

# The ECB: Safe at Any Speed?

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Monitoring the European Central Bank 1

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October 1998

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David Begg  
Birkbeck College, London, and CEPR

Paul De Grauwe  
Katholieke Universiteit Leuven and CEPR

Francesco Giavazzi  
Università Bocconi, Milan, and CEPR

Harald Uhlig  
CentER, Tilburg University and CEPR

Charles Wyplosz  
Graduate Institute of International Studies, Geneva, and CEPR



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Centre for Economic Policy Research  
90-98 Goswell Road  
London EC1V 7RR  
UK

Tel: (44 171) 878 2900  
Fax: (44 171) 878 2999  
Email: [cepr@cepr.org](mailto:cepr@cepr.org)

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# MECB Statement of Purpose

Europe has a new central bank. It must develop its version of accountability and public debate over monetary policies. It is natural for CEPR, as a network of policy-oriented academic economists, to contribute to the establishment of a new tradition. The response is Monitoring the European Central Bank (MECB), an initiative that brings together a group of economists internationally known for their work on macroeconomics and monetary policy. MECB will monitor the European economy and the work of the ECB. Its analyses will be presented to the broader public, including the European Parliament and the media, in an annual report and in a subsequent commentary on the ECB's own annual report.

## MECB Steering Committee Members

David Begg, Birkbeck College, London, and CEPR

Paul De Grauwe, Katholieke Universiteit Leuven and CEPR

Pier Luigi Fabrizi, Monte dei Paschi di Siena S.p.A.

Francesco Giavazzi, Università Bocconi, Milan, and CEPR

Thomas Huertas, Citibank, N.A.

Richard Portes, London Business School and CEPR

Harald Uhlig, Center, Tilburg University and CEPR

Charles Wyplosz, Graduate Institute of International Studies, Geneva,  
and CEPR

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# Foreword

When the European Central Bank (ECB) takes on its policy responsibilities in January 1999, it will confront an unexplored territory and face a host of important, unresolved issues. The ECB will be a formidable institution in Europe and in the international financial system. We therefore believe it is essential to provide a regular, periodic examination of ECB policies, from an independent, pan-European perspective. The speed of events in the euro zone and in the global economy requires that this examination begin now.

CEPR's Monitoring the European Central Bank reports will be written by a group of distinguished economists known internationally for their work on macroeconomics and monetary policy. The reports will play a key role in establishing the accountability of the ECB and ensuring that its actions receive informed, detailed analysis and commentary.

We shall publish two Reports annually. The first will provide a detailed assessment of the actions of the ECB and alert the public to the main issues raised by the policies pursued by the Bank during the previous year. The second will offer a detailed commentary on the ECB's own annual report.

The 1998 report is the first in the new MECB series. In this report, the authors discuss how the ECB will operate in the current climate of global financial and economic instability. The international financial crisis enormously complicates the already difficult tasks facing the ECB. It is far from evident that procedures in place and proposed would be adequate to deal with serious financial disturbances, and there is concern that the ECB is not prepared to meet exceptional challenges which may face it very soon.

CEPR is very grateful to Citibank, N.A. and Monte dei Paschi di Siena S.p.A who have supported the work underlying this report. The views expressed in the report are those of the authors writing in their personal capacity; neither CEPR nor the funders take institutional positions regarding the contents of

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RICHARD PORTES  
7 October 1998

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# Executive Summary

- Integration of European markets has usually been accompanied by weak central institutions, reflecting national disagreements and political compromise. Despite the rhetoric, the ECB will be no exception. At present, it is both weak and unprepared.
- Its centre should be strengthened in relation to national central banks whose governors will otherwise retain too much power, inhibiting development of a truly European perspective.
- There is considerable latitude in the mandate to pursue price stability. Since monetary policy takes time to affect prices, the ECB cannot be instantly accountable for inflation. In consequence, the ECB has some discretion about how quickly to achieve inflation targets.
- This allows scope to pursue other policies that are temporary in nature. All central banks pay some attention to output fluctuations and financial stability. For credible central banks, this does not conflict with pursuit of price stability over a longer period.
- The ECB should announce its normal response to deviations of inflation and output from their target or trend paths, although specific circumstances will always entail an important element of discretion. Since policy takes time to work, this involves forecasting inflation and output. Such forecasts for Euroland should be made public. Money growth will be only one of many relevant indicators. It would also be helpful to discuss in advance how the ECB might react to some of the more obvious contingencies.
- Changes in interest rates should be accompanied by a public explanation of why rates have changed, including any

evolution in the forecasts of economic conditions. Votes cast by individual members of the Governing Council should be made public after a short time.

- The ECB will face two problems not encountered by the US Fed: labour markets are more rigid, potentially giving rise to more persistent recessions, and fiscal policy is in the hands of 11 uncoordinated authorities, giving rise to potential free riding by each fiscal authority. The ECB should strive to avoid hard landings, but cannot succeed if any monetary tightening becomes the excuse for fiscal expansion by individual member states.
- Since politicians care even more than the ECB about recession, labour market rigidities may actually enhance the ECB's threat to create recession if fiscal discipline breaks down. It may be possible to sustain some cooperation between fiscal and monetary authorities. The Euro11 committee would then play a key role coordinating fiscal policies among EMU members.
- There is no guarantee that the expensive TARGET payments system will actually be used for large-value transactions. Alternative private settlement systems will be vulnerable in a crisis and may force the ECB to act as lender-of-last-resort.
- More generally, financial regulation within EMU is at present unsafe. No secure mechanism exists for creating liquidity in a crisis, and there remain flaws in proposals for dealing with insolvency during a large banking collapse. Asymmetric national exposure to risky foreign loans may lead to conflicts about the appropriate response. In the longer run, centralization of regulation is essential.
- A global crisis would set off the deflation already evident in Japan. Although deflation is a symptom of deeper causes, such as failures in bank regulation, it is also damaging in its own right since it escalates the real burden of debt repayment. It is therefore important that the ECB pay as much attention to avoiding undershoots of its target inflation range as it pays to avoiding overshoots.

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## Not just unproven but unsafe?

German engineering is, deservedly, the envy of the world. Rare flaws in its design, such as the Mercedes A-Class rollover during a test drive, have therefore received undue attention. The A-Class problem was not insuperable, but it took time and money to put right, and was a PR disaster.

Since the design strategy for the European Central Bank (ECB) has sought to emphasize its similarities to the Bundesbank, it is natural to ask whether the euro is safe with German engineering. We shall argue that the ECB is not yet prepared to meet the early challenges to which it may be exposed.

Given the energy devoted for a decade to planning how EMU will work, it is amazing how much is yet to be resolved. Moreover, where decisions have been made, they have frequently been compromises that weaken the ECB from the outset.

### 1.1 Design flaws and decisions not yet taken

Five basic difficulties exist. First, much of the relationship between the ECB and the European System of Central Banks remains unclear. The presumption that national central banks will act simply as agents of the ECB is incompatible not merely with the belief that financial regulation in practice can be left to national authorities, but also with the remarkable power that governors of national central banks have already secured on the Governing Council of the ECB. While the Euro11's proven monetary leaders, Messrs Tietmeyer and Trichet et al., remain as governors of their national central banks but simultaneously control the ECB Council, national perspectives are likely to persist and lines of authority to remain ambiguous. In the procedure for corporate governance of monetary policy itself, the problem is not that decisions remain to be taken but that flaws are already designed in.

Second, the money policy strategy of the ECB remains (deliberately) ambiguous, which means that the transparency necessary for accountability will be difficult to accomplish. While both the letter of the treaties and the rhetoric of policy-makers proclaims a clear ordering of priorities – price stability above all, other economic objectives if and when scope remains – the simple fact is that no central bank, certainly not the Bundesbank or the Fed, has ever behaved in this way. Ambiguity is intended partly to conceal conflicts in objectives, partly to avoid scaring the markets and partly to protect central bankers. Whether any of these arguments make sense has received too little discussion.

Third, the ECB has yet to resolve the process by which monetary policy will be conducted. In particular, it has yet to choose whether to adopt money stock targets or inflation targets. The argument for each has been rehearsed many times, and the distinction between the two can be exaggerated. It is troubling, however, that the ECB has not yet been able to announce which targets it will adopt. Since different countries have different traditions, making a choice has political overtones and there may be faces to save.

Fourth, the appropriate monetary policy depends a great deal both on the corresponding fiscal policies in the Euro11 and on what monetary policies are elsewhere in the world. That the Euro11 will be a relatively closed economy has previously led to the assumption that global policy coordination would be the exception not the norm. As the global crisis deepens, design questions become more evident. Who will speak for the Euro11? Already, Messrs Tietmeyer, Trichet and Fazio have refused to relinquish their seats at the G-7 in favour of Mr Duisenberg.

Even within Euroland evident difficulties remain. Occasionally, a single central bank can make a deal with a single fiscal authority to trade a change in interest rates for a change in fiscal policy. When the ECB must deal with 11 fiscal authorities, can anything ever be done beyond maintaining communications via the exchanging of observers in the ECB Council and the Euro11 Committee?

Fifth, a central bank is much more than the embodiment of a monetary policy rule. Like any central bank, the ECB will necessarily have scope for discretionary actions, especially in a crisis, for provision of liquidity and for involvement in regulatory decisions about supervision of banks, including their possible closure.

It remains unclear that the ECB has a convincing answer to the questions of whether and how it will act as a lender-of-last-resort. In part, this again reflects differences in national tradition, but in part it also reflects ambiguity about subsidiarity. Can a banking crisis, say in Spain, be quarantined within Spain, or will it have systemic dimensions? In the latter case, what action by the ECB is appropriate?

The ECB currently believes that adequate procedures are in place both for financial regulation at national level and to safeguard the payments system of Euroland in the event of a crisis. We remain unconvinced on either count.

## 1.2 Why design problems have arisen

The difficulties identified above have developed despite the strenuous efforts of those involved in trying to get the ECB off the ground. The difficulties reflect the shortness of the interim period but, more fundamentally, continuing national disagreements about the design of institutions to support European integration.

Preparation time for the ECB was always going to be the minimum possible, curtailed because of the fragility of the interim period during which EMU members had been announced but conversion of their currencies to the euro had yet to take place. Even before the fact, there was apprehension about whether speculative attacks on these currencies might occur during 1998. With hindsight, it is remarkable that the so-called weaker currencies among the EMU 11 have survived the last few months with scarcely a tremor. This is surely vindication for the chosen conversion procedure to the euro that pre-announced bilateral conversion rates at the date entrants were decided.<sup>1</sup>

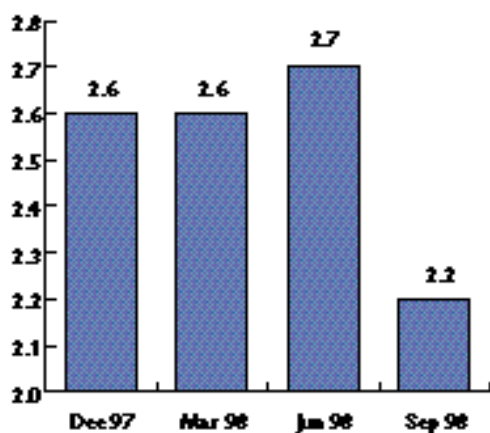
The shortness of the interim period makes it hard for the ECB to catch up but cannot explain why so little was prepared in advance, despite the work conducted by the European Monetary Institute during 1994–8. Although able to rehearse many arguments and undertake technical background studies, the EMI was hampered by two considerations, one economic the other political. The economic problem was that however much the EMI analysed the behaviour of economies prior to EMU none of us can be sure how private sector behaviour will change as a consequence of EMU itself. How thick a fog the ECB will face at the outset is one of the issues we discuss in Chapter 2.

More significantly, the EMI was unable to resolve most of the procedural issues about how the ECB will operate. Increasing integration of European markets has rarely been accompanied by the creation of strong central institutions taking a European perspective. Compromise and implicit national quotas for staff appointments or institutional location remains the way in which European nations rub along together.

In such a climate, still reflective of different national traditions and ideologies, many decisions about the design of the ECB were innately political. Actual decisions on operational procedures had to await not merely the knowledge of which countries would be participating in EMU but also the outcome of the negotiation that

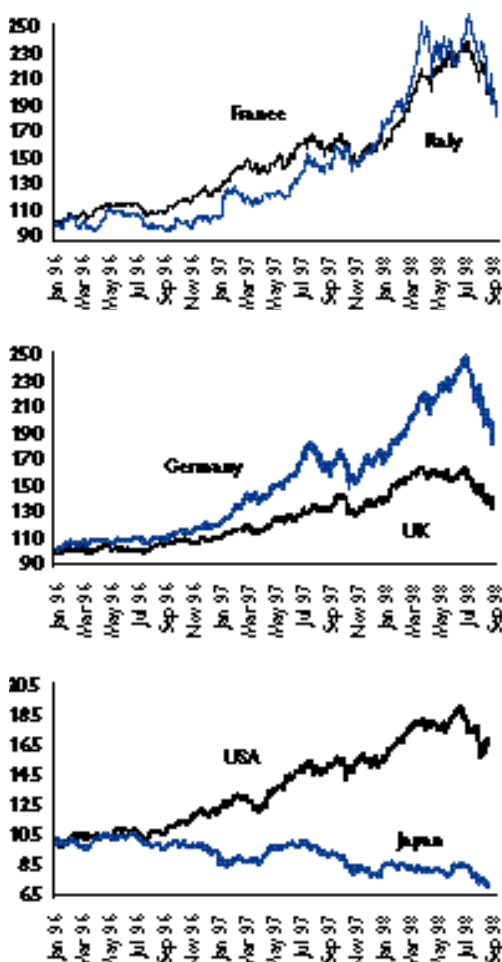
<sup>1</sup> Begg et al (1997) discuss possible conversion procedures and make the case for the strategy that was eventually adopted. See also De Grauwe and Spaventa (1997) who made similar recommendations.

Figure 1.1 1999 GDP growth in Euroland: forecasts have been reduced



Source: Morgan Stanley Dean Witter Research

Figure 1.2 Falling stock markets (Jan 1996 = 100)



Source: MSCI

then took place. Since bargaining power depended on which countries participated, this could not be accomplished in advance.

As a result, some very basic decisions remain to be made, and the necessary shortness of the interim period has been a more severe drawback than it would have been had more of the ground been prepared in advance. Similarly, the extent of the unfolding global crisis is increasingly depriving the ECB of the luxury of having a strategy of beginning with some decisions unresolved and fixing things as it goes. Suddenly, it is fighting a design war on all fronts.

