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10

Optimum Currency Areas and Monetary

Introduction

For most of the time in this book, we have been taking for granted that each currency was unambiguously and irrevocably identified with one particular country, in spite of the fact that, as has been pointed out before, there are many examples of countries in which foreign currencies are widely used, officially or unofficially. Chapter 9 focused explicitly on the issue of currency substitution, that is, a situation in which the association between currencies and countries becomes blurred. In this chapter, we move on to address the question of whether there is such a thing as an optimal currency area.

The question has to be answered in two stages. First, we need to deal with a set of preliminary questions of a positive nature.[1] What economic difference does it make whether countries or regions share a common currency? What, if any, are the real effects?

[1] Positive analysis attempts to explain why the economy is the way it is, whereas normative analysis seeks to prescribe how government or corporate policies, laws, institutional arrangements and so on ought to be framed for the economy to operate in a desirable fashion.

To what extent do countries entering a currency union sacrifice their economic independence? Then we can attempt to provide an answer to the normative question: what is the optimal scope of a single currency?

Fortunately, we have already answered most of the positive questions in earlier chapters, so that much of the analysis will be simply an application of previous models.

In what follows, it will help if we have some examples of currency union in mind. For this purpose, we shall focus for the most part on the case of the proposed European Monetary Union (EMU), which has the virtue of being topical, already widely researched and involving issues which are largely familiar. But it should be clear that we could have picked any region as a potential candidate for currency union.

More importantly, the reader should be aware that the arguments for and against monetary integration can always be turned on their head, and related instead to the question of monetary disintegration. In that sense, this chapter is equally concerned with the question: what are the implications for a region or country of starting to issue its own money?[2] Would Scotland or Wales or California be better off issuing their own currency? Or London or New York? Would the UK or USA be left any worse off if those regions opted for independent currencies?

As it happens, California does issue its own money. Dollar bills printed there carry the inscription 'Issued by the Federal Reserve Bank of California, San Francisco', and the same is true of all the Fed's twelve regional branches across the USA. Scottish banknotes too carry the name of the private commercial banks which have issued them.

Nonetheless, neither Scotland nor California[3] can be said to have its own currency at present. The reason is not simply that, in both cases, the notes issued are printed under licence to the respective central banks. Rather, it is that, having subcontracted the job of printing banknotes to its agents, each central bank then treats the currency issued as indistinguishable from those it prints itself. In particular, it stands ready to exchange any or all regionally printed notes for those

[2] Monetary disintegration is actually far more topical than monetary integration. After all, EMU is the only formal example of monetary union to be taken seriously since World War II, whereas almost every ex-colony has issued a new currency on gaining its independence, and the components of the old Soviet Empire are doing the same. In general, monetary disintegration has been far more common than monetary integration.

[3] Examples like these are not frivolous. On grounds of size alone, California is a very serious candidate for monetary independence. After all, its economy is larger than that of Canada, or indeed any European country except Germany. Even Scotland has a slightly larger population than Denmark, whose monetary independence is usually taken for

issued centrally. It follows that an individual who feels inclined can exchange any number of Californian dollar bills for the same number of dollars issued by the New York (or Philadelphia or St Louis) Federal Reserve, and Scottish and English banknotes are similarly interchangeable.

At this point, it should be clear that what we are talking about is simply a special case of a fixed exchange rate. These are examples of currencies which are physically distinguishable, but which are governed by an exchange rate regime with two essential features which can be regarded as being the defining characteristics of a single currency system:

> A Single Currency Zone (or Monetary Union) is one where the accepted means of payment consists either of a single, homogeneous currency, or of two or more currencies linked by an exchange rate which is fixed *(at one-*for-one) irrevocably.

It is worth noting the properties which have not been included. There is no reason, at least in principle, why a monetary union cannot embrace a proliferation of currency issuers, printing notes or coins as different from one another as are today the banknotes of any two members of the United Nations.[4] Nor is there any mention of political or geographic requirements. There are plenty of cases of currencies being used and even officially accepted over areas that are non-contiguous, politically diverse or even currently at war with each other. Panama, for example, has used the US dollar in place of a national currency for many years.

However, the most important feature of the definition given here is in the final word. What really distinguishes a monetary union from a fixed exchange rate regime is more than just the fact that the exchange rate is fixed at one-for-one. That is merely an arithmetic convenience. Rather it is the fact that the exchange rate is fixed irrevocably and irreversibly, and moreover is universally believed to be so. It is easy to see why this feature is so critical. Suppose it were thought possible that at some future date the Californian dollar was going to be revalued against, say, the New York dollar. Plainly, the result would be an immediate deviation from the current one-for-one exchange rate, as holders of New York dollars rushed to swap their money for Californian

[4] Not only do Scottish banknotes differ from each other, depending on the particular commercial bank issuing them, they even include one-pound notes, in spite of the fact that in England the one-pound note has long since been phased out in favour of a small nickel coin. In some situations, this feature limits substitutability. For example, there are few if

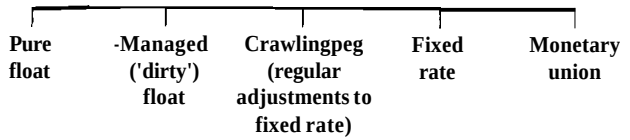

Figure 10.1 Exchange rate regimes (more fixed +).

dollars. Moreover, lenders and borrowers would soon start to specify in their contracts the currency in which repayment was to be made. In short, the situation would be unstable, and the New York dollar would cease to exist, as the whole stock found its way back to the vaults of the Federal Reserve. In this respect, it helps if a currency is homogeneous. Because there is no way of distinguishing between one hundred franc note and the next, there is no way they could ever differ in value. Where the fiction of a separate currency is maintained, the mechanism for creating a separate currency is already in place, and therefore the threat or promise may still be felt to exist.[5]

Monetary union can be viewed as the extension of a fixed exchange rate regime to a point where the possibility of parity changes is ruled out completely (Figure 10.1). The distinction is an important one, as EMS members have discovered to their cost. As long as countries or regions preserve separately issued currencies, the market will always take the view that they have preserved the potential escape route of exchange rate changes in order to make use of it when fixity proves too painful.

Before proceeding to the analysis, there is one other aspect of the question which ought to be acknowledged. Obviously, there is a sense in which a country's currency is widely perceived as a vital part of its national sovereignty. Like its postage stamps or its national airline or even its own armed forces, a country's currency is felt to be a vital part of its identity, one of the essential insignia of statehood. Why this should be the case is not entirely obvious, except as a particular example of the general rule that from the moment any activity becomes state sponsored rather than private, it is liable to become the focus of a

[5] This is more or less what happened with the Irish Punt, which had been unofficially interchangeable with the UK pound for many years, prior to being floated as an independent currency on 13 March 1979. On the other hand, the very fact that Scottish and Californian banknotes are universally accepted throughout the UK and USA respectively can be taken as evidence that virtually nobody takes seriously the possibility that they might

degree of nationalistic fervour. What is true of sport is certainly true of currencies. Anyone who doubts the fact need only consider the haste with which most of the new states of Eastern Europe have declared their intention to issue their own national money.[6]

However, these issues are appropriate to textbooks on economic psychology and politics, not economics. The question of sovereignty will be viewed here exclusively from the economic angle.

Nonetheless, it should be said that the subject matter of this chapter is more closely linked to political value judgements than the material in the rest of the book. At a number of points, we will find the train of the economic argument running into the buffers of political issues. In order to avoid trespassing into these areas, therefore, we shall have to come to an abrupt halt at several points in the discussion as we reach the boundaries of economics. The reader should not feel frustrated by this coyness. In dealing with a topic of this nature, the job of the economist can never be any more than to follow through the implications of the policy options under consideration. Perhaps the most important outcome of the analysis will be to delineate clearly the points at which the economic arguments end and political concerns take over.[7]

In Section 10.1, we shall consider the benefits of monetary union, in terms of reduced transaction costs and the elimination of exchange rate uncertainty. In Section 10.2, we turn to a consideration of the factors determining the costs of integration: the degree of labour mobility and the openness of the economy. Section 10.3 addresses an assortment of other issues: the impact of currency union on government monetary and fiscal policy choices, the transition costs of integration, and the relationship (or lack of it) between common markets for goods and common currencies. Conclusions are in Section 10.4.

