TABLE 17-1

Average of Imports and Exports of the EU-27 Countries from and to Other European Union Countries as a Percentage of GDP (Euro Area countries are highlighted)

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
EU (27 countries)	18.5	19.2	19.7	21.0	21.2	21.5	18.4	20.4	21.9	21.6
Belgium	59.2	61.3	64.4	66.4	67.2	67.6	55.8	60.5	64.0	63.0
Bulgaria	26.6	28.4	28.7	31.3	34.1	32.9	25.4	28.7	34.4	34.1
Czech Republic	41.6	50.9	49.6	52.6	55.1	51.5	44.8	52.0	57.5	59.3
Denmark	20.8	21.0	22.1	23.2	23.0	23.1	19.5	19.8	21.0	21.0
Germany	18.3	19.4	20.3	22.1	23.1	22.9	19.6	21.5	23.1	22.7
Estonia	40.2	45.3	49.8	48.7	45.5	45.1	37.6	46.7	56.1	56.8
Ireland	28.8	28.5	28.5	26.6	26.2	26.2	24.9	26.1	26.5	26.4
Greece	8.9	9.0	8.8	9.5	9.7	9.9	8.1	7.8	8.2	8.4
Spain	14.8	14.9	14.4	14.3	14.7	13.9	11.7	13.2	14.1	13.7
France	15.1	15.2	14.8	15.5	15.6	15.5	13.1	14.3	15.2	15.1
Italy	12.4	12.6	12.8	13.6	14.1	13.5	11.2	12.7	13.5	13.0
Cyprus	10.4	14.2	16.1	15.4	15.9	16.6	13.8	15.0	14.4	13.3
Latvia	27.8	30.5	32.6	33.1	31.0	28.4	24.4	32.0	37.9	38.7
Lithuania	26.1	31.1	32.6	35.0	35.3	33.7	28.8	35.4	41.1	42.9
Luxembourg	41.8	43.8	44.4	46.6	39.7	42.5	36.5	34.7	35.2	32.3
Hungary	40.1	42.9	44.1	50.9	52.0	51.3	46.6	52.1	56.2	58.0
Malta	31.4	33.7	33.1	34.4	33.2	31.1	27.0	30.0	35.2	34.5
Netherlands	35.5	37.3	39.5	42.3	43.2	44.8	37.7	43.8	47.2	49.6
Austria	30.4	31.9	31.5	31.9	33.0	33.0	27.2	30.5	32.5	31.4
Poland	21.1	25.2	24.2	26.4	27.2	26.5	25.1	26.8	28.6	27.6
Portugal	19.5	19.1	21.0	22.1	22.3	22.4	19.1	20.5	22.1	21.9
Romania	24.9	25.8	22.6	22.5	23.2	22.7	21.2	24.5	27.5	27.2
Slovenia	33.0	37.8	40.9	44.4	46.5	45.3	37.2	43.6	48.4	47.9
Slovakia	53.3	56.3	57.2	62.8	63.9	60.6	51.3	58.0	65.5	68.6
Finland	18.5	18.6	19.5	21.3	21.0	20.3	15.5	17.3	18.2	17.4
Sweden	19.0	20.0	21.0	22.2	22.9	23.1	19.3	20.5	20.9	19.7
United Kingdom	11.0	10.6	11.1	12.8	10.6	11.3	10.3	11.2	11.9	11.3

Source: Eurostat.

Consider first the Euro Area countries. In 2012, Belgium's intra-EU exports and imports were around two-thirds of its GDP, while the Netherlands, Estonia, Slovenia and Slovakia appear to also have benefited greatly from the reduction in transactions costs associated with the single currency, since the average of intra-union exports and imports for these countries ranged from about 50 per cent to about two-thirds of their GDP. Next in the list come Malta, Latvia and Bulgaria, with indices of trade integration between a third and a half of GDP, while for France, Germany, Portugal and Finland, the corresponding figure is between around 15 per cent and 25 per cent. The trade-integration indices for Italy

and Spain, however, amounted to only a little over 13 per cent, while Greece appeared to gain least from monetary union on this criterion, with the average of EU exports and imports amounting to only 8 per cent of GDP in 2012.

Among the three non-Euro Area countries for which we have figures, Denmark and Sweden actually had average intra-European Union exports and imports as a percentage of GDP, around 20 per cent – a higher figure than many countries that have adopted the euro as their common currency. On the other hand, the UK's European trade integration index came to just over 11 per cent in 2012 – the lowest figure of any country in the table, with the single exception of Greece.

What does all this tell us? First, the degree of trade integration across Europe is quite variable, but nevertheless quite high on average – with the notable exception of Greece.