### 1.3 Does it matter?

The preceding diagnosis gives rise to three dangers: a crisis may occur before the ECB is fully prepared; even once it is prepared, the power structure of the ECB may impede efficient decision making; and uncertainty and even deliberate obscurity may reduce transparency and accountability.

#### A crisis is now much more likely ...

During the last few years it has been assumed that the ECB would be launched against the backdrop of healthy GDP growth as EMU countries finally recovered from the twin shocks of German unification and the Maastricht squeeze on fiscal policy. In such circumstances, contingency planning for a world beset by crisis cannot have appeared the first priority. Yet forecasts of European growth rates are now being downgraded (Figure 1.1), stock markets have fallen sharply (Figure 1.2) and exposure of European banks to emerging markets is being increasingly acknowledged (Figure 1.3). The best way to meet a crisis is to have contingency plans already in place. Chapter 4 discusses the pressures to which the ECB will be subject and the design flaws in present arrangements.

#### The early Fed had the same flawed power structure ...

Attempts to build parallels between the ECB and the Bundesbank reflect not merely the desire to build on proven success but awareness that starting a central bank from scratch is no easy matter. The Euro11 is not Germany, however, and the ECB will not have the same constituents as the Bundesbank. Lessons from the early history of the Fed are important for those seeking to build a central bank with a new constituency. These lessons are disturbing (Box 1.1).

One lesson is that problems are created when the central Executive Committee is weak in relation to the chairmen of its constituent banks. Based in Frankfurt, the Executive Board and its staff, however excellent in quality, will remain small in scale and operational experience in relation to national central banks

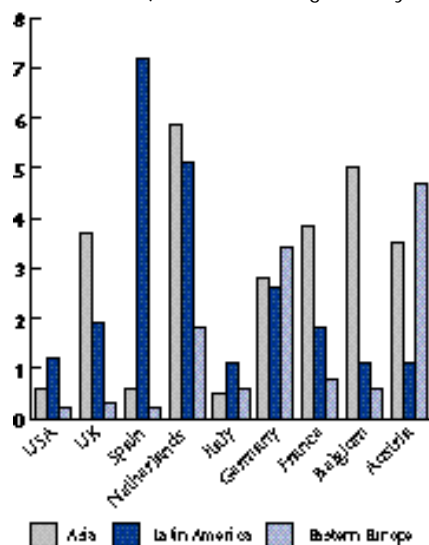


with their large research departments, daily operations in financial markets and close contact with domestic banking systems. On the ECB Governing Council, governors of national central banks will considerably outnumber the representatives of the Executive Board. The Governing Council will meet with such frequency, every two weeks, that a rerun of the early years of the Fed seems inevitable: initially, the Executive Board will execute but not initiate policy.

A weak centre and strong national interests contain three dangers: inertia in policy formulation, slow transition to a truly European mentality and conflict between constituent interests organized along national lines. How quickly the ECB achieves effective centralization may be one of the keys to its eventual success.

Can we get any idea how much it might matter that national interests are over-represented because the Council comprises 11 powerful governors of national central banks and only 6 members from the Executive Board presumed to take a pan-European perspective? Thus, a governor from a country where the economy is overheating is likely to support higher interest rates; a governor from a country hard hit by a banking crisis is likely to argue for a liquidity injection. Such conflicts may lead to unpredictable outcomes and reversals of policy; they may also prevent decisive action.

Figure 1.3 Bank exposure to emerging markets, 1997 (Share of lending country's GDP)



Source: BIS and IMF, 1997

### BOX 1.1 Lessons from the early Fed

'In the early years of the Fed, authority was much more decentralised and disputed. Decentralisation created problems not anticipated by the framers of the Federal Reserve Act... In response to these problems the institutional arrangements originally envisaged were subsequently reformed ... The first 22 years of the Fed were a trial and error process, leading ultimately to the effective centralisation of authority.... It is remarkable, given the extent of the decentralisation and of the confusion of the locus of authority, that the newly-created Fed succeeded at operating at all.... The executive committee was initially responsible only for executing, not initiating, policy.'

B. Eichengreen 'Designing a central bank for Europe: a cautionary tale from the early years of the Federal Reserve System', in M.B. Canzoneri et al (1992).

'Faust (1996) summarises the issue of divergent political interests controlled by the mixed influences getting together on the Federal Open Market Committee:

"The Fed was born in controversy. Farmers and small businessmen wanted a decentralised organisation under strong governmental control to counterbalance the power of eastern bankers. The financial community, on the other hand, feared that political control of the system would bring inflation."

Replacing 'eastern bankers' with 'the Bundesbank' makes the quote apply to control issues within the ECB.

Havrilevsky and Gildea (1996) show in detail that both board members and Reserve Bank presidents reflect their political roots in their voting, and that they are swayed by prevailing wind.... There are lessons for the ECB. The issue is not that governors or bank presidents take or solicit instructions from their patrons, but whether they are cloned and then sent on a mission. When an issue of difference arises, a French appointee would vote in the style of France, and a German, as predictably, in the way of the Bundesbank.'

R. Dornbusch, C. Favero, and F. Giavazzi (1998), 'Immediate challenges for the ECB', Economic Policy

One way to explore what might happen is to use historical comparison, as in Box 1.1. We can also use computer simulations. Imagine that the ECB had the more centralized voting structure of the modern US Fed, whose Board of Governors consists of 12 members, 5 of whom represent the regional banks and 7 the centre. Not only are regional representatives a minority on the Fed Board, they have less attachment to their regions than European central bank governors do to their countries.<sup>2</sup> There is considerable mobility of personnel between the US regional banks, a feature absent between European central banks. Hence, the governor of the Banque de France will defend French interests with greater perseverance than the President of the Federal Reserve Bank of Kansas will defend the interests of his region.

As long as shocks are symmetric, differences in the degree of centralization of the decision making process will not matter much. A consensus will be reached. When shocks are asymmetric, however, policy conflicts will arise.

How sensitive might the majority vote on interest rates be to national considerations if shocks are asymmetric? De Grauwe et al. (1998) simulate a model of Euroland, comparing interest rate outcomes under the decentralized power structure of the ECB and a centralized power structure similar to that of the modern Fed. Either way, it is assumed that the 11 national governors pursue national interests and that the 6 Executive Board members vote on the basis of Euro11 average data.

The authors show that for mild asymmetric shocks little conflict arises but, when asymmetric shocks are more severe, there are significant discrepancies between the outcomes of the two voting systems (Table 1.1). Unsurprisingly, the centralized 'Fed' system, which increases the voting power of those reflecting the EMU-wide average, smoothes more of the national idiosyncrasies of asymmetric national shocks, leading to less volatility in the common interest rate.<sup>3</sup> How interest rates are affected therefore depends on the prevalence of asymmetric national shocks.<sup>4</sup>

Of course, individual pursuit of national self interest greatly exaggerates what is likely to occur. Members of the Governing Council will be playing a repeated game. Even if individual votes remain secret from outsiders, a subject to which we turn shortly, Council Members will care about how they are perceived by other Members. This will moderate the above conclusion.

Furthermore, since central banks worry about the way markets

<sup>2</sup> See Dornbusch et al. (1998)

<sup>3</sup> von Hagen (1998) obtains similar results.

<sup>4</sup> There are essentially two schools of thought in this connection. One argues that in the future EMU these asymmetric shocks will become less important because integration will make the economic structures of the euro-countries more alike (see European Commission (1990)). Another school of thought argues that market integration will lead to further regional specialization, so that asymmetric shocks may actually increase (see Krugman (1993)). For empirical evidence see, for example, Frankel and Rose (1997).

Table 1.1 Voting structure and interest rate volatility (standard deviation of real interest rates)

Asymmetric shocks	Voting Structure	
	Fed Rule	ECB rule
Small	1.4	1.6
Large	1.4	2.4

Source: P. De Grauwe, et al. (1998)

interpret interest rate changes as signals of a fundamental reassessment of circumstances, it is quite possible that a decisive majority will be required for any change in stance. In that case, even if national interest does dominate on the Council, it is as likely to lead to blocking minorities and a bias against interest rate changes as it is to cause excessive changes in interest rates.

### Early clarity makes accountability more likely ...

Clarity of objectives, procedures and organization structure are likely to facilitate communication and accountability. These have two benefits: less unnecessary uncertainty for market participants and greater likelihood of political legitimacy. Although the formal independence of the ECB is enshrined by treaty, its effectiveness depends on the continuing acquiescence of European voters. Nothing is irreversible.

Chapter 2 describes some of the ways in which greater transparency can be accomplished. These include greater clarity about the objectives of the ECB, which cannot forever hide its multitude of responsibilities behind the fiction of price stability over everything. Econometricians will gradually discover and reveal the trade-offs in objectives that on average lie behind actual decisions; there is little to gain by seeking to keep these secret. More generally, the ECB will improve transparency and reduce uncertainty by discussing in advance how it might hypothetically react in particular situations.

Transparency of course can go too far. The central bank may wish to make use of monetary surprises on particular occasions, just as a good poker player understands instinctively that being too predictable can be used against one by other players.

Nor is the optimal degree of transparency independent of how successfully other difficulties have been resolved. When objectives and procedures have been clearly laid out, the main outstanding issue is the discretionary judgement of those responsible for policy. Recording their performance and holding them to account, as for example in publication of the minutes by both the Bank of England and the US Fed, then appears reasonable practice.

How can the ECB emulate these examples? One solution is to publish the minutes of its Board meetings. The strongest argument for publishing the minutes (including the voting record) is that it protects the members of the Governing Council from the pressure that inevitably will be exerted on them. When the voting record is kept secret the public will never know to whose pressure the Council members may have yielded. When the voting record is common knowledge it will be easy to detect such patterns of pressure. As a result, Council members will be much more reluctant to yield to such pressure. The publication of the minutes, therefore, makes the ECB both more independent and more accountable.

The risk is that voting patterns by Board members may be interpreted by national public opinions as reflecting national interest. In that case, what should be a dispassionate debate about policy options and economic conditions in Euroland could become controversy fuelled by nationalistic concerns. Hopefully, over time this risk will abate.

In the meantime, transparency represents the best defence against entrenchment of national interests. Chapter 2 presents our proposal: outline the systematic basis of interest rate decisions and communicate in advance how the ECB would react to plausible contingencies, if and when these arise.

#### 1.4 So what to do?

We have argued that EMU already contains some design faults and will also suffer both because design is incomplete and because that incompleteness is itself symptomatic of deeper disagreements.

What is identifiably wrong should ideally be fixed as soon as possible. Making the case for more centralized operating procedures for the ECB is a good idea. Ideally, existing treaties should be redrawn to alter the balance of voting power between national central banks and the ECB Executive Board. Eventually, the Executive Board should have six votes, national governors only five votes. This implies that different member countries would be grouped together for voting purposes.

It is unrealistic to expect such a change to happen quickly. It will be a pity if, as a consequence, the ECB is therefore condemned to repeat the mistakes of the early Federal Reserve. Some of these dangers can be mitigated by two steps on which practical progress can be made more quickly.

First, the resources of the ECB should be increased so that research and other support services can be properly funded to ensure healthy competition with national central banks.

Second, whilst it is understandable that existing central bank governors should not have transferred en masse to Frankfurt, it is undesirable to perpetuate a situation in which many of those perceived as Europe's leading central bankers continue to be based in national central banks.

Some of the problems identified in this chapter are not due to defective design but simply to decisions delayed or to contingencies not yet considered in full. In the remaining chapters, we examine whether progress can still be made before the ECB assumes its responsibilities in January 1999.

## 1.5 Preview

Chapter 2 discusses the conduct of ECB monetary policy, identifying decisions still to be made and the implications of each possible procedure currently under consideration. How well these function in practice will of course depend on the economic climate in which the ECB must operate. Chapter 3 examines the challenges that will remain even if economic growth within Europe stays on course during 1999 and beyond. Even in this favourable environment, much remains to be accomplished. Chapter 4 discusses the greater tests that will be faced if the global environment deteriorates significantly during the next twelve months.

The success of EMU and the legitimacy of the ECB will depend crucially on the ability of policy-makers to communicate to the public exactly why monetary policy decisions have been made. Our purpose in launching this report is neither to criticize particular decisions nor always to recommend a specific alternative. Rather, we hope to set out what options were available to policy-makers at the time at which a choice had to be made.

Sometimes the ECB will face a restricted set of choices, none of which is particularly desirable: neither monetary policy nor financial supervision can be assessed independently of other policies or the wider economic climate. By shedding light on the background against which policy decisions have to be made, we aim to increase the transparency of monetary policy and inform the public debate. Without such information, accountability is an empty slogan. Greater understanding remains the most reliable basis through which the ECB can build the reputation that it needs. In this we hope to play our own small part.

## Monetary policy in foggy conditions

### 2.1 Foggy days

As it assumes operational responsibilities, the European Central Bank may be shrouded in fog. Its measuring sticks do not yet have numbers clearly marked. The data that it will receive will be initially harder to interpret than usual. They will cover a new economic area. Linkages between monetary data (interest rates, exchange rates, monetary aggregates) and the evolution of the European economy (inflation, growth, unemployment) will be hard to predict. True, central banking is partly an art and the team in charge is seasoned. Still, it will have to rely on educated guesses and it would take a miracle to escape making any errors. This chapter evaluates how problematic this is likely to become and how best it can be confronted.

Additional fog surrounds the monetary policy strategy of the ECB. When preparing the task for the new central bank, the European Monetary Institute has left open the choice of which strategy it should adopt. This is in part the result of the weakness of the EMI, but it also reflects a clash of cultures. The Bundesbank has long tied its reputation to monetary targeting, the Banque de France has emphasized interest rate setting, while inflation targeting has made fresh recruits in many countries around the world, including the Banco de España. So far the ECB has not come out with a clear choice.

ECB watchers of all kinds – including national governments, trade unions and financial markets – will thus lack clear guideposts to interpret the bank's actions and statements. In the early period, the European Parliament will also find it difficult to exercise its constitutional duty of making the ECB accountable. What exactly will the Bank aim at? How will it react in various possible circumstances? ECB watchers will be reduced to making educated guesses, including mistaken ones. This chapter

examines how the ECB can help its many constituencies to watch itself, a task that is crucial for a proper and accountable conduct of monetary policy.