[6] Their flight from the rouble is understandable in the light of the near-hyperinflation in Russia. But since dollars and DM are already widely circulating throughout the old Soviet Empire, the 'temporary' solution of relying on foreign money would appear perfectly reasonable. Issuing their own currency is hardly something which ought to figure very highly among the priorities of governments facing the kind of problems seen today in that part of the world.

[7] The author has tried to remain neutral in this chapter as elsewhere in the book, though his views may well be apparent if only because, alongside the most frequently-aired arguments,

.1 The benefits of monetary union

e benefits of monetary union are all microeconomic in nature.[8]

In a sense, the case for monetary union is a negative one, since the pposed benefits stem from eliminating the costs of maintaining multiple rrencies. Essentially, the argument is that the existence of multiple cur- cies imposes costs on individual economic agents or on society as a ole. These costs, which reduce overall welfare both directly and indir- ly, via their inhibiting effect on trade and investment, can be grouped der two broad headings, depending on whether they arise out of the con- ions of economic life under certainty (mainly transaction costs of one e or another) or out of the intrinsic uncertainty of floating or poten- ly variable fixed exchange rates.

It is straightforward to enumerate the costs imposed by the existence multiple currencies. However, in evaluating the potential savings from ir elimination by a monetary union, it is important to bear the follow- points in mind:

) Not all the costs of foreign currency transactions could be saved by the use of a common currency. For example, some foreign currency loans are simply hedging exchange rate risk. On the other hand, firms often borrow in foreign markets because they find it the cheapest source of finance. Only in the former case is there a potential saving from monetary union. In the latter case, there would only be scope for saving if the reason for the difference in borrowing costs was attributable to exchange rate risk. Very often, however, the reasons have little to do with exchange rates. For example, a multinational company may find it cheapest to raise funds on its 'home' capital market, simply because it is better known there and therefore attracts a higher credit rating.

his is not to deny that a variety of supposed macroeconomic advantages have been uced to support the case for currency union. For example, it could be argued that, under d exchange rates, currencies perceived as depreciation-prone may need to be protected igh interest rates for long periods, presumably until the national monetary authority in stion has 'earned' enough credibility. In this respect, a national currency could be viewed liability, imposing higher interest rates than would otherwise be necessary on the nestic economy.

Even if one takes this argument at face value, however, it has the drawback of being metrical: if low-credibility countries (like the UK, Italy and France in the ERM) carry burden of excessively high interest rates, high-credibility countries (Germany and land) enjoy the benefit of relatively low interest rates.

More to the point, the argument appears to rest on the assumption that currencies divided into devaluation or revaluation candidates on a more or less arbitrary basis, or he very least that there is no close connection between a country's monetary policy and redibility. If there is any rationality in the way the market assesses the reputation of the pective national monetary authorities, the credibility of a supranational currency (and ce the accompanying level of interest rates) will depend on the respective national shares he post-union monetary decision-making process (see Section 10.3.2).

(2) Some of the apparent costs of foreign trade are simply rents extracted by banks, currency dealers and other intermediaries, exploiting the economies of scale open to them from the volume of transactions they handle on a regular basis. To some extent, there are genuine resource costs which could be avoided by monetary union. But the rents in excess of true marginal (social) cost would only be redistributed to other sectors of the economy, a change which may or may not be considered desirable depending on one's outlook. In other cases, costs may be not so much illusory as zero-sum, so that one country's cost is another's benefit. Again, monetary union results in no overall benefit, but simply a reallocation of income from pre-union winners to losers.

(3) Even where monetary union seems likely to yield cost savings, there may often be other, less radical ways to achieve the same results, as we shall see.

10.1.1 Foreign exchange transaction costs

We are all familiar with some of the costs of converting from one currency to another. As we saw in Section 1.1.3, large-scale currency conversions involve a bid-ask spread. On the one hand, this spread is probably quite small relative to the size of the individual transaction, and hence of negligible importance in terms of its impact on behaviour. However, given the staggering volume of foreign currency transactions compared even to the world economy as a whole, the aggregate resource cost could be quite substantial. For example, if total currency transactions in the London market add up to around $300bn on an average business day, and the typical spread is about 0.05%, the implied cost is $150m, or well over $30bn per year – a very large amount by any standards.

However, from the point of view of a single country, for example the UK, the potential resource saving from EMU is probably far smaller than this. For one thing, as the City of London's public relations machine cheerfully reminds us at every opportunity, a large proportion of the currency traded there is on behalf of foreign principals and hence, far from a resource cost to the UK, represents service exports by the British financial sector. Moreover, even where the costs are borne by UK residents, the Potential savings from EMU are not applicable to the considerable proportion of transactions with countries outside Europe.

Of the remaining trade volume, the bulk almost certainly involves little or no true transaction cost to the economy. In the first place, the $300bn figure is gross, that is, counting offsetting trades. Many trades are netted out and hence, are either not charged the spread, or at any rate involve agenuine marginal cost which is only a tiny fraction of the quoted

spread. Moreover, even where costs apply, economies of scale are likely to mean the spread is far greater than the marginal cost which could be saved by a common currency.

The 'bottom line' is that savings in transaction costs are likely to be somewhere between one quarter and one half of one per cent of EU income.[9] Although this may not seem a very large sum, it would be enough to justify the change to a single currency – if we could be sure the sacrifices were negligible.

10.1.2 The costs of uncertainty

The argument most often used to justify monetary union is that exchange rate uncertainty is inherently damaging to the volume of real flows of trade and investment. The proposition is superficially persuasive. There can be little doubt that businessmen prefer certainty to uncertainty, other things being equal. This means that, faced with investment or trade opportunities, entrepreneurs are likely to be less enthusiastic where the decision involves the risk of currency fluctuations.

However, on closer examination, the issue is nowhere near as clear cut as might appear at first glance. Consider an example. Suppose a British multinational is considering building an aircraft assembly plant in Germany. At the time of writing the £/DM exchange rate is apparently floating freely. Therefore, in so far as the costs of the project are primarily denominated in DM, and moreover spread out over a number of years, the sterling cost is uncertain, as is the exchange rate at which the cashflows from operating the plant will be converted into pounds.

But clearly the contribution of currency volatility to the risk of the project is likely to be very much overstated by, say, the variance or standard deviation of the exchange rate. In the first place, the UK company if it is truly multinational may well have DM-denominated assets with which it can finance the project. Failing that, it has the alternative of funding the investment by borrowing in Germany, a policy which amounts to hedging its prospective DM asset by a liability in the same currency. As we saw in Section 3.3, this is equivalent to a forward purchase of DM, with the useful difference that it offers more flexibility over both contract size and maturity dates. Similarly, the cashflows from the sale of the product (aircraft) can be hedged by forward sales of DM against pounds.

Moreover, the ultimate risk to the company associated with the investment and the ensuing cashflows is measured by their impact on its

[9] The estimates, which may well be over optimistic, are those published by the EU itself. They assess potential savings as being somewhat greater for the smaller countries and those with less sophisticated financial markets.

net position (sometimes called ***net exposure)*** in DM in any period, not by their gross foreign currency value. Most cross-border transactions of this type will be netted out in the balance sheets of large multinational companies. Thus, if the company in our example has previously been a seller of aircraft to Germany, the DM-denominated proceeds of the sale, though risky taken in isolation, obviously help to offset the foreign currency risk of the company's investment.[10]

This is far from being the end of the story, however. To make matters simple, suppose the British firm in our example has no other business in DM, so that we can consider the proposed investment project in isolation. Under these circumstances, it is obviously true that if the DM falls by, say, 10% after the investment is made, the sterling value of the company's German asset will also fall by 10%, ***other things being equal.*** But, as is so often the case in economics, other things are unlikely to remain equal because, in so far as the exchange rate is not expected to change any further in the interim, the competitiveness of production at the new assembly plant has been enhanced. The increase in prospective cashflows will to some degree offset the fall in asset values resulting directly from the DM depreciation, and might even reverse it.

