of the adoption of the euro? The effects seen so far do not appear to be very large.

In the continuing controversies about Europe's bold experiment in monetary union, there has at least been some agreement about where the costs and benefits lie. The costs are macroeconomic, caused by forgoing the right to set interest rates to suit the specific economic conditions of a member state. The benefits are microeconomic, consisting of potential gains in trade and growth as the costs of changing currencies and exchange-rate uncertainty are removed.

A [2006] study by Richard Baldwin, a trade economist at the Graduate Institute of International Studies in Geneva, scythes through [previous] estimates. He works out that the boost to trade within the euro area from the single currency is much smaller: between 5% and 15%, with a best estimate of 9%. Furthermore, the gain does not build up over time but has already occurred. And the three European Union countries that stayed out—Britain, Sweden and Denmark—have gained almost as much as founder members, since the single currency has raised their exports to the euro zone by 7%.

Interest in the potential trade gains from the euro was primed...by a startling result from research into previous currency unions. In 2000 Andrew Rose, an economist at the University of California, Berkeley, reported that sharing a currency boosts trade by 235%. Such a number looked too big to be true. It clashed with earlier research that found exchange-rate volatility reduced trade only marginally...

Despite such worries, researchers continued to find large trade effects from currency unions. Mr. Baldwin explains why these estimates are unreliable. The main problem is that most of the countries involved are an odd bunch of small, poor economies that are in unions because of former colonial arrangements. Such is their diversity that it is impossible to model the full range of possible influences on their trade. But if some of the omitted factors are correlated with membership of a monetary union, the estimate of its impact on trade is exaggerated. And causality is also likely to run the other way: small, open economies, which would in any case trade heavily, are especially likely to share a currency.

The intractable difficulties in working out the trade effect from previous currency unions means that previous estimates are fatally flawed. But the euro has now been in existence since the start of 1999, with notes and coins circulating since January 2002, so there is an increasing body of evidence based on its experience. That has certainly highlighted the macroeconomic disadvantages for its 12 member states. The loss of monetary sovereignty has hobbled first Germany and, more recently, Italy.

Despite these drawbacks, some studies have pointed to a substantial increase in trade within the euro area arising from monetary union, for example, by 20-25% in the first four years. As with the previous currency unions, however, many other explanatory influences might have come into play. Fortunately, unlike those earlier unions, there is a "control" group: the three countries that stayed out. This is particularly useful because they have shared other relevant aspects of membership of the EU, such as trade policy. It is on the basis of this that Mr. Baldwin reaches his best estimate of a 9% increase in trade within the euro area because of monetary union.

As important, he establishes that the boost to trade did not occur, as expected, by lowering the transaction costs for trade within the euro area. Had it done so, the stimulus would have been a fall in the prices of goods traded between euro-zone members relative to those traded with countries outside the currency union. However, Mr. Baldwin fails to find either this expected relative decline or the trade diversion it would have generated from the three countries that stayed out. He argues that another mechanism was at work. The introduction of the euro has in effect brought down the fixed cost of trading in the euro area. This has made it possible for companies selling products to just a few of the 12 member states to expand their market across more or all of them. This explains why the boost to trade has essentially been a one-off adjustment; and why countries that stayed out have benefited almost as much as those that joined.

[There is also an important lesson for the 12 members of the euro area. Even if their economies were insufficiently aligned to be best suited for a currency union, one hope has been that the euro would make them converge as they trade much more intensively with one another. The message from Mr. Baldwin's report is that this is too optimistic. Countries in the euro area will have to undertake more reforms, such as making their labour markets more flexible, if they are to make the best of life with a single monetary policy.

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A further argument made by optimists is that greater integration under the EU project might also enhance other OCA criteria. For example, if goods markets are better connected, a case can be made that shocks will be more rapidly transmitted within the EU and will be felt more symmetrically. Thus, creating the Eurozone will not only boost trade but also increase the symmetry of shocks, corresponding to a shift from point 1 to point 3 in Figure 21-6. Such a process would strengthen the OCA argument even more.

Set against this optimistic view is the pessimistic prospect that further goods market integration might also lead to more specialization in production. According to this argument, once individual firms can easily serve the whole EU market, and not just their national market, they will exploit economies of scale and concentrate production. Some sectors in the EU might end up becoming concentrated in a few locations. Whereas in the past trade barriers and other frictions allowed every EU country to produce a wide range of goods, in the future we might see more clustering (the United States provides many examples, such as the auto industry in Detroit, financial services in New York City, entertainment in Los Angeles, or technology in Silicon Valley and San Francisco). If specialization increases, each country will be less diversified and will face more asymmetric shocks. In Figure 21-6, this might correspond to a move from point 1 to point 4, where the case for OCA would strengthen, though not by much; or even a move to point 5, where the costs of asymmetric shocks are so large that they dominate the gains from market integration, so that the case for an OCA is weakened.

Some speculate that certain other OCA criteria could be affected by the adoption of the euro: maybe the common currency will encourage greater labor and capital mobility? Maybe it will encourage more fiscal federalism? As with the arguments about the effects on trade creation and specialization, evidence for these claims is fuzzy. We cannot make a definitive judgment until the Eurozone experiment has run for a few more years and there are sufficient data to make reliable statistical inferences.

Summary

We have seen how a calculation of economic costs and benefits can help us decide whether a common currency makes sense. Based on these criteria alone, it appears that neither the Eurozone nor the larger EU is an OCA. Admittedly, this conclusion does not apply with equal force to every country in the Eurozone. Some subgroups of countries may satisfy the OCA criteria. For decades Luxembourg has, in fact, used the Belgian franc as a currency; and the Dutch guilder has been closely tied to the German mark. The BeNeLux countries, and maybe Austria too, have always been well integrated with Germany and are therefore stronger candidates for a currency union. Other countries also had strong criteria for joining: for Italy, perhaps, where monetary policy was often more erratic, a better nominal anchor might have outweighed other negatives.

So if the EU as a whole is not an OCA, then why does the euro exist? The euro project was seen as something bigger. This was a currency designed to unify a whole continent of disparate economies, to include France and Germany, Italy and the United Kingdom, to run from west to east, from Scandinavia to the Mediterranean—and it developed with very little reference to the OCA criteria. To understand why the euro happened, we need to study political logic, the topic of the next section.
2 The History and Politics of the Euro

The political origins of the European Union and the euro project can be found in the past. As long ago as 1861, the eminent French writer and statesman Victor Hugo could imagine that “a day will come in which markets open to commerce and minds open to ideas will be the sole battlefields.” The timeline in Table 21-1 provides a summary of some of the most important events that have shaped European economic history since 1870. The course of events reveals a European project guided by politics as well as economics.

A Brief History of Europe

The table shows major political and economic events since 1870 and highlights the most important developments affecting monetary policy over the same period. The table is divided into two periods: panel (a) sketches the more distant history that shaped the creation of the EU and progress toward EMU, culminating in the Maastricht Treaty and the preparations for the euro in the 1990s; panel (b) supplies more detail on important recent events affecting the EU and the EMU project starting from the creation of the euro.

The EU project emerged as a cooperative response to a history of noncooperation among nations on the continent, which twice in the twentieth century spilled over into violent military conflict, in World War I (1914–18) and World War II (1939–45). Even during the interwar years, political tensions ran high and economic cooperation suffered. The situation was not helped by the punishing economic burdens placed on Germany by the Allied powers after World War I. Matters only became worse during the severe economic downturn that was the Great Depression of the 1930s: protectionism surged again and the gold standard collapsed amid beggar-thy-neighbor devaluations (as discussed in the chapter on fixed and floating regimes).

In 1945, as a weak Europe emerged from the devastation of World War II, many feared that peace would only bring about a return to dire economic conditions. More economic suffering might also sow the seeds of more conflict in the future. At an extreme, some feared it would undermine the legitimacy of European capitalism, with the neighboring Soviet bloc all too eager to spread its alternative Communist model.

What could be done? In a speech delivered in Zurich, on September 19, 1946, Winston Churchill presented his vision:

And what is the plight to which Europe has been reduced? . . . Over wide areas a vast quivering mass of tormented, hungry, care-worn and bewildered human beings gape at the ruins of their cities and their homes, and scan the dark horizons for the approach of some new peril, tyranny or terror. . . . That is all that Europeans, grouped in so many ancient states and nations . . . have got by tearing each other to pieces and spreading havoc far and wide. Yet all the while there is a remedy. . . . It is to recreate the European family, or as much of it as we can, and to provide it with a structure under which it can dwell in peace, in safety and in freedom. We must build a kind of United States of Europe.

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### Table 21-1

**European Integration Through 1997** This table shows major political and economic events over the past century or more up to the creation of the euro.

<table>
<thead>
<tr>
<th>Major Political and Economic Events</th>
<th>Monetary Developments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1870–1914</strong> Largely peaceful era; economic growth and stability.</td>
<td>The gold standard system of fixed exchange rates prevails.</td>
</tr>
<tr>
<td><strong>1914–45</strong> World Wars I and II; economic malaise, Great Depression.</td>
<td>Collapse of gold standard, floating exchange rates with instability; capital controls widespread.</td>
</tr>
<tr>
<td><strong>1946</strong> Period of postwar rapid growth begins, and will last until 1970s.</td>
<td>The Bretton Woods system of fixed exchange rates established.</td>
</tr>
<tr>
<td><strong>1947–51</strong> Marshall Plan reconstruction financed by United States and overseen by the European High Authority.</td>
<td>European Payments Union is created to free up the European payments system and facilitate trade.</td>
</tr>
<tr>
<td><strong>1954–65</strong> In 1954 France, West Germany, Italy, Belgium, Netherlands, Luxembourg form European Coal and Steel Community (ECSC). In 1957 they sign Treaty of Rome to form European Economic Community (EEC). In 1967 the European Communities (EC) merges EEC, ECSC, and Euratom; Council of Ministers and European Commission established.</td>
<td></td>
</tr>
<tr>
<td><strong>1971–73</strong> 1st enlargement: Denmark, Ireland, and United Kingdom join (1973) to form an EC of 9 countries.</td>
<td>The Bretton Woods system of fixed exchange rates collapses.</td>
</tr>
<tr>
<td><strong>1973–79</strong> European Parliament directly elected (1979).</td>
<td>European Monetary System (EMS) of monetary cooperation creates a currency basket called the <strong>ecu</strong> (a precursor of euro) and the <strong>Exchange Rate Mechanism</strong> (ERM), a system of quasi-fixed exchange rates (1979). Belgium, Luxembourg, Denmark, Germany, France, Ireland, Italy, and Netherlands join EMS/ERM; United Kingdom joins EMS only.</td>
</tr>
<tr>
<td><strong>1981–86</strong> Second and third enlargements: Greece (1981), Portugal and Spain (1986) expand EC to 12 countries</td>
<td>Greece, Portugal, and Spain join EMS but not ERM.</td>
</tr>
<tr>
<td><strong>1987–90</strong> Single European Act takes effect (1987) and has goal of EC “single market” by 1992.</td>
<td>Spain (1989) and United Kingdom (1990) join ERM.</td>
</tr>
<tr>
<td><strong>1990</strong> German reunification in 1990 creates new unified German state, adding former East Germany to the EC</td>
<td>Capital controls abolished in EC.</td>
</tr>
<tr>
<td><strong>1991</strong> Maastricht Treaty transforms EC into European Union (EU); to take effect in 1993. EU citizenship and EU enlargement process established. Plan for <strong>Economic and Monetary Union</strong> (EMU) adopted.</td>
<td>Plan for EMU includes a common currency (Britain and Denmark retain right to opt out de jure). ERM set as the entry route to the euro. Rules for membership and convergence criteria established.</td>
</tr>
<tr>
<td><strong>1992</strong></td>
<td>Portugal joins ERM. <strong>ERM crisis</strong>: Britain exits ERM, as does Sweden which will then de facto opt out of the euro; ERM bands eventually widened.</td>
</tr>
<tr>
<td><strong>1993</strong> EU sets out <strong>Copenhagen Criteria</strong>, the political and economic conditions that future EU applicants must satisfy.</td>
<td>Applicants expected to enter ERM/EMS and achieve requirements for monetary union in a given period.</td>
</tr>
<tr>
<td><strong>1995</strong> Fourth enlargement: Austria, Finland, and Sweden expand EU to 15 countries. <strong>Treaty of Schengen</strong> will create common border system, immigration policies, and free travel zone (Ireland and United Kingdom opt out; non-EU countries Iceland, Norway, and Switzerland opt in).</td>
<td>Austria, Finland, and Sweden join EMS. Austria (1995) and Finland (1996) join ERM.</td>
</tr>
<tr>
<td><strong>1997</strong> Treaty of Amsterdam addresses EU citizenship, rights, powers of European Parliament, employment, and common foreign and security policy.</td>
<td>Stability and Growth Pact is adopted to further enforce the Maastricht budgetary rules.</td>
</tr>
</tbody>
</table>
### Major Political and Economic Events

1998
Eleven countries say they will adopt the euro: France, Germany, Italy, Belgium, Netherlands, Luxembourg, Ireland, Portugal, Spain, Austria, Finland.

