

# MONITORING EUROPEAN INTEGRATION



## *The Making of Monetary Union*



---

# **Monitoring European Integration**

---

*A CEPR Annual Report*

## **The Making of Monetary Union**

## **Centre for Economic Policy Research**

The Centre for Economic Policy Research is a network of more than 130 Research Fellows, based primarily in European universities. The Centre coordinates its Fellows' research activities and communicates their results to the public and private sectors. CEPR is an entrepreneur, developing research initiatives with the producers, consumers and sponsors of research. Established in 1983, CEPR is already a European economics research organization with uniquely wide-ranging scope and activities.

CEPR is a registered educational charity. Grants from the Leverhulme Trust, the Esmée Fairbairn Charitable Trust, the Baring Foundation, the Bank of England and Citibank provide institutional finance. The ESRC supports the Centre's dissemination programme and, with the Nuffield Foundation, its programme of research workshops. None of these organizations gives prior review to the Centre's publications nor necessarily endorses the views expressed therein.

The Centre is pluralist and non-partisan, bringing economic research to bear on the analysis of medium- and long-run policy questions. CEPR research may include views on policy, but the Executive Committee of the Centre does not give prior review to its publications and the Centre takes no institutional policy positions. The opinions expressed in this volume are those of the authors and not those of the Centre for Economic Policy Research.

## **Executive Committee**

### *Chairman*

Anthony Loehnis

### *Vice-Chairmen*

Jeremy Hardie

Sir Adam Ridley

Professor Giorgio Basevi

Sarah Hogg

Honor Chapman

Kate Mortimer

Guillermo de la Dehesa

Alasdair Smith

Professor Jacob A Frenkel

Sheila Drew Smith

## **Officers**

### *Director*

Professor Richard Portes

### *Deputy Director*

Stephen Yeo

### *Director of Finance and Research Administration*

Wendy Thompson

3 October 1991

---

## List of Contributors

---

**David Begg**, *Birkbeck College, University of London*

**Pierre-André Chiappori**, *DELTA, Paris*

**Francesco Giavazzi**, *Università Bocconi, Milano*

**Colin Mayer**, *City University Business School, London*

**Damien Neven**, *INSEAD, Fontainebleau, and Université Libre de Bruxelles*

**Luigi Spaventa**, *Università degli Studi di Roma, 'La Sapienza'*

**Xavier Vives**, *Universitat Autònoma de Barcelona*

**Charles Wyplosz**, *INSEAD, Fontainebleau, and DELTA, Paris*

---

# Contents

---

## **Part I: European Monetary Union – The Macro Issues**

|          |  |           |
|----------|--|-----------|
| <b>1</b> | <b>Incentive Compatibility and Monetary Union</b>                  | <b>3</b>  |
| <b>2</b> | <b>The Constitution of the European Central Bank</b>               | <b>7</b>  |
|          | Appendix 2A: The Flexibility of the Bundesbank                     | 18        |
|          | Appendix 2B: Central Bank Independence and the Draft Statutes      | 20        |
| <b>3</b> | <b>Fiscal Rules</b>  | <b>21</b> |
| <b>4</b> | <b>Inflation Preconditions</b>                                     | <b>45</b> |
|          | Appendix 4A: France and Italy in the ERM                           | 58        |
|          | Appendix 4B: Monetary Union with Different Initial Inflation Rates | 61        |
| <b>5</b> | <b>Summary and Conclusions</b>                                     | <b>63</b> |

## **Part II: The Microeconomics of Monetary Union**

|          |  |            |
|----------|--|------------|
| <b>6</b> | <b>Prudential Regulation and Financial Stability</b> | <b>69</b>  |
| <b>7</b> | <b>Bank Regulation and Banking Systems in Europe</b> | <b>81</b>  |
| <b>8</b> | <b>The Principles of Financial Regulation</b>        | <b>93</b>  |
| <b>9</b> | <b>Conclusions and Recommendations</b>               | <b>109</b> |
|          | Notes  | 115        |
|          | References   | 118        |

---

# Tables

---

|      |  |     |
|------|--|-----|
| 3.1  | Debts and Deficits as Percentages of GDP. 1990.  | 22  |
| 3.2  | Change in Debt/GDP Ratio with Balanced Primary Budget from Initial Ratio of One-to-One.                          | 25  |
| 3.3  | Required Reduction in the Primary Budget to Stabilize EC National Public Debts at 1990 Level Within Three Years. | 26  |
| 3.4  | National Net Public Debts as Proportions of EC GDP.  | 36  |
| 3.5  | EC Members' Seigniorage Revenues as Percentages of National GDP.   | 41  |
| 3.6  | Average Maturity and Foreign Currency Component of EC National Debts. End 1989.                                  | 42  |
| 3.7  | Total Bank Lending to Governments: Germany and Italy. 1990.  | 43  |
| 4.1  | GDP Deflators. Average Annual Percentage Increases. 1979-91.   | 46  |
| 4.2  | Wages and Productivity in the Manufacturing Sector. Current Dollars.   | 48  |
| 4.3  | Interest Rate Differentials Relative to Germany. 1991.   | 50  |
| 4A.1 | Growth Rates of Compensation per Employee in the Public and Private Sectors. 1980-90.                            | 59  |
| 4B.1 | Inflation Before and After EMU.  | 59  |
| 6.1  | Foreign Assets Held by Banks in Six European Countries. 1985 Constant Dollars.                                   | 73  |
| 7.1  | Minimum Capital Requirements of Banks.   | 82  |
| 7.2  | Deposit Protection Schemes for Commercial Banks in Six Countries.  | 84  |
| 7.3  | Comparison of Banking Systems for Five Countries. 1987.  | 88  |
| 9.1  | The Four Steps of Transition.  | 113 |

---

## Figures

---

|       |  |    |
|-------|--|----|
| 3.1a  | Nominal Interest and Growth Rates: Germany. 1961-91.   | 28 |
| 3.1b  | Nominal Interest and Growth Rates: France. 1961-91.  | 28 |
| 3.1c  | Nominal Interest and Growth Rates: UK. 1961-91.  | 29 |
| 3.1d  | Nominal Interest and Growth Rates: Italy. 1961-91.   | 29 |
| 3.2   | Real Interest Rates: Main EC Countries. 1979-91.   | 31 |
| 4.1   | Ratio of Services Prices to Industrial Prices for France, Germany and Italy. 1978-89.                | 47 |
| 4.2   | Inflation Rates in Sweden, Switzerland and the UK. 1978-91.  | 54 |
| 4A.1a | Yields on Seven-Year Government Bonds and Credibility Bands. French Franc. June 1991-September 1992. | 60 |
| 4A.1b | Yields on Seven-Year Government Bonds and Credibility Bands. Italian Lira. June 1991-September 1992. | 60 |



---

## Preface

---

The Centre for Economic Policy Research is a network of 140 economists based in 90 different institutions, primarily in Europe. Much of the research in the Centre's various programmes relates more or less directly to short- and long-run issues of economic policy in Europe. CEPR puts extremely high priority on effective dissemination of both policy research and the fundamental research underlying it. Although this is only the second annual CEPR Report, these Reports have already become an important component of this effort.

The process of economic integration is at the centre of the European policy debate. Informed discussion of this issue must be based on economic analysis which is rigorous, yet presented in a readable and non-technical manner accessible to policy-makers, their advisers and the informed public. These are the objectives and the intended readership of the CEPR Report.

*Monitoring European Integration* assesses the progress of and obstacles encountered by economic integration in Europe. A rotating panel of CEPR Research Fellows meets periodically to select relevant issues, analyse them in detail, and highlight the policy implications of the analysis. The output of the panel's work is a short annual Report, for which they take joint responsibility.

Each year's Report will typically be devoted to a particular theme or issue. The 1990 Report examined the impact of developments in Eastern Europe on the economies of Western Europe and on the process of economic integration among them. It dealt with the restructuring of production and trade as well as the short- and medium-run macroeconomic effects on the West of the economic transformation of the East. The Report, which

appeared in November last year, was the first such analysis of these issues: comprehensive though not excessively detailed, comprehensible though based on careful economic reasoning. As a result, it achieved wide public notice and significantly influenced the policy debate, while laying out an analytical structure that has informed subsequent studies.

The 1991 Report deals with Economic and Monetary Union in the European Community, in particular the macroeconomic and microeconomic issues arising from the process leading to a single currency and a European Central Bank. Thus it considers the monetary constitution, convergence conditions, fiscal rules and debt bail-outs, financial regulation, and the specific problems of the transition period ahead. The stress throughout is on how to ensure macroeconomic and financial stability in ways that all participants will find to their advantage.

The Report should have several roles: as an input into the discussions and the negotiations leading to the Maastricht EC summit of December 1991; as a guide to evaluating the treaty likely to emerge from Maastricht; and as a text for subsequent progress towards EMU. As for the 1990 Report, the stature of the authors and the depth of their reflection should assure for this document an attentive, high-level audience throughout these stages.

As in 1990, The German Marshall Fund of the United States provided generous financial assistance essential to the completion of the Report. We are also grateful to the Commission of the European Communities, whose Stimulation Plan for Economic Science has financed the Centre's research network on 'Financial and Monetary Integration in Europe'; and to the Ford and Alfred P Sloan Foundations, which have supported much of the Centre's research in international macroeconomics. The Report is not itself new research – it is written and published quickly in order to be relevant to ongoing policy processes. But it evidently rests on a solid base of

fundamental and policy-oriented research, for the support of which the authors and CEPR express their continuing thanks.

The authors and CEPR are grateful to officials in several countries who were generous with their time and cooperation in discussing the issues treated here. They wish also to record their appreciation of the hospitality of José Viñals at the Committee of Governors of European Central Banks and of Luis Angel Rojo and José Perez at the Banco de España. They also thank Eduard Hochreiter, Manfred Neumann and Rafael Repullo for their insightful comments on earlier drafts and Olivier Castan and Ghislain le Mintier for research assistance. For the production of the Report they thank David Guthrie and Kate Millward in particular, as well as other staff at CEPR whose patience and professionalism have been most helpful.

None of these institutions or individuals is in any way associated with the content of the Report. The opinions expressed are those of the authors alone, and not of these institutions nor of CEPR, which takes no institutional policy positions. The Centre is extremely pleased, however, to offer to an outstanding group of European economists this new forum for economic policy analysis.

***Richard Portes***

3 October 1991

---

# Introduction

---

The decision of the Rome Council of October 1990 to pursue the creation of a European Monetary Union (EMU) has left many questions, including the timing, unanswered. The Council's view that 'further satisfactory and lasting progress towards real and monetary convergence will have to be achieved, especially as regards price stability and the restoration of sound public finances' has led to a number of convergence preconditions. Convergence, as measured by long-term interest rates, is far from achieved. The risk is that the convergence preconditions in effect empty the main decision of all practical content.

The convergence requirements reflect some valid concerns, stemming from truly different national interests: these should be carefully addressed. Other concerns are misconceived and we hope can be dispelled. When all valid concerns are considered, the case for convergence does not stand up. There are better ways to address the risks, less demanding in the short run, and not harmful in the long run. The purpose of this Report is to offer relatively simple solutions which deal both with the legitimate concerns that have been expressed, and with others surprisingly absent from current discussions.

The Report is in two parts. Part I deals with macroeconomics, Part II with regulation and stability of the banking system. Part I takes as its starting-point the view that any proposal must be acceptable, or 'incentive compatible', to all the countries involved. We address four issues. What monetary constitution is required to deliver price stability, and do the draft statutes of the European Central Bank (ECB) meet these conditions? Are fiscal rules a necessary adjunct to such a constitution? Is convergence of

inflation rates a precondition for embarking on monetary union? Finally, how should the transition be managed?

While these macroeconomic issues are hotly debated, banking supervision and preservation of the stability of the financial system have received scant attention. Overseeing the smooth operation of the payments system is one of the functions that the ECB will be required to perform. To date the ECB has primarily been conceived as an instrument of macroeconomic management. Not only are supervisory and regulatory issues important in their own right, but there are possible conflicts between the central bank's responsibility for financial stability and its commitment to stable prices. These need to be addressed. Part II of the Report examines the appropriate microeconomic responsibilities of the ECB.

---

## Executive Summary

---

The main recommendations of Part I of the Report, on the macroeconomics of a European Monetary Union, are the following:

- The benefits that low-inflation countries – notably Germany – will reap from monetary union are bound to be small, and they therefore cannot be asked to run big risks. This means both that the EMU must be truly inflation-proof and also that high-inflation countries must use the transition period to earn their way in.
- Requiring the convergence of member countries' fiscal policies (public deficits and debts) is unnecessary and unwise. Arbitrary restrictions on national fiscal policies are harmful; and high public debts should be met by prudential rules for the financial systems, *not* by fiscal rules.
- Inflation convergence will occur completely and reasonably quickly *after* the creation of the EMU. An early locking-in of exchange rates is a positive shock that can speed up convergence, while delaying entry will have the opposite effect.
- The final realignment must occur *before* the Treaty is officially signed. Entry should be restricted to those countries that have subsequently kept their currency within the narrow bands of the ERM without realignment for at least two years.
- Price stability requires complete ECB independence. This is incompatible with current plans to assign exchange rate policy to the Economic and Financial Affairs Council (ECOFIN).

Part II recommends the following measures for the regulation and stability of the financial system, during Stage Two:

- A central committee should be established to oversee the authorization and supervisory functions of national regulatory bodies and to resolve disputes between member states.
- Home country deposit insurance schemes should be established, with minimum levels of deposit insurance.
- Once financial markets are integrated to the point that banking failures in one country can cause systemic failures in others, a central regulatory agency should be established.

Once the union has become established:

- The ECB should be responsible for the authorization of banks and for lender of last resort intervention.
- Closures of banks and the administration of deposit insurance should also be centrally organized; but there is a case for keeping these functions *separate* from those of the ECB.
- Solvency ratios should be more closely related to risk.
- Centralization of regulation should *not* mean harmonization: differences in the functions of banks across countries impose different risks on depositors and therefore require different regulatory responses.

---

# **Part I: European Monetary Union – The Macro Issues**

---

*David Begg*

*Francesco Giavazzi*

*Luigi Spaventa*

*Charles Wyplosz*



# **1 Incentive Compatibility and Monetary Union**

---

In addition to the political vision, there exist a number of sound economic reasons to create a European monetary union. But there are also causes for concern. What is troublesome is that the possible gains and losses are not equally shared among potential EMU members. The inevitable bargaining process that will give birth to EMU may therefore reflect as much the politics of the initial economic conditions as sound judgement about the way the union will operate in the future. A viable proposal must be acceptable to all members. It is essential that temporary preoccupations shaped by the particular situation at the time of the negotiations do not cast a permanent shadow on the design of EMU.

The general case for EMU is well known and need be recalled only briefly.<sup>1</sup> Transaction costs, which may be substantial, will be reduced, underpinning the single European market and enabling its producers and consumers to reap the benefits of scale economies and opportunities for greater specialization. All EC countries stand to share in these benefits. Difficulties arise, however, because there are other aspects in which either benefits are less equally shared, or one country's gains may occur at the expense of another country's losses.

## **1.1 High- and Low-Inflation Countries**

Countries that have had long experience of above-average inflation expect to enjoy benefits from a stable currency after EMU. In addition to price stability *per se*, such countries may gain from lower interest rates, as financial markets no longer require risk premiums to offset the prospect of recurrent devaluations. Lower interest rates may in turn mean lower taxes

as the cost of debt service falls. While many EC countries are looking forward to these benefits, Germany and the Netherlands are essentially already in such a position; and those countries that have invested considerable efforts to reach the low-inflation league (Belgium, Denmark, France and Ireland) may wish primarily to consolidate existing gains. Thus differences in initial inflation conditions represent a potent source of divergences in national interest.

Whereas higher-inflation countries will benefit from any reduction in inflation as a consequence of EMU, low-inflation countries not merely have little to gain, they actually stand to lose unless the new arrangements provide at least as sound a currency as they currently enjoy. The issue is further complicated by the recent history of the European Monetary System, which has increasingly evolved into a DM-zone.<sup>2</sup> In practice this has meant the Bundesbank has assumed *de facto* leadership and set monetary policy for the System as a whole. The fact that no realignment has taken place since January 1987 is seen as an indication that the EMS works and can continue working. If indeed the German monetary constitution is one of the best in the world,<sup>3</sup> why not maintain the status quo?

One answer is that a one-sided commitment *never* to realign *vis-à-vis* the Deutschmark can never be fully credible, and hence cannot deliver – for example to Italy – the full benefit that EMU would inevitably confer. Another answer is that the devolution of one country's monetary policy to another country's central bank cannot be permanently attractive, at least to the former. Such reasoning explains why several of Germany's partners are now keen to share in both the institution and the benefits of a truly European Bundesbank or ECB.

By the same token, Germany in general and the Bundesbank in particular are likely to see little direct merit in such a change. The present EMS arrangements confer two advantages: the Bundesbank enjoys the power largely to dictate European interest rates, and it can thereby underwrite German concerns about price stability. Any incentive-compatible proposal for EMU must confront this issue directly. Germany will give up the existing arrangements only if the proposals for EMU offer a monetary constitution that makes price stability no less credible than the present constitution of the Bundesbank. Moreover, even with such guarantees, Germany still has no interest in sharing the decision-making power. To protect itself against a more relaxed approach – not just to monetary policy, but also to fiscal policy – Germany has an incentive to ask for stricter rules than those under which it operates today. In paving the road to EMU, we must provide adequate assurances and safeguards; but we must not shackle EMU with a host of unnecessary and misguided restrictions. Economic analysis may, however, suggest how to reach an acceptable solution while avoiding unnecessary rules.

## **1.2 High and Low Public Debts**

The initial diversity in the fiscal positions of EC member countries is remarkable. Three have debt/GDP ratios above 100%, six others have a ratio well above the EC average, and high both by historical standards and in comparison with other industrial countries. Yet four countries have debt/GDP ratios below 50%, and in the UK the ratio has actually been falling for many years. Similar differences exist in general government budget balances.

For high-debt countries, EMU may mean *either* giving up inflation as a tool to service public debts, in which case fiscal discipline will be imposed upon weak executives wishing to tie their own hands, *or* – more ominously

— that they will pass on some of the debt problem to the other EMU countries, through either a higher European inflation rate or a forced bail-out.

Low-debt countries have no reason to wish to face that risk, and they will inevitably seek to build in safeguards. The danger here is that the initial conditions — this split between high- and low-debt countries — will shape the fiscal constitution of the EMU. As in the design of the monetary constitution, good rules are not rules tailor-made to cope with exceptional initial conditions alone.

