A Single Monetary Policy: One Size Fits All?

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1. Introduction

A common currency means a common monetary policy. The potential problems posed by this inescapable fact was pointed by this year's Nobel Laureate, Robert Mundell, in his seminal contribution to the theory of Optimum Currency Areas almost forty years ago[1]. He stressed that the adoption of a common currency only made sense if the constituent regions were economically homogenous, for in that case shocks would tend to affect all regions together and a "one-size-fits-all" monetary policy would suffice. But if the constituent regions were subject to asymmetric disturbances then changes in the real exchange rate between the constituent regions would be required and divergent monetary policies would be desirable. Since this could not happen, adjustment would have to come about through nominal wage and price adjustment, that is through inflation or recession, or else through labour migrating from depressed to booming regions.

Mundell's insights still form the starting point for discussion of the costs of a single currency, although inevitably our understanding of the issues has advanced somewhat since his original contribution. In my remarks I shall explore the problems posed for Euroland and the ECB in having to pursue a "one-size-fits-all" monetary policy. Of course, a lot of the time the economies of Euroland will be moving in step, and there will be no problem in having a common interest rate, but there are times when this will not be the case and some countries would like to pursue a different policy from that being dictated from Frankfurt. Now, as already noted, national interests could diverge because there are asymmetric, or idiosyncratic, shocks that affect only part of Euroland. In addition common shocks could have asymmetric effects because of differing national economic structures; similarly a given change in Euro interest rates could have different effects in different countries. In all of these cases a "one-size-fits-all" monetary policy ceases to be appropriate. In addition even if shocks are common and have similar effects across countries, it is possible that countries may nevertheless have different preferences over which policies are followed. I shall address each of these potential sources of tension in turn.

2. Asymmetric disturbances

The canonical example of an asymmetric shock is the case of German re-unification. The need to re-build the former GDR meant that a greater fraction of German production needed to be diverted to supplying domestic rather than foreign needs; the natural accompaniment to this expenditure switching is a real appreciation of the mark. To put it another way the investment and consumption boom associated with re-unification meant that Germany experienced a positive shock to demand[2]. Given the short-run rigidity in nominal wages and prices, the easiest way to

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[1]See Mundell (1961).

[2]This shock could have been offset by fiscal tightening, but it would clearly have been inappropriate for current German taxpayers to pay *all* the costs of re-unification - some transfer

accomplish the required adjustment would have for an increase in interest rates in Germany accompanied by a nominal appreciation of the mark. If this is not allowed to occur - as was the case in 1992-3, and would be the case if the same sort of shock happened under EMU - then either an inflationary boom in Germany and/or a recession in the rest of Euroland will be required to bring about the required adjustment in relative prices through changes in nominal prices expressed in domestic currency terms. Under the Bundesbank hegemony of the EMS, the predominant mechanism in 1992-3 was a slowdown in the non-German members as the Bundesbank raised interest rates to contain domestic inflationary pressures. Under EMU the burden of adjustment would be shared more equally between the countries as monetary policy would be set with an eye to overall conditions in Euroland rather than what was happening in a particular member country, but nevertheless it would still be the case that the chosen policy could not simultaneously be right for everyone.

Shocks like German re-unification are once-in-a-lifetime events. But other sorts of asymmetric disturbances like shifts in tastes between different goods or technological advances in particular industries are more frequent. Before conjecturing about what will happen in the future it therefore makes senses to see what the lessons of the past suggest about the frequency and size of asymmetric shocks. There is now quite a sizeable literature investigating the correlation of different sorts of shocks across EU countries.

An early, and prime, example is the work of Bayoumi and Eichengreen[3], who estimate so-called Vector Auto-Regression models in output and inflation and then use the restriction that demand shocks have no long run effect on output to back out the underlying supply and demand shocks. They do a similar exercise for the regions of the US as a standard of comparison. They then compared the correlation of shocks of a country with an "anchor" area, Germany in the EU, and the Mid-East region in the US. They found that, up to 1988, demand and supply shocks in the rest of the "core" of the EU - France, Belgium, the Netherlands, and Denmark - were reasonably well correlated with those in Germany, and were similar to those for most of the regions of the US. Looking at a broader set of EU countries, however, shocks were less well correlated than in most regions of the US.