Starting anew is the inescapable, in many ways exhilarating, fate of the ECB. While the ECB embarks on its journey in foggy conditions, it enjoys a number of formidable advantages. It is highly independent. Its mandate is spelled out in the Maastricht Treaty. Carefully engineered on the Bundesbank blueprint, it will inherit a lot of credibility and market goodwill. Yet the ECB will not be the Bundesbank. It will have to prove its mettle. Foggy conditions will not help and the horn will have to be blown loud and clear.

Does all this mean stubborn adherence to the objective of price stability? Should the ECB deliberately seek confrontation with its constituencies to establish its reputation? As a result, will Europe face heightened uncertainty and increased danger of an actual crash? Our view is that central banks have better ways of winning respect than displaying stubbornness. Good central banks are considerably smarter (and more opportunistic) than they claim: the best way of being seen as rigorous is to adopt, and patiently explain, a strict logic when reacting to unforeseen events.

### 2.2 Debunking a myth

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There is considerable latitude in interpreting the mandate of price stability, essentially because monetary policy affects prices with a long lag. Thus a central bank has considerable discretion over the interval in which to achieve price stability. In the short run, this provides the opportunity to affect other variables that may respond more quickly to monetary policy.

Let us start by debunking a myth. Central banks care a lot about inflation, but whatever the rhetoric, none of them, not even the Bundesbank, has cared about price stability to the exclusion of all other goals. They have also cared about avoiding recessions and maintaining financial stability.

Much recent evidence has shown that, on average, central banks follow what is called a 'Taylor rule', named after Stanford economist John Taylor who proposed that interest rates be changed whenever either inflation or output depart from set targets (see Box 2.1 for a more precise presentation). Central banks would never admit that they blindly follow such a simplistic rule, and they are right. Not only would a mechanistic approach mean that there is no need for sophistication at the helm but, more importantly, it would imply that crucial information, not embodied in inflation or GDP figures, would be overlooked.

## BOX 2.1 The Taylor rule

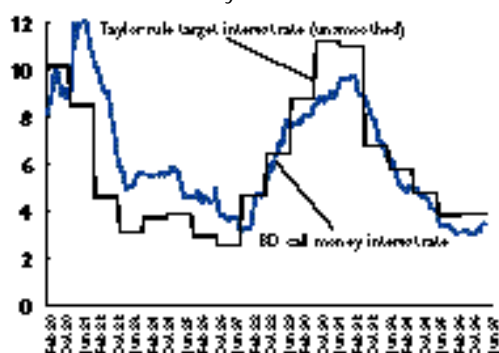
What central banks actually control is short-term interest rates. An increase in inflation should lead them to raise the interest rate. If they also care about avoiding recessions, John Taylor (1993) proposed that they adopt the following simple rule. They should first calculate the gap between current inflation and the inflation rate they would like to achieve. Similarly, they should calculate the gap between current output and potential, or full capacity, output. Output below potential would induce the central bank to choose a lower interest rate; inflation above target would signal the need to raise it. How much should the central bank react to each indicator? Taylor's prescription is for the central bank to assign weights which reflect the central bank's concern for each of the two, inflation and output gaps. Formally:

$$r_t = r^* + \alpha (\pi_t - \pi^*) + \beta (y_t - y^*)$$

where  $\pi_t$  is actual inflation,  $\pi^*$  is the inflation that the central bank would like to achieve,  $y_t$  is current output, and  $y^*$  is potential output.  $\alpha$  is the weight ascribed to the inflation gap,  $\beta$  the weight for the output gap. In this rule, the central bank also chooses a baseline nominal interest rate  $r^*$  that corresponds to normal conditions (zero inflation and output gaps) from which it departs when the situation so requires.

One problem with this rule might be that it is backward looking: current inflation is whatever it is, and there is very little the central bank can do to change it. Future inflation, on the other hand, can be influenced: typical estimates of the lag between monetary policy actions and the maximum effect on inflation are around two years. This suggests that central banks should use a forward looking rule: instead of the current inflation and output, they should consider forecasts of future inflation and output deviations from their desired levels.

Figure 2.1 A simple Taylor rule for Germany



Clarida, Gali and Gertler (1998) have looked at the historical behaviour of a number of central banks including European ones, and found that, *ex post*, interest rates conform surprisingly well to the Taylor rule. If central banks only cared about keeping inflation low, or close to their target, the weight assigned to the output gap in the estimated Taylor rule should be zero. It is never so, not even for the Bundesbank. In Figure 2.1 we show the actual value of German call money rate and the fitted value from a Taylor rule estimated on annual data. The German output and inflation gaps jointly explain 83% of the movements of short term German rates in this period, surprisingly good considering that the equation does not include an autocorrelation term. The implied weights are 1.07 on the inflation gap and 0.34 on the output gap. This evidence conforms with other results (see, for example, Peersman and Smets, 1998, Gerlach and Schnabel, 1998), which all point to the same conclusion: the story that central banks only care about achieving low inflation is just a myth, and a highly misleading one.

Should we be surprised? Certainly not, for several reasons. First, no central bank can afford to turn a blind eye to growth and unemployment. Citizens rightly expect more from a policy-maker than just price stability. In fact, when a finance minister urges his central bank to cut interest rates in order to stimulate the economy in the face of a global recession, and when the central banker instead warns about the inflationary consequences, this is just a difference in degree, not in fundamental opinions. Central bankers focus more on price stability than the average politician,



and they should, but this does not mean that they completely disregard recessions. All this is well understood by those close to policy making.

If the ECB ends up behaving like other responsible central banks, economists will uncover from the data its average behaviour, just as they have done for the Bundesbank and the Fed. In the long run nothing is gained by seeking to hide its normal behaviour. Indeed, for a central bank without a track record, there is much to gain by making this known as quickly as possible. This refers only to normal or average behaviour, however, precisely what the market uses in setting wage contracts and pricing long term assets. This is all quite compatible with the exercise of discretion in the short run to reflect specific and temporary circumstances. The art of central banking rests precisely on the judicious exercise of short term discretion without undermining confidence in long run stability.

ECB Council Members, already battle-hardened, were deliberately appointed as 'tough' central bankers: they are aware of the increasing consensus among academic and practising economists that, eventually, a sustained easing of monetary policy produces no additional growth, only the headache of extra inflation. The moment they forget, the bond market is there to remind them.

There are three more important reasons why the ECB should adopt and announce a rule that governs its normal behaviour. First, like any well run corporation, internal decision making should be informed by a systematic management information system, if only to suggest a point of departure for the Council's discussion.

Second, rules are an important communication device. In foggy days, it will be crucially important that the ECB provides clear explanations to the public of what is being done and why. In this regard, accountability and credibility go hand in hand. A good central bank is a predictable central bank. For many reasons, the public and the markets need to understand what the ECB is doing now and what it will be doing in the future. Just as important, people need to know when exceptional behaviour is genuinely exceptional. A rule is merely a system for classifying actions as normal or exceptional.

Third, a rule acts as a commitment device in the strategic interaction of ECB with fiscal authorities, not to mention wage setters, in the Euro11, a subject to which we return in Chapter 3.

### 2.3 Unconvincing reasons for refusing to announce a rule

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The ECB seems reluctant to announce a policy rule for interest rates. Could it be correct? Three main reasons have been advanced to justify this reluctance. We find them unconvincing.

### Creative ambiguity

Many central banks are known for their taste for secrecy as well as Delphic statements that are masterpieces of ambiguity. Is there any good reason for such devious behaviour by a public institution? One answer, given by Cukierman and Meltzer (1986), is that a completely predictable monetary policy has little or no effect on the economy. While rules and a high degree of predictability are best on average, there are many circumstances where the central bank needs to act in a discretionary way. Because it never knows whether currently unforeseen circumstances will soon make surprises desirable, a central bank needs to always retain a zone of ambiguity and some room for manoeuvre.

Rules that apply to average or normal behaviour, however, do not preclude a discretionary response on particular occasions. A desire for creative ambiguity may have a more worrying rationale, namely to conceal unresolved differences of opinion within the ECB. If differences of opinion relate to how Euroland's economy actually operates, full transparency may resolve differences more quickly. If, however, the desire for creative ambiguity is to conceal differing views about trade-offs in objectives pursued by the ECB, Council Members may be reluctant to face full disclosure. In that case, of course, accountability will be considerably impaired. The better approach is for the Council to work out its differences and divulge the resulting agreement, even if it is subject to subsequent evolution. The fact that there is some 'bad' ambiguity is a fact of life and papering over it will greatly reduce the quality of the signal emitted by the bank.

### Structural uncertainty and signal extraction

January 1999 constitutes a break in history. We know from the famous 'Lucas critique' (Lucas, 1976) that private behaviour changes when the policy environment changes. Knowledge of past policy and past private behaviour may no longer be relevant to distil the economic regularities used to base predictions of how people will respond to a new policy framework. Since interest rate decisions will reflect both the underlying objectives of the central bank and its judgement about the effect of interest rates changes on the variables it is trying ultimately to affect, the ECB may conclude that structural uncertainty provides an overwhelming argument against any early pre-announcement of a formal rule. This would be the wrong conclusion.

Private sector actions depend on beliefs about how the ECB will behave and on assessment of the consequences of ECB monetary decisions. Extracting information 'signals' will be harder for a while in the new environment. It would be a mistake to leave the financial markets guessing about whether a particular policy stance reflects a deliberate action by the ECB, a

perception of how Euroland works, or a distortion in the lens of ECB communication.

The sooner the ECB and the private sector converge on a view about how the EMU economy is working, the fewer the inconsistencies and the unpleasant surprises that are likely then to emerge. Research departments of major private institutions will be competing with research departments of the ECB, national central banks and indeed national treasuries, in the attempt to understand how Euroland works. The private sector will not be slow to advertise its findings. The ECB and national central banks should be no less open. The ECB has no choice but to make its best guesses known and react to the flow of new information about the evolving economic structure

### Complexity and simple rules

'The world is too complicated for simple rules. Trust us.' This sums up the widespread resistance of central bankers to announcing and sticking to some simple monetary policy rule. On the contrary, announcing a rule for behaviour in normal times and explaining when and why policy deviates from that rule creates a healthy discipline for both the ECB and the formation of expectations by the private sector.

#### 2.4 The making of monetary policy: which rule?

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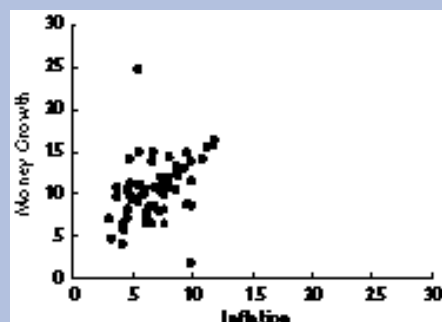
We have argued that the ECB should announce a rule. What rule should it choose? Faced with the choice of a monetary policy rule, central bankers appear divided along two lines. Money growth targets are popular in Frankfurt, in part because they were the official Bundesbank rule. Inflation targets have a more recent history. They have been first emphasized in New Zealand, when a new monetary constitution was adopted, and later in the United Kingdom, Canada, Spain and Sweden. The arguments made in the two camps are summarised in Box 2.2.

We find the inflation target more convincing.<sup>1</sup> Like many other indicators, monetary aggregates should be carefully monitored because they will be helpful in identifying inflationary pressures. But it is misguided to focus solely on money stock growth rates, hoping for a close relationship with future inflation during the policy regime change in the early days of EMU.

<sup>1</sup> Inflation targeting has recently received a lot of attention from academics, resulting in a number of excellent pieces of research sufficient for an informed and deep debate, see, for example, the book length contribution by Bernanke et al. (1999) as well as the contributions by Bernanke and Mishkin (1997), Bernanke and Woodford (1997), Goodfriend and King (1997), Leiderman and Svensson (1995), Rudebusch and Svensson (1998), Svensson (1996, 1997, 1998) and Woodford (1994).

## BOX 2.2 Targets for money growth or inflation rates?

Figure B.2.1 Money growth and inflation (Annual average 1980–90. Data refer to 61 countries with inflation rate below 12%)



Source: R. Barro (1996)

Table B.2.1 Violations of the Bundesbank's monetary target

	Target of M3	Actual M3 Growth	Target achieved	
			yes	no
1979	6–9	6.3	✓	
1980	5–8	4.9		x
1981	4–7	3.5		x
1982	4–7	6.0		x
1983	4–7	7.0	✓	
1984	4–6	4.6	✓	
1985	3–5	4.5	✓	
1986	3.5–4.5	7.7		x
1987	3–6	8.1		x
1988	3–6	6.7		x
1989	about 5	4.7	✓	
1990	4–6	5.6	✓	
1991	3–5	5.2		x
1992	3.5–5.5	9.4		x
1993	4.5–6.5	7.4		x
1994	4–6	5.7	✓	
1995	4–6	2.1		x
1996	4–7	8.1		x
1997	3.5–6.5	4.7	✓	

Source: Deutsche Bundesbank Annual Reports

Those who argue in favour of money growth rate targets argue that:

- they are more easily observable and controllable by the central bank than inflation. It makes more sense to target something that can be controlled rather than something that cannot be controlled;
- inflation reacts with a long lag of up to two years to monetary policy choices, whereas monetary aggregates react more quickly and decisively. Thus, successful monetary policy and deviations from the stated policy are more easily observed by financial markets. This makes the central bank more accountable;
- while money demand at the national level may have appeared to be empirically rather unreliable, it is a lot more stable at the European scale, see e.g. Browne et al. (1997) and Spencer (1997). The reason could be that there is a lot of substitutability among European assets. For example: French bonds are good substitutes for German bonds: aggregating them together makes more sense than looking at each in isolation;

On the other hand, advocates of inflation targets instead point out that:

- since money demand can change, the link between money growth and inflation is not that close, as is evident from Figure B.2.1.<sup>1</sup> Since monetary targets are just a means to an end, it is better to focus on the end right away. Monetary growth rates should be used among a number of other variables in order to assess inflationary pressures. While inflation reacts with a lag, inflation forecasts are available right away. In addition to forecasts internal to the ECB or by professional agencies, one can use long term interest rates as indicators of long term inflation expectations;
- the Bundesbank has repeatedly missed its monetary growth rate target range, as is clear from Table B.2.1. Its success must therefore be due to something else, presumably its proven success in keeping inflation low. Is the Bundesbank really an inflation targeter? Bernanke and Mihov (1997) claim it is;
- the stability of money demand at the European level may be a mirage created by the law of large numbers. Arnold and de Vries (1997) argue that calculating European-wide aggregates washes out country-specific idiosyncrasies. With monetary policy set for Euroland as a whole, these idiosyncrasies will no longer be country-specific and money demand will cease to be a stable and reliable target because the stability of money demand has not yet passed the test of the Lucas critique. In fact, some observers worry that the introduction of euro notes and coins will change people's behaviour;
- inflation targets are easier to explain to the public than monetary growth rate targets.