In general, then, it is easy to overstate the true costs of exchange rate uncertainty, at least as far as the typical multinational corporation is concerned.[11] Smaller companies have to rely on the ability of financial intermediaries to match positions in different countries, charging fees

[10] Readers familiar with modern portfolio theory will recognize the fundamental proposition involved here. In general, the riskiness of an investment can never be judged in isolation. What determines an investment's contribution to the total risk borne by a company is the covariance of its return with the return on the rest of the company's activities. In so far as the two returns are dependent on a single common factor (for example, the pound/DM exchange rate), there will be some covariance between them. The covariance will be positive if both returns tend to rise when the pound strengthens, negative if one return rises in situations where the other falls. Unless the covariance is so great as to create 100% correlation between the new risk and the pre-existing risks, the investment still increases the degree of diversification of the company's activities, reducing the overall risk. Indeed, if the covariance is actually negative, it is a case of swings and roundabouts, with good news on one front offset to some extent by bad news on the other. Under these circumstances, the new investment provides a degree of hedging for the rest of the company's business.

[11] These are some of the reasons why, in practice, it is often a very complicated exercise indeed to estimate the impact of exchange rate fluctuations on a company. The situation is further complicated by the fact that the answer very much depends on the currency in which the multinational chooses to do its accounting. Shareholders of US-based multinationals, for example, are normally assumed to prefer to see the accounts in dollars, so management is preoccupied with currency exposure relative to the dollar. Whether this presumption is correct in a world with increasingly integrated equity markets is dubious. It is probably even less relevant in Europe, where the major Dutch-based multinationals have millions of shareholders outside the Netherlands. In any case. if they are concerned at the impact of currency fluctuations on their balance sheets, they can always draw up their accounts in ECUs.

which are reduced to the level of the transaction costs referred to in the last section. What is left is the residual risk that has to be carried either by the individual company or by the forward market.[12]

As far as the latter option is concerned, it is often said that covering foreign exchange transactions is costly. The statement is somewhat misleading. As we saw in Chapter 3, forward cover is likely to involve a cost in the form of a risk premium. However, most of the published research suggests the premium is probably quite small (Chapter 13). Nonetheless, the situation involves a number of subtleties which have been a source of confusion in some commentaries. Take an example.

Suppose at some point the situation with regard to the £/DM exchange rate is as follows:

Spot rate: DM1 = £0.40
30 day forward rate: DM1 = £0.404
Expected 30 day ahead spot rate: DM1 = £0.403

Comparing the spot and forward rates, it is plain that the DM stands at a forward premium to the pound of (0.404/0.40) – 1 = 0.01 or 1%. However, there is no reason to regard this figure as giving an indication of the potential saving from uniting the UK and German currencies. For one thing, the pound's discount is the DM's premium. When, as here, sterling holders have to pay more than the spot rate for 30-day German currency, DM holders pay less than the spot rate.

Moreover, most of the forward premium has nothing at all to do with risk as such. In the example given above, three-quarters of the forward premium (that is, 0.75%) reflects the market's (albeit unobservable) expectations. This component of the premium is hardly to be regarded as a cost, because if the market's expectations are fulfilled, it will be just sufficient to compensate DM borrowers and sterling lenders for movements in the exchange rate during the month.[13] It is only the residual 0.25% that is a genuine cost of insuring against exchange rate fluctuations, and therefore potentially a saving through currency union.

[12] In reality, there is nowadays a whole range of different so-called derivative instruments which can be used for hedging currency risk, for example, futures, options, swaps and such like. For an explanation of how they work, see the relevant chapter of any up-to-date textbook on Finance.

[13] In terms of domestic macroeconomics, there is no reason to suppose real (that is, inflation-corrected) interest rates will diverge between UK and Germany. The reason is that, under CIRP, nominal interest rates will differ only by the forward premium, which in turn is mostly accounted for by the expected depreciation of the currency, and if PPP holds the latter reflects relative inflation rates.

10.1.3 The international unit of account

Economists view money as having a number of important functions, of which one of the most important is as a *unit of account*. In this respect, it fulfills an essential information-bearing role, shortcutting what would otherwise be the cumbersome mechanism of barter. Without a stable unit of account, the drafting of long-term contracts would be impossibly complex. However, when this analysis is applied to cases like EMU, there turns out to be somewhat less to the argument than meets the eye, as we shall see.

To understand the point, suppose I am looking through a mail order catalogue in the UK. Now in the absence of anything qualifying as money (that is, in a world of barter), the catalogue would have to be very thick indeed if it were to serve the purpose of telling me the true price of anything more than a handful of goods. The reason is that the price of each good would have to be quoted in terms of all other goods. So for example, instead of a money-price of £10 for a compact disc, the catalogue would have to quote a long series of *relative prices*: 20 large white loaves of bread, two tickets for the cinema (specifiying the cinema and the film), 0.75 days of tuition on a first degree arts course (specifying the university etc.), and so on.

Put like this, it should be clear why it is absolutely essential to agree on a substance – commodity, paper, metal or whatever – to nominate as a unit of account.[14] Having done so, the information problem becomes manageable. Once I get used to pounds sterling, I know immediately what is meant by a cost of £10 in terms of all the goods and services I buy regularly and, equally important, I have a fairly precise idea of its cost in terms of leisure, that is, how many hours I have to work in order to pay for it.[15]

Obviously, the advantage of any form of money resides in its very uniqueness as a common standard of account. Hence, some proponents of currency union go on to argue that a common currency for Europe, for example, would be a substantial informational improvement on the 12 national currencies it replaces.

The argument is possibly correct, up to a point. But in the first place, its force really relates to the advantages of fixed compared to floating exchange rates. After all, the 12 currencies add a mere 11 prices – the 11

[14] It should also be clear why people organized in barter rings in the UK and the USA are deluding themselves if they think they are somehow behaving more efficiently than those of us in the monetary economy. Even allowing for high transaction charges in banks, they are unlikely to be saving anywhere near enough to cover the inconvenience of barter. However, if barter enables them to avoid or evade direct or indirect tax, it could be worthwhile for the individuals involved, though not of course for society as a whole.

[15] Suppose there are N goods in the economy. It turns out that, with barter, $N(N-1)/2$ (relative) prices need to be given in the catalogue, whereas nominating one of the N goods as money reduces the number of (money) prices required to only $N-1$. So even if the number of different goods and services traded in the UK is only 10,000 (an extremely conservative estimate), monetary exchange is more efficient by a factor of 5000!

exchange rates against the pound – to the thousands of sterling prices with which a UK resident must live. This is hardly a significant burden. Second, the argument relies for its superficial attraction on a number of conditions which are not really satisfied. Perhaps most importantly, it is not obvious that a single currency is optimal when relative prices differ between regions, as they do in Europe.

To be explicit, ask yourself how much better off the average European would be, informationally speaking, if all prices were quoted in, say, ECU. Would a Londoner really benefit if supermarket prices were quoted in the same currency in Madrid? Very little, one suspects. Indeed, the most likely reaction to a changeover would be total apathy. The reason Spanish prices are of little interest to UK residents has nothing to do with the fact they are currently quoted in pesetas, but most obviously because there are very few practical ways for a Londoner to take advantage of any bargains in Madrid, and vice versa. Moreover, that is true even though many of the goods in question are eminently tradeable. But, as we have seen, the problem for traders who may or may not arbitrage away any price differentials is one that is straightforwardly handled by forward covering.

Take a more controversial example. It is well known that, when converted at current exchange rates, prices of many motor vehicles appear to be as much as 25% more expensive in the UK than in Belgium. Anyone seeking to establish whether the price differential is real or only apparent must examine carefully the makers' claim that the specification of UK vehicles is higher than in continental Europe, as well as the additional cost of shipping cars across the English Channel, where necessary. Having estimated the costs of converting the vehicles to a common specification and added the charges for transportation, insurance and so on, those costs have then to be translated into a common currency.

It should be clear that, in all these tiresome computations, the role played by uncertainty about the number of Belgian francs per pound is negligible. The complications all arise from the failure of the European single market, which has nothing whatever to do with the existence of multiple currencies, as we shall see (Section 10.3.5). In general, the reader may look back at the discussion in Chapter 2 to see that few of the reasons given there for the failure of PPP have anything to do with exchange rate uncertainty.

Of course, it is just about conceivable that at some future date products may have become standardized across the European market to such a degree that currency considerations really do stand out as the most serious remaining obstacle to integration. Other than in this unlikely (and unattractive) scenario,[16] however, the benefits from a shared unit of account seem likely to be extremely slim.

[16] Standardization is unlikely to be successful beyond a certain point simply because pressure from the authorities is in large part offset by the continuing market tendency towards product differentiation. Moreover, it is hard to see why product diversity should be any less attractive to economists, politicians and civil servants than it is to consumers.