In a subsequent update[4], these same authors not surprisingly found the correlation in supply shocks dropped sharply when the sample period was extended to include German unification, but there was still a significant correlation between France, the Netherlands, Belgium, Austria and Switzerland. All this suggests divergences in interest are most likely between members of the "core" of the EU and those on the "periphery", rather than within the "core"[5].

The bottom line of this empirical work is that if the future is like the past, then tensions about the appropriate direction for ECB monetary policy are likely. Indeed this is the case today with the

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of the burden to future generations through higher public debt is the appropriate response.

[3]Bayoumi and Eichengreen (1993).

[4]Bayoumi and Eichengreen (1996)

[5]Other contributions to this literature include Demertzis, Hughes Hallett, and Rummel (1996) and Chamies, Deserres and Lalonde (1994).Their contributions suggest that asymmetric shocks are even likely between the "core" countries.

core countries of Germany, France and Italy growing only rather sluggishly at the same time as countries like Ireland and Spain are racing away. This would seem to be even more likely if and when the UK and the other "outs" decide to join. It would hold *a fortiori* once enlargement takes place if the new entrants also seek early admission to the Euro zone.

Will the future be the like the past, though? EMU, and the completion of the Single Market more generally, represents a major change in regime and it would be foolish to assume that this will leave unaffected the way the economies of Euroland interact with each other. However, the effect of increased European economic integration on the likelihood of asymmetric shocks is unclear.

On the one hand we have Paul Krugman[6] arguing that the removal of the remaining barriers to trade within the EU and the introduction of the Euro will encourage greater regional specialisation in production, as is the case in the US. There, industries tend to highly regionally concentrated (cars in Detroit and Tennessee; rubber in Ohio; etc.) reflecting the low transport costs and negligible interstate trade barriers that make it profitable to supply the whole of the US market from a single location. In Europe, by contrast, industries tend to be more dispersed as informal trade barriers and exchange risk have encouraged meeting national demands from a supplier based within the country, a tendency reinforced by a tendency of some EU governments to foster national champions through their industrial and public procurement policies. These incentives for dispersion should greatly lessen if the Single Market program and the Euro succeed in the objective of creating a single, integrated European market; the wave of mergers already taking place in industries such as telecommunications is indicative of these forces at work. If this continues, then asymmetric shocks resulting from shifts in tastes between goods or technological progress in particular industries will be more likely than in the past.

On the other hand, Jeff Frankel and Andy Rose[7] have argued that the increased demand linkages following from increased integration will work in the opposite direction. More integration can be expected to lead to more trade between member states and greater spillovers in demand between countries, resulting in greater, not less synchronisation between national business cycles. Their empirical work suggests this is likely to dominate the "Krugman effect". Finally it should be recognised that an important source of asymmetric shocks in the past has been independent movements in national monetary policies. Similarly movements in exchange rates have often been difficult to rationalise as reflecting economic fundamentals and appear instead themselves to have had the character of asymmetric shocks. Both these sources of idiosyncratic disturbances by definition disappear with a single currency.

The bottom line seems to be that there may be grounds for optimism that the EU economies may behave in a more highly correlated fashion in the future than in the past. However, one cannot rule out the possibility of there being significant idiosyncratic disturbances affecting only a subset of Euro members. In that case a "one-size-fits-all" monetary policy will likely lead to tensions between member states.

3. Transmission mechanisms

[6]Krugman (1993).

[7]Frankel and Rose (1998) .

Mundell's original contribution to the theory of Optimal Currency Areas noted that if wages and prices were very flexible then it would not matter very much if there were asymmetric shocks as adjustment would occur rapidly and with little cost through changes in relative wages and prices (denominated in domestic currency terms) rather than through changes in the nominal exchange rate. But if adjustment is slow, then a "one-size-fits-all" monetary policy will impose substantial costs in the face of asymmetric shocks. Furthermore, differences in the transmission mechanism from activity to inflation will mean both that common shocks have asymmetric effects and that the effect of a change in the single interest rate has different effects across countries. Thus both the speed of adjustment, and international differences in that speed of adjustment, are of interest.