<sup>1</sup> A more detailed discussion can be found in Teles and Uhlig (1996).

## Should the central bank target the price level or the annual inflation rate?

Svensson (1996) identifies the advantages of each strategy. Using a series of annual inflation targets, any errors in any year are built into subsequent price levels, making the long-run price increasingly uncertain. In contrast, targeting a path for the price level implies that any errors one year have to be reversed in subsequent years, making the price level more predictable in the long run. For long-term fixed-rate loan contracts, what matters for assessing the real value of the repayment burden at the end of the contract is the average inflation rate during the length of the contract. Thus, price level targeting makes such contracts safer, injecting security into financial markets. Thus, a price level rule eliminates inflation bias, reduces long-term price variability and may even reduce inflation variability.

Moreover, as suggested by Bernanke and Mishkin (1992), by focussing on the price level at the end of a long period, the central bank is given the flexibility to react to present economic circumstances, when needed, and undo its 'sins' later. In fact, there is evidence that the more successful central banks have followed such a 'mean-reverting' strategy.

Despite these advantages of price level targeting, an even better case can be made for preferring inflation rate targeting. Under price level targeting, any overshooting of the target in one year requires undershooting in the next, and thus possibly the creation of deflation. Compare a target annual inflation of 1% with a target path for the price level builds in annual price increases of 1% from the base date. What happens if inflation overshoots to 4% in the first year? Under an inflation target, the past is gone, and the only objective from now on is to maintain annual inflation at 1%. Under a price level target, it is necessary in year 2 to aim for inflation of -2% to get back on track for a price level that has increased by only 2% in the two years since the base date.

Thus, inflation targets forgive past mistakes, building them permanently into future price levels. Price level targets force past mistakes to be corrected, even if this entails deflation. But deflation may wreak havoc on the financial sector and the whole economy. Central banks will be wary of causing deliberate deflation simply to offset inflation whose costs have already been borne. More generally, this suggests that there may be difficulties in committing to a policy of inflicting future pain to offset past mistakes whose consequences may already have been largely absorbed by the private sector.

While the debate is useful, the distinction should not be overdone. It is not black and white, but a menu from which to choose. Over a long enough period, the two become equivalent: there is little difference between aiming for a price level for 2003 and for the average inflation rate during 1999–2003. But aiming

only for the annual inflation rate at the end of 2003 is very different: it implies no attempt will be made to claw back any overshoot or undershoot of inflation during 1999–2002. Targeting either the eventual price level or the average inflation rate over some long period would in contrast require the central bank not merely to be in control by the end, but to put right any deviation that occurred in the mean time by deliberately causing undershoots to offset previous overshoots, and vice versa. This is feasible provided the planning horizon is longer than the period it takes for a change in monetary policy to affect prices. In any case, adopting a long horizon is necessary to recognize a fact of life.

A good compromise, therefore, is to target a gliding multi-year average inflation rate. Such an approach provides short-run flexibility while avoiding a faulty history cumulating at the end of the target period.

## 2.5 Self-fulfilling prophecies?

Suppose the ECB tries to achieve an annual inflation rate of 1% in two years time. To achieve this, it examines available forecasts of future inflation, including those derived from examining long bond rates. The more inflation the leading indicator signals, the tighter should be monetary policy. Professional forecasters will forecast inflation of 1% and all leading indicators will be consistent with this. No leading indicator will convey any information about whether, in the absence of policy, the inflation rate would have overshoot or undershot; everyone is confident the ECB will fix things. So confident that the ECB is deprived of any useful indicators of actual conditions!

This puzzle was noted in Woodford (1994) and has been discussed by Bernanke and Woodford (1997). There are two easy answers, but both are disconcerting. First, surely the monetary authority will not be exactly on target? If it is only 90% successful, the remaining 10% of inflationary pressure can still be reflected in professional forecasts, which can thus serve as a guide to the policy required. Why is this disturbing? Because the 90% action is based on the 10% signal in the available forecasts, so small errors in these forecasts lead to wild swings in monetary policy actions.

A second answer is that the ECB should look not only at inflation forecasts but also at forecasts of, say, nominal interest rates. Set these at the forecast level, then, if the forecast is consistent, this should result in the target inflation rate, without any contradiction. This leaves a disconcerting afterthought: it is dangerous to leave the job of figuring out the appropriate course of monetary policy to professional forecasters. This is the prime task of the central bank itself. With a clear, unambiguous,

accountable central bank, both should coincide. But that doesn't make central bank analysis superfluous: the opposite instead is true.

Inflation forecasts produced by the staff of the ECB run into the same logical problems. They can only be circumvented by a more explicit modelling of the underlying channels of the monetary transmission mechanism itself, as in Goodfriend and King (1997), or Rudebusch and Svensson (1998); indeed, their analysis needs further extension to include forward-looking elements that allow full resolution of the paradox.

We can do no better than repeat the conclusion of Bernanke and Woodford (1997):

central banks should be careful not to tie monetary policy too closely to any variable that is too sensitive to the expectations of the public. To avoid misunderstanding, we should emphasise that our results have little to say about the desirability or feasibility of inflation targeting per se, as opposed to inflation-forecast targeting; indeed, this policy strategy has many attractive aspects. Our claim is only that, for successful implementation of inflation targeting, there appears to be no substitute for explicit structural modelling of the economy and extensive information gathering by the central bank.

We should add only that the central bank should also work hard at communicating the elements of its strategy to the public. When self-fulfilling prophecies are possible, good communication is no longer a luxury, it becomes essential for stability.

### 2.6 What the ECB should do

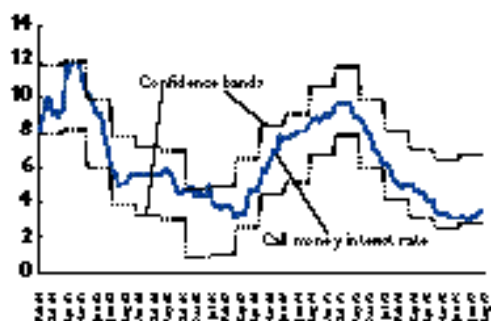
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Transparency will not merely aid markets and accountability, ultimately it is likely to improve the quality of decision making within the ECB as well. We have already suggested that the ECB should base interest rate decisions on a procedure that distinguishes normal behaviour and reaction to special circumstances. The rule is a characterization of normal behaviour. It does not preclude the exercise of discretion. It does provide, however, a benchmark against which to check that discretion has no hidden systematic components.

What should the rule look like? Since one purpose of the rule is to facilitate communication, it should be simple. Interest rates should reflect deviations of inflation and output from their target ranges. Since monetary policy takes time to work, it is forecast levels of these gaps that should influence policy.

The ECB should announce its forecast for Euro11 inflation and output, and thus the expected deviations of these variables from target. Based on these forecasts, it should explain what its normal rule would then imply for interest rates and whether or not the ECB considers that any deviation from this normal reaction is required.

Figure 2.2 Taylor rule for the Bundesbank: the scope for discretion



### How much discretion might it be reasonable to expect the ECB to exercise?

Clearly, once its reputation has been established its room for manoeuvre is greater. Figure 2.2 illustrates how the Bundesbank has behaved historically.

We estimated a Taylor rule for actual data, and show the upper and lower bounds for a 90% confidence interval around the rule estimated from the data; the figure also shows the path of actual interest rates. The figure illustrates that a credible central bank can and does exercise quite a lot of discretion: German interest rates did not relentlessly stick to the middle of the band, reflecting the fact that the Bundesbank was often reacting to special economic disturbances. In a similar way the ECB should find a balance between rule and discretion.

In this chapter, we have discussed the issues facing the ECB in formulating a procedure for the conduct of monetary policy. Our central conclusion is that there is no serious conflict between transparency and effectiveness, nor therefore between responsibility and accountability.

Since policy actions to achieve price stability take time to work, there is scope for pursuit of other objectives in the meantime, provided that these are essentially temporary in nature. It is unhelpful to pretend otherwise.

The same delay in the effectiveness of monetary policy makes it necessary to forecast inflation and other economic conditions. Monetary growth is merely one such indicator, and insufficiently reliable to accord it supreme importance. In practice, there is little alternative to inflation targeting, however this is portrayed and communicated.

Central bank behaviour can logically be divided into the part that is systematic and predictable and the part that responds to unforeseen contingencies. Simple rules cannot describe the richness of the real world, and complex rules lose their appeal as a focus of expectations or a standard of monitoring. Important elements of discretion necessarily remain. Nevertheless, it is helpful to describe the basis of decision making, both before and after the fact. In this chapter, we have set out an operational proposal on how this could be accomplished.



# 3

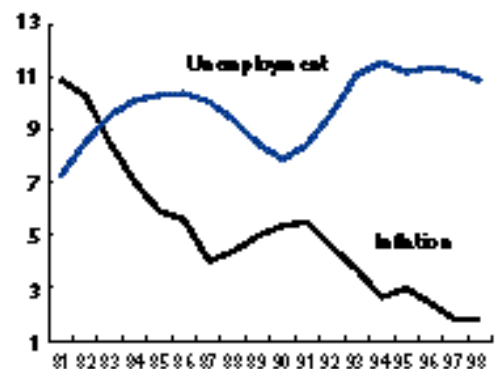
## Even sunny days ahead leave the ECB some tricky decisions

Until the early summer of 1998, the launch of EMU in 1999 was expected to take place in highly auspicious conditions: low and stable inflation and declining unemployment. As Figure 3.1a shows, it is only recently that Europe has been in such a comfortable position, in contrast to the United States which has seen both inflation and unemployment in decline for most of the last two decades. Chapter 4 explores how the spread of a global financial crisis to Europe might change that situation dramatically. Optimists might argue that these financial clouds will clear quickly and that Euroland will remain largely unaffected. This chapter explores the consequences of this optimistic view.

Even then, there will be problems along the early path that the ECB must tread. We identify two big problems and a number of smaller ones. The two big problems are the inflexibility of European labour markets and a potential coordination failure by the 11 national fiscal authorities in Euroland: we shall discuss them first. Both have important consequences for ECB monetary policy and both are key differences between the United States and Euroland. These two problems also turn out to present a golden opportunity for the ECB: because politicians care more than the ECB about unemployment, the ECB can use the inflexibility of labour markets as leverage to enforce fiscal discipline.

The smaller problems are the end-of-1998 interest rate, asymmetric conditions in Euroland and how to respond to mild changes in economic conditions. This will be the bread-and-butter substance of the monetary policy discussions in the years to come: less exciting, perhaps, than the two big problems above or the issues of financial collapse considered in Chapter 4, but nonetheless relevant. We need to discuss them too.

Figure 3.1a Inflation and unemployment in Europe



Source: European Economy

### 3.1 Hysteresis in labour markets

The Maastricht Treaty absolves the ECB from a more than fleeting responsibility for combating unemployment. The reasoning behind this view is that money is neutral in the long run. Once the long run comes, money neutrality implies that any permanent monetary expansion no longer has output or employment effects; it only affects prices.

How long one has to wait for the long run remains a controversial issue. In the shorter run, the impact on output and unemployment may be sizeable. Moreover, and important for our discussion, the increase in unemployment due to a monetary contraction may be more sustained in Europe than in the United States. The short run in Europe lasts longer than in the United States.

Figure 3.1b shows the evolution of unemployment in the United States. While increases are not reversed quickly, they have a tendency to reverse themselves over a few years. The evolution of European unemployment has been quite different. Figure 3.2 reminds us of its step-like behaviour over the last two decades. Each step is associated with an important shock: oil price increases in the 1970s and early 1980s, and tight monetary policies in the early 1990s following German unification. It is worth stressing that most of the increase in the European unemployment during the 1990s occurred in just two years, 1992–3.

What is striking is that each shock seems to have had irreversible effects on unemployment. Since 1992–3, when real interest rates reached a peak, little reduction in unemployment has been achieved. The contrast between the two figures suggests that European unemployment, unlike that in the United States, may be subject to hysteresis:<sup>1</sup> temporary recessions have permanent effects.

There are a number of reasons, specific to Europe, which can explain the hysteresis phenomenon. These explanations typically emphasize the fact that labour negotiations are conducted on the behalf of the currently employed workers, the insiders. Outsiders do not have a voice through which to argue for the wage moderation that could make it possible for them to compete for jobs. Outsiders may not even wish to compete hard if they benefit from relatively generous welfare protection.

Hysteresis is unlikely to be symmetric: just as it is easier to fall down a cliff than to climb up it, the destruction of physical and human capital, and indeed of confidence, is not easily reversed. This helps to explain why the recent recovery of output has yet to lead to any sizeable reduction in unemployment within the EU 11.

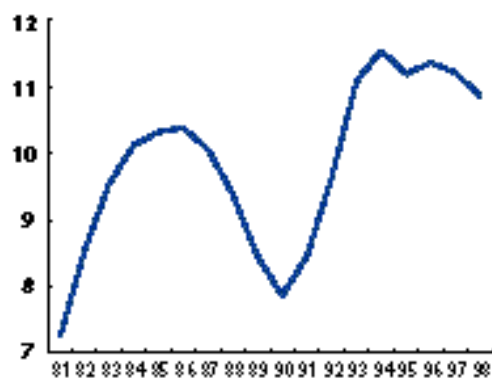
<sup>1</sup> For an introduction to hysteresis, see Blanchard and Summers (1986), Lindbeck and Snower (1988).

Figure 3.1b Inflation and unemployment in the United States



Source: European Economy

Figure 3.2 European unemployment rates



Source: European Economy

To avoid falling off a cliff, one should stand well back from the edge and be quick to reverse any lurches towards it. So, while the ECB should concentrate on its fight against inflation, it needs to be more prudent than the Fed in the United States when tightening up monetary policy in order to avoid a hard landing with seriously rising unemployment. Achieving soft landings is more important for the ECB, because the Euroland shock absorbers are too rigid and a likely source of hysteresis.