Second, however, we can see from Table 17-1 that the degree of European trade integration appears to have been rising over time in nearly every country: comparing the index of trade integration in 2003 to its value in 2012, it has increased for the vast majority of countries in the table. For some countries, such as Czech Republic and Hungary, this growth in European trade integration is very marked (an increase of around 18 percentage points), while for others, such as Italy and the UK, the increase over the ten-year period is only slight.

In the period immediately prior to that described in the table, many countries, such as Germany and Ireland, experienced high increases in trade integration. This has led some economists to argue that some of the criteria for an optimum currency area – such as a high degree of trade integration – may actually be endogenous: actually being a member of a currency union may enhance the degree of trade between members of the union, precisely because of the decline in transactions costs in carrying out such trade.[6]

Overall, the figures presented in Table 17-1 suggest that many European countries have gained from the reduction in transactions costs in international trade as a result of the single currency. Indeed, these gains have been estimated at about one-quarter to one-half of 1 per cent of Euro Area GDP. This may not sound massive, but remember that transactions costs are a deadweight loss. Moreover, the gains are not one-off: they accrue continuously so long as the single currency persists, since they would have to be paid in the absence of the currency union. They therefore become cumulative. In addition, if the degree of Euro Area trade integration tends to rise over time as a result of the single currency, as some economists have suggested, then the implicit gain from not having to pay transactions costs also rises over time.

The other, indirect benefit of a single currency when there is a high degree of trade integration follows from the reduction in uncertainty associated with doing away with the volatility in the exchange rates between members' national currencies (since those currencies are replaced with a common currency). These gains are hard to quantify, but the figures presented in Table 17-1, again, do suggest that they are not negligible for the Euro Area.

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[6] See Jeffrey A. Frankel and Andrew K. Rose, 'The Endogeneity of the Optimum Currency Area Criteria', *The Economic Journal*, 1998, vol. 108, pp. 1009–1025.

Real Wage Flexibility A great deal of research has been undertaken on real wage flexibility in Europe, and virtually all of it concludes that Continental European labour markets are among the most rigid in the world, while the UK labour market, at least since the 1980s, has become one of the most flexible. We discussed both the UK and Continental European labour markets at some length in Chapter 7, and concluded that major reasons for inflexibility in Continental European labour markets included high levels of union coverage and the more generous unemployment benefit systems of many European countries, combined with various laws that reduce labour market flexibility.

In addition, the introduction of the single European currency may have had a negative effect on European wage flexibility, since many European collective wage agreements between workers and a firm in one country will also often extend to the firm's workforce in other European countries, and a single currency brings transparency in wage differences across countries, as well as price transparency. To return again to our example of a negative demand shock in Germany and a positive shock in France, a company with employees in both countries would find it hard to reduce real wages in Germany while raising them in France.

Furthermore, because of the high non-wage costs of employing workers in many European countries, even if there were movements in the real wage, firms would be slow to expand or contract their output in response, so that shifts in aggregate supply will be slow to come about.

On the whole, therefore, movements in real wages are unlikely to make a significant contribution to the macroeconomic adjustment of Euro Area countries to asymmetric shocks.

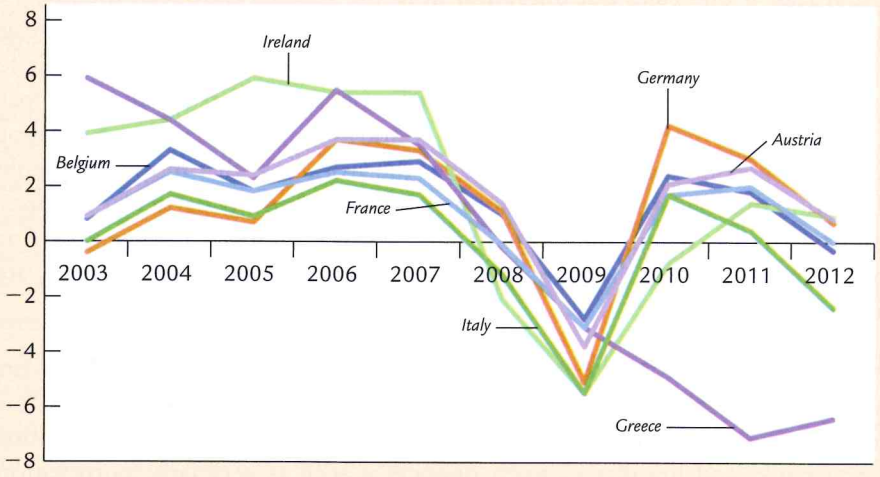
Labour Mobility Labour is notoriously immobile across European countries, at least if one rules out migration from the Eastern European members of the EU such as Poland. In part, this might be attributed to differences in language, culture and other social institutions across Europe that make it difficult for workers to migrate. However, it seems that European workers are also very loath to move location even within their own countries. Indeed, the degree of labour mobility as measured by the percentage of the workforce that moves geographical location over any given period, is much lower within any particular European country than it is within the United States, and is even lower between the Euro Area countries. Europe therefore scores very low on this optimum currency area criterion.