Now it is well accepted by all but a rather small group of economists, that nominal inertia in both wages and prices is an unfortunate fact of life, with economic models suggesting that changes in interest rates affect aggregate demand with roughly a one-year lag and demand affecting inflation with about a one-year lag (these lags are not only long, but prone to be variable too). Evidence from large econometric models, quoted by Rudi Dornbusch, Carlo Favero and Francesco Giavazzi[8] and reported in Table 1, suggests that not only are lags important, but also that there are quantitatively significant differences between countries in response. For instance the effect of a change in interest rates on output after a year is about twice as large in Germany, France and Italy as in Belgium and the Netherlands. The effect on the UK economy is even larger - apparently twice that in the Euroland core. Similarly the inflation effects also differ across countries, with the effect on inflation after two years being particularly large in Belgium (despite the small output effect) Italy and the UK.

These apparent differences could reflect little more than differences in econometric methodologies across the various model-building groups. Evidence from smaller econometric models using consistent methodological approaches across countries tend to suggest somewhat less significant differences in transmission mechanisms, although new empirical evidence provided by the same authors also suggests that the output effect of interest rate changes is twice as large in Italy as in the three other large Euroland countries (the UK does not seem to be such an outlier here). Given the suggestive, if inconclusive, nature of the econometric evidence for differences in the transmission mechanisms between countries, it is helpful to ask whether there are *a priori* reasons for expecting international differences between countries.

3.1 Financial markets

We start with financial markets; see Table 2. There are two particular features that are worthy of note, on both of which the UK is an outlier suggesting potential problems if/when the UK joins. The first is the level of household indebtedness, which is high relative to disposable income in two of the present "outs", Sweden and the United Kingdom. Furthermore, in the latter case at least, most of this debt is at variable rates. This obviously reflects the relatively high fraction of owner-occupiers rather than renters in the UK, and its pervasive finance through mortgage debt. As a consequence, if credit constraints bite on households, which is surely the case for a large fraction of household borrowers, then increase in interest rates are likely to have a particularly strong depressing effect on household consumption expenditure. This could partly account for the larger impact of interest rates on output for the UK evidenced in Table 1.

[8]Dornbusch, Favero and Giavazzi (1998).

Second, in regard to corporate finance, UK firms rely rather more on the equity and corporate bond markets for their finance than many of their continental counterparts for whom bank intermediated finance is relatively more important. However, with the exception of Italy (and to a lesser extent Belgium) most of the corporate bank finance is at relatively fixed interest rates, reflecting an enduring customer-supplier relationship (this is particularly so in Germany). So even though bank finance is somewhat less important in the UK than elsewhere, the fact that along with Italy much of it is at variable rates makes both economies somewhat more sensitive to changes in official interest rates. This seems to square with the econometric evidence mentioned earlier.

Once again, however, it may be unwise to take the past as a guide to the future, as the introduction of the Euro can be expected to affect the structure of European financial markets. Thus if interest rates become more volatile, one might expect the demand by households and firms for fixed rate borrowing to increase. More generally the creation of a truly common European financial area will tend to deliver greater homogeneity in banking practice, corporate finance instruments, etc., especially as cross-border mergers proceed. This will tend to lessen differences in the transmission mechanism that are due to differences in capital market structure.

3.2 Product and labour markets

Differences in product and/or labour market structures will affect the size and speed of the response of inflation to excess demand or supply. Although all econometric models embody some inertia in the setting of product prices, I am not aware of any work that has focussed on heterogeneity in product market structures as a source of differences in transmission mechanisms. Mike Burda[9] has suggested that integration and cross-border mergers are likely to result in increased the relative importance of maintaining customer-supplier relationships and thus tend to increase the incentive for fixing prices for a relatively long period. High credibility of the ECB in delivering low and stable inflation might have the same effect. In that case nominal inertia in goods market will increase, and whilst not a source of national differences in itself, will lengthen the time to adjust to asymmetric shocks through adjustment in relative prices and thus worsen the "one-size-fits-all" problem.