### 3.2 Centralized monetary policy and decentralized fiscal policy

All other central banks deal with only one fiscal authority. In the United States, for example, individual state budgets are small in relation to the federal budget. In Europe, the opposite is true. The 'federal' budget of the European Commission is negligible. The ECB will have to think about 11 independent fiscal authorities.

This matters. Larger fiscal deficits put upward pressure on interest rates and exchange rates. Larger fiscal spending or lower taxes often mean larger total demands for goods and services, putting upwards pressure on prices. The ECB needs to worry about this. Conversely, decisions by the ECB to pursue lower interest rates eases the debt burden on the fiscal authorities. It is no wonder that the finance ministers in Europe like to see lower rather than higher interest rates. But if lower interest rates are not used as an opportunity for fiscal consolidation, higher inflation will eventually result.

If the first years of Euroland are years of strong output growth, the best policy mix will entail firm stances by both fiscal and monetary authorities. This calls for a coordinated response to get the mix right, but nobody likes to spoil a party. This is now visible in the United Kingdom, currently enjoying its sixth year of sustained growth, declining unemployment and low inflation. Even though the UK Treasury has tightened its fiscal stance, it may have done so insufficiently in the face of strong domestic demand, fuelled among other things by windfalls to households as building societies paid out accumulated surpluses during their change of status to commercial banks. This left the Bank of England forced to play 'bad cop', raising interest rates and inducing a substantial exchange rate appreciation that now has UK exports in rapid decline.

In Euroland, these problems will be amplified by an additional complexity. Each of the 11 fiscal authorities has an incentive to free ride on the others. Individual fiscal authorities will hope that European restraint is achieved by fiscal tightening by other EMU member states. In such circumstances, the ECB will not merely have to ensure that interest rates rise as necessary, but it will also have to lobby intensively for greater fiscal restraint,

allowing the burden of tightening to be spread more evenly between monetary and fiscal policy. Indeed, in public and in private, Mr Duisenberg and his colleagues have already begun such a campaign.

This game between the ECB and the national fiscal authorities may result in either of two outcomes: a bad one or a good one. In the bad outcome, the fiscal authorities will be unrestrained and cater to their national constituencies with little concern for the situation in Euroland. Those pointing to the penalties in the Stability and Growth Pact will bark, but not bite. A liberal interpretation of the escape clauses leads fiscal authorities back into the days of unrestrained borrowing. As a result, the burden for restraint is pushed upon the ECB, which then sees itself pushed into moving interest rates up and monetary policy tighter. In turn, the fiscal authorities can point to the tighter monetary policy and the resulting recessionary pressure as the reason for their looser fiscal policy stance.

For the good outcome to be reached, however, the fiscal authorities must abide by the spirit of the Stability Pact, not just the letter: they must aim at improving state finances while the economy is in upswing. Table 3.1 shows that much remains to be done. If state finances were to improve, the ECB would then need to be less eager to exercise restraint and tighten monetary policy. By and large, its response to strict fiscal policies would be to keep interest rates around their currently low levels. Not only would this help business cycle conditions, it would also alleviate the debt service burden, making it easier for them to stick to the restraints. This is good for everyone.

Without careful attention, it is the first scenario (a bad outcome) that looks more likely, especially as the governments currently in power differ politically from those which crafted the Maastricht Treaty and the Stability Pact. In particular, Germany is no longer likely to play the role of enforcer of fiscal restraint. Achieving the good outcome is not impossible, but it will require a determined effort by all parties concerned. The ECB may play a key role. We now develop a possible strategy.

Table 3.1 Budget deficits (% of GDP)

	1997	1998E	1999E
Germany	-2.6	-2.3	-2.4
France	-3.0	-3.0	-2.6
Italy	-2.7	-2.6	-2.5
Spain	-2.6	-2.2	-1.8
Netherlands	-1.4	-1.7	-1.6
Belgium	-2.1	-1.7	-1.6
Austria	-2.5	-2.2	-2.3
Finland	-1.0	0.6	1.1
Portugal	-2.5	-2.3	-2.0
Ireland	0.9	1.5	1.6
Euro11	-2.6	-2.3	-2.2

Note: E is OECD estimate, June 98

Source: OECD

### 3.3 Two problems and an opportunity

The key to success is the realization that the ECB can turn the first problem (European labour market inflexibility) into a stick to solve the second (potential coordination failure by the national fiscal authorities in Euroland.) While the ECB will have some concern for cyclical conditions and unemployment rates, politicians will be far more concerned about them.

The ECB can thus proceed initially with a monetary policy that eases the continuing climb out of the low-growth valley. At the same time, its stern warnings about using the resulting fiscal

dividends towards achieving budget balance should be understood by the fiscal authorities as an implicit threat, that the ECB will step on the brakes hard to stop the resulting inflationary pressure, should the fiscal authorities not heed its warnings. This threat is credible because the ECB will be less concerned about the resulting additional unemployment than the fiscal authorities. The fiscal authorities will understand this threat and will therefore decide to pursue greater fiscal discipline. Everybody is better off.

A number of elements will help to carry out this strategy. First, better communication and negotiation with the fiscal authorities is needed. Second, the ECB should make sure that it gets the public on its side.

To develop better communication and negotiation channels with the fiscal authorities, ECOFIN is the natural place to start. The Maastricht Treaty provides for the President of the ECB to attend ECOFIN Council meetings. Since the Euro11 committee will meet on the morning of ECOFIN meetings, it is perhaps the former that will in fact become the appropriate forum for communication and negotiation between the ECB and the 11 fiscal authorities. Similarly, the President of that committee and a member of the European Commission may attend the ECB's Governing Council meetings, though of course without any voting rights. ECOFIN can and should help the ECB to achieve a smooth transition and to create the conditions for sustainable growth. Negotiations through this institutional framework do not endanger the independence of the ECB, they enhance its potential effectiveness.

Negotiating with the fiscal authorities will not be enough: the ECB also needs to get the public on its side. By constantly and truthfully informing the public of its reasoning and options, the ECB may be able to enlist the support of public opinion to exercise pressure on national authorities when the need arises. Openness of the ECB will be its most forceful weapon. The more transparent it becomes, the more the ECB will be seen as a defender of public interest. The battle for the trust of public opinion begins in earnest in January 1999.

That battle will not be easily won. Over the last few months, as growth has been taking hold throughout Europe, most countries have enjoyed rising tax income and shrinking budget deficits. Pressure for more spending and for further tax reductions have immediately sprung up from all quarters. Structural budgets have stopped improving, as can be seen from Table 3.2. While the ECB has already sternly reminded all governments concerned that the Stability Pact requires them to use these fiscal growth dividends for achieving budget balance or even surplus, these warnings do not appear to have yielded a sufficiently powerful impression.

Perhaps that is understandable. Most European countries have emerged from the long convergence process with 'Maastricht fatigue.' Public opinion, mostly initially enthusiastic about the

Table 3.2 Structural budget deficits (% of GDP)

	1997	1998E	1999E
Germany	-1.8	-1.6	-1.9
France	-1.8	-2.2	-2.1
Italy	-1.8	-1.9	-2.1
Spain	-1.5	-1.5	-1.3
Netherlands	-1.5	-2.1	-2.0
Belgium	-0.8	-0.9	-1.2
Austria	-1.8	-1.8	-2.1
Finland	-0.8	0.2	0.9
Portugal	-1.8	-2.1	-2.0
Ireland	-0.2	0.1	0.5
Euro11	-1.7	-1.7	-1.8

Note: E is OECD estimate, June 98  
Source: OECD

single currency, is now questioning its benefits and is unwilling to endure more sacrifices. Some relaxation of this constraint is now anticipated. Most governments are walking the narrow path between adherence to the letter of the Stability Pact and wooing their own electorates.

There is mounting evidence about how the politics is likely to play out over the longer run.<sup>2</sup> Sustained budget improvements result from cuts in spending, in particular spending on public employment. In contrast, tax increases are quickly followed by further rises in spending. In addition, the very policies that permanently improve the budget seem to have less contractionary effects than tax increases, and may even induce expansion, as suggested initially by Giavazzi and Pagano (1996).

This body of evidence suggests a strategy for the ECB to win public support. In its pronouncements, the ECB ought to be more concerned about public spending than taxation. If it can simultaneously create a monetary policy environment friendly for early and sustained growth, the public can be convinced more easily to accept unpopular fiscal measures.

### 3.4 The ECB needs to discuss scenarios

The ECB can help to achieve the good outcome by using openly the threat of applying the brakes if fiscal discipline does not materialize. How can the ECB become more explicit about its threat without being perceived as unreasonably pushy?

The solution for the ECB is to apply the lessons from Chapter 2 and be explicit about how it envisages the future. A desirable approach would be to start by presenting a benchmark for interest rate decisions while, at the same time, pointing out the room for manoeuvre that it reserves for discretionary use. Box 3.1 provides a hypothetical example. The ECB could then discuss how it plans to use this space and how much it plans to deviate from the benchmark, relating such departures to a number of scenarios for the future.

Part of the exercise could make it clear that deviations from the central scenario will depend on the fiscal discipline in members countries. Should fiscal expenditures be restrained, then inflationary pressure arising from that side would be restrained too, allowing the ECB to keep interest rates below the benchmark. On the other hand, should excessive borrowing flare up again, the ECB would need to contain the inflationary pressure by deviating to the upper side of the band. The benchmark itself could even shift upwards, as additional fiscal spending works towards closing the output gap.

A clear, convincing discussion along these lines can help the ECB win this battle, which ultimately everybody wants to be won.

<sup>2</sup> Alesina and Perrotti (1995, 1997)

**BOX 3.1 Applying the Taylor rule**

To frame its discussion for the future course of interest rates, the ECB could take a bold step of turning the Taylor rule into a benchmark for actual policy making, including specification of the likely range of discretion that the ECB would retain for itself.

To illustrate, we conduct a simple exercise. We keep the parameters estimated previously for Germany but apply these to output and inflation data for Euroland as a whole. Not the whole story, but perhaps the best single place to start in seeking an early benchmark for ECB behaviour. Using forecasts of future output gaps and inflation rates, we calculate the targeted path for interest rates. Exactly how the ECB will forecast output and inflation is one of the remaining uncertainties that will be reduced as we accumulate data on its actual behaviour. A back-of-the-envelope calculation is still an interesting guess at its early behaviour.

The current Euro11 output gap is -1.2% and the inflation rate is 1.5%. Using the Clarida-Gali-Gertler estimates of the Taylor rule for Germany, but applying these to Euro11 data, implies a target interest rate of 4.8%. If, instead we use our own estimates of a crude Taylor rule presented in Chapter 2, we find a slightly lower target of 4.6%. The estimates also show that central banks approach their preferred targets gradually, closing the gap each month by a mere 10%. Starting from the current German interest rate of 3.25%, the numbers above imply an early 1999 target of 3.4%.

Both targets would imply that if the sunny scenario persists the ECB would wish to be slightly tighter than the Bundesbank has been in recent months. How is this to be interpreted? Is this simply because the Bundesbank tailors its monetary policy to German rather than European conditions? Using the German output gap of -1.4% and the German inflation rate of 1%, this implies a target interest rate of 4.1% using Clarida-Gali-Gertler estimates, and 4.0% with our own estimates.

Discrepancies between German conditions and Euroland conditions thus are likely to imply only a small change in interest rates if the ECB's preferences about inflation and output turn out to be exactly the same as those of the Bundesbank. Putting the same point differently, German conditions are not that far from the (weighted) average of the Euro11.

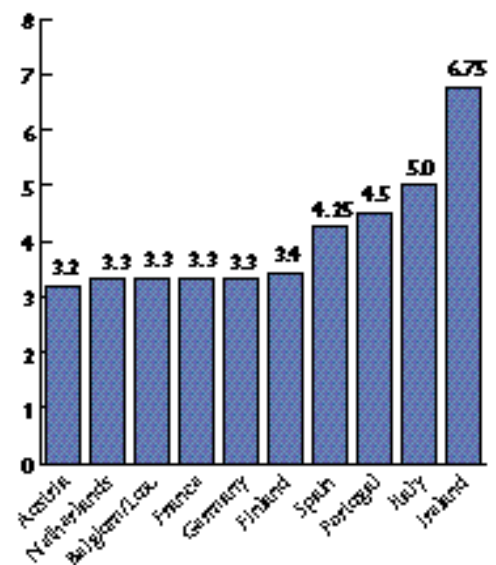
The other part of the discrepancy is more important: estimated rules do not track monetary policy decisions exactly, because the central banks use their extra scope for discretion. In practice, Bundesbank concerns about even the possibility of a looming crisis may already be affecting the interest rates that we observe. At present, German rates are lower than their Taylor rule normal implies.

**3.5 The Euroland interest rate at the end of 1998**

What interest rate will the ECB inherit? As of early October 1998, there has been substantial, though not complete, convergence of nominal interest rates within the EMU 11. Figure 3.3 shows the interest rates in Euroland at the time of writing. Since it is almost universally expected that EMU will begin on time, this implies that complete convergence of interest rates within the EMU 11 is likely to occur by the end of December. To which rate should they converge?

The answer, of course, is the interest rate that markets expect the ECB to deliver on its first day of operations, 4 January 1999. It is reasonable to believe this to be the German interest rate bequeathed by the Bundesbank. Certainly, in the run up to EMU, markets continue to examine other interest rates in terms of deviations from the German rate. It is probable that the ECB will not wish to deviate from the Bundesbank standard.

Figure 3.3 Short term interest rates, October 1998



Source: Datastream

It is important to recognise that this scenario subsumes two quite distinct cases. In the first, during the run up to EMU the Bundesbank maintains its historical attitude, choosing interest rates only with regard to what is good for Germany. While German conditions are close to the average of Euroland, they are not identical: the ECB would start with an interest rate which is slightly inappropriate.

A second possibility is that during late 1998 German interest rates begin to adjust to rates that would be appropriate for EMU at its outset, either because the Bundesbank finds that an increasing degree of currency substitution makes it hard for it to reflect purely German conditions, or because the Bundesbank acknowledges a European responsibility and attempts to ease the transition for the ECB. The ECB would assist this process if it set out clearly the basis of its future interest rate policy. Markets would automatically anticipate its early moves and the ECB would start from an interest rate suitable for Euro11.