Financial Capital Mobility In discussing financial capital mobility, a distinction must be made between the wholesale and the retail capital markets. The wholesale financial markets are the capital markets in which only financial institutions such as banks and investment trusts operate, as well as very large corporations, while the retail financial markets (such as high street banks) are those open to individual households and to small and medium-sized corporations. Prior to the introduction of the euro, financial integration among Euro Area countries was probably quite low, in both the wholesale and retail sectors. Following the introduction of the euro, however, integration of the wholesale financial markets

has increased dramatically. In particular, a liquid euro money market with single inter-bank market interest rates was established, so that a bank in Luxembourg, for example, can now borrow euros just as easily and at the same rate of interest from another bank in Frankfurt as it can from a bank located in the same street. In the government bond market, the degree of market integration is also high, and this is shown by the fact that the interest rates on government bonds of the different Euro Area countries are very close to one another and tend to move very closely together. On the other hand, the integration of retail market products, such as loans to households and small and medium-sized enterprises, is lagging behind compared with the wholesale market products. This becomes evident from persistent cross-country differences in bank lending rates and the rather limited cross-border retail banking activity. Indeed, national banking sectors have remained largely segregated, with only marginal cross-border penetration: only around 5 per cent of total bank loans are granted across borders to customers in other Euro Area countries.

Symmetric Demand Shocks The economic cycle across the countries of the Euro Area does seem to be positively correlated, in the sense that the timing of booms and recessions appear to be very close. In Figure 17-6, we have graphed data on annual growth rates in real GDP for Belgium, France, Germany, Italy, Greece, Ireland and Austria, for the ten years 2003–2012. Clearly, the movements in growth rates over this period for this group of countries tend to have similar turning points: the generally improving position until 2004, the dip in growth

FIGURE 17-6



Real GDP Growth in Several Euro Area Countries 2003–2012 The business cycle appears to be largely synchronized across the economies of these Euro Area countries.

Source: Eurostat.

in 2005, subsequent recovery 2005–2007, and the sharp dip during the recession of 2008–2009 are features that all the growth paths share. We can also see how Ireland's growth rate outstripped the performance of the other countries during the period up to 2007, indicating that ECB monetary policy was initially somewhat loose for the Irish economy in this early period. On the other hand, while the Irish economy has recovered relatively well from the 2008 recession, we can see that Greece has not fared so well, continuing to contract. Other countries, such as Italy, also dipped into negative growth towards the end of the period, and growth across these countries overall is at best weak.

Overall, therefore, the evidence is somewhat mixed, although, on the whole, it suggests that the problem of asymmetric demand shocks is not a great one for the current member countries of EMU. The fact that there is not strong evidence of asymmetric demand shocks at the aggregate level, however, does not rule out the possibility that there may be asymmetric shocks at other levels in the economy. In fact, researchers have found that many of the shocks that impact on European countries asymmetrically tend to be specific to a region or to an industry rather than to a country as a whole. This is not a problem made worse by joining a monetary union, however, since a country that experienced, say, a negative shock to one of its industries or regions, would not in any case be able to deal with this using monetary or exchange-rate policy without generating imbalances in its other regions or industries.

Summing Up: Is Europe an Optimum Currency Area?

As in many policy debates in economics, there is no clear-cut answer to this question. Certainly, many European countries have a high degree of intra-union trade and have economic cycles that are more or less synchronized. Labour mobility and wage flexibility (and labour market flexibility in general), however, is low in Europe, and while the euro has increased financial market integration in the Euro Area's wholesale financial markets, the retail financial markets remain highly segregated at the national level.

Overall, therefore, if very strong differences in the economic cycle were to emerge across the Euro Area, the lack of independent monetary and exchange-rate policy would be felt acutely. For that reason, many economists argue that Europe – meaning the current Euro Area – is not an optimum currency area. Nevertheless, as we have noted in our discussion, it is possible that some of the optimum currency area criteria may be endogenous. In particular, the single currency is likely to generate even greater trade among EMU members. Given this, it is likely that the economic cycles of member currencies will become even more closely synchronized as aggregate demand shifts in one country have increasingly strong spillover effects in other Euro Area countries. Moreover, the single currency may raise labour mobility across Europe in the long run, since being paid in the same currency as in one's home country is one less issue to come to terms with when moving location to find a job. Also, with time, one would expect financial market integration to spread to the retail capital markets.

