

SCOTLAND AND EUROPEAN MONETARY UNION: AN INTRODUCTION

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1. INTRODUCTION

Sooner or later the Scottish public is likely to be confronted with a referendum on membership of European monetary union.¹ Leaving aside explicit political preferences – such as individual views about the desirability or otherwise of 'more' rather than 'less' European integration – the debate will, inevitably, revolve around largely economic issues. The purpose of this paper is to set the scene by reviewing the most important economic issues raised by the debate.

Monetary unions exist the world over – indeed Scotland and England have been in a monetary union since 1707. And, although these unions all have some features in common, each is different in important respects. In fact there is no universal form of monetary union, beyond the minimal requirements that there is a single currency, a single central bank, a common 'rate of interest', and a single exchange rate with respect to non-member currencies. However, when we examine the other dimensions to monetary unions – such as the structure and nature of fiscal policies, labour market policies, competition policies, social welfare provisions, etc. – we find

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¹ *Should Scotland seek membership of the EU as an independent country, it is debatable whether it would have the option of not subscribing to EMU. But even then conditions (e.g. the joining rate) would be negotiable. However, as the current applicants have discovered, the requirement is that they sign up for the entire *acquis communautaire* which includes EMU.*

significant variations in practices. The orientation of these non-monetary instruments may be critical in determining the overall economic and political stability of the arrangement.

2. OPTIMUM CURRENCY AREA THEORY

The debate over a country's choice of exchange rate regime reduces ultimately to one's belief in one or other of the following propositions:²

- Fixed exchange rates are desirable because they eliminate the trade-suppressing problems of transaction costs and exchange rate uncertainty, and impose an inflation discipline on an economy such that its inflation rate must not exceed, in the long run, that of the best performing member of the fixed exchange rate regime. That should ensure lower interest rates for some.
- Floating exchange rates are preferred because this permits monetary policy to be applied to achieving domestic economic objectives. The exchange rate is free to adjust as required in the face of country specific demand shocks, and is the mechanism for speedily restoring demand for domestic output. Otherwise that result would have to be obtained by a fall in domestic wages and prices.³ In effect, there are more instruments to achieve the domestic objectives – but there may be more short term volatility (especially in prices) whilst this is being done.

Optimal Currency Area theory teaches us that, to join a single currency union, an economy needs to satisfy four separate criteria – or, at least, to have the independent policy capacity to absorb the disequilibria caused if they are not satisfied. These four criteria are:⁴

² *An arrangement of irrevocable exchange rate fixity has identical consequences for national monetary policy as has a monetary union. The principal difference is that it is less disruptive to exit the former than the latter.*

³ *This statement assumes that exchange rate changes have no impact on the role of money prices in domestic resource allocation. This, of course, is a doubtful assumption.*

⁴ *See Mundell (1961), McKinnon (1963) and Kenen (1969).*

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- The partner economies should trade predominantly and freely among themselves,
- There should be a very high degree of factor (labour and capital) mobility between member countries and regions. Recognising that labour mobility has its own costs and limitations, that condition may only be available as a long term solution to persistent disequilibria in labour markets. If so, labour mobility must be supplemented by sufficient relative wage flexibility in the short term.
- Industrial production should be well diversified within each economy or region. That would imply a high degree of intra-industry trade – as opposed to industrial specialisation and concentration.
- The member economies should not be subject to country-specific shocks; or to institutional, behavioural, or transmission asymmetries. If they do have asymmetric structures or asymmetric transmission mechanisms, even symmetric shocks will have asymmetric impacts. This condition implies that each economy needs to be, and to remain, broadly 'in-cycle' with its partners.

Of these four criteria, the European partners satisfy the first: with Britain conducting 49% of her trade within the Euro-zone – and the others more (up to 75% for Belgium or the Netherlands).⁵ However, if investment income is taken into account, Britain derives only about 41% of her foreign exchange earnings from the Euro-zone (ONS 2000). That is lower than her partners.