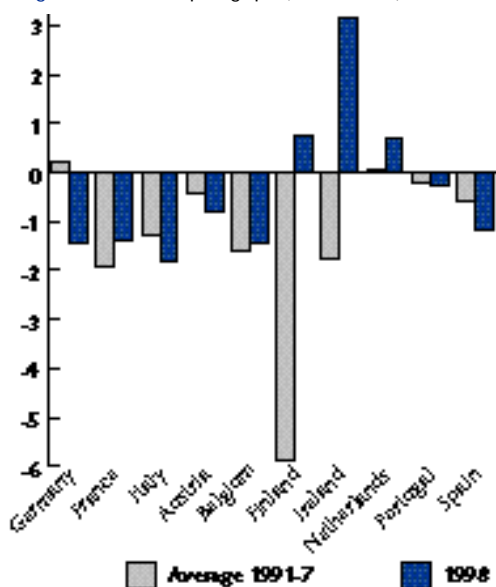
### 3.6 Asymmetric initial conditions

In principle, the ECB only cares about Euroland in the aggregate. Problems will arise when economic conditions differ widely among EMU members, as is bound to occur from time to time. It would be especially helpful if such asymmetries were not present when EMU gets under way, the time at which the ECB is busy confronting its own teething problems.

To display the 1998 output gaps in a sunny scenario, Figure 3.4 shows OECD forecasts for 1998 as of June 1998, before the prospects for the global economy began to cloud over. Figure 3.4 also displays the output gaps over the previous seven years, a measure of past pain still fresh in collective memories. Ireland is a clear outlier; of the others, only Finland and the Netherlands have output above potential GDP. Ireland and Finland are recovering from deep recessions in the mid-1990s, so their inflationary pressures still remain subdued. Falling commodity prices suggest that this happy situation could continue through 1999.

None of these cases call for urgent attention. For countries outside EMU, any re-emergence of overheating would trigger fears of monetary accommodation and a permanent increase in inflation. For an individual EMU member state, however, local inflation will simply burn itself out provided that the ECB holds firm. No special action is required unless Euroland's inflation rate is threatened. Small countries have small spillovers. Moreover, if national authorities have any fears that local inflation will send the wrong signals to local wage negotiators, they can always tighten the national budget, with the fringe benefit of using favourable local conditions to increase the margin by which they fall inside the Stability Pact threshold on budget deficits.

Figure 3.4 Output gaps (% of GDP)



Source: OECD



### 3.7 What to do if a few clouds appear?

With some luck, Euroland can escape the severe repercussions of the global crisis that we consider in Chapter 4. But it might still experience some more modest effects. Exports to Central and Eastern Europe, Asia and Latin America may decline, and some losses in the banking system are probably unavoidable. Suppose they remain moderate in extent. Some reductions in asset prices occur, investment spending is lower than in the sunniest scenario and there is less tax revenue and output growth than had previously been projected.

Countries may even find that their larger than expected deficits exceed the Stability Pact limits, despite the fact that with slowly growing output they face insufficient recession for exemption from fines under the Stability Pact. Some countries may therefore have to tighten fiscal policy to avoid breaking through the 3% ceiling for the budget deficit. This is the simple consequence of the failure to cast Stability Pact thresholds in terms of the structural rather than the actual budget deficit. The implication is that induced fiscal tightening might exacerbate any moderate slowdown of output growth. For most countries in Euroland, expansionary monetary policy would then be the best hope of avoiding a rise in unemployment so soon after its high levels of the 1990s had finally begun to be reversed.

But could the ECB do it? The ECB may be reluctant to relax monetary policies as its first major policy move, putting at risk its yet to be established credibility. The ECB may point out that real interest rates are currently low, thus justifying inaction. Yet, an early growth reversal could well strengthen the risk of deflation and rob the ECB of that argument. Deflation would be further, if moderately, enhanced by Euro appreciation, especially if the Fed were to move early and decisively to reduce US interest rates. Finally, concerns about hysteresis in European labour markets should prevent the ECB from making monetary policy too tight, should recessionary forces reappear.

In such circumstances, the ECB is less likely to signal its emphasis on price stability by a complete rejection of any interest rate reduction than by a delay in its implementation: postponing action may win the ECB some early credit as a staunch inflation fighter. The longer it delays, however, the larger will be the move eventually required. Allowing the emergence of a full blown recession may lead to early questioning of its democratic legitimacy and accountability, even if such pressures could be resisted successfully once the ECB had a longer track record. Perhaps the most likely outcome therefore is a small reduction in interest rates, a little late and a little less in extent than is ideally required. Provided that the adverse external shock is not too large, this may be sufficient to preserve a relatively sunny outlook or at least to achieve a soft, if premature, landing.

### 3.8 Conclusion

Even under ideal starting conditions, the ECB will face delicate questions. There are two big problems in particular. European labour market rigidities and hysteresis should caution the ECB against slamming on the brakes to try to establish its reputation for being hawkish on inflation. Decentralized fiscal decision and centralized monetary policy create a difficult game, in which some fiscal authorities may be tempted to free-ride on the discipline of others. Coordination failures could induce a bad outcome characterized by a weak fiscal discipline and an overly tight monetary policy stance.

These two problems also present a golden opportunity for the ECB. Because politicians attach a greater weight to unemployment than does the ECB, the ECB can use the inflexibility of labour markets as leverage to prod national governments toward fiscal discipline. Recession will hurt politicians more than the ECB. A good outcome, with continuing fiscal discipline and friendly monetary policy, may result if the ECB threatens to wield its big stick.

Such trade-offs between monetary and fiscal policy require greater communication and negotiation between the ECB and the national fiscal authorities: ECOFIN meetings are the natural starting place. This will not endanger the independence of the ECB: rather it will strengthen its hand for the common good. The ECB also needs to work hard at enlisting public support. It should apply the lessons of Chapter 2 to spell out precisely the scenarios in which it is willing to wield its stick and jam on the brakes.

There are also a number of smaller issues. First, what interest rate will the ECB inherit? Here, it would be helpful if the Bundesbank took on its European responsibility and conducted monetary policy with an eye towards European and not German conditions as 1999 approaches. Second, the ECB needs to be aware of asymmetric conditions within Euroland; however, unless the financial crisis deepens rapidly, these are unlikely to matter much at the beginning. Finally, if a mild recession is looming from the outset, the ECB should not fear that its credibility will evaporate if its first major policy move has to be a lowering of already low interest rates. Given the hugely cautious architecture of the Maastricht Treaty, the markets clearly believe that the ECB will be effective in fighting inflation. We share that confidence.

World financial instability may upset growth. A slowdown, even if moderate, would be bad news after the lacklustre performance of the last decade. This will force the ECB into shifting gear towards a supportive stance. Whether the adverse global shock could be even more serious, posing yet further challenges for the ECB, is the question to which we now turn in Chapter 4.

# 4

## The A-Class test

### 4.1 Setting the stage: a dark scenario

Global financial markets are experiencing volatile times. Since early Summer 1998, dramatic news has been arriving apace. As all forecasters quickly revise their numbers downwards (see Table 4.1), the threat of a generalized world crisis can no longer be excluded. This chapter assumes the worst and examines whether the ECB is prepared. Despite careful planning, the Mercedes A-class initially failed to pass an obstacle test for which presumably it had not been specifically designed. We ask whether the ECB will be safe in any eventuality. Could a global crisis expose hitherto undetected design flaws? We fear that this may be the case. Like Mercedes, the ECB needs to address these flaw before it is too late.

The recent global turmoil may turn out to be the most dramatic this century, except perhaps for the Great Depression. An amazing sequence of bad news has suddenly darkened the skies under which the euro will be born.

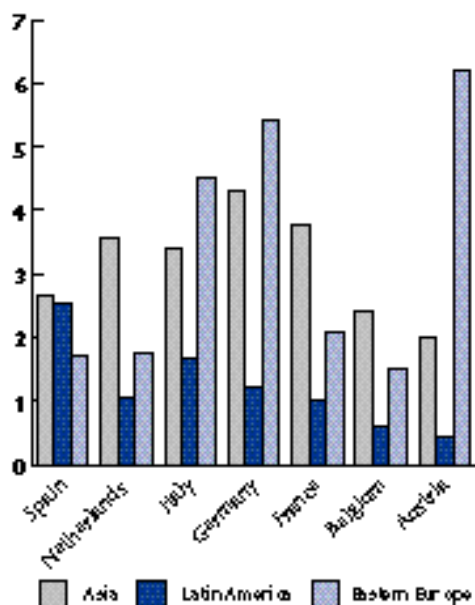
1. The Asian crisis has deepened into a potential financial meltdown with banking collapse and economic depression in many emerging markets in the Far East. IMF rescue operations have had little effect, but have left the IMF with few reserves to deal with crises elsewhere.
2. Japan, already wounded by the burst of the financial markets bubble at the beginning of this decade, has been adversely affected by the Asian crisis. The Japanese banking system is mired in a large portfolio of bad loans. A flight for quality has depressed long-term government bond rates beneath 1%, suggesting that prices are expected to fall for some time. Japan is no longer a stabilizing element in the region.
3. China, which has so far escaped, has warned repeatedly

Table 4.1 Evolving forecasts for 1999 GDP growth

	Dec 97	Mar 98	Jun 98	Sep 98
EMU	2.6	2.7	2.7	2.2
France	2.4	2.4	2.2	2.0
Germany	2.2	2.2	2.6	1.5
Italy	2.7	2.8	2.8	2.2
Belgium	2.3	2.3	3.8	2.4
Netherlands	2.8	3.1	3.3	2.5
Spain	3.7	3.7	3.9	3.2

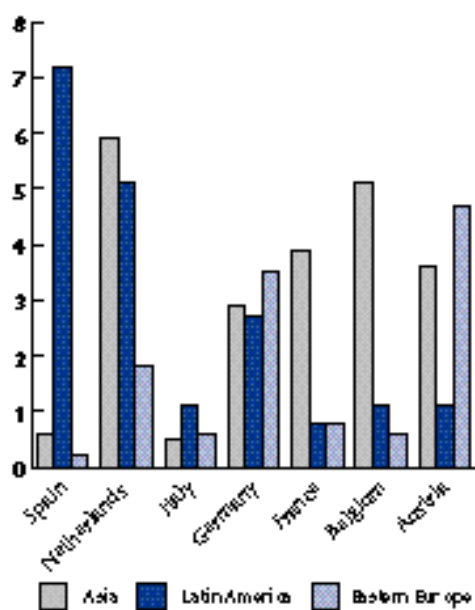
Source: Morgan Stanley Dean Witter Research

Figure 4.1 Trade links of EMU countries (exports as % of GDP)



Source: IMF, DOTS and IFS, 1996

Figure 4.2 Bank exposure: International Claims per Lending Countries (% of GDP)



Source: BIS and IMF, 1997

about the consequences of a Yen devaluation. Estimates of non-performing loans of Chinese banks are as high as 20–30% of GDP. If the financial crisis were to spread to China, its sheer size would impose a heavy burden on current international institutions. China in crisis would result in another sizeable disruption of world trade.

4. Russia has defaulted on a major proportion of its debt following a collapse of its exchange rate. As it slips into hyperinflation and adopts policies from the dusty shelves of the Soviet Union, the region will be jolted, which may include some Central and Eastern European countries.
5. At the time we write, Brazil is under severe pressure to devalue. Capital has been fleeing the country at a rate of \$1 billion per day and interest rates have been raised to punishing levels to stop the outflow. A sharp Brazilian devaluation could trigger an attack on the Argentinian currency board since a third of Argentinian trade is with Brazil. Contagion in other Latin American economies cannot be ruled out.
6. With Asia, Russia and Latin America in crisis, no world-class company can escape unscathed. The combination of a suddenly depressed business outlook and heightened uncertainty constitutes an explosive mix for stock markets and financial institutions. Hedge funds have started to cave in. There is no reason to believe that further failures will be avoided, including banks. The smoke at the heart of the global financial system is clearly visible: the question is whether fire will break out.
7. Europe's growth has been sustained by export growth, consumer confidence and business investment. Figure 4.1 shows trade exposure to regions in crisis. Exports already show signs of weakness. Investment is unlikely to remain buoyant when stock markets fall and foreign markets fold. Consumer confidence is more resilient, and it is an open question how close financial crises have to hit until concern grows.

The crisis scenario raises several critical issues for the ECB. How would it deal with a rapidly unfolding crisis? How would costs and responsibilities be divided among the ECB, national central banks and fiscal authorities? Would the response be quick enough?

Figure 4.2 shows European bank exposure to troubled regions. German banks are among the largest creditors of Russia. Dutch, and to a lesser extent Belgian, banks have been exposed to Asia but until Latin America becomes a serious trouble spot, the risks are limited. A collapse of the Argentinian currency board would put pressure on Spanish and Dutch banks. Section 4.2 asks whether the ECB is ready to intervene where and when needed,

and sees many stones yet unturned. The spectre of deflation is also haunting. Japan is already facing this situation and Europe may not escape. The implications for the economy and the ECB are presented in Section 4.3. Asymmetric exposure by European banks to global financial risks and losses, differences in European banking regulations and varied patterns of trade each introduce large asymmetries that may make the ECB hostage to national interests. The consequences are examined in Section 4.4. In such troubled times the central bank cannot be left alone to steady conditions. A coordinated response by monetary and fiscal policy-makers and bank regulators is required. Section 4.5 gives reasons to be sceptical.

### 4.2 Is the ECB prepared to face a banking and financial crisis?

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There is no lack of fuses to trigger a financial crisis in Europe. Most banking and financial institutions have been weakened by the South East Asian, Japanese and Russian crises. Contagion to Latin America would undoubtedly further bleed them while directly hitting stock markets, especially in the United States. In retrospect, the collapse of the hedge-fund LTCM may yet be seen as a the first salvo of a meltdown of banking and financial institutions in the United States and in Europe. If this happens, the ECB will face two major tasks: (i) to prevent a shortage of liquidity that could exacerbate the crisis, and (ii) to organize orderly workouts. Box 4.1 recalls how the Fed swiftly intervened during the 1987 stock market crash. The Fed made sure that enough liquidity was available to satisfy the demand for margin calls induced by the extraordinary large price movements that were occurring. Two aspects of ECB operations appear inadequate in this respect.

First, the design of TARGET, the euro payments system, and the rules for access to central bank credit – which were mainly designed to shelter the ECB from the fallout of a financial crisis – appear to hinder the ability of the new central bank to move fast in the case of a sudden need for liquidity. Second, local supervision information will not be systematically available to the ECB. We now consider these two aspects.