17-6 Fiscal Policy and Common Currency Areas

Our discussion so far has tended to centre on the loss of autonomy in monetary policy that is entailed in adopting a single currency among a group of countries. However, it is obvious that there is nothing in the adoption of a common currency that implies that members of the currency union should not still retain independence in fiscal policy. For example, in our example of an asymmetric demand shock that expands demand in France and contracts aggregate demand in Germany, the French government could reduce government spending in order to offset the demand shock, while the German government could expand government spending. In fact, even if France and Germany did not make up an optimal currency area because wages were sticky and labour mobility was low between the countries, national fiscal policy could, in principle, still be used to compensate for the loss of monetary policy autonomy.

Fiscal Federalism

Suppose that a currency union had a common fiscal policy in the sense of having a single, common fiscal budget covering tax and spending decisions across the common currency area. This means that fiscal policy in the currency union would work much as fiscal policy in a single national economy works, with a surplus of government tax revenue over government spending in one region used to pay for a budget deficit in another region. Return again to our example of an asymmetric demand shock that expands aggregate demand in France and contracts aggregate demand in Germany, as in Figure 17-2. Now, the fiscal policy of an economy will generally have built in to it stabilizers that automatically stimulate aggregate demand when the economy goes into recession, without policy makers having to take any deliberate action. For example, since almost all taxes are closely related to the level of economic activity in the economy, tax revenue will automatically decline in Germany as a result of the negative aggregate demand shock that shifts it into recession. At the same time, transfer payments in the form of unemployment benefit and other social security benefits will also rise in Germany. The opposite will be true in France, where the automatic stabilizers will be operating in reverse, as transfer payments fall and tax receipts rise with the level of economic activity. These changes will tend to expand aggregate demand in Germany and contract it in France, to some extent offsetting the asymmetric demand shock.

If the governments of France and Germany have a common fiscal budget, then the increased net government revenue in France can be used to offset the reduction in net government revenue in Germany. If the resulting movements in aggregate are not enough to offset the demand shock, the French and German governments may even go further and decide to increase government expenditure further in Germany and pay for it by reducing spending and perhaps raising taxes in France.

This kind of arrangement – a fiscal system for a group of countries involving a common fiscal budget and a system of taxes and fiscal transfers across countries – is known as **fiscal federalism.** The problem with it is that the taxpayers of one country (here, France) may not be happy about paying for government spending and transfer payments in another country (in this example, Germany).

National Fiscal Policies in a Currency Union: The Free-Rider Problem

Assuming that, for political reasons, fiscal federalism is not an option open to the currency union, we still need to explore the possibility of individual members of the union using fiscal policy in order to offset asymmetric macroeconomic shocks that cannot be dealt with by the common monetary policy. In particular, in our example, what is wrong with Germany running a big government budget deficit in order to counteract the fall in aggregate demand, and borrowing heavily in order to finance the deficit? One answer may lie in the effect on other members of the currency union of a rise in the debt of a member country.

Whenever a government raises its debt to very high levels, there is always the possibility that the government may default on the debt. In general, this can be done in one of two ways. Where a country is not a member of a currency union and controls its own monetary policy, it can engineer a surprise inflation by a sudden increase in the money supply, so that the real value of the debt shrinks. In addition, as we discussed in Chapter 6, when there is a sharp rise in the price level, this will usually be accompanied by a sharp fall in the foreign-currency value of the domestic currency. This means that, valued in foreign currency, the stock of government debt will now be worth far less. Thus, the government has in effect defaulted on a large portion of its debt by reducing its value both internally and externally.

If this is not possible – for example, because, as in a currency union, the country no longer enjoys monetary policy autonomy and is not able to devalue the external value of its currency (since it uses the common currency) – the only other way of reneging on the debt is through an outright default (e.g. stopping interest payments and/or failing to honour capital repayments when they fall due). Generally, the financial markets are good at disciplining governments that run up large debts, by charging them high rates of interest on the debt that the government issues – after all, if you thought there was even a slight possibility that you might not get your money back if you lent it, you would want to be paid a higher rate of interest in order to compensate for that risk. In the case of a monetary union, however, this means that excessive debt issuance by one member country (e.g. Germany) will tend to force up interest rates throughout the common currency area. Although the ECB controls very short-term interest rates in the Euro Area through its open-market operations, it does not control longer-term interest rates, such as those paid on 10- or 20-year government bonds. Hence, fiscal profligacy by the German government will tend to push up the cost of borrowing for all members of the currency union.

On the other hand, interest rates may not be raised enough to discipline properly the high-borrowing German government. This is because the markets feel that the other members of the monetary union would not allow the country concerned actually to default, and that if it threatened to do so, the other members would probably rush in and buy up its government debt and 'bail out' the country concerned. If the markets believe in this possibility, then German debt will not be considered as risky, so the interest rates charged to Germany on its debt will not be as high as they otherwise might be. The net effect is for Germany to pay interest rates on its large stock of debt that are lower because of the implicit belief that it will be bailed out if it has problems servicing the debt, and for all other members of the currency union to pay higher interest rates on their government debt because Germany has flooded the financial markets with euro-denominated government bonds. In essence, this is an example of a free-rider problem: Germany is enjoying the benefits of a fiscal expansion without paying the full costs. We can also think of this problem as another example of *moral hazard,* which we first encountered in Chapter 7 in our discussion of labour markets. In that discussion, we defined moral hazard as the tendency of people to behave inappropriately when their behaviour is imperfectly monitored. The same is true here, except that now we have the possibility of a national government behaving inappropriately.

