mg.td/docs/mi

ERM project paper

DATE: 21 DECEMBER 1993

ERM PROJECT

I attach my paper.

THE UK'S MEMBERSHIP OF THE ERM

This paper has two sections covering:

A The analysis that lay behind the UK's decision to join the ERM at the time it did and at the rate it did;

B Policy during the UK's membership of the ERM.

I have not specifically covered the details of the UK's departure from the ERM. I was not in touch with what was going on myself and I do not believe that there are records on file of the crisis meetings held during the UK's last 24 hours in the ERM. I have also not gone into general "ERM-faultlines" issues, such as whether fixed exchange rates are possible without capital controls, as such issues were covered in the papers written in August on possible ERM developments.

I have generally given file reference for the papers, minutes etc that I have quoted. However the [redacted] - which are my main source for the events of 1990 - are not yet on file. I have also used a few other papers that are not on file. I have also not given file references for quotes from the minutes of the monthly monetary meetings; these are all on parts of [redacted].

A JOINING THE ERM

The decision to join the ERM involved various judgements:

- a judgement that it was in the UK's interest to join rather than stay out of the ERM;
- a judgement about when to join.
- a judgement about the appropriate rate at which to join;

1. The case for membership of the ERM

When the EMS was founded, the Treasury had been opposed to UK membership of the ERM. By the late 1980s, officials involved in the area seem to have taken it for granted that the UK would go into the ERM if and when the prime ministerial veto was removed. The main change of view in the Treasury occurred in 1985 when a substantial amount of work was undertaken on the advantages and disadvantages for the UK of ERM membership; this work led to Nigel Lawson's first unsuccessful attempts to persuade the Prime Minister to agree to the UK joining the ERM. From then until the autumn of 1989 the Treasury was headed by a Chancellor who was a strong enthusiast for UK membership. By the time he was replaced by John Major, the UK was committed to joining the ERM once the fairly specific "Madrid conditions" had been met. The incoming Chancellor did not ask for a review of the arguments for and against ERM membership.

The Treasury's opposition to the UK joining the ERM at its beginning had reflected a view that high inflation was deeply set in expectations in the UK; and that this should be accommodated by allowing sterling to fall against the continental European currencies - a need that was compounded by the UK's poor trading performance, which had to be offset by a continuing fall in the real exchange rate. The UK labour market was believed to be so

rigid that adjustment to an inflation rate given from outside the UK would require unacceptable costs in lost output.

The early 1980s showed that UK inflation could be brought down to continental rates. The UK labour market was still generally seen as more rigid than its continental counterparts, but reforms which might have been expected to alter that had been implemented or were in progress. (A recent Treasury Academic Panel paper, *Inflation and the Output Gap*, by [redacted], reports econometric work which suggests that inflation is now, if anything, more responsive in the UK than it is in the major continental countries to shortfalls or excesses of output relative to potential.) So it became increasingly difficult to argue that the UK could not make a success of ERM membership if countries like France and Italy could.

And the ERM was widely believed to be a success story in the late 1980s. Inflation had not only be brought down but held close to German levels in countries with previously indifferent inflation performances, while academic analysis suggested that increased exchange rate stability had not come at the expense of greater interest rate volatility. However, at the same time analysis did not suggest that the improved inflation performance in countries such as France had come about through changes in the performance of labour markets induced by ERM membership (eg as a result of unions being less confident that high pay settlements would be accommodated by devaluation); rather ERM membership had entailed restrictive policy settings that had brought down inflation (at the expense of persistently high unemployment). Nor would the factors that caused the resurgence of UK inflation towards the end of the 1980s have obviously been any less malign if the UK had joined the ERM in the mid-1980s. Indeed, ERM membership might have made the late 1980s boom more difficult to bring under control rather than loss.

The only internal Treasury paper written in the late 1980s on the arguments for and against ERM membership that I have seen on the files was a "summary" review of the arguments sent by [redacted] to [redacted] (with a copy list of four) on 29 May 1987,

as part of contingency planning for a move into the ERM after the 1987 election. This concluded that the balance of arguments had shifted in favour of joining the ERM (eg because the petro-currency status of sterling had become less important, because of greater inflation convergence within the ERM, and because European exchange controls were being dismantled).

The main arguments in favour of ERM membership given in [redacted] note were:

(i) the ERM would provide a "clear external discipline...difficulties in interpreting money aggregates had led to uncertainties about the operation of policy which may in turn have added an uncertainty premium to interest rates";

(ii) volatility in sterling had affected investor and industrial confidence... most firms are much more concerned about the impact of exchange rate variability than movements in interest rates.

The first of these arguments was, of course, as vulnerable to Goodhart's law as had been earlier phases of UK monetary policy - there was no good reason to believe that German M3 would not misbehave once it became the UK's effective nominal anchor in the same that successive UK monetary aggregates had misbehaved when put at the centre of the stage.

Looking at our period of ERM membership in retrospect, we are most conscious of the extent to which it required UK monetary policy to be tighter than warranted by domestic conditions. While [redacted] [redacted] discussion of the costs and benefits of ERM membership referred to reduced control over domestic interest rates and the risk of greater interest rate volatility, as well as the possibility that the UK would be forced to make faster progress in bringing down inflation to German levels, the experience of how the ERM worked in the 1980s did not seem to have provided very clear warnings of the difficulties that we and others were to experience in the 1990s, viz. having to accept a seriously

inappropriate monetary policy. (The potential for inappropriate monetary settings was discussed more at the end of the 1980s - in the context of trying to refute the "Walters Critique" - though the concern was normally that policy might be too loose in high inflation countries such as the UK, rather than that it would be too tight.)

Why was it that the working of the ERM in the 1980s had not provided warnings of the problems that and others we faced in 1991 and 1992? One obvious reason is that nothing like the German reunification shock happened in the 1980s. Another reason is that with the extent of inflation divergences in the early and mid 1980s fairly frequent realignments were inevitable, and countries did not invest as much credibility in avoiding realignments as we and others did in the early 1990s.

But another important reason is that it was much less obvious when policies were "too tight" in countries which had the objective of getting inflation down to German rates but were some way from that objective. Some "optimal" rate of inflation convergence might in principle have been estimated, and monetary policy defined as "too tight" if inflation convergence was achieved faster than was optimal; but in practice there were no such estimates, so that all that could be said was that inflation convergence was "fast" or "slow", not that it was "too fast" or "too slow"; that policy was "tighter" or "looser", not that policy was "too tight" or "too loose". High unemployment in countries such as France was seen as bringing a valuable reward - indeed by the late 1980s it was becoming fashionable to see France as some sort of economic success story.

The situation was very different in the 1990s when countries such as France had achieved inflation convergence with Germany, and with their balance of payments current accounts in surplus saw no need to shift resources into the external sector through competitiveness gains. There could be little dispute that monetary policy was much too tight in France in 1991 and 1992; and this transparency, in turn, made it more likely that markets would pull the plug on the ERM, as they eventually did in July 1993. In

this respect, therefore, and rather paradoxically, inflation divergence may actually have contributed to the sustainability of the ERM in the 1980s.

Between 1987 and 1990, however, the UK did have some experience of the difficulties that fixed exchange rate regime can cause, namely the attempt to shadow the DM in 1987 and end 1988, and the eventual uncapping of sterling to try and regain control over demand and inflation. The constraint on the exchange rate in 1987 and early 1988 clearly reduced the extent to which excess demand spilled overseas, and worsened domestic inflationary pressures. It was possible to regard this episode as a one-off occurrence, caused by an adjustment to financial liberalisation that the economy would not have to repeat.

For most of the 1980s, as long as UK economic policy was perceived as relatively successful, there was only moderate pressure from informed opinion outside for ERM membership - a panacea is not necessary when there is nothing to cure. (The files record a CEPR lunch time talk given in 1987 by Jacques Melitz on "Why Britain should join the EMS now" which provoked, according to the account of the subsequent discussion, little enthusiasm and a great deal of Anglo-Saxon scepticism.)

By the end of the 1980s, however, business was overwhelmingly in favour of ERM membership. A good example of the sort of pressure from industry is the report of a Financial Weekly poll, published on 18 January 1990, which reported that 97 per cent of top executive wanted the UK to join the ERM - and that 60 per cent wanted membership within a year. Two-thirds "did not care what exchange rate Britain joined at".

The Labour party had also made ERM membership a central part of its economic programme. The imminence of the EMU IGC and the desire to put the UK in a position where it could be significant influence on the outcome of the IGC, made membership more urgent.

2. The timing of the UK's decision to join the ERM

Redacted passage

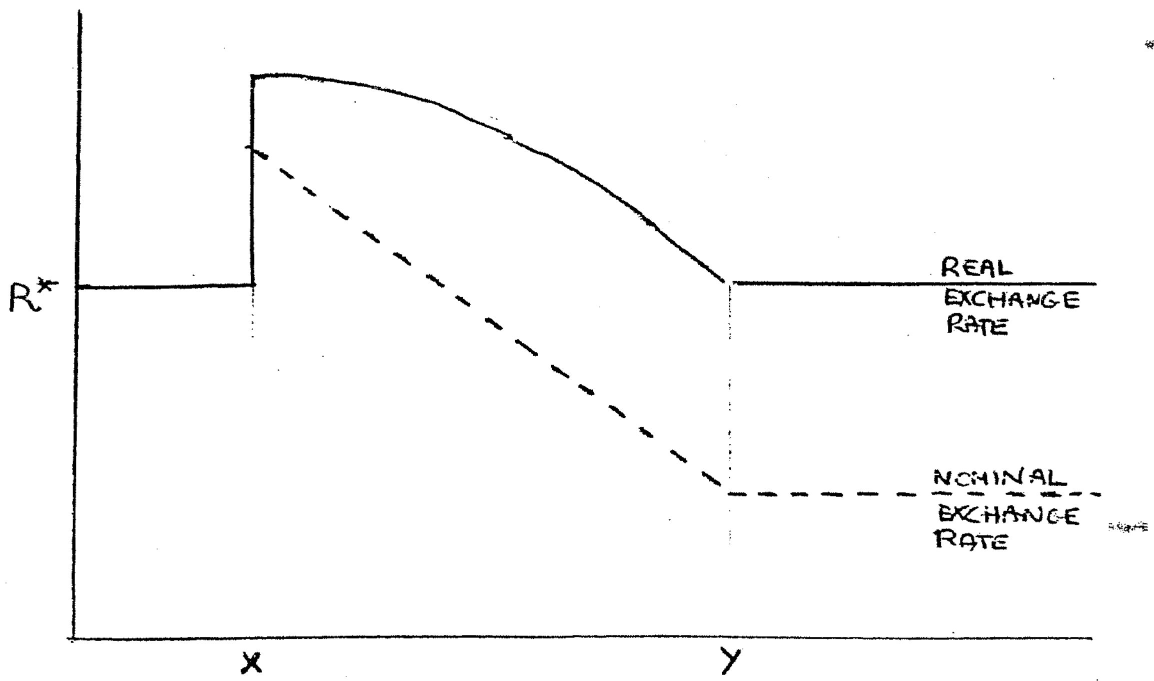
How bad a time to join was October 1990? [redacted] In order to consider these questions it helps to start with a schematic account of the situation of UK economy and of economic policy at the time.

The accepted account of the late 1980s is that the UK experienced a large inflationary shock caused by financial liberalisation and improved confidence about economic performance: the latter was partly the result of the Government's hype about economic miracles and partly a confusion between cyclical economic strength and improved underlying performance. For monetary authorities trying to control inflation in an open economy with a floating exchange rate, the appropriate reaction to such an inflationary shock is to raise interest rates and allow the real exchange rate to rise above -"overshoot"- its long run equilibrium value. Once monetary policy has been tightened to its maximum extent, the exchange rate starts to depreciate from its peak level, but remain above its equilibrium value until the inflationary shock is completely out of the system.

Figure 1 illustrates the case of an upward shock to the pr level which raises inflationary expectations. Assuming that initial inflationary shock and some of its second-round effe are accommodated, the path of the real exchange rate might lo in the simplest case, as below, with X the point at which inflationary shock occurs and the authorities react, and Y point at which inflation falls back to the desired level.

It is of course possible to complicate this story in any numbe ways. For example if the markets are quicker on the uptake t the authorities and expect policy tightening before it happe the exchange rate will rise in advance of the policy tighteni while if the markets and the authorities only learn gradua about the scale of the shock, and policy tightening proceeds i series of steps, the exchange rate may rise over an exter period before peaking and then starting to decline.

FIGURE 1

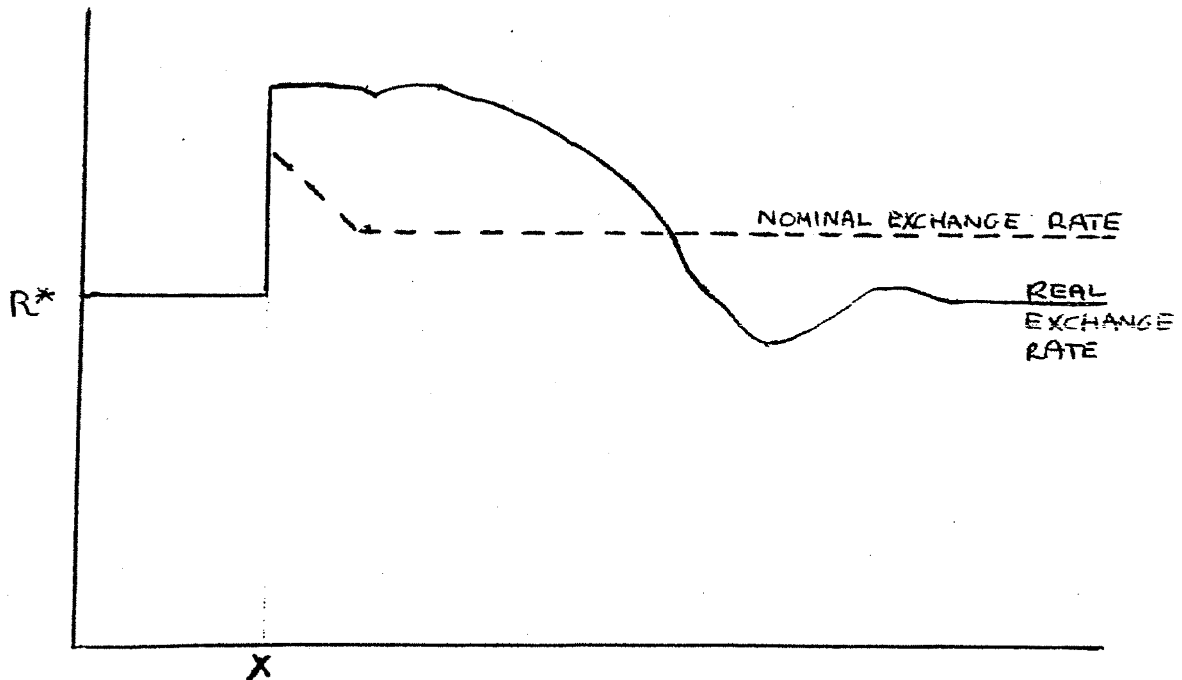


Another important complication is that markets do not actually know with certainty what the authorities' objectives are; they only know what the authorities say their objectives are. An inflationary shock, accompanied by policy tightening, will not necessarily cause an exchange rate appreciation if markets doubt the authorities' willingness to stick a tough policy out (eg because of the pain caused to debtors).

The behaviour of sterling in the three years prior to its joining the ERM reflected features of both the simple model of an inflationary shock and the complications discussed above. Sterling was strong in 1988, both in anticipation of and following interest rate increases. But the further deterioration of inflation prospects in 1989 and early 1990, even though there were further interest rate increases in May and October, was accompanied by a sharp downward movement in sterling, as markets became increasingly unsure of the Government's willingness to take the measures needed to get inflation back under control [redacted] Sterling eventually revived in 1990, helped by rumours of imminent ERM entry which suggested to the markets that the authorities were about to lock themselves into a policy that would force inflation down.

Returning to the simple "overshooting" example, it is clear that if the adjustment process is interrupted by fixing the nominal exchange rate at some level that it has reached any time between the initial policy tightening and the eventual return to equilibrium (ie between X and Y in figure 1 above), this must involve a tighter monetary policy for a period after the exchange rate is fixed than if the exchange rate had continued to float down. In figure 2 policy is clearly tighter in the period immediately after the exchange rate is fixed than it would be if the exchange rate continued to fall.