As far as labour markets go, this is an area where there has been a truly enormous amount of relevant work, directed to understanding the causes of Europe's horrendous unemployment[10] over the last twenty-five years. The key insight of this literature is that, for a variety of reasons, Europe's institutions have been ill-suited to dealing with a succession of adverse shocks (the productivity slowdown of the 70s, the oil price shocks, the disinflation of the 80s, high real interest rates, etc.).

In understanding how costly a single monetary policy is there are two aspects of the labour market that are of particular interest. The first is the degree of nominal inertia in wages; the second is how responsive (real) wages are to the amount of slack in the labour market (this is usually referred to as real wage rigidity). The costs of adjusting to a disturbance via wages and prices will be higher, the higher is nominal wage inertia and the lower is the responsiveness of wages to unemployment. The empirical evidence clearly suggests that wages in Europe are rather

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[9]Burda (1999).

[10]See e.g. Bean (1994), Blanchard (1999) and Nickell (1997) and the references therein.

insensitive to unemployment compared to the US, although nominal wage inertia appears to be somewhat higher there than here (reflecting the higher prevalence of multi-year wage contracts). The net effect of these two forces is that the output cost of reducing inflation is about twice as high in Europe as in the US; this also implies that the cost of a "one-size-fits-all" monetary policy would be twice as high, given the same frequency and size of asymmetric shocks. This high level of real wage rigidity in Europe is a consequence of the relatively generous unemployment compensation systems (especially the long duration for which such payments can be made) and high levels of job protection interacting with the wage bargaining system leading to high levels of job security for "insiders". However, real wage rigidity is lower in countries with centralised and co-ordinated wage bargaining systems, such as Austria and the Nordic countries, as consensual decisions over the appropriate level of wages facilitate adjustment in the face of shocks. In recent years labour market reforms in the UK seem to have reduced the degree of real wage rigidity.

Keeping the costs of "one-size-fits-all" monetary policy down thus would require keeping the degree of nominal wage inertia down and increasing the responsiveness of wage settlements to labour market slack. In fact low and steady inflation will, if anything, tend to promote longer wage contracts and thus worsen nominal wage inertia. What happens to real wage rigidity depends crucially on the prospects for labour market reform.

In thinking about this, I think it is helpful to separate out the effect of EMU, and integration more generally, on the incentives to undertake reform from their effect on its political feasibility[11]. First, as far as the incentives for reform go, the argument heard most frequently is that faced with an inability to depreciate their way out of trouble, countries will have no alternative but to improve the flexibility of their labour markets. As the costs of nominal inertia in wages and prices are that much greater when countries cannot tailor monetary policy to domestic ends, it would seem that this should indeed encourage reform.

Other arguments are less clear cut in their implications. Second, there will be competitive downward pressure on taxes and thus on welfare spending. However, this is a two-edged sword as far as unemployment is concerned, because it is not only welfare spending that is likely to come under pressure, but also spending on active labour market programs that help the unemployed into jobs. Furthermore acting against this downward pressure on spending arising from competitive pressures is a reduction in the pressure for fiscal consolidation now that the EMU entry criteria in respect of debt and deficits have been deemed to be satisfied.

Third, there is the effect of integration more generally on wage bargaining systems. The evidence suggests that both fully centralised wage bargaining and fully decentralised wage-setting work fairly well, but that a half-way house with large, but unco-ordinated, bargaining units produces the worst of all worlds[12]. The creation of an integrated European market is likely to make it harder to sustain co-ordinated bargaining, which not surprisingly has survived only in the smaller countries where opportunities for free riding are limited. Thus for countries like Austria, EMU and the Single Market could be bad news as far as wage bargaining goes.

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[11]The arguments that follow are explored in more depth in Bean (1998a).

[12]See Calmfors and Driffill (1987) for the seminal statement of this thesis.

Fourth, to the extent that countries have a similar degree of labour market inflexibility at present, there is a *dis*incentive to undertake unilateral reforms because they will tend to create or worsen asymmetries in the transmission mechanisms between countries and thus make it more likely that national interests will diverge from European interests. Obviously this problem could be avoided by co-ordinating structural reforms, but this seems an order of magnitude more difficult even than co-ordinating fiscal policies.