1999
- The euro is introduced as a unit of account on January 1.
- Euro notes and coins appear in 2002 and replace national currencies. Greece, Denmark join ERM.

2000
- Treaty of Nice addresses EU expansion, amends and consolidates Rome and Maastricht Treaties, and modifies voting procedures.
- Greece becomes the twelfth country to join the Eurozone.

2003
- In Sweden voters reject euro adoption in a referendum.

2004
- Fifth enlargement: Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, and Slovenia expand EU to 25 countries.
- Estonia, Lithuania, and Slovenia join ERM.

2005
- Ratification of EU Constitutional Treaty postponed indefinitely following rejection by voters in French and Dutch referenda. Controversial EU accession talks start for Turkey (candidate since 1999 and an associate member of EEC/EC/EU since 1963).
- Cyprus, Latvia, Malta, and Slovakia join ERM. 12 of 25 Eurozone members are in violation of the Stability and Growth Pact rules.

2007
- Sixth enlargement: Bulgaria and Romania expand EU to 27 countries.
- Slovenia becomes the thirteenth country to join the Eurozone.

2008–11
- Global financial crisis (2008): peripheral countries (Greece, Ireland, Portugal, Spain) in deep recession and at risk of default (2009– ); the troika (ECB/EU/IMF) bailout programs begin in crisis countries (2010).
- Cyprus and Malta (2008), Slovakia (2009), and Estonia (2011) expand Eurozone to 17 countries; ECB (with the EU) takes extraordinary steps to support banks and governments.

2012–14
- Fiscal contraction in EU and harsh austerity measures in periphery. Eurozone enters double-dip recession (2012). Unemployment climbs over 12%; youth unemployment over 24%; majority of people distrust the EU in 15 Eurozone countries; Croatia joins EU (2013).
- ECB President Draghi promises (2012) to do “whatever it takes” to save the euro. Cyprus banking crisis (2013) is fifth troika program; de facto break in monetary union as capital controls imposed. Latvia joins the euro in 2014.

2015–16
- In a 2015 referendum on the troika program, the people of Greece reject austerity policies but the Greek government capitulates to the terms after facing the threat of a banking crisis and ejection from the euro. In a 2016 “Brexit” referendum, the people of the United Kingdom vote to leave the EU. A critical Italian constitutional referendum is expected by the end of 2016. Multiple terrorist attacks, notably in France. Migrant and refugee crisis as people cross external EU border from Africa and Middle East. Failed military coup in Turkey. Rise of populist parties and movements in multiple countries, many of them hostile to free migration and also to the euro and/or the EU.
- Capital controls and seemingly indefinite troika program for Greece, although IMF voices reluctance with status quo. Very slow economic recovery in Eurozone, and continued fiscal strains outside Germany. Some banking distress in many countries in 2016 after new “bail in” resolution rules go into effect.
Back from the Brink: Marshall Plan to Maastricht, 1945–91

Into this crisis stepped the United States, to offer what has gone down in history as the most generous and successful reconstruction plan ever undertaken, the Marshall Plan. From 1947 to 1951 Americans poured billions of dollars worth of aid into the war-torn regions of Western Europe to rebuild economic infrastructure (the Soviet bloc refused to take part in the plan).

The Marshall Plan required that the funds be allocated and administered by a European High Authority, composed of representatives of all countries, which encouraged collective action to solve common problems. Many cooperative arrangements were soon established: to smooth international payments and help trade (European Payments Union in 1950); to encourage trade and diminish rivalries in key goods like coal and steel (European Coal and Steel Community, or ECSC, in 1954); and to promote atomic and nuclear science without military rivalry (Euratom, in 1957).

In 1957 the Treaty of Rome was signed by six countries—France, West Germany, Italy, Belgium, Netherlands, and Luxembourg. They agreed to create the European Economic Community, or EEC, with plans for deeper economic cooperation and integration. In 1967 they went further and merged the EEC, the ECSC, and Euratom to create a new organization referred to as the European Communities, or EC. Two supranational bodies were created: the Council of Ministers, a decision-making body formed of national ministers, and an administrative body, the European Commission.

The dropping of the word “economic” (in the move from EEC to EC) was significant. By the 1960s two future paths had emerged. Would the EC create just a zone of economic integration? Or would it go further and aspire to a political union or a federal system of states—and if so, how far? The question has been hotly debated ever since.

In the 1970s, two major challenges to the EC project emerged: problems of expansion and problems of monetary affairs. The expansion problem involved deciding when and how to admit new members. By 1973 the first enlargement added Denmark, Ireland, and the United Kingdom. The EC (i.e., the Council of Ministers) viewed these states as the right type to gain entry—they had solid credentials in terms of economic development and stability, and all were established democracies. In contrast, the second and third enlargements included countries with weaker economic and political claims—but all the same, Greece (1981), Portugal (1986), and Spain (1986) were soon admitted to the growing club. The year 1975 also saw the first meeting of the European Council, the gathering of the heads of state or heads of government of all members. This body, which was only formalized in 2009, allows the highest-level elected representatives of each state to shape the EU-wide policy agenda and resolve major disputes at their regular EU summits. Its deliberations, typically lasting through the middle of the night, have played a major role in addressing Europe’s increasingly frequent economic and political crises in recent years.

The problem of monetary affairs was precipitated by the collapse of the Bretton Woods system of fixed exchange rates in the early 1970s. As we saw in the

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8 George C. Marshall (1880–1959), American military leader during World War II and named U.S. Secretary of State in 1947, proposed the postwar reconstruction effort for Europe in a speech after he was awarded an honorary degree at Harvard University, on Thursday, June 5, 1947.
Chapter 21 | The Euro

The Euro

Chapter on fixed and floating exchange rates, the world had been operating since 1946 under a system of fixed dollar exchange rates with monetary autonomy, with the trilemma being resolved through the imposition of capital controls. In the 1970s, this system broke down and floating exchange rates became the norm in the advanced economies. At that time, except for wars and crises, Europe had spent roughly a century under some form of a fixed exchange rate system, and European policymakers worried that exchange rate instability might compromise their goals for economic union. Indeed, as early as 1970, the EC’s visionary Werner Report anticipated a path via a transitional fixed exchange rate system toward a single currency within 10 years, although the process would take much longer than that. European leaders did take the first and fateful step down this road when they announced that they would create essentially a new mini–Bretton Woods of their own, the European Monetary System, or EMS, which began operation in 1979.

The centerpiece of the EMS was the Exchange Rate Mechanism (ERM), a fixed exchange rate regime based on bands. The ERM defined each currency’s central parity against a basket of currencies, the so-called ecu (European currency unit), the precursor to the euro. In practice, the non-German currencies ended up being pegged to the German mark, the central reserve currency in the system (just as the U.S. dollar had been the central reserve currency in the Bretton Woods system).

The ERM permitted a range of fluctuation on either side of the central value or parity: a narrow band of ±2.25% for most currencies (the escudo, lira, peseta, and pound were at times permitted a wider band of ±6%). In 1979 all EC countries except the United Kingdom joined the ERM; later, Spain joined in 1989, the United Kingdom in 1990, and Portugal in 1992. In principle, it was a “fixed but adjustable” system and the central parities could be changed, giving potential encouragement to speculators (also like Bretton Woods).

**Crisis and Opportunities: EMU and Other Projects, 1991–99** The EC entered the 1990s with the drive for further integration still going strong. Since 1979 a directly elected European parliament had been at work. In 1987 the Single European Act was passed with the goal of reducing further the barriers between countries through the creation of a “single market” by 1992.

If, within the EC, the political momentum was still strong, it was soon given another push by the end of the Cold War in 1989—although this push would end up taking the entire European project in somewhat new directions and with often unanticipated consequences. The Soviet Union disintegrated and Communist rule in Eastern Europe came to an end, symbolized by the fall of the Berlin Wall. What was the EC going to do in response? The Germans had no doubts—East and West Germany would be reunited quickly, to form Germany again. German reunification was formally completed on October 3, 1990. For the EC as a whole, though, there was the question of how to react to the new states on their eastern flank.

The countries of Eastern Europe were eager to move quickly and decisively away from Communism and autocracy and toward capitalism and democracy, and they saw joining the EC as a natural means to that end, as we noted earlier. From a political and security standpoint, the EC could hardly say no to the former Communist countries, and so plans for further eastern enlargement had to be made rather quickly. Other countries also waited in the wings. In the early 1990s wars broke out in the Balkans, forcing the EC to confront the big hole in its map between Italy and Greece. Did the former Yugoslav states and Albania belong in “Europe,” too? And discussion of
the eastern frontier of the EC soon brought to the fore the question of Turkey—a country that has had EC associate member status since 1963 and yet had to wait until 2005 for formal admission talks to begin, and whose possible admission to the EU has long been a matter of political friction (e.g., most recently in the Brexit referendum debate).

In the face of these political challenges, the EC needed to act with purpose, and the grandest treaty to date, the 1991 Treaty on European Union, or the Maastricht Treaty, was the response, reasserting more than ever the goal of creating an “ever closer union among the peoples of Europe.” Adding more federal flavor, the treaty gave the EC a new name, the European Union, or EU, and created a notion of EU citizenship. The treaty also laid down the process for enlargement, that would eventually take the EU, via three further enlargements, to 15 members in 1995, 25 in 2004, and 27 in 2007.

Later political developments in the 1990s built on Maastricht. The 1993 Copenhagen Criteria provided formal conditions for new members wanting admission, such as rule of law, human rights, democracy, and so on. The 1995 Schengen Treaty established a zone for the free movement of people (though Ireland and the United Kingdom opted out). The 1997 Amsterdam Treaty forged ahead in EU foreign and security policy and strengthened the rights of EU citizenship and the powers of the European parliament.

The most ambitious part of the Maastricht Treaty was its economic element: the EU-wide goal of Economic and Monetary Union (EMU). The economic union would rest on the idea of a single market, a concept of an EU-wide, fully integrated economic area that would encompass goods and services markets, capital markets, and labor markets. To that end, the treaty established four indivisible central “pillars”: the free movement of goods, free movement of services, free movement of capital, and free movement of people. The treaty also called on the European Commission to ensure that national laws and regulations did not stand in the way of these four freedoms.