## **1.3 The Search for the Common Good**

In assessing both the inflation risk and the dangers arising from high public debt and the pressure it may exert for a bail-out financed collectively by EMU members, an incentive-compatible design must therefore curtail the risks incurred by those already pursuing prudent policies without falling into either of two pitfalls: imposing such conditions that all incentives for other countries to join are removed; or placing the eventual union in such a straitjacket that the scope for a judicious policy response to changing circumstances is made unnecessarily difficult. We shall argue that this middle way can be found. In Chapter 2, we present the set of principles that will make the ECB a reliable inflation fighter. Chapter 3 shows how public debts and fiscal indiscipline can be reined in without unduly undermining the ability to respond to shocks. Chapter 4 considers the requirement that inflation rates converge. Since price and wage setting are bound to be profoundly affected by the formal decision to set up an EMU, pre-entry conditions are both unnecessary and insufficient. Instead, the exchange rate should be used as an anchor, and its stability within the narrow EMS bands as a precondition. Our conclusions and policy recommendations are listed in Chapter 5.

## **2 The Constitution of the European Central Bank**

---

### **2.1 The Objectives of Monetary Policy**

The draft statutes of the ECB (drawing on the statutes of the Bundesbank) clearly state the objectives of monetary policy as follows:

- 2.i The primary objective of the System shall be to maintain price stability.
- 2.ii Without prejudice to the objective of price stability, the System shall support the general economic policy of the Community.

Two opposite objections to this formulation have been raised. One view is that setting price stability as the primary aim of monetary policy may impose too rigid a constraint on ‘the art of central banking’ which ought to be left free, as and when necessary, to reconcile – or compromise among – the variety of tasks assigned to it in a complex financial system. The other view considers instead that the vagueness of the formulation of paragraph 2.ii leaves an excessive margin of freedom in the pursuit of discretionary policy and, as such, may weaken the commitment to price stability.

Both objections miss the point that, with price stability as its paramount objective, the ECB will enjoy greater flexibility in the fulfilment of its other tasks: internal balance (full employment), external balance (the current account and external solvency), the smooth and efficient functioning of the payments system, and the orderly working of the financial markets. These last two objectives, and their implementation, are discussed in detail in Part II of this Report, although in Part I we

necessarily have to consider whether there is any conflict between a macroeconomic commitment to price stability and a microeconomic responsibility of the central bank to act as lender of last resort.

Over the medium run, a credible commitment to price stability is paramount, since it is the essential condition for the success of full monetary integration. It not only makes *economic* sense; it is also a prerequisite for *political* acceptance of the union. Credibility does not merely prevent the outbreak of inflationary expectations: it enables monetary policy to attend to other objectives precisely because it is understood that such concerns are transient and have no systematic effect over the medium run. For price stability to be beyond question the ECB must be, and be seen to be, fully independent. But independence, though necessary, is not sufficient because even independent officials may not always behave appropriately, and the appointment of these officials is inevitably political. Independence must therefore be underwritten by a monetary constitution. The draft Treaty goes a long way to provide the right conditions for price stability and independence of the ECB. In that sense it deals, at least in part, with the pursuit of internal balance. Pursuit of external balance and the related role of the exchange rate is, however, at best ambiguous and at worst misconceived in the draft Treaty; and provisions for last resort lending are missing altogether.

## 2.2 Price Stability

The economic reasons in favour of price stability are well established. Price stability, on the other hand, does not imply unnecessary inflexibility – as would be the case if the commitment to price stability were translated into the adoption of rigid quantitative rules. Provided the medium-term commitment is secure, a temporary relaxation of monetary policy will not induce expectations of inflation: it is understood that any relaxation today

will necessarily be accompanied by correspondingly tighter monetary policy in the future. This margin for temporary flexibility in monetary policy arises only if departures from the medium-run path compatible with price stability are indeed believed to be transient. Price stability is quickly undermined if a temporary relaxation is interpreted as permanent. If this possibility cannot be excluded, there may be no sensible alternative to a permanent monetary straitjacket. Misinterpretation is most plausibly avoided, and flexibility enhanced, when both the underlying commitment to price stability is strong and the reasons for temporary deviations are quickly explained so that they may be seen to be temporary. The Bundesbank has provided several examples of how temporary flexibility can be attained in practice under suitable conditions. Some of these are discussed in Appendix 2A.

## **2.3 Internal and External Balance**

Internal balance, the correspondence of overall demand and capacity output, cannot be completely divorced from price stability. Excess demand bids up prices and excess capacity is the mechanism of disinflation if previous policy has allowed any incipient departure from price stability. If a credible nominal anchor has firmly tied down inflation expectations, however, monetary policy may be able to react to shocks more rapidly than fiscal policy. Within a monetary union, the incentive to use monetary policy for this purpose will be larger the more the shock is a common shock to member states. (Monetary policy in a currency union is necessarily coordinated, whereas fiscal policy, remaining under national control, will be coordinated less easily.) On the other hand, if greater integration of European markets enhances wage and price flexibility through greater competition and factor mobility, the need for a policy response will thereby be reduced.

External balance calls for the external exchange rate, and hence interest rates, to move the EC current account closer to overall balance. Over the long run, there is no question that for external solvency any deficit will have to be repaid with interest in the future. This requires that monetary policy aims at setting an exchange rate compatible with external balance. Over the shorter run, however, the external account may be required to act as a shock absorber. Temporary gains in the terms of trade (for example a fall in primary commodity prices) are best accompanied by a temporary surplus. An adverse shift in technology or world demand, on the other hand, is best met by a temporary deficit, if only to finance investment spending. In addition, costs of adjustment may convert temporary shocks into permanent effects. Examples include the one-off cost of breaking into new foreign markets, training and human capital, and installation of physical capital. Allowing temporary uncompetitiveness to erode permanently part of the base for the traded goods sector is not always wise. In general, therefore, there are good reasons not to aim invariably at reducing external imbalances. On some occasions, a temporary adjustment of monetary policy and the external exchange rate will be preferable.

Considerations both of internal and external balance may therefore provide the basis for temporary discretionary policy by the ECB. Having raised this possibility, we counsel against its widespread use. Even with the assurance of independence (which, as noted later, must extend to decisions regarding exchange rate management), belief in the underlying commitment to price stability will be undermined if short-run considerations are too clearly to the fore. Discretionary actions must be judiciously dispensed and reserved for instances in which the comparative advantage of rapid monetary response is evident, and therefore widely understood.



## **2.4 Central Bank Independence**

For price stability to be guaranteed, either monetary policy has to follow an inflexible rule or the ECB must be independent. The fundamental advantage of independence, and the reputation that goes with it, is that it allows the ECB to be flexible when necessary, without triggering inflationary expectations.

Central bank independence rests on two indispensable conditions.<sup>4</sup> First, the governors and members of central bank boards must be individually and collectively free from government pressure (political independence). Second, the operating procedures must not be restricted by governments' policies (economic independence). These conditions are jointly necessary and do not substitute one for the other. Much experience has been accumulated with existing national central banks which can be put to good use.

Political independence depends on the powers assigned to the boards, the procedures of appointment and dismissal, and the period of board members' office. Members of the Board of the ECB must be appointed as individuals, not as national representatives, and they should have a period of office longer than the lifetime of a typical national parliament. On the other hand, like any bureaucracy, the ECB must be held accountable for its actions. In Section 2.7 below, we examine how independence and democratic accountability can be satisfied simultaneously.

The relevant provisions of the draft statutes are briefly described in Appendix 2B. One difficulty is that existing national central banks begin with differing degrees of economic and political independence. The 1992 model – common central principles but delegated national discretion in how they are implemented – is not appropriate in this instance for two

reasons. First, governors of national central banks will *ex officio* have seats on the Board of the European Central Bank. Second, the ECB will ultimately stand behind the actions of national central banks. Thus, while it may be operationally convenient to retain a federal structure in which national central banks, rather than disappearing, remain the arms for implementing central policy, the independence of the centre requires that national central banks are equally independent from political control. One purpose of the transition will be to effect this change.

Economic independence hinges on the ability of the ECB to select and set freely its instruments. In principle, monetary policy may be conducted by setting monetary aggregates or by setting interest rates. Once the ECB has decided the interest rate and the correspondingly appropriate aggregate money stock, it will then allocate reserves to national central banks. With a single money in Europe, any national central bank facing abnormally high local money demand will quickly be able to bid funds away from other areas of the EC: the distribution of the given monetary aggregate will be as endogenously distributed across countries as it is currently distributed across regions within a country.

Traditionally, the greatest threat is pressure to monetize a fiscal deficit. The draft statutes prohibit the ECB from having primary dealings with the fiscal authorities. Essentially, this means no automatic overdraft facility for Treasuries, and no central bank purchases of debt directly from the government. Forbidding the central bank to intervene in the primary market for government debt is to a large extent mere window dressing. What is the economic distinction between purchasing government securities in the primary market and standing ready to buy securities in the secondary market? Indeed it could be argued that the latter simply paves the way for private financial intermediaries to lend to the government and finance such lending by loans from the central bank. Such a system simply

uses taxpayers' money to pay the profits and operating costs of private intermediaries. More importantly, it does not impede government borrowing.

In the end, price stability will rest on the independence of the ECB, not on operating restrictions that can largely be circumvented through intermediaries. The guiding principle should be that the ECB is not compelled to provide concessionary finance to governments. Governments can then be free to borrow what they wish, provided they are prepared to pay the going market interest rate. Still, preventing direct (primary market and overdraft facilities) transactions between the ECB and the government may be wise for two reasons: it forces the market to establish the relevant price (thereby making concessionary finance more difficult), and it makes transactions more visible (thereby making monitoring of central bank performance much easier).<sup>5</sup>

## **2.5 Does Last Resort Lending Threaten Price Stability?**

Part II of this Report recommends that the ECB should be ready to act as lender of last resort, where appropriate providing temporary liquidity to avert the threat to the payments system, and the attendant systemic risk, occasioned by a confidence crisis affecting the banking system. Although general issues of financial regulation will be discussed below, at this juncture we must ask a specific question of macroeconomic significance: if one bank gets into trouble and the ECB intervenes to avert a chain reaction, is there any risk to price stability? Can the temporary crisis become a vehicle for permanent money creation? For that to be the case the central bank must delay the reversal of the monetary blip long enough to allow it to affect demand and prices. But this need not occur, for the authorities have an excellent indicator of market sentiment: market interest rates. After

the initial intervention, the central bank can quickly begin to reduce the money supply again. If this is too abrupt, interest rates will sharply rise, thus signalling that money demand has not yet reverted to its pre-crisis level. With such a short-run indicator, and the known longer-run commitment to sound money, last resort lending should not seriously be in conflict with price stability.<sup>6</sup>

## **2.6 Who Should Control the Exchange Rate?**

It is sometimes debated whether the exchange rate instrument should be assigned to the ECB or governments acting through the Council of Economics and Finance Ministers of the European Community (ECOFIN). Of four policy variables – the money supply, the interest rate, the exchange rate and fiscal policy – only two can be chosen independently as exogenous policy instruments. Their choice then determines the other two variables. It seems reasonable to assume that Finance Ministers will set fiscal policy and the ECB the interest rate. Then the money supply and the exchange rate are determined endogenously. Assigning control of the (external) exchange rate to ECOFIN is equivalent to giving governments the power to compel the ECB to alter interest rates so that Finance Ministers may reconcile their fiscal intentions with their exchange rate objectives. In short, it completely undermines the independence of the ECB. This issue is incapable of compromise. Central bank independence requires that ECOFIN control of the exchange rate be dropped from the statutes – simply because there is no independent exchange rate.

This in no way precludes consultation or cooperation between fiscal and monetary authorities. For example, European representatives at an international meeting of Finance Ministers may agree that international macroeconomic policy would be better served on balance by a change in the relative exchange rates of the dollar, the yen and the European

currency; but they will no longer be able to instruct the ECB to alter interest rates to bring this about. However, price stability in Europe may not be threatened if an interest rate reduction is accompanied by a fiscal tightening, and that might be the appropriate way to secure the desired exchange rate change. If Treasuries and the ECB feel that this is beneficial, there is no reason why it should not happen. But the ECB should not be *ordered* to change interest rates.

The only problem is that monetary adjustment is usually undertaken more rapidly than fiscal adjustment. In such circumstances, the central bank may be reluctant to cut interest rates in case promises of fiscal tightening are not then kept. Desirable exchange rate changes may then be delayed until fiscal adjustment can be seen to have occurred. But this problem need not be insuperable. In the division of labour between European Finance Ministers and the ECB, Finance Ministers will have incentives to adhere to their promises, and a central bank with sufficient independence may be able to risk cutting interest rates in advance of fiscal changes. Everyone will know that default on fiscal promises will then lead to sharp interest rate increases which will exact a heavy penalty on the fiscal authorities.

Finally, it is possible that at some future stage Europe will embark on discussions with the US or Japan about yet wider monetary union or a new international regime of fixed exchange rates. Will European competence in such negotiations fall to heads of state and Finance Ministers or to the ECB? Even if close consultation is required, such negotiations should be conducted by heads of state and their Finance Ministers. Is then the ECB truly independent and can it credibly ensure price stability if it can be undercut by some future political agreement? Necessarily, any international agreement of such import will be a political decision, and it will be so regardless of the monetary arrangements within Europe. An effective and successful central bank is likely to have a larger voice in any subsequent

negotiations; if anything, it enhances the credibility of current price stability still further.

## **2.7 Independence and Accountability**

There has been much discussion of the 'democratic deficit' caused by the creation of new arrangements which reduce overall political control. The setting up of a truly independent European Central Bank may be viewed by some as one such case. This objection is in our opinion misguided. On the one hand, the whole point of ECB independence is to remove political control, and it is wishful thinking to believe that full political control and a credible target of price stability can generally be combined. On the other hand, this does not mean either that the political process should play no role or that the ECB should be able to do what it likes with impunity. The critical distinction is between objectives and execution of policy. Independence ought to mean an agreed monetary constitution, no obligations to assist Finance Ministries, and complete freedom to determine temporary and discretionary activities. But the execution of such policies should properly be subject to close scrutiny. For these reasons the ECB should routinely and regularly have to account for its actions. The vehicle for such scrutiny should be an annual report to the European Council and the European Parliament, as is provided in the draft statute (article 15.3). These latter bodies should have the power to challenge the implementation of policy but not its overall objectives. In extreme circumstances, this procedure should be capable of dismissing individuals within the ECB against these clearly laid-out criteria. This framework provides the appropriate degree of political involvement and accountability.

## **2.8 One Market, One Money**

Europe will eventually have an independent central bank operating through national central banks which themselves have been made fully independent. Internal exchange rates will be irrevocably fixed and a single interest rate will prevail throughout member states. In such circumstances one could persist with different national currencies, just as Scottish banknotes circulate in London; but there are two main reasons for adopting a single currency. First, unless there is a final realignment for purely accounting reasons, currencies will not convert at one-to-one (e.g. 1DM = 1FFr). Even if francs and Deutschmarks are both legal tender, the mental arithmetic of conversion imposes substantial and unnecessary costs. For example, conversion of coin vending and automatic ticketing is wasteful expenditure. In general multiple media of exchange increase transactions costs and undermine the efficiency of the payments system. Second, and perhaps less mundanely, maintaining national currencies casts a shadow on the irrevocability of exchange rate fixity. Many of the expected benefits of EMU stand to be chipped away, including the equalization of interest rates through the elimination of risk premiums and the control of national central banks by the ECB. In the end, since the arrangements necessary to guarantee central bank independence so transparently abolish national monetary sovereignty, there is no case for not adopting a single European currency as well.

## **Appendix 2A: The Flexibility of the Bundesbank**

The primacy of the Bundesbank's commitment to price stability is widely recognized, and German monetary policy has delivered low inflation over many years. This has not meant inflexibility in the pursuit of rigid targets: when needed, shifts of money demand were accommodated and money supply was allowed to exceed the initially set levels.

An illustration is provided by the period 1986-8, which was characterized by several shocks to the demand for money. Two instances were the effects of the stock market crash of October 1987 and the German public's reaction to the proposed introduction of a withholding tax on interest income (which made the demand for currency grow at a rate of 20% at the end of 1988). The Bundesbank accommodated these shocks and monetary targets were regularly overshot in that period. The Bundesbank's *Annual Report* for 1988 illustrates the tactics and the strategy (pp. 39-40):

'As early as the first half of the year the growth of the money stock M3 quickened sharply, taking it distinctly above the top of the target corridor. For one thing, this trend reflected the lagged effects of the cuts in central bank interest rates from the late autumn of 1987 and domestic investors' continuing wait-and-see attitude towards purchases of German bonds. For another, monetary expansion was given an "stimulus" as longer-term bank deposits were switched into liquid money holdings, such as currency and sight deposits, on tax grounds. External factors may also have played a part in this, e.g. the increased holding of Deutsche Mark notes abroad..... Towards the end of the year, monetary expansion was given an extra fillip by an increase in currency in circulation which was completely out of line; motivated by uncertainties associated with the introduction of withholding tax, domestic investors resorted to a downright "flight" into cash....

'This outcome meant that the Bundesbank's monetary target was overshot in 1988 for the third consecutive year. Overall money balances expanded considerably more strongly than would have been consistent with the medium-term growth potential of the economy...



After the years 1982 through 1985 had seen a rate of monetary growth that was broadly matched by potential output growth, the expansion of the money stock M3 (including an annual increment of 1/2 percentage point to take account of the rise in trend) outpaced the rate of growth of production potential, calculated at constant prices, by a total of 5 percentage points up to 1988. This development, on past experience, implies a total risk to the stability of the Deutsche Mark. It should be borne in mind, however, that under the special conditions obtaining in recent years excessive monetary growth does not “mechanistically” translate into price rises. Hence it is not impossible that, following several years of uninterrupted decline in inflation rates, households and enterprises came to have greater confidence in monetary stability and therefore did not expect to see interest rates move as erratically again as they had done in the seventies and early eighties, and thus considered the opportunity cost of holding liquid funds to be small. Since the autumn of 1987, i.e. since the start of the “withholding tax debate” in Germany, private demand for money has apparently been given a boost by investors remaining undecided as to whether they should hold their funds in the form of foreign or domestic assets, in interest-bearing instruments such as savings deposits (which are exempt from withholding tax) or for the time being just in the form of banknotes. As far as monetary policy is concerned, the decisive factor is then whether the cash reserves accumulated will continue not to be channelled into expenditure or the money supply if there is a change in the underlying economic conditions. .... The large supply of liquidity would certainly become relevant to monetary policy if resident financial asset holders were to slacken in their willingness to hold on to their large liquid reserves over the long term.’