10.2 The costs of monetary union

Two points need to be clear at the outset regarding the costs of monetary union.

First, they are largely ***macroeconomic*** in nature. There are no obvious microeconomic disadvantages.

Second, they are not primarily concerned with the nature of the macroeconomic equilibrium under currency union and disunion, but with differences in the patterns of ***adjustment to disequilibrium*** following a disturbance in the foreign sector. In other words, while there is little reason to suppose the ultimate outcome of a disturbance is affected by whether countries share a common currency, there is every reason to expect the adjustment mechanism to vary considerably, with important consequences for output and employment over what could be a very protracted period. The reason why the equilibrium outcome is unchanged by currency union is easily stated. As has already been pointed out, currency union is to all intents and purposes the same as a permanently fixed exchange rate as regards its comparative static properties. It is only when we come to examine the implications for adjustment that the differences become apparent.

To understand what is involved, take the monetary model as the starting point. As usual, we take as our benchmark a pure float with perfectly flexible prices, and we contrast the effect of a disturbance in this simple case (Section 5.1) with the effect in the fixed exchange rate case (Section 5.2).

The type of disturbance to consider for our purposes is a shock to the domestic country's price level relative to the foreign price level. Suppose, for example, the foreign price level falls suddenly by 10%, while the domestic price level is initially unchanged. We saw in Chapter 5 that the final result is the same in both cases: competitiveness is restored, with real income, output and the real exchange rate back where they started. The difference is that, whereas under a floating exchange rate regime the domestic currency depreciates so as to restore competitiveness (Section 5.1.5), with a fixed exchange rate the process involves a fall in the domestic money stock and price level.

Take the fixed exchange rate case first. As we saw in Section 5.2.3, in the aftermath of a relative price shock, equilibrium is restored through reserve changes impacting on the domestic money market. In this case, the home country loses reserves as a result of the deterioration in its competitive position, until the fall in its money stock reduces its price level to match the 10% fall in foreign prices.

Now it is a sad fact of macroeconomic life that falling price levels tend to be accompanied by considerable economic pain, in the form of unemployment, bankruptcies and misery. The critical question is this: ***is the Process more painful when the option of devaluation is ruled our because the home country and the foreign country are bound up in a currency union?*** If it

is, then it would obviously be desirable from the macroeconomc point of view to preserve that option (if not actually to allow the exchange rate to float freely). If however the adjustment mechanism is no more sluggish when the exchange rate is fixed irrevocably, then the microeconomic benefits of union are available at little or no macroeconomc cost.

10.2.1 The labour market

The consensus among economists is that the labour market is the critical factor in determining how smoothly adjustment proceeds.

Consider the impact of the initial disturbance on wage levels in the domestic economy. The fall in foreign prices means that, at pre-existing money wages, domestic production has become uncompetitive because real wages are now higher than before by an amount of up to 10%. Roughly speaking, if internationally traded goods prices account for, say, 40% of the cost of living, real wages will have risen by 4% (that is, 40% of 10%), with a consequent loss of competitiveness, other things being equal. As long as this situation persists, there will be downward pressure on the level of economic activity, with accompanying increases in unemployment, the level of bankruptcies and so forth.

The question is: to what extent, if any, would devaluation make the return to equilibrium speedier and less painful?

With the exchange rate fixed, as the domestic economy loses reserves, the excess demand for money exerts downward pressure on product prices and may also push up interest rates (Chapter 6). If prices fall faster than money wages, it follows that real wages increase, resulting in unemployment. In fact, if the price level falls by the full 10% while money wages are unchanged, real wages increase by 10%, and the level of employment bears the brunt of adjustment to the disturbance. Unless both money wages and prices fall at the same rate, and more or less immediately, there must be temporary unemployment.

By contrast, if the domestic currency depreciates, whether under a free float or a once-and-for-all devaluation, the domestic price of traded goods rises by 10%, reducing real wages pro rata and preserving labour market equilibrium – provided money wages remain unchanged in the face of the fall in their purchasing power, a point to which we shall return-later.

The importance of labour mobility (Mundell)

At this point, it would appear that floating exchange rates are unambiguously superior to fixity, because they allow a near-painless reduction in real wages, through a devaluation-induced inflation of the domestic price level. Does that mean every country should have its own currency with a

freely floating exchange rate? Why stop there? After all, everyone agrees that unemployment is undesirable. Why not have currency zones smaller than countries? Then California could reduce or even eliminate its unemployment by devaluing its currency, reducing real wages in the state relative to the rest of the USA, as well as the rest of the world. Or go further: in US cities where unemployment is high as a result of the post-Cold War cuts in defence spending, a devaluation would provide a useful boost to the local economy, and the same applies to the small towns in Northern England currently suffering from the impact of pit closures. It looks as though there are arguments in favour of ever-smaller currency zones.

There is in fact an obvious limit, however, as is clear from the last example. As Mundell pointed out over 30 years ago, the argument for flexible exchange rates presented here presupposes that labour is immobile.

By contrast, suppose labour is mobile internationally or interregionally. Then it is easy to see that, even with a fixed exchange rate, equilibrium can be restored without transitional unemployment. Instead, workers who cannot find jobs in the domestic economy will move abroad (or to the next town or region), where they will be absorbed into employment because at the lower prices and wages, production is relatively profitable. As the domestic economy loses labour, its marginal product rises, until higher real wages are validated. Thus labour mobility obviates the need for exchange rate flexibility, by making it possible to preserve full employment, more or less, without devaluation.

Now international labour mobility is unusual in anything but the very long run. By and large, people only leave their own country to emigrate, drawn by what they see as vastly better prospects stretching into the indefinite future. But within a small country or group of countries (for example, Benelux) or a single region, they may well be ready to move in response to temporary differences in labour market conditions.

For these reasons, Mundell concluded that the optimal zone for a single currency was determined by the area within which labour was willing and able to move freely. In practical terms, this would appear to mean very small currency zones indeed, far smaller than most (though not all) of the countries in the industrialized world. For example, it probably means a separate currency for California, or better still for the South-West USA. Likewise. on these grounds Scotland needs an independent currency,[17] as

[17] **Notice that the presence of hundreds of thousands of Scots or people of Scottish descent in England, North America, Australia and so on is evidence, not of labour mobility, but rather of the exact opposite. For the most part, Scots in London have not moved south in reponse to temporary employment opportunities resulting from the sluggish response of wages to random demand shocks, any more than have the Scots now living in Australia. Instead, insofar as they have been drawn by economic factors, they relate to very long term growth prospects that have little or nothing to do with exchange rate regimes or indeed with macroeconomics altogether.**

do the other regions of the UK. On the other hand, West and East Germany are probably better off having a common currency, and it may be that the Benelux countries could also be integrated.

In general, considerations of labour mobility militate in favour of smaller currency zones. Moreover, on these grounds there ought to be more currencies in Europe than in the USA if, as is normally assumed, the degree of population mobility is lower in Europe. It is also worth noting that anything which serves to reduce labour mobility (for example, language differences, generous unemployment benefits) will also tend to make the optimal currency area smaller.[18]

In fact, recently published evidence suggests that wages fall very little in the states of the USA in response to unfavourable demand shocks. Virtually the whole burden of adjustment falls on labour migration between states, so that it is estimated to take about six years for regional unemployment rates to return to the national average in the aftermath of a disturbance. From this point of view, it would appear that the USA is a candidate for monetary disintegration.

The importance of openness (McKinnon)

We appear to have arrived at the conclusion that, in terms of macroeconomics at any rate, the optimum currency area is very small, at least relative to present-day nation states. It turns out however that the requirements of labour market adjustment can equally be taken as justification for a movement in the opposite direction altogether.

The issue turns on the mechanism whereby devaluation serves to reduce real wages. Recall that, in the aftermath of a devaluation, it was assumed that money wages remained unchanged, in spite of the rise in prices, allowing the real wage to fall – hence, the desirability of a flexible exchange rate in the absence of labour mobility.