FIGURE 2



This initially tighter policy has the advantage of bringing forward the reduction in inflation and should make it possible at some later point to have lower unemployment than in the case where the exchange rate continued to depreciate, because inflation expectations have been reduced more quickly. Perhaps an optimal control exercise on the Treasury model or some other macro-economic model would suggest that a higher value of the Government's inter-temporal "objective function" would be achieved if the nominal exchange rate were allowed to complete its downward adjustment rather than being fixed while still overshooting. But it might also show the reverse, and either way such calculations are unlikely to be given a great deal of weight. The important point is that while "fixing an overshot exchange rate" must in the short term mean tighter monetary policy and higher unemployment,

one cannot say *a priori* that it is a sub-optimal policy. (An argument might be made against an adjustment path that involved very low rates of inflation, if it was believed that the output costs of reducing inflation increase as inflation falls towards zero. The results reported in [redacted] *op cit* do not, however, provide much support for this argument.)

Applied to the situation of 1990, there is the additional complication, already noted, that the collapse of credibility had prematurely unwound a good part of the overshooting that had occurred in 1987 and 1988. A simple argument that it must have been wrong to enter the ERM in October 1990 because the adjustment of the economy to the late 1980s inflationary shock was incomplete would not hold water.

A case could even be made that the macroeconomic situation in 1990 made ERM membership more not less urgent. The upsurge in inflation had clearly destroyed the credibility of the MTFS and of the whole monetary policy framework that the authorities had been using. This loss of credibility had contributed to the fall in the exchange rate in 1989 which had in turn pushed inflation up further in 1990. The constraints on interest rate increases (both their political unpalatability and the threat of widespread bankruptcies of small businesses and owner occupiers with large mortgages) made it possible to envisage a continuing upward movement in inflation which real interest rates might be always too low to contain. An institutional change that would help to restore credibility might put the economy back on to a stable path - and the two obviously available institutional changes were a move to make the Bank of England independent and joining the ERM.

There was, however, one influential view that the UK joined the ERM at a bad time.

Redacted passage

3. The choice of the entry rate

There is a very widespread view that the UK entered the ERM at too high a rate, that this mistake contributed to the depth of the recession in the two years after entry, and was largely to blame for the markets' expulsion of sterling from the ERM in September 1992. (The last of these points may be less strongly and widely believed following the franc's demise in July 1993, as the franc was generally held to be correctly valued, or perhaps undervalued, at its ERM parity. The events of July 1993 serve to underline the obvious truth that the sustainability of a particular monetary policy does not depend entirely, or perhaps even primarily, on the performance of an economy's tradeable sector.)

Some economists did argue strongly in 1990 against UK ERM entry at a rate anything like as high as DM 2.95. (Some argued for a significantly higher entry rate; eg Giles Keating argued for DM 3.20, which he calculated to be the PPP rate. Others, such as Gavyn Davies, thought DM 2.95 was more or less spot on.) Phillips and Drew, Peter Warburton, and the National Institute were amongst those arguing for an entry rate of DM 2.70 or less. John Williamson's view was that the equilibrium rate for sterling was DM 2.24 (in 1990Q1). Charles Goodhart argued that the extent of sterling's misalignment at DM 2.95 was greater than after the return to the Gold Standard in 1926.

The basis for such claims was the balance of payments current account position. For example, NIESR Discussion Paper No 171 (*Choosing the rate: an analysis of the optimism level of entry for sterling into the ERM*, by Wren-Lewis, Westaway, Soteri and Barrell) reported calculations on the NI model of the level of sterling that would produce a current account balance with UK unemployment at its natural rate. Their conclusion was that

> sterling should enter the ERM at around DM 2.6, if the authorities were willing to devalue sterling later on to compensate for higher inflation in the UK than in Germany in the period after ERM entry; or at a lower rate, if the authorities wanted to avoid future realignments by accommodating in advance the UK's relatively high inflation.

Such calculations are obviously sensitive to assumptions about the natural rate of unemployment, the trend growth rate, and trade elasticities. The forecasts on which the calculations are based are also very liable to large changes: a point that hardly needs emphasising in a year when the two published Treasury forecasts have seen an £8 billion downward revision in the current account deficit forecast for 1993, in spite of unemployment ending the year some 300,000 or so lower than expected when the earlier forecast was made.

In periods when sterling has been moving around a lot the calculations are also extremely sensitive to assumptions about the speed of response of trade volumes to competitiveness: if the exchange rate has fallen substantially one year, say, before the calculation is made the estimated equilibrium exchange rate will be lower if trade volumes are believed already to reflect the effect of the previous year's depreciation. The sensitivity of the estimated equilibrium exchange rate to its various determinants is heightened by the low trade elasticities that are typical of UK macroeconomic models: these mean that even small required changes in the current account take large changes in competitiveness to achieve. The variation in the results obtainable in this type of exercise is illustrated by the large gap between the NIESR's view of the correct ERM entry level for sterling and John Williamson's estimate of the equilibrium rate quoted above. (A paper prepared by [redacted] as part of the contingency planning before the 1992 General Election provided a comprehensive survey of studies of the UK's "Fundamental Equilibrium Exchange Rate" and illustrated the very wide range of results available.)

Nevertheless, despite the enormous uncertainty, if one accepte the premiss of the NIESR studies - that sterling's ERM entry rat should have been set at a level consistent with achieving curren account balance *without the need for further real depreciation* one would have to conclude, with or without the benefit o hindsight, that sterling's ERM entry rate was much too high.

To defend the decision to go into the ERM at DM 2.95 it i therefore necessary to argue:

- either that it was reasonable to allow for a substantia real sterling depreciation *inside* the ERM;

- or that a persistent current account deficit wa acceptable;

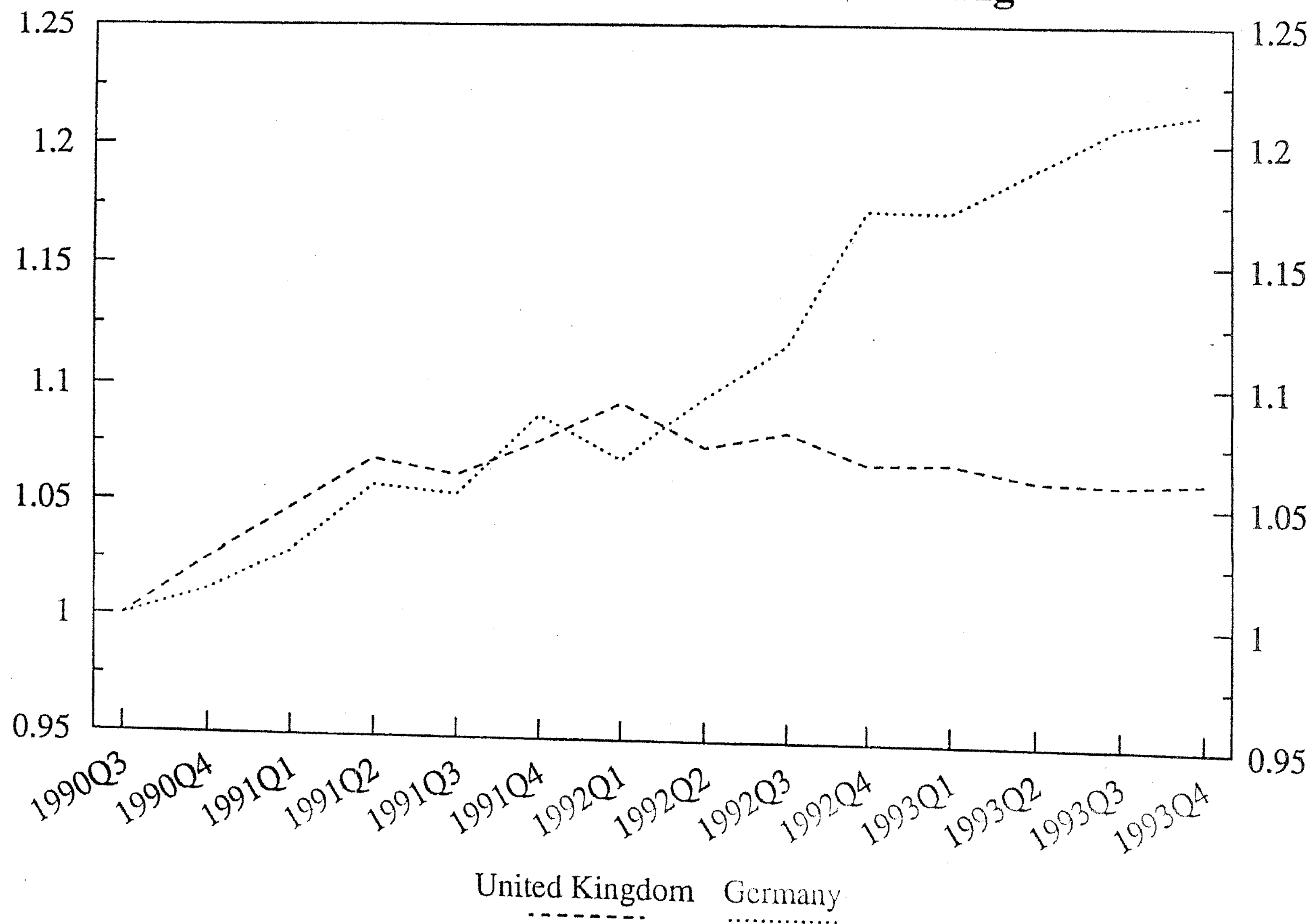
- or both.

The authors of the NIESR paper undoubtedly believed it would l very difficult to secure a real depreciation of sterling without nominal depreciation: UK inflation was unlikely to fall much if all below German inflation. In the event, the UK has ma substantial competitiveness gains against Germany since mid 199 even before allowing for the fall of sterling against t deutschemark (see chart). Indeed the fall since the UK went in the ERM in UK unit labour costs relative to German unit labo costs in domestic currencies is almost exactly equal to t difference between the actual central parity on entry (DM 2.9 and the NIESR paper's estimate of the FEER (DM 2.60).

This gain in competitiveness has occurred only gradually, a after a severe UK recession, and there may have been a case f securing an step change in competitiveness before ERM entr Certainly, the underlying fiscal position in 1990 was not healthy as it looked at the time and there now seems to have be a case for fiscal tightening simply in terms of the publ sector's own financial health. With the benefit of hindsigh there is a case for saying that fiscal policy and monetary poli should have been rebalanced - a tighter fiscal stance and low

exchange rate - before ERM entry, simply to restore the Government's underlying financial position to health.

Unit Labour Costs in Manufacturing



However the NIESR paper's case for a sterling depreciation and fiscal tightening was not based on worries about the health of the public finances. Rather, the authors were in effect advocating an objective for the current account as an addition to the objective for money GDP. The UK authorities - who followed the "Lawson doctrine" on the current account - had no such objective. (In view of its importance in the debate, a resume of the "Lawson doctrine" is given in an annex to Section A.)

In 1990 money GDP growth was overshooting the Government's objectives; and a policy of sterling depreciation aimed at cutting the current account deficit would have pushed up money GDP growth further unless offsetting fiscal policy measures had been taken. The NIESR paper acknowledged this, and called for tax increases of up to £6 billion in the first year of ERM membership to offset the inflationary effects of depreciation, with further tax increases in later years, even though NIESR's base forecast showed continuing PSDRs. (The estimate of the fiscal tightening required was predicated on inflation forecasts made in the autumn of 1989: a much larger fiscal tighening would have been required given the worsening of inflation in the first half of 1990.) If a major fiscal tightening had been made in 1990 it would have coincided with a sharp increase in the private sector's financial surplus and would probably have been seen in retrospect as a classic example of destabilising fiscal action.

Forecasts and the decision on ERM entry

In terms of the MTFS policy framework, the choice of exchange rate had to be based on the outlook for money GDP. In assessing the decision, therefore, one has to look at the forecasts of money GDP that were available to the authorities at the time.

The first half of 1990 saw much more resilient demand - and substantially higher inflation - than the Treasury forecasters (and most others) had expected at the start of the year. The

January forecast for RPI inflation in 1990Q4 had been 6.7 per cent - by June end-year inflation was expected to be 9.4 per cent. In January, manufacturing output had been forecast to fall by ½ per cent; in June it was expected to rise by 1 per cent. In January real domestic demand had been forecast to fall by 1 per cent; in June it was forecast to rise by ½ per cent.

A part of these revisions was made between January and the Budget forecast, but the bulk of the revisions was made between the Budget forecast and June. (The main change in the forecasters' view of inflation actually occurred between the January forecast and the Budget, but the published forecast did not reflect the full deterioration in prospects.) Even the June forecasts were predicated on a stabilisation of demand in the middle of the year; and comments on the forecast at the time were generally to the effect that the risks were that demand would be stronger than the forecast showed. It in any case showed money GDP growth sharply higher than in the Budget forecast and MTFS projections (which had themselves been revised up substantially from the previous year's projections).

Money GDP Growth

	1989-90	1990-91	1991-92	1992-93	1993-94
1989 Budget/MTFS	7.8	5.9	5.9	5.5	
1990 Budget/MTFS		7.6	6.7	6.2	5.6
June 1990 forecast		8.6	8.2	7.6	7.1

The forecast clearly called for a significant policy tightening compared with the assumptions used in the forecast, which were:

	Effective exchange rate	3 month inter-bank rate (FY)
1990	89.0	15
1991	88.6	14
1992	87.5	12.9
1993	87.3	11.75

MG believed that if anything this forecast was over-optimistic about the extent to which inflationary pressures would fall back. This view was reflected in [redacted] intervention at [redacted] monthly monetary meeting of 4 July which discussed the latest Treasury and Bank forecasts as well as the Monthly Assessment for June. According to the minutes:

Redacted passage

Outside forecasts in mid 1990 generally showed stronger growth than the Treasury forecast. The table below gives key figures for the average of independent forecasts included in the Treasury's comparison of independent forecasts as of August 1990.

Independent average forecast (August 1990)

	1990	**1991**
GDP growth	1.3%	2.1%
RPI (Q4)	8.9%	4.8%
Average earnings growth	9.5%	8.8%
Unemployment (Q4: millions)	1.69	1.78
Manufacturing output growth	0.8%	2.0%
Sterling index (Q4)	90.2	87.8
Short term interest rate (Q4)	14.7	11.6
PSBR (FY: £ billion)	- 5.7	- 3.7

The forecasts seem to display both a degree of cynicism about policy - showing a sharp cut in interest rates even though wage inflation was forecast to remain very high - and considerable optimism about the resilience of the exchange rate in the face of interest rate cuts. Doubtless several forecasters had factored in ERM membership, and had assumed this would permit or perhaps force interest rate cuts.

The picture changed quite quickly during the late summer of 1990. The tone of comments at [redacted] monthly monetary meeting held on 5 September was quite different from the tone of two months earlier. [redacted] noted that:

Redacted passage

The Treasury's October forecast - completed on 10 October, and so updated to take account of the announcement of ERM membership - showed a noticeably weaker immediate prospect than the June forecast had described. Real GDP growth of just 0.1 per cent in 1991 was now forecast (against 1.1 per cent forecast in June). This change reflected a weaker second half of 1990 - a 1.1 per cent fall in real GDP between the second and fourth quarters, compared with no change shown in the June forecast - rather an assumed effect of tighter monetary policy in 1991. In fact, while the exchange rate index projected for 1991 in the October forecast was 93.6, 5½ per cent higher than in the June forecast - the

outturn for 1990 Q3 was already 4½ per cent higher than in the June forecast - this was partly offset in terms of the overall monetary policy stance by an assumed faster fall in short term interest rates: these were now expected to reach 12 per cent in 1991Q4 (against 14 per cent in the same quarter in the June forecast, when they had been projected to remain at 15 per cent until the end of 1991 Q1).

The October forecast still suggested a large overshoot of the MTFS money GDP path. Indeed the projected 1990-91 overshoot had increased, largely because oil prices had risen after Iraq's invasion of Kuwait.

Money GDP Growth

	1990-91	1991-92	1992-93	1993-94
Budget/MTFS	7.6	6.7	6.2	5.6
June 1990 forecast	8.6	8.2	7.6	7.1
October 1990 forecast	9.3	7.7	7.7	6.2

Within the MTFS framework, therefore, the October forecast still suggested that policy was too loose, even with the much higher exchange rate path now assumed. The monetary policy assumptions used were:

	Effective exchange rate	3 month inter-bank rate (FY)
1990	91.4	14.8
1991	93.6	12.8
1992	92.8	12.0
1993	92.0	11.3

The weakening of the economy during the summer of 1990 did not lead the Treasury seriously to question the case for entering the ERM - this was still to go ahead as soon as Mrs Thatcher agreed - but it did to some extent affect the way the case for entry was discussed. Before the summer break, the argument had been that the appreciation of the exchange rate that had been obtained during the spring must at all costs not be lost. There was concern that interest rates might be forced down by ERM membership, but the risk of a substantial reduction was thought to be small: sterling would be able to appreciate within its band, the commitment to existing parties would not be 100% credible, and anyway there was always the chance that German interest rates would rise. By September the argument was rather that some interest rate cut would be desirable, if not immediately, at least pretty soon; and that such an interest cut would risk an unwelcome fall in sterling unless the UK joined the ERM.