In addition, if Germany is using the proceeds of its borrowing to fund a strong fiscal expansion, this may undo or work against the anti-inflationary monetary policy of the ECB by stoking up aggregate demand throughout the Euro Area.

In order to circumvent some of these problems, the currency union members can enter into a 'no bail-out' agreement, which states that member countries cannot expect other members to come to their rescue if their debt levels become unsustainable, in an attempt to convince the markets to charge profligate spend-and-borrow countries higher interest rates on their debt. In fact, exactly such a no bail-out agreement exists among members of EMU. Unfortunately, however, it seems clear that the no bail-out clause is not credible: if Germany (or any other EMU member) were to default on its debt, this would have strong repercussions throughout the Euro Area, as it would probably lead to the financial markets losing confidence in debt issued by other members and to strong selling of the euro in the foreign-currency exchange market. In order to avoid this, it is likely that EMU members would in fact bail out a member country that was threatening to default on its debt. Indeed, bailouts have been made to Greece, Portugal, Ireland and Cyprus during the period 2010–2013, albeit with strings attached, for example agreements to substantial cuts in public spending.

For these reasons, the members of the currency union may wish to impose rules on one another concerning the conduct of national fiscal policies in order to avoid fiscal profligacy by any one member. At the outset of EMU, a set of fiscal rules was indeed drawn up and agreed to by members of the European monetary union. This set of rules was known as the Stability and Growth Pact (SGP). The SGP not only laid down strict rules on the maximum permissible budget deficit and debt-to-GDP ratio for EMU members, but it also stipulated harsh punishments – fines amounting to as much as 0.5 per cent of GDP – for offenders. Let's take a closer look at the SGP.

The Stability and Growth Pact

The SGP was a set of formal rules by which members of EMU were supposed to be bound in their conduct of national fiscal policy. Its two main components were as follows:

- Members should aim to achieve balanced budgets.
- Members with a total budget deficit of more than 3 per cent of GDP will be subject to fines that may be as high 0.5 per cent of GDP unless the country experiences exceptional circumstances (such as a natural disaster) or a very sharp recession in which GDP declines by 2 per cent or more in a single year.

The rationale for imposing the SGP among EMU members is clear, since it would rule out any free-rider or moral hazard problems associated with excessive spending and borrowing in any one member country, by simply limiting the amount of spending that can be done that is not financed by taxation.

The Treaty on Stability, Coordination and Governance was signed in March 2012 by all Euro Area members and eight other EU member states, and came into force on 1 January 2013. Signatories to the treaty agreed to implement a balanced budget rule in their national legislation through permanent, binding provisions, preferably of a constitutional character, by the end of 2013. Under the treaty, the annual structural government deficit (that part of the budget deficit not related to the ups and downs of the economic cycle) of signatories must not exceed 0.5% of GDP. Signatories must additionally implement a correction mechanism whereby measures to reduce the budget deficit kick in automatically if there is a significant deviation from the agreed country-specific minimum benchmark figure for long-term sustainability.

How does the SGP square with our discussion of government debt in Chapter 16? First of all, as we discussed in the previous chapter, there is nothing particularly optimal about achieving a balanced budget. A balanced budget – even a budget balanced on average over the business cycle – is consistent with an equilibrium debt-to-GDP ratio of zero. This must be true because a balanced budget means that debt cannot be growing, and if GDP is growing, at least on average, then the debt-to-GDP ratio must be shrinking and will eventually reach zero. If there is a positive long-run rate of growth of real GDP that exceeds the real interest rate, however, there seems to be no economic rationale for a balanced budget.

Second, what is the basis for the maximum 3 per cent budget deficit rule? It is related to the rules for entry into EMU which were laid down in the Maastricht Treaty in 1992. According to the Treaty, candidates for entry into EMU should have a debt-to-GDP ratio of no more than 60 per cent of GDP and a budget deficit of no more than 3 per cent of GDP. Effectively (and perhaps in implied contradiction of the requirement that governments should aim to balance the budget), therefore, the Maastricht Treaty sets the 'prudent' debt-to-GDP ratio at 60 per cent. Although largely arbitrary, this ratio does not seem unreasonable (it certainly sounds more prudent than a debt-to-GDP ratio of 200 per cent or even 100 per cent of GDP).