Whilst the net effect of these various forces on the incentive to undertake structural reform is in principle ambiguous, on balance I would incline to the view that they are in sum probably beneficial. However, the same cannot be said for the effect of EMU and integration on the political feasibility of reform. As Gilles Saint-Paul[13] has emphasised, reform creates losers as well as winners. The identification and compensation of these losers is not so easily accomplished and the present arrangements thus represent something of a political equilibrium. Reform requires either building coalitions in favour of reform, or else a Thatcher-like figure who is both willing and able to push through unpopular measures. Now it is generally the case that the costs of reform are usually incurred before the benefits are seen. Thus reducing unemployment benefits, or applying a more stringent work test, has immediate adverse consequences on some of the poorest members of society, but only gradually yields benefits in terms of more jobs as the increased unattractiveness of unemployment promotes wage moderation by those in work. Support for reform is more likely if the benefits can be seen coming through quickly. This is more easily accomplished if monetary and fiscal policies are free to support structural reform in a suitably expansionary way. EMU does, of course, constrain monetary policy from playing such a supportive role, whilst the Stability Pact may inhibit the use of fiscal policy.

In addition integration is likely to lead to more re-structuring of European industries, leading to greater regional specialisation than is presently the case. This will be associated with higher rates of both job destruction and job creation. However, those who lose out from the process are likely to be more voluble than those who gain. Thus the *demand* for social protection is quite likely to rise, making it even more difficult to pursue reform.

In sum, therefore, whilst integration may lead to greater flexibility in European labour markets, I would not regard it by any means as a foregone conclusion.

4. Asymmetric preferences

The possibility that divergent preferences, as opposed to heterogeneity in shocks or economic structure, may be a source of disagreement over the direction of monetary policy has been rather less considered. There are, however, two arguments that have appeared, both of which rely on the idea of "time inconsistency".

The first takes the standard model of inflation[14] in which the monetary authorities have an incentive to indulge in "surprise" inflation in order to engineer a higher level of activity and lower unemployment; the private sector knows that the authorities face this incentive and thus expect an inflation rate that is sufficiently high to dissuade the authorities from increasing inflation still

[13]Saint-Paul (1993, 1998).

[14]See Barro and Gordon (1983).

further. A key feature of this model is that the authorities target level of activity is higher than the natural rate; if this is not so there is no incentive to inflate. This divergence is supposed to occur because the natural rate of output is too low because of imperfections in goods and/or labour markets (resulting from monopolistic competition, the activities of unions, the disincentive effects of unemployment benefits, etc.). Much of the theoretical literature on central banking has been concerned with ways of improving on the outcome under discretion, including the possibility of delegation to a "conservative" central banker and inflation-contingent contracts. If this time inconsistency problem is not adequately solved, then countries with high natural rates of unemployment might be expected to press for looser monetary policies.

Whilst this model provides a good explanation of an endemic tendency to inflation when monetary policy is under political control, because a high level of activity is usually taken by the electorate as a signal of general economic competence over the whole range of a government's policies, it is less convincing as an explanation of what goes on once monetary policy has been credibly delegated to an independent central bank such as the ECB, as it is no longer obvious why the central banker should be interested in achieving an output level higher than the natural rate. This accords with the view of those such as Alan Blinder[15] who have been actively involved at the coal face of setting interest rates. I am therefore inclined to discount this reason for divergent preferences.

The second argument as to why there might be divergent preferences over inflation relies on the incentive to indulge in "surprise" inflation in order to reduce the real value of outstanding nominally-denominated public debt (anticipated inflation is offset by a higher required nominal interest rate on the debt). This incentive is greater, the greater is the debt stock, so highly indebted governments can be expected to be more prone to indulge in bursts of inflation[16]. But again, whilst this argument might explain why a government with control of monetary policy might have a temptation to inflate, it does not explain why a properly independent central banker will be similarly tempted.