There does not seem to have been any discussion of whether a fall in sterling might not have been preferable to a cut in interest rates as a way of relaxing policy. [redacted]s. Political consideration aside, however, the case for preferring interest rate reductions to an exchange rate depreciation in the position that the economy had reached by the late summer 1990 is not clear cut, and certainly might have merited some analysis. The case for preferring a cut in interest rates would have to have rested on the need to reverse the alarming upward drive of *headline* inflation as quickly as possible, taking advantage of the effect of mortgage interest rate cuts on the RPI; or on a view that the situation in the housing market was so weak that it required priority treatment. Such a view of the housing market would have been correct, but it was not the view of Treasury forecasters or senior officials at the time. (Of course, even by October, the forecast seemed to justify neither interest rate cuts nor a fall in the exchange rate - if the MTFS objectives were being taken seriously.)

Redacted passage

The later version is well expressed in [redacted]'s draft of 3 October of a minute for the Chancellor to send to the Prime Minister:

> "To maintain the downward pressure on inflation it will be vital that there is no fall in the exchange rate.
>
> At the same time, given the increasing signs that the real economy is slowing down, we must find the occasion to bring about a reduction in interest rates. Entry into the ERM provides, in my view, the only circumstance in which we are likely to be able to achieve both these objectives: it, and it alone, will allow us, once sterling is in place within the mechanism, to reduce interest rates without any compromise to our monetary stance.
>
> I remain convinced that we could not contemplate an interest rate reduction outside the ERM."

There seems no doubt that this was a powerful argument with the Prime Minister, who was clearly worried about the possibility of a weaker economic outturn than shown in the Treasury forecasts.

Redacted passage

And the Prime Minister had by early September signed up to the argument that interest rate cuts would be hazardous if the UK remained outside the ERM.

Both the June and October forecasts proved to be badly wrong about the course of domestic demand. They failed to foresee either the shift of the personal sector's financial surplus into large surplus or the related prolonged downturn in the housing market. By contrast, the extent to which industrial and commercial companies reduced their deficit was very accurately forecast, especially in June. (Although the October forecast showed a big swing in the personal sector position between 1989-90 and 1990-91, this was forecast to have all happened by 1990 Q3, in which a £2½ billion surplus was shown.)

Forecasts for net acquisition of financial assets (FY totals £ billion)

	Persons			ICCs		
	June 90 Forecast	October 90 Forecast	Latest data	June 90 Forecast	October 90 Forecast	Latest data
1988-89	- 15.7	- 12.3	- 14.4	- 12.0	- 13.6	- 11.2
1989-90	- 5.0	- 2.5	- 1.1	- 26.1	- 27.8	- 23.2
1990-91	- 5.4	9.3	6.2	- 17.8	- 29.1	- 21.2
1991-92	- 4.9	10.4	22.2	- 8.8	- 22.5	- 5.9
1992-93	- 7.3	5.4	34.3	- 1.5	- 15.3	- 2.5
1993-94	- 16.1	0		3.4	- 17.2	

The possibility of a large correction in the personal sector's financial position had, of course, been discussed since 1988; the point that there had to be a limit to the build-up in the personal debt-income ratio was part of the "Lawsonian" argument that a balance of payments current account deficit would be "self-correcting" as long as the public sector was not in deficit.

The [redacted] paper for the Chevening discussion circulated in December 1989 had emphasised the uncertainty over the private sector's financial position. It had argued that:

> "The recent boom can be traced back to the unique combination of a falling personal saving ratio, a falling company saving ratio and a rising investment ratio. There are good reasons to think that some of this demand expansion will be reversed as the private sector adjusts to its unprecedented deficit... But we do not know the pace at which it will happen. This is the background for the design and operation of macroeconomic policy."

A substantial correction of the personal sector's deficit had occurred in 1989-90, and the forecasters effectively assumed that there was no more correction to come - why they should have done so is now not clear, particularly in June when the resulting forecast showed the personal sector in permanent and increasing deficit, against a background of high real interest rates. Neither the June nor the October forecast report made any mention of a larger personal sector adjustment as a downside risk to the demand forecast. Indeed, as far as consumer spending was concerned, the reports drew attention to the risk that demand might be stronger than forecast:

> "Inevitably, however, there are risks to this judgement, and the risks are inter-related. First, the resilience of consumer demand has consistently confounded our recent forecasts and there must be a danger that the latest retail sales figures are pointing to a renewed upturn, a feature which we may have discounted too strongly. But there are downside risks, too, and these are primarily related to company sector prospects."
>
> (June Forecast Report, sent by [redacted] to the Chancellor on June 27. Section on "risks and uncertainties", paragraph 1.30)

"There are two crucial aspects of the *domestic demand outlook* which rely heavily on judgement. *First*, we have allowed for lower interest rates to boost consumer spending via improved confidence and a more buoyant housing market. But the effect is assumed to be relatively muted.... If confidence surges

more than we foresee - and it has in the past been ve: sensitive to mortgage rates - then it could re-ignite tl housing market and spark renewed strong growth in consume spending."

(October Forecast Report, Section on "risks ar uncertainties", paragraph 1.28: italics in original)

No one in mid 1990 foresaw the interaction of falling house prices negative equity, weakened consumer confidence, and repossession that was to play an important role in determining consumer deman over the following two years. City housing market experts such a Wrigglesworth and Steven Bell continued to predict imminen recovery in the housing market not only in 1990 but throughout mos of 1991. [redacted] even told the Chancellor at th January 1991 Chevening meeting that "his main worry was the ris: that the housing market might begin to recover too fast on the bac: of only small falls in interest rates".

In both June and October 1990 the Treasury forecasters projectec some recovery in house prices during 1991. In June this recovery was not expected to begin until the start of 1991, with house prices falling by 1½ per cent during the second half of 1990 before rising by 4 per cent during 1991. In October house prices were forecast to pick up immediately in the fourth quarter of 1990, ir response to the cut in interest rates, and then to rise by 6 per cent during 1991. The table below compares the June and October 1990 forecasts of house prices (rebased to 1990 = 100) with the outturn.

House price forecasts

	June 1990 Forecast	October 1990 Forecast	Outturn
1990	100	100	100
1991	101.5	103	97.2
1992	105.7	109	94.5
1993 H1	109.9	113.7	92.6

The public sector's position was shown as having deteriorated since the Budget forecast/MTFS; the PSBR was forecast in October to rise to £9 billion (1.4 per cent of GDP) in 1992-93, falling back to £4 billion (0.6 per cent of GDP) in 1993-94 (and put moving into surplus in 1994-95); the June forecast had shown marginally higher deficits. While not consistent with the balanced budget rule, the fiscal position certainly looked perfectly sustainable with a continuing fall in the ratio of public debt to national income. There was thus no strong indication of a need for a tighter fiscal policy in terms of the prospects for the public sector's financial accounts. Unfortunately, of course, these fiscal projections were based on growth projections that were not only much higher than the growth actually achieved but also implied output remaining above its trend path (as we now estimate it) over the whole of the forecast period.

What turned out to be the dominant features of the economy in 1991 and 1992 were simply not in these forecasts - and not even hinted at in the discussion of risk and uncertainties. However, as noted earlier, outside forecasters generally projected stronger demand and output (and a healthier fiscal position) than the Treasury forecasters: and within the Treasury the comment of policymakers was that the forecasters were probably understating demand. So if the forecast had been more correct, it would not have been believed; though it might possibly have made top officials and Ministers more conscious of the risk of ERM entry going wrong.

Effect of German reunification

IF2 sent a paper to the Chancellor on "German Monetary Union: Economic Effects" on 9 February 1990 , two days after the FRG cabinet announced that it was ready to talk with the GDR about monetary union. The paper noted the likely upward pressure on inflation and that the Bundesbank would probably tighten monetary policy by raising interest rates. The DM would probably appreciate - although this was not certain: "the safest conclusion is that a period of turbulence for the DM cannot be ruled out". This paper was sent to the Prime Minister's office on 12 February.

IF's paper on German developments and their implication for th rest of Europe was updated on various occasions during the sprin and summer. The message about interest rates and the exchange rat was not essentially changed. It was only towards the middle of th year, however, that significant concern about the German fisca position began to be expressed. The scale of the damage being don to Germany's inflation performance was also substantiall understated, and it was not until the second half of 1991 that WE forecasts fully caught up with the deterioration.

The issue of the implication of developments in Germany for UK' membership of the ERM was first raised in a minute from to of 15 February 1990, recording that "th Chancellor would be grateful for a note on the implications o German monetary union the ERM and the time at which sterling shoul join it." (There were press reports later in February tha Mrs Thatcher was arguing that German reunification/monetary unio meant that UK's ERM membership needed to be further delayed*: th Chancellor was perhaps trying to arm himself against thi argument.)

The reply, drafted by MG with the help of IF, and sent by on 22 February ( ), focused mainly on the risk that reunification would weaken Germany's role as the ancho of the ERM. It argued that the German monetary authorities woul if necessary tighten policy, but this could not be guaranteed t prevent weakening of the DM against other currencies. And the rise in DM interest rates "could cause tension in the ERM".

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* The *Sunday Correspondent* for 25 February led with the headline: "German union sets Thatcher against EMS". The story underneath reported her view that "the pace of events in Germany virtually sets a new condition for full membership of the European Monetary System". This was apparently a reply to a story in the previous day's FT that the decision on ERM membership was now "firmly in the hands of John Major".

The covering note argued that as UK's inflation performance meant the Madrid conditions were not likely to be met until the end of 1990 at best, and as German monetary union was likely to take place in the first half of the year, there would be time to assess what its effects had been before the "question of sterling's membership became a live one". It also made the point that the UK might come under unwelcome pressure to reduce interest rates after ERM membership, so that some rise in German interest rates - which might reduce that pressure - might not be unwelcome to us.

The Chancellor raised the question of GEMU again in May. A minute of 18 May from [redacted] to [redacted]:

> "The Chancellor noted [redacted]'s comments in his 15 May record of his visit to Germany on the consequences of GEMU for the German economies, the extent of the likely confusion and its impact on financial markets and the likelihood of further interest rate increases.
>
> He has asked how this is likely to impact on the ERM and what the implications are for UK entry."

As far as I can see no paper was supplied in answer to this request,

Redacted passage

The June 1990 WEP forecast correctly showed a protracted period of high German interest rates. It suggested that short term rates would rise from 8.3 per cent in the first half of 1990 to peak at 8.8 per cent in the fourth quarter, and that they would stay at that level throughout 1991. Thereafter they would fall only gradually, averaging 8.3 per cent in 1992 and 7.8 per cent in 1993, as German inflation stayed at around 3 per cent in both years, having peaked at 3.2% in 1991 Q2.

In the event interest rates went about 1 percentage point higher than this forecast showed at their peak and they did not start to fall until 8½ months later than the forecast showed. But by mid 1993 German interest rates were lower than shown in this forecast.

What the WEP forecast did not get right at all was the context in which German interest rates were kept high. It showed very high real interest rates in France (6-6½ per cent in 1991 and 1992, relative to CPI inflation, falling to 5 per cent in 1993) but French growth continuing at around 2¾ per cent a year. German growth was shown as continuing at an average rate in excess of 3 per cent a year in the 3 years after 1990. In other words the WEP showed a European economy that was resilient to high real interest rates (and that resilience explained why interest rates remained high); whereas what actually happened was that inflationary pressures caused the Bundesbank to keep interest rates high in the face of a German (and European) recession.

One outside commentator at least thought that German monetary union meant that the UK's membership of the ERM should be delayed. Writing in the *Sunday Times* on 20 May, Brian Reading said:

> "Margaret Thatcher has chosen a rotten time to lift her veto on pegging the pound to the D-mark. If German monetary union goes ahead as planned on July 2, the D-mark will climb steeply. Early entry into the European exchange rate mechanism means gambling on the rate at which the pound can be successfully pegged ... . If we peg the pound to the D-mark now, the scope for cutting British interest rates will be reduced and not increased."

There is a further reference to German developments in a minute of 6 September from [redacted] to [redacted]:

> "[redacted] asked me to record the main arguments we may face at a later stage"; of which the third was "German interest rates are likely to rise substantially as they grapple with the task of absorbing the GDR; that may force us to raise interest rates inappropriately."

Although the Treasury does seem to have played down the relevance of German unification to the prospects for the UK's ERM membership, it cannot be argued that the UK while in the ERM had to cope with domestic interest rates that were higher than expected before ERM entry. In fact, although German interest rates in 1991 and 1992 were somewhat higher than forecast when the UK went into the ERM, UK interest rates were actually lower. The higher German interest rates were more than offset by a faster than expected convergence of UK and German interest rates.

Advice on the entry rate and width of the band

On 1 June 1990, [redacted] sent the Chancellor a paper o the subject of the entry rate and the width of the band. Th paper, with background material, was sent on to the Prime Ministe on 8 June. The Treasury updated its advice on the entry rate i August, and this advice was sent to the Prime Minister o 3 September (though without the updated background material).

Redacted passage

The analysis on which the view about the appropriate entry rate was set out in an annex which looked at:

- the history of the real sterling/deutschemark exchange rate
- the level of the exchange rate which had been felt necessary over the previous year or so to maintain monetary conditions appropriate to the Government's objectives
- the implication of the outlook for the balance of payments
- the evidence of the dynamics of interest rates and exchange rate movements at realignments.

Two charts were shown (numbered charts 3 and 4 and reproduced here on the basis of which it was argued that: "the current rea sterling/mark exchange rate is a little above the average observe over the last 20 years or so. However, the excess - 3 per cent o so - is small in relation to deviations which have occurred in th past".

It was also noted that underlying inflation in the UK wa considerably higher than in Germany - 3½ per cent higher on on measure - and that this differential "must be expected to persis for some time". However this was not seen as a reason for goin into the ERM at a relatively low real rate, as accommodating i advance an adverse inflation differential would make it harder t secure a rapid decline in inflation.

It was then argued that was sterling's real effective rate rather than its real rate against the DM was relevant to UK inflation chart 4 suggested that "the real exchange rate relevant for inflation is a little lower than the real sterling/mark rate. The real effective rate is very close to its average over the last 20 years". Furthermore the yen was probably misaligned; when it recovered its appreciation would further depress sterling's effective rate. (The paper also noted that a realignment of the French franc and lira against the DM would raise sterling's effective rate. No mention was made of the possibility of a general appreciation of the DM against non-ERM currencies, and the effect that this would have on sterling's effective rate.)

The charts appear only to have covered the period up to 1989Q4, yet statements were made about the "current" level of competitiveness in a paper originally prepared in May and eventually sent to the Prime Minister on 8 June. Some of the data used would not have been available beyond 1989Q4, but some rough updating could have been attempted allowing for nominal exchange rate changes between 1989Q4 and May 1990 and for inflation differentials.

The definition of competitiveness used was not stated (it was probably based on relative GDP deflators, rather than relative consumer prices or relative unit labour costs). The different measures of competitiveness normally tell slightly different stories about the situation at any particular time relative to past history. Had measures of competitiveness based on relative unit labour costs been presented, they would actually have shown the UK rather more competitive (especially against Germany) than the measure based on GDP deflators.