Suppose, therefore, that a country was unable to balance its budget, even on average, as prescribed in the first part of the SGP. It could, nevertheless, avoid triggering any fines by keeping its total budget deficit at 3 per cent of GDP. However, given long-run European growth rates of the order of 2.5–3 per cent per year, and allowing for long-run inflation of 2–2.5 per cent per year (as we discussed in Chapter 15, the ECB inflation target is in fact 2 per cent per year), the average Euro Area country could presumably expect long-run nominal GDP growth of about 5 per cent a year. In Chapter 16, we showed that a condition for fiscal sustainability of a country (in the sense that its government is able to service the government debt) is that

$$\frac{B}{Y} = (x + \pi)d,$$

where B is the total budget deficit (including interest payments on government debt), Y is GDP, x is the rate of growth of real GDP, π is the inflation rate and d is the equilibrium debt-to-GDP ratio. If, therefore, $x + \pi = 0.05$ (the rate of growth of nominal GDP) and the target debt-to-GDP ratio $d = 0.6$, we can work out the maximum consistent budget deficit, as a percentage of GDP, as

$$\frac{B}{Y} = 0.05 \times 0.6 = 0.03$$

In words, the government should aim to run a total budget deficit of no more than 3 per cent of GDP per year if it wants an equilibrium debt-to-GDP ratio of 60 per cent. This is the rationale for the maximum of 3 per cent of GDP imposed on total budget deficits by the SGP.

Overall, while the budgetary arithmetic underlying the SGP is clearly related to the notion of fiscal sustainability, it nevertheless seems flawed as a viable and reasonable constraint on the behaviour of EMU member governments – on at least two counts. First, the first component of the SGP, although apparently unenforceable, encourages balanced government budgets, for which there is no economic rationale.

Second, however, having given up sovereignty over monetary policy (or, at the very least, having 'pooled' sovereignty with the other members of EMU), an EMU member is left with only fiscal policy with which to attempt to counter any asymmetric shocks that it may encounter, and the SGP effectively limits the ability of EMU members to avail themselves of this. This straitjacketing of national fiscal policy that the SGP implied may have reflected a desire among the architects of EMU for the ECB to maintain an effective monopoly on demand management, so that its polices could not be countered by national fiscal policies.

The crucial question for the SGP, however, was whether or not the maximum allowable budget deficit would be enough for a country to let its automatic fiscal stabilizers come into play if it were to go into recession. This is crucial in a monetary union because member countries will have already given up their right to pursue an independent monetary policy and they cannot use the exchange rate as an instrument of policy.

In practice, the SGP proved to be something of a toothless watchdog. As the Euro Area experienced sluggish growth in the early years of EMU, several member countries – in particular, France and Germany, two of the largest member countries – found themselves in breach of the SGP excessive deficit criteria. However, both France and Germany managed to persuade other EMU members not to impose fines and, in 2004, the European Commission drew up guidelines for softening the SGP. These guidelines included considering more widely the sustainability of countries' public finances on an individual basis, paying more attention to overall debt burdens and to long-term liabilities such as pensions, rather than to a single year's deficit.

Some critics of the new SGP guidelines argued that they were subjective and somewhat fuzzy. Yet perhaps fuzziness is the best solution. In effect, the commitment of an EMU member to maintaining fiscal prudence and not becoming a free-rider now relies on peer pressure and national prestige: no country wants to have fingers wagged at them for spending and borrowing excessively. Most importantly, currency unions are, by definition, short on policy instruments – they require flexibility rather than rigidity in the conduct of fiscal policy. Having a system of rigid rules and draconian punishments and no credible way of enforcing the sanctions was not the correct way to ensure fiscal stability in the Euro Area.

CASE STUDY

The Euro Area Crisis

The recent crisis in the Euro Area has led many to question the very viability of a single European currency. This case study looks at how the crisis unfolded. The jubilant scenes witnessed at the beginning of the Euro project are now a distant memory, replaced by a widespread doubt as to whether the Euro offers sufficient flexibility for member countries to withstand and mitigate the effects of financial crisis and recession. In recent years, the financial markets have begun to question the ability of some European governments to honour their sovereign debt repayment obligations. The debt issued by these countries is no longer perceived as being risk-free, reducing the price of these government bonds and pushing up interest rates.

The problems began with Greece. From 2008, Greek debt increased steadily from 113 per cent GDP, almost double the European average, and subsequently peaking at over 170 per cent. The Greek budget deficit for 2009 was revised upwards from 3.9 per cent of GDP to 12.7 per cent. These are well above the SGP guidelines discussed in the previous section. This cast doubt on the ability of the Greek authorities to collect tax or cut spending. Greek state and bank debt was then downgraded by rating agencies on account of its poor perceived credit risk. To head off the immediate risk of default, in the spring of 2010 Greece received a series of emergency loans from Euro Area countries. These, however, had strings attached. Greece had to agree to substantial cuts in public spending and rises in taxes, leading to widespread public unrest. We examine the case of Greece further in Chapter 20.