A third source of divergent preferences has not, I think, been considered before, and that is that countries may have different attitudes to the variability of output and inflation, say because social insurance schemes are of varying effectiveness. Conventional macroeconomic theory suggests that there is no long-run trade off between output and inflation. However, the presence of a short-run trade off implies that the policy maker is faced with a trade off between the *volatility* of output and the *volatility* of inflation - in other words a country can have very stable inflation only if it is willing to experience large swings in output and vice versa[17]. If countries do have different preferences, then one might expect that the national central bank governors on the Governing Council of the ECB might have different views about how quickly divergences in inflation from target should be corrected. In fact this is probably a non-problem, as under plausible specifications of the economy it turns out that the optimal policy is rather insensitive to the relative weights on output variability vis-a-vis inflation variability[18]. In that case even quite sharply different

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[15]See Blinder (1997).

[16]See de Grauwe (1995).

[17]See e.g. Taylor (1994).

[18]See Bean (1998b) for the analysis in the UK context.

preferences would not result in very different policy choices.

5. Concluding Remarks

My remarks have touched on only one aspect of the operation of monetary union, namely the problems imposed by the constraint of having a single interest rate for all Euroland. Divergences in national preferences do not seem likely to be a major cause of dispute over the direction of monetary policy, and it is not implausible that some convergence in economic structures will reduce the differences in national transmission mechanisms. Notwithstanding this disagreements must still be expected in the face of asymmetric disturbances which, even if less frequent, will nevertheless occur from time to time.

A relevant question is the extent to which fiscal policy can substitute for monetary policy in these circumstances, the constraints of the Stability and Growth Pact permitting. The literature often gives the impression that because they both affect the level of demand, they are perfect substitutes. Of course this is not, in general, true. Consider, for instance the canonical example of an asymmetric shock, that of German re-unification. The optimal response required an increase in both consumption and investment in Germany, and a change in the real value of the mark. A nominal re-alignment, possibly accompanied by different interest rates in Germany and the rest of Europe, is the efficient way to achieve that. Offsetting the inflationary effects of this boom would have required fiscal tightening, i.e a reduction in either household or government consumption in Germany. But there is just no good reason why the burdens of rebuilding the East should have fallen on consumption today. Moreover, such a policy would do nothing to bring about the required change in relative prices, viz. it is an expenditure-reducing rather than an expenditure-switching policy. So fiscal policy, whilst certainly useful in the face of an asymmetric disturbance, is by no means a perfect substitute for monetary policy.

In summary, tensions are bound to occur from time to time because of the imposition of a “one-size-fits-all” interest rate policy in the face of different national economic conditions. Formulating a monetary policy that is acceptable both for Dublin and for Dresden, for Lisbon and for Lille in these circumstances is no mean challenge and the ECB will be an easy target for governments keen to shift the blame. Defusing these tensions requires an appreciation by the people of the benefits that a common currency also brings. It also requires openness and a willingness to explain by the Governing Council of the ECB.

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Table 1: Effect of 1% point rise in short rates (% change) in various national central bank models

		Year 1	Year 2	Year 3
Germany	Output	-0.2	-0.4	-0.3
	Inflation	0.0	-0.1	-0.3
France	Output	-0.2	-0.4	-0.2
	Inflation	-0.1	-0.2	-0.3
Italy	Output	-0.2	-0.4	-0.3
	Inflation	-0.2	-0.4	-0.5
Spain	Output	-0.1	0.0	0.0
	Inflation	-0.1	-0.1	-0.2
Belgium	Output	0.0	-0.1	-0.2
	Inflation	-0.1	-0.5	-0.8
Netherlands	Output	-0.1	-0.2	-0.2
	Inflation	-0.1	-0.4	-0.4
UK	Output	-0.4	-0.9	-0.6
	Inflation	0.0	-0.2	-0.5

Source: Dornbusch et al. (1998) with estimates for UK inflation corrected to remove direct effect of interest rates from RPI inflation.

Table 2: Financial structures

	Household fin. liabilities (% of disp. income)	% of household borrowing at variable rate	Securities as % of (loans + securities)	% of bank loans in firms liabilities	% of firm borrowing at variable rate
Germany	78	36	6	85	40
France	51	13	15	80	56
Italy	31	59	5	95	77
Spain	58	n.a.	9	77	n.a.
Belgium	42	18	7	90	67
Netherlands	65	8	3	79	37
Sweden	100	n.a.	4	81	n.a.
UK	102	90	19	49	48

Source: Dornbusch et al. (1998).