A more interesting difference comes from Mundell's emphasis on capital links (Mundell 1973a,b). Capital links may be as important as trade links: a) because they enable international investment to be undertaken where it is most efficient; and b) because they allow countries to pool their short term financing risks. Thus, even if there were sufficient factor mobility and structural similarities, trade integration is only a necessary condition for convergence. It is not sufficient because, if your investment partners are a different set of countries, then the financial links may imply a different pattern of shocks and spillovers from those coming from one's trade partners.

⁵ *Figures from Eirestat indicate that Ireland conducts less than 49% of her trade with the Euro-zone. But since her largest trading partner is the UK, this would change if Britain were to join.*

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That would lead to a pattern of incompletely converged cycles. This, arguably, was the root cause of the downfall of the Dollar link in Argentina - the capital/money link being with the US, and the trade links being with Brazil and Europe, where the two sets of partners showed divergent cyclical and cost positions.

And so it is for Britain, to a lesser extent. She may trade as much with her European partners as with everyone else, but her investment income is 75% from non-EU sources. Moreover foreign investment is roughly one-third of total UK investment. Consequently if the two sets of trading partners move apart, as the US and Europe have done, then any currency link to either party will imply extra costs. Ultimately one has to decide which set of costs will be smaller: a Euro link, or a dollar link. Alternatively, a policy of steering a course between the two currencies might bring lower costs and hence greater stability in the trade-weighted exchange rate. In fact, figures from the IMF's International Financial Statistics (January 2003) suggest that the Euro has been three times more volatile than the Pound since 1999, in trade weighted terms. Exchange rate volatility would therefore presumably at least double if the Euro were adopted.

3. A SINGLE MARKET VIEW: AN ASYMMETRIC RELATIONSHIP BETWEEN THE UK AND THE EUROZONE?

Evidently, a single currency needs symmetry between the participating economies. But the single market needs some asymmetries in the markets because in order to get the full benefit, you need to be able to exploit economies of scale, and also differences in comparative advantage in different countries. So to some degree these two things – the single currency and the single market – are going to pull in opposite directions. In that case, it matters whether you think you will get greater convergence between participating economies, in which case you will get less out of the single market if you adopt the Euro. Or whether you would get more differences, in which case the single market will appear to be more important but the single currency less helpful.

4. STRUCTURAL ASYMMETRIES IN THE LABOUR MARKET

With respect to the factors of production, capital mobility is certainly available under the single market arrangements. However, the rigidities in Europe's labour markets – reducing both mobility and wage/price flexibility – are legendary. Eichengreen (1992) estimates that inter-country and inter-regional migration is at least three times lower than in comparable monetary unions such as the USA. More recent estimates (MacLennan et al, 2000; Obstfeld and Peri, 1998) confirm those figures. The UK may have more flexible labour markets than her partners, but they are less flexible than those in the US.⁶

We have less direct evidence on wage and price flexibility within the European economies. However, Decressin and Fatas (1995) demonstrate that the lack of interregional immigration has meant that country or region-specific shocks have had to be absorbed by labour participation rates. As a result, unemployment has played little role in regulating the European labour markets. That implies wage and price flexibility has largely been absent – an observation consistent with the later work of Blanchard and Wolfers (2000), Ball (1999), Phelps (1994) or Nickell (1997) for example. As a result, unemployment has persisted and wages have failed to adjust.

Several papers have set out to analyse how monetary union might affect wage bargaining and market flexibility: Cukierman and Lippi (2001), Sibert and Sutherland (2000), or Soskice and Iverson (1998) for example. But in each case the market structures have been kept fixed, so the question of what incentives actually exist for market reform and whether structural asymmetries would gradually disappear, has largely been ignored.⁷ Against

⁶ MacLennan et al estimate annual US mobility at 2.8% of the population, but 1.6% in the UK and 1.23%, 1.07% and 0.5% in Germany, France and Italy respectively. Obstfeld and Peri have even lower figures for Europe, and claim that labour market flexibility is now declining instead of rising.