As the full extent of the problems in Greece began to be uncovered, concerns were raised about other countries: Portugal, Italy, Ireland and Spain were placed under the spotlight. There was a fear that the European banking system may not be able to cope if this larger group of countries went the same way as Greece. Over the following year bailouts were received by Ireland and Portugal. The Euro Area countries established the European Financial Stability Mechanism (EFSM) in February 2011, initially backed by €500 billion, but increased just eight months later. In October 2011, 50 per cent of Greek debt was written off (a so-called 'haircut') and €130 billion provided to the Greek government to recapitalize their banks.

During 2012, the effects of fiscal reform in the countries most at risk appear to have improved financial stability in the Euro Area. In Spain, for example, substantial fiscal tightening has reduced the budget deficit from over 10 per cent of GDP in 2009 to around 7 per cent in 2013. Labour market reforms have also began to pay dividends, with more inward investment attracted by lower unit labour costs and more flexible working practices, accompanied by an improvement in the current account. However, unemployment remains stubbornly high, particularly among the youth, and per-capita incomes are back where they were ten years ago.

In Ireland, the austerity programme and banking reform promised at the time of their 2010 bailout has taken its toll on output per head, which still languishes at its 2003 level and shows little sign of speedy recovery. The budget deficit, at over 8 per cent of GDP in 2013, still remains uncomfortably high from the perspective of investor confidence.

Negative growth has been a major worry in Portugal, despite the country's progress in reducing their government deficit to just under 5 per cent in 2013.

So, while the euro crisis has receded somewhat, events in Cyprus in 2013 show that there is still cause for vigilance. Moreover, the cuts in public spending required by these bailouts are proving politically unpopular, resulting in changes in government and record low approval ratings for politicians in many European countries. ■

17-7 Conclusion

In this chapter we have examined some of the main issues concerned with common currency areas, focusing in particular on the EMU. Where there is a high degree of trade among a group of countries, there are benefits to be had from forming a currency union, largely arising from the reduction in transactions costs in international trade and reductions in exchange-rate uncertainty. There are also costs associated with joining a monetary union, however, largely related to the loss of monetary autonomy (member countries are no longer free to set their own interest rates) and the loss of exchange-rate movements as a means of achieving macroeconomic adjustment. Any decision to form a currency union must weigh these costs and benefits against one another to see if there is an overall net benefit. Although, in the long run, the loss of exchange-rate adjustment and monetary autonomy may have little effect on the equilibrium levels of output

and unemployment in the economies involved, there may be substantial short-term economic fluctuations in these macroeconomic variables as a result of joining the currency union. This is particularly the case if there are asymmetric demand shocks impacting on the currency union so that it is impossible to design a one-size-fits-all monetary policy to suit every country. Short-run adjustment will also be long and painful when wages do not adjust very quickly, although this problem may be overcome by labour mobility across the member countries.

A group of countries for which the benefits of monetary union are high and the costs are relatively low is termed an optimum currency area. Even though there is quite a high degree of trade integration among the member countries of the current European monetary union (with the notable exception of Greece), and their economic cycles do seem more or less synchronized and of a similar amplitude (with the notable exception of Ireland), labour mobility and wage flexibility in Europe are both notoriously low, and integration of Euro Area financial markets, although high in the wholesale sector, has so far been disappointing in the retail financial markets. Overall, therefore, the Euro Area is probably not an optimum currency area. Nevertheless, it is possible that some of these criteria may be endogenous: EMU may lead to increasing economic integration in the Euro Area that will in turn significantly raise the benefits and reduce the costs to each country of remaining in the monetary union.

Summary

1. A common currency area (or currency union or monetary union) is a geographical area through which one currency circulates and is accepted as the medium of exchange.
2. The formation of a common currency area can bring significant benefits to the members of the currency union, particularly if there is already a high level of trade integration, primarily because of the reductions in transactions costs and in exchange-rate uncertainty.
3. The costs of joining a currency union include the loss of an independent monetary policy and the loss of the exchange rate as a means of macroeconomic adjustment. Given a long-run vertical supply curve, this will affect mainly short-run macroeconomic adjustment.
4. Short-run adjustment problems will be reduced by greater degrees of real-wage flexibility, labour mobility and capital market integration across the currency union. They will also be less important, the fewer members of the currency union suffering from asymmetric demand shocks.
5. A group of countries with a high level of trade integration, high labour mobility and real-wage flexibility, a high level of capital market integration and that does not suffer asymmetric demand shocks across the different members of the group, is termed an optimum currency area. An optimum currency area is most likely to benefit from currency union.