Even more radical than all of this, however, was an ambitious fifth element in the treaty: the monetary union. This element would create a new currency (soon given the name “euro”) that was envisaged as the future single currency for the entire EU. Indeed, for some of its adherents, the monetary union was seen as the necessary step to make the single market truly work. Under the plan for the euro, countries would transition at an appointed date from their pegged rates within the ERM into an irrevocable peg with the euro. Starting from 1992, constructing the four pillars of the single market proceeded gradually and smoothly, although problems would arise later on. But the plan for the monetary union almost immediately came into doubt and flirted with disaster.

The ERM proved to be a typically fragile fixed exchange rate system. As we saw in Chapter 20, its worst moment came in 1992. In the ERM crisis, several ERM countries suffered exchange rate crises and their pegs broke: the British pound, Italian lira, Portuguese escudo, and Spanish peseta. (Other non-ERM currencies such as the Swedish krona and the Finnish markka pegged to the mark also experienced crises and broken pegs.) Even the currencies that stayed within the ERM had to have their bands widened so much as to make their pegs look more like floats for a while. The whole system was reduced to a near shambles.

As we saw in the past two chapters, the fundamental cause of these crises was a tension between the macroeconomic objectives of the center country, Germany
(tight monetary policy to prevent overheating after a large fiscal shock caused by reunification), and the objectives of the pegging countries (whose authorities wanted to use expansionary monetary policy to boost output during a period of global slowdown).

The ghosts of the 1992 crisis still roam today. Many countries rejoined the ERM, some at a new rate or with a wider band: Spain, Italy, and Portugal all regrouped, reentered ERM, and ultimately adopted the euro. But Britain permanently left the ERM and turned its back on the common currency. Sweden, officially committed to the euro, has never shown any interest in joining even the ERM. Today, in both Britain and Sweden, public opposition to the euro remains high. And there is always the fear that another ERM-style crisis could again erupt in any EU members that peg to the euro.

Still, despite the exchange rate crisis in 1992, the ERM was patched up, and most countries remained committed to the plan to launch the euro. The ERM bands were widened in 1993 to a very slack ±15%, and most were happy to live within those limits and get ready for euro admission.

**The Eurozone Is Launched: 1999 and Beyond**  The euro was launched in 11 countries on January 1, 1999, and administered by a newly created central bank, the European Central Bank (ECB). The ECB took control of monetary policy in all Eurozone countries on that date from each national central bank. The national central banks still have responsibilities. Each one represents their country on the ECB Council, and still supervises and regulates their own country’s financial system. The euro immediately became the unit of account in the Eurozone, and a gradual transition took place as euros began to enter circulation and national currencies were withdrawn.

Table 21-2 shows the history and current state of the EU at the time of this writing in late 2016. The table shows the dates of membership in the EU, the ERM, and the Eurozone. Also shown are the fixed exchange rate parities of all ERM and euro members—for the latter, these were frozen upon euro entry and became obsolete once the national currencies were retired.

As of 2016, the Eurozone contained 19 “in” countries from the EU-28. The first 11 of these made the switch to the euro in 1999, then Greece entered in 2001, Slovenia in 2007, Cyprus and Malta in 2008, Slovakia in 2009, Estonia in 2011, Latvia in 2014, and Lithuania in 2015. Of the 9 “out” countries from the EU-28, there is currently only one country, Denmark, in the ERM “waiting room” and pegged to the euro, and it has been waiting a very long time. This leaves 8 “out” countries that are not in ERM. Seven of the “outs” have floating exchange rates against the euro. Bulgaria is the exception; it has a non-ERM peg. Among all the “out” countries, only Denmark and the United Kingdom can legally opt out of the euro indefinitely.

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9 The European Central Bank was established on June 1, 1998. It succeeded a prototype monetary authority, the European Monetary Institute (EMI), which for four and a half years had undertaken much of the groundwork for the euro project.

10 All EU central banks cooperate as a group in the European System of Central Banks (ESCB). Within that group, the central banks of Eurozone member states (known, confusingly, as the Eurosystem banks) have a much closer relationship with the ECB. Only Eurosystem banks have representation on the ECB’s Council.

11 Since 1999 the original ERM has been replaced with a modified ERM II, with the euro replacing its predecessor, the ecu, as the base currency for pegging. Notwithstanding the Maastricht Treaty, all ERM members now operate in a de jure ±15% band (although Denmark sticks to the old, narrow ±2.25% band).


### TABLE 21-2

**The EU-28 and the Euro Project in 2016** This table shows the progress of each country through EU membership, ERM membership, and adoption of the euro (as of 2016). The euro parities of Eurozone members and ERM members are also shown, although the former have now abolished their national currencies. The dates for future ERM or euro membership are in most cases uncertain or unknown (shown by a question mark); or the dates are unlikely or not required (shown by a dash).

<table>
<thead>
<tr>
<th>YEAR JOINED</th>
<th>EU</th>
<th>ERM</th>
<th>Eurozone</th>
<th>Euro Parity (€1 = )</th>
<th>National Currency (Current or Former)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Belgium</td>
<td>1959</td>
<td>1979</td>
<td>1999</td>
<td>40.3399</td>
</tr>
<tr>
<td></td>
<td>Cyprus</td>
<td>2004</td>
<td>2005</td>
<td>2008</td>
<td>0.585274</td>
</tr>
<tr>
<td></td>
<td>Estonia</td>
<td>2004</td>
<td>2004</td>
<td>2011</td>
<td>15.6466</td>
</tr>
<tr>
<td></td>
<td>Finland</td>
<td>1995</td>
<td>1996</td>
<td>1999</td>
<td>5.94573</td>
</tr>
<tr>
<td></td>
<td>France</td>
<td>1959</td>
<td>1979</td>
<td>1999</td>
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</tr>
<tr>
<td></td>
<td>Germany</td>
<td>1959</td>
<td>1979</td>
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<tr>
<td></td>
<td>Greece</td>
<td>1981</td>
<td>1999</td>
<td>2001</td>
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<tr>
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<td>1973</td>
<td>1979</td>
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<td>0.787564</td>
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<td>2005</td>
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<td>2004</td>
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<td>2004</td>
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<td></td>
<td>Netherlands</td>
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<td>2004</td>
<td>2005</td>
<td>2009</td>
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<tr>
<td></td>
<td>Slovenia</td>
<td>2004</td>
<td>2004</td>
<td>2007</td>
<td>239.64</td>
</tr>
<tr>
<td></td>
<td>Spain</td>
<td>1986</td>
<td>1989</td>
<td>1999</td>
<td>166.386</td>
</tr>
<tr>
<td>Countries in the ERM</td>
<td>Denmark*</td>
<td>1973</td>
<td>1999</td>
<td>—</td>
<td>7.46038</td>
</tr>
<tr>
<td>Other EU Countries</td>
<td>Bulgaria</td>
<td>2007</td>
<td>?</td>
<td>?</td>
<td>?</td>
</tr>
<tr>
<td></td>
<td>Croatia</td>
<td>2013</td>
<td>?</td>
<td>?</td>
<td>?</td>
</tr>
<tr>
<td></td>
<td>Sweden*</td>
<td>1995</td>
<td>—</td>
<td>—</td>
<td>?</td>
</tr>
<tr>
<td></td>
<td>United Kingdom†</td>
<td>1973</td>
<td>1990–92</td>
<td>—</td>
<td>?</td>
</tr>
</tbody>
</table>

* The United Kingdom and Denmark can legally opt out of the euro. Sweden is opting out de facto by choosing not to join the ERM. All other countries are technically expected to join the euro at some point.

† As we have noted, following a 2016 referendum, the United Kingdom is expected to leave the EU within a few years.

although Sweden acts as if it can, too. (All three countries have popular opposition to the euro and are expected to stay out; indeed, the United Kingdom is now expected to leave the EU entirely.) Beyond these cases, all of the other “out” countries are officially obliged to join the ERM and then adopt the euro—at some point, although the timetable is not specific.
Summary

History shows that the countries of Europe have some deep tendency to prefer fixed exchange rates to floating rates. Apart from brief crisis episodes in times of turmoil (during wars, the Great Depression, and the early 1970s), most European countries have maintained pegged exchange rates against each other since the 1870s. Some have now taken the additional step of adopting a common currency.

There have certainly been some economic changes in Europe that make it more likely to satisfy the OCA criteria now than at anytime in the past. The EU project has pushed forward a process of deep economic integration, with major steps such as the EMU and Schengen treaties bringing Europe closer to the ideal of a single market. But integration is still very much a work in progress, and the OCA criteria are unlikely to be met soon.

Instead, European history leads us to the conclusion that the common currency fits as part of a political project rather than as a purely economic choice. To consider some of the implications of this conclusion, in the remainder of this chapter we consider some of the operational issues and problems faced by the Eurozone during its first decade of existence.

3 Eurozone Tensions in Tranquil Times, 1999–2007

From its launch in 1999 until 2007 or so, the Eurozone was considered a success. Compared to what came next, this was a time of economic growth and stability for the Eurozone—a period with no recession and with the ECB untroubled by problems either with its explicit inflation target goal or its broader responsibility to support Eurozone economic and financial stability.

In this section we review this fortunate period, focusing on the way in which the ECB’s monetary policy rules were devised, and the broader concerns about fiscal stability. This period will be remembered for a somewhat narrow and limited policy focus and a general complacency concerning some of the ultimately more dangerous macroeconomic trends that we discuss in the section that follows.

The European Central Bank

Suppose some German economists from the 1950s or 1960s, after having traveled forward in time to the present day, pop up next to you on a Frankfurt street corner, and say, “Take me to the central bank.” They are surprised when you lead them to the new ECB building instead of the old Bundesbank building.

It is no coincidence that the European Central Bank is located in Frankfurt. It is a testament to the strong influence of German monetary policymakers and politicians in the design of the euro project, an influence they earned on account of the exemplary performance of the German economy, and especially its monetary policy, from the 1950s to the 1990s. To see how German influence has left its mark on the euro, we first examine how the ECB operates and then try to explain its peculiar goals and governance.

For economists, central banks have a few key features. To sum these up, we may ask: What policy instrument does the bank use? What is it supposed to do (goals) and not do (forbidden activities)? How are decisions on these policies made given the
bank’s governance structure? To whom is the bank accountable, and, subject to that, how much independence does the bank have? For the ECB, the brief answers are as follows:

- **Instrument and goals.** The instrument used by the ECB is the interest rate at which banks can borrow funds. According to its charter, the ECB’s primary objective is to “maintain price stability” in the euro area. Its secondary goal is to “support the general economic policies in the Community with a view to contributing to the achievement of the objectives of the Community.” (Many central banks have similar instruments and goals, but the ECB has a relatively strong focus on inflation.)

- **Forbidden activities.** To prevent the use of monetary policy for other goals, the ECB may not directly finance member states’ fiscal deficits or provide bailouts to member governments or national public bodies. In addition, the ECB has no mandate to act as a lender of last resort by extending credit to financial institutions in the Eurozone in the event of a banking or financial crisis. (Most central banks are not so constrained, and they typically can buy their own government’s debt and act as a lender of last resort to private banks or financial institutions.)

- **Governance and decision making.** Monetary policy decisions are made at meetings of the ECB’s Governing Council, which consists of the central bank governors of the Eurozone national central banks and six members of the ECB’s executive board. In practice, most policy decisions are made by consensus rather than by majority voting. Meetings are usually held twice each month.

- **Accountability and independence.** No monetary policy powers are given to any other EU institution. No EU institution has any formal oversight of the ECB, and the ECB does not have to report to any political body, elected or otherwise. The ECB does not release minutes of its meetings or details of any votes (but in 2015 it began to publish accounts of its meetings). The ECB has independence not only with respect to its instrument (it sets interest rates) but also with respect to its goal (it gets to define what “price stability” means). A small but growing number of central banks around the world has achieved some independence, but the ECB has more than most.