⁷ It has long been argued that structural reform is a prerequisite for a successful EMU (Delors Committee 1998). But that argument has largely been based on the empirical and analytic evidence of a negative relationship between (real) wage rigidities and economic performance: Bruno and Sachs (1985), Nickell (1997). The point that matters for this review is whether those rigidities are likely to be removed; or whether the existing structural asymmetries are more likely to get preserved or

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that, some have argued (e.g. Frankel and Rose 1998) that cyclical convergence will come about because economic structures will adapt. There is more to say about that below. But preliminary evidence shows that EMU has changed wage bargaining and induced some convergence – but only on a small scale.⁸

On the other hand, the strategic arguments all point the other way. Calmfors (1998, 2001) argues that although money wages may become more flexible in a single currency zone, further labour market reforms are less likely if the case for adopting the Euro was linked to a lack of financial discipline. Indeed, monetary union in Europe was designed to eliminate exactly that kind of indiscipline. Moreover, there will be less need for such reforms once inside the union – and also less desire for them since governments, with the loss of monetary policy and with extra restrictions on the domestic economy, will want to use labour market regulation as a way of overcoming the shortcomings (from their point of view) of that union. That is to say, most governments will wish to retain rigidities so that they still have some effective instruments (payroll taxes, employment protection, incomes policies, minimum wage laws, etc) with which to stabilise their economies.

It is still possible to argue that asymmetric shocks would increase the incentive to develop new measures to counter those shocks (Sibert 1999). But it is hard to see that governments would not use those measures to create asymmetric practices to counter asymmetric shocks. And when we test propositions of this kind (see Hughes Hallett and Viegi 2003), that is exactly what we find. To do away with such practices would mean a higher degree of uncertainty about incomes and employment, and less social welfare provision since payroll taxes and other 'social' provisions would have to be cut in order to provide the necessary flexibility in unit labour costs. That would not be acceptable in a Eurozone that wishes to provide a degree of social insurance. Indeed closer integration has often generated the opposite reaction. Governments and labour organisations have striven to provide employment insurance in an increasingly uncertain world where governments are no

extended. The following paragraph shows that the latter is more likely to happen. For other evaluations which support that point of view, see Van Bergeijk et al (1999) or Krueger (2000).

⁸ Andersen et al (2000)

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longer able to control many of the policy levers that affect output, employment and growth at home (Agell 1999).

Finally it is not correct to say that, because Britain has relatively flexible markets, she could join a less flexible Eurozone without much cost to herself (indeed might even profit from doing so). In a series of papers⁹ examining the incentives to join a currency union, it has been shown that there are always costs, to both sides, to forming a currency union under imperfect market flexibility. Put simply, rigidities in one place spill over to constrain performance everywhere else. Hence asymmetries in the capacity of labour markets to adjust, asymmetric shocks, or asymmetric transmissions, all cause spillovers which damage others (unless price flexibility is perfect). The flexible country would have to do more adjusting than previously since it now has to absorb the problems transmitted by others, as well as its own disturbances. The inflexible economy, meanwhile, will welcome the fact that it can transfer part of its burden of adjustment to others.

It is important to keep these considerations in mind since greater flexibility in wages, employment costs, or investment flows (or a more flexible use of public expenditures or taxes) are the way in which economies showing structural differences or cyclical divergence will have to be balanced if the optimal currency area criteria are not satisfied. If the greater flexibility is not available, or cannot be created, the UK and Scotland would necessarily suffer exaggerated 'boom and bust' cycles, with higher unemployment alternating with periods of additional inflation.

5. HOW WELL ARE THE EU AND THE UK'S CYCLES CORRELATED?

Measuring symmetry in the form of correlations between the cycles of the European economies has proved popular, although only a few studies have included Britain in their analysis. It is also important to remember that high cyclical correlations are only a necessary condition for the optimal currency area conditions to apply. Sufficiency requires similar degrees of variability as well.¹⁰

⁹ See *Hughes Hallett and Jensen (2001, 2002)*.

¹⁰ *Hughes Hallett and Jensen (2001)*.

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Most analyses take the correlations between output cycles as their measure of cyclical convergence. Hughes Hallett (2003 table 3) reports some typical results. These show how the cyclical convergence between the UK and Germany, which was virtually negligible over the pre-EMU period, has been falling from a correlation of 0.5 in the 1980s to a negative correlation of – 0.32 by 1996. The UK's correlations with the US, meanwhile, have risen from 0.49 to 0.81 over the same period.