## **Appendix 2B: Central Bank Independence and the Draft Statutes**

First, the ECB, national central banks and all members of their decision-making bodies are requested not to seek or take instructions from Community bodies or governments of member states (article 7). Second, the six members of the Executive Board, though political appointees, are chosen as individuals, and not as national representatives (article 11). Third, in formulating the common monetary policy and taking the related decisions, the Council of the ECB, which comprises the governors of the member central banks and the seven independent members of the executive board, will decide by simple majority with unweighted voting. The one-person-one-vote principle is the corollary of independence: attaching a country's weight in the European Community to its governor's vote would imply that the governors are supposed to represent the interests of their countries and can therefore receive instructions from their governments, like national executive directors in international organizations. Fourth, the proposed term of office, of eight years, is appropriate, since it is longer than the lifetime of a typical national parliament. Lastly, article 14 requires that the statutes of national central banks conform with those of the European Central Bank.

---

### **3 Fiscal Rules**

---

Fiscal issues are the single dimension on which potential EMU member countries differ most as illustrated in Table 3.1. These issues are relevant not only for the final phase of EMU but also for the transition. It has been suggested that the operational start of Stage Two and the entry into EMU be made dependent on a drastic reduction of existing fiscal imbalances and on greater fiscal convergence. The Delors Committee Report of 1989 attracted early attention to the deep link between monetary unification and fiscal policy. The Report proposed binding fiscal rules (mainly limits on the size of budget deficits and national public debts). In the debate that followed the publication of the Delors Report many relevant objections were raised against the adoption of binding fiscal rules.<sup>7</sup> The Rome Council of October 1990 did not resolve the issue, but only handed it over to the intergovernmental conference (IGC). New specific rules have since been proposed, for example that no budget deficit should exceed the level of public investment – a formula applied to the German Länder – while it has been maintained that fiscal conditions (including debt ceilings) should be met before Stage Two of monetary union is allowed to start.

The position that one takes on this issue really depends on where one stands on the trade-off between the stabilizing effects of active fiscal policies on one hand, and the risk arising from unsustainable positions on the other hand.

We fully share the objections against binding fiscal rules, which we believe to be economically undesirable, necessarily arbitrary, and in any case ineffective. They are undesirable for two reasons: first, since they are based on current economic conditions, they will not be credible if changing conditions warrant the choice of new ceilings; second, the loss of monetary

**Table 3.1: Debts and Deficits as Percentages of GDP, 1990.**

| <i>Country</i> | <i>Borrowing<br/>Requirements<sup>a</sup></i> | <i>Gross Public Debt</i> |                           |
|----------------|---|--------------------------|---------------------------|
|                | <i>1990</i>                                   | <i>1990</i>              | <i>Change<br/>1982-90</i> |
| Belgium        | 5.8   | 129.3                    | 27.0                      |
| Denmark        | 1.4   | 55.3                     | 2.3                       |
| France         | 1.2   | 46.7                     | 6.6                       |
| Germany        | 3.2   | 44.6                     | 5.1                       |
| Greece         | 18.4  | 83.4                     | 47.3                      |
| Ireland        | 3.4   | 117.7                    | 25.5                      |
| Italy          | 10.1  | 99.9                     | 33.5                      |
| Netherlands    | 5.4   | 83.0                     | 27.5                      |
| Portugal       | 6.0   | 66.0                     | n.a                       |
| Spain          | 3.1   | 43.2                     | 14.2                      |
| UK             | 0.3   | 36.1                     | -16.9                     |

Sources: *European Economy*, December 1990, and OECD, *Economic Outlook*, no. 49, July 1991. Note: (a) General Government.

policy makes fiscal policy an even more important national instrument for stabilization purposes.<sup>8</sup> They are arbitrary because any prescribed ceiling on debts or deficits is questionable, and they are ineffective because they can easily be circumvented. We recognize, however, that major costs to the union may arise from unsustainable debt positions. The challenge is then to devise solutions which alleviate most reasonable fears. Our proposed approach is to confine the costs of such positions within the country concerned, preventing possible spillovers elsewhere. Although our proposed safeguards would act to prevent a steady drift to insolvency and the need for a bail-out, it turns out that what we propose would not require any discrete immediate change in policy in currently high-debt countries: this takes care of the future without imposing unnecessary delay in the transition to monetary union.

## **3.1 The Case Against Binding Rules**

### **3.1.1 The Equivalence Principle**

When faced with a temporary adverse shock most people prefer to spread the pain over time, borrowing now and repaying later. This principle, commonly accepted for households and corporations, also applies to governments, for at least three reasons. First, citizens wish to smooth collective consumption much as they wish to smooth private consumption. This argues against emergency cuts in public spending. Second, taxes on goods and incomes should be spread evenly over time. Finally, if a number of households and firms are unable to borrow because financial intermediaries ration credit, they benefit from an implicit intermediation by the government. These well-known arguments in favour of fiscal policy are strengthened in the case of a monetary union: as individual countries lose independent control over national monetary policy, simultaneously denying governments flexibility in the use of national fiscal policy may be costly. Admittedly, the need for national policies arises only in the presence of country-specific shocks, but the last two decades have shown many instances of such disturbances: just two years ago who would have foreseen the unification shock now severely rocking Germany?<sup>9</sup>

A general equivalence principle should be kept in mind. There are two fundamental approaches to the question of unanticipated temporary disturbances. The first is to borrow in bad years and to lend (or repay) in good years. The second is to set up an insurance scheme, which implies paying a premium every year and receiving compensation in bad years. Individual households use both schemes, supplementing one with the other as the need arises. As a first-order approximation (if agents are risk neutral), the two schemes are equivalent.<sup>10</sup> This equivalence principle also applies to EMU member governments. The borrowing and lending approach implies that budget deficits are used occasionally, while an

insurance scheme corresponds to an EMU-wide fiscal system of income redistribution of the kind in existence in federal states. Either system is economically sufficient to meet the problem, but at least one of them is necessary. Binding rules on budget deficits inhibit self-help through borrowing and lending. As long as a shift to an enlarged federal budget is not being contemplated, binding budgetary rules are not advisable.<sup>11</sup> It could be observed that risk aversion increases the attractiveness of the insurance solution, and in the present case it would make fiscal centralization more attractive.

### **3.1.2 Arbitrariness and Ineffectiveness**

The inevitable arbitrariness of binding fiscal rules also makes them thoroughly unappealing. The proposed debt ceiling of 60% of GDP has no economic rationale nor any historical relevance. It just happens to be the Community's average in 1991. Similarly any rule that deficits can be incurred only to finance capital expenditures relies inevitably on an accounting distinction between current and capital expenditures which in many instances fails to capture the concepts that are economically relevant. Much current public spending is in fact in the nature of investment. For example, education and research expenditure should be considered as investment in human capital; much modern work on the sources of long-term economic growth identifies human capital as the single most important factor. Moreover, binding fiscal rules can easily be circumvented and may therefore be ineffective. First, creative accounting may well impute subsidies to loss-making enterprises to the capital account. Second, the experience with the introduction of statutory limits shows numerous instances of failure,<sup>12</sup> especially when hidden debts (via publicly owned agencies, for example) are taken into account.<sup>13</sup> On the other hand, there are indications that fairly loose federal states (for example Canada or Germany) manage to leave enough room of manoeuvre for regional governments without leading to the kind of dangerous situations feared by

**Table 3.2: Change in Debt/GDP Ratio with Balanced Primary Budget from Initial Ratio of One-to-One.**

| Real Interest Rate (%)                    | 2  |    | 4 |    | 6 |   |
|---|----|----|---|----|---|---|
| Real GDP Annual Growth Rate (%)           | 3  | 5  | 3 | 5  | 3 | 5 |
| Debt/GDP Annual Growth Rate (as % of GDP) | -1 | -3 | 1 | -1 | 3 | 1 |

the Delors Committee. Third, suppose that a state has complied with the fiscal entry conditions and is allowed into the union. Once in, it may be tempted to relapse into earlier bad habits, in the knowledge that it would be difficult to enforce a sanction at that stage.

### 3.2 Debt Dynamics: The Problem with Budget Deficits

What matters is not the nominal level of the debt, nor even its real level, but the debt/GDP ratio. GDP is effectively the tax base that can be tapped to pay for the debt. Table 3.2 illustrates the importance of this correction: with a balanced primary budget, nominal debt grows at a rate equal to the nominal interest rate, the real debt grows at the real interest rate, and the growth of the debt/GDP ratio depends on the difference between the real interest rate and the real GDP growth rate. A balanced primary budget (net of interest payments) is not necessary to stabilize a given debt ratio if, and only if, the growth rate in the long run exceeds the interest rate on debt. It is not sufficient, however, when the interest rate is higher than the growth rate.

**Table 3.3: Required Reduction in the Primary Budget to Stabilize EC National Public Debts at 1990 Levels Within Three Years.**

| <i>Country</i> | <i>%</i> |
|----------------|----------|
| Belgium        | 0.4      |
| Denmark        | -0.9     |
| France         | 0.5      |
| Germany        | 2.3      |
| Greece         | 10.0     |
| Ireland        | -1.4     |
| Italy          | 3.1      |
| Netherlands    | 2.3      |
| Spain          | 2.1      |
| UK             | -1.8     |

---

Source: OECD, *Economic Outlook*, no. 49, July 1991.

Stopping the growth of the debt/GDP ratio can be done in three ways, and in only three ways: (i) tax increases and/or expenditure cuts; (ii) unexpected inflation, which wipes out the real value of the debt if the latter is not indexed; and (iii) default. A sustained lowering of the real interest rate is not a feasible alternative for an open economy in an increasingly integrated world economy.

To stop an explosive process without resorting to inflationary finance or default, the primary budget deficit eventually must be turned around into a surplus (unless the real interest rate is lower than the growth rate of real output, in which case there is no debt burden). The surplus required to stabilize the debt/GDP ratio is proportional to the difference between the real interest rate and the GDP growth rate and to the debt level. It is indicated in Table 3.2 for our examples and in Table 3.3 for the EC countries. This is why waiting to stabilize the debt is costly and why,

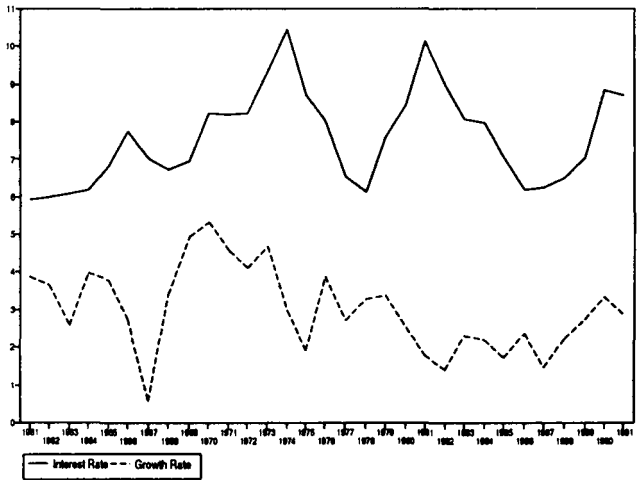


therefore, protracted deficits are unacceptable: the more the debt is allowed to grow, the greater the size of the required fiscal policy turnaround.

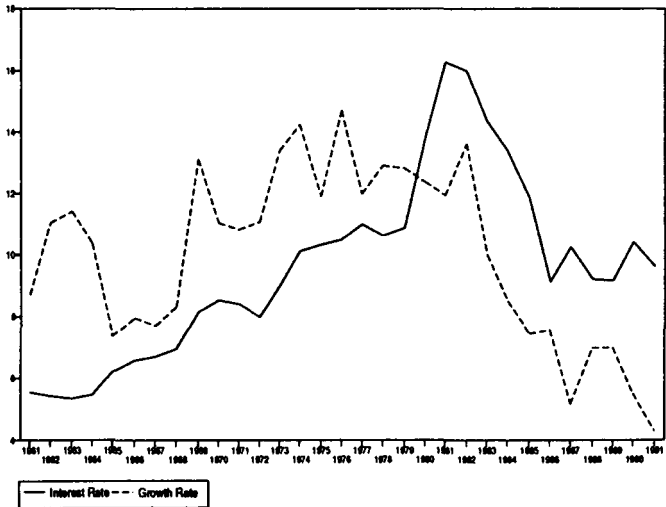
While structural (permanent) deficits are unacceptable because they may cause debt explosion, temporary deficits are not necessarily undesirable: they increase the debt without its ever threatening to explode. True, the subsequent primary surplus required to stabilize the debt is larger and therefore more difficult to achieve. Deficits matched by eventual surpluses leave the debt/GDP ratio unaltered. This is a good rule of thumb once it is recognized that temporary deficits are fully justified in the presence of temporary disturbances which either reduce tax revenues or require additional public spending (e.g. unemployment benefits). Because the public at large, and financial markets in particular, cannot ascertain *ex ante* whether a deficit is temporary or not, deficits that raise the debt/GDP ratio must be contemplated with caution. Fears of inflation or of fiscal tightening may affect the interest rates, stock prices and business and consumer confidence.

Historically, debt/GDP ratios of 200% or more have been observed, especially after wars. While at times they were dealt with through defaults or rapid inflation, in other instances post-war political circumstances were conducive to strict budgets: the stabilization and the eventual decline of the debt ratio were often helped by high real growth rates, gentle inflation and low real interest rates. There are three countries (Belgium, Ireland and Italy) with ratios at or above 100% (see Table 3.1). These levels are below historical records but they present two distinctive, and troubling, features. First, the debt build-up occurred in peacetime and cannot be imputed to a deep depression: it is the result of expenditure rising faster than cyclically adjusted revenues. Second, while until the end of the 1970s it was often the case that interest rates fell short of growth rates, in the past decade the real interest rate has been consistently higher than the real growth rate in all the

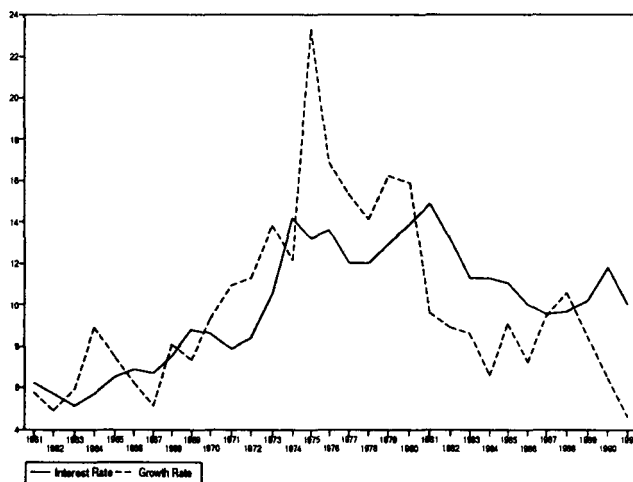
**Figure 3.1a: Nominal Interest and Growth Rates:  
Germany. 1961–91. Source: OECD.**



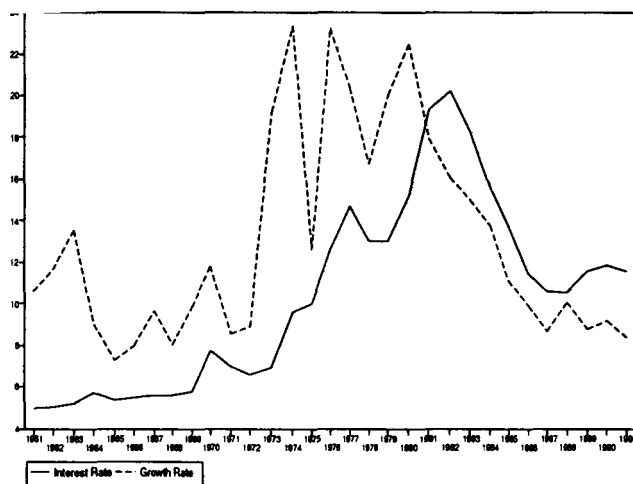
**Figure 3.1b: Nominal Interest and Growth Rates:  
France. 1961–91. Source: OECD.**



**Figure 3.1c: Nominal Interest and Growth Rates:  
UK. 1961–91. Source: OECD.**



**Figure 3.1d: Nominal Interest and Growth Rates:  
Italy. 1961–91. Source: OECD.**



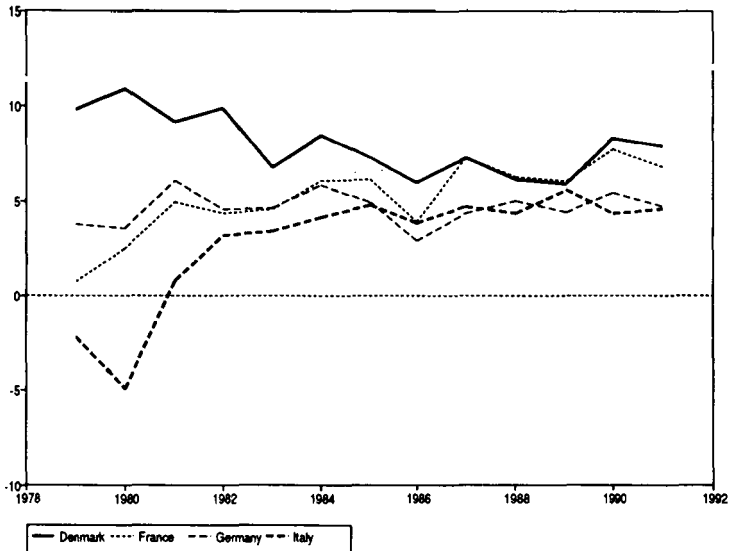
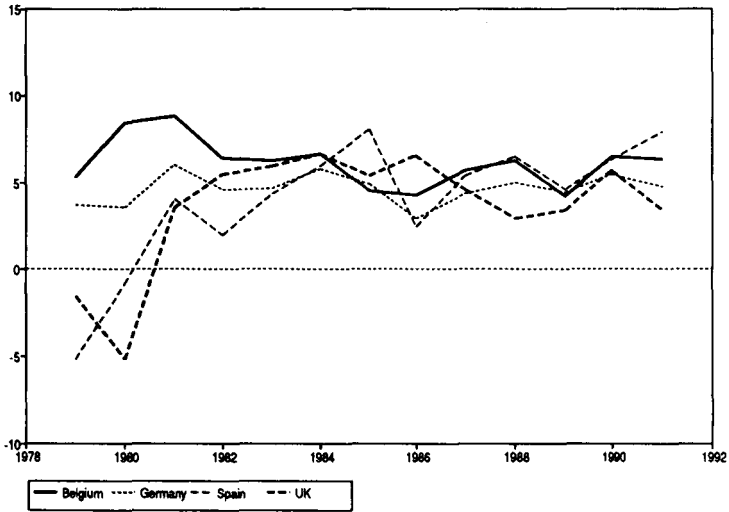
industrialized world. Figure 3.1 shows the nominal interest and nominal growth rates. This situation is likely to continue in the years ahead, if only because of a decline in world savings and the huge borrowing needs from Eastern Europe.<sup>14</sup> On the other hand, the adjustments required to stabilize the debt ratio are not infeasible even within two or three years, the shortest duration currently envisaged for transitional arrangements on the road to EMU, except for Greece (see Table 3.3).<sup>15</sup> Still it remains to be seen whether governments are willing and able to enforce the turnaround. More importantly, stabilizing the debt/GDP ratio may not be enough.