On all four points, the working of the ECB has been subject to strong criticisms.

**Criticisms of the ECB** There is controversy over the price stability goal. The ECB chooses to define price stability as a Eurozone consumer price inflation rate of less than but “close to” 2% per year over the medium term. This target is vague (the notions of “close to” and “medium term” are not defined). The target is also asymmetrical (there is no lower bound to guard against deflation), a characteristic that became a particular worry as inflation rates fell toward zero during the Great Recession following the global financial crisis of 2008. As global real interest rates have fallen to record low levels in recent years, the ECB, like other central banks, also now faces a much lower level for its “neutral” policy rate, which leaves little room for downward easing without hitting the zero lower bound for nominal interest rates—another problem with the ECB’s choice of a low inflation target.

There is controversy over having only price stability as a goal. On paper, the ECB technically has a secondary goal of supporting and stabilizing the Eurozone economy.
But in practice, the ECB has acted as if it places little weight on economic performance, growth, and unemployment, and where the real economy is in the business cycle. In this area, the ECB’s policy preferences are different from, say, those of the U.S. Federal Reserve, which has a mandate from Congress not only to ensure price stability but also to achieve full employment. The ECB also differs from the Bank of England, whose former Governor Mervyn King once famously used the term “inflation nutter” to describe a policymaker with an excessive focus on price stability. The ECB’s early obsessive focus on money and prices was thought to reflect a combination of its Germanic heritage and its relative lack of long-term reputation.

There is controversy over the ECB’s way of conducting policy to achieve its goal. In addition to the “first pillar,” which uses an economic analysis of expected price inflation to guide interest rate decisions, the bank has a “second pillar” in the form of a reference value for money supply growth (4.5% per annum). As we saw in the chapter on exchange rates in the long run, however, a fixed money growth rate can be consistent with an inflation target only by chance. For example, in the quantity theory model, which assumes a stable level of nominal interest rates in the long run, inflation equals the money growth rate minus the growth rate of real output. So the ECB’s twin pillars will make sense only if real output just happens to grow at less than 2.5% per year, for only then will inflation be, at most, $4.5 - 2.5 = 2\%$ per year. Perhaps aware of the inconsistency of using two nominal anchors, the ECB has given the impression that most of the time it ignores the second pillar; nonetheless, concern about money supply growth is occasionally expressed.

There is controversy over the strict interpretation of the “forbidden activities” rules. What happens in the event of a large banking crisis in the Eurozone? When banking crises hit other nations, many central banks would choose to extend credit to specific troubled banks or to relax lending standards to the banking sector as a whole, and they could print money to do so. In the Eurozone, officially the ECB can print the money but it cannot implement either type of additional lending; the national central banks of countries in the Eurozone can do the lending but can’t print the money. National central banks can devise limited, local credit facilities or arrange private consortia to manage a small crisis, or they can hope for fiscal help from their national treasuries. Big crises could therefore prove more difficult to prevent or contain. (In a discussion that appears later in this chapter, we look at how the ECB reacted during and after the Global Financial Crisis of 2008 and how it was able to ease, or skirt, these rules somewhat.)

There is controversy over the decision-making process and lack of transparency. Votes are not formally required, and no votes of any kind are reported. Consensus decisions are preferred but these may favor the status quo, causing policy to lag when it ought to move. Minutes are recorded but can be kept secret for 30 years and their level of detail is not known. Some parts of meetings are private without any record being kept at all. Insistence on having all 19 central bank governors plus the 6 Executive Board members on the Council leads to a very large body; consensus can be hard to achieve, which, in turn, can make prompt action difficult to take. This design will become even more cumbersome should even more countries join the euro, but the structure of the Council is set in the Maastricht Treaty and is impossible to change without revising the treaty.

There is controversy over the ECB’s lack of accountability. Because so much of its operation is secret and it answers to no political masters, some fear that people
in the Eurozone will conclude that the ECB lacks legitimacy. Although the EU is a collection of democratic states, many of its decisions are made in places that are far from the people in these states. Many EU bodies suffer a perceived “democratic deficit,” including the work of the unelected Commission and the treaties pursued at the intragovernmental level with no popular ratification and little consultation. (Brexit is a dramatic exception.) The ECB can appear to be even further removed at a supra-governmental level. There is nothing akin to the U.S. requirement that the Federal Reserve chairman regularly answer questions from Congress. Rather, the ECB has a more informal dialogue and consultations with the Council, Commission, and Parliament. In response, the finance ministers of the Eurozone have ganged up to form the Eurogroup, which meets and opines about what is happening in the Eurozone and what the ECB is (or should be) doing. Occasionally, national heads of governments weigh in to attack the ECB’s policy choices or to defend them. Along with the EU’s commissioner for economic and monetary affairs, heads of government can make pronouncements and lobby, but they can do little more unless a treaty revision places the ECB under more scrutiny.

**The German Model**

Some of these criticisms are valid and undisputed, but others are fiercely contested. Supporters of the ECB say that strong independence and freedom from political interference are exactly what is needed in a young institution that is struggling to achieve credibility and that the dominant problem in the Eurozone in the recent past has been inflation not deflation. For many of these supporters, the ECB is set up the right way—almost a copy of the Bundesbank, with a strong focus on low inflation to the exclusion of other criteria and a complete separation of monetary policy from politics. Here, German preferences and German economic performance had been very different from those for the rest of the Eurozone, yet they prevailed. How can this be understood?

German preferences for a low-inflation environment have been extremely strong ever since the costly and chaotic interwar hyperinflation (discussed in the chapter on exchange rates in the long run). It was clear that the hyperinflation had been driven by reckless fiscal policy, which had led politicians to take over monetary policy and run the printing presses. After that fiasco, strong anti-inflation preferences, translated from the people via the political process, were reflected in the conduct of monetary policy by the Bundesbank from 1958 until the arrival of the euro in 1999. To ensure that the Bundesbank could deliver a firm nominal anchor, it was carefully insulated from political interference.

Today, as we learned when studying exchange rates in the long run, a popular recipe for sound monetary policy is a combination of central bank independence and an inflation target. Sometimes, the inflation target is set by the government, the so-called New Zealand model. But the so-called German model went further and faster: the Bundesbank was not only the first central bank to be granted full independence, it was also given both instrument independence (freedom to use interest rate policy in the short run) and goal independence (the power to decide what the inflation target should be in the long run). This became the model for the ECB, when Germany set most of the conditions for entering a monetary union with other countries where the traditions of central bank independence were weaker or nonexistent.

**Monetary Union with Inflation Bias**

We can see where Germany’s preferences came from. But how did it get its way? A deep problem in modern macroeconomics
concerns the *time inconsistency* of policies. According to this view, all countries have a problem with inflation bias under discretionary monetary policy. Policymakers would like to commit to low inflation, but without a credible commitment to low inflation, a politically controlled central bank has the temptation to use “surprise” monetary policy expansions to boost output. Eventually, this bias will be anticipated, built into inflation expectations, and hence, in the long run, real outcomes—such as output and unemployment—will be the same whatever the extent of the inflation bias. Long-run money neutrality means that printing money can’t make an economy more productive or create jobs.

The inflation bias problem can be solved if we can separate the central bank from politics and install a “conservative central banker” who cares about inflation and nothing else. This separation was strong in Germany, but not elsewhere. Hence, a historically low-inflation country (e.g., Germany) might be worried that a monetary union with a high-inflation country (e.g., Italy) would lead to a monetary union with on average a tendency for middling levels of inflation—that is, looser monetary policies on average for Germany and tighter on average for Italy. In the long run, Germany and Italy would still get the same real outcomes (though in the short run, Germany might have a monetary-led boom and Italy a recession). But, while Italy might gain in the long run from lower inflation, Germany would lose from the shift to a high-inflation environment. Germany would need assurances that this would not happen, and because Germany was such a large and pivotal country in the EU, a Eurozone without Germany was unimaginable (based on simple OCA logic or on political logic). So Germany had a lot of bargaining power.

Essentially, the bargaining over the design of the ECB and the Eurozone boiled down to this: other countries were content to accept (rightly or wrongly) that in the long run their real outcomes would not be any different even if they switched to a monetary policy run by the ECB under the German model, and thus had to settle for less political manipulation of monetary policy.

Or so they said at the time. But how could one be sure that these countries did in fact mean what they said? One could take countries’ word for it—trust them. Or one could make them prove it—test them. In a world of inflation bias, trust in monetary authorities is weak, so the Maastricht Treaty established some tests; that is, some rules for admission.

**The Rules of the Club**

The Maastricht Treaty established five rules for admission to the euro zone, as shown in Table 21-3. All five of these *convergence criteria* need to be satisfied for entry. Two of the five rules also serve as ongoing requirements for membership. The rules can be divided into two parts: three rules requiring convergence in nominal measures closely related to inflation and two rules requiring fiscal discipline to clamp down on the deeper determinants of inflation.

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Nominal Convergence

In the chapters on short- and long-run exchange rates, we explored some of the central implications of a fixed exchange rate, implications that also apply when two countries adopt a common currency (i.e., a fixed exchange rate of 1). Let’s consider three implications:

- Under a peg, the exchange rate must be fixed or not vary beyond tight limits.
- Purchasing power parity (PPP) then implies that the two countries’ inflation rates must be very close.
- Uncovered interest parity (UIP) then implies that the two countries’ long-term nominal interest rates must be very close.

In fact, we may recall that the Fisher effect says that the inflation differential must equal the nominal interest rate differential—so if one is small, the other has to be small, too.

These three conditions all relate to the nominal anchoring provided by a peg, and they roughly correspond to the first three Maastricht criteria in Table 21-3.

The rules say that a country must stay in its ERM band (with no realignment) for two years to satisfy the peg rule. It must have an inflation rate “close to” that of the three lowest-inflation countries in the zone to satisfy the inflation rule. And it must have a long-term interest rate “close to” that in the three low-inflation countries. All three tests must be met for a country to satisfy the admission criteria.

13 The two-year requirement for the ERM means a country can’t cheat by stabilizing its currency at the last minute, possibly in an opportunistic way to get in at a favorable (depreciated) rate that boosts demand for the country’s output. Still, as currently interpreted, the ERM rule means that a currency only has to stay within the wide (post-1993) ±15% ERM bands, so the constraint is not all that tight. Also, following the exchange rate crises of 1992 in the United Kingdom and Sweden that gave the ERM a bad name, the two-year ERM membership rule might be waived if either of these two countries wishes to adopt the euro.
What is the economic sense for these rules? They appear, in some ways, superfluous because if a country credibly pegged to (or has adopted) the euro, theory says that these conditions would have to be satisfied in the long run anyway. For that reason they are also difficult to criticize—except to say that, if the rules are going to be met anyway, why not “just do it” and let countries join the euro without such conditions? The answer relates to our earlier discussion about inflation bias. If two countries with different inflation rates adopt a common currency, their inflation rates must converge—but to what level, high or low?

The way the rules were written forces countries to converge on the lowest inflation rates in the zone. We have argued that this outcome is needed for low-inflation countries to sign up, although it will require possibly painful policy change in the high-inflation countries. The Maastricht criteria ensure that high-inflation countries go through this pain and attain credibility by demonstrating their commitment to low inflation before they are allowed in. This process supposedly prevents governments with a preference for high inflation from entering the Eurozone and then trying to persuade the ECB to go soft on inflation. These three rules can thus be seen as addressing the credibility problem in a world of inflation bias. All current euro members successfully satisfied these rules to gain membership, and the end result was marked inflation convergence as shown in Figure 21-7. Current and future ERM members are required to go through the same test.