Notice that what is involved is a kind of sleight of hand, a monetary confidence trick whereby devaluation and the consequent rise in prices bring about a fall in real wages, ***because labour suppliers fail to notice or respond to the inflation by raising*** their money wage ***demands.*** To the extent that wage earners ***do*** respond, no reduction in real wages takes place and

[18] Unemployment benefits should of course be interpreted broadly to include all the benefits available to those not working, including other welfare provisions, benefits in kind and such like. Experience in the USA shows that where labour mobility exists, the unemployed have a tendency, not surprisingly, to gravitate to wherever the benefits are most generous.

hence depreciation is ineffective. The Mundell case for flexibility therefore requires an inert labour force.[19]

How likely is such passivity on the part of the labour force? obviously, it very much depends on the circumstances: how competitive the labour market, how far wages are fixed by long-term contract, and so forth. But, as McKinnon argued in reply to Mundell, other things being equal (that is, given the other features of the labour market), there will be one overriding factor determining how far workers passively accept a fall in their real wage as a result of devaluation: the degree of openness of the economy.

To see the force of the argument, consider the following question: how far do real wages fall when the exchange rate depreciates, say, by 10%? The answer obviously depends on the impact of the devaluation on the cost of living.

At one extreme, in a very small economy, almost all consumption is likely to consist of imports or import-competing goods, that is, tradeables. The effect of a 10% devaluation is therefore likely to be a near-10% rise in the cost-of-living index. The probability of workers accepting this without attempting to claw back some of the drop in their standard of living by pressing for higher money wages seems small.

On the other hand, in a large economy, where imports may well be only a negligible proportion of the typical consumption basket, the impact of even a 10% devaluation will be small. For example, if imports carry only a 5% weight in the consumption price index, the direct effect will be only ½% (that is, 10% of 5%). Hence, McKinnon argues, in large economies, devaluation is unlikely to provoke a significant response on the part of wage-earners.

In general, therefore, McKinnon puts forward the case for very large currency areas. The larger the zone, the more closed the economy of the region it covers. Hence, the smaller the weight of traded goods in the consumption baskets of its workforce, and the easier it will be to sneak a reduction in the real wage without workers realizing or bothering to respond.

It looks as though labour market considerations suggest a trade-off between labour mobility, which suggests smaller currency areas, and openness, which indicates choosing larger areas.

[19] Notice it cannot be argued that workers are simply unable to retrieve the situation. After all, unless labour market participants suffer from some form of what economists call money illusion, one would expect agreements between employers and the labour force to relate implicitly or explicitly to real rather than nominal wages. Hence, what was an equilibrium real wage prior to devaluation will still be the equilibrium afterwards, unless there has been some other change affecting the relative bargaining strengths of the two sides of the labour

10.3 Other considerations

10.3.1 Government behaviour: common currency versus fixed exchange rate

The macroeconomic arguments about the efficacy of devaluation as a tool for preventing unemployment really relate to the debate over the relative attractions of floating versus fixed exchange rates, rather than to the pros and cons of currency union. The reader may well wonder whether there are likely to be any macroeconomic implications specific to currency union. According to Mundell, one difference is to be found in the probable response of governments under the two types of arrangement, which he argues is likely to be different under a common currency than under a multiple currency system with fixed exchange rates.

His argument is as follows. Suppose there is a sudden decrease in the demand for the output of country (or region) A, to the advantage of country or region B. If the two zones are linked by a fixed exchange rate, the natural reaction will be for A's monetary authority to tighten credit so as to reduce the money stock, thereby raising interest rates and strengthening the balance of payments. These measures will inevitably have the effect of reducing demand even further in B, leading to multiple deflation.

Notice the problem arises out of a basic asymmetry of fixed exchange rate systems. The burden of adjustment falls mainly on the country or region whose currency is in excess supply, which is forced to deflate, while there is no comparable pressure to reflate on members of the system whose currencies are in excess demand.

By contrast, Mundell argues, if A and B form part of a common currency area, the authorities will be preoccupied with preventing unemployment in A. Hence they will tend, in response to the same initial demand shift, to loosen monetary conditions, in the process giving a boost to inflation in both A and B.

Mundell concluded, therefore, that while fixed exchange rate systems suffer from an inherent deflationary bias, common currency zones have a built-in inflationary bias.

A similar argument has often been put in balance of payments terms. Fixed exchange rate systems, whatever their written rules, invariably impose an unofficial burden of adjustment on deficit rather than surplus countries. On the other hand, within any single country there is pressure to equalize levels of employment and output at the level of the most fortunate region, in other words to increase demand in the deficit regions.

The argument is not entirely convincing, however. Take, for example, the Bretton Woods system (Section 1.5.1). In most cases, it did appear to throw the burden of adjustment on to the deficit country, while surplus countries felt immune to pressure to reflate their economies. However, the one glaring exception to this ***defacto*** rule was the USA itself, which was able to run unlimited deficits, thereby swamping any possible deflationary bias in a tide of newly printed dollars. In a sense, the Bretton Woods system involved enforced transfers to the USA from each member country in proportion to its dollar reserves, by a mechanism which is the international analogue of what is called ***seigniorage*** in the context of the domestic economy.

By contrast, the ERM fulfilled Mundell's prophecy. In the early 1990s, Germany generated domestic inflation within the new currency union so as to sustain the level of demand in its Eastern provinces. At the same time, it attempted to preserve the external purchasing power of the DM by a tight credit policy, thereby imppsing deflation on its ERM partners.[20]

Unfortunately, as the last example makes clear, Mundell's argument is difficult to verify, because the issue is inseparable in practice from questions of sovereignty, as currencies have so far invariably been associated with independent countries. Putting the matter crudely, the government of a surplus country in a fixed exchange rate system usually feels free to pressure deficit countries to deflate, secure in the knowledge that it will not have to face voters embittered by higher levels of unemployment, interest rates, bankruptcies and recession. On the other hand, the pressure on a government to inflate so as to reduce unemployment within one of its own regions obviously arises out of political necessity, rather than from the fact that the regions share a common currency. Whether the same pressure would be felt within a system like the proposed EMU is doubtful.[21]

In any case, since neither an inflationary nor a deflationary bias can be considered desirable outcomes, it is hard to see how this factor can decisively affect the choice between the two systems. If anything, it would be preferable to have a system which was neutral rather than one with an inherent bias.

In practice, the inflationary bias within individual countries tends to be mitigated somewhat by the existence of so-called fiscal stabilizers. For example, suppose the demand for Scotland's output declines, its unemployment rises, its income falls and its balance of payments with the rest of the UK deteriorates. The result is that tax revenues from Scotland fall, as Scots

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[20] Notice that the scope for Bundesbank seigniorage under the ERM was presumably much smaller than was available to the USA under Bretton Woods, simply because ERM members had a more or less free choice as to which reserve currencies to hold. On the other hand, at the time of writing at least, it is impossible to know how much of the increase in the Deutschmark money stock during the late 1980s and early 1990s is actually circulating as currency in the ex-Soviet bloc countries.

[21] One example to illustrate the point is the Republic of Ireland, which until 13 March 1979 was in a de *facto* currency union with the UK, since it kept the exchange rate of the Irish Pound fixed at par with the pound sterling. Yet, of course, no British Government felt under any compulsion to reflate in the UK so as to eliminate unemployment in Ireland.

As far as EMU is concerned, it very much depends, of course, on whether any significant degree of democratic accountability is introduced into the formulation of European macroeconomic policy.

earn lower incomes and spend less, in the process reducing both their direct and indirect tax bills.[22] In addition, there will usually be an immediate inflow of Government transfer payments, in a variety of forms: more unemployment benefits, higher means-tested welfare payments, and so forth. The net effect amounts to an automatic (that is, unlegislated) fiscal stimulus to offset, at least partially, the deflationary effect of the original demand fall. Under these circumstances, the perceived need for Government intervention to boost demand in the stricken region is reduced, as indeed is the urgency of a real devaluation, at least in the short run.

It follows that, from this point of view, a common currency is likely to be tolerable where significant fiscal stabilizers are in place, as in the UK and, in particular, in federal systems like the USA or Germany. The same is certainly ***not*** true of the EU, where fiscal transfers are negligible in scale, and virtually never automatic. Europeans still pay taxes to their national governments, not to Brussels. Hence, there is no spontaneous fiscal subsidy to the UK when its balance of payments with the rest of the EU deteriorates,[23] though in the long term poorer countries do enjoy some slight (and politically contentious) subsidies through the EU Regional Fund and a number of other programmes.

