

**The Euro**



Chapter 20: The Euro

- 1 The Economics of the Euro
- 2 The History and Politics of the Euro

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In 1961 the economist Robert Mundell wrote a paper discussing the idea of a *currency area*, also known as a **currency union** or *monetary union*, in which nations replace their national monies with a common currency.



Almost forty years later, in 1999, 11 nations in Europe elected to form such a currency area, known as the *Euro area*, or **Eurozone**. Later that year, Mundell received the Nobel Prize.

By 2014 there are 18 member countries and about 334 million people use the €. Lithuania will have observer status until 1 January 2015

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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 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 (ECB).

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).

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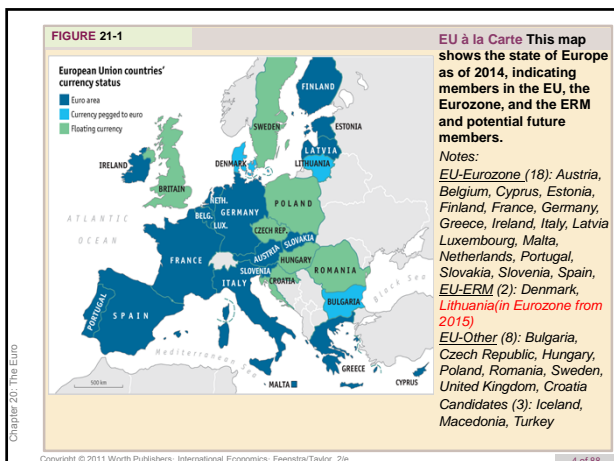
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### The Long Road to Maastricht and to the Euro

**Table 14.4 Steps of monetary integration**

Towards Maastricht		Between Maastricht and the single currency		After Maastricht	
1970	Werner Plan	1994	European Monetary Institute (precursor of ECB)	1999	Monetary union starts
1979	European Monetary System starts	1997	Stability and Growth Pact	2001	Greece joins
1989	Delors Committee	1998	Decision on membership	2002	Euro coins and notes introduced
1991	Maastricht Treaty signed	1998	Conversion rates set	2007	Slovenia joins
1993	Maastricht Treaty ratified	1998	Creation of ECB	2008	Cyprus and Malta join
				2009	Slovakia joins
				2011	Estonia joins

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### The Maastricht Treaty

- A firm commitment to launch the single currency by January 1999 at the latest.
- A list of five criteria for admission to the monetary union.
- A precise specification of central banking institutions.
- Additional conditions mentioned (e.g. the excessive deficit procedure).

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# The Maastricht Convergence Criteria

- **Inflation:**
  - not to exceed by more than 1.5 per cent the average of the three lowest inflation rates among EU countries.
- **Long-term interest rate:**
  - not to exceed by more than 2 per cent the average interest rate in the three lowest inflation countries.
- **ERM membership:**
  - at least two years in ERM without being forced to devalue.
- **Budget deficit:**
  - deficit less than 3 per cent of GDP.
- **Public debt:**
  - debt less than 60 per cent of GDP.
- **Note: Observed on 1997 performance for decision in 1998.**

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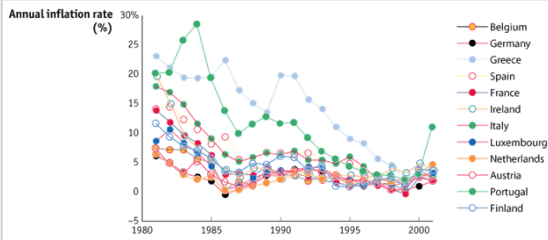
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**Inflation Convergence** To meet the Maastricht Treaty's convergence criteria, the first 12 members of the Eurozone had to reduce their inflation level below a moving target. This target was equal to average inflation in the three lowest-inflation 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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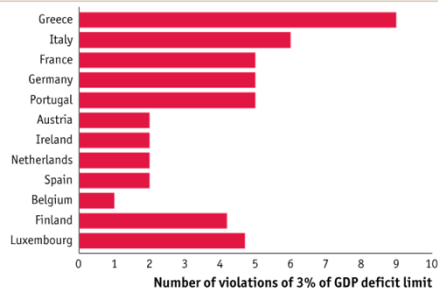
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**Breaking of Fiscal Rules** The fiscal convergence criteria laid down by the Maastricht Treaty and affirmed by the Stability and Growth Pact have been widely ignored. This figure shows the number of times that each of the original 12 members of the Eurozone have violated the 3% of GDP government deficit limit since joining the Eurozone.