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Figure 21-7

### Inflation Convergence

To meet the Maastricht Treaty’s convergence criteria, the first 12 members of the Eurozone had to reduce their inflation level below a moving target. This target was equal to average inflation in the three lowest-inflation countries in the bloc plus 1.5 percentage points. This process ensured that the Eurozone began with a low inflation rate. The countries currently in the ERM must pass the same test before they can adopt the euro.


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14 The interest rate rule relates to the long-term interest rate for government borrowing, not the short-term rate that is central to UIP. Over the long run, the two move together and on average are generally separated by a positive term premium. Under a peg, then, countries will share identical long-term interest rates if and only if (1) there is no risk premium difference between them and (2) there is no term premium difference either. In practice, risk premiums and term premiums are higher for riskier borrowers, so in some ways this rule is also related to fiscal discipline (discussed in the next section).
Fiscal Discipline The Maastricht Treaty wasn’t just tough on inflation, it was tough on the causes of inflation, and it saw the fundamental and deep causes of inflation as being not monetary, but fiscal. The other two Maastricht rules are openly aimed at constraining fiscal policy. They are applied not just as a condition for admission but also to all member states once they are in. The rules say that government debts and deficits cannot be above certain reference levels (although the treaty allows some exceptions). These levels were chosen somewhat arbitrarily: a deficit level of 3% of GDP and a debt level of 60% of GDP. However arbitrary these reference levels are, there still exist economic rationales for having some kinds of fiscal rules in a monetary union in which the member states maintain fiscal sovereignty.

Why might inflation ultimately be a fiscal problem? Consider two countries negotiating the treaty, one with low debt levels (e.g., Germany) and one with high debt levels (e.g., Italy). Germany has several possible fears in this case. One is that if Italy has high nominal debt (measured in lira, but soon to be measured in euros), Italy will lobby for high inflation once in the union (because inflation destroys the real value of the government’s debt). Another fear is that Italy has a higher default risk, which might result in political pressure for the ECB to break its own rules and bail out Italy in a crisis, which the ECB can do only by printing euros and, again, generating more inflation.

The main arguments for the fiscal rules are that any deal to form a currency union will require fiscally weak countries to tighten their belts and meet criteria set by fiscally strong countries in order to further ensure against inflation.

Criticism of the Convergence Criteria Because these rules constitute the main gatekeeping mechanism for the Eurozone, they have been carefully scrutinized and have generated much controversy.

First, these rules involve asymmetric adjustments that take a long time. In the 1980s and 1990s, they mostly involved German preferences on inflation and fiscal policy being imposed at great cost on other countries. Germany had lower inflation and larger surpluses than most countries, and the criteria were set close to the German levels, not surprisingly. To converge on these levels, tighter fiscal and monetary policies had to be adopted in countries like France, Italy, Portugal, and Spain while they tried to maintain the peg (to obey rule 1: staying in their ERM bands). As we saw in the chapter on output, exchange rates, and macroeconomic policy, fiscal contractions are even more contractionary under a peg than under a float. Such policies are politically costly, and hence the peg may not be fully credible. As we saw in the chapter on crises, foreign exchange traders often have doubts about the resolve of the authorities to stick with contractionary policies, and these doubts can increase the risk of self-fulfilling exchange rate crises, as happened in 1992. The same costs and risks now weigh on current Eurozone applicants seeking to pass these tests.

Second, the fiscal rules are seen as inflexible and arbitrary. The numerical targets have little justification: Why 3% for the deficit and not 4%? Why 60% and not 70% for the debt level? As for flexibility, the rules in particular pay no attention to the stage of the business cycle in a particular applicant country. A country in a recession may have a very large deficit even if on average the country has a government budget that is fairly balanced across the whole business cycle. In other words, the well-established arguments for the prudent use of countercyclical fiscal policy (including even nondiscretionary automatic stabilizers) are totally ignored by the Maastricht criteria. This is an ongoing problem, as we see in a moment.
Third, whatever good might result from the painful convergence process, it might be only fleeting. For example, the Greek or French governments of the 1990s may have subjected themselves to budgetary discipline and monetary conservatism. Have their preferences really changed or did they just go along with the rules (or pretend to) merely as a way to get in? The same question applies to current Eurozone applicants. As Figure 21-8 shows, once the original dozen members of the Eurozone were in the club, their commitment to fiscal discipline (as reflected in their fiscal deficits) started to weaken in the subsequent decade, in some cases dramatically so.

The problems just noted do not disappear once countries are in the Eurozone. Countries continue to have their own fiscal policies as members of the Eurozone, and they all gain a share of influence on ECB policy through the governance structure of the central bank. Countries’ incentives are different once the carrot of EMU membership has been eaten.

**Sticking to the Rules**

If “in” countries desire more monetary and fiscal flexibility than the rules allow, and being “in” means they no longer risk the punishment of being excluded from the Eurozone, then a skeptic would have to expect more severe budgetary problems and more lobbying for loose monetary policy to appear once countries had entered the Eurozone.

On this point, as we see, the skeptics were to some extent proved right, but the problems they identified were not entirely ignored in the Eurozone’s design. On the monetary side, success (low and stable Eurozone inflation) would rest on the design of the ECB as an institution that could withstand political pressure and act with independence to deliver low inflation while ignoring pleas from member governments. In that respect, we have already noted the formidable efforts to make the ECB as independent as possible. On the fiscal side, however, success (in the shape of adherence to the budgetary rules) would rest on the mechanisms established to enforce the Maastricht fiscal criteria. This did not turn out quite so well.
The Stability and Growth Pact  Within a few years of the Maastricht Treaty, the EU suspected that greater powers of monitoring and enforcement would be needed. Thus, in 1997 at Amsterdam, the EU adopted the Stability and Growth Pact (SGP), which the EU website has described as “the concrete EU answer to concerns on the continuation of budgetary discipline in Economic and Monetary Union.” In the end, this provided no answer whatsoever and even before the ink was dry, naysayers were unkind enough to term it the “stupidity pact.”

Throwing another acronym into the mix, the SGP was aimed at enforcing the 3% deficit rule and proposed the following to keep states in line: a “budgetary surveillance” process that would check on what member states were doing; a requirement to submit economic data and policy statements as part of a periodic review of “stability and convergence programs”; an “early warning mechanism” to detect any “slippage”; a “political commitment” that “ensures that effective peer pressure is exerted on a Member State failing to live up to its commitments”; and an “excessive deficits procedure” with “dissuasive elements” in the event of failure to require “immediate corrective action and, if necessary, allow for the imposition of sanctions.”

The shortcomings of the SGP, which became clear over time, were as follows:

- Surveillance failed because member states concealed the truth about their fiscal problems. Some hired private-sector accounting firms to make their deficits look smaller via accounting tricks (a suspiciously common deficit figure was 2.9%). In the case of Greece, the government simply falsified deficit figures for the purpose of gaining admission to the euro in 2001 and owned up once it was in.

- Punishment was weak, so even when “excessive deficits” were detected, not much was done about it. Peer pressure was ineffective, perhaps because so many of the governments were guilty of breaking the pact that very few had a leg to stand on. Corrective action was rare and states “did their best,” which was often not very much. Formal SGP disciplining processes often started but never resulted in actual sanctions because heads of government, at summits of the European Council, proved very forgiving of each other and unwilling to dispense punishments.

- Deficit limits rule out the use of active stabilization policy, but they also shut down the “automatic stabilizer” functions of fiscal policy. Recessions automatically lower government revenues and raise spending, and the resulting deficits help boost aggregate demand and offset the recession. This makes deficit limits tough to swallow, even if monetary policy autonomy is kept as a stabilization tool. In a monetary union, where states have also relinquished monetary policy to the ECB, the pain of hard fiscal rules is likely to be intolerable.

- Once countries joined the euro, the main carrot enticing them to follow the SGP’s budget rules (or to pretend to follow them) disappeared. Hence, surveillance, punishment, and commitment all quite predictably weakened once the euro was up and running.

These failures of the SGP came to light only gradually, but by 2003 the pact was in ruins, once it became clear that France and (ironically) Germany would be in breach.
of the pact and that no serious action would be taken against them. As we see next, fiscal problems in the Eurozone have only gotten worse, especially since the Great Recession, although whether the principles of the SGP can, or should, be reinstated is the subject of ongoing disagreement.

4 The Eurozone in Crisis, 2008–13

For almost 10 years, Eurozone policymaking focused on two main macroeconomic goals: the ECB’s monetary policy credibility and inflation target, seen as a broad success given low and stable inflation outcomes; and the Eurozone governments’ fiscal responsibility, seen as a failure given the general disregard for the SGP rules. However, policymakers (like their counterparts all over the world) failed to spot key macroeconomic and financial developments that were to plunge the Eurozone into crisis in 2008 and beyond.

Boom and Bust: Causes and Consequences of an Asymmetrical Crisis

With a fanatical devotion to inflation targeting, the ECB (and its constituent central banks) paid insufficient attention to what was historically a primary responsibility of central banks, namely, financial stability. Within some parts of the Eurozone (as elsewhere) borrowers in the private sector were engaged in a credit-fueled boom. In other parts of the Eurozone, savers and banks funneled ever more loans toward those borrowers. The creditors were core Northern European countries like Germany and the Netherlands; the debtors were fast-growing peripheral nations such as Greece, Ireland, Portugal, and Spain (so called because they are located on the periphery of Europe).

In Greece, much of the borrowing was by a fiscally irresponsible government that was later found to be falsifying its accounts. In the other peripheral nations, however, the flow of loans funded rapid investment and consumption surges, including a residential construction boom that in places (e.g., Dublin and Barcelona) rivaled the property bubble in parts of the United States. In Ireland and Spain, even as this boom took place, the governments had maintained a fiscal position close to balance, or even surplus; the asymmetric boom helped them at that time. The trouble was to come when the boom gave way to a severe asymmetric bust.

Growth slowed sharply when the global boom turned to a bust that dragged Europe down with it. Much of the construction and overconsumption in the peripheral economies turned out to be unjustified and unsustainable. Along the way, however, the boom had bid up the prices of assets (notably houses) and of many nontraded services (and thus wages), and had left households in the peripheral nations saddled with high debts and uncompetitive, high wage levels that could not be sustained once the artificially high demand of the boom years was exhausted. These events were bad enough, but other factors made things worse.

A vicious spiral began in the peripherals. Construction and nontraded sectors started to collapse, which lowered demand. House prices fell, as did the value of firms. Wealth collapsed, lowering demand further. Output fell in the short run, as did tax revenues. Households cut spending further, and the governments also tightened their belts. With everyone suffering lower incomes and wealth, and the economy contracting, banks tightened lending, which hurt demand even more. As the spiral continued, banks found that their loans were often turning bad, and that many debts
would be repaid only partially, if at all. Because much of the periphery’s lending came from banks connected to the Northern European core, these developments triggered tighter credit everywhere in the Eurozone as banks turned cautious. Lending growth for the whole Eurozone was virtually frozen for five years.

The Policymaking Context The Eurozone faced hard choices after the crisis hit in 2008, but the policy measures taken were more timid and quickly reversed, as compared with actions in other countries.

Why? The choices made can potentially be explained by considering the unique features of the European monetary union. We highlight six points.

■ Limited Lender of Last Resort The Eurozone is a monetary union, and has a common central bank, but the ECB is highly inflation averse, is restricted from direct government finance, and is required not to engage in lender of last resort actions to banks lacking good collateral. It is therefore unwilling to intervene with emergency liquidity in weak local banks, except with strict guarantees from the local sovereign government; and it has been generally unwilling (with some exceptions) to intervene to ensure weak sovereigns remain funded at sustainable interest rates.