10.3.2 Fiscal sovereignty and the Treasury

The need for fiscal stabilization is only one of the arguments which have motivated the demands from a number of sources for the imposition of constraints on national fiscal policy and its ultimate subordination to a centralized European budgetary process.[24] Whether or not surrendering national fiscal autonomy in this way is judged to be desirable depends on one's political perspective, and is therefore not our concern here. All that can be said is that the desirability or otherwise of a common currency cannot nowadays be considered independently of the issue of fiscal sovereignty.

Apart from the question of fiscal stabilizers, it might appear that fiscal policy independence and currency union are unrelated issues, and

[22] Direct taxes are those paid on personal and corporate incomes, while indirect taxes are imposed on expenditures, which in the UK means mainly Value Added Tax and Customs and Excise duties.

[23] At the risk of labouring the point. it must be emphasized that, just because'the UK's balance of payments would be more or less unobservable within a currency union, it certainly does not follow it would be unimportant. Going back to the example of Scotland, a regional balance of payments deficit indicates a net outflow of wealth to the rest of the world. The fact that the region is not faced with the immediate problem of how to preserve the external purchasing power of its currency is of little comfort if it faces instead a loss of output and employment.

[24] In principle, at least. this type of concern is completely independent of arguments about the desirability or otherwise of 'coordinating' (that is, unifying) the detail of fiscal policies. as it affects tax rates, subsidies, payments to and receipts from social security, and so forth,

indeed ***in principle*** there is no connection between the two Nonetheless, in the European case at least, fiscal policy has been fully drawn into the sphere of supranational political economy.

Again, the reason has little or nothing to do with macro- or microeconomics. To understand what is at stake, consider the analogy with local government budgeting within a country like the UK. Broadly speaking, local authorities face a budget constraint which is almost the same as that facing the central government. with one exception (see Section 4.1.2). Both levels of government can finance their expenditure either by raising tax revenues or by borrowing. The only difference is that ***de facto*** the central government is able not only to borrow in the normal way (that is, by issuing short- or long-term debt), but can also fund its activity by printing IOUs which are treated as money by the rest of the economy.

We have already mentioned in the last section the fact that this power generates revenue for the central government from seigniorage. What has not so far been pointed out is that this power to print money has another dimension. Take the case of the UK. As long as the British government restricts itself to borrowing in sterling denominated forms, it need never, indeed can never default on its debt. For example, its gilt-edged stock promises to pay the holder nothing more than a certain number of pounds every six months (the 'coupon') and one hundred pounds at maturity. Her Majesty's government will never run out of pounds as long as it controls the Bank of England's printing presses. In other words, its obligations to repay its sterling debts can always be covered by printing pounds, and its only obligation to holders of pounds is to redeem banknotes with more banknotes.

Notice that the same is certainly not true of the British government's borrowing in foreign currency. The Treasury cannot repay debts denominated in DM or Yen by printing those currencies. That right belongs exclusively to the Bundesbank and Bank of Japan respectively.[25]

By contrast, a local authority in Britain could well default, if allowed to do so by central government. If it is either unable or unwilling to pay for its spending by local taxation, it must borrow, and it makes no difference whether it borrows sterling or foreign currency. In either case, it incurs debts which are not denominated in terms of its own IOUs, and therefore cannot be repaid from its own printing presses. In this sense, ***all local authority borrowing is denominated in a foreign currency,*** that is, a currency which is 'foreign' or externally printed from the point of view of the local government in question.

[25] This is precisely why a number of countries, mainly in Latin America and Africa, were forced to default on their debts in the 1980s, in spite of the insistence of one confused commercial banker in the previous decade that 'National governments don't go bankrupt'.

The reader may well wonder what would be the case in a country with an independent central bank. It all depends what one means by independence. One might think an independent central bank could refuse to print money to redeem a government's (domestic currency) debts. However, this scenario is hard to imagine in practice. at least in

The dilemma is obvious. Again, ***in principle*** this simply puts the local authority on a par with private institutions like firms, households, and so forth. But this presupposes the central government would be willing ultimately to allow the local authority to default or even be driven into bankruptcy, if ever it were unable to pay its debts. By and large, central government is very unhappy indeed about this possibility, and tries to avoid it at all cost. In order to do so, it is forced to place direct or indirect constraints on the spending decisions of local government,[26] so as to preempt as far as possible a situation where it is forced to choose between being compelled to finance a local authority's borrowing on the one hand and allowing it to default on its debts on the other. This unenviable choice would of course be made more difficult by the fact that it would almost certainly involve conflict between local and central governments of different political complexions.[27]

Now since EMU will reduce national governments to the status of local authorities, with no power to issue money, either they must be permitted to default on their debts or they must be constrained. The new integrated monetary authority, the European central bank, cannot be forced to monetize any and every budget deficit a national government is unable or unwilling to fund by borrowing, at least if it is to have any control over the supply of the common currency. On the other hand, the prospect of a member country becoming insolvent is presumably too awful to contemplate, at least for governments that are less than wholeheartedly committed to market disciplines in other, less sensitive areas of economic life. The only remaining alternative is the imposition of permanent constraints on the fiscal policies of national governments, which become essentially instruments of the central government, restricted to determining the allocation of expenditures and the tax burden (that is, the microeconomics of fiscal policy), with no direct control over the key macroeconomic variable, the budget balance.[28]

Ultimately, the dilemma will have to be resolved before currency union can proceed. All that can be said here is that its resolution is likely

[26] The way these limits actually operate is extremely complicated, and not relevant to the issues involved here. Note that half or more of local authority spending in the UK is in any case funded directly or indirectly by central government. The bulk of the subsidy is in the form of a grant computed according to a formula which is both complicated and little publicized, a fact which if anything makes it even harder for the central government to simply turn its back on an insolvent local authority.

Whether the EU will draw any lessons from this sort of situation (and similar problems in other European countries) remains to be seen.

[27] As in the case of the City of Liverpool's insolvency in the early 1980s. A similar scenario when New York City was in financial difficulties prompted the notorious headline in one local newspaper 'RON (Reagan) TO CITY: DROP DEAD'.

[28] Notice that even the microeconomic control may ultimately be reduced to near zero (see

to be considerably more painful than it has so far proved in the context of any single country, since the local and central governments will be divided not only by political persuasion, but also by nationality.

It is not possible to assess the costs and benefits of this abrogation of fiscal policy by national governments. What can be said is that there are at least two aspects to be considered. In the first place, countries face a cost in so far as they may be forced to relinquish the right to operate a countercyclical fiscal policy. The cost in this respect could be higher unemployment and lower output.

As far as the benefits are concerned, if the constraints are binding, the imposition of fiscal rectitude from above may well reduce the borrowing costs for previously profligate member governments, especially if the European central bank is a guarantor of their debts. On the other hand, governments which have a long-established record of conservative budgeting will have little to gain, and may well lose. Indeed, an anomalous situation may well arise whereby the conservative countries end up being forced into less responsible fiscal policies.

To see why, consider the situation of a country like Switzerland, which is expected to join the new union at some stage. Suppose the rules of the currency union permit budget deficits which are higher than Switzerland is running prior to entry, by whatever measure is adopted (probably in relation to GNP). Under the circumstances, it appears Switzerland would have little to gain by keeping its borrowing below the maximum permitted. As long as its common currency debt is credibly guaranteed by the European central bank which issues it, Swiss government debt would carry no default risk (but then neither would the debt of any other member country), and hence it would pay the same interest rate on its borrowings whether its deficit was bumping up against the ceiling level or only one quarter as high. Moreover, the less it borrowed, the more it would be subsidizing the more profligate governments. There would be no rewards to persuade any country to borrow less than the maximum permissible level. On the contrary, the fact that a thrifty government (especially for a large country) was directly reducing the borrowing costs for less conservative neighbours would act as a strong disincentive to saving.

We conclude that the fiscal constraints will need to be set at a lower level than otherwise (that is, than the pre-entry average or maximum of the member countries) in recognition of the fact that the maximum levels are likely in practice to become the norm. This in turn implies a greater degree of stringency for the majority of member countries.

10.3.3 Monetary sovereignty and the central bank

In practice, the type of monetary policy found in a currency union is likely

ank than anything else. Thus, the current hyperinflation in Russia has far nore to do with the internal politics of its government sector than with the act that the rouble is used over so many regions with such diverse and ivergent economies.

Let us return to the example of Europe. We saw in Chapter 5 that a xed exchange rate regime is consistent with an independent monetary olicy only in the very short run. In practice, this meant that ERM ember countries found themselves forced to accept Bundesbank monetary discipline as the cost of remaining in the system.[29]

Now there are two ways of interpreting this fact.