### **3.3 The Problem with High Debts**

When is it that a high debt/GDP ratio, even if stabilized, becomes a valid obstacle to EMU membership? It is frequently asserted that large public debts lead to high real interest rates, stifling investment by firms. Figure 3.2 displays real interest rates for France and Germany, two countries that have always had low public debts, as well as for Belgium and Italy, which built up large debts over the 1970s. The figure fails to reveal any role of high debts.<sup>16</sup> Even with financial markets separated by capital controls as in Belgium, France and Italy, international capital mobility seems sufficient to keep real interest rates in line. While aggregate borrowing by many large governments may, in the end, push up world interest rates, the effect of any single borrower, at least of the size of an individual EC member government, is just too small to show up. In an EMU perfectly integrated in world financial markets, local real interest rates will be even more closely related to world credit conditions and even less affected by any single country's public debt.

Other sources of concern are the level of provision of public goods and the tax pressure. Tables 3.2 and 3.3 show the amounts by which public spending must be reduced, or taxes raised, to stabilize debt/GDP ratios.

**Figure 3.2: Real Interest Rates:  
Main EC Countries. 1979–91. Source OECD.**



What matters most is that initial conditions differ so much across potential EMU member countries. The fear must be that residents of a country with permanently lower public outlays or permanently higher taxes will express frustration, and either migrate or call for a more level playing field. Even a difference in disposable income as small as 2% of GDP, if permanent, cumulates to large discrepancies over horizons of 10 or 20 years. The strength of this incentive is not known; yet there is little direct evidence of intra-EC migration based on public policy considerations.<sup>17</sup>

Debt crises are more worrisome. External shocks, domestic policy mistakes, mistrust in the success of a fiscal programme, even mere rumours of the possibility of administrative measures (like consolidation of floating debt or the imposition of portfolio constraints on banks' assets) may trigger a sudden flight from public debt instruments. Risk premiums would soar and new issues – to turn over the old debt falling due and to finance the current deficit – could only be placed at a cost which would make stabilization even more remote.

### **3.4 Deficits, Debts and EMU**

The proposal to introduce binding fiscal rules appears to address three main concerns: first, political pressures may compel the ECB to monetize public debts and allow higher inflation than is desirable; second, a government could run up its debt to an unsustainable level and then extract a transfer of resources from other countries through a bail-out operation; third, default by a highly-indebted government may lead to the systemic collapse of commercial banks or other financial institutions – an admittedly extreme case but one that cannot be ruled out in drafting the ECB's constitution. A high-debt country may one day consider leaving the union to recover some room for manoeuvre, or may find default an attractive option, especially if its mere threat is sufficient either to extract some support, in the form of

transfers from low-debt countries, or to tilt the balance towards more inflation. It is therefore understandable that low-debt and low-inflation countries should seek to protect themselves against the externalities of other countries' high debts.

These dangers are greater in a monetary union because the interdependence among member countries will increase. This is the basis for new rules. However, the best rules are those that achieve the desired effect with minimum distortions. Binding fiscal rules do not fulfil this last criterion: they are not only arbitrary but also excessive because they extend far beyond what is required. In fact it is entirely possible to sever the link between individual countries' fiscal (mis)fortunes without the sledge-hammer of binding rules, as we shortly explain.

Given the three ways of bringing down debt/GDP ratios (fiscal adjustment, unexpected inflation or default) the object is to find ways that give all EMU member countries the incentive to choose the first option, because the other two have undesirable implications. The solution is to make sure that fiscal difficulties are bottled up in the country that has let its fiscal position deteriorate. The strategy is to use as much market-imposed discipline as possible and the least disruptive additional measures.

### **3.5 Financial Market Discipline and its Limits**

Undisciplined governments, trying to avoid the fiscal turnaround option, end up with inflation. If the ECB is independent and determined to pursue price stability, the inflation option is eliminated, pushing undisciplined governments towards the third solution – some form of default. In principle, markets have a great deal of information available to evaluate the riskiness of public debts: the budget is a matter of public debate, the data are published and soon available, the key players are well identified.

Indeed, ratings by specialized agencies are published regularly for sovereign foreign debt and for the debts of local authorities and of states in federal countries. In federal countries where local governments enjoy sufficient fiscal independence (e.g. Canada) interest rates rise with the size of the government debt and often vary by 50 basis points.<sup>18</sup> Have such risk premiums proved sufficient to discipline governments? The case of New York City suggests that the answer is negative. Before the crisis erupted in 1974, relevant interest rates rose by no more than 40 basis points. This is further evidence of the short-termism that seems to characterize financial markets.

Markets can certainly provide the ultimate sanction on an impenitent sinner: a sudden withdrawal of new credits, unleashing a debt crisis of the type briefly sketched above. But this sanction is precisely the kind of event that is feared by other governments for its systemic effects. In fact, there are four reasons why sole reliance on extreme market reactions provides no satisfactory solution to the problem of discipline.

First, even if no new debt is issued, by merely suspending debt service a government implicitly borrows and keeps expanding its indebtedness, with arrears replacing formal bond issues. In contrast with a private borrower, it may be quite difficult for creditors to seize property of a sovereign borrower.

Second, the true sanction – the denial of further lending – comes too late and too abruptly. There is a quantum jump between rising rates of interest and the inability to borrow. One could imagine that interest rates will increase gradually to punitive levels; but if higher borrowing costs only lead to faster debt accumulation, the mere threat of a liquidity crisis may prompt financial intermediaries to act in anticipation and deny further lending at a relatively early stage. This is bound to generate a crisis as



everyone in the market is likely to scramble to pass along the 'hot potato'. Holding on to debt becomes an externality.

Third, in such a crisis, those financial intermediaries that hold large amounts of risky debt may become instantly bankrupt. Given the tightness of linkages among financial institutions, there is a real risk of a systemic failure in the payments system. This confronts the ECB with the choice between a liquidity injection or a breakdown in the payments system. True, any liquidity effect could be easily sterilized through counteracting open market operations. Price stability would not be endangered; but the intervention implies a transfer of income. Bad assets would replace good assets in the ECB balance sheet, and the resulting loss would come as a deduction from seigniorage revenues. At the end of the day, the intervention would have transferred some of the tax liabilities from the defaulting country to other members of the union.

Fourth, this last scenario implies a moral hazard problem. If it is believed that in the end the ECB will intervene as lender of last resort to avert a systemic collapse of the financial sector, highly-indebted governments may be tempted to extract transfers from the rest of the monetary union. Such *macchiavellian* free-riding behaviour need not be intentional. Governments typically do not decide to build up debt, nor do they coolly plan an eventual default. They work under political constraints and face a variety of objectives, of which debt management is just one among many others. Under such conditions, trusting that political systems behave rationally may be an act of faith that some countries are not ready to make.

The first two considerations are not specific to the existence of a monetary union. Legal action against a defaulting government may actually be easier within EMU. It is the other two considerations that are specific features of a monetary union. Both are associated with the risk of the financial

**Table 3.4: National Net Public Debts as Proportions of EC GDP.**

| <i>Country</i> | <i>%</i> |
|----------------|----------|
| Belgium        | 3.8      |
| Denmark        | 0.5      |
| France         | 4.8      |
| Germany        | 5.6      |
| Greece         | 0.9      |
| Ireland        | 0.8      |
| Italy          | 7.9      |
| Netherlands    | 2.7      |
| Spain          | 2.5      |
| UK             | 4.8      |

---

Sources: OECD, *Economic Outlook*, no. 49, July 1991, and *European Economy*, December 1990.

system's collapse, which is predicated on the size of the delinquent debt being large *vis-à-vis* the market. This almost exonerates smaller countries at the expense of larger ones (see Table 3.4).

### **3.6 Strengthening Market Discipline: Removing the Inflation Option**

National governments need sufficient fiscal policy independence to cope with temporary shocks but markets cannot fully prevent, in all circumstances, weak governments from accumulating dangerously high public debts. A government can only be made to realize that an excessive debt is its own problem for which the union will provide no help, thus leaving the other members of the union immune, if inflation is removed as an option and the systemic risks of default are also reduced.

Inflation reduces the debt burden because seigniorage is a source of flow revenue, and inflation also lowers the real cost of the stock of debt, if it is not indexed.<sup>19</sup> Even in high-debt countries, the rate of seigniorage has fallen considerably over recent years, in line with inflation. Seigniorage revenues are likely to decline further as competition in the banking sector leads national authorities to reduce high compulsory reserve ratios, the base of seigniorage. Increasing inflation will therefore be hardly rewarding, if at all, as a source of flow revenue, and seigniorage is quite unlikely to be a powerful incentive for inflation.

Stock gains from unexpected inflation are more important. The ECB's independence and its commitment to price stability will act as a useful barrier against temptations to inflate away public debts. ECB officials will want to be fully protected from political pressure, however, and the best protection is to make inflation unrewarding. The revenue from unexpected inflation increases with the share of debt issued in domestic currency at fixed nominal rates and the length of the debt's maturity. The solution is to request that, when the debt exceeds a certain limit, a substantial share of public bonds be inflation-proof. This is done by issuing securities indexed to the price level or issued in, or indexed to, foreign currencies,<sup>20</sup> or floating rate instruments with the coupon indexed to a short-term rate.

Prescriptions about the maturity of the debt are less obvious. On the one hand, short maturities make large public debts more fragile. On the other hand, long maturities introduce a moral hazard problem. Fragility arises because short-term debts have to be turned over frequently. If the size of gross issues is very large, any exogenous disturbance – unrelated to the debt situation – may precipitate an unwarranted crisis. Moral hazard occurs with long maturities because ill-intentioned governments find it easier to suspend payments or adopt other partial default measures when they do not have to face the market too frequently. The choice depends upon whether

one most fears bad government behaviour or market imperfections. In Europe, the latter seems more likely. Hence the recommendation that the average maturity of public debt does not fall below a certain level (three years would be the minimum, though five years – the average duration of the business cycle – would perhaps be a more satisfactory standard). The issue of short-term bills could also be subject to EC surveillance.<sup>21</sup>

### **3.7 Strengthening Market Discipline: Protection from Systemic Risks**

Indexed debt cuts off the incentive to pressure the ECB to create a general inflation to assist a particular country in fiscal trouble. Treasuries might still be tempted, admittedly in extreme circumstances, to manipulate the ECB with the mere threat of default. It is widely agreed that the Treaty should incorporate a ‘no bail-out’ clause, forbidding the ECB or any Community body from rescuing Treasuries on the verge of default. Governments that choose to go that route must know *ex ante* that they will travel alone all the way. The no bail-out clause does guarantee, however, that they *actually* travel alone, without infecting others with their crisis.

A financial crisis precipitated by a country’s default and expanding beyond that country’s borders is a scenario that no central banker contemplates with equanimity. Should banks and other financial intermediaries be allowed to fail under such circumstances? One view is that a pledge never to intervene as lender of last resort, if effectively carried out, might be just enough to entice banks and financial intermediaries to adopt the proper strategy. This view rests on the notion that shareholders and depositors – including large pension funds – are responsible for monitoring carefully how banks and intermediaries manage their assets and liabilities: failure to do so should bear consequences. This is the tough line. It might require extraordinary resolve, however, for the ECB actually to carry out the threat

if required. More fundamentally, an extensive literature on corporate control shows that in practice small shareholders fail to exert adequate control, mainly because of information asymmetries and externalities. Similarly, bank depositors typically trust their banks rather blindly – until they run to get their cash out. This is not irrational as long as deposits are fully insured, or at least largely insured. The tough line might just be too unfair, and as such not carried out: if such is the assessment of the Treasuries and of the markets, it simply becomes non-credible and therefore ineffective.

A more sensible and credible solution would be to regulate banks and other financial intermediaries likely to hold large amounts of public debt in their portfolios. Different, not mutually exclusive measures can be contemplated.<sup>22</sup>

First, banks and financial intermediaries may be forbidden to hold more than a given proportion of their assets in the form of liabilities of any single government. Beyond the prudential protection of banks and financial intermediaries – and shelter from ‘friendly’ pressure by the Treasury, in particular in those countries where some of the largest banks are state owned – this clause would force Treasuries with large debts to seek other sources of funding, directly from households or outside the EMU. This would undoubtedly increase the scrutiny of public debts by rating agencies and thus reinforce the discipline effect of financial markets.

Second, banks might be required to strengthen their capital base in proportion to the level of their holdings of public debts. This would simply extend the Cooke ratios to Treasury paper.<sup>23</sup> Such a measure means that if significant portions of a bank’s assets lose value – for example if a debtor defaults – the bank has a sufficient capital base to remain solvent.

Third, with public debts priced every day at market, financial intermediaries would be required to mark down in their books those Treasury liabilities which trade below par. As debts accumulate slowly over time, in the rather implausible occurrence of default, financial intermediaries will have already absorbed at least part of the loss when it finally materializes. Of course, this clause would not work in the event of a sudden and unexpected default.

Fourth, obvious as it may be, it should be stressed that governments should not engineer special incentives for the acquisition and holding of public debt: not only capital controls, but favourable tax treatments or particular regulations should be banned in the Treaty, and a government could be taken to court for the infringement of this rule.

### **3.8 The Situation in High-Debt Countries**

The proposed provisions solve the serious problems brought in by high-debt countries. Unable to reduce the real value of their debt stock through inflation or to receive direct or indirect support from the union, sovereign governments will be left to face the choice between overdue fiscal adjustment and the painful consequences of default. Their fiscal problems will remain their own, without affecting the other member countries' ability to exercise fiscal policy sovereignty.

It is of interest to examine how these provisions would affect the high-debt countries. Table 3.5 confirms that the incentive to use inflation as a tool to reduce the real debt burden has been greatly reduced in almost all countries.

A few countries have a relatively short average debt maturity (see Table 3.6, first column). Among the high-debt or high-deficit countries, Greece,

**Table 3.5: EC Members' Seigniorage Revenues as Percentages of National GDP.**

| <i>Country</i> | <i>Average<br/>1979-81</i> | <i>1990</i> |
|----------------|----------------------------|-------------|
| Belgium        | 1.27                       | 0.63        |
| Denmark        | 0.68                       | 0.41        |
| France         | 0.87                       | 0.50        |
| Germany        | 0.87                       | 0.54        |
| Greece         | 3.30                       | 1.35        |
| Italy          | 2.12                       | 0.67        |
| Ireland        | 1.23                       | 0.52        |
| Netherlands    | 0.69                       | 0.57        |
| Portugal       | 3.83                       | 1.26        |
| Spain          | 1.77                       | 0.92        |
| UK             | 0.75                       | 0.40        |

---

Source: Gros (1991 forthcoming)

Note: Seigniorage is measured as the opportunity cost of holding

Italy and Spain would most likely be invited to lengthen their debt maturities. The second column reports the share of fixed coupon long-term debt in total marketable debt. The share is particularly high in Belgium, Ireland, and possibly the Netherlands, but not in Italy or Greece.

What about systemic risk and exposure of financial intermediaries? Table 3.7 shows that German banks have a larger exposure to public debt than Italian banks. While 58% of the German public debt is owed to deposit banks, in Italy the bulk of public debt is held by the domestic non-financial sector, and in particular by households (Less than 21% is in the hands of financial institutions and only 13% is held by deposit banks, which are the main vehicle of systemic risk.) The 'Cooke-type' ratio of public debt to owned capital is much higher in Germany than Italy. Given the absence of

**Table 3.6: Average Maturity and Foreign Currency Component of EC National Debts. End 1989.**

|             | <i>Average<br/>Maturity<br/>(years)</i> | <i>Fixed Coupon<br/>Long-Term Bonds<br/>(% of marketable debt)<sup>c</sup></i> |
|-------------|---|--|
| Belgium     | 3.4                                     | 55   |
| Denmark     | 4.0                                     | 45   |
| France      | 4.0 <sup>a</sup>                        | n.a.   |
| Germany     | 5.0                                     | 24   |
| Greece      | 0.6b                                    | 9  |
| Ireland     | 5.9                                     | 44   |
| Italy       | 2.5                                     | 20   |
| Netherlands | 5.9 <sup>a</sup>                        | 61   |
| Spain       | 1.2                                     | 30   |
| UK          | 9.4                                     | 56   |

Source: Missale (1991).

Notes: (a) 1987; (b) estimate, which excludes domestic debt indexed to foreign currencies; (c) initial maturity.

risk on German public debt and the consistent policy of disintermediation pursued by the Banca d'Italia since the mid-1970s – when the largest share of public debt securities was still owned by the banking system – this is not particularly surprising. What these numbers mean, though, is that applying a German public debt/capital ratio to the banking system would not constrain Italian banks. The risk of contagion from an Italian debt crisis is currently quite limited. This does not mean, however, that the prudential rules should not be introduced as a safeguard against future developments.



**Table 3.7: Total Bank Lending to Governments:  
Germany and Italy, 1990.**

|                             | <i>Germany</i> <sup>a</sup> | <i>Italy</i> <sup>b</sup> |
|-----------------------------|-----------------------------|---------------------------|
| Billion ECU                 | 293.8                       | 95.0                      |
| Percentage of:              |                             |                           |
| Banks' assets               | 11.5                        | 13.7                      |
| Banks' loans and securities | 12.4                        | 21.3                      |
| Capital and own reserves    | 250.0                       | 150.0                     |

---

Sources: For Italy, Banca d'Italia, *Relazione Annuale*, 1990, Appendice (tables aC4, aD9, aD12, aD14). Data refer to a sample of deposit banks accounting for 94% of the volume of business. The data reported do not include special credit institutions. For Germany, *Monthly Report of the Deutsche Bundesbank*, tables III and VIII.

Notes: (a) does not include lending by foreign branches of approximately DM 9,900 million; (b) does not include lending to some public utilities, included in the public sector but not in general government.

### 3.9 Fiscal Preconditions

So far, the fiscal rules under review have concerned the monetary union once it has come into being. Are fiscal convergence rules required as a precondition for entry to EMU? The arguments in favour of fiscal preconditions are the same as before. Letting in countries with high and growing debts is worrisome because of pressure for higher inflation and default risks. Of particular concern is the 'hit-and-run' option: a country comes in, quickly runs up its debt and through a default threat manages to attract sizeable transfers in the wake of an operation designed to avoid a systemic banking and financial collapse.

The measures we have proposed in Chapter 3 imply that EMU will offer any debtor members neither the opportunity of financing expenditures through inflation nor the option to default.<sup>24</sup> For some countries this may be a valid economic reason not to join the union from the outset. But others will benefit from a soundly-based EMU that helps them achieve monetary and fiscal discipline. Arbitrary or insufficiently targeted fiscal rules will simply exclude such countries. That is why we have sought to target our proposal on the essence of the problem.