■ No Fiscal Union The Eurozone lacks a political-fiscal union, and has no fiscal policy tools, because there is no central budget that can be used to engage in cross-country stabilization of shocks. This is in large part due to the absence of a central European government (executive power) standing above the sovereigns (the member states). In contrast, in the United States, with a strong center, substantial federal-level automatic transfers between states act as a significant buffer. In fact, the Eurozone has the reverse problem: when the national sovereigns lose credit market access on reasonable terms, they must beg for assistance from the EU, ECB and the International Monetary Fund (IMF), the so-called troika. As a condition for granting assistance, these organizations have imposed harsh terms that require the countries to undertake fiscal contractions during their slumps, amplifying their business cycles. Overall, even for countries not in a rescue program, the EU authorities have sought even stricter fiscal rules and monitoring since the crisis, adding stringent new rules for all countries in addition to the Maastricht and SGP protocols. Greece has suffered the most extreme version of this external interference. In 2015 the troika imposed more harsh conditions, and even though a referendum rejected the terms, the Greek government felt it had no choice but to agree so as to avoid the threat of a forced exit from the euro (“Grexit”) and the financial crisis that would follow.

■ No Banking Union The Eurozone also lacks even the minimal political-fiscal cooperation to create a banking union, meaning that responsibility for supervising banks, and resolving or rescuing them when they are insolvent, rests with national sovereigns. In the United States, in contrast, the Federal Deposit Insurance Corporation and other institutions underpin a true federal-level banking union with a common pool of fiscal and monetary resources. Critically, the insurance of an individual U.S. state’s banking system does not depend at all on the fiscal position of the state itself. Despite the EU’s claims to have established a banking union in recent years, the actual structure is inadequate. The supervision and regulation of banks is run out of Frankfurt,
but no common pool of fiscal resources at the Eurozone level has been created to back deposit insurance. Instead, from 2016, the “first loss” in the case of bank losses falls on “bailed in” equity holders, bond holders, and large depositors of the institution; any further loss then falls on the member state itself. There is no cross-country pooling of risk, mainly because strong countries understandably do not want to share risk with weak countries. But this unwillingness to create cross-country insurance, in turn, leads to a deeper problem: the doom loop.

■ **Sovereign–Bank Doom Loop** Because there isn’t a banking union or a political-fiscal union, a Eurozone country’s national banks tend to hold the local national sovereign’s debt; but, in turn, these sovereigns can end up bearing large fiscal costs to repair banking systems and protect depositors from losing their money, under the current rules just described. The banks and the sovereign can then enter into a so-called “doom loop”: weak banks’ losses can damage the sovereign’s creditworthiness just when it may need funds to resolve a crisis; simultaneously, a weak sovereign’s debt can decline in value, damaging the balance sheets of local banks where such local debt is predominantly held. In contrast, there is no local U.S. doom loop: an Illinois bank does not hold Illinois debt (so an Illinois default would not hurt Illinois banks), and an Illinois bank failure is handled by the Federal authorities (and would not burden the state of Illinois itself).

■ **Labor Immobility** Because the Eurozone is especially weak on labor mobility (one of the OCA criteria), a local economic slump (say, in Spain) is likely to persist for longer because unemployed workers cannot migrate easily to another country where there are better opportunities. After the crisis, local long-term unemployment rates (especially among the youth) rose to very high levels in some countries, despite stronger economic conditions in the core Eurozone countries. The United States saw more labor migration between asymmetrically affected areas in its slump.

■ **Exit Risk** We know that after barely more than a decade, the credibility of the Eurozone as permanent, with no possibility of exit, is not 100% certain. Events have shown that the risk of a country’s exit can put financial pressure on that country. If investors suspect that a country will exit the Eurozone, they will want to pull their money out of the country’s banks and sell its debt to avoid potential losses. The result is capital flight to safe havens, and higher risk premiums on local interest rates. These reflect the nonzero “redenomination risk” of local assets out of euro and into a new, and much depreciated, local currency, plus the risk of losses of depositors via bank restructuring. This dynamic was much in evidence in Cyprus in 2013, for example.

Many of the events in the timeline of 2008–13 can be better understood if we keep these six major points in mind. We now take a closer look at this period, with some key macroeconomic data present for reference in Figure 21-9.

**Timeline of Events** The first big problem occurred in April 2010 when Greece requested help as its country risk premium spiked and it could no longer borrow at sustainable rates, an action that roiled global financial markets. The EU/ECB/IMF troika jointly devised a plan to stave off the disaster of an uncontrolled default-cum-banking
Key Macroeconomic Data for the Eurozone Crisis  These six charts cover the Eurozone in the period 2004 to 2013 and show the evolution of output, unemployment, government deficits, interest rates and public debt, and the supply of credit by banks. The divergent fortunes of Germany and the five peripheral countries are clearly visible.

Data from: IMF, Eurostat, OECD.
crisis. Together, the troika would provide €110 billion of loans that would give Greece two to three years of guaranteed funding. This help would only be provided under strict conditions that the Greek government radically cut its spending. Financial market turmoil continued, however, and the troika announced further measures for Greece on May 7, 2010.

To help other troubled nations (Ireland, Spain, Portugal, and Italy were all at risk), all EU countries established a fund to provide loans of up to €440 billion. This fund, now known as the *European Stability Mechanism* (ESM), was founded on the good credit of the other EU members and was backed by a once unimaginable bond-buying commitment from the ECB. In addition, funds of up to €60 billion from the EU budget provided a theoretical credit line of up to €500 billion. A further sum of €250 billion was pledged by the IMF. The troika believed that these funds would be large enough to cope with any financing problems that might arise in Ireland and Portugal. If financing problems had occurred in larger countries like Spain (or, even worse, Italy), the troika would have had to come up with more resources.

The announcement of these measures kept the panic under control only for a time. The risk premiums of the peripherals spiked again in November 2010, after EU leaders said they wanted to possibly impose losses on bondholders in any future rescues. When the EU leaders made this announcement, financial markets realized that they could suffer losses not only on their Greek bonds but on their bonds issued by other weak countries on the periphery. Even though the EU officials backtracked, the financial markets continued to worry and the borrowing costs for all peripherals started to climb. As their borrowing costs rose, they too lined up to seek official bailout programs from the troika, often under some duress.

The troika thought their official funding would help keep the periphery countries’ governments afloat until they could get back on their feet again. But Greece’s debt was so high that it eventually had to impose a partial default in February 2012. During May and June of 2012, many thought that Greece was on the verge of exiting the Eurozone and there was further turmoil in financial and political circles. Greece remained in the Eurozone, but by 2013 the Greek unemployment rate was 27%; among youths, the unemployment rate was 58%.

By mid-November 2010, Ireland approached the troika to ask for an ESM program, which further shook confidence in the peripherals and in the euro itself. The Irish had a self-made problem. In 2008–09 Ireland guaranteed the safety of deposits in their private banks to prevent bank runs by bank debt holders that would cause even more economic pain. This method of preventing bank failures did not solve the problem of the private losses, it just transferred the financial sector’s massive losses to the government. By late 2010, the Irish government had to admit a loss of about 20% of GDP just to cover the banks’ bad debts. The overall fiscal deficit for Ireland that year was an unheard of 32% of GDP. Financial markets got scared, and the Irish government’s interest rate climbed astronomically. They too were pushed into a program of harsh austerity involving public sector cuts and higher taxes. Unemployment rose from 4% in 2006 to 15% by 2012, and among
ys it rose to 30%. Ireland was able to borrow affordably in financial markets again in July 2012, but the economy remained weak.

Spain also faced a banking crisis, and although the Spanish government did not intervene as quickly or as generously as did the Irish government, the losses could not be hidden forever, and the country’s economy suffered. Banking systems in countries like Spain and Ireland have become so impaired that they do not lend much, and when they do, they do not pass on the ECB’s low interest rates to local borrowers. The monetary policy transmission mechanism is broken as low ECB interest rates are not passed through to local firms and consumers. The banks may try to survive as “zombie banks,” but they do not help the real economy very much. Similar banking stresses occurred in Portugal and Italy, and by 2013 the interest rates at which Spanish, Portuguese, and Italian firms could borrow from their countries’ banks were 2 to 3 percentage points higher than the rates available to German or Austrian firms, causing even greater asymmetry.

Even though Portugal and Spain were not initially as damaged as Greece and Ireland, they shared in the collapse of economic growth in the Eurozone periphery. Spain’s banking losses were continually revealed to be larger than previously admitted, and Portugal’s growth rate—already bad before the crisis—got even worse. The continuing deterioration in fiscal conditions caused their lending rates to rise, so that in 2011 and 2012 Portugal and Spain, respectively, also reluctantly entered into bailout programs. By 2013 Spanish unemployment reached 27% (56% among youths); in Portugal the rates reached 11% and 38%, respectively.

As of mid-2013, the latest country to enter an official bailout program was Cyprus, a small but telling example of how the Eurozone might cope with further distress. Cyprus had its own boom and bust, a housing bubble of sorts that had been fueled by an influx of foreign wealth (much of it Russian) seeking a safe, offshore tax haven. Cyprus’s economy stalled in 2011 after its government credit rating had been downgraded. By 2012, banking problems in Cyprus were apparent: Cypriot banks still held significant Greek debt, and were badly hit when the troika decided to allow a Greek default. As early as July 2012 Cyprus began months of confusing and contentious negotiations with the troika. As rumors emerged that bank depositors might suffer losses, a slow bank run developed in late 2012 and early 2013.

As it turns out, the rumors were well founded. On an extraordinary weekend in March 2013 the troika and the Cyprus government talked long into the night and finally made a deal that would impose significant “taxes” on all bank deposits, including those below the EU’s legally guaranteed level of €100,000. All hell broke loose: angry protests began, people tried to get their money out of the banks and out of the country, parliament rejected the deal, and it took another weekend to sort out a different compromise that protected those with less than €100,000 in the bank, but imposed losses on everyone else. Along the way, the government maneuvered around other laws and treaties: it imposed capital controls on banks and at the border, and also shunted aside the priority of depositors and creditors at Laiki Bank and the Bank of Cyprus (so that the ECB would be made a preferred creditor ex post; its loans to Laiki, secured with specific collateral, would be transferred whole, without losses, and the losses would be forced onto other secured and unsecured debts of the bank’s large creditors, and, remarkably, those of the impaired-yet-acquiring Bank of Cyprus, too). Even though the entire operation was widely judged a political and economic disaster, the president of the Eurogroup (the organization of Eurozone finance ministers)
described the outcome as a “template” for handling future crises, a view echoed by ECB President Mario Draghi some days later.

**Who Bears the Costs?** The view that countries should bear all of the pain for their crises is a consequence of the weak level of cooperation and collective burden-sharing in the Eurozone project. As we have noted, this is very different from the U.S. monetary union where political, fiscal, and banking union structures work together to help spread risks and absorb shocks. The core countries of the Eurozone have made little effort to provide assistance to the peripherals, beyond lending them money which will supposedly have to be paid back one day. The belief has been that every country is responsible for its own fiscal position.

But there is some inconsistency in the Eurozone’s approach. Note that in principle the governments (and the banks) of the peripherals could have been allowed to default, and resume operation in a more creditworthy state. Instead, the EU decided on a “moral hazard” or “bailout” approach of trying to ensure that no bank or government creditors were ever hurt. This controversial step had several motivations, many of them understandable, including the desire to protect core EU banks, to protect the collateral of the ECB, to avoid further contagion and panic in financial markets, and perhaps to defend the reputation of the euro as a serious global currency. These decisions cast aside the prior notion that every Eurozone country was responsible unto itself and the idea that the ECB would not go along in any bailouts. Politically, this course of action would bring about much greater centralization of power, with the European and/or IMF authorities dictating more and more terms on which periphery countries in official bailout programs could run their economic policies.