On the one hand, ERM members by and large had far less convincing records of monetary discipline than Germany. By making a public ommitment to accept the monetary discipline imposed by the Bundesank, they hoped to be able to achieve relatively rapid credibility as low-nflation countries. They tried, as it were, to hitch a ride to their desired estination of credibility as low inflation countries on the Bundesbank's oattails. Without ERM membership, they would have been forced to olerate far higher interest rates to compensate for the risk indicated by neir pre-ERM history of relative laxity in monetary policy. Moreover, ney would have had to sustain these high interest rates for as long as it ook to convince markets that they really had changed their priorities and vere now truly committed to permanently lower inflation. According to his view of events, while it survived the ERM allowed the UK, France nd Italy to reduce their inflation at lower cost (in terms of lost output, igh interest rates, unemployment and so on) than would have been ossible outside the system. Of course, with the demise of the ERM this iterpretation looks somewhat implausible.

On the other hand, the freedom to purchase short-term benefit at rhatever cost in inflation might be regarded by some people as worth preerving. In so far as a country's inflation is the freely-chosen outcome of emocratic choice, it is hard to see how it can be renounced without some neaningful loss of freedom.[30]

[29] That is to say, their interest rates followed German rates up or down, while in most cases especially UK, France and Italy) remaining above German levels.

[30] Anyone who doubts this is the case ought to ask themselves the following question: why re Germany or Switzerland so zealous in their pursuit of low inflation, while the UK and, o a lesser extent the USA. are so much laxer? The answer surely relates ultimately to the riorities of voters in the different countries, embodied not only in their directly expressed references regarding inflation rates, but also in the institutional framework they erect. hus, apart from obvious differences in the extent to which governments exert political ontrol over monetary policy, one notable distinction is in the fact that both the USA and he UK have tax regimes that encourage people to invest in inflation. In the USA, tax relief granted on consumer borrowing, but interest income on lending is for the most part axable. In the UK, tax and other incentives have been used over the years to persuade ritons to invest in real estate, thereby giving them a significant stake in inflation.

The issue only becomes acute if there is actually a divergence between member countries' preferences in this regard. Of course, the very fact that Germany had so different an inflation history from the other major economies is prima facie evidence of just such a divergence in tastes prior to entry into the system. Was ERM entry ever likely on its *own* to trigger a change in tastes? Or was it expected somehow to make the transition from high to low-inflation country less painful than otherwise by signalling unambiguously to financial markets a change that had already taken place?

Alas, we shall never know whether ERM entry was actually accompanied by the requisite convergence of tastes, because the system was undermined by an unforeseen calamity rather similar to the one which destroyed Bretton Woods. It will be recalled that a sudden increase in spending by the **USA** on fighting its wars against communism in Vietnam and poverty at home ultimately proved fatal to the world's fixed exchange rate system in the early 1970s (Section 1.5.2). In a bizarre parallel, the effort to raise East German living standards to West German levels dealt a mortal blow to the **ERM.** This has been the outcome in spite of the fact that the reaction of the monetary authority in the centre countries was completely different in the two cases. While the Federal Reserve accommodated **US** Government spending in the late 1960s by printing dollars and generating worldwide inflation, the Bundesbank has so far preserved its independence in the 1990s by refusing to accommodate an avalanche of fiscal spending it had never endorsed in the first place.

The resulting high real interest rates effectively forced the other ERM members to devote their savings to funding the rebuilding of East Germany. Thus, whereas US overspending in the 1960s was paid for by an inflation tax on Bretton Woods member countries, the ERM meant that German overspending in the 1990s was financed by forced loans from its satellite countries. If given the choice, the other European countries might have preferred the inflation tax to the forced lending, or possibly neither. As it was, the UK and Italy eventually found the price too high and left the ERM, followed soon afterwards by a crisis which finally put an end to the fixed exchange rate system in all but name.

How will matters change when (or perhaps if) European monetary unification takes place?

Obviously, that will depend critically on the nature of the new supranational monetary authority. What the example of German unification ought to teach us is that the outcome will depend not only on which country's tastes predominate with regard to inflation, but also on the domestic Preoccupations of the dominant nation at the time. Thus, the German aversion to inflation and consequent support for a tight money policy was reinforced by its own domestic problems in the 1990s.

Subject to this proviso, however, the outcome is bound to be some form of compromise involving inflation higher than would ideally be

preferred by the low-inflation countries (Germany, Holland) and lower than would be chosen by the others. Indeed, it is at the moment so difficult to imagine a compromise between the monetary conservatism of the Bundesbank and the relative liberality of the Mediterranean countries that the prospect of monetary union appears remote, though the situation could change, especially if Germany itself becomes more inflation-prone.

As we shall see when we turn to a consideration of the transitional arrangements for EMU membership, it is anyway difficult to visualize the Mediterranean countries meeting the convergence criteria. At the time of writing, Germany itself has a budget deficit which is too high to satisfy the conditions, and is still rising rapidly.

10.3.4 The costs of transition

For the most part, this chapter has concentrated on the advantages and disadvantages of two possible scenarios: a number of regions with and without a common currency respectively. Little has been said about the transitional costs of moving from one scenario to the other. To some extent, this was because the costs of arriving at a common currency are difficult to assess, and would seem to depend on the specific circumstances in the region or regions involved.

At the macroeconomic level, there are in *principle* no transition costs. In practice, however, just as some people might think a happy marriage requires the engaged couple to start the process of compromise while they are still courting, in the same way the proponents of EMU have laid great emphasis on the need for a timetable of economic convergence to precede the currency union. This compromise process is embodied in the so-called **convergence criteria** set out in Table 10.1, which lay down the conditions member countries must satisfy if they are to be admitted to the currency union now due to start in 1999. The criteria are intended to guarantee the convergence of inflation rates and the imposition of a measure of fiscal rectitude prior to monetary unification. As such, they are not prerequisites for currency union, only of a currency union that works the way those who specified the conditions hope it will.[31]

It is impossible to quantify the costs these convergence criteria impose on the member countries. In so far as they require governments to renounce to a large extent their discretion in setting both monetary and fiscal policy, they actually impose very tight constraints on national

[31] Many people appear to he under the impression that fiscal conditions are included in the convergence criteria simply as a temporary transitional measure. They remain blissfully aware of the need for some considerable degree of permanent fiscal constraint on member governments, for the reasons given in the previous section. This author believes that many of them will find the reality rather unattractive, so that the prospects for monetary integration depend in this respect (and a number of others) on how soon the public at large is allowed to appreciate the full implications of the union they are entering.

Table 10.1 EMU convergence criteria.

Fiscal policy	
1. Budget deficit	< 3% of GDP
2. Government debt	< 60% of GDP
Monetary policy	
3. Inflation (RPI)	< 1.5% above 3 best-performing countries
4. Long-term inflation rates	< 2% above 3 best-performing countries

macroeconomic management.[32] It is worth noting that only two EU member countries satisfied the convergence criteria by 1993: France and Luxembourg. In fact, at the time of writing, it is difficult to imagine the Southern European countries meeting these conditions before the end of the decade at the earliest.

As far as microeconomic costs are concerned, there is an important (if obvious) point to be made, one which serves to emphasize the extent to which the contentious aspects of monetary union are inevitably political rather than economic. The point relates to the cost of changing over to a new currency.[33]

Consider the options facing an economic agent when a new currency is introduced. Where the individual has a choice between using a national currency and adopting a new common currency, the relative attractiveness of the two alternatives will depend on how many other people have already made the switch. Everybody waits for everybody else. Nobody wants to be a pioneer, the lone user of a new standard which is incompatible with everyone else, with no guarantee, moreover, that the others will ever make the switch. Equally, nobody wants to be left stranded on the old standard. It is a dilemma which is familiar to all of us from many similar situations where new standards are being introduced.[34]

[32] Compare, for example, the monetarist programme propounded by Milton Friedman in the 1960s and 1970s, which set limits on monetary policy alone. By contrast, the EU convergence criteria are more like the stabilization programmes imposed by the IMF on insolvent Third World countries.