---

## 4 Inflation Preconditions

---

### 4.1 No Inflation Convergence

The 'coronation theory' holds that EMU should only come into existence when enough countries have converged to similar low levels of inflation, and that only these countries should join EMU from its inception.<sup>25</sup> Table 4.1 shows that current EC members form three groups. The Benelux countries, Denmark, France, Germany and Ireland have virtually converged: in the past five years their average inflation rate has remained around 3% and never above 5%. A second group of countries (Italy and Spain, with the UK too close to call) is stuck at an average rate of inflation which is about twice as high and in the past five years has never fallen below 5%. It is somewhat surprising that in this group inflation convergence stopped about at the time when the EMS 'hardened', transforming *de facto* into a regime of fixed exchange rates. Single-digit inflation rates are still out of reach for Greece and Portugal. There is no doubt therefore that inflation convergence has not occurred and is not occurring. The differential between higher-inflation countries and Germany has recently fallen; but this has been almost entirely due to a surge in the German inflation rate which is believed to be temporary.

The economy-wide rate of inflation hides important differences between the sectors that are exposed to and sheltered from international competition (see Figure 4.1). In the high-inflation countries producers of traded goods – manufactures in particular – have limited the loss of market shares by absorbing rising nominal wages through cuts in profits, and especially through an unprecedented boost in productivity (see Table 4.2).

**Table 4.1: GDP Deflators. Average Annual Percentage Increases. 1979-91.**

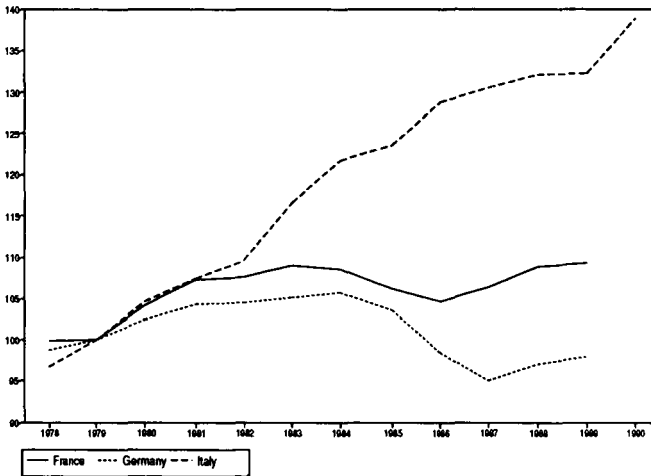
|             | <i>1979-86</i> |                | <i>1987-91</i> |                | <i>Minimum</i> |
|-------------|----------------|----------------|----------------|----------------|----------------|
|             | <i>Average</i> | <i>Maximum</i> | <i>Average</i> | <i>Maximum</i> |                |
| Belgium     | 5.1            | 7.1            | 3.0            | 4.5            | 1.6            |
| Denmark     | 7.3            | 10.5           | 3.7            | 4.7            | 2.2            |
| France      | 9.1            | 11.7           | 2.9            | 3.1            | 2.7            |
| Germany     | 3.5            | 4.9            | 2.7            | 4.0            | 1.5            |
| Greece      | 19.5           | 25.1           | 16.2           | 20.1           | 13.8           |
| Ireland     | 11.5           | 17.5           | 3.5            | 5.0            | 2.6            |
| Italy       | 14.2           | 20.2           | 6.5            | 7.5            | 5.9            |
| Netherlands | 3.4            | 6.1            | 1.7            | 3.1            | -0.5           |
| Portugal    | 21.2           | 24.7           | 12.7           | 14.2           | 11.3           |
| Spain       | 12.4           | 17.1           | 6.7            | 7.5            | 6.0            |
| UK          | 9.0            | 19.1           | 6.3            | 6.8            | 5.0            |

Source: OECD, *Economic Outlook*, no. 49, July 1991.

## 4.2 Why Hasn't the 'Hard' ERM Delivered Full Convergence?

The most popular view of the EMS is that the Bundesbank has a comparative advantage in providing the public good of price stability).<sup>26</sup> The interpretation is that in modern industrial societies the expectations of price and wage setters are at the core of the inflation process. Authorities willing to bring and keep the inflation rate down must demonstrate their resolve to affect credibly the public's expectations. Pegging the exchange rate to a low-inflation country is seen as a means of increasing credibility by setting up a perceived system of incentives and sanctions. A unilateral withdrawal from a formal exchange rate agreement would be viewed as a

**Figure 4.1: Ratio of Services Prices to Industrial Prices for France, Germany and Italy. 1978–89 (1989 = 100).**



declaration of impotence and would be met with political and economic sanctions. On the other hand, a continuing inflation rate in excess of the average that is not fully compensated by devaluations leads to a loss of competitiveness and represents an incentive to disinflate.

Joining the ERM does not imply, however, that inflation will eventually converge to the German level. Realignments provide high-inflation countries with the opportunity to recover their competitive losses at discrete intervals – thus reducing the incentive to disinflate and weakening the credibility effects.<sup>27</sup> Realignments entail a cost, however, if only because they require a multilateral decision process. Therefore they are infrequent. A country joining the ERM knows that for long periods the nominal exchange rate will be fixed, and inflation differentials will cause real appreciation and loss of competitiveness. Even if relatively large

**Table 4.2: Wages and Productivity in the Manufacturing Sector. Current Dollars.**

|  | <i>Germany</i> | <i>France</i> | <i>Italy</i> | <i>UK</i> |
|--|----------------|---------------|--------------|-----------|
| <b>Total Labour Cost per Employee</b>              |                |               |              |           |
| 1980   | 21.1           | 21.7          | 14.0         | 14.6      |
| 1990   | 36.8           | 36.0          | 31.7         | 26.3      |
| Cumulative Growth Rate                             | 74.4           | 65.9          | 126.4        | 80.1      |
| Differential Cumulative Growth Relative to Germany | —              | −4.9          | 29.8         | 3.3       |
| <b>Average Output per Employee</b>                 |                |               |              |           |
| 1980   | 29.5           | 30.2          | 21.1         | 17.6      |
| 1990   | 55.6           | 56.7          | 48.4         | 36.9      |
| Cumulative Growth Rate                             | 88.5           | 87.7          | 129.4        | 109.7     |
| Differential Cumulative Growth Relative to Germany | —              | −0.4          | 21.7         | 11.2      |
| <b>Average Labour Cost per Unit of Output</b>      |                |               |              |           |
| 1980   | 0.72           | 0.72          | 0.66         | 0.83      |
| 1990   | 0.66           | 0.63          | 0.65         | 0.71      |
| Cumulative Growth Rate                             | −8.3           | −12.5         | −1.5         | −14.5     |
| Differential Cumulative Growth Relative to Germany | —              | −4.5          | 7.4          | −6.7      |

---

Source: De Nardis and Micossi (1991).

devaluations were allowed at the time of realignments, the real exchange rate would fluctuate over time, inducing undesirable fluctuations in output and employment. The conclusion is that the ERM reduces inflation by raising its cost, but it does not force full convergence. As long as periodic realignments are an option, the inflation differential relative to Germany will be lowered, but not abolished.

This view of the ERM is consistent with the European inflation experience in the 1980s. Membership of the ERM did change the economic climate: specific policy episodes in a number of countries – which were perceived as signals of a change of regime – can be attributed to that membership and the obligations it has imposed. There has been a general change of governments' attitude towards inflation. The exchange rate constraint has encouraged an intense process of restructuring, labour shedding and rationalization in the industrial sector. In the end, the authorities' commitment to stay in the system has been perceived by price setters as a signal that inflation would come down.

One question, however, remains unanswered. Why have Belgium, Denmark, France and Ireland been able to converge to the German level, but not Italy, Spain or the UK? Spain and the UK are late ERM entrants and may simply require more time. How much time is crucial to an appraisal of the coronation theory. Appendix 4A compares the disinflation experience in France and Italy, two of the original ERM members. It shows that French credibility has been established through more than just ERM membership: fiscal policy, in particular regarding public sector wages, has given a clear signal of the government's resolve not to devalue. The same has not occurred in Italy.

A clear implication is that the pledge not to realign is not sufficient to deliver full convergence. All the levers at the governments' disposal, and especially those which are publicly visible, must be dedicated to enhance credibility. This is what France, along with Belgium, Denmark and Ireland, has done in the late 1980s. Italy, Spain and the UK have shown less single-mindedness, and economic agents do not fully trust their governments' resolve not to realign. Inflation convergence will not be complete as long as realignments are not credibly ruled out. By the same

**Table 4.3: Interest Rate Differentials Relative to Germany, 1991. Per cent.**

| <i>Country</i> | <i>Short</i> | <i>Long</i> |
|----------------|--------------|-------------|
| Belgium        | 0.25         | 0.9         |
| Denmark        | 0.80         | 1.3         |
| France         | 0.15         | 0.9         |
| Greece         | 16.80        | 17.1        |
| Ireland        | 1.35         | 0.8         |
| Italy          | 2.88         | 2.9         |
| Portugal       | 14.50        | 13.0        |
| Netherlands    | -0.05        | 0.2         |
| Spain          | 3.85         | 4.4         |
| UK             | 2.90         | 1.4         |

---

Source: OECD, *Economic Outlook*, no. 49, July 1991.

token, convergence is bound to occur under irrevocably fixed exchange rates and, *a fortiori*, with a single currency.

### **4.3 The Risks with High-Inflation Countries in the Union**

#### **4.3.1 Imported Inflation and the Temporary Demand Blip**

The argument for delaying the entry of high-inflation countries rests on the effect of above-average inflation in some countries on aggregate demand and prices in the rest of the union. This effect is illustrated with a simple example in Appendix 4B, which shows that the low-inflation countries may indeed import inflation from the high-inflation countries. Two channels are at work. The first one is the direct effect via imports from high-inflation countries. This effect is quite small, however, given the import shares of



the low-inflation countries from the high-inflation countries reported in Appendix 4B. The second channel operates via interest rates. Once the union is in existence, nominal interest rates are equalized. With persistent inflation differentials, real rates must differ from one country to another. If the ECB sets the nominal interest rates so as to keep the real rates unchanged in the low-inflation countries, the real rates stand to fall considerably in the high-inflation countries. Table 4.3 suggests that the reduction in interest rates may be quite large, ranging, for long rates, from 4.4% in Spain to 1.4% in the UK. This could trigger a demand boom and push up inflation in the low-inflation countries as well.<sup>28</sup>

There are two reasons why we do not think this effect is very worrisome. First, the large capital inflows that we observe in the high-inflation countries suggest that many firms already reap the benefits of lower interest rates: they borrow Deutschmarks or guilders rather than lire or pesetas. The more widespread is the practice of borrowing in foreign currency, the smaller the impact of a fall in domestic nominal rates. Moreover, the period of relatively low real rates will be particularly long in those countries where inflation is especially stubborn. If inflation remains stubborn, however, these are also the countries that once in the union would suffer a severe loss of competitiveness and therefore face the prospect of a prolonged depression as long as their inflation differential persists. Bad news for the future will dampen the initial boost of demand. Finally, the ECB can always raise interest rates to offset the temporary blip in demand: the cost will be some redistribution of demand towards high-inflation countries, and, in the low-inflation countries, towards the export sector.

### **4.3.2 National Attitudes Towards Inflation**

There is a deeper reason why low-inflation countries may be seriously worried about entering a union with a high-inflation country. It goes

beyond the temporary vagaries of recorded inflation statistics. We believe that it would not completely disappear even if a traditionally high-inflation country were to demonstrate its resolve by meeting any entry conditions for joining the low-inflation club. The concern is that citizens' attitudes towards inflation may remain different across countries, no matter what the institutional developments. The memory of the hyperinflation of the 1920s may have shaped Germans' attitudes towards inflation in a way that is unknown in countries that did not go through such a traumatic experience. Even if inflation has converged for some time, these countries' representatives on the ECB Board may react differently when a big real shock comes, weighing inflation and unemployment differently from the German representative.

Economic theory has little to say about the extent to which peoples' attitudes towards inflation may be affected by a regime shift. Did Mrs Thatcher really change the British? Are the French really committed to low inflation, or are they simply waiting to get their seat on the Board to vote for lower interest rates? Some guidance comes from the political economy literature.<sup>29</sup> Considering the voting mechanism (unweighted majority) of the ECB Council, more inflation-prone countries will tend to elect Council members more conservative than their median voters. They will thus enhance their credibility and achieve lower inflation rates, but these rates will still be inefficiently high – and certainly higher than the lowest rate before the union.

Independence certainly helps. One can hope that the longer the term in office, and the greater the independence of the Board members, the less they will remember where they came from; but this is no more than a hope. If different national attitudes towards inflation are what really worries the low-inflation countries, then there are no safeguards.

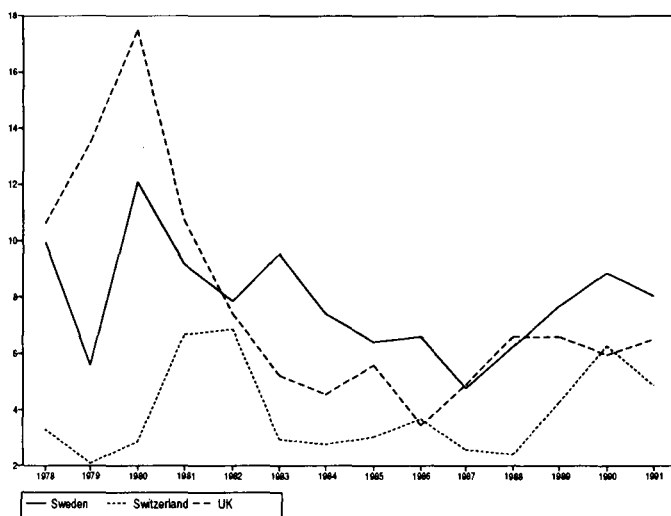
## 4.4 Is Conditionality the Solution?

To cope with these difficulties, it has been proposed to adopt a two-speed process. Countries would need first to achieve a reasonable degree of inflation convergence before being admitted into the union. Italy and Spain, and possibly the UK if its disinflation were to end too soon, would then join the union at a later stage. Three main criteria have been advanced: inflation convergence to the lowest level achieved among ERM member countries, interest rate convergence, and a period of no realignment within the narrower bands of the ERM. The inflation and interest rate convergence criteria are both insufficient and unnecessary. The exchange rate criterion is safer and sufficient.

Requiring full inflation convergence is insufficient for two main reasons. First, having brought down inflation is no guarantee that the low rate will stick. The examples of Sweden, Switzerland and the UK shown in Figure 4.2 make that point abundantly clear. Second, with EMU membership at stake there is a serious risk of manipulation of price indices. Inflation convergence is not merely insufficient, it is also unnecessary. Once a country has ratified membership of EMU the elimination of the option of future devaluation will be 100% credible and inflation convergence will occur. The ERM experience of Belgium, Denmark, Ireland and France shows the way.

Convergence of interest rates is even less meaningful. For interest rates to converge the markets must expect no further realignments. It might seem like a good idea to ask would-be EMU members to convince markets that they have taken all the necessary steps to achieve exchange rate stability *vis-à-vis* the strongest currency in the union. Relying on markets to be the referee of a country's commitment to the EMU is dangerous, however, because it has all the features of a 'bootstrap self-fulfilling prophecy'. If the

**Figure 4.2: Inflation Rates in Sweden, Switzerland and the UK. 1978–91.**



markets believe that the country will enter the EMU, its interest rate will converge, immediately. If the market believes that the country will not join no matter what, the interest rate will not converge. It is enough that some other country expresses doubts to reach the no-entry situation. In the end, the interest rate differential simply reflects the low-inflation countries' judgement about the desirability of accepting into the EMU the country in question. The criterion is simply the mirror image of the low-inflation countries' view. It is not a valid criterion.

## **4.5 An Exchange Rate Precondition and the Final Realignment**

It was noted in Section 2.6 that the exchange rate is determined by both monetary and fiscal policies. Full commitment by both authorities is required to achieve exchange rate credibility and eventually successful entry into the EMU. Demonstrating the will and ability to maintain exchange rate stability against hard currencies is the right precondition.

There is another delicate issue which needs to be addressed: the level at which currencies will be definitively locked in. This is delicate for three reasons. First, exchange rates may be misaligned at the time of the creation of the EMU. Those with an undervalued exchange rate may suffer imported inflation. Those with overvalued currencies stand to suffer a possibly long period of slow growth until sustained below-average inflation has restored competitiveness. Surely Germany does not want other union member countries to generate the kind of difficulties now facing its own Eastern region. Similarly, Spain and possibly Italy do not want to undergo the sort of painful adjustment observed in the 1920s when the UK returned to the gold standard. Assessing competitiveness is not easy, as noted in Section 4.1 above. More importantly for the transition, if a final realignment is widely expected, wage and price setters will not feel exchange rate discipline. Expecting wage and price increases to be ratified by a devaluation, they will push inflation up, away from convergence. If financial markets expect a depreciation, interest rates will also rise.

Two apparently contradictory conclusions immediately follow. If a realignment is needed, it will be expected. On the other hand, exchange rate stability is the only way through which inflation and interest rates will converge, thus minimizing the entry costs described in Section 4.3. The

resolution of this contradiction provides the rationale for two safe entry preconditions to be observed jointly.

First, entry into the EMU should be made conditional on no realignment having occurred for a significant period of time. We propose that countries be required to have been operating within the narrow margins ( $\pm 2.25\%$ ) of the ERM for two years without realignment and without the possibility of any final realignment.

Second, any final realignment must occur and be organized according to standard practice, through common agreement. These joint conditions imply that countries wishing to be eligible for EMU membership as of 1 January 1994 be required not to seek any realignment after the treaty is signed at the Maastricht Summit of December 1991. Any country deciding, or compelled, to realign after January 1992 will see its entry into EMU delayed, as the realignment will mark the beginning of its two-year probation period.<sup>30</sup> For countries not belonging now to the ERM, or operating with a wider band, this period will start as of the day of their decision to join the ERM with a narrow band.

This proposal has several merits. It is flexible, in so far as the conditions, while constraining the behaviour of prospective members, leave freedom of choice and are not based on imposing specific roles on specific economic variables. On the other hand, it provides sanctions and incentives. Countries unable to lower their inflation rates and still wishing to join the union would bear the high output costs caused by the decline in their competitiveness. Agents would realize this, and they would be compelled either to adapt their behaviour or to accept being left out of the union. If the full implications of the entry conditions are accepted, and a final realignment is ruled out, in two years both inflation and interest rates would go a long way towards full convergence, minimizing post-entry

macroeconomic disturbances. Finally, such conditions would reduce the danger of active speculation induced by expectations of a final realignment.