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## 1 The Economics of the Euro

### The Theory of Optimum Currency Areas

- 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.
- To decide whether joining the currency union serves its economic interests, a country must evaluate whether the benefits outweigh the costs.

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### The Theory of Optimum Currency Areas

#### Market Integration and Efficiency Benefits

*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

*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.*

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### The Theory of Optimum Currency Areas

The net benefits of adopting a common currency 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.

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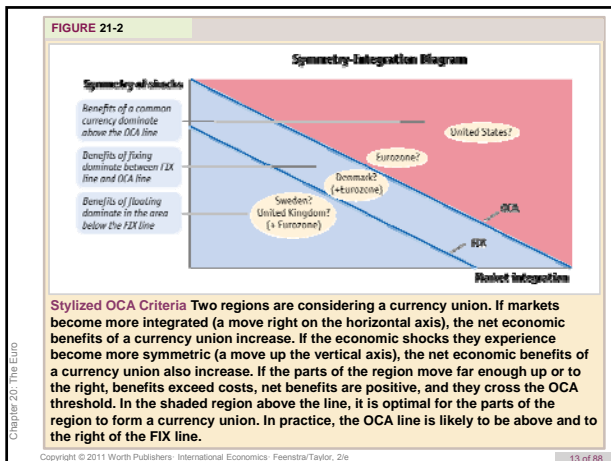
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**What's the Difference between a Fix and a Currency Union?**

- 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.
- For example, Denmark is in the ERM, so the krone is pegged to the euro, but not in the Eurozone. Denmark appears to have ceded monetary autonomy to the ECB, but transactions between Denmark and the Eurozone still require a change of currency.
- By keeping its own currency, Denmark has the *option* to exercise monetary autonomy or leave the ERM at some future date if they want the flexibility of a more freely floating exchange rate.

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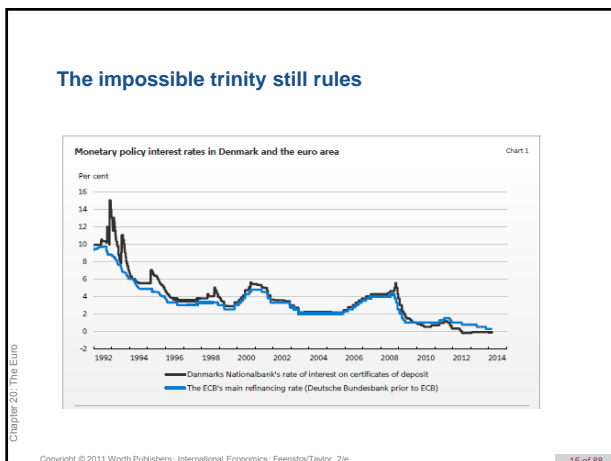
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**Other Optimum Currency Area Criteria**

**Labor Market Integration** In the event of an asymmetric shock, labor market integration provides an alternative adjustment mechanism. With an excess supply of labor in one region, adjustment can occur through migration (see Figure 21-3).

**Fiscal Transfers** If fiscal policy is not independent but built on top of a federal political structure with fiscal mechanisms that permit interstate transfers—a system known as *fiscal federalism*, then a third adjustment channel is available. If Home suffers a negative shock, fiscal transfers from Foreign allow more expansionary fiscal policy in Home. If fiscal transfers result in gains for Home, there is a shift down from  $OCA_1$  to  $OCA_2$  in Figure 21-3.