For examples of how the criteria have actually impinged on countries' economic policy to date, one need only speculate on how different might have been the responses of national governments to the recession of the early 1990s and the collapse of the ERM in 1993 if they had not been committed to convergence. In particular, it is difficult to imagine Italian fiscal policy being as stringent as it actually was without the pretext of the need to meet the convergence criteria.

[33] See the reference to Dowd and Greenaway in the Reading Guide.

[34] Among instructive examples of this type of situation are the changeover to unleaded petrol (or catalytic converters in the USA), the conversion of PC users to MS-DOS and more recently to Windows (and the attempts to wean them off those standards), the struggle to persuade people to communicate through e-mail, and so on. The *ne plus ultra* of standardization projects must be the Esperanto language, which has made little headway after over a century of efforts by its enthusiasts, in spite of the fact that the balance of argument must be vastly more favourable to the notion of a common language than to a common currency. Of course, while the notion of a government imposing a common language is regarded as undemocratic, coercion is for some reason viewed as acceptable in the case of money.

There is no easy solution to this problem, which is precisely why, under the arrangements for EMU, it is not proposed to allow economic agents any such choice. The new currency will simply be imposed, while national currencies are simultaneously abolished.

Now there will undeniably be costs involved in actually switching over from the old to the new common currency: resetting millions of prices and relabelling millions of goods, recomputing wages, presumably rewriting many contracts, and so on and so forth. These costs are unavoidable, with one obvious and important exception. ***They can be reduced to a minimum by adopting as a common currency a national money already in circulation.*** The reason is simply that, in this way, the switching costs are nil for at least one nation in the new union.

For example, if the Deutsche Mark is chosen as the common currency for Europe, at least the Germans will be saved the costs of switching over to a new money, while the costs of the other member countries will be no greater than if the ECU had been adopted.[35] The fact that this solution is not actually being proposed is testimony to the predominance of politics over economics, which is characteristic of most aspects of the plans for EMU.[36]

10.3.5 Common currency and common market

Before leaving this topic, there is one important confusion which needs to be clarified. The confusion arises because many of the arguments used to support the idea of currency union in Europe have in reality little to do with the subject. In some cases, the supposed benefits are actually the outcome of integrating markets for goods and services, and sometimes also of allowing free movements of capital across national borders.

Now there are some situations where it is natural to think of currency union in the context of a single market. There is, however, no *necessary* connexion. A single market without currency union is quite possible to visualize, and indeed is perfectly feasible, and though the reverse seems improbable, it is not inconceivable either.

[35] It should be clear that the argument about the choice of currency to minimize transition costs has nothing to do with the question of who ultimately controls the money supply. Thus, although the DM would be optimal in terms of switching costs, it does not follow that post-unification monetary policy ought to be any different from what is desirable for a new currency.

[36] The analogy of a common language for Europe is instructive (see footnote (34)). Thus, it would be wasteful to adopt Esperanto, for the same reason a new European currency would be wasteful. The obvious, most economical choice of a *lingua franca* would be English.

Take the case of the **USA.** On the one hand, the **USA** is a more or less completely integrated market[37] with a single currency. On the other hand, in the recently founded North American Free-Trade Association, it shows no sign of wanting currency unification with Canada and Mexico. Moreover, the fact that wages and prices still vary somewhat between the different US states would appear to suggest that inter regional price differentials usually stem from transport and other transaction costs, geographic and climatic variation and, most importantly for Europe, cultural heterogeneity. If this is the case, there would appear to be little prospect of any immediate narrowing of intra-European prices, whether currency union goes ahead or not.

In fact, it has been pointed out by Krugman (see the Reading Guide) that in one important respect currency union is actually less attractive in the context of an established single market. Remember McKinnon's argument that a currency union is justified where the individual economies are very open, and hence where exchange rate changes would have a large impact on consumption baskets and, consequently, on wages. On this view, if economies are very open, the option of being able to respond to disturbances by devaluing is not very useful.

However, thanks to the single market, European economies are likely to become progressively more specialized, as production concentrates in the lowest-cost locations. Inevitably, the result will be a greater vulnerability to shocks. For example, when (if ever) a truly free market in coal is established, whichever country ends up with the lion's share of European production will have an economy which is highly sensitive to fluctuations in world energy markets. Thus, while it may be true that currency union involves few sacrifices in coping with a ***given*** level of shocks, future disturbances are likely to be increasingly severe for individual European countries as they become more and more specialized and hence more and more dependent on a small number of industries. In these circumstances, they may well regret the sacrifice of their own currencies.

One further comment should be made regarding the political economy of international trade. Few economists would doubt that there is at the moment a serious danger of trade war in the industrialized world. To a great extent, the battle lines are already drawn up, in three groupings that have been gradually coalescing over a number of years: Europe, North

[37] Notice it is not a completely unified market in terms of goods and services. For example, the export of banking services between the States of the Union is limited by the Glass–Steagall Act, which restricts the extent to which banks can set up branches outside their home territory. Moreover, if harmonization of indirect tax rates (as envisaged in the Delors Plan for Europe) and of social security benefits (as in the Social Chapter of the Maastricht Treaty) are to be regarded as essential for a single market, then the USA is a highly fragmented market, with little or no apparent tendency toward integration. Of course, by any sensible criteria, for example, the degree of convergence of prices and wages across the country, the percentage of interstate relative to international trade, and so on, the USA is

America and the Far East. The almost interminable skirmishing over the Uruguay Round of the GATT agreement exposed the divisions very clearly. The fact that the negotiations ended reasonably successfully is not entirely reassuring in this regard.

Now the construction of the EU has undoubtedly played a major part in splitting the industrialized world into three blocs. While there is no *economic* reason why currency union should hasten the slide towards a trade war, there is every reason to fear that it may well do so in terms of the political economy of international trade.

10.4 Conclusions

The reader may feel that what has been presented here represents a somewhat jaundiced view of the costs and benefits of monetary union. However, this is not necessarily the correct interpretation of the arguments presented in this chapter.

Instead, the position taken here has been that, at least as far as Europe is concerned, the ***economic*** arguments deployed in support of monetary union are in most cases overstated, in some cases misguided and in others unconfirmed by the evidence produced to date. That broad conclusion should not detract from any purely ***political*** arguments for or against currency unions, though this is not a subject on which judgement can be passed here.

Summary

- A monetary union is simply a special case of a fixed exchange rate system, where the exchange rate is fixed irrevocably at one-for-one. It follows that the advantages and disadvantages of currency unions are for the most part those of fixed exchange rate systems.
- A monetary union holds out the prospect of lower transaction costs in international trade and investment, but the scope for savings seems likely to be small.
- Firms involved in international trade and investment would gain from the elimination of exchange rate uncertainty. But it is in any case only their net exposure which is relevant, and this will often be relatively small for multinational corporations. Moreover, there are a number different ways in which currency exposure can be hedged at low or in some cases negligible cost.

- In principle, the larger the area covered by a common currency, the lower the cost of gathering price information. The theoretical benefits, however, are likely to be rather limited in practice, at least in the European context.
- The costs of currency union depend on the behaviour of national labour markets, but two contradictory arguments need to be considered.
- Extending currency zones over areas within which labour is mobile is costless. However, where labour markets are separate for reasons of distance, immigration controls, travel costs and so on, exchange rate flexibility is helpful in returning real wages to their equilibrium level in the aftermath of a shock. It follows that common currencies should apply only over areas small enough to be characterized by labour mobility.
- On the other hand, devaluation can only reduce real wages as a result of a form of money illusion, and the illusion is likely to be preserved most easily where the cost-of-living increase following devaluation is smallest, in other words in relatively closed economies. Hence, on these grounds, currency zones ought ideally to be largeenough to behave like closed economies.
- One of the few meaningful differences between common currencies and fixed exchange rates is in terms of the political economy of international policymaking. Because fixed exchange rate systems tend to impose the burden of adjustment on deficit countries, they probably suffer an inbuilt deflationary bias, while common currency zones may well suffer from an inflationary bias.
- It is hard to see how a currency union between a number of countries can avoid imposing constraints on the fiscal policies of the different ('local') authorities unless it is willing to contemplate a national government becoming insolvent.
- The question of sovereignty cannot be avoided in determining the complexion of monetary policy within a currency union. If national monetary policy reflects national tastes, it remains an open question how these tastes can or should be aggregated to determine a supranational monetary policy.
- There is no necessary connection between currency union and a common ('single') market. Currency union would be possible without integration of commodity markets, and the opposite is not