Results such as these do not take into account the differences between the real and nominal parts of the cycle, or the differences between demand and supply shocks. For that, the classic references are Bayoumi and Eichengreen (1993 and 1997). But their results do not include the UK. A more recent study (Demertzis et al 1998) does include the UK, and finds some correlations between the UK and the periphery group (Greece, Ireland, Italy, Spain, Portugal, Finland and Sweden) on the demand side. But there are no significant correlations with the core countries, nor with the supply or monetary shocks of any country.

There is an alternative literature which attempts to establish if there is an emerging European business cycle in the EU (Artis and Zhang 1997; Forni and Reichlin 2001). These studies also show that there is some evidence of a common cycle in the core countries. But that does not include the UK whose cycle remains out of phase with the Eurozone (Rubin and Thygesen 1996; Kontolemis and Samiei 2000). In fact the UK's cycle may even be diverging from her Eurozone partners (Barrios et al 2001).

6. DO BUSINESS CYCLES BECOME MORE CLOSELY CORRELATED IN MONETARY UNIONS?

Frankel and Rose (1998) have argued that the optimal currency area properties change over time, and that membership of a free trade zone or a currency union will induce a greater degree of convergence between transmission of shocks. This work is based on an empirical relationship between business cycle correlations and the trade intensity between countries. Frankel and Rose found a significant (if small) increase in the correlations between national business cycles as trade intensified over the

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1970s, 1980s and 1990s. This suggests that the optimal currency area conditions might be achieved naturally, once the single currency is in place.¹¹

Should we expect this kind of result to hold more generally? The answer, using a real business cycle model (see Hughes Hallett and Piscitelli 2002), is yes – but only up to a point. In the theoretical analysis, cyclical convergence follows trade integration if:

- the home economy is small and stable;
- the industrial structures of the home economy and the rest of the zone are similar, and the rest of the zone is open with high value added;
- and relatively little integration has already taken place.

But divergence would follow if:

- the output shocks were of different sizes, if the home economy is relatively large or volatile compared to the rest of the zone; or
- there are marked differences in industrial structures and if the home economy trades less with the rest of the zone than its partners; or
- or a lot of integration and mutual trade dependence is already in place.

The general implication is that, as a country joins a single currency and a single market, it is likely to experience some cyclical convergence to start with (unless it is large, with a different structure or is well integrated already). But as integration proceeds and countries become more specialised, then their business cycles are likely to go out of phase again.

7. THE GOVERNMENT'S FIVE ECONOMIC TESTS

In 2003, when the British government was considering the possibility of a referendum on entry, a formal assessment of the government's own five conditions for entry was carried out. The tests themselves were that the following should be satisfied 'clearly and unambiguously':

¹¹ *Frankel and Rose (2002) have extended that idea to suggest that the single currency itself might lead to large gains in national incomes. However, closer examination reveals that that will only hold for small economies with high savings and high taxation (Hughes Hallett 2002).*

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- that Britain was in cycle enough with the rest of the Eurozone, and able to live comfortably with a common set of policies,
- that joining the euro would have a clear and positive effect on growth and employment,
- that joining the euro would increase foreign direct investment in the UK,
- that joining the euro would be beneficial to London's financial markets,
- and that the Eurozone must demonstrate itself flexible enough to cope with economic change (whether in boom or recession).

These tests, vaguely worded as they are, do correspond to a reasonable extent with the Optimal Currency Area criteria that have to be satisfied before it is safe to adopt a common currency. The first has to do with symmetry and convergence, the last with market (specifically labour market) flexibility and mobility. The second is a comment on the need for the gains from joining to be large enough, and focussed on the targets of economic policy (since the government will be less able to steer the economy itself after joining). The third refers to the need for the capital links, as well as the trade links, to be strong enough as we emphasised in section 2. Only the fourth might not be relevant to the economy as a whole, as opposed to one specific sector.