There is room for argument whether the real DM/£ rate (and) [or] real effective rate was more relevant. While it is true that the real effective rate affects the pressure to converge to any given level of inflation, within the ERM sterling had to converge to German (and other European countries') inflation rates. The strong deutschemark was putting extra downward pressure on ERM inflation rates generally; for the UK to choose a more competitive rate for sterling against the DM on the grounds that the DM itself was high would have weakened the pressure on the UK to converge to other ERM countries' inflation rates. In practice the two real exchange rates shown in charts 3 and 4 were giving almost identical messages, so this argument was not very important at the time, although it became somewhat more important by the end of the

FROM PAPER SENT TO PRIME MINISTER ON 8 JUNE, 199

hart 3 : Real £/DM exchange rate

Increase implies £ appreciation

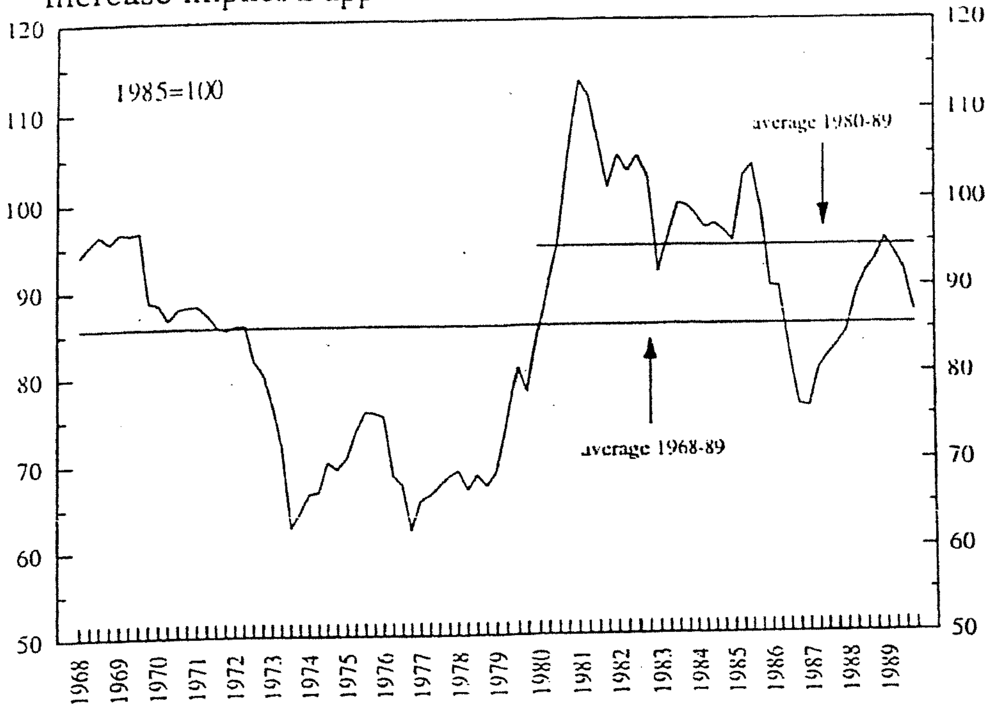
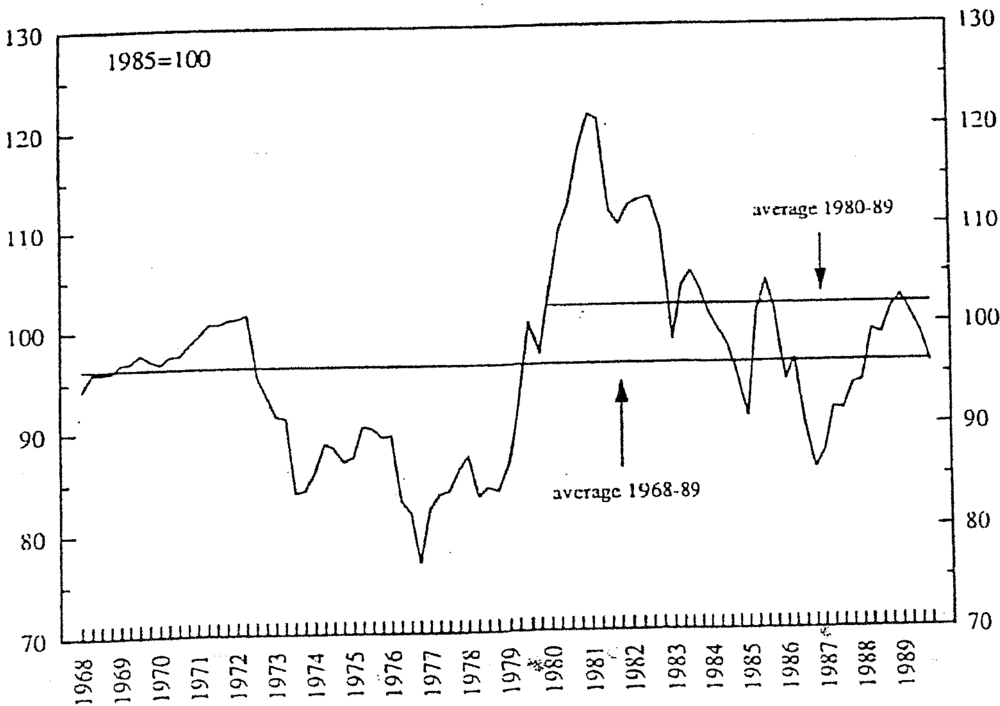


Chart 4 : Sterling's real effective exchange rate

Increase implies £ appreciation



The second part of the analysis looked at the "evidence from the monetary conditions needed to keep downward pressure on inflation". This was a summary of judgements on monetary conditions over the previous 1-1½ years, recording the exchange rate levels at which the Monthly Assessment had expressed comfort with monetary conditions, and the levels at which the Assessment had expressed unease that conditions were too loose. The conclusion of this section was:

> "it would seem a reasonable starting point to suppose that entering the ERM at an effective rate some way above present levels would be desirable <u>if other factors bearing upon the tightness of monetary conditions remained unchanged</u>. [Underlining in original.] More specifically if: (i) base rates remained at 15 per cent; (ii) joining the ERM had no effect, beneficial or otherwise [*sc.* on inflation?]; and (iii)
>
> there was no change in the fiscal stance, an ERI of 89-9 would probably be what was needed to maintain downwar pressure on inflation.

Within the Government's policy framework it was this part of the analysis - the assessment of the inflationary implications o different exchange rate levels, rather than historical comparison of competitiveness - that was fundamental for the decision on the entry rate. It is, however, perhaps surprising that the analysis in the paper was carried out entirely without reference to the Treasury forecast (which would, as shown earlier, have reinforced the case for a high entry rate).

The third part of the analysis looked at the prospect for the balance of payments. This section noted the prospect of current account deficits continuing in the range £10-15 billion a year, and of long term net capital outflows exceeding £10 billion a year. It argued that "our current account deficit has not been caused by lack of competitiveness. The main factor has been growth in domestic demand at a faster pace than has happened in trading partner countries". Short term inflows into sterling would, however, be needed to offset the current account deficit and long term capital outflows. It was probably this factor which constituted "the major barrier, so far as the balance of payments is concerned, to joining the ERM at too high a level".

The point that was being made here was, it seems, that a high current account deficit could affect the market's view of the prospects for sterling and hence the size of the risk premium in sterling interest rates. The paper took as read - or at any rate certainly did not discuss - the arguments against reducing the nominal exchange rate to effect some improvement in the prospects for the current account.

The final section of the analysis looked at the movement in French and Italian interest rates around the time of ERM realignments and noted that devaluing countries had sometimes been subject to some unhelpful downward pressure on interest rates, but that such pressures were "liable to be much more intense with a narrow banc than a wide one".

After discussion of this paper with the Chancellor, it seemed more or less settled that when the UK entered the ERM it would do so ir the *wide* bands, and our experience in the ERM surely suggests this was a correct decision. The question of the entry rate tended tc be discussed not as an absolute number but as where the band shoulc be set in relation to the actual rate at time of entry. Thus the minutes of a meeting in the Chancellor's room on Thursday 14 June record the Deputy Governor as saying that the "Bank could make the system work provided we entered on a wide band and towards the lower end of the band." "agreed that we shoulc go in slightly below the centre of a wide band".

The question of the entry rate was reviewed in mid-August (in a paper sent by to on 22 August). Since the earlier paper, sterling had risen strongly, partly as a consequence of the threatening situation in the Gulf and the increase in oil prices (from $17 a barrel in May to $28 a barrel ir late August). Over the previous three months sterling had riser about 8 per cent in effective terms and 6 per cent against the DM. Sterling's effective rate averaged over 95 in August, comfortably above the level of 89-90 that the earlier appear had said was "probably needed to maintain downward pressure on inflation".

The updated charts told a rather different story to those circulated 2½ months earlier; partly because of developments over the period, and partly because the earlier charts had not beer fully up to date even when circulated. Sterling's real effective rate now looked to be clearly above its average for the period 198(to 1990Q2, and higher than at any time other than the early 1980s; the real DM/£ rate was equal to its average for the period 1980 tc 1990Q2. Both real rates were well above their longer tern

FROM MG PAPER OF 22 AUGUST

Chart 1

Sterling's real effective exchange rate
Increase implies £ appreciation

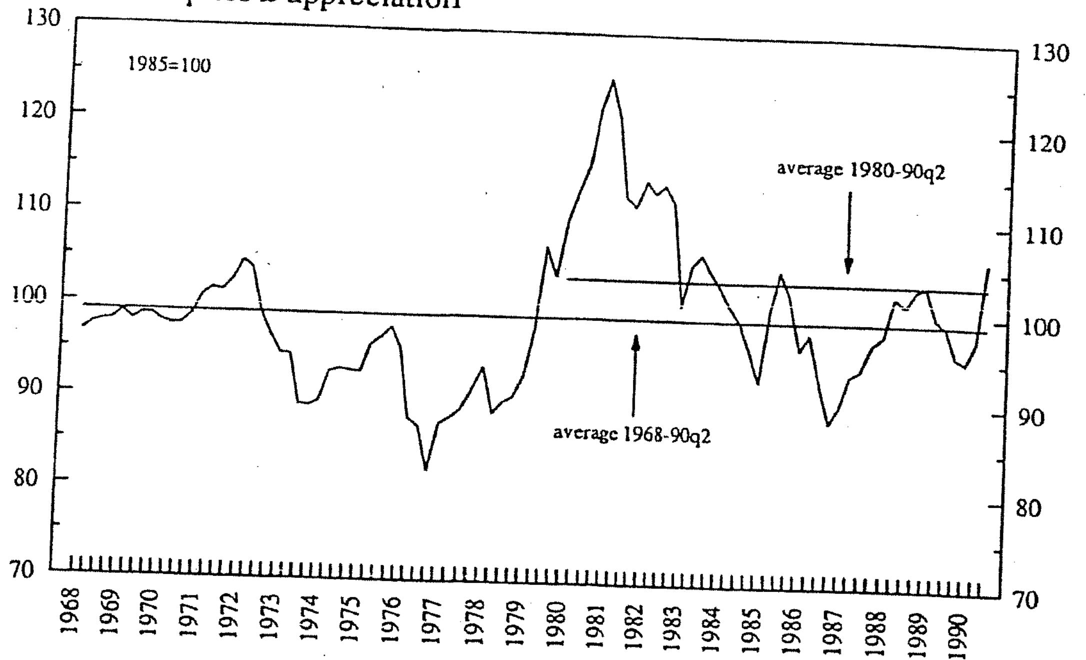
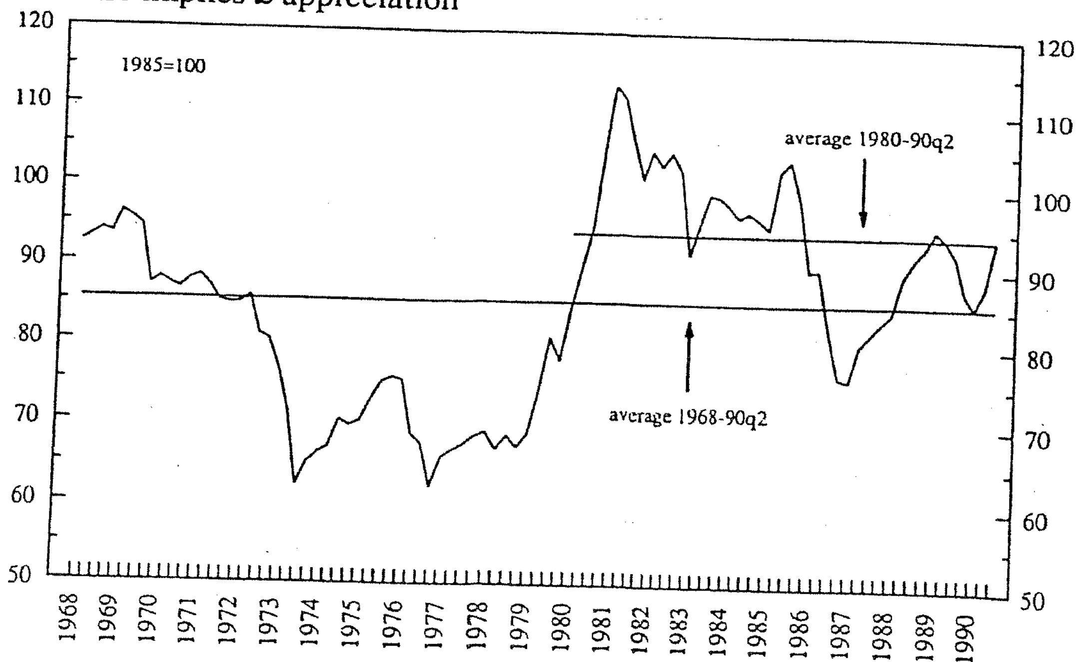


Chart 2

Real £/DM exchange rate
Increase implies £ appreciation



The paper played down these differences:

> "sterling's current real effective exchange rate is still not out of the ordinary by reference to historical experience... the same is broadly true of real sterling/deutschemark rates".

Looking at the exchange rate, together with interest rates "the monetary stance is probably tighter now than it has been at any time since 1988". At the same time "there has been a marked slackening in the tempo of the economy since the earlier paper at the end of May. Even if inflation itself has not yet started to fall, the process of disinflation has advanced significantly". The conclusions no longer favoured an asymmetric band: instead they favoured joining at or close to current market rates (DM 2.99, ERI of 95.8 on 21 August).

Redacted passage

Sterling weakened during September - a development which the Chancellor saw as adding to the urgency of joining the ERM - and averaged DM 2.95 in September as a whole.

Redacted passage

It was only at the Prime Minister's meeting on the afternoon of the following day - Thursday 4 - that the decision was taken to go ahead on the 5th. The exchange rate was then DM 2.93; so the decision taken at the meeting to go for a central rate of DM 2.95 built in a small degree of asymmetry around the current central rate.

SECTION A: ANNEX

The Lawsonian argument on the balance of payments current account

Nigel Lawson argued that the government should not worry about a balance of payments current account deficit that was the counterpart of a deficit of the private sector, rather than the public sector. This argument still underlay macroeconomic policy at the time that UK's entry to the ERM was decided.

There were two strands to the argument. Firstly the deficit would be self-correcting, because the private sector would not continue in deficit indefinitely - there would be forces tending to limit the build-up of private sector debt. Secondly, if the private sector wanted to be net borrowers and the overseas sector net lenders there was no externality involved which required the government to interfere. The Government should just keep its eye on inflation, using monetary policy as necessary to achieve its inflation objectives.

The first of these points - the self-correcting nature of the current account deficit - has by now the prestige of a prediction that has proved totally correct - the private sector has indeed returned to surplus and the limits to the feasible build-up of debt have been demonstrated.

The second point is more open to challenge, if only because it involves denying the desirability of using fiscal policy at all to dampen the economic cycle. The position taken during Nigel Lawson's chancellorship - that fiscal policy should be determined only by medium/long term prospects, so that a government can make large tax cuts in the middle of a boom if the public sector is in structural surplus - was very extreme. We now take a more moderate position: for example, the delay in the implementation of the tax increases announced in March 1993 Budget indicates some attempt to adapt fiscal policy to the cycle.

However, the arguments made in 1990 by NIESR, Phillips and Drew and others for tightening fiscal policy in order to improve the current

account were not essentially arguments about cyclica stabilisation: by 1990 the economy had already slowed down, an there was general expectation of a further substantial reduction i at least the company sector's deficit, so that any fisca tightening at that stage would have been pro-cyclical. Behind th views of NIESR *et al* must lie a belief that a current accoun deficit "matters" - that the balance of payments of the position o the county as a whole affects the interests of the citizens in a way that they do not take account of when making their ow spending/saving decisions.

Consider the following economic units in order of size:

23, Acacia Avenue, Guildford, UK
Acacia Avenue, Guildford, UK
Guildford, UK
UK

For each of these units we can ask whether it is in surplus o deficit with the rest of the world; and whether the current account position of the unit in question matters to the household at 2 Acacia Avenue.

Clearly whether it is itself in surplus or deficit matters for the household at 23 Acacia Avenue. If it is running a large current account deficit it is likely to have to curtail its expenditure an accept a low standard of living in the future, unless it has some reason to expect an increase in its income, or a large inheritance is in prospect, or something like that.

Now consider aggregating all the households in Acacia Avenue, and arriving at the current account position of the street as a whole. Is there any externality? Suppose Acacia Avenue turns out to be running a large deficit, does that matter to the household in 23 Acacia Avenue (except possibly taking the street as a sample of a much larger unit)?