#### 4.2.1 The payments system: liquidity provision versus protection of the ECB

TARGET, the new EU-wide payments system, is mainly designed to shelter the ECB from the consequences of an insolvency. The gross amount of each payment that goes through TARGET is settled instantaneously. If a bank needs credit to carry out a payment, it can obtain the liquidity from its national central bank (NCB), but only after posting adequate collateral. The ECB

### BOX 4.1 Lessons from the 1987 crash

During the 1987 stock market crash, the extraordinary large price movements created a correspondingly large demand for liquidity due to the need to satisfy margin calls. For example,<sup>1</sup> a trader who owned a long futures contract whose price was declining had to meet margin calls, even if he was fully hedged by corresponding puts in the options market. Since New York banks do not accept puts as collateral, the trader would have had to put up cash or sell the puts. In the latter case, his futures position would no longer be hedged against additional price movements. The alternative of using the margins collected on his winning contracts was not available because there is an overnight delay in crediting collected margins to winners. Thus the sudden crash created a correspondingly swift demand for credit.

As Brimmer (1989) recalls:

on the morning of October 20, 1987, brokerage firms and their banks had extended credit on behalf of their customers to meet margin calls, long before receiving balancing payments through the clearing and settlement process.<sup>2</sup>

As margin calls mounted, money-centre banks became increasingly reluctant to lend. As a result, the response to margin calls also slowed down, and uncovered positions became larger and were outstanding for longer periods of time. To forestall a freeze in the clearing and settlement system, the Fed urged key money-centre banks to expand loans to their creditworthy brokerage customers.<sup>3</sup> The counterpart of such loans was an increase in total discount window lending to New York banks. In the midst of the crash, the Fed issued the following statement:

The Federal Reserve, consistent with its responsibilities as the nation's central bank, affirmed today its readiness to serve as a source of liquidity to support the financial and economic system:<sup>4</sup>

in other words, banks were offered unrestricted access to the discount window so that they could keep their credit lines to securities' firms open.

As noted by Bernanke (1990):

... this statement was backed up with three types of actions. First, the Fed reversed its tight monetary stance of the previous weeks and flooded the system with liquidity. Second, the Fed 'persuaded' the banks, particularly the big New York banks, to lend freely, promising whatever support was necessary. (The 10 largest banks nearly doubled their lending to securities firms during the week of October 20.) Finally, the Fed monitored the situation and took direct action when necessary. When a large clearing firm (First Options of Chicago) was in danger of defaulting, the Fed acted quickly to enable its parent firm (Continental Illinois) to inject funds into its subsidiary. This action may have helped avoid the closing of the options exchange. The principal effect of the Fed's action was to transfer some trader default risk from the clearinghouses and their members to money-centre banks. Under the presumption that money-centre banks were well capitalised, and that in any event their solvency would be guaranteed by the government, this transfer of risk reduced the overall threat of insolvencies in the system. This in turn allowed the payment and settlement process to avoid a gridlock. In performing its lender-of-last-resort function, the Fed redistributed risks in the system in a socially beneficial way.

A caveat should be added. The crash of 1987 had few evident, deep-seated causes. Central banks did well to prevent the spread of panic; their prompt action was successful. The 1998 crisis has already lasted much longer, and more basic failings are beginning to be revealed. If the current crisis deepens, the appropriate lesson to draw from 1987 is not that such central bank action will suffice as before but rather that action on at least that scale will be necessary.

- 1 See Garcia (1989) and Brimmer (1989), for an illustration of how the crash led to a sudden increase in demand for liquidity. Bernanke (1990) illustrates the operation of the clearing and settlement system during the crash and concludes that 'the Fed played a vital role in protecting the integrity of the system.'
- 2 In an often quoted episode, at noon Goldman Sachs and Kidder, Peabody were facing, in combination, a cash deficit of US\$1.5 billion.
- 3 At one bank alone, Citicorp, loans to securities firms climbed to US\$1.4 billion from a normal range of US\$200 to US\$400 million.
- 4 Statement issued by the Federal Reserve on 20 October 1987.

is protected for two reasons: first, any credit that the insolvent bank has received from the central bank is covered by 'good' collateral; second, if a bank were to fail, the risk to the system is limited to only a few payments – how many will depend on the speed of settlement. There is no risk of insolvency spreading throughout the system, eventually forcing a bail-out by the central bank.

TARGET is very different from Fedwire, the Fed's nationwide system for transferring funds and government securities among banks operating in the United States. In Fedwire the Fed executes a payment instruction (which at that moment becomes irrevocable) even if it leads to a debit balance on the account of the sending bank. If this bank were to fail while in overdraft, the risk would be borne by the Fed because overdrafts are only settled at the end of the day.<sup>5</sup>

TARGET is also different from other traditional payments and settlement systems, such as CHIPS, the private settlement system for international dollar payments, or some of the systems operated by European countries before EMU, which do not imply instantaneous settlement of bilateral positions. In traditional systems banks carry their positions to the end of the day; when the night comes, they settle the net positions they have cumulated during the day. In this architecture, by the end of the day, a bank will have accumulated large outstanding positions with a multitude of other banks. The insolvency of one bank would therefore spread throughout the system and its effects would be difficult to unscramble at the end of the day. Private netting systems operate under the assumption that if a major problem were to arise, the central bank would guarantee the settlement of all intra-day transactions. This is because, although netting systems set aside a common pool of collateral and are subject to limits on the exposure of individual banks, such safety nets may not be sufficient if a major problem were to arise.

Although TARGET can effectively shelter the ECB, it suffers from two potential weaknesses:<sup>6</sup> one relates to its operation in normal times, the other to its operation in times of financial distress. In normal times the system may be too expensive, especially for large-value transactions – the kind of payments that involve systemic risk – thus leading European banks to choose other (private) settlement systems which are not immune from systemic risk. During a crisis the rules of TARGET could be too rigid, and prevent the ECB from accommodating swiftly enough a sudden increase in the demand for liquidity.

5 Another difference between TARGET and Fedwire is that the latter is a single, unified system, while TARGET connects different national systems. This could affect the speed of settlement, particularly at times when the volume of transactions peaks.

6 See Prati and Schinasi (1998), IMF (1998), and Financial Times, 'Banks at odds over euro payments', 17 September 1998.

### The cost of using TARGET

When a large-value payment goes through TARGET, the transaction is settled bilaterally and instantaneously, and thus typically requires central bank credit. In TARGET such credit will only be available if the bank puts up adequate collateral. (Note that providing collateral for intra-day credit is not required for transactions that occur via Fedwire.) The cost of using TARGET for a large-value payment therefore depends on the opportunity cost of the assets that must be put up as collateral, i.e. on the value of the trading opportunities lost by freezing those assets. The cost is low in countries where a repo market is not developed but high in those countries, such as France, where repurchase agreements represent a big market.<sup>7</sup>

As an alternative to TARGET, European banks could use private payments and settlement systems. Two in particular will compete with TARGET: the Euro Clearing System (ECS), a system run by the European Banking Association, and Euro Access Frankfurt (EAF2), a system owned by the Landeszentralbank in Hessen, Germany, which allows remote access. Both are net settlement systems where the collateral is only present in the form of a pool – although EAF2 is evolving towards TARGET by settling positions every 20 minutes.<sup>8</sup>

Almost all large European banks are members of ECS, which is an EU-wide system. Membership is expensive. Entry costs are high and members are required to pledge a fixed amount to the common pool of collateral. These fixed costs keep medium and small banks out of the system. The cost per transaction is, however, lower than TARGET by about one third.<sup>9</sup>

Presumably TARGET is being forced to compete with private payments systems to make sure that the ECB will run the new system efficiently. Private systems are subject to systemic risk, however, and are operated under the assumption that in extreme situations the ECB will bail them out, competition could therefore be risky. We could end up in a situation in which small-value payments transit through TARGET, while large-value transactions, the ones that give rise to systemic risks, use the private systems. If such systems were hit by a large insolvency, the collateral that supports them may not be sufficient to prevent a collapse: it would then be difficult for the ECB not to step in as the lender-of-last-resort.

7 The cost would be even higher if the assets put up as collateral were 'earmarked', and thus could not be substituted with different assets while the credit position is open. The ECB has delegated to NCBs the decision on whether or not to allow assets put up as collateral to be pooled. (See ECB, September, 1998.)

8 In EAF2 net positions will indeed be checked every 20 minutes. If, however, a bank were then unable to liquidate its net position, this would be carried into the next 20 minutes. Thus open positions could still cumulate during the day.

9 BCI (1998) estimates that the incentive to use ECS depends on ability to mobilize the collateral that a bank must put in TARGET in order to have access to central bank credit.



### ... and its ability to provide liquidity during a crisis

The very characteristics that make TARGET a secure system – the requirement of full and instantaneous collateral for access to central bank credit – could hinder its effectiveness during a crisis. As the 1987 crash illustrates, in the event of a sudden fall in stock prices the ECB may need to relax its monetary stance by rapidly increasing EMU-wide liquidity. This could be obtained through ‘fine tuning reverse operations’.<sup>10</sup> These open market operations are decentralized, i.e. delegated to NCBs and, as all ECB operations, require adequate collateral. A shortage of collateral – arising, for example, from a gridlock in the settlement system – could make such interventions, and thus the ability of the ECB to relax its monetary stance, difficult to implement. Providing liquidity in a way similar to the Fed in 1987 may require suspending the rules laid out by the ECB (1998).

### Facing illiquidity ... or insolvency

A crisis typically starts when a bank suddenly becomes illiquid or insolvent. In such a crisis, there are clear principles to govern the behaviour of the ECB and NCBs. If a commercial bank is illiquid yet solvent, the system, through the relevant NCB, can provide liquidity by engaging in a reverse operation against collateral. The ECB has identified two categories of assets eligible as collateral: Tier 1 and Tier 2 assets (see Box 4.2.) Only if the bank is insolvent, i.e. if it does not have enough Tier 1 or 2 assets to obtain the necessary liquidity, will it be allowed to fail, unless of course the local government is willing to intervene directly and is able to do so fast enough.

Importantly, Tier 2 assets are non-marketable and include, in some countries, loans and equity. What qualifies as a Tier 2 asset is obviously critical. A list will be approved by the ECB upon recommendation by each NCB. Since the list may include non-marketable instruments, the appraisal of their value as ‘good’ collateral can only rest with the NCB involved. NCBs have access to local supervisory information, either directly, in those member countries where the central bank is responsible for bank supervision, or indirectly. In Germany, for instance, where supervision is not a responsibility of the central bank, the information that goes to the supervisor is typically collected by the Bundesbank. The ECB, instead, will be entirely dependent on national supervisors for the information needed to make relevant decisions: it will thus be unable to decide whether the assets of a given bank represent ‘good’ collateral, and thus, effectively, whether that bank is insolvent or just illiquid.

This opens the possibility and the incentive for shifting abroad the cost of a bank bail-out. A NCB could decide that the assets of an insolvent bank qualify as Tier 2 collateral: if the

<sup>10</sup> See ECB, ‘The Single Monetary Policy in Stage Three’, September 1998, p.15.

## BOX 4.2 What are Tier 1 and Tier 2 assets?

Article 18.1 of the ECB Statute requires that all ECB credit operations be based on adequate collateral. Assets eligible for being used as collateral are of two types: Tier 1 and Tier 2 assets.

Tier 1 assets are marketable debt instruments. They must be issued (or guaranteed) by an institution deemed financially sound by the ECB. They should be liquid and listed on a regulated market, or on certain unregulated markets specified by the ECB. They must be located in the euro area and easily transferable, i.e. deposited with a national central bank or a securities depository. They must be denominated in euro and issued by supra-national institutions or by entities located in the European Economic Area.

Tier 2 assets, instead, are issued (or guaranteed) by institutions deemed financially sound by the national central bank which has included them in its Tier 2 list. Equities traded on a regulated market qualify as Tier 2 assets. These assets must be easily accessible to the national central bank, but need not be deposited with the central bank or a security depositor.

Source: ECB, 'The Single Monetary Policy in Stage Three', September 1998, p.43.

bank then fails and the collateral evaporates, the entire system would bear the loss. Although the Procedures for Monetary Policy in Stage Three carefully specify the risk control measures that apply to assets used as collateral (see ECB, 1998, chapter 6), to our knowledge there is no official document which explicitly states that any loss incurred from the use of Tier 2 assets is borne by the NCB which has accepted those assets as valid collateral.

### 4.2.2 Is decentralized banking supervision prudent?

The 1997 EMI Annual Report notes that (p. 62):

although the ESCB should not need supervisory information for the purpose of its monetary and exchange policy operations as a rule, banking supervisors will be prepared to consider requests from the ESCB in this area.... Should a banking crisis arise, in view of the possible systemic implications, banking supervisors will be prepared to inform the ESCB on a case by case basis.

As noted by the IMF (1998):

the current agreement about sharing information between the ECB and the national supervisors – which can be summarised by the formula 'no real obligation, no real obstacle, and some understanding' – would probably not give the ECB the same authority as the Bundesbank in brokering a solution to a banking crisis at the EMU level.

Leaving the responsibility for bank supervision at the national level – as is currently envisioned – is a good idea only if the rules are such that the cost of a mistake is entirely borne by the country where the incorrect assessment of a bank's solvency was made. As mentioned above this is not the case, at least it is not stated explicitly.

Decentralized bank supervision, however, cannot be the long run solution. If several European banks are simultaneously hit by a default anywhere in the world, a very plausible occurrence, who is responsible for coordinating the orderly workout?

Moreover, decentralized supervision will only work as long as the European banking industry remains segmented. Who will supervise the new bank formed from the merger between the Dutch ING and the German BHF? If the headquarters are in Amsterdam, supervision will be there. What if ING goes on acquiring more and more banks? The Dutch supervisor will increasingly be at a disadvantage. Clearly, as cross-border mergers and the construction of EU-wide banks progress, decentralized supervision will become less and less efficient. In the United States, bank supervision has traditionally been conducted by three different bodies: State agencies, the Fed and the Treasury through the Controller of the Currency. The end of Glass-Steagall and the appearance of nationwide banks has shifted the supervisory role away from the States to the two national bodies.<sup>11</sup>

It is ironic that while the international financial community is arguing for a 'worldwide financial regulator', national jealousies appear to prevent the ECB from centralizing such responsibilities at the EU level.