A last and important advantage of the proposal is that it practically eliminates Stage Two of the Delors Plan. It is widely understood that this stage is dangerous because existing parities are extremely vulnerable to market assessments about the likelihood of a final realignment. The two-year period will necessarily involve intensive coordination among central banks and pave the way for a smooth transition to the ECB. It is also conceivable that the ECU be hardened along the lines of the Spanish proposal: depreciating currencies would have their weights reduced, appreciating ones their weights raised, to guarantee that the ECU does not depreciate *vis-à-vis* any constituent currency. Such a move would enhance inflation credibility in the transition period.

The last condition concerns the rate at which parities will be locked. The choice is between the central parities established at the time of the final realignment, before the Treaty is signed, and the market parity at some known date, some time after the Treaty is ratified. It is clear that there exist strong incentives for most countries to look for a final depreciation advantage by driving the exchange rate to the floor of the margin of fluctuation on the last day. One is the familiar beggar-thy-neighbour advantage from enhanced competitiveness. Another incentive, more applicable to high-debt countries, is a reduction in the real value of their debt.<sup>31</sup> Such efforts are bound to be frustrated if all countries attempt to do so at the same time, which would simply weaken the ECU externally and leave a legacy of an inflationary impulse. This undesirable possibility means that currencies should enter the EMU, and be converted into ECUs, at the central rate.

## **Appendix 4A: France and Italy in the ERM**

France and Italy joined the EMS upon its creation in March 1979. Both countries have undergone a strong disinflation, but Italy has failed to join the group of low-inflation countries. True, Italy started with a much higher inflation rate and retained a 6% margin of fluctuation for its exchange rate until 1989. Recently, however, there has been no significant difference in the behaviour of the exchange rate in the two countries: if anything, the record of the lira has been better than that of the franc. No currency realignment has occurred since January 1987.<sup>32</sup> Obviously the absence of realignments for a long time, though making the authorities' commitment more credible, does not mean, in the eyes of economic agents, that devaluations will never occur again. If the inflation differential is fairly small it can be sustained by a parity adjustment happening once in a while. Even after a change in regime has occurred, its impact on expectations depends on how visible it is.

The outcome of wage negotiations in the public sector is a plain test of the credibility of the government's commitment to low inflation. The public sector is sheltered from international competition, and the only nominal anchor of public sector contracts is the government's resolve to be consistent with its commitment to disinflation and fixed exchange rates. Generous wage concessions in the public sector weaken the authorities' credibility and exert pressure on private sector negotiations – especially in sheltered parts of the service sector. In the case of Italy, public sector wage contracts may have had a crucial role in widening the gap between the prices of services and of manufactures shown in Figure 4.1, thereby contributing to high inflation (see Table 4A.1). This may also provide a key to the question why in Italy – unlike France – the learning process has not yet converged as documented by the market expectations about where the exchange rate will lie in the long run. Figure 4A.1 provides a measure



**Table 4A.1: Growth Rates of Compensation per Employee  
in the Public and Private Sectors.  
Average Annual Percentage Increases, 1980–90.**

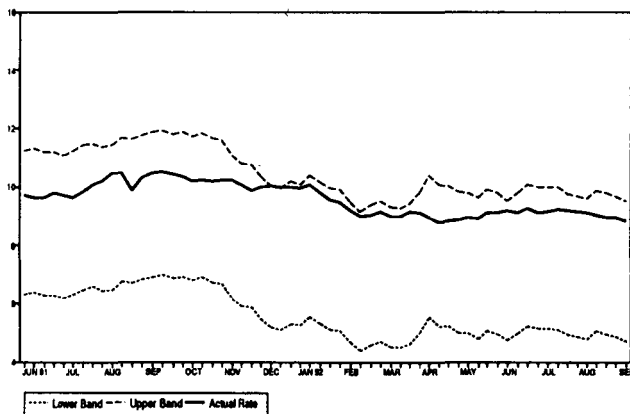
|             | <i>1986-90</i> |                | <i>1980-90</i>                          |
|-------------|----------------|----------------|---|
|             | <i>Public</i>  | <i>Private</i> | <i>Public minus Private<sup>a</sup></i> |
| Belgium     | 2.9            | 3.8            | -1.4                                    |
| Denmark     | 4.9            | 4.3            | -0.1                                    |
| France      | 4.0            | 4.7            | -0.8                                    |
| Germany     | 2.5            | 3.6            | -1.2                                    |
| Greece      | 17.8           | 16.2           | 1.3                                     |
| Ireland     | 3.5            | 5.3            | -0.9                                    |
| Italy       | 10.3           | 8.1            | 1.9                                     |
| Netherlands | 1.6            | 2.1            | -1.7                                    |
| Spain       | 7.5            | 7.2            | -0.4                                    |
| UK          | 8.3            | 8.4            | 0.6                                     |

Source: OECD, *Economic Outlook*, no. 49, July 1991.

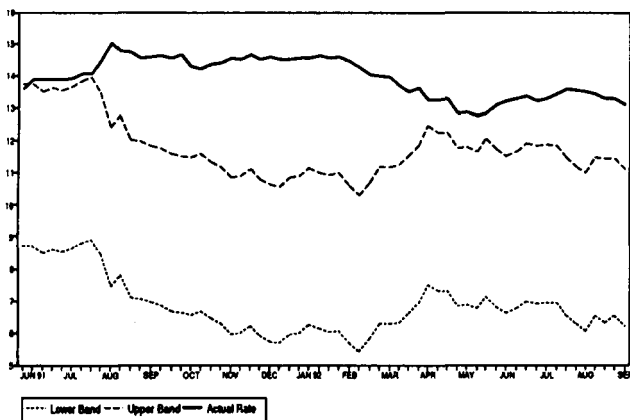
Note: (a) Compensation per employee in the public sector is the ratio of the wage bill of the central government divided by the number of central government employees.

of market expectations seven years ahead relative to the band of fluctuation.

**Figure 4A.1a: Yields on Seven-Year Government Bonds  
and Credibility Bands. French Franc.  
June 1991–September 1992.**



**Figure 4A.1b: Yields on Seven-Year Bonds and  
Credibility Bands. Italian Lira.  
June 1991–September 1992.**



## Appendix 4B: Monetary Union with Different Initial Inflation Rates

Table 4B.1 describes a hypothetical monetary union being formed between two countries. Country A enters the union with zero inflation; both nominal and real interest rates are 5%. In country B, before the union, actual and expected inflation are 5%, and the nominal interest rate is 10%. Expected real rates are equalized because, prior to the union, the interest rate differential between the two countries incorporates the expectation of a 5% devaluation of country B's currency. When the two countries form the union their nominal interest rates converge. What is the level of prices and interest rates in country B? There are two channels. The first is the direct effect on the CPI of rising import prices. This effect would not be particularly large: the share of French and German imports from Italy, Spain, the UK, Portugal and Greece – assuming that all the high-inflation countries were to join the union – amounts to 2.5% of GDP for Germany, 3.5% for France (data for 1988). The (weighted) average inflation differentials between these five countries and Germany and France are currently 3.5% and 4.4% respectively (based on the estimated growth rate of the GDP deflator for 1991). This means that, neglecting substitution effects, the fixed exchange rate link with the five high-inflation members of the EC would add 0.4% per year to German inflation and 0.6% to French inflation. (These figures are essentially the same if the link were limited to Italy, Spain and the UK.) Moreover this channel is already operating in the current EMS, at least since realignments were abandoned almost five years ago. Table 4B.1 assumes an increase of 0.5% in country A's inflation rate.

The second channel operates through interest rates and aggregate demand. We assume that, after the union, the central bank maintains the real interest rate unchanged in country A. This implies a fall in the real interest rate in

**Table 4B.1: Inflation Before and After EMU. Per cent.**

|                              | <i>Country A</i> | <i>Country B</i> |
|------------------------------|------------------|------------------|
| <b>Before EMU</b>            |                  |                  |
| <i>Inflation</i>             | 0.0              | 5.0              |
| <i>Nominal interest rate</i> | 5.0              | 10.0             |
| <i>Real interest rate</i>    | 5.0              | 5.0              |
| <b>After EMU</b>             |                  |                  |
| <i>Inflation</i>             | 0.5              | 5.0              |
| <i>Nominal interest rate</i> | 5.5              | 5.5              |
| <i>Real interest rate</i>    | 5.0              | 0.5              |

---

country B from 5% to 0.5%. Such a sharp reduction in the cost of borrowing would boost domestic demand in the country B and impose a serious inflationary pressure throughout the union.

---

## 5 Summary and Conclusions

---

The benefits from EMU are of two kinds. First, reduced transactions costs and full financial integration will benefit all member countries. Second, price stability and a strong currency will accrue to those countries that have yet to establish such a tradition: Italy, Spain and the UK.<sup>33</sup> Belgium, Denmark, France and Ireland hope to solidify their recently hard-won strong currency status. Germany, and possibly the Netherlands, have little further to gain in this respect; indeed, Germany stands to lose its famed monetary constitution to the point that the general benefits may not be sufficient, on pure economic grounds, to tilt the balance for Germany in favour of EMU. Of course, wider political considerations matter too.

Understandably, low-inflation and low-debt countries do not want to jeopardize their healthy situation, nor should they be asked to do so. There is a palpable risk that, because benefits from EMU do not accrue equally to all countries, the EMU may be set wrong for decades because of undue concern for present-day and temporary conditions,<sup>34</sup> or it may never take off. In analysing the macroeconomic issues involved, this part of our Report has tried to strike a balance: a successful plan must be incentive-compatible, dealing effectively with the fears today of those responsible for conducting negotiations; but it must also strive to set out a robust and wise constitution that will function long after the initial concerns have lost their relevance. Eight main conclusions emerge from this analysis.

- **Price Stability Requires Central Bank Independence**

Central bank independence is a necessary condition for price stability. Price stability is vastly easier to achieve once the central bank has established its credibility. Moreover, central bank credibility also allows monetary policy to be used effectively but safely in response to

temporary shocks. Forty years of Bundesbank experience back up these claims. ECB independence requires that its officials be free from political pressure.

- **Exchange Rate Cannot Be Assigned to ECOFIN**

Economic independence requires that the ECB be free to choose and set its instruments. The exchange rate is endogenous to fiscal and monetary policies, and it should be left for coordination between ECOFIN and the ECB.

- **One Money**

Irrevocably fixed exchange rates but separate currencies only deliver part of the benefit from a monetary union. A common currency delivers the same benefit and much more.

- **Fiscal Policy Independence Must Be Preserved**

Fiscal policy is a useful instrument that cannot be discarded without significant welfare losses. In fact it is probably so useful that attempts at imposing arbitrary constraints will result in 'back-door flexibility' through a host of accounting tricks and hidden public agencies.<sup>35</sup> How the stabilization function is exercised is a matter of choice. As a first approximation it does not matter whether temporary disturbances are dealt with by borrowing and lending (budget surpluses and deficits) or by the insurance function of a federal budget. What matters is that one of the two alternatives be allowed to operate.

- **Fiscal Recklessness Can Be Bottled Up**

Inflation is usually the consequence of fiscal recklessness. High debts lead to one of three outcomes: fiscal restraint, inflation or default. The EMU makes the last two options a matter of collective interest. Even if

inflation is no longer in the hands of any single member country, an independent ECB has reasons to fear political pressure. The effects of fiscal indiscipline can be bottled up in the delinquent country. Incentives for inflationary finance can be eliminated by requiring that, beyond a reasonable level, debt be indexed or issued in foreign currency. Default becomes a domestic issue when it cannot trigger a systemic collapse of the banking and financial sectors throughout the EMU. To make the banking and financial sectors 'default-proof', the indispensable no bail-out clause is not enough. The asset and liability sides of financial intermediaries' balance sheets must be required to satisfy prudential ratios.

- **Entry Precondition: The Exchange Rate**

Starting EMU without inflation convergence has a short-term macroeconomic cost and may have long-term effects on the commitment to price stability. While the short-run costs are easily exaggerated, and the long-run commitment to price stability is a matter of national attitudes, both risks can be reduced by setting preconditions. Requiring price and interest rate convergence is unnecessary and insufficient. Requiring two years at unchanged parity within the narrow EMS bands achieves what is needed.

- **The Final Realignment: Early and Unexpected**

A final realignment may be needed before parities are locked in. Late realignments foster the wrong incentives: that price and wage increases will be validated and that interest rates carry an exchange risk premium. Our proposal – that the decision to enter EMU should embody a commitment to join in two years' time at the central parity obtaining as an EMS member today – encourages early realignments (subject of course to existing ERM rules and understandings) for any countries whose exchange rate misalignment is already thought likely to cause a problem.

- **Stage Three: The Earlier, the Better**

Once the parities are frozen, there is no benefit from Stage Two, and the big risk that it is not 100% credible. The best Stage Two is the shortest possible.



---

## **Part II:     The Microeconomics of Monetary Union**

---

*Pierre-André Chiappori*

*Colin Mayer*

*Damien Neven*

*Xavier Vives*

---

## **6 Prudential Regulation and Financial Stability**

---

The draft statutes of the European Central Bank and the European System of Central Banks state that a 'primary objective of the system shall be to maintain price stability'. Secondary objectives include 'support of the general economic policy of the community' and behaviour consistent with free and competitive markets.

In comparison, banking supervision and preservation of the stability of the financial system have received scant attention. Overseeing 'the smooth operation of the payments system' is one of the functions that the ECB will be required to perform. This will presumably involve supervisory functions; but this is not developed in the statutes. Furthermore, preservation of the financial system appears to be excluded from the list of responsibilities of the ECB.

The ECB is therefore primarily conceived to be an instrument of macroeconomic management. Prudential supervision and avoidance of systemic risk are at best regarded as secondary issues and, in some cases, as functions inappropriate to the ECB.

We argue that this view is incorrect and that it is potentially dangerous to accord secondary importance to the regulatory functions of the ECB. Protection of the European financial system will have to be a central concern of the ECB. Furthermore, some central regulatory body – which may or may not be the ECB – will have to take responsibility for coordination of regulation at a European level.

## **6.1 European Financial Integration**

The integration of European financial markets is proceeding rapidly. Elimination of capital controls, the 'Second Banking Directive' and the Directive of Investment Services are creating a single market in financial services in Europe. After 1992, capital will be able to flow freely through Europe, and banks authorized in one market will be entitled to export banking services and establish branches and subsidiaries anywhere else in the European Community.

Associated with integration is increased competition. Indeed, a main motivation behind 1992 is the belief that promoting competition among member states will enable customers to benefit from lower costs of production and lower prices.

One way in which lower prices can be expected to emerge is through lower profit margins. Until recently, banks' profit margins were comfortably protected in many countries by regulations on interest rates and investments, as well as restrictions on entry. In the last few years, competition has intensified in response to domestic deregulation and in anticipation of 1992. This increased competition is already reducing banks' profitability.

To the extent that this process is merely eliminating monopoly rents, it is clearly to be welcomed. However, in the case of banks, there can be less desirable features associated with declining profitability.

## **6.2 Risks to the Banking System**

Banks take in short-term deposits and invest in long-term assets, primarily in the corporate sector. They perform, in the parlance of the economics

literature, a ‘maturity transformation’ function. This mismatch between the maturities of their assets and liabilities makes them vulnerable to decisions by depositors to withdraw their funds. They are unable to service large demands for withdrawals because the liquidation value of their investments is often small.

By offering a cushion against withdrawals, financial reserves (equity) and profits provide depositors with protection against bank failures. Rents derived from bank charters limit risks of failure. Reductions in profitability from increased competition reduce bank reserves and increase the fragility of the banking system.

In addition, as the Savings & Loans crisis in the US has demonstrated, depositors are vulnerable to imprudent lending by banks. Faced with the prospect of financial failure, shareholders and managers are tempted to gamble their way out of difficulty by investing in high-risk, high-return activities, such as leveraged buy-outs. If the bank thereby secures its financial condition, the benefits accrue to shareholders and managers: if the risky investments fail, the losses are borne by depositors (or providers of deposit insurance). Again, bank charters limit this risk by raising the cost to shareholders of failure (i.e. the rent forgone).

Unbridled competition in banking is therefore not desirable. These risks are normally controlled through regulation.

## **6.3 Regulation of Banks in Europe**

Bank regulation takes many forms: entry restrictions, reserve requirements, liquidity requirements, restrictions on ownership, and supervision of and direct controls on their activities. If threatened by failure, then banks can be

rescued, central banks can act as lenders of last resort and deposit insurance can be paid.

The choice between different forms of regulation is determined in part by the functions that banks perform. In some countries, banks play a central role in the ownership and control of companies. In such circumstances restrictions on corporate equity holdings would impede the normal functioning of banks. On the other hand, risks to depositors may be greater in such systems, thereby necessitating more rigorous monitoring and higher capital requirements.

Partly on account of these differences in financial systems, Europe starts from a position of having quite different forms of bank regulation across countries. In some countries there are limitations on bank equity holdings and the form of bank loans and specific liquidity requirements on banks. Some countries provide quite generous deposit insurance; others do not. In some countries, central banks undertake bank supervision themselves; in others, it is contracted out to auditors.

## **6.4 The Need for Harmonization**

In a system of segmented financial markets, differences in bank regulation can be tolerated; in integrated markets they cannot. There are four important 'externalities' that cause investors in one country to be affected by regulation in others.

First, not all customers of banks are domestic residents. Some of the effects of financial failure are felt by depositors overseas. The recent failure of the Bank of Credit and Commerce International (BCCI) illustrates this quite clearly. Many of the customers of the bank are not resident in its European country of authorization – Luxembourg – so the costs of its failure are then

**Table 6.1: Foreign Assets Held by Banks in Six European Countries. 1985 Constant Dollars.**

| <i>Country</i> | <i>1986</i> | <i>1987</i> | <i>1988</i> | <i>1989</i> | <i>1990</i> |
|----------------|-------------|-------------|-------------|-------------|-------------|
| Belgium        | 1.29        | 1.59        | 1.46        | 1.58        | 1.63        |
| France         | 1.16        | 1.48        | 1.47        | 1.69        | 1.89        |
| Germany        | 1.60        | 2.01        | 1.93        | 2.39        | 2.89        |
| Italy          | 1.15        | 1.21        | 1.16        | 1.47        | 1.39        |
| Luxembourg     | 1.28        | 1.59        | 1.57        | 1.83        | 2.17        |
| UK             | 1.18        | 1.38        | 1.35        | 1.35        | 1.42        |

Source: Bank for International Settlements and authors' calculations.

borne either by overseas residents or by those who are required to pay deposit insurance.