It is very hard to see the household at 23 Acacia Avenue can be affected by the aggregate financial position of its neighbours

except in extreme circumstances (eg if half of Acacia Avenue had its houses repossessed and put on the market at knock-down prices). In general there is no externality.

What about the current account position of Guildford? It is much easier to see that the household at 23 Acacia Avenue might be affected by an unsustainable aggregate position of Guildford's households and firms.

If households and firms in aggregate in Guildford are in large current account deficit, some adjustment - possibly a large and sudden adjustment - to the aggregate level of spending in Guildford may be likely in due course. If the income of the household at 23 Acacia Avenue is in any way dependent on the local economy - say one member of the household is employed in a local service industry - then the household at 23 Acacia Avenue faces the risk of its income being reduced as a result of the prospective downward adjustment of spending in Guildford. In the absence of a suitable insurance policy, the household at 23 Acacia Avenue might benefit from the local council moving into surplus while Guildford is running a current account deficit, so as to smooth out the path of economic activity in the town, *if such fine-tuning is feasible*.

A similar argument applies in relation to the UK's current account. An unsustainable current account position may mean that an adjustment in aggregate UK spending is likely at some time in the future. It probably depends on the particular sources of employment income at 23 Acacia Avenue whether that household would benefit more from stabilisation of the aggregate UK current account by national fiscal policy (*if this is feasible*) or from stabilisation of Guildford's current account.

There might seem to be an additional reason why the UK's current account matters, which is that a large UK account deficit will involve not only a build-up of overseas claims on UK firms and households, but also a growing overseas exposure to sterling. At some point a continuing current account deficit might lead to a collapse of sterling, suddenly making foreign holidays and imported goods very expensive for the household at 23 Acacia Avenue.

However it is far from clear that there is a relationship running from the current account to the exchange rate. For example sterling was uncomfortably (and irrationally) strong in 1988, while the current account deteriorated; and France in 1993 provides an example of a country with a good current account performance and weak currency. Finally the actual and prospective net overseas exposure to sterling in 1990 was low - the UK had substantial net foreign assets.

It seems therefore that the argument for the Government having a current account objective must be an argument about countercyclical stabilisation. Those who believe in the feasibility of countercyclical policy would argue that myopia, herd instinct etc causes occasional unsustainable private sector financial positions; and that a far-sighted Government can smooth out activity, reduce the incidence of bankruptcies, and prevent wasteful investment decisions, by offsetting private sector deficits with public sector surpluses. But, as already noted, this sort of argument - while some might feel it would have applied in 1987 and 1988 - seems to have been much less relevant in 1990. Unfortunately NIESR, Phillips and Drew *et al* did not explain their reason for concern over the current account. Much public discussion of the balance of payments current account does seem to rest on a fallacy: an assumption that a statistic which is an *aggregate* of millions of individual current surpluses and deficits is necessarily something which affects everyone - in the way that, for example, the national debt affects all taxpayers.

B POLICY WITH STERLING IN THE ERM

In Section A it was shown that the forecasts available at the time of the decision to take sterling into the ERM at a central rate of DM 2.95 were spectacularly wrong about the behaviour of the personal sector. If the authorities had believed that a massive increase in the personal sector's surplus was in prospect, they might well have either delayed sterling's entry into the ERM or have contrived a significantly lower entry rate.

If monetary policy during the period of ERM membership was tighter than the authorities would probably have chosen, given the weakness of domestic demand, why did the authorities not simply acknowledge that circumstances had changed and realign? One answer was provided by John Williamson - who had been among the strongest academic critics of the rate at which sterling joined the ERM - in the August 1991 issue of the NIER:

> "It does not necessarily follow that [the cost of correcting sterling's overvaluation] can be reduced by devaluation.... The key issue is whether it would be possible to design an anti-inflation strategy that could be introduced simultaneously with a realignment so as to maintain credible expectations of inflation deceleration. If that proves beyond the wit of policy-makers, the next best thing may be to avoid realignments and accept the costs of convergence with grim determination. The worst policy of all is surely to start off with portentous declarations of how unthinkable a realignment would be and then cave in when the going gets rough."

Stripped of Williamson's preoccupation with the issue of competitiveness rather than the broader question of the appropriate stance of monetary policy, the argument can be generalised as follows. Getting inflation down to the levels experienced in the low inflation ERM countries was bound to be costly. The cost would, however, be lower the more credibility that the authorities' intention of getting inflation down enjoyed: the more the authorities could persuade people that

they would take tough action if necessary, the less tough the action they would actually have to take.

Suppose that, with the benefit of hindsight, the authorities had decided that they would have done better to have taken sterling into the ERM at, say, DM 2.70 than at DM 2.95; but suppose also that by the time they reached this conclusion they had more or less managed to convince everyone of their determination to stick with DM 2.95. If they had devalued, they could hardly have expected a DM 2.70 commitment to have enjoyed much credibility after they had reneged on the earlier commitment. So even if the authorities had decided in early 1991 that the optimal - but unavailable - policy would have been a *credible* DM 2.70 parity, they would not necessarily have chosen to devalue. Sticking with the existing exchange rate parity, even if that was higher than optimal, and so retaining credibility, might have been the best *available* policy.

A further point is that it is very difficult, even in retrospect, to say anything precise about whether and when monetary policy became too tight. If the UK was to make a success of ERM membership, and to give itself the option of joining in an EMU at some point at the second half of the 1990s, it had to get inflation down to best-practice European rates fairly quickly. It is hard to see that it has "over-achieved" this objective - although there might well have been a prospect in September 1992 of "over-achievement" if the UK had raised interest rates and kept sterling in the ERM. Given the objective of getting inflation down to best-practice European levels, an argument about monetary policy being "too tight" or "too loose" must essentially be an argument about the *speed* of the necessary disinflation.

If the effect of spare capacity and unemployment on inflation is linear - eg a 1 per cent shortfall of output relative to trend reduces inflation by x per cent after a year and a 10 per cent shortfall of output relative to trend reduces inflation by 10x per cent after a year - then the total cumulative output loss (or total person-years of unemployment) required to reduce inflation by any given amount is invariant to the speed of reduction.

However, if there are significant non-linearities in the effect of spare capacity on inflation, different rates of disinflation involve different costs in terms of cumulative output losses. There is then a trade-off between getting inflation down more quickly, at the cost of a relatively high cumulative output loss, or more slowly with a lower cumulative output loss: an "optimal rate of disinflation" can, in theory, be computed by comparing the technical trade-off between the rate of disinflation and the cumulative output loss, on the one hand, with, on the other hand, the relative values that the government puts on low inflation and high output.

Almost everyone would imagine that there is some non-linearity in the relationship between output and inflation; people have, after all, been brought up with the Phillips *curve* (rather than the Phillips straight line). Recent Treasury econometric work (reported in [redacted] *op cit*) is consistent with rather important non-linearities: one of [redacted] results suggests that the effect of spare capacity on inflation reaches its maximum when the gap between trend and actual output is 3½ per cent; any further shortfall in output involves a cost without any benefit. If this finding is correct - it is, inevitably, very uncertain - and if the estimates that the output gap was much larger than 3½ per cent in 1992 and 1993 are also correct, then there is a fairly clear sense in which policy was too tight in the early 1990s: more or less the same reduction in inflation as was actually achieved could have been achieved with a significantly smaller cumulative loss of output.

However we may analyse the trade-offs now, while we were in the ERM Ministers certainly showed little enthusiasm for any benefits that the unexpectedly deep recession might bring. They had an election to win: the electorate could not be guaranteed to be tolerant of more unemployment in 1992 in the belief that it meant correspondingly less unemployment at some time in the future. Quite apart from the election, the position that "unemployment is a price well worth paying" is one that Ministers find difficult to defend. Thus, in practice, once it was clear that the UK was in

recession - and that was very soon after the UK joined the ERM - the policy objective of Ministers was to cut interest rates as fast as the need to maintain confidence in sterling's ERM commitment permitted. Although officials at the monthly monetary meeting certainly discussed on several occasions whether actual or prospective progress on inflation justified interest rate cuts, there is no evidence that this sort of worry affected Ministers. Whenever the state of the exchange markets presented the opportunities for cutting interest rates without unreasonable risk to sterling, the opportunity was taken.

The period of the UK's membership of the ERM can be thought of as having three phases:

Phase 1 After an extremely brief honeymoon, sterling quickly became too weak to risk an interest rate cut, while growing evidence of recession made the authorities increasingly impatient to cut interest rates. Markets' awareness of the authorities' dilemma threatened to undermine sterling's position in the ERM. This stage lasted until around the beginning of February 1991.

Phase 2: Helped initially by a weakening of the deutschemark against the dollar, sterling moved into a virtuous circle: cuts in interest rates made ERM membership seem more successful, and the easing of market worries about pressure on the government to devalue created scope for more cuts in interest rates. Signs of recovery from recession in the late summer also helped sterling and allowed one final cut during this period. By the autumn of 1991, the interest rate differential with Germany had been compressed much further and faster than had been expected when the UK joined the ERM.

Phase 3: Little further compression of the differential was possible, but after the encouraging indicators of the early autumn the economy seemed by late November to be turning down again; demand failed to recover, house prices weakened further, unemployment continued to rise, while renewed rises in German interest rates, as well as worries over Maastricht Treaty ratification in Denmark and France, tightened the external constraint. The general election result provided some respite in the spring of 1992, and one final interest rate cut was achieved. However, the increasing use made of the lower ranges of the wide band eventually undermined the credibility of the commitment to the DM 2.95 central rate. The required risk premium on sterling rose and eventually sterling was forced out of its ERM bands.

In Phase 1, there was little the authorities could do but hang on and hope that something would turn up - which it eventually did. In Phase 2, policy could hardly have been more successful in achieving the objective of maximising the reduction of UK interest rates without undermining sterling. It is clear that, by contrast, policy in Phase 3 was ultimately unsuccessful. However there can be two views about the nature of the failure:

- firstly, it might be seen as a failure of *tactics:* defective handling of the markets, an unwillingness to raise UK interest rates in reasonable time, signals of desperation that unsettled markets, the Chancellor's undiplomatic handling of Schlesinger, and so on.

- alternatively, the real failure may have been one of *strategy*: not realising that the state of the economy made leaving the ERM desirable (and perhaps inevitable), so that the exit from the ERM - while ultimately beneficial - was disorderly and involved a large capital

loss on the Reserves; while there was no contingency planning for monetary policy outside the ERM.

The view that the UK has been better off outside the ERM, and that it was principally the manner of leaving that left a great deal to be desired, is perhaps not quite universally held. With the rebased figures for GDP, it seems that the economy began to grow again during the first half of 1992: non-oil output rose by 1 per cent at an annual rate between the first and third quarters of 1992, and at an annual rate of 1½ per cent between the second and fourth quarters. The growth rate has speeded up only marginally since the UK left the ERM.

However, it would be unwise to conclude that the continuing modest recovery experienced in recent quarters would have occurred with sterling still inside the ERM. Simulation results suggest that if UK interest rates had fallen only as fast as German interest rates and sterling had remained within (though at the bottom of) its original ERM band, GDP would have been 1½ per cent lower in 1993 Q3 than it actually was. As non-oil GDP is currently estimated to have risen by 1.6 per cent in the year to 1993 Q3, the simulation results might be taken to imply that if sterling had stayed in the ERM, non-oil GDP would have been just about flat over this period.

There is a case for believing that things would actually have been worse than this. A successful defence of sterling in September 1992 would have involved at least a temporary rise in interest rates: the simulation results just quoted make no allowance for this. The forecasters' view at the time was that even a small increase in interest rates would have an unusually severe impact on confidence and hence on demand and activity. Thus there seems a good chance that the counterfactual case of sterling staying in the ERM would have led to a "double-dip" recession.

The position of the housing market would have been particularly precarious in the absence of the big stimulus it received from the cut in interest rates between September 1992 and January 1993. The underlying position in the housing market in the summer of 1992 was, of course, difficult to discern: the authorities had

distorted the market in the spring and summer of 1992 by the temporary suspension of stamp duty on transactions under £250,000, giving incentives for people to move before duty was reimposed in August 1992.

In spite of this encouragement to bring purchases forward, house prices were at best flat during the summer of 1992. Once stamp duty was reimposed, the number of transactions collapsed and prices fell sharply - the Halifax house price index recorded a fall of 2.9 per cent in September alone, and a total fall of 4.1 per cent over the last four months of the year. (NB The big September fall in house prices cannot be attributed to confidence effects of "Black Wednesday". Virtually all the house price offers it reflected will have been made and accepted before September 16.)

The announcement of these large house price falls further discouraged potential buyers: so the stamp duty holiday, which had been intended to bring forward a recovery in the housing market, ended up further undermining the confidence that was essential to recovery. It is clearly possible that with at best a gradual further reduction in interest rates - and with the continuing risk of interest rate increases to defend sterling's position in the ERM - house prices would have gone on falling in 1993; with all that would have entailed for the number of repossessions, the impairment of mobility by negative equity, the financial health of the lending institutions, and also for the recovery in consumer spending.

Work undertaken in MG2 during the autumn of 1991 (at BG's request) was relatively sanguine about the impact of falling house prices and repossessions on the building societies' financial position. BG2 updated this work during the summer of 1992, taking account of the further decline in house prices that had occurred in the meantime. Meanwhile the Bank had been researching the link between house prices, arrears and repossessions (an article on this research was published in the August 1992 BEQB).

Neither BG's work nor the BSC's monitoring of individual societies suggested a serious threat to the financial system at the level of house prices prevailing in mid 1992. But the point was being reached where further substantial falls in house prices could have undermined the financial position of some important building societies (as well as insurance companies that were experiencing large losses on their mortgage indemnity policies). With a further 10 per cent price fall, for example, BG2 estimated building societies' total losses at between £2¼ and £7¾ billion, compared with building societies' total capital of £10¾ billion at end 1991 (and those estimates of losses did not allow for the inevitable effect of further price falls on the scale of arrears and repossessions). ([redacted]). The range for insurance companies' losses on the same assumptions was £1¼ to 4 billion.

The point had not been reached by September 1992 at which BG or BSC were telling the rest of the Treasury that "something had to be done" to avert disaster; although contingency work on fiscal measures to boost the housing market was undertaken during August. But if interest rates had been raised during September in a successful defence of sterling's position in the ERM, the news of September's 2.9 per cent fall in the Halifax house price index would surely have set alarm bells ringing loudly at the BSC, the Bank and the Treasury.

While there clearly were costs to the UK's failure to remain in the ERM the collapse of the ERM in August 1993 has reduced some of these (though not the domestic political costs). Thus while it is certainly important to look back at how the authorities tried to keep sterling in its ERM bands, and why they failed to do so, a more significant question may be whether on the morning of 16 September - or earlier - the authorities should not have been looking for the best opportunity to get sterling out of the ERM rather than fighting to keep sterling in.

The forecast as a background to policy

The Treasury's views about the sustainability of ERM membership, and where it was taking the UK economy, were presumably to some extent conditioned by the Treasury's own forecasts. Unfortunately, the errors made in 1990 about the personal sector financial position and the housing market, discussed in Section A, were repeated throughout the period of the UK's membership of the ERM. Successive forecast reports drew attention to the large movement from deficit to surplus in the personal sector's financial position that had already occurred; and argued that, given this change, it was reasonable to assume no further movement in the same direction. House prices were generally projected to start a modest recovery within a quarter or two of the completion of the forecast in question - it was only in June 1992 that a more pessimistic view of the housing market emerged, with house prices being forecast to fall during 1993.

Reflecting these views about the personal sector, GDP growth was projected in successive forecasts to be already resuming or to be shortly due to resume at a 2½-3 per cent annual rate. Thus annual growth in the range 2½ to 3 per cent was generally shown for periods beyond those affected by "carry-over" from the most recent quarters' falls in GDP (see table B1). At the same time it was only in 1992 that the forecasters projected that inflation would be close to the levels required for successful ERM membership within the reasonably near future.

The January 1991 forecast projected a continuing rise in the personal sector's debt-income ratio, and rises in house prices through 1991 and 1992 (of 3 per cent and 4 per cent respectively). This allowed a recovery in activity starting in the middle of 1991.