The value of these five tests is that they all, except the fourth, deal with the real side of the economy. This is in contrast to the EU's five Maastricht convergence criteria (see the next section) which focus on the nominal or financial side. The UK government's five tests may therefore be seen as a necessary complement to the EU's convergence criteria. Given this interpretation, it is significant and important that the government's own assessment was that four of the five tests had not been satisfied at this stage and that it would not yet be in Britain's economic interest to join the Euro.

All this discussion of economic tests of course presupposes that the government can and has calculated the correct equilibrium exchange rate at which the pound might enter, and that the Eurozone partners have done the same since the entry rate is not a unilateral decision. Whether the governments can make such a calculation, and get it right, is not known. But the previous attempt to do so, at $\text{£}1 = 2.95\text{DM}$ in the 1990-92 EMS period, remains in the public's memory as a period of financial instability and depression that could only be resolved by Britain leaving the EMS.

8. THE MAASTRICHT CONVERGENCE CRITERIA

The Maastricht criteria no longer play an important role in the functioning of EMU. But they remain, as they were originally designed, the formal criteria for entry.

Thus Britain, or Scotland if she were to apply in her own right, would have to pass all five Maastricht criteria – in addition to the Chancellor's five tests which the government has chosen to impose upon itself – before joining.

The five criteria are:

- that the candidate country's rate of price inflation shall be no more than 1.5 percentage points above the average of the three lowest in the union;
- that the long term rate of interest (taken to be that on 10-year bonds) shall be no more than 2 percentage points above the average of the three lowest in the union;
- that the fiscal deficit, as defined in the Maastricht treaty, shall be no more than 3% of GDP;
- that the consolidated public sector debt shall be no more than 60% of GDP;
- and that the country in question shall have been a member of the exchange rate mechanism (ERM II), with an exchange rate that has remained within the 'normal' bands (by convention, at 15% around a prespecified parity rate), and without excessive tensions or realignment, for two years.

At the time of writing, Britain satisfies the middle three criteria fairly easily: her long term interest rates have been below those in the Eurozone for some time, her debt ratio is below 40% (at approximately 38%), and her fiscal deficit is small (about 1.5% of GDP) although there are projections that the government's current expenditure plans might lead to rather larger deficits if growth does not hold up. Technically, there could be a problem with the inflation criterion since, with France, Germany, and the Netherlands entering recession, their inflation rates may be zero or slightly negative. So Britain, with inflation between 2.5% to 3%, may be more than 1.5% points above the average of the three lowest. But she is not more than 0.5% – 1% above the average of the Euro area.

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The last criterion could prove controversial however. Formally, it requires Britain to rejoin the exchange rate mechanism for two years – and at a higher rate than today's market rates since, as the euro starts to depreciate from its recent rapid rise, the pound would almost certainly move outside its 'normal' band and have to realign. The status of this problem, however, is unclear. The government in London maintains it would not re-enter the ERM; the Commission in Brussels maintains that it has to (there will be no exceptions).

It is not possible to give a separate evaluation for Scotland since separate data on the fiscal position are not available, inflation is likely to be a little lower (if different at all), and the financial variables are the same as for the rest of the UK. Scotland would therefore face the same entry requirements as the UK as a whole.

9. THE STABILITY AND GROWTH PACT

The European Union has also adopted a system of fiscal restraints (on public expenditures and taxation) to ensure that the budget deficits of members of the Eurozone do not exceed 3% of GDP in any one year. Crudely put, governments are given guidelines and budgetary targets in consultation with the European Commission which are calculated to yield a budgetary position that is 'close to balance or in surplus' over the medium term. In the meantime, any country judged to be about to run a budget deficit exceeding 3% of GDP will be sent a warning letter and be required to submit plans which explain how this deficit will be eliminated. If the deficit persists, however, the country will be required to cut public spending or raise taxation; and ultimately to pay a fine of up to 0.5% of GDP for each percentage point of excess deficit.

So far four countries (France, Germany, Italy, and Portugal) are said to have violated the 3% deficit limit and are at various stages of being disciplined. However, there are also widespread criticisms of the Pact, as being both ineffective and overly restrictive. There are therefore many proposals for its reform – ranging from giving governments greater incentives to implement the rules correctly, to relaxing the rules by giving low-debt countries wider latitude, taking public investment expenditures out, or to taking the purely cyclical elements (and hence the pro-cyclical responses of governments) out to encourage the reform of structural imbalances.