Second, failure may not be restricted to individual banks, and the failure of one bank may cast doubt on the ability of other banks in a country to survive. There is therefore a risk of runs on other banks; in other words, there is a possibility of contagious collapse of the financial system of a country as a whole. Again BCCI illustrates this point clearly. As a result of their exposure to BCCI, local authorities in the UK re-examined their relations with small banks and in some cases decided to withdraw their funds. There was concern that this could prompt the failure of a number of small banks in the UK.

Third, a failure in one country could spread contagiously across Europe as well as within countries. More seriously, as markets become integrated, the exposure of banks in one country to those in another increases. This may result from one bank's having a counterparty position in another or through

the interbank market, which will become much more integrated even before the emergence of a single currency. Table 6.1 records the extent to which the importance of foreign assets in the portfolios of European banks has already increased.

Fourth, with the emergence of the single European currency, banking failures may have repercussions on other countries not only through the interbank market and the counterparty positions banks have with one another but also through the payments system. The effects of liquidity shortfalls are not restricted to the residents of any one country. In determining the extent to which lender of last resort facilities should be provided, account must be taken of the Community-wide consequences of interruptions to payments.

Externalities involving the operation of the payments system and the interbank market therefore mean that decisions cannot be left to national regulators. This stands in contrast to other financial institutions, where cross-border externalities do not arise to the same extent. Decisions concerning the authorization and rescuing of banks need to be coordinated at a European level, whereas principles of subsidiarity allow them to be taken at a lower level for other financial institutions.

## **6.5 International Harmonization of Regulation**

There are two groups that are discussing the international harmonization of bank regulation. The first is the Basle Committee of Central Bankers and the second is the European Community. In a number of concordats and accords, the Basle Committee has set down procedures to govern how the jurisdiction of regulators over banks operating in more than one country should be established and the way in which supervision of banks should be

coordinated. The most important product of the Basle Committee to date has been the agreement on solvency ratios.

The EC has followed the lead given by the Basle Committee. In particular, it has implemented the principle of home country authorization and responsibility for supervision in the Second Banking Directive. The Basle Committee's solvency ratios form the basis of the EC rules.

The EC is going further in trying to harmonize other regulatory rules. These concern minimum capital requirements, investments in non-banks, controlling shareholders and large exposures.

## **6.6 Inadequacies of Current Proposals**

Considerable progress has been made in harmonizing bank regulation. More can be expected and, in particular, harmonization of deposit insurance in the EC is under discussion. We suggest, however, that current proposals suffer from a more fundamental deficiency.

While it is possible to harmonize rules concerning regulation, it is much harder to harmonize discretion. Discretion relates to the methods by which banks are originally evaluated for authorization, their subsequent supervision and decisions to intervene to rescue banks. It was noted above that procedures concerning these activities differ appreciably across countries. That means that while regulatory authorities may abide by harmonized rules, the discretion that they can apply in authorizing and supervising banks will allow banking standards to vary. Some countries have incentives to take a liberal attitude to entry to encourage growth of financial centres; others may be much more concerned about securing the soundness of their banking system. Thus, even with harmonization of rules, variations in standards will persist.



Furthermore, it was noted above that externalities may affect financial systems of individual countries or the Community as a whole. Uncoordinated regulators do not take account of this in supervising banks. That is why the EC has left responsibility for the supervision of monetary matters to host – not home – countries. However, even host countries do not take account of the effects of their actions on third countries that may be affected by bank failures. Coordination is therefore needed; but coordination of discretion is difficult to achieve.

## **6.7 Committee or Central Agency?**

There are two possible forms that coordination may take. The first is coordination of authorization and supervision by a central committee. Such a committee could oversee the procedures that individual countries employ and act as a forum for resolving disputes about the adequacy of countries' regulatory systems.

Initially, this will probably work quite well. A central committee may be able to provide the necessary inducements for regulators to act in Community – not narrow national – interests. It can be strengthened by deposit insurance that is provided by the lead regulator, namely the home country. If such an insurance scheme is introduced, a primary function of the central committee will be to ensure that supervision by the host country is performed to sufficient standards to ensure that undue costs are not imposed on home countries.

Coordination on its own becomes harder when there are systemic rather than individual bank risks. Since deposit insurance is an important element in the protection of financial systems against risks of contagious runs, it will no longer be possible for home countries to choose levels of deposit insurance at will. Instead, minimum levels of deposit insurance will be

needed to ensure that a home country's deposit insurance offers adequate protection to host countries' financial systems. So long as systemic risks are limited to individual countries and not likely to spread contagiously across borders, however, then rules and central committees should be adequate for coping with these externalities.

Committees really become inadequate at the stage where financial systems become so interlocked that regulatory failures have consequences for the Community as a whole. For example, lax regulation by authorizing countries affects host countries, whose reactions to failure can have effects on third parties. The speed with which intervention occurs has implications for financial sectors in several countries – not just that in which intervention is undertaken. At that point, the second form of coordination is required: a central agency that can oversee the behaviour of national regulatory authorities. This body will have responsibility for monitoring and controlling authorization, and for the supervision and intervention functions of national regulatory bodies.

It is important to appreciate that the need for such an agency arises even in the absence of a single currency: integration of financial markets is sufficient. The single currency introduces the fourth externality listed above, namely effects on the European payments system; it therefore gives rise to a further justification for centralized control.

## **6.8 The Design of the Central Regulatory Agency**

At that stage it would seem natural to associate the central regulatory agency with the ECB: monetary policy and lender of last resort are both central bank functions. However, there may be some merit in keeping separate the regulatory functions that are associated with authorizing and closing down banks. The ECB should be associated with the authorization

of banks and providing lender of last resort facilities. A separate regulatory agency could be concerned with closure and the provision of deposit insurance, in order to avoid the risk that authorizing institutions may be reluctant to reveal their failures and close down banks.

A further reason for separation is that there is an important distinction between lender of last resort functions and deposit insurance. The lender of last resort is concerned with the liquidity of banks or the banking system; deposit insurance is concerned with insolvency. If it were always possible to distinguish these, then lender of last resort support would be provided where there were liquidity problems and closure with deposit insurance where there was insolvency. In practice, it is not generally possible to distinguish liquidity problems and insolvency immediately, although this may be possible in the longer term.

Lender of last resort responsibility is therefore the proper concern of central banks. Deposit insurance should in general be funded from risk-based premiums levied on banks. Where there is a serious failure, however, then accumulated reserves may not be adequate. In such extreme cases those having responsibility for administering deposit insurance may need the power to tax. In other words, preservation of deposits may necessitate transfers through the tax system. Separation of lender of last resort and deposit insurance activities may then be justified by the distinct nature of the two functions as well as the need to provide regulators with incentives to close banks where appropriate. These advantages must be set against the costs associated with possible duplication of activities by two agencies.

## **6.9 Risk-Based Regulation**

It was noted above that there are significant differences across countries in the structure of their financial systems and the roles that banks play. In some countries, banks are intimately involved in the investment activities of their borrowers through equity holdings and seats on the boards of these firms. In other countries, there are more distant relations between banks and companies.

Associated with these different financial structures are different risks. It is generally thought that banks are more vulnerable to failure if they have close relations with their borrowers and hold corporate equity. Others argue, however, that close relations improve banks' information about their borrowers and therefore make them less vulnerable to failure. Either way it is clear that regulation should take account of the risks associated with different banking and corporate structures.

In general, it is important that regulation reflect the risks of banking activities. We do not favour rules that require separation of commercial and investment banking activities. To the extent, however, that investment banking increases the risks faced by banks then regulation, in particular capital requirements, should reflect this. To a certain extent this is already a feature of risk-based requirements under the Basle Accord. But these measures are considerably less sophisticated than some proposals for capital requirement rules on market makers and dealers. In particular, currently they do not take account of market risks. We believe that much could be done to improve the consistency between capital requirement rules imposed on banks and non-bank financial institutions.

We argue, however, for regulation to be imposed on organizational rather than functional grounds. The distinguishing feature of banks is that they

offer liquid deposits that can be used for transaction purposes. The insurance that depositors are offered reflects the role that banks play in the payments system. Depositors should feel confident about using banks in preference to hoarding cash without being required to undertake a large amount of monitoring of the quality of banks. Regulation is designed to ensure that insurance is not abused and preferably properly priced. Thus while banks should be allowed to undertake non-banking functions, their regulation should reflect their specific role in providing transaction services and accordingly be more stringent than that imposed on other financial institutions.

## **6.10 The Structure of Part II**

In Chapter 7 we describe current regulatory arrangements in six European countries and proposals to harmonize regulation across countries. Chapter 8 provides a framework within which to consider bank regulation and harmonization. It describes the theory of bank regulation and the alternative tools that are available for regulating banks. It discusses the problems that arise in regulating banks that operate in more than one country and the alternative approaches that can be taken to harmonize regulation. Chapter 9 summarizes our proposals for the transition to monetary union and Stage Three.

## **7 Bank Regulation and Banking Systems in Europe**

---

This chapter discusses existing systems of regulation in the EC and proposals for international harmonization. Section 7.1 describes the six countries' systems. It notes that there are wide variations in both their form and method of regulation. Section 7.2 argues that there are fundamental reasons for these differences, associated with structures of financial systems and the role of banks in different countries. They imply different incentives on regulators to provide protection to investors both domestically and internationally. These divergences of interest are likely to become particularly acute as European financial markets are integrated as part of the creation of the single market in 1992.

The response has been to try to increase international harmonization of regulation. This has been occurring at two levels. First, the Basle Committee has been attempting to achieve global harmonization and coordination of bank regulation. Second, the European Community has been seeking to harmonize certain aspects of bank regulation in the Community in the run-up to the integration of European financial markets. Section 7.3 describes these proposals.

### **7.1 Existing Systems of Regulation**

This part describes bank regulation in Belgium, France, Germany, Italy, Spain and the UK. Six categories of regulation are considered: entry requirements, liquidity ratios, direct restrictions, deposit insurance, prudential supervision and lender of last resort facilities. Solvency ratios are discussed in Section 7.3 under international harmonization.

**Table 7.1: Minimum Capital Requirements of Banks.**

| <i>Country</i> | <i>Million ECUs</i> |
|----------------|---------------------|
| Belgium        | 1.182               |
| France         | 2.149               |
| Germany        | 2.927               |
| Italy          | 16.287              |
| Spain          | 11.719              |
| UK             | 7.143               |

---

Source: OECD (1987) and individual central banks.

### **7.1.1 Entry Requirements**

To be granted authorization banks must meet certain capital requirements. These are summarized in Table 7.1. In addition, there are a range of rules relating to the management of banks, their legal form and internal organization which differ across countries.

### **7.1.2 Liquidity Ratios**

In France, short-term assets with a maximum maturity of one month must represent at least 100% of liabilities with the same maximum maturity. In Germany, there are provisions requiring that certain long-term assets be matched by long-term liabilities and medium-term assets be matched by various short- and medium-term liabilities.

There are no liquidity requirements in the other countries, but liquidity positions are monitored. For example, banks in the UK are required to maintain adequate liquidity, and this is evaluated by the Bank of England on a case-by-case basis.

### **7.1.3 Direct Restrictions**

Direct restrictions relate to the nature of the business that banks can perform, the types of investments that they can make, the ownership of banks and loan concentrations. France, Germany, Spain and the UK have universal systems of banking with few restrictions on the activities of banks. In the UK, however, securities trading is normally conducted by separately incorporated subsidiaries of banks rather than by banks themselves. Prudential considerations lead the Bank of England actively to discourage banks from taking large equity stakes in industrial companies, and holdings of equity in an associated or subsidiary company would be deducted from a bank's capital. Belgium has separation between commercial and investment banking. In Italy commercial banks are restricted in the proportion of loans of maturity greater than 18 months that they can make.

In France, equity participations in non-financial enterprises are limited to 15% of own funds for any one participation and 60% in total. In Belgium, the participation by a bank is limited to 5% of the industrial firm's capital, and in the UK banks have to report holdings in excess of 10% of the institution's capital and seek prior consent if they wish to enter into exposures above 25% of their capital. Equity participations in Spain are limited to 20% of a bank's equity during the first five years of its existence and are subject to solvency requirements. Bank holdings of shares are not in general permitted in Italy unless the companies are performing activities closely related to banking or are in insurance.

Industrial companies' ownership of banks is permitted in Belgium, France and Germany but not in Italy. In Spain, participation is limited to 20% of banks' equity.



**Table 7.2 Deposit Protection Schemes for Commercial Banks in Six Countries.**

| <i>Country</i> | <i>Limitations</i>                                   | <i>Coverage</i>                     |                                  |                                |
|----------------|--|-------------------------------------|----------------------------------|--------------------------------|
|                |  | <i>Deposits in Foreign Currency</i> | <i>Branches of Foreign Banks</i> | <i>Branch in Other Country</i> |
| Belgium        | 11,820 ECU   | No                                  | Yes                              | If no host country protection  |
| France         | 57,310 ECU   | No                                  | Yes                              | No                             |
| Germany        | 30% of bank's liable capital                         | Yes                                 | Yes                              | Yes                            |
| Italy          | 100% of first 130,290 ECU<br>75% of next 521,170 ECU | Yes                                 | Yes                              | If no host country protection  |
| Spain          | 11,720 ECU   | Yes                                 | Yes                              | No                             |
| UK             | 75% of first 28,570 ECU                              | No                                  | Yes                              | No                             |

Source: OECD (1987) and individual central banks.

In Belgium, France and Germany risk exposure to a single customer cannot exceed 40% of a bank's own funds. In the UK, the Bank of England has to be notified of exposures of individual customers in excess of 10% of a

bank's capital base. In Spain, large loans are subject to stricter solvency requirements.

#### **7.1.4 Deposit Insurance**

In Belgium, France, Germany and Italy deposit insurance schemes are privately administered, generally by bankers' associations. In the UK, the Deposit Protection Board, which comprises representatives from the Bank of England and participating institutions, administers the deposit protection plan. A similar body manages the Spanish deposit insurance scheme.

The levels of protection provided by the four schemes are shown in Table 7.2. These vary between 75% of the first £20,000 in the UK to 100% of the first 200 million lire and 80% of the next 800 million lire per deposit in Italy. The German and Italian systems offer protection to deposits in foreign currencies; the others do not. All the schemes offer protection to deposits held by non-residents and branches of foreign banks resident domestically; but only Belgium, Germany and Italy offer protection to the branches of domestic banks in foreign countries.

#### **7.1.5 Prudential Supervision**

Most countries do not regard lender of last resort facilities as pivotal features of their regulatory systems. Of more importance is prudential supervision.

In Belgium, supervision is undertaken by the Commission Bancaire. This employs certified auditors but it also performs occasional on-site examinations itself. In France, supervision is undertaken by the Commission Bancaire. This has detailed knowledge of the daily operation of banks and places great importance on its own in-house examinations.

In Germany, bank supervision is undertaken by the Bundesaufsichtsamt für das Kreditwesen in conjunction with the Bundesbank. In the UK, banking supervision is undertaken by the Bank of England. In both countries, regulators do not in general perform their own bank examinations but require banks to have their annual accounts audited by independent qualified auditors and rely on detailed monthly balance sheet and other prudential returns by the banks. Reports may also be commissioned in the UK from nominated external auditors.

The Banca d'Italia and the Banco de España carry out regular on-site inspections themselves.

#### **7.1.6 Lender of Last Resort Facilities**

Central banks are in general reluctant to admit that they operate lender of last resort policies. In the event of a failure in Germany, the bank is closed and a moratorium period is declared. This period is used to explore possible restructurings of the bank. If these fail then the bank is declared bankrupt and forced to file for bankruptcy. After bankruptcy is filed, the Federal Association of German Banks pays compensation to protected depositors. Shortly after the crisis following the failure of the Bankhaus Herstatt in 1974, a Liquidity Consortium Bank (the Liko-Bank) was established to provide assistance to banks that experience temporary liquidity problems but are otherwise solvent.

In France, the important role of the Banque de France in the commercial paper market makes it difficult to distinguish between lender of last resort facilities and the normal functioning of the credit markets. In the past, the government has looked first to shareholders and then to the banking system to provide the necessary support for failing banks. In the case of the Al Saudi failure in 1988, the French government formally announced plans to save the bank from insolvency. The shareholders of Al Saudi, many of

whom were foreign, refused to contribute funds. French financial institutions, including commercial banks and mutual savings, provided the necessary finance. The government extended coverage of the deposit insurance scheme to foreign currencies as part of a policy to promote Paris as a safe financial centre. Despite the rescue, some depositors lost money. This experience of depositor losses has been repeated in other French failures – for example the three Lebanese-owned banks that failed in 1989.

The Bank of England cooperates with the major commercial banks in managing crises; the ‘lifeboat’ that was formed in 1973 to handle the ‘secondary banking crisis’ is an example. In 1984 the Bank of England came to the rescue of Johnson Matthey in the face of a potential threat to the position of London’s gold market. In general, limitations on depositor protection are respected.

There were many bank failures in Spain over the period 1978-83. Several of these were bought by the Deposit Guarantee Fund. The Banco de España can now administer problem banks. It can liquidate banks and has extensive powers of intervention under certain specified criteria.

## **7.2 Differences in Financial Systems**

Section 7.1 recorded significant differences in the organization and operation of regulation across European countries. This section suggests that there are fundamental variations in the structure of financial sectors and the role of banks that underlie these differences.

In some countries, banks are central to the operation of non-financial corporations. This is particularly true of France and Germany, where banks hold corporate equity and sit on the boards of firms. It is less true of the UK despite the fact that there is no explicit impediment to the direct

**Table 7.3: Comparison of Banking Systems for Five Countries. 1987.**

|                        | <i>France</i> | <i>Italy</i> | <i>Spain</i> | <i>UK</i> | <i>West<br/>Germany</i> |
|------------------------|---------------|--------------|--------------|-----------|-------------------------|
| Number of Banks        | 394           | 159          | 138          | 578       | 313                     |
| Bank Branches          | 9,917         | 7,014        | 16,498       | 14,300    | 6,602                   |
| Population per Branch  | 5,584         | 8,158        | 2,342        | 3,979     | 9,252                   |
| Assets of Banks (\$bn) | 861           | 593          | 255          | 1,561     | 927                     |
| % of Financial System  | 55            | 60           | 64           | 85        | 45                      |
| Foreign Banks' Share   |               |              |              |           |                         |
| % of Assets            | 18            | n.a.         | 5            | 62        | 9                       |
| % of Private Deposits  | 20            | n.a.         | 1            | 21        | 4                       |
| % of Private Loans     | 15            | n.a.         | 5            | 33        | 5                       |

Source: Davis (1990).

participation of banks in corporations. The relevance of banks to domestic corporate sectors is less in financial systems such as the UK where there are large securities (equity and bond) markets.

Some regulators believe that close relations between banks and industry are conducive to sound banking. This runs counter to the conventional view that equity holdings by banks increase risks of financial failure. They argue that closely involved banks are better informed about their borrowers and better placed to react to problems when they do arise.