Because the EU leadership desperately wanted to prevent any country from defaulting, the ECB (like central banks in centuries past) became the only Eurozone institution willing and able to lend a hand. The ECB continued to lend to the private banks against the ever-weaker collateral of the peripheral governments’ bonds. Prior to the crisis, the ECB had supposedly said it would refuse to lend against such government bonds when their ratings fell, but when push came to shove, the ECB relaxed its lending criteria again and again, because to do otherwise would have triggered a funding crisis for both the banks and their respective governments. By 2012, new ECB president Mario Draghi was promising to do “whatever it takes” to save the euro, but it isn’t clear what he meant by that statement. We still do not know, for example, the exact scope and terms of the Outright Monetary Transactions program, a proposed ECB bond-buying program. But some Eurozone officials, such as German Bundesbank head Jens Weidmann, are not eager for the ECB to act as a backstop in government bond markets. He and others fear that undertaking such programs will lead to fiscal dominance, money printing, and inflationary budget financing.

**From Double Dip to Brexit and Beyond...** To the skeptical, the Eurozone/ECB approach has been a giant “extend and pretend” refinancing scheme to postpone tough choices at the nexus of monetary, fiscal, and banking policies. Given the dismal growth path that is expected to continue into the future, the approach will likely fail unless it makes a plan to write down or restructure the underlying losses of banks and governments in the periphery, and even some in the core. The Eurozone needs to have plans and policies in place that will allow it to recapitalize failing banks and restore fiscal health to the governments.
The EU, ECB, IMF, and all of the Eurozone’s member governments have been slow to understand (or even agree on) what is happening, and so it has been difficult for them to figure out what to do. As a result of this confusion, they send different signals to different program countries at different times. It remains unclear how these losses will be finally recognized. In addition, political and social unrest remains high, which is hardly surprising given the persistently high levels of unemployment and stagnant living standards, and, in recent years, rising public concerns in several countries about immigration and terrorism. In current and former program countries, debt-to-GDP levels remain high. Yet one way or another, through cuts in public spending, losses for depositors, levies for taxpayers, defaults or inflation for bondholders, or all of the above, some losses will eventually be felt and dealt with. We just don’t know how the story will end yet.

A sudden growth miracle could quickly erase all of these problems. But many even doubt whether the current policies will be enough to maintain stability and prevent a continued long depression in the short to medium term. The ECB monetary policy stance changed little in 2010–13, but the governments of the Eurozone turned very hard in the direction of fiscal austerity, which led to a change in the total Eurozone government structural budget surplus of between 3 and 4 percentage points of GDP from 2010 to 2013.

Not coincidentally, in late 2011 the Eurozone went into a double-dip recession, and by early 2013 had recorded six straight quarters of negative growth. Measured from the last peak in output, the slump had dragged on in Europe for about as long as the Great Depression of the 1930s. To service their large euro-denominated debt, countries like Greece, Ireland, Portugal, Spain, and Cyprus need to see their economies recover and their nominal GDP grow (as measured in euros). In the near term, however, growth forecasts for these economies are dismal. A rise in net exports would seem the best hope, but this would normally require a real depreciation in a nation’s currency. Because peripherals have no currencies to depreciate (they use the euro), the only way they can restore competitiveness and output is by a large decline in wages and costs, a tough process that is rarely successful, and which is being forced along by high unemployment. In addition to severe social and political pain, this harsh deflation may keep nominal GDP low and falling for a long time, causing the countries’ debt burdens to grow ever larger as a fraction of income, despite their best efforts to cut government expenditures. By lowering demand and increasing unemployment, the austerity-under-duress undertaken by the peripherals may have been self-defeating.

If all these efforts to keep the Eurozone intact fail, and if political will evaporates, one or more peripheral countries may default, and even exit the Eurozone. In that event, huge economic sacrifices and deep social damage will have been imposed on their populations, seemingly for nothing. Core countries may also take large losses if they attempt to prop up the system, and they could balk at a “transfer union” based on payments to a group of peripherals to defend the honor of their single currency project. If uncontained, the potentially serious side effects of such an event would surely be an adverse shock for the global economy and would be an incredibly serious crisis for Europe itself. Should a scenario like this unfold, tensions will rise, and the Eurozone in its present form might be in peril (see Headlines: A Bad Marriage?).

Although danger signals have been flashing for some time, the most recent and dramatic blow to anyone’s confidence in Europe’s stable politics and solid institutions was delivered by a 2016 referendum in which the British people voted to leave the
**A Bad Marriage?**

As the Eurozone crisis continued into 2013, Martin Wolf of The Financial Times summarized the dismal situation.

Is the eurozone crisis over? The answer is: “yes and no”. Yes, risks of an immediate crisis are reduced. But no, the currency’s survival is not certain. So long as this is true, the possibility of renewed stress remains.

The best indicator of revived confidence is the decline in interest-rate spreads between sovereign bonds of vulnerable countries and German Bunds. Irish spreads, for example, were just 205 basis points on Monday, down from 1,125 points in July 2011. Portuguese spreads are 465 basis points, while even Greek spreads are 946 basis points, down from 4,680 points in March 2012. Italian and Spanish spreads have been brought to the relatively low levels of 278 and 362 basis points, respectively. [1 basis point = 0.01 percentage points.]

If all members of the eurozone would rejoin happily today, they would be extreme masochists. It is debatable whether even Germany is really better off inside: yes, it has become a champion exporter and runs large external surpluses, but real wages and incomes have been repressed. Meanwhile, the political fabric frays in crisis-hit countries. Anger at home and friction abroad plague both creditors and debtors. Behind this improvement lie three realities. The first is Germany’s desire to keep the eurozone intact. The second is the will of vulnerable countries to stick with the policies demanded by creditors. The third was the decision of the European Central Bank to announce bold initiatives—such as an enhanced longer-term refinancing operation for banks and outright monetary transactions for sovereigns—despite Bundesbank opposition. All this has given speculators a glorious run.

Yet that is not the end of the story. The currency union is supposed to be an irrevocable monetary marriage. Even if it is a bad marriage, the union may still survive longer than many thought because the costs of divorce are so high. But a bad romance is still fragile, however large the costs of breaking up. The eurozone is a bad marriage. Can it become a good one?

A good marriage is one spouses would re-enter even if they had the choice to start all over again. Surely, many members would refuse to do so today, for they find themselves inside a nightmare of misery and ill will. In the fourth quarter of last year, eurozone aggregate gross domestic product was still 3 per cent below its pre-crisis peak, while US GDP was 2.4 per cent above it. In the same period, Italian GDP was at levels last seen in 2000 and at 7.6 per cent below its pre-crisis peak. Spain’s GDP was 6.3 per cent below the pre-crisis peak, while its unemployment rate had reached 26 per cent. All this cost-hitting economies, save for Ireland’s, have been in decline for years. The Irish economy is essentially stagnant. Even Germany’s GDP was only 1.4 per cent above the pre-crisis peak, its export power weakened by the decline of its main trading partners.

What, then, needs to happen to turn this bad marriage into a good one? The answer has two elements: manage a return to economic health as quickly as possible, and introduce reforms that make a repeat of the disaster improbable. The two are related: the more plausible longer-term health becomes, the quicker should be today’s recovery.

A return to economic health has three related components: write-offs of unpayable debt inherited from the past; rebalancing; and financing of today’s imbalances. In considering how far all this might work, I assume that the risk-sharing and fiscal transfers associated with typical federations are not going to happen in the eurozone. The eurozone will end up more integrated than before, but far less integrated than Australia, Canada or the US.

On debt write-offs, more will be necessary than what has happened for Greece. Moreover, the more the burden of adjustment is forced on to crisis-hit countries via falling prices and wages, the greater the real burden of debt and the bigger the required write-offs. Debt write-offs are likely to be needed both for sovereigns and banks. The resistance to recognising this is immensely strong. But it may be futile.

The journey towards adjustment and renewed growth is even more important. It is going to be hard and long. Suppose the Spanish and Italian economies started to grow at 1.5 per cent a year, which I doubt. It would still take until 2017 or 2018 before they returned to pre-crisis peaks: 10 lost years. Moreover, it is also unclear what would drive such growth. Potential supply does not of itself guarantee actual demand.

Fiscal policy is contractionary. Countries suffering from private sector debt overhangs, such as Spain, are unlikely to see a resurgence in lending, borrowing and spending in the private sector. External demand will be weak, largely because many members are adopting contractionary policies at the same time. Not least because it is far from clear that the competitiveness of crisis-hit countries has improved decisively, except in the case of Ireland, as Capital Economics explains in a recent note. Indeed, evidence suggests that Italian external competitiveness is worsening, relative to Germany’s. Yes, the external account deficits have shrunk. But much of this is due to the recessions they have suffered.

*Continued on next page*
EU. The United Kingdom is now set on a complex and difficult multiyear project to divorce itself from the EU, and to form new relationships (with Europe and the world) that are as yet unclear. However, at the time of that event, polls in many other EU countries showed their citizens were eager to have similar referenda, and some polls showed that other countries would also vote to leave the EU if given the chance to do so. More broadly, and aside from polls and direct referenda, a mood of more populist politics was spreading across Europe, reflecting serious discontent among average voters at the economic and political malaise of the region since the start of the Great Recession. Parties on the far left and far right, standing on platforms often hostile to the euro or the EU, or critical of policies like free migration, have been gaining ground. Should these trends continue, Brexit could turn out to be a warning signal to the EU as the center struggles to hold. Thus the institutions of the EU and the euro seem likely to face continued challenges for many years to come.

5 Conclusions: Assessing the Euro

The euro project must be understood at least as much in political terms as in economic terms. We have seen how the OCA criteria can be used to examine the logic of currency unions, but in the case of the EU these are not the whole story: Europe does not appear to satisfy the narrow definition of an OCA. In contrast, some of the most important criteria for the survival of the euro may relate to the non-OCA criteria that were included in the Maastricht Treaty. How well can the euro hold up in the future? Even after the crisis, both optimistic and pessimistic views persist.

**Euro-Optimists** For true optimists, the euro is already something of a success: it has functioned in a perfectly adequate way (apart from a crisis that has troubled many other countries too) and can be expected to become only more successful as time goes by. More countries are lining up to join the Eurozone. Even if there are costs in the short run, the argument goes, in the long run the benefits will become clear.

Optimists tend to stress that the OCA criteria might be self-fulfilling. In the long run, they believe the euro will create more trade in the Eurozone. It may also create more labor and capital mobility. They downplay the risk that shocks will become more...
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asymmetric, or at least think this will be outweighed by greater market integration. This will enhance the Eurozone’s claim to be an OCA. Since the euro is only a few years old, data are scarce, and these claims can be neither proved nor refuted decisively at present. However, the little evidence we have suggests that although labor mobility has not changed much, goods and services trade in the Eurozone is rising (even if no faster than outside) and that capital market integration has perhaps improved even more dramatically, as measured by the increase in cross-border asset trade and foreign direct investment flows in the Eurozone.16

Optimists also tend to believe that the ECB will prove to be a strong, credible, independent central bank that can resist political interference or the temptation to print money for the sake of expediency. On paper, the ECB certainly has such characteristics, with a very high degree of independence compared with other central banks. Again, the costs of a common currency may be large in the short run, but as long as the ECB can deliver on its low-inflation target, the optimists reckon it will, in the end, command the respect of the peoples and politicians of the Eurozone.

At a global level, optimists note that the euro is increasingly becoming a reserve currency for foreign central banks, a vehicle currency for trade, and is now the dominant currency used in international bond markets. These developments show the market’s confidence in the currency and also augur well for the future, since trade and financing costs may be expected to fall as the euro becomes more widely used around the globe.