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What will finally emerge at the end of this debate is not clear, except that some form of Stability Pact (and hence some system of fiscal restraints) will be retained. There are at least four reasons for this, but they all have their origin in the fact that a monetary union between economies with structural, behavioural, and institutional differences will need to create additional policy power to replace that lost with the demise of national monetary policies. Otherwise, given that domestic monetary interventions are no longer available, it will not be possible to counter regional shocks or stabilise the domestic economies as effectively as outside the union. Consequently any democratically elected government, facing an electoral calendar, will almost certainly try to overuse fiscal policy to stabilise the domestic economy. That will have costs for everyone, not just the home economy. Specifically:

- The overuse of fiscal deficits, especially if excess expenditures in a downturn are not matched by extra savings in the upturn, could easily lead to an accumulation of debt and eventual insolvency. Insolvency on this scale would cause major disruptions in the European capital markets, and hence costs for everyone.
- The prospect of insolvency might lead to risk premia on interest rates. The higher cost of capital would reduce investment and output capacity.
- The excessive use of fiscal policy might lead to a poor balance between fiscal and monetary policies within the domestic economy, and hence to suboptimal (that is welfare reducing) outcomes because the policy mix is 'wrong' or cannot be adjusted fast enough.
- Countries may be encouraged to use fiscal policy excessively, in their own interest, because they lack other instruments and do not internalise the full costs of using those policies. The ability to spread the costs of an expansion (say) across other members of the union means that each government may try to over-expand. Thus, the higher interest rates caused by a larger deficit will appear in the union-wide capital market and therefore be smaller for the initiating government than had it acted outside the union. Similarly, every additional inflation or rise in the external exchange rate will be spread over the whole union.

For all these reasons, some system of fiscal restraints is bound to remain in place – and correctly so. The only question is how restrictive the restraints should be.

10. THE GAINS FROM MEMBERSHIP

Even if the UK does not satisfy the optimal currency area conditions, it does not follow that EMU is necessarily undesirable. If the benefits are very large, then the costs will not matter very much. But if the benefits are small, then monetary union is perhaps something that we ought not to risk.

The estimates of the benefits which appear in the next table, Table 1, are taken from the European Commission's own publication: 'One Market, One Money' (EC 1990). These benefits are significant, but quite small.

The first benefit is a saving in transaction costs that the commissions which importers and exporters have to pay to change currencies (0.4% of GDP). Then there are the benefits of greater price transparency – a single currency allows you to know the price of anything, free from any uncertainties about what movements in the exchange rate might do to those prices. That is said to be worth another 0.3 percent of GNP each year.¹²

Putting those figures together, we are likely to get an increase in national income of somewhere between 1.0-1.5 percent. Shared across the population these gains are quite small given all the costs and risks entailed. To put this figure in perspective, it is roughly equivalent to one standard deviation of the typical one period ahead forecasting error for national income.

These gains should be compared to the estimated gains from being members of the single market programme – which covers trade in goods and services – of which the UK is already a member. Those gains are said to be worth 5%-6% a year on national income: that is five times larger.

¹² *The net present value of these savings, given an expected rate of nominal growth of 5% per year, would be 3.5%. However an investment ratio of 20%, and a capital output ratio of 4, would mean that those savings would yield an additional 0.7% of GDP each year (the third figure in table 5). The UK treasury's own estimates are somewhat less optimistic, at 5%-9% over 30 years, or 0.15%-0.3% in national income each year on average.*

Table 1
The Estimated Benefits of EMU in Europe (% GNP)

	% GNP
Lower Transaction Costs in Trade	0.4
Eliminating Information Costs or Price Discrimination	0.3
Dynamic Effects of the Above on Investment	0.7
Reduced Levels of Foreign Exchange Reserves	0.05
Seignorage if Foreigners Use the Euro	-
Total	1.4

Source: EC (1990)

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