This forecast was more or less retained in the following June. As the forecast report noted, in colourful style, the forecast was "in many ways a bold projection. [It] contrasts with most outside forecasters, and especially press commentators, who have been weaving recent indicators into a more gloomy tapestry". The

TABLE B1 SUMMARY OF GROWTH AND INFLATION FORECASTS

Forecast of:	Real GDP growth forecast for:			
	1990	1991	1992	1993
June 1990	1.1	1.1	2.1	2.4
January 1991	1.1	-1.3	2.3	3.2
June 1991	0.5	-1.8	2.4	3.0
January 1992		-2.4	0.5	2.6
June 1992		-2.4	-0.1	2.7
January 1993			-0.7	1.1
June 1993	0.6	-2.5	-0.5	1.7

	GDP deflator growth* forecast for:			
	1990-91	1991-92	1992-93	1993-94
June 1990	7.7	6.4	5.2	4.5
January 1991	8.2	5.9	4.4	3.5
June 1991	7.9	7.2	5.2	4.6
January 1992		7.0	4.4	3.2
June 1992		7.2	4.1	2.9
January 1993			3.5	2.7
June 1993	8.0	6.6	3.5	3.1

* adjusted to remove discontinuity caused by abolition of domestic rates.

forecasters still saw "a marked improvement in the housing market, with house prices starting slowly to pick up almost immediately". As well as exposing their own position, the forecasters encouraged the Chancellor to become publicly more exposed about prospects for recovery than his own better judgement might have suggested to him.

Following some more encouraging statistics, especially improved business confidence, in the late summer and early autumn of 1991, there was a distinctly jaunty tone to the October forecast report: its summary chapter was entitled "Recovery-steady as she goes?" The report noted "the astonishing improvement in the personal sector financial balance. It is difficult to see consumers wanting to run even larger surpluses at the expense of their consumption". The forecast report described the personal sector debt-income ratio as "largely flat over the forecast period". (In fact, an accompanying chart shows the debt-income ratio clearly rising from the middle of 1992.) House prices were forecast to rise by 3 per cent over the year 1992 Q4.

The tone of the forecast reports in January and June 1992 was somewhat less self-confident, but the message was not greatly changed. The June report was headed "Recovery at last or another false dawn?" The forecasters' answer to this question was, not unexpectedly, "Recovery at last". They expected "output to pick up from the second quarter much as previously forecast.... Growth of 2¾ per cent is projected for 1993".

To the extent that they influenced policy decisions - and that extent was probably much greater in 1992 than in 1993 - the forecasters clearly encouraged Ministers and top officials to believe that the policy of sticking in the ERM at an unchanged parity should be maintained: at any time, they apparently had only to hang on for a few more months and the recovery would be well under way.

Phases 1 and 2 of ERM membership: building credibility

The first few months of ERM membership were very difficult: markets did not give the move the sort of welcome that had been suggested by the way they had reacted to rumours of imminent ERM membership earlier in the year, and there was vocal criticism that the UK's entry rate was too high. Pressure for interest rate cuts grew as the evidence that the economy had moved into recession mounted.

Edward Leigh MP wrote on 20 December to the Prime Minister reporting a meeting of the "No Turning Back Group" - attended by Mrs Thatcher - at which there had been "strong consensus that there was no domestic reason why interest rates should not fall and that our domestic industry needed relief." On 4 January, Sir Alan Walters said on Radio 4 that sterling needed to be devalued by between 10 to 15 per cent. This "would be far better than having to increase interest rates to 16, maybe 17 or 18 per cent in order to defend the parity". A *Times* leader of January 29, headed "Mr Major's Paralysis" said that "Britain is in an economic slump.... What, then should the Chancellor be doing? First and foremost he should be cutting interest rates." (NB *The Times* was not arguing at this stage that the UK should contemplate devaluation or leaving the ERM, rather that interest rate cuts were feasible within the ERM constraints.)

The Times of 13 February carried a letter from "Liverpool Economic Research Limited." (Messrs Congdon, Martin, Minford, Pepper, Walters and Warburton). They said: "we are deeply concerned about the state of the economy... Sterling is seriously overvalued against the average of our world competitors.... Ideally, we should leave [the ERM]. Even within the ERM... if others will not realign, it is still open to Britain to do so".

The authorities had to make the difficult judgement whether it was more risky to cut interest rates, and thereby possibly highlight the domestic pressures on interest rate decisions, or to provoke increasingly fierce attacks on policy by holding back.

Redacted passage

Interest rates were, in the event, cut by ½ percentage point on February 13th. The markets took the cut well, so that a second half point cut was possible two weeks later; and this was followed by further half point cuts in March, April and May. On all these occasions official rates followed short term market rates down (see chart); the risk of a surprise interest rate cut upsetting sterling was avoided. By delaying interest rate cuts the authorities were able to signal the prudence and caution that the markets wanted to see, and at the same time the repeated cuts did - if only very temporarily - do something to quieten domestic criticism of the ERM constraint and so made the markets less worried that the ERM commitment would be sacrificed to domestic concerns.

As interest rates came down, some concern was expressed within the Treasury and Bank that the pace of reduction might be faster than was justified by progress on inflation; or that the momentum of

cuts might take interest rates lower than would prove sustainable for very long.

Redacted passage

Interest rates were cut by ½ percentage point on 24 May,

Redacted passage

By July, improving news on inflation was felt to justify a further interest rate cut. And worries began to be expressed that the

Larger

large personal debt burden required much [longer] interest rate cuts than had yet been contemplated, or were likely to be feasible within the ERM. (As already noted this sort of concern was not reflected in the forecasts at this time.)

Redacted passage

Interest rates were cut on 12 July. There was another half percentage point cut in interest rates on 4 September, and the differential with German rates had by this time fallen to around 1 percentage point.

Redacted passage

The one remaining area of concern was the housing market - and it was a concern that mounted as the autumn progressed.

Redacted passage

Nevertheless the view during the autumn was that domestic conditions did not warrant a further cut in interest rates.

Redacted passage

The view that recovery was under way was generally - though not universally - shared by outside commentators and forecasters at this time, even by some members of the "Liverpool Group". While Patrick Minford was throughout the autumn forecasting a small fall in GDP in 1992, Tim Congdon's October forecast was for 2 per cent growth in 1992, only marginally less than the internal Treasury forecast at the time. The consensus of both city and non-city forecasts for 1992 growth remained around 1.8 to 1.9 per cent throughout the autumn; because of the negative "carry-over" from 1991's fall in GDP, a substantially faster rate of growth *during* 1992 was implied.

It is reasonable to regard 1991 as, in many ways, a year of success for the monetary authorities. For most of the year they had been under pressure from many directions to cut interest rate more quickly; their restraint convinced the markets - in the light of what happened in 1992 one should perhaps say "duped" - that there was only a small risk of sterling being devalued, and almost certainly allowed a bigger total reduction in interest rates than would have been achieved if larger cuts had been snatched at earlier in the year.

The last claim is obviously impossible to prove; and some will argue that the fact that large interest rate cuts were eventually achieved shows that the authorities had been too cautious early in the year, denying the economy desperately needed help. All one can do is to compare the outturn with the interest rate reductions that had been expected to feasible inside the ERM, and with what other ERM members had achieved. After 11 months of membership, the UK had achieved a smaller differential with German interest rates than countries such as France and Denmark had achieved after a decade in the ERM. The Treasury forecast completed just after the UK joined the ERM had projected short term UK interest rates of 12 per cent in 1991 Q4; for most of that quarter UK interest

rates were actually close to 10½ per cent, even though German interest rates were higher than had been forecast.

Further circumstantial evidence is provided by a paper on the ERM and macroeconomic policy prepared in MP during October 1991 [redacted]. This paper considered two illustrative paths for UK interest rates: one in which the markets did not believe the authorities would maintain the fixed exchange rate and required an additional interest rate premium to compensate for an increasingly overvalued exchange rate; and one in which ERM entry helped to reduce interest rates, allowing a one percentage point cut on entry, and further cuts as the credibility of the authorities' commitment to the ERM increased. The two paths presumably covered the range of outcomes that Treasury economists regarded as at all likely. It is therefore worth noting that in the high credibility/low interest rate case the differential between UK and European interest rates was projected to fall to 1 per cent only after *5 years*. In the event, a 1 percentage point differential between UK and German rates was achieved after less than 12 months in the ERM.

It could be argued that the fast convergence of UK and European interest rates was the natural consequence of the steepness of the UK recession. But in practice the weakness of the economy seemed at times to make it more rather than less difficult to cut interest rates, because economic weakness increased doubts about whether the authorities would be able to bear the domestic cost of sticking to their ERM commitments; quite apart from the implication of economic difficulties for the Government's election prospects. (The period leading up to the collapse of the ERM in 1993 provided further evidence of economic weakness making it more rather than less difficult for ERM countries to cut interest rates.)

Phase 3: losing credibility

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Sterling weakened in the early part of December, but the 13th of the month provided an excellent example of the credibility that the Government's ERM commitments now enjoyed, and of the extent to which Ministers were able to move the exchange market by what they said as well as what they did. In response to a question at a press briefing the Chancellor said "we will move to the narrow band... at the central rate of 2.95 - no question of using it as an excuse for a depreciation. That is our policy, it has always been our policy and it remains our policy". This was the first time that an absolutely clear commitment to a move to narrow bands at the existing central rate had been made - a couple of earlier statements about this had been less unambiguous - and sterling jumped at the news. Having opened the morning at DM 2.8588 it peaked after the Chancellor's remarks became known at DM 2.8895, and ended the day without about a 2 pfennig gain. As a result, sterling was in a slightly stronger position to withstand the impact of the German interest rate increase when it was eventually announced.

Not only did the Bundesbank raise its Lombard and discount rates by ½ percentage point on 19 December, American rates were cut almost simultaneously. [redacted] Although some risk to sterling's position the following morning was acknowledged at a meeting held at No.11 on the Sunday evening, the minutes of the meeting do not record any discussion of, let alone support for announcing a pre-emptive increase in UK interest rates the following morning.

By the Monday, all ERM members apart from the UK had raised interest rates. The UK's failure to raise interest rates risked suggesting that it was reluctant to accept the rules of the ERM game, though it could argue that its membership of the wide band gave it more latitude than most ERM members to resist following a rise in German rates. Clearly an interest rate increase would have set off a wave of domestic protests about the damage being caused by ERM membership; and, especially if the political fall-out had seemed to increase the likelihood of a Conservative defeat at the general election, sterling's position could have been undermined rather than reinforced.

Even without the announcement of an interest rate change, short term UK rates in the money rates had risen - with 3 month LIBOR going over 11 per cent - and this provided some support for sterling. The authorities' problem was that if market rates remained at this level for very long, a base rate increase - and consequent mortgage rate increase - might be triggered without any further signal from the authorities. Any attempt to get market rates back down to nearer 10½ per cent would, however, have been very dangerous for sterling. So the authorities neither validated the increase in market rates nor tried to get them down; and, helped perhaps by a natural dearth of speculative activity over the Christmas holiday period, got through to the New Year with base rates still at 10½ per cent, and with no real sterling crisis. Sterling, which had fallen just over a pfennig to a little below DM 2.86 following the German interest rate increase, ended 1991 just above DM 2.84.

In the early months of 1992, up to the election in April, sterling remained weak - its DM rate was below the lower limit of a notional narrow band centred on DM 2.95 = £1 throughout almost the whole of this period. Data on the economy remained disappointing; but a further cut in interest rates, though sometimes under discussion, was felt to be too risky.

Redacted passage

Maintaining credibility involved words as well as actions; and words became increasingly important in 1992, as the scope for actions to improve credibility - short of actually increasing interest rates - disappeared. Most obviously it involved repeated assertions by the Chancellor, the Prime Minister, and others that the government would not realign or leave the ERM; and that when the eventual move to narrow bands occurred it would be at the existing central party against the deutschemark of DM2.95 = £1.

More subtly, it also involved attempts to persuade the markets that the authorities believed that there would be no benefit in lower interest rates from devaluing or leaving the ERM. Hence the Treasury Bulletin article (Volume 3 Issue 1) on "UK interest rates and the level of sterling" questioned whether interest rates would be lower if sterling left the ERM or if sterling had entered the ERM at a lower rate. Hence also the claim in the Chancellor's speech to the European Policy Forum (10 July 1992) that if the UK left the ERM and cut interest rates "quite soon interest rates would have to go back up again - to much higher levels than they are today".

From the point of view of the policy objective of keeping the UK in the ERM without having to raise interest rates, what mattered was not whether there claims were true, nor even whether the authorities persuaded the markets that the claims were true. What mattered was that the authorities persuaded the markets that they (ie the authorities) believed these claims: clearly, if the authorities believed that devaluation would put up interest rates they were hardly likely to devalue. Weaker and less controversial claims - eg that the authorities would only be able to cut interest rates outside the ERM at the cost of higher inflation - would not have served the same purpose.

In a minute to the Chancellor of 29 July 1993 [redacted] did, in fact, assess whether the claims we made look correct in the light of experience since "Black Wednesday". He showed that countries which had dropped the link with the DM in the autumn of 1992 had generally felt it necessary to maintain interest rates well above German levels. (The same goes for ERM countries which have depreciated against the DM since the widening of ERM bands in August 1993.) The UK has been an exception in cutting interest rates below German rates; but even UK rates have not been cut below the rates expected to prevail in Germany in a year or so's time. And the rate cuts implemented here were, in the event, sufficient to generate something approaching an exchange rate crisis during February 1993; the authorities might well have had to raise interest rates again to support sterling if the pound had not been rescued by a run of vastly improved economic statistics.

An argument was heard - both inside and outside the Treasury - that the authorities could safely cut interest rates further - even below German rates - by making greater use of the wide bands. For example, Giles Keating (in a CSFB circular of 24 April 1992 - after the election result had allowed sterling to appreciate back into the notional narrow band around DM 2.95) suggested that sterling interest rates could be reduced to around 9 per cent (i.e. about ½ to ¾ percentage points *below* German rates) while sterling remained within the broad ERM bands. The running loss on holding sterling rather than deutschemark assets would be compensated for by the capital gain on sterling assets that would be achieved when sterling appreciated back into the notional narrow bands around DM 2.95 = £1.

MG was very sceptical about this argument. Essentially it rested on being able to maintain the credibility of the DM 2.95 central rate by "words" - regular ministerial repetitions of the commitment to go to narrow bands at DM 2.95 - while the actual exchange rate was much lower. It seemed to us that if sterling settled for an extended period towards the bottom of its wide band, markets would increasingly discount the possibility of a return to DM 2.95. In the short term the possibility of a capital gain might offset some small adverse interest rate differential. But if we followed Keating's advice and cut rates below German levels we would probably soon have to raise them again. And the mere act of cutting rates in this way might alarm markets over the risks that the domestic pressures were apparently forcing us to take.

Sterling survived the run-in to the general election on 9 April with surprisingly little difficulty. Clearly the shadow-chancellor's statements committing a Labour government to maintaining the existing parity were a great help. There was, nevertheless, a risk that an in-coming Labour government would announce after "inspecting the books" that all pre-election commitments - whether on taxes or the ERM - were off. So it might seem surprising that sterling was not more severely affected by pre-election uncertainty: as analyses showed after the French referendum in the following September, an event due to occur in a few days time that may, even with only a small probability, trigger an exchange rate realignment can create very large expected capital gains or losses which correspondingly large short term interest rate differentials are needed to offset. Presumably, however, markets were content to hold sterling because the possibility of loss in the event of a Labour victory followed by devaluation was offset by the near certainty of an upward bounce in sterling if the Conservatives won.

Following the Conservatives' election victory, sterling did indeed strengthen, moving back comfortably inside the notional narrow band limits. After sterling had settled down at around or slightly over DM 2.93 for the best part of a fortnight, interest rates were cut by ½ percentage point on 5 May. This cut brought the differential with German interest rates down to around 30 basis points. Sterling fell by about 1½ pfennigs after the announcement but recovered a little in the afternoon of the 5th, supported by covert Bank intervention, and strengthened further the following day.

Sterling was doubtless being helped during this period by reports of improved business and consumer confidence, though officials were cautious about taking a post-election upturn for granted. At the monthly monetary meeting on 7 May there was general support for delaying any further cut in interest rates until there was

more evidence on the effects of recent improvements in confidence in our economic activity.

Sterling continued to strengthen over the following three weeks, actually getting back to DM 2.95 on 26 May. This, however, proved to be its peak. From this point it depreciated against the DM at a fairly constant rate of about 5 pfennigs decline per month, until it hit the floor of its wide band a little over 3½ months later.

At home, guarded optimism about the implication of the post-election confidence data turned by mid summer into dismay that the recovery appeared as elusive as ever. But the external constraint became still more severe, as the Danish referendum result in early June raised doubts about EMU, and indirectly the ERM, and especially following the unexpected ¾ percentage point increase in the Bundesbank's discount rate on 16 July.

Redacted passage

The authorities were still using "words" to defend sterling. A restatement by the EST on 11 June of the commitment to enter the narrow band at a DM 2.95 central rate pushed sterling up by about ½ pfennig immediately after it appeared on the Reuters screen. But there were diminishing returns to this sort of statement, as it was perfectly obvious to markets that the authorities would not in practice be willing to raise interest rates to push sterling back into the narrow bands once it had fallen below them without a substantial improvement in economic conditions in the UK.