Finally, like the “father” of the EU, Jean Monnet, the optimists believe that the adoption of the euro, like entry to the EU itself, means “no going back”: there is simply no imaginable political future for Europe apart from union. Neither the euro nor the EU has exit mechanisms. Perhaps such an idea was inconceivable to the institutional designers. For true believers, the EU project ultimately rests on a deep belief in the political logic of the process and in a presumed common destiny for the peoples of Europe. For them, the great crisis and economic suffering of the present are not a major concern: even if there are large costs to be shouldered in the short run, optimists believe that the long-run gains will make it all worthwhile.

Euro-Pessimists For true pessimists, the preceding arguments are not convincing. Market integration will not radically change because the impact of the euro on (already high) intra-EU trade levels will be small. Because cultural and linguistic barriers will persist, labor migration will be limited and held back even more by inflexible labor market institutions in most countries. In all markets, regulatory and other frictions will remain, and there is resistance to further economic integration. A 2005 EU directive to liberalize services proved unpopular and contributed to the failure of referenda on a proposed EU Constitutional Treaty in France and the Netherlands. Across the EU, the full implications of a single market in all dimensions (goods, services, capital, and labor) are only now being dimly understood by some stakeholders. As reality bites, the European Commission, national governments, political parties, and voters themselves increasingly disagree about how far and how fast this process should go.

If integration stops for lack of political support, a key economic rationale for the euro unravels. If political support for the EU stalls, then the political logic is weakened. If some

countries press ahead for a closer, more highly integrated union of countries while others stand aside, the sense of a common destiny among all EU nations will be undermined.

On monetary policy, pessimists note that there is often wide divergence in the countries of the Eurozone. Low-growth, low-inflation countries tend to want looser monetary policy. High-growth, high-inflation countries tend to want tighter monetary policy. If different countries desire very different policies from the ECB, tensions may rise and governments may lose respect for the ECB’s independence. The euro could also be threatened by fiscal problems. The rules say governments cannot lobby the ECB for low interest rates or high inflation to make their debt payments lower or to reduce the real value of their debts, nor can they urge a weaker euro to promote growth. But as history has typically shown, governments tend to trump central banks and will push them around if times get tough. Pessimists note that the Maastricht fiscal rules have evaporated and the SGP has been emptied of meaning. If some nations lobby for looser monetary or fiscal policies, the more fiscally prudent or inflation-averse nations may object, and the resulting fight will cause uncertainty and undermine the credibility of the euro and the ECB.

But the ECB is already in a protracted struggle. Prior to the crisis, the ECB was continually voicing its concerns about fiscal dangers. In November 2005 the ECB asserted its power to deny Eurozone banks the right to use government bonds as collateral if those bonds’ credit rating fell too low; but after the 2008 crisis, the ECB caved in and continued to lend against peripheral country government debt of declining quality to prevent crises. The ECB then joined in the fiscal rescue of May 2010 by pledging to fund part of the troika’s rescue program, thus stepping further away from its “no bailout” position. In 2012 the ECB said it would do “whatever it takes” to save the euro, launching the Outright Monetary Transaction bond-buying program, but this new approach was not fully approved until 2015 after long and drawn out legal wrangling, especially in Germany, delayed its implementation.

As the crisis drags on, pessimists see no end to the monetary and fiscal policy tensions inherent in trying to impose a monetary union on a region with too many economic, political, cultural, and linguistic differences. At best, even if the euro survives, pessimists believe the region will suffer slow growth and ongoing internal policy conflicts. The lack of a true banking union risks repeated financial and/or default crises due to the sovereign-bank doom loop. At worst, the tensions could cause the breakup of the Eurozone into blocs or the reintroduction of the former national currencies. The shock of the Brexit vote shows that European projects are not irreversible. All in all, the grand designs of the EU and EZ projects look rather half-finished, leaving the future political and economic prospects uncertain (see Table 21-4).

Summary On the upside, the political dimension of the EU might yet carry the day in the long run, despite current setbacks; in the medium run, the OCA criteria might turn out better than one might think; and even if they don’t in the short run, the Eurozone can still survive and function, a workable, albeit economically costly, currency union.

On the downside, EU enlargement undercuts the OCA logic in the short run and could make the ECB’s governance more cumbersome and make resolution of conflicts more difficult. As the member states of the Eurozone cope with severe fiscal
problems, there is a significant risk of a clash between the fiscal goals of the governments and monetary goals of the ECB; and should the current crisis intensify (e.g., should any member country default or desire to leave the euro) the project would be in uncharted waters.

What do the people think? The results of successive Eurobarometer polls indicate that at the best of times only about 50% to 60% of the citizens of the Eurozone have thought that the euro has been beneficial. In some countries that figure is higher, in some lower. Since the crisis began, support has fallen from even these lukewarm levels, especially in the hard-hit peripheral countries. The euro remains an experiment—its arrival did not mark the end point of European monetary history, and its long-run fate is not entirely certain.
1. A currency union occurs when two or more sovereign nations share a common currency. Sometimes these arrangements are unilateral, such as when a country like Ecuador adopts the U.S. dollar. But some are multilateral, the most prominent example being the Eurozone.

2. The euro is (as of 2016) the currency of 19 European Union (EU) countries, and they manage it collectively by a common monetary authority, the European Central Bank (ECB). Most of the EU’s 28 countries are expected to adopt the euro eventually.

3. According to the theory of optimum currency areas (OCAs), regions should employ a common currency only if they are well integrated and face fairly similar (symmetric) economic shocks. If these criteria are met, efficiency gains from trade should be large, and the costs of forgone monetary autonomy small.

4. A currency union is usually a more irreversible and costly step than simply fixing the exchange rate. The OCA threshold is therefore higher than the threshold for a fixed exchange rate.

5. Additional economic factors can strengthen the case for an OCA. If regions have high labor mobility or large fiscal transfers, these mechanisms may make the costs of a currency union smaller for any given asymmetric shock. In addition, countries with a poor nominal anchor may be eager to join a currency union with a country with a better reputation for inflation performance.

6. Political considerations can drive monetary unions, as when countries feel they have a common destiny and wish to treat monetary union as part of a broader goal of political union.

7. The Eurozone has fairly high trade integration, although not quite as high as that of the United States. The Eurozone might or might not pass this OCA test.

8. The Eurozone has fairly symmetric shocks for most countries. The Eurozone probably does pass this OCA test.

9. The Eurozone has very low labor mobility between countries. The Eurozone almost certainly fails this OCA test.

10. The OCA criteria may fail ex ante, but they may be self-fulfilling: thanks to the common currency, after some years, trade and labor mobility may increase, tipping the balance in favor of an OCA ex post. But increasing specialization due to trade may cause more asymmetric shocks, which would push in the opposite direction.

11. The lack of compelling economic arguments for the euro leads us to study its historical and political origins. The EU must be understood as a political project, and the euro is an important part of the conception of the EU. Although many EU citizens have trust in this project, polls show that such a view is held by only a bare majority.

12. The ECB plays the pivotal role in securing the future of the euro. If it can deliver low inflation and economic stability comparable with the German central bank, after which it was designed, the euro is more likely to succeed as a currency in the EU and as a global currency.

13. Attempts to exert political influence on the ECB continue and the EU has often proved weak at punishing countries that break the rules of the Eurozone (the Maastricht criteria and the Stability and Growth Pact).

14. The global financial crisis of 2008 and Great Recession were the first real test of the euro, and a stern test at that. Like other economies, the Eurozone suffered from excessive lending and financial bubbles in some countries, fiscal indiscipline in other countries, bailouts of banks, and (as a result) pressure on the central bank to deviate from established policies to support the real economy, banks, and governments. These problems were difficult to handle because they affected Eurozone countries in an asymmetric fashion. As a result, ECB and EU authorities struggled to devise effective policy responses based on broad cooperation except in the direst moments. The economic and political situation remains fragile, especially in the hard-hit peripheral economies of Greece, Ireland, Portugal, and Spain.

15. A double-dip recession began in 2011 making matters even worse: slow growth damaged fiscal positions, government ambitions were limited, and the ECB was reluctant to try aggressive or...
unconventional tactics (like quantitative easing) for several years.

16. A slow recovery followed, but fundamentals remain weak, public and private debt levels are high, and the European banking system remains fragile. Populist politics in many countries reflect a widespread mistrust of the current economic and political status quo, and the EU and Eurozone have faced growing criticism in many countries. New challenges (including a wave of external immigrants/refugees and a rise in terrorism) have arisen in recent years. The 2016 decision of the British people to vote in favor of leaving the EU dealt a blow to confidence in the supposedly deep and irreversible nature of the European project.

**KEY TERMS**

currency union, p. 827
Eurozone, p. 827
euro, p. 827
European Union (EU), p. 828
Maastricht Treaty, p. 828
optimum currency area (OCA), p. 830
inflation bias, p. 835
Marshall Plan, p. 846
Treaty of Rome, p. 846
Exchange Rate Mechanism (ERM), p. 847
Economic and Monetary Union (EMU), p. 848
ERM crisis, p. 848
European Central Bank (ECB), p. 849
convergence criteria, p. 855
Stability and Growth Pact (SGP), p. 860

**PROBLEMS**

1. **Discovering Data** Do some research on the Internet to construct an updated version of the map in Figure 21-1. You can find membership information on the websites of the European Union (europa.eu) and the European Central Bank (www.ecb.int). Since this book was written, have any new countries joined the European Union, applied to join, or left? Have any countries entered the Exchange Rate Mechanism, or exited from it? Have any new countries adopted the euro, or left?

2. One could view the United States as a currency union of 50 states. Compare and contrast the Eurozone and the United States in terms of the optimum currency area (OCA) criteria.

3. After German reunification and the disintegration of Communist rule in Eastern Europe, several countries sought to join the European Union (EU) and later the Economic and Monetary Union (EMU). Why do you believe these countries were eager to integrate with Western Europe? Do you think policymakers in these countries believe that OCA criteria are self-fulfilling? Explain.

4. The Maastricht Treaty places strict requirements on government budgets and national debt. Why do you think the Maastricht Treaty called for fiscal discipline? If it is the central bank that is responsible for maintaining the fixed exchange rate, then why does fiscal discipline matter? How might this affect the gains/losses for joining a currency union?

5. Congress established the Federal Reserve System in 1914. Up to this point, the United States did not have a national currency; Federal Reserve notes are still the paper currency in circulation today. Earlier attempts at establishing a central bank were opposed on the grounds that a central bank would give the federal government monopoly over money. This was a reflection of the historic debate between maintaining states' rights versus establishing a strong centralized authority in the United States. That is, the creation of the Fed and a national currency would mean that states would no longer have the authority to control the money supply on a regional level. Discuss the debate between states' rights versus centralized authority in the context of the EMU and the European Central Bank.
6. There have been reports that a group of six Gulf countries (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates) were considering the introduction of a single currency. Currently, these countries use currencies that are effectively pegged to the U.S. dollar. These countries rely heavily on oil exports to the rest of the world, and political leaders in these countries are concerned about diversifying trade. Based on this information, discuss the OCA criteria for this group of countries. What are the greatest potential benefits? What are the potential costs?

7. Before taking office as the new Federal Reserve chairman, Ben Bernanke advocated for the adoption of an inflation target to promote price stability in the United States. Compare and contrast the Fed and the European Central Bank in terms of their commitment to price stability and economic stability. Which central bank has more independence to pursue price stability as a primary objective? Explain.

8. Why do countries with less independent central banks tend to have higher inflation rates? Is it possible for the central bank to increase output and reduce unemployment in the long run? In the long run, is the German model a good one? Explain why or why not.

9. Compare the Maastricht Treaty convergence criteria with the OCA criteria. How are these convergence criteria related to the potential benefits and costs associated with joining a currency union? If you were a policymaker in a country seeking to join the EMU, which criteria would you eliminate and why?