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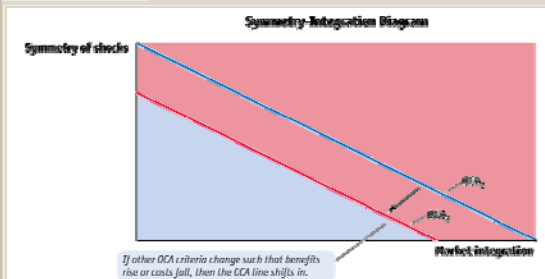
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**Other Optimum Currency Area Criteria**

FIGURE 21-3



**Changes in Other OCA Criteria** Several other criteria can make a currency union more attractive, even for given levels of market integration. Factors that lower costs or raise benefits will shift the OCA line down and to the left, expanding the OCA zone.

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**Monetary Policy and Nominal Anchoring** If Home suffers from chronic high inflation that results from an **inflation bias** of Home policy, the more politically independent common central bank of the currency union could resist political pressures to use expansionary monetary policy for short-term gains.

Italy, Greece, and Portugal are Eurozone members that historically have been subject to high inflation.

High-inflation countries are more likely to want to join the currency union the larger are the monetary policy gains of this sort.

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**Political Objectives** Finally, there is the possibility that countries will join a currency union even if it makes no pure economic sense for them to do so.

Forming a currency union has value for political, security, strategic, or other reasons.

Political benefits can be represented in Figure 21-3 by the OCA line shifting down from  $OCA_1$  to  $OCA_2$ . In this scenario, for countries between  $OCA_1$  and  $OCA_2$ , there are *economic costs* to forming a currency union, but these are outweighed by the *political benefits*.

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**APPLICATION** Optimum Currency Areas: Europe versus the United States

We can use comparative analysis to see if Europe performs as well as or better than the United States (viewed as a common currency zone) on each of the OCA criteria, which would lend indirect support to the economic logic of the euro.

**Goods Market Integration within the EU** As intra-EU trade flows rise further, the EU's internal market will become more integrated, but on this test Europe is probably behind the United States (see panel (a) of Figure 21-4).

**Symmetry of Shocks within the EU** Most EU countries compare quite favorably with the U.S. states on this test. There is no strong consensus that EU countries are more exposed to local shocks than the regions of the United States (see panel (b) of Figure 21-4).

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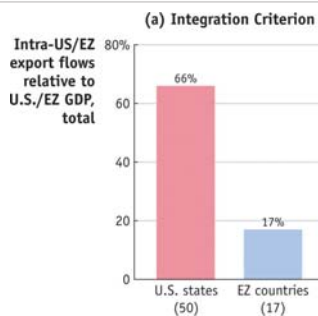
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**APPLICATION**  
Optimum Currency Areas: Europe Versus the United States

FIGURE 10-4 (1 of 4)

OCA Criteria for the Eurozone and the United States Most economists believe that the United States is much more likely to satisfy the OCA criteria than the EU is. Why?

Data in panel (a) show that interregional trade in the United States rises to levels much higher than those seen among EU countries.



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**APPLICATION**

### Optimum Currency Areas: Europe Versus the United States

**FIGURE 10-4 (2 of 4)**  
 OCA Criteria for the Eurozone and the United States (continued)  
 Data in panel (b) show that U.S. and EU shocks are comparably symmetric.

Region/Country	Correlation of local growth with U.S./EZ growth, average
U.S. regions (8), or states* (50)	0.46*
EZ countries (17)	0.51

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**APPLICATION**

### Optimum Currency Areas: Europe Versus the United States

**FIGURE 10-4 (3 of 4)**  
 OCA Criteria for the Eurozone and the United States (continued)  
 Data in panel (c) show that U.S. labor markets are very integrated compared with those of the EU.

Region/Country	Persons born outside state/country in U.S./EZ, average
U.S. states (50)	42%
EZ countries (17)	14%

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**APPLICATION**

### Optimum Currency Areas: Europe Versus the United States

**FIGURE 10-4 (4 of 4)**  
 OCA Criteria for the Eurozone and the United States (continued)  
 Data in panel (d) show that interstate fiscal stabilizers are large in the United States, but essentially nonexistent in the EZ.

Region/Country	Share of local income shock offset by federal transfers
U.S. states (50, range of estimates)	30%
EZ countries (17)	0.5%

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**APPLICATION** Optimum Currency Areas: Europe versus the United States

**Labor Mobility within the EU** Labor in Europe is much less mobile between states than it is in the United States. The flow of people between regions is also larger in the United States than in the EU.