The action taken by the authorities at the end of July to avert an increase in mortgage rates threatened some building societies - the net rates on the newly introduced FIRST Option Bond were cut by ½ percentage point - made clear to markets just how difficult the Government would find it to raise interest rates if existing wide-band commitments required an increase.

Redacted passage

By this time the possible capital gain on sterling from a move to narrow bands at DM 2.95 can have had little weight in calculations of the overall return on sterling.

In the absence of any realistic chance of an appreciation back towards DM 2.95 in the short term, and given the possibility of a downward realignment of sterling at some stage, what persuaded people to hold sterling rather than deutschemarks when there was almost no interest rate differential between the two currencies? Once sterling fell towards DM 2.80 some support was probably provided by the belief that the most likely alternative to a move to narrow bands at DM 2.95 was what had become known as an "Italian exit". This meant a move to narrow bands with the new narrow band lower limit equal to the old wide band lower limit, with a consequent downward realignment of the central DM rate (to DM 2.8416).

More generally there may have been an element of "regressive expectations" in foreign exchange markets. When sterling had been at around DM 2.85 for a while, say, and then moved down to DM 2.83, the possibility of reversion towards DM 2.85 provided some very short term support for sterling. But once the new lower level had become established for a while that support diminished, and sterling had to fall again. In this case, sterling was bound to continue on a downward trend until the interest rate differential with Germany was increased to provide an adequate compensation for the risk of future sterling depreciation.

Sterling was not helped by a German whispering campaign for an ERM realignment. The July increase in German interest rates was preceded by a report in the Financial Times of Monday 13 July that a "senior official" of the Bundesbank had suggested that "countries which thought they were suffering from Germany's monetary policies could take the initiative by seeking realignment within the European Monetary System... We are not in a fixed exchange rate system yet". According to the FT report, the senior official "believed market forces might eventually force weaker currencies towards a devaluation". But the damage was done: the risk premium on sterling had inevitably been increased. This was not the first time such remarks were reported, and there were more unhelpful comments over the following two months, culminating in

the *Handelsblatt* interview that sealed sterling's fate on Black Wednesday.

Towards the end of July both the authorities and the markets began to focus on the disruptive potential of the referendum on the Maastricht Treaty that had been called in France for 20 September: opinion polls were showing increasing numbers against the Treaty. At a seminar on 28 July the Prime Minister commissioned contingency planning. Although the main concern was over what might happen after a rejection of the Treaty in the referendum, it was recognised that if the opinion polls continued to suggest that such a rejection was a realistic possibility, severe difficulties might be experienced in advance of the vote.

A letter from to sent on 12 August ( ) set out the views of the European and Markets divisions of the Bank of England. The main point stressed in the letter was that the fundamental defence of sterling had to lie in a willingness to raise interest rates. By contrast the value of additional foreign currency borrowing was "at best, minimal", and the potential of foreign exchange intervention "should not be overstated". There was also nothing useful to be got from additional commitments on entry to the narrow band.

In the first half of August sterling had also to contend with a renewed decline in the dollar. There is a well documented relationship between the DM/$ rate and the DM/£ rate: when the dollar weakens against the deutschemark it tends to bring the pound down with it. This relationship had weakened but not entirely disappeared since the UK's entry into the ERM.

A simple regression of changes in the DM/£ rate on changes in the DM/$ rate shows that for the four years prior to ERM entry a 1 per cent movement in the dollar against the deutschemark was associated with a 0.2 per cent movement in sterling against the deutschemark. (Minute of 25 September 1992 from to). Over the period of the UK's membership of the ERM this coefficient was approximately halved.

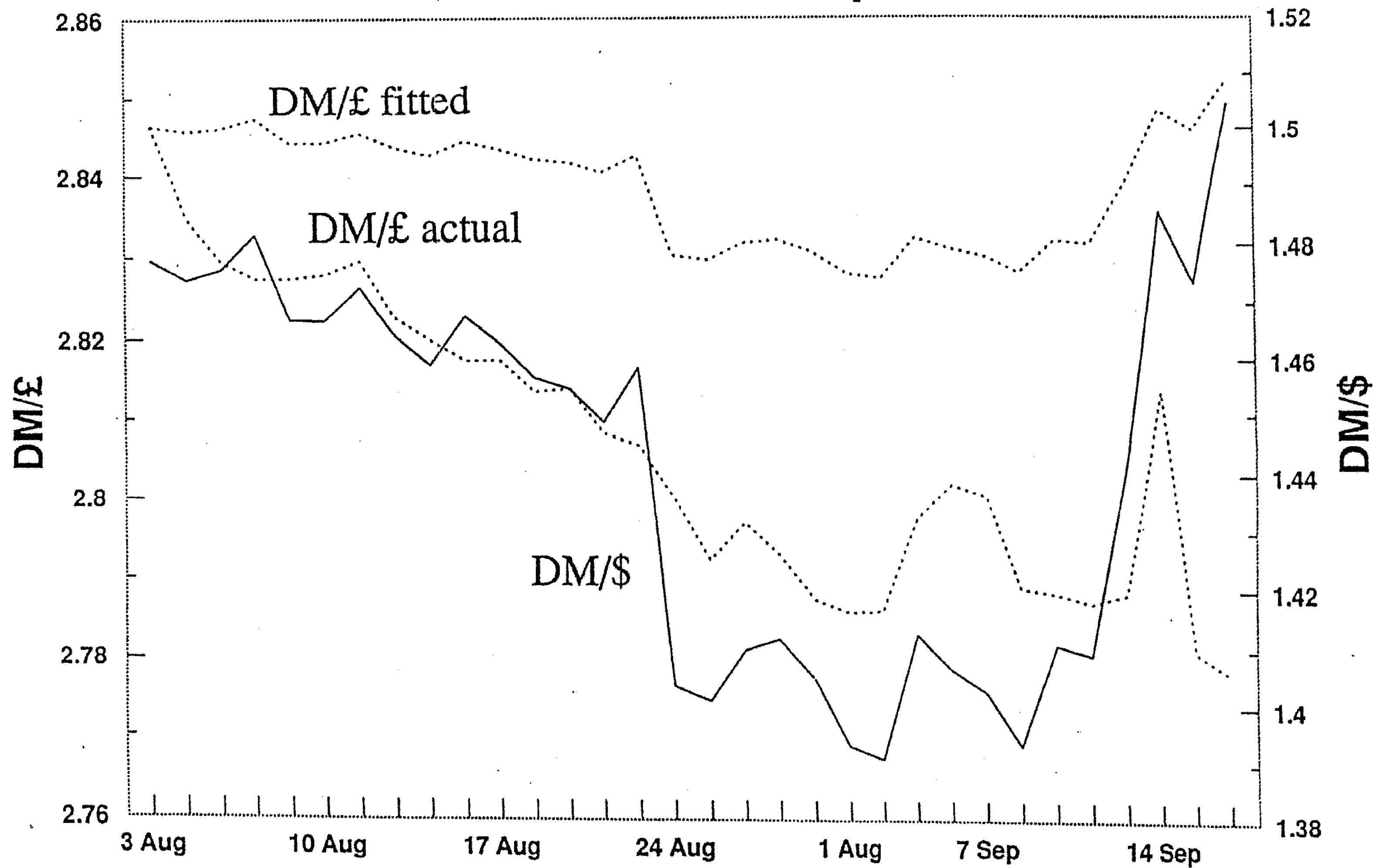
If the ERM bands had been entirely credible, the relationship should have disappeared entirely as sterling approached its fluctuation limits. However, during August the sensitivity of the DM/£ rate to fluctuations in the dollar increased appreciably (see chart which compares the "fitted" DM/£ rate - computed using the relationship that held on average during the UK's ERM membership - with sterling's actual movement against the deutschemark). This illustrates the decline in the credibility of the ERM commitment that had by now occurred.

The second full week of August saw an increasing amount of Bank of England intervention in the markets to support sterling. Having been stable at just under DM2.83 for almost a week, sterling weakened on 12 August, falling to DM2.8228 by the close. The following day, sterling fell below DM2.82. Sterling was by now right up against its limits against both the peseta and the escudo, and the three central banks affected were doing several hundred million dollars worth of intervention at the margin on some days, while the Bank of England was also selling deutschemarks on a small scale. Over the next four weekdays, sterling gradually moved down towards DM2.81 with intervention by the Bank of England averaging around $150 a day.

By the middle of August the Bank of England was seriously alarmed about sterling's slide; on 17 August [redacted] sent [redacted] a paper (dated 14 August) entitled "Sterling Management in the Coming Period". It contained some fairly stark warnings about where things were heading:

> "Given the present market sentiment towards both dollar and sterling, it must be questionable whether we can carry on even until 20 September with our current operational stance, without getting sufficiently close to limit down against the DM for official determination to defend the parity to be put completely on the line."
>
> "If we failed to devote considerable efforts to [the defence of the DM 2.80 level, the markets] would conclude that we

The dollar and the pound



were content for the DM/£ rate to move to the point of obligatory intervention (2.7780), and might well decide that we were inviting them to test the extent of our determination to support at that point. Were that battle to be joined, the potential offerings of sterling could substantially exceed our present gross exchange reserves."

To head off this crisis, the Bank proposed:

- stepping up the rate of covert intra-marginal intervention, spending at least $1 billion to try to keep sterling above DM 2.805,

- if this failed to keep sterling above DM 2.805, moving to overt - and internationally shared - intervention, being prepared to spend at least $2 billion, more likely in successive rounds than in one concentrated shot.

- if this failed to hold sterling above DM 2.80, a programme of foreign currency borrowing, of "not less than $5 billion equivalent, and preferably £5 billion."

The Bank's paper indicated an important change in thinking over the two days that had elapsed since the letter from [redacted] quoted above; the paper did not include an increase in interest rates in the sequence of actions to defend sterling; although the paper did say this was "a possibility" which "can, in any event, not be excluded", and warned against Ministers saying anything that appeared to rule out the possibility of an interest rate increase. The weight the Bank proposed putting on intervention and foreign currency borrowing was surprising, given the conventional view about the limited effectiveness of such measures (which had been endorsed in [redacted] letter).

In putting the Bank's foreign currency proposal to the Chancellor ([redacted] minute to the Chancellor of 24 August, covering [redacted] submission of 21 August) MG suggested, if somewhat obliquely, that interest rate increases should perhaps have a greater priority than in the Bank's suggested ordering of actions:

"Our view is that the use of foreign currency borrowing needs very careful handling... But it would be useful to have this shot in our locker, for example to use in parallel with, or to bolster the interest rate weapon."

Redacted passage

In the event, sterling was allowed to fall through DM 2.80 without overt Bank of England purchases of sterling (although there was overt intervention to support the dollar, concerted with other central banks); but considerably more than the $1 billion covert intervention originally suggested by the Bank was spent as sterling slipped to DM 2.7923 by close on 25 August (and its ERM divergence indicator crossed the 75 per cent threshold). The markets seem to have been totally unaware of the intervention that had been taking place: for example the foreign exchange report in the FT of Tuesday 25 August said "the Bank of England did not support sterling through intervention"; the following day's report said "the Bank of England narrowly avoided the need to support the currency through intervention". These reports relate to days on which the Bank had intervened to the tune of $650 billion and $900 billion respectively.

The following day, the Bank did undertake overt intervention - the FT's lead story reported "about £1 billion" of purchases of sterling - to back up a statement by the Chancellor that the UK would not devalue or leave the ERM. This had a little more effect than the earlier intervention - sterling ended the day a little

higher at DM 2.7950 - even though its impact was blunted by a statement from a Bundesbank council member that an ERM realignment was possible.

One piece of evidence that the authorities had not sent sufficiently strong signals to the market is provided by the remarks of an (unnamed) "respected forex dealer" quoted in the FT of 27 August. He said that he had a feeling that devaluation was being considered. "I cannot otherwise explain why rates have not yet been raised and intervention is coming so late."

The Bank did not undertake further overt intervention over the next few days and covert intervention was on a much reduced scale. Sterling weakened a little over this period, closing on 2 September at DM 2.8875, as the dollar hit new all time lows against the deutschemark. The following day saw the announcement of the ECU 10 billion borrowing programme. This was well received by the pundits - some of whom saw it as ruling out the devaluation option - and sterling rose to DM 2.8177 at one point during the day, though it fell back to just over DM 2.80 at the close. Thereafter, however, sterling resumed its downward drift against the deutschemark, even though the dollar began to recover. The Bank of England undertook very little further intervention until after the realignment of the lira.

It seemed in early September that sterling might get through to the French referendum without further serious trouble - the Bank was guardedly optimistic at the monthly monetary meeting on 2 September. Contrary to what some *ex post* analysis may have appeared to suggest, there was no necessity for uncertainty about the referendum to have an increasingly adverse effect on sterling as the referendum approached - though sterling was bound to be affected by changes in perceptions of the likely result. There was a risk that sterling would be devalued if the result went one way; but there was also a chance that it would jump up if the result went the other way. Sterling had necessarily moved to a level at which the possible gain from a "yes" vote cancelled out the possible loss from a "no" vote; this level was almost time-invariant (and would have been completely time-invariant if the DM/£ interest rate differential had been exactly zero). Only very minor movements in sterling were required as the day of the referendum approached to keep expected gain and loss in line, provided that expectations of the result remained constant. (Sterling was <u>not</u> being supported primarily by an interest rate differential against the deutschemark. If it had been, it is perfectly true that the differential required to hold sterling at any particular level would have risen enormously as the date of the referendum approached.)

In the event the two events that together finished sterling off were:

- the devaluation of the lira, which must have raised the risk premium on most other ERM currencies simply because it made the ERM seem less like a fixed rate regime; and the markets' conclusion - by two days after the devaluation was announced - that the size of the change had been inadequate and that the lira remained uncompetitive.

- Schlesinger's *Handelsblatt* interview.

The effect on sterling of these two events was not linear - the first helped to augment the second. The fact that the Bundesbank had just been seen to force a devaluation on the Italians was bound to make the markets react fiercely when it appeared that the Bundesbank had a further devaluation candidate.

What might we have done differently? (i) strategy

On 28 May 1992 the Chancellor's PPS ([redacted]) minuted [redacted] [redacted] with the following question:

> "Is it the Treasury's considered view that provided interest rates are set to maintain sterling's position within the current ERM bands and provided the structural fiscal deficit is removed by tight control of public expenditure over the next few years then the economy will recover from recession and grow at a healthy rate without re-igniting inflationary pressures and without running into a balance of payments problem?"

The Chancellor also asked for confirmation that "it is the Treasury's clear view that the current structure of macro-economic policy is entirely appropriate from a medium-term perspective". [redacted]'s reply - which took account of a discussion at TMB - provides a convenient summary of the various options for improving on the modest economic recovery (accompanied by a large continuing PSBR and weak balance of payments position) shown by the most recent forecast. These included (as well as fiscal policy options):

- a more aggressive interest rate policy, while sticking with the existing central ERM parity;

- exchange rate changes within the ERM;

- leaving the ERM.

Option (i): more aggressive interest rate cuts

[redacted] acknowledged that in theory UK interest rates could fall below German interest rates if sterling was towards the bottom of its wide band and expected to appreciate back towards the centre of the band. However, he also pointed out that a unilateral cut in interest rates might call into question the Government's commitment to the DM 2.95 central rate. Especially in the aftermath of the Danish referendum result, a unilateral move would, he argued, be extremely risky. But a concerted cut in interest rates by all ERM members other than Germany might be possible without any change in ERM parities: this was "definitely worth pursuing".

As has been argued earlier, subsequent events seem to confirm the view that extended use of the lower regions of the wide band was likely to prejudice markets' confidence in the DM2.95 central rate. And if this was true of the passive use of the wide band

into which we were forced during the summer of 1992, it would surely have been true *a fortiori* if we had tried to make active use of the wide band to allow more aggressive interest rate cuts. As for an ERM wide coordinated interest rate cut, any room for manoeuvre that other countries had was absorbed when the German discount rate increase in July was not matched in France, Denmark, Belgium or the Netherlands. (Market interest rates in Belgium and the Netherlands had for several months been a little below German rates.) No doubt the pressure on sterling in July was less than it would have been if other ERM countries had fully matched the German increase: we benefited from a concerted (if not coordinated) *relative* cut in official interest rates.