6. It is possible that a group of countries may become an optimum currency area after forming a currency union, since this may enhance trade integration and help to synchronize members' economic cycles, and a single currency may also encourage labour mobility and capital market integration.
7. While the current Euro Area displays, overall, a high degree of trade integration and does not appear to be plagued by asymmetric demand shocks, real-wage flexibility and labour mobility both appear to be low. And while the introduction of the euro has led to a high degree of Euro Area financial market integration at the wholesale level, retail financial markets remain nationally segregated. Overall, therefore, the Euro Area is probably not at present an optimum currency area, although it may eventually become one.
8. The problems of adjustment within a currency union that is not an optimum currency area may be alleviated by fiscal federalism – a common fiscal budget and a system of taxes and fiscal transfers across member countries. In practice, however, fiscal federalism may be difficult to implement for political reasons.
9. The national fiscal policies of the countries making up a currency union may be subject to a free-rider problem, with one member country issuing a large amount of government debt at a lower interest rate than it might otherwise have paid, leading to other member countries having to pay higher interest rates. A currency union may therefore wish to impose rules on the national fiscal policies of its members.

KEY CONCEPTS

Common currency area (or currency union or monetary union)
Euro
European Economic and Monetary Union (EMU)
Euro Area
European Central Bank (ECB)
Optimum currency area
Fiscal federalism

QUESTIONS FOR REVIEW

1. What are the main advantages of forming a currency union? What are the main disadvantages?
2. Is a reduction in price discrimination across countries likely to be an important benefit of forming a currency union?
3. What is an optimum currency area? List the criteria that an optimum currency area must satisfy.
4. Is EMU an optimum currency area?
5. What is fiscal federalism? How might the problems of macroeconomic adjustment in a currency union be alleviated by fiscal federalism?
6. Why might the members of a currency union wish to impose rules on the conduct of national fiscal policies?

PROBLEMS AND APPLICATIONS

1. Consider two countries that trade heavily with one another, Ruritania and Circuitania. The output of Ruritania is mainly agricultural, while the output of Circuitania is mainly high-technology electronic goods. Suppose that each economy is initially in a long-run macroeconomic equilibrium. The national currency of Ruritania is the cob, while the Circuitania national currency is the byte.
   a. Use aggregate supply–aggregate demand diagrams to illustrate the state of each economy. Be sure to show aggregate demand, short-run aggregate supply and long-run aggregate supply.
   b. Now suppose that there is an increase in demand for electronic goods in both countries, and a simultaneous decline in demand for agricultural goods. Use your diagrams to show what happens to output and the price level in the short run in each country. What happens to the unemployment rate in each country?
   c. Using your diagrams, show how each country could use monetary policy to reduce the short-run fluctuation in output.
   d. What do you think will happen to the cob–byte exchange rate? Show diagrammatically how this could reduce short-run fluctuations in output in each country.
2. Suppose Circuitania and Ruritania form a currency union and adopt the electrocarrot as their common currency. Now suppose that there is an increase in demand for electronic goods in both countries, and a simultaneous decline in demand for agricultural goods. As president of the central bank for the currency union, would you raise or lower the electrocarrot interest rate, or keep it the same? Explain. (*Hint:* You are charged with maintaining low and stable inflation across the Electrocarrot Area.)
3. Suppose that Circuitania and Ruritania decide to engage in fiscal federalism and adopt a common fiscal budget.
   a. Show, again using aggregate demand–aggregate supply diagrams, how fiscal policy can be used to alleviate the short-run fluctuations generated by the asymmetric demand shock.
   b. Given the typical lags in the implementation of fiscal policy, would you advise the use of federal fiscal policy to alleviate short-run macroeconomic fluctuations? (*Hint:* Distinguish between automatic stabilizers and discretionary fiscal policy.)
4. The United States can be thought of as a nontrivial currency union since, although it is a single country, it encompasses many states that have economies comparable in size to those of some European countries. Given that the US has had a single currency for 200 years, it may be thought of as a *successful* currency union. Yet many of the American states produce very different products and services, so that they are likely to be impacted by different kinds of macroeconomic shocks (expansionary and recessionary) over time. For example, Texas produces oil, while Kansas produces agricultural goods. How do you explain the long-term success of the US currency union given this diversity? Are there any lessons or predictions for Europe that can be drawn from the US experience? (*Hint:* Think about taxes and transfers.)
5. Explain, giving reasons, whether the following statements are true or false.
   a. A high degree of trade among a group of countries implies that there would be benefits from them adopting a common currency and forming a currency union.
   b. A high degree of trade among a group of countries implies that they should definitely adopt a common currency and form a currency union.
6. Do you think that the free-rider or moral hazard problem associated with national fiscal policies in a currency union, as we discussed in this chapter, is likely to be a problem in actual practice? Justify your answer.