Labor markets in Europe are generally less flexible, and 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** Stabilizing transfers, whereby substantial taxing and spending authority are given to the central authority, exist in the United but not in the EU.

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**APPLICATION** Optimum Currency Areas: Europe versus the United States

**Summary** On the simple OCA criteria, the EU falls short of the United States as a successful optimum currency area, 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, 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.

Most economists think there are still costs involved when a country sacrifices monetary autonomy.

On balance, economists tend to believe that the EU, and the current Eurozone within it, were not an optimum currency area in the 1990s and that nothing much has happened yet to alter that judgment. ■

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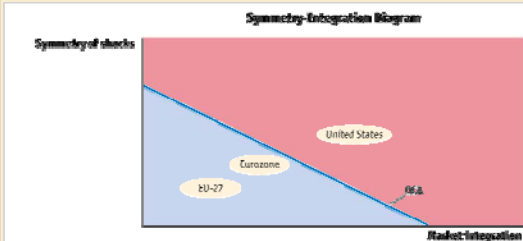
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**APPLICATION** Optimum Currency Areas: Europe versus the United States

FIGURE 21-5



**Stylized OCA View of the EU and the United States** Most economists consider that the Eurozone and EU countries do not satisfy the OCA criteria—they have too little market integration and their shocks are too asymmetric. The Eurozone may be closer to the OCA line since integration runs deeper there, but it is still far behind the United States on the OCA criteria. If we expand to the EU of 27, it is likely that this larger zone fails to meet OCA criteria by an even larger margin, with lower integration and higher asymmetry than the current Eurozone.

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**Are the OCA Criteria Self-Fulfilling?**

Some economists argue that by adopting a common currency, it might become an OCA in the future.

Joining a currency union might promote more trade, by lowering transaction costs.

If the OCA criteria were applied *ex ante* (before the currency union forms), then many countries might exhibit low trade volumes.

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.

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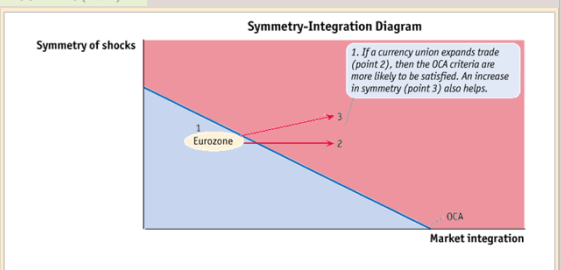
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**APPLICATION** Optimum Currency Areas: Europe versus the United States

FIGURE 21-6 (1 of 2)



**Self-Fulfilling OCA Criteria** Euro-optimists believe that the OCA criteria can be self-fulfilling. Suppose the Eurozone is initially at point 1, but then the effects of EMU start to be felt. Eventually, there will be an increase in market integration (more trade, capital flows, migration), moving the zone to point 2. There may also be a greater synchronization of shocks in the Eurozone, moving the zone to point 3.

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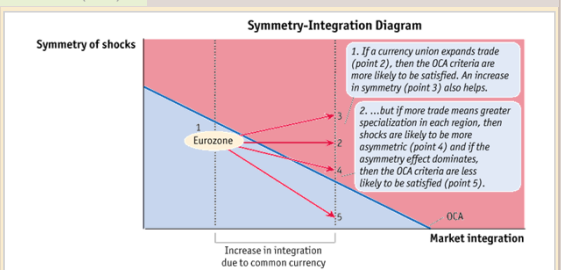
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**APPLICATION** Optimum Currency Areas: Europe versus the United States

FIGURE 21-6 (2 of 2)



**Self-Fulfilling OCA Criteria (continued)** However, euro-pessimists note that market integration and more trade might also lead to more specialization by each country in the EU. In that case, the shocks to each country are likely to become more *asymmetric*, implying a move toward point 4 or point 5. In the case of point 5, the case for an OCA grows weaker, not stronger, after the long-run effects of the currency union have been worked out.

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