Option (ii): exchange rate changes

The option of exchange rate changes within the ERM covered both (i) a unilateral UK devaluation and (ii) a general realignment involving an appreciation of the DM against other currencies. It was fairly clear in 1992 that a reduction in sterling's *real* exchange rate was required; but a reduction in the nominal exchange rate was not the only way - and not necessarily the best way - to achieve this, and it might have put at risk the convergence of UK and European inflation rates achieved over the previous two years. And, having tricked the markets once into allowing us a virtually zero interest rate differential with Germany by committing themselves to not devaluing, the UK authorities could hardly expect to carry off the trick a second time, after a devaluation. So it seemed certain that a unilateral UK devaluation would have led to higher UK interest rates.

The experience that we have had since leaving the ERM suggests that, with a depressed domestic and world economy, the fears that a lower exchange rate would quickly be translated into higher domestic prices were rather overdone. At the same time, there is nothing in our or other countries' experiences since 1992 that brings into question the claim that a devaluation of sterling would lead to higher UK interest rates. Since in 1992 it was the non-tradeable sector, and especially the housing market, where the crisis was practically acute, a lower real exchange rate accompanied by higher nominal and real interest rates would probably have made the immediate situation worse rather than better. And even in the trading sector, while some firms might have been given the chance to save themselves by exporting their way out of difficulties, others would have been pushed into bankruptcy by the increase in interest payments.

The idea of a general ERM realignment was one that had interested Norman Lamont for some time. The previous year he had asked [redacted] for an assessment of the case for an ERM realignment ([redacted]'s minute to [redacted] of 6 August 1991). And the question had been raised again - by [redacted] - in December 1991 at the Sunday evening meeting held at 11 Downing Street during the round of ERM interest rate increases.

The attractions of a realignment were that:

- a higher deutschemark would tighten monetary conditions in Germany and so perhaps allow lower German interest rates;
- a higher deutschemark would allow the tradeable sectors of other ERM countries to expand at Germany's expense.

A free float of the deutschemark outside the ERM might have had the additional advantage of decoupling ERM interest rates from German rates.

There were three main points in the Treasury's (and the Bank's) reactions to the suggestions of an ERM realignment. Firstly, Treasury officials questioned the extent to which the Bundesbank would take account of the deutschemark exchange rate in assessing the appropriate level of interest rates. Officials may, in fact, have understated the extent to which a higher deutschemark rate could have led to lower German interest rates. Even though the Bundesbank does not operate anything like a "4 to 1 rule", a significantly higher deutschemark exchange rate would have worsened the competitive position of German industry, would have brought forward and intensified the recession in Germany, and

probably led to earlier and faster downward adjustment in German wage settlements. Such developments would in turn have led to lower German interest rates in due course.

The second point made was that even if a realignment did lead to lower German interest rates it would at the same time probably increase the differential between other ERM interest rates and German interest rates, as much of the credibility of the ERM as a fixed rate regime would inevitably be lost. So it could lead to higher rather than lower interest rates outside Germany. This point was entirely valid, although it may have applied with most force to the short term. As time passed, and Germany exhibited more and more the symptoms of an uncompetitive economy, the markets might have become less concerned with the risks of a further upward alignment of the deutschemark.

The third - and on its own entirely decisive - point that was made was that getting a general ERM realignment off the ground depended crucially on the attitude of the French. If the French had not themselves come to the conclusion that a realignment was desirable, we would not be able to persuade them. If they had concluded in favour of a realignment they were unlikely to be shy about sounding us out. All we were likely to achieve by taking the lead ourselves was leaks in the press that the UK was considering the devaluation option. Subsequent French behaviour gives absolutely no reason to think that a general ERM realignment was negotiable in 1991 as in 1992. Nor is there any reason to think that other northern European countries would have been interested. When the Chancellor himself raised the question with the Danish Finance Minister in July 1992, he was told firmly that the Danes wanted to stick with the deutschemark.

Option (iii): leaving the ERM

The third option - leaving the ERM - was rejected because it was, in [redacted]'s words, "not politically feasible within the foreseeable future", and because we would "lose all the credibility associated with ERM membership... People will believe that we have left the ERM because we have given up the struggle to

defeat inflation". If it is accepted now that leaving the ERM has been beneficial, it might seem reasonable to think that the Treasury should by the summer of 1992 been trying to find a way of getting out.

It would be wrong, however, to assume that the market consequences of a voluntary and unforced withdrawal would have been identical to those we actually experienced since "Black Wednesday". An unforced withdrawal, following all the commitments made, would have seemed an immensely cynical act. By being forced out as we were, the authorities did at least demonstrate a determined (and costly) attempt to meet their commitments, and the UK's departure from the ERM occurred after the markets had themselves concluded that this was the optimal course for the UK to take.

Redacted passage

Further option: move to narrow bands.

Another option that had been considered after the election had been an immediate move to narrow bands either at a central rate of DM 2.95 or possibly a lower rate. Although some officials saw this as a useful way of boosting credibility, a minute sent by [redacted] to the Chancellor on 15 May said that the balance of opinion among officials was in favour of retaining the extra degree of flexibility afforded by the wide bands. By the time the Chancellor discussed this issue with officials on 10 June, the Danish referendum result had added to uncertainty in the ERM. The Chancellor came down against a move to narrow bands. It is hard to believe now that such a move, in the absence of a willingness to raise interest rates when necessary, would have given sterling more than a very temporary boost. It might possibly have brought sterling's final agony forward to July.

What might we have done differently? (ii) tactics

Policy arguably fell between two stools in the summer of 1992. The authorities continued to talk (amongst themselves, as well as externally) as if anything other than maintaining the commitment to the ERM parity was unthinkable. At the same time the Chancellor (and perhaps some officials) had concluded that the effects on the domestic economy of the interest rate flexibility needed to sustain that commitment were also unthinkable.

Given the situation on the evening of 15 September 1992, probably the best thing that could have happened was for the UK to be forced out of the ERM on the following day. The counterfactual case of policy really giving priority to the ERM commitment - which would have included a one or two percentage point rise in interest rates during August - would have had very unpleasant consequences had it been successful, even if the August interest rate increase had been reversed soon after the French referendum. Interest rates would have come down only slowly with German rates; the UK economy would not have been decoupled from the continental European recession to the extent that it has been; what would have happened to the housing market does not bear thinking about; and the prospects of tackling the fiscal position would have been remote - indeed the pressure would have been for a still larger public deficit.

Black Wednesday did, however, have enormous costs as well as benefits. The most obvious cost is that the UK would have been significantly better off now if it had still had large net positive foreign exchange assets rather than liabilities when sterling depreciated. And there were other important costs as well: the Government's weakened authority, and the deterioration of national morale (which probably had a significant effect on demand in the economy in the last few months of 1992).

Could we have left the ERM while avoiding these costs, or at least keeping them to a minimum? Taking full benefit of hindsight - which includes the information that to get out of recession the UK economy needed interest rates that were not remotely likely to be available within the ERM until late 1993 at the earliest - we would not have gone into the ERM when we did; or once in the ERM, would have left it as soon as possible.

It is more interesting to ask what we might have done differently, even without the benefit of hindsight. Although there were people calling for the UK to leave the ERM throughout 1991 and the first half of 1992, given what most forecasts - not just the Treasury forecast - were saying about prospects for recovery, given the costs to the UK's position in the EC of a unilateral withdrawal from the ERM, and given the domestic political costs of the abandonment of such a central part of the Government's policy, it was reasonable for policy makers to concentrate on making as good a possible job of ERM membership, and to reject the alternative of leaving the ERM, at least until around the middle of 1992.

By July 1992 a more alarming interpretation of the situation was increasingly warranted:

- sterling's fall towards the lower reaches of its fluctuation bands could have been taken as a sign that the interest rate differential with Germany (set when sterling was benefiting from post-election euphoria) had been squeezed too far;

- the completely unexpected rise in the German discount rate in mid-July at the very least put back the date at which we could expect an easing of the external constraint on UK interest rates;

- the situation in the housing market was becoming more ominous (hence the work on housing market packages commissioned by the Chancellor at end July/beginning of August);

- it looked as though the Bundesbank was trying to force a realignment by disruptive leaks to the press.

Added to this by the end of the month was the threat of a negative vote in the French referendum. At some stage in late July/early August it would not have been unreasonable to reach the conclusion that:

- an interest rate increase was probably going to be required to keep sterling in the ERM (this was more or less implicit in the tone of some of the discussion at the monthly monetary meeting held in early August);

- the UK's chances of defending its ERM parity would be improved by making an early, preemptive rise in interest rates.

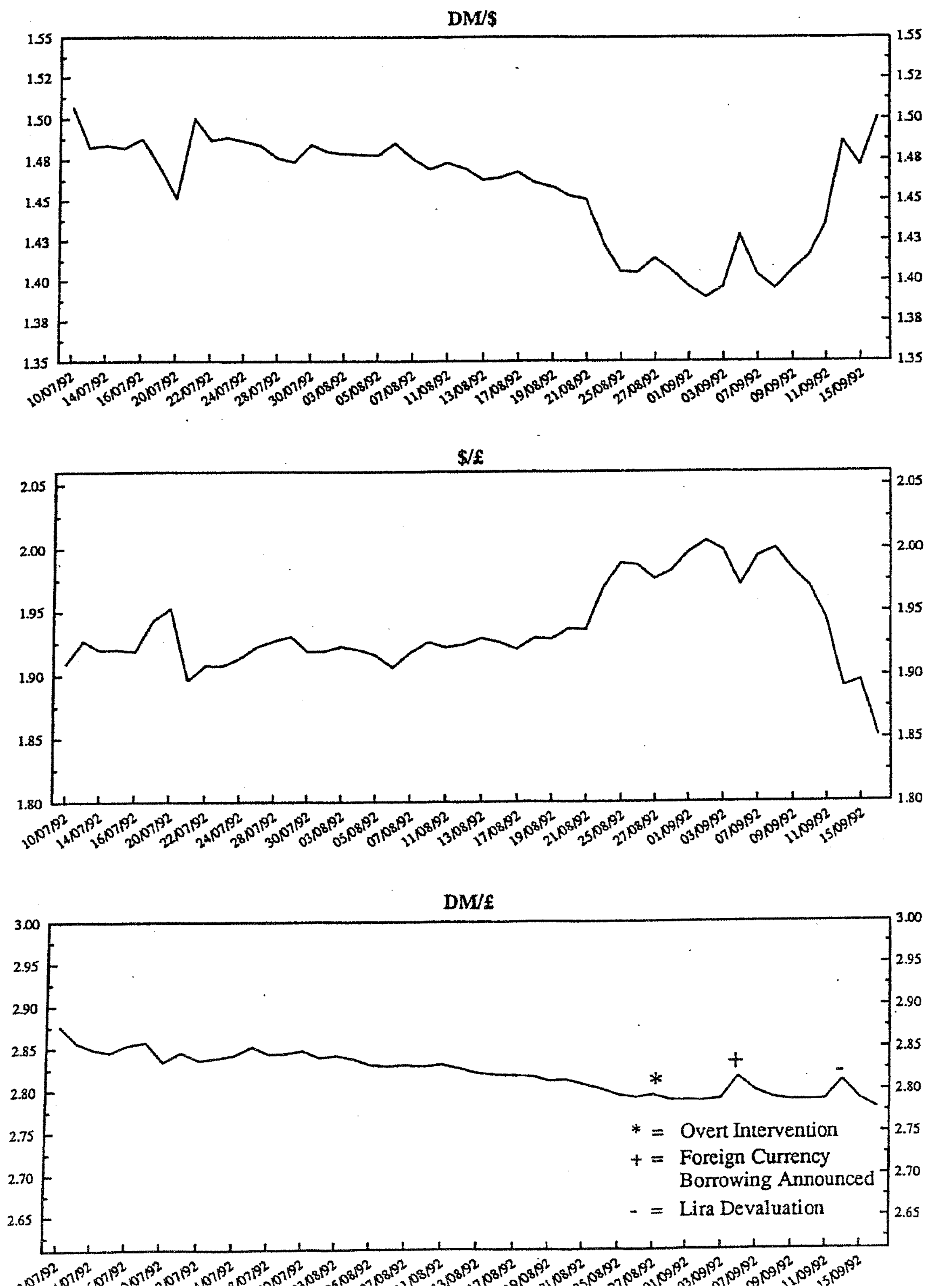
At this point Ministers might have been told that:

- if they continued to attach overriding importance to staying in the ERM, they ought to put up interest rates;

- if they were not willing to put up interest rates, the UK was quite likely to be forced out of the ERM, and the authorities should start preparing for that. The Bank should not be allowed to spend a large amount of money to support sterling; Ministers should not expose themselves further than was strictly necessary on the ERM commitment; and contingency planning should be undertaken for life outside the ERM.

One might have perhaps expected some message of this sort in the Bank's paper of 14 August. But it was not there. Instead there was what seemed at the time, and still seems, a very surprising emphasis on the difference that intervention and foreign currency borrowing could make. In the event overt intervention and the announcement of foreign currency borrowing just show up as little more than one day blips on the chart of the DM/£ exchange rate (see chart). Had the Bank advised in mid August the advisability of raising interest rates to protect sterling's position in the ERM, the Chancellor would almost certainly have rejected the advice. But having admitted to ourselves that were not willing to

Exchange Rates



put up interest rates to defend sterling, we would at least have had to acknowledge that we were set on a course which could well end with sterling being forced out of the ERM.

How much difference such a conclusion would have made to subsequent actions is open to dispute. The Bank might still have undertaken intra-marginal intervention on a substantial scale, as long as there seemed even a remote possibility of sterling surviving until 20 September. Perhaps the Prime Minister would not have exposed his position again quite in the way he did in his Scottish CBI speech. Just possibly, if we had got through to the evening of 15 September, we would have concluded that Schlesinger's *Handelsblatt* interview was the final nail in the coffin, and made no attempt to defend sterling on the following day.

Adjustment to foreign monetary policy shocks

When the UK entered the ERM we were uncertain about how tight a monetary policy the external constraint would impose on the UK. In the event UK interest rates fell faster than we had expected, but nothing like as fast as it turned out that they needed to fall.

Whether in EMU or in the ERM (as long as there are no realignments, and abstracting from the degree of flexibility afforded by the fluctuation bands) the economies of the individual member countries have to adjust to a monetary policy given from outside. In the ERM, as the Treasury has argued in the past, the possibility of realignments should tend to cause interest rates to vary across countries in a generally appropriate way (high inflation countries have high interest rates because they are more likely to be devalue); but the extent to which economies adjust to cope with a monetary policy imposed from outside the economy is still very important.

The UK has tended to stress the role of labour market flexibility in the adjustment process. If an inappropriately high interest rate is imposed from outside, causing a rise in unemployment, a fall in domestic prices and wages will help to reabsorb the unemployed through a rise in net exports. Ideally, the high interest rate would cause no additional unemployment - except for a transitional period; merely a switch of output and jobs from the non-tradeable to the tradeable sectors.

For this mechanism of adjustment to be important however requires not only labour market flexibility but also that trade should be reasonably sensitive to changes in competitiveness. Without this it is actually possible for wage and price flexibility to be destabilising for a while - because the more flexible that prices are, the larger the rise in real interest rates that an increase in nominal interest rates imposed from outside will cause. (The longer the view taken, the more likely is the stabilising

competitiveness effect to dominate, however, as the competitiveness effect cumulates over time.)

It is of interest to obtain some quantitative estimates of the speed of adjustment, which means using the Treasury or some other model. MP1 have carried out some simulations which suggest that the adjustment process is extremely slow; and that it is not much speeded up even by quite large increases in wage flexibility compared with what is normally assumed on the model.

The model simulations of a 1 percentage point increase in domestic interest rates required to keep to a given exchange rate parity show:

- using the normal model parameters, in the first year real GDP is 0.14 per cent lower; and the peak effect on GDP comes after 7 years, when it is 0.74 per cent lower; it is still 0.56 per cent lower after 10 years, at which time unit labour costs are 1.05 per cent lower.

- making wages *three times* more responsive to unemployment than is normally assumed on the model, and also increasing the responsiveness of unemployment to employment - so that the total effective of changes in employment on wages is increased by more than three times - the effect of a 1 percentage point interest rate increase on GDP still takes seven years to reach a peak, which is now a reduction of 0.66 per cent; the reduction in GDP after 10 years is 0.52 per cent.

- such stabilisation of output as occurs does not appear to come mainly from better competitiveness boosting output. A more important influence is that higher interest rates boost savings and hence wealth, and eventually the rise in wealth starts to support consumption.

ERM project paper

These simulations suggest that for adjustment in the ERM and EMU to be at all satisfactory will require much greater labour market flexibility and/or much higher trade price elasticities (and probably both) than currently feature in the Treasury model.