### 4.2.3 Does the ECB pass the test?

Our analysis of the ability of the ECB to face a financial crisis identifies four weaknesses and suggests four remedies:

- banks could choose not to use TARGET for large-value transactions. The alternative private payments systems they would use are not immune from systemic risk. One solution would be to reduce the freedom that banks have to settle payments outside of TARGET, at least restrict it in the case of large-value payments;
- the requirement that all ECB credit be collateralized may hamper the ability of the ECB to respond swiftly enough to a sudden demand for liquidity, particularly during a crisis. In order to avoid the risk of difficult discussions at the time of a crisis, it should be understood and clearly spelled out that the rules for collateral could be suspended in case of a crisis;
- there remains some confusion about who would bear the cost of a mistake in accepting Tier 2 assets as good collateral. The responsibility should be clearly attributed to NCBs.
- decentralized bank supervision will not work in the long run. As the consolidation of the European banking industry advances, the ECB will find itself without an adequate supervisory system. The European Union should start thinking now about setting up a EU bank supervisor. This authority could rest with the ECB itself, or be delegated to an independent institution.

<sup>11</sup> It will be interesting to watch the outcome of the fierce battle which is taking place between the Fed and the US Treasury to decide which institution will emerge as the nationwide supervisor.

### 4.3 The spectre of deflation

Until recently, the convergence to low inflation rates was considered to be a major success. By providing incentives to achieve near-price stability, the Maastricht Treaty had established optimal conditions for a strong currency and an ideal situation for its launch. With an average inflation rate of 1.5%, Euroland is indeed close to absolute price stability – and nearly as close to deflation. A serious financial crisis could well turn a blessing into a curse.

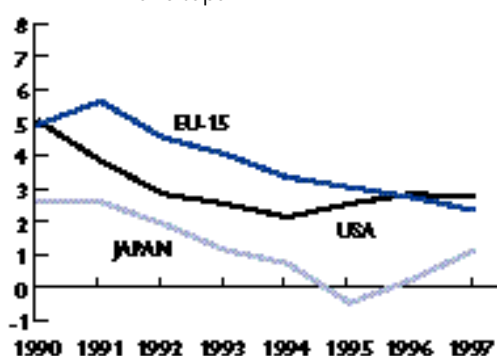
Japan is a case in point. Deflation there is a symptom, not a cause: the current crisis in Japan is a banking crisis first and a crisis of falling prices second; though the second factor obviously exacerbates the first. With troubled banks in uncertain conditions and a diminished ability to lend, Japan is experiencing a credit crunch and a flight to quality in the form of long-term government bonds, which depresses long term interest rates near zero. Monetary policy has lost its ability to influence monetary and cyclical conditions, possibly the first post-war appearance of Keynes's famed liquidity trap which seemed to exist only in textbooks.

The sudden risk of deflation would represent an unexpected challenge for the ECB. It is useful to start by asking how the Bundesbank would react to a serious contractionary shock. It could relatively easily lower interest rates without endangering its inflation fighting reputation. In fact we have noted in Chapter 2 that the Bundesbank has systematically done so. Thanks to its proven track record and reputation, the Bundesbank can expand the money stock in a recession without the market believing that this is a change in priority of the Bundesbank, or a signal that the Bundesbank has become soft on inflation.

The ECB will face a different reputation problem. As it has no track record, a lax monetary policy to counter contractionary forces produced by the world financial crisis could more easily be interpreted by the market that the ECB is not as 'hard-nosed' as the Bundesbank. In order to counter such perception and in light of the already low real interest rates in Europe, it is quite likely that the ECB would want to err on the side of extra caution in reducing the interest rate. Given its desire to quickly establish its reputation, it is almost inevitable that it will hesitate longer in reducing interest rates than the Bundesbank would have done in the same situation. If the worldwide deflation, set in motion by a global financial melt-down, gains momentum there is a risk that the ECB will hesitate too long to take appropriate action.

The resulting low inflation may then turn out to be a Pyrrhic victory. Looking again at Japan helps to illustrate what is at stake. Clearly, looking to inflation alone, the Bank of Japan scores better than the Federal Reserve, as is made clear by Figure 4.3. During the 1990s the Bank of Japan was spectacularly successful in ensuring price stability in Japan, achieving an

Figure 4.3 Inflation in the EU, United States and Japan



Source: European Economy

average inflation of 1% over the decade. With a 3% average, the Fed was far less successful it would seem. Yet there is little doubt that the Fed's reputation is stronger than that of the Bank of Japan. This strong reputation is based on the view that the Fed has provided for reasonable price stability while at the same time following policies that made economic growth possible and that maintained financial stability, whereas Japan is mired in its problem of a failing banking sector. Low inflation at any cost is certainly not what the ECB will want to aim at.

Delayed and miserly intervention by the ECB would certainly lead to long-lasting and deep financial distress. Not only would such a policy unnecessarily prolong the recession, but it would probably also force national governments to intervene and bail out parts of their banking and financial institutions, possibly shattering the Stability Pact. It would be an irony if cautious ECB behaviour resulted in large budget deficits and the abandonment of the Stability Pact. Section 4.5 further looks at the issue of coordination between the ECB and national governments.

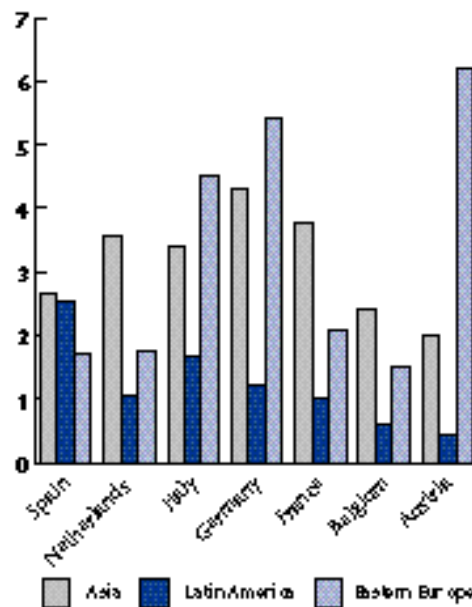
#### 4.4 Asymmetries

Figures 4.1 and 4.2 make an important additional point: a worldwide financial upheaval may have substantial asymmetric effects on the economies of Euroland. One reason has to do with the very different bank exposures in Euroland towards the emerging markets. For example, over 70% of all international claims of Spanish banks are in Latin America, an amount that sums to 7% of Spain's GDP. The exposure of Dutch banks amounts to 5% of GDP. A sufficiently strong global financial crisis could well lead to intense conflicts over the appropriate monetary policy course. In a crisis context, any small mishap can easily translate into a major disaster.

Countries whose banks have limited exposure will be reluctant to undertake massive bail-outs. Banks and financial institutions, however, collapse at lightning speed and with fatal contagion. Hesitation could make all the difference between a small and a big financial meltdown. Presumably all ECB Governing Council members are well aware of the need for speedy action. The EMI, though, has studiously avoided taking a position on the issue of lender of last resort. Similarly, the ECB has not made its position public.

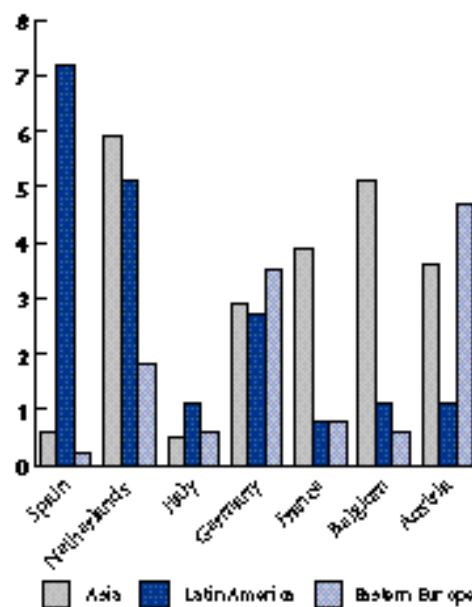
Quite possibly, fears of moral hazard justify caution and it is perfectly acceptable that the ECB always denies that it sees itself as lender-of-last-resort while being prepared to be so. This still leaves us with a question: have adequate preparations been made? Does the ECB fully realize the many technical hurdles that have been described in Section 4.2? Is there a procedure set for emergency consultation with NCBs since, in the end, action will be conducted on national markets? The need for secrecy

Figure 4.1 Trade links of EMU countries (exports as % of GDP)



Source: IMF, DOTS and IFS, 1996

Figure 4.2 Bank exposure: International Claims per Lending Countries (% of GDP)



Source: BIS and IMF, 1997

must not obscure inadequate resolution of diverging national interests and varying bail-out philosophies.

#### 4.5 Coordination among and with national treasuries

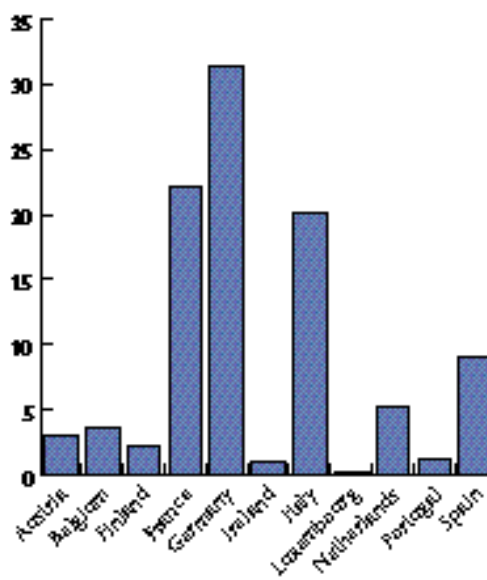
A banking and financial crisis will require additional government borrowing to support healthy companies and banks affected by a severe credit crunch, a quick separation of fundamentally healthy parts of the financial system from fundamentally bankrupt parts, a deep pocket approach to take over troubled parts and a flooding of the healthy parts with liquidity to be siphoned off when times become better again. To this effect, the ECB needs to work very closely with the national treasuries and supervisory agencies.

It is easy to imagine how the decentralized nature of fiscal policies may lead to a coordination failure. The effects of the actions of one fiscal authority on the system as a whole will in general be weak. Of the 11 Euroland countries, 7 have a GDP of less than 10% of the total (see Figure 4.4). Even for the largest country, Germany, whose GDP represents 33% of the total, the effects of fiscal policy actions on the whole system will be much lower than in the United States, say, in which the central bank faces one large federal fiscal authority. It is inevitable, therefore, that no single fiscal authority in Europe will view itself as called upon to solve a Europe-wide problem. A national deep-pocket approach to a European credit crunch affecting the European financial system and European industries will be hard to coordinate, or even to bring about.

The current levels of government debt may provide an additional reason why fiscal policies in Euroland may not respond adequately to the onset of a crisis. Figure 4.5 shows the evolution of the debt-to-GDP ratio in Europe and in the United States during the 1990s. The difference is striking. Whereas the United States was able to stabilize its debt-to-GDP ratio, the EU-11 countries experienced a significant build-up of their debt-to-GDP ratio. Ironically perhaps, this happened despite Maastricht-mandated efforts to reduce government debt levels. As a result, EMU will start with a relatively unfavourable government debt situation, hence limited room for manoeuvre within the constraints set by the Stability and Growth Pact. The Pact is considered by European central bankers as a key element of stability, and indeed aims to shield the ECB from pressure to finance deficits. The Pact allows for exceptional deficits, but the exceptions concern the past, not the threat of future contingencies. While this helps to ensure discipline in normal times, at the onset of a crisis it may turn into a stumbling block.

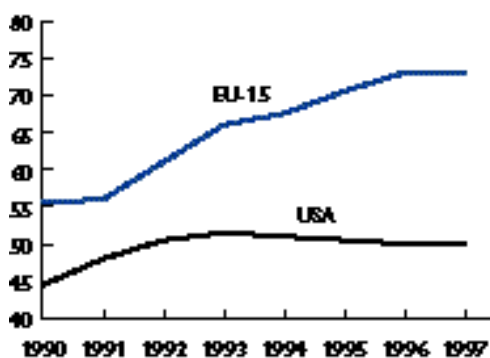
In the end, there are many reasons why the ECB and national authorities will find it more difficult than elsewhere to

Figure 4.4 GDP weight in Euroland, 1996



Source: European Economy

Figure 4.5 Government debt-to-GDP ratio in EU and the United States



Source: European Economy

coordinate themselves in a situation of emergency. It is precisely in this kind of situation that speed and decisiveness matter most. One risk is a loss of control early in the crisis process, while quick interventions may make a crucial difference. Another clearly unintended implication is that the whole burden of getting things back on track will rest on the shoulders of the ECB. Unfortunately, it will find itself handicapped to do so by its narrow mandate to ensure price stability.

### 4.6 Lessons

Thinking through the crisis scenario has uncovered several design flaws in the ECB which need fixing, and soon. We are not arguing that the crisis situation is inevitable, but it is conceivable that it could soon occur. By definition, crises occur before they are anticipated and usually before preparation is complete. Clearly, this applies to the ECB, as well as to NCBs and national authorities. The following suggestions ought to be considered as a matter of urgency.

1. The impact of a financial crisis will be asymmetric. To keep its hand steady and to send clear signals to financial markets as well as to act swiftly, when needed, a strengthening of the centre of the ECB is needed. President Duisenberg together with the Executive Board need to take and be given the key lead as well as the key voice for monetary policy in Europe. Analytical capabilities which largely remain in NCBs should be transferred to Frankfurt or operate, partly at least, on a centrally-set agenda.
2. A clear protocol for coordinated responses of European fiscal authorities, European bank supervisors and the ECB at a time of crisis needs to be established.
3. Financial system regulation and supervision needs to be more clearly centralized within Europe and needs to be more clearly coordinated with the ECB headquarters in Frankfurt.
4. To assure the appropriate speed of response in the event of a crisis, the ECB needs to be prepared to act as temporary lender-of-last-resort, including for payments outside of TARGET.
5. An agreement should clearly establish how losses suffered by the ECB in the process of emergency interventions will be eventually apportioned among national fiscal authorities.

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Signature: ..... Date: .....

I would like to receive MECB2 free of charge in April 1999

Name: .....

Position: .....

Company: .....

Email Address: .....

Delivery Address: .....

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.....

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Please return this form to:  
The Subscription Officer  
CEPR, 90-98 Goswell Road, London EC1V 7RR, UK  
Fax: (44 171) 878 2999      Email: orders@cepr.org