The size of banking systems varies appreciably among countries (see Table 7.3). In Spain there were 16,500 bank branches in 1987; in West Germany,

there were 6,600. The population per bank outlet in the same year was 2,342 in Spain as against 9,252 in Germany. In 1987, the total assets of the German banking system were \$927 billion; in the UK they were \$1,561 billion. As a percentage of the assets of their financial systems, banks accounted for 45% in Germany and 85% in the UK.

The presence of foreign banks differs markedly between countries. In Spain, foreign banks accounted for just 5% of total assets in 1987; in Germany they accounted for 9%; and in the UK for 62%. Foreign banks held less than 1% of private sector deposits in Spain, 4% in Germany and 21% in the UK.

All of the above imply variations in the role of banks in domestic economies. In some countries, banks are the dominant financial institution; in others, securities markets are more important. In some countries, there is a large presence of foreign banks; in others, banks are nearly all domestic. Regulators have particularly strong incentives to protect banking systems in some countries and to attract overseas institutions in others.

The trade-off between under- and overregulation varies across countries and affects the preferred form and scale of regulation. This becomes of particular importance as financial markets are integrated and, as described above, there are possible spillovers of the effects of regulation in one country on another. The response has been attempts by national governments to harmonize bank regulation and coordinate supervision.

### **7.3 International Coordination of Regulation**

There have been two classes of international negotiation: the Basle agreements and the European Community directives. Section 7.3.1

describes the Basle agreements and Section 7.3.2 the European Community directives.

### **7.3.1 The Basle Agreements**

In the wake of such financial failures as Bankhaus Herstatt in Germany in 1974, the governors of central banks of the 'Group of Ten' established what is now known as the Basle Committee on Banking Supervision under the auspices of the Bank for International Settlements. The main purposes of this committee were to encourage a gradual convergence of bank supervisory practices and to enhance regulatory protection.

The outcome was what became known as the Basle Concordat. This lays down that no foreign banking establishment should escape adequate supervision and that supervision should be the joint responsibility of host and parent authorities. According to the original Concordat, supervision of liquidity should be the prime responsibility of host authorities, as foreign establishments have to conform with local practices on liquidity, while supervision of solvency should essentially be the parent authority's responsibility. Practical cooperation would be encouraged by exchanges of information and regulatory inspections by overseas authorities.

The original 1975 document was reaffirmed and expanded in a revised version in 1983. The 1983 document expressly incorporated the principle of monitoring banks on a consolidated basis, whereby parent authorities have to supervise a bank's world-wide operations, including its foreign subsidiaries. The Concordat stated that 'banking supervisory authorities cannot be fully satisfied about the soundness of individual banks unless they can examine the totality of a bank's business world-wide through the technique of consolidation'. The Concordat reaffirmed that it only

addressed supervisory responsibilities and not lender of last resort intervention.

The most significant product of the Basle Committee has been the Basle Accord, entitled 'International Convergence of Capital Measurement and Capital Standards', which was endorsed in 1988. This agreement set out the basis on which risk-weighted capital requirements should be determined. It relates only to credit and not to market risk. It establishes an agreed approach to defining the constituents of capital, assigning credit risk weights to various types of exposure and setting minimum requirements for the ratio of capital to risk-weighted assets. The Group of Ten countries have agreed to comply fully with this proposal by 1 January 1993. With minor modifications it is also the basis of the European Community Directives on Solvency Ratios and Own Funds.

### **7.3.2 The European Community Directives**

The principles of the single European market regarding banking are enshrined in the Second Banking Directive. This lays down the principles on which an internal market will be created through a single banking licence based on mutual recognition and minimum standards of prudential supervision. The basic standards of supervision envisioned by the Second Directive are supplemented by various EC directives and recommendations.

The corner-stone of the Second Directive is that credit institutions are in general supervised by home countries. However, host countries retain responsibility for liquidity standards and the implementation of monetary policy. At present, host countries also retain an interest in the market risks incurred by institutions, as these are not incorporated in the directive on solvency ratios.



The home country principle applies to *branches* of foreign banks, but not to *subsidiaries*, for whose supervision host countries retain responsibility. This is necessary because subsidiaries – unlike branches – are separately incorporated under the laws of host countries. Subsidiaries of foreign banks have their own capital, which lies within the regulatory and supervisory jurisdiction of host country authorities.

While the Second Banking Directive does not attempt to standardize banking law, there are a number of areas in which harmonization has been proposed: minimum capital for authorization, investments in non-bank entities, controlling shareholders, solvency ratios and own funds definitions, large exposures and deposit guarantee schemes.

Banks must satisfy a minimum capital requirement of at least 5 million ECU to start operations. They may not hold more than 15% of their own funds in investment in non-banks (or more than 10% of the relevant firm), and the total value of such holdings may not exceed 60%. Home country authorities must be informed of shareholdings in excess of 10% of voting rights and require those acquiring stakes in banks to give notification when their holdings pass 20%, 33% or 50%. With some exceptions, EC requirements on solvency ratios and own funds are similar to the rules set out in the Basle Accord. Large exposures are defined as those in excess of 10% of banks' own funds. Any one of these is limited to 45% of a bank's own funds, and in total they are limited to 800% of own funds. The introduction of deposit insurance in all EC member countries has already been proposed. The Commission is currently investigating the possibility of harmonizing insurance schemes across the Community, probably on the basis of home country regulation.

---

## **8 The Principles of Financial Regulation**

---

This chapter sets out the principles that underlie bank regulation. Section 8.1 discusses the case for regulation. It notes the special role of banks in the economy and the risks to which banks are vulnerable. There is a 'market failure' that means that the private sector cannot ensure the adequate functioning of the banking system.

Section 8.2 examines alternative forms of regulation. It discusses lender of last resort facilities, deposit insurance, solvency ratios and restrictions on banking activities. Section 8.3 turns to the main subject of the Report, the regulation of international banking. Section 8.4 argues that problems of international harmonization give rise to a particular preference for rule-based as against discretionary regulation. But rule-based regulation is not sufficient. The question then arises as to how discretionary regulation should be harmonized.

Section 8.5 considers two possibilities: coordination through committee and centralization of regulation. It suggests that at some stage centralization of regulation becomes inevitable. At that point, attention has to be given to institutional design. Currently, bank regulation is primarily – but not always – the responsibility of central banks. In Belgium, Denmark, France and Germany, institutions other than the central banks are involved in regulation. There may be a merit in separation in so far as those institutions that license banks may not have the right incentives to close them down in the event of failure. Section 8.8 summarizes the principles of regulation set out in this chapter.

## **8.1 The Case for Regulation**

### **8.1.1 Risks to Banks and the Banking System**

Economics attributes a special role to banks in an economic system. They perform an array of functions: they provide transaction services; they are part of the payments mechanism; they transform short-term deposits into long-term loans; they provide liquidity, spread risks and monitor loans. Of these, it is probably the combination of provision of payments services and maturity transformation that sets banks apart from other institutions.

Lending to companies is quite different from investment in marketable securities. The activities of banks are very difficult to monitor. At the best of times, a large number of individual depositors have little incentive to devote resources to the monitoring of bank activities. There is a 'free rider' problem in monitoring. In the case of banks, it would be difficult for depositors to collect information about bank investments even if they wanted it. As a consequence, a bank's depositors are far less well informed about its activities than its owners and managers. There is a problem of 'asymmetry of information' between depositors and banks.

This asymmetry in information gives rise to risks of 'moral hazard': that banks take actions that are not in the interests of depositors. In particular, banks may engage in excessively risky investments at the expense of depositors who do not gain if the investments are successful and lose their money if they are not.

There is a still more serious reason for concern about the solvency of banks. Banks transform short-term deposits into long-term loans. This leaves them exposed to withdrawals that necessitate the premature liquidation of long-term assets. If the net realizable value of assets falls below deposits, then banks are unable to service withdrawals in full and

insolvency may result. Perceiving this risk, investors may be induced to withdraw their deposits from financially sound banks in anticipation of similar behaviour by others. Banks are thus prone to runs; investors realize that the value of assets in the bank is low and that withdrawing is the best strategy.

Not only are banks vulnerable to runs; they are also exposed to failure elsewhere in the banking sector. The failure of one bank can lead depositors to question the solvency of others. As a consequence, depositors may withdraw funds from perfectly healthy banks because they are unsure about their soundness or simply because they are uncertain whether other depositors are about to run.

Depositors may in fact be quite right to infer information about the financial condition of other banks from the failure of one. The risk of runs should encourage other banks to launch rescues of failing banks. If they do not, this may indicate their inability to do so. In other words, their failure to intervene may signify their own weak financial condition. As a consequence, depositors withdraw on the basis of the failure of the first bank.

### **8.1.2 The Costs of Financial Failure**

A bank run is costly in terms of real resources since the production process is interrupted and assets are liquidated prematurely. The major causes of the recession in the 1930s were bank runs and the management of the crisis by the Federal Reserve. Failure in the banking system may have wider ramifications on the rest of the financial system and ultimately the economy. Intermediaries in money and capital markets, such as dealers and market makers, provide essential liquidity services which need to be supported by bank credit lines. In raising liquidity, participants in markets face risks of failure to refinance that are similar to the risks of runs faced

by banks. Unexpected demands for settlement – due to large price variations or the failure of a major institution – may trigger a systemic crisis. In contrast to the 1930s, the October 1987 stock market crash did *not* evolve into a systemic crisis because the Federal Reserve intervened to provide liquidity to the banking system.

### **8.1.3 Investor Protection**

A slightly different role of regulation, which is not unique to banks, is to provide investor protection. Asymmetries of information between depositors and banks give rise to risks of fraud, negligence and incompetence on the part of banks. Of these, fraud is undoubtedly the most serious. Even in the absence of systemic risks, there is a case for regulation to prevent fraud.

### **8.1.4 Summary of the Case for Regulation**

The case for regulation therefore hinges around five observations. First, banks play a central role in a financial system; this is associated with the payments mechanism and maturity transformation. Second, there is a ‘market failure’ in the operation of banks associated with imperfect information. Third, there are externalities among banks that stem from the risk of contagion. Fourth, systemic collapses are costly in terms of their effects on the payments system and on other parts of the financial system. Finally, some form of regulation is justified on grounds of investor protection even in the absence of systemic risks.

## **8.2 The Design of Regulation: Regulatory Instruments**

There are two types of bank regulation: structure and conduct regulation. Examples of the first are functional separation of institutions (such as the separation between commercial and investment banks in the Glass-Steagall

Act in the US), direct restrictions on asset or liability operations, entry requirements (like chartering requirements and minimum capital requirements), deposit insurance and lender of last resort provisions. Examples of conduct regulation are information disclosure rules and pricing rules or rate regulation.

### **8.2.1 Lender of Last Resort and Deposit Insurance**

Lender of the last resort intervention and deposit insurance are the basic tools of financial market stabilization. Deposit insurance and lender of last resort facilities reduce the risk of runs and protect the payments system. Lender of last resort action should be used for problems of liquidity and deposit insurance insolvency. In drawing this distinction it is important to appreciate that from the perspective of a regulatory authority, the relevant value of a bank is its social value. Banks may be insolvent but still deemed to be ‘too big to fail’ because they play a central role in a financial system or because they are major sources of finance to industry.

Another important distinction between the two for the purposes of this discussion is that lender of last resort intervention is discretionary, whereas insurance is rule based. This is important in two respects. First, because of their discretionary nature, lender of last resort facilities suffer from more serious problems of credibility than deposit insurance. It is widely thought that the Federal Reserve in the US misused its discretion in the 1929 crisis and its aftermath. Second, as we will discuss below, it is easier to harmonize rules rather than discretion. The internalization of externalities associated with financial failure is therefore more easily achieved with deposit insurance than with lender of last resort facilities.

Deposit insurance has played a major role in providing stability to the US financial system since the 1930s. Its role in Europe has been much more limited; it was introduced in most countries in the late 1970s, primarily

with a view to providing protection to small deposit holders rather than financial stability. Amounts insured in European countries are for the most part low and in many cases the existence of such insurance is largely unknown to the public. With increased risks in European financial systems, the importance of deposit insurance in systemic as well as investor protection will increase.

Both lender of last resort facilities and deposit insurance suffer from moral hazard problems. Deposit insurance with flat premiums induces excessive risk-taking and reduces depositors' incentives to monitor banks. Faced with financial failure, institutions have incentives to pursue 'go-for-broke' strategies offering high deposit rates and driving healthy banks out of the market, as in the case of the US Savings & Loans crisis. Lender of last resort facilities suffer from similar problems so long as it is thought they may be used to bail out troubled institutions, in particular those that are deemed to be 'too big to fail'.

A serious objection to acting as lender of last resort is the threat that it poses to price stability. The concern is that directing such lending towards the preservation of the financial system may undermine price stability. This was discussed in Part I. Here we merely restate that there is a confusion: liquidity creation associated with lender of last resort facilities can be sterilized when monetary conditions permit; so lender of last resort intervention need have no *long-run* inflationary consequences. On the other hand, it may in certain periods be essential to the preservation of the proper functioning of the financial system.

One of the arguments for discretion in the application of lender of last resort facilities is that uncertainty about intervention discourages moral hazard. As a consequence, central banks prefer not to disclose the precise circumstances in which they would intervene. However, this has the

undesirable effect of increasing the risks of runs. We believe that moral hazard is not appropriately controlled through uncertainty about whether the lender of last resort will act. Instead, we argue for better systems of screening and monitoring banks and earlier intervention in cases of abuse.

### **8.2.2 The Mix of Instruments**

There are costs associated with all forms of regulation. Capital requirements impose barriers to the entry of new banks; liquidity ratios distort banks' portfolio allocations; direct restrictions on the activities of banks limit economies of scope that may exist between commercial and investment banking and between bank lending and holdings of corporate equity. Optimal regulation requires a detailed consideration of the trade-offs of the costs and benefits of different instruments. In general, regulation will involve the application of a mix of instruments.

There is general agreement that as far as possible regulation should be based on risk and implemented by price. Properly priced regulation is preferred to controls of the form of a separation between commercial and investment banking. Capital ratios and premiums on deposit insurance should reflect the riskiness of banks. This is harder to do for banks than, for example, brokers and dealers, on account of the absence of market price data on their investments. The correct pricing of risks is particularly important, however, in view of the differences in the functions of banks across countries noted in Section 8.1 above. Serious distortions in competition could arise if different levels of protection were provided to banks in different countries without protection being properly priced. Alternatively, if regulation were set at a level consistent with protection of the riskiest banks, it could create formidable barriers to entry.



### **8.2.3 The Narrow Bank**

One form of regulation that has been widely discussed is the 'narrow bank'. In its most extreme form – 100% reserve requirement – banks are required to invest all their deposits in risk-free, liquid government securities. The objection to this proposal is that economies of scope between deposits and credits may be lost in the process and, still more significantly, problems of instability would simply be transferred to the other divisions of the holding company that fund illiquid assets.

The narrow bank proposal draws attention, however, to a number of important considerations. First, deposit-taking institutions should be regulated more stringently than other financial firms. Second, there is a question of how holding companies should be regulated. There seems to be no objection to banks' owning other financial or industrial firms, provided risks are priced, prudential capital ratios are adequate and supervision is appropriate for the risks that banks take.

On the other hand, industrial or non-bank financial company ownership of deposit-taking institutions is more objectionable for two reasons. First, the explicit or implicit insurance provided to banking subsidiaries may be used by holding companies to subsidize their other activities. Second, if banking is concentrated then industrial companies could use their control over banks as a way of limiting entry of new firms into their product markets. The latter problem will largely disappear in the larger, more competitive European market and the former requires the proper pricing of regulation. The argument in favour of permitting other companies to own banks is that this may allow better management to be injected into what is often a relatively badly managed sector.

### **8.3 The Regulation of International Banking**

Thus far we have considered the design of bank regulation in general terms. The particular subject of interest here is the effect on regulation of the creation of a single European financial market and in particular a single currency.

A single European market in financial services is being created, in which banks authorized in one country will be able to export their services to any other member country of the EC. They will have rights of establishment of branches and subsidiaries. The principle behind this is that competition in the provision of financial services will improve services provided to consumers and lower the cost of their provision.

International trade in banking services raises particular problems of regulation. Once banks start to trade outside the country of their authorization, the interests of regulators and of those affected by regulation diverge. There is an externality arising from the fact that regulators will not take full account of the interests of all of those affected by regulation.

There are four levels at which this is likely to happen. The first is that bank failures affect overseas as well as domestic customers of a bank. In authorizing the establishment of a bank, a regulator may take inadequate account of the costs that may be borne by overseas residents resulting from failure or fraud. Lax regulation can be used to encourage banks to locate their activities in particular financial centres. There is a particularly strong incentive to pursue this line when countries derive the benefits of local registration but bear only a small proportion of the costs of failures of banks that operate overseas.

The costs of failure overseas may not be restricted to the direct customers of banks. As noted above, banks are susceptible to contagious collapse. As a consequence, the failure of one overseas bank may throw into question the financial condition of other banks, both domestic and overseas. The domestic repercussions of a systemic failure in one country resulting from lax regulation in another would obviously be a matter of serious concern.

Things are still worse, however, when not only are banks subject to contagious collapse but contagion is not restricted to one country. International contagion could result if the failure of a bank in one country undermined investors' perceptions of the soundness of banks in another. In addition, even if such panic runs did not occur, there may be real threats to the financial solvency of banks overseas if banks hold counterparty positions across borders. With the internationalization of financial services, the international flows of finance between financial institutions, including banks, have increased. One aspect of this that is particularly likely to grow in the future is the internationalization of interbank markets. If a European market in financial services does emerge, then national interbank markets are likely to become closely integrated.

All of these externalities arise in the absence of a single European currency. What a single currency does is to extend externalities through the payments mechanism. Widespread bank failures undermine the operation of a country's payments system. In the presence of a single currency, such interruptions to payments systems are not limited to one country.

To summarize, international trade in services can lead to inadequate regulation of banks for four reasons. Regulators may pay insufficient attention to: overseas customers of domestic banks; the systemic risks in overseas countries in which banks trade; systemic risks in the EC as a whole; and the EC payments system.

There are three possible responses to these externalities: to harmonize, coordinate or centralize regulation.

## **8.4 Rules versus Discretion**

As described in the previous section, the EC has made home countries responsible for regulating the activities of banks in all member states. The exception to this concerns supervision relating to the money supply, which remains the responsibility of host countries. As part of the process of ensuring adequate standards of regulation, the EC has imposed minimum standards of regulation. These relate to minimum capital requirements, investments in non-banks, controlling shareholders, solvency ratios, own funds and large exposures.

It is clear from this list that there is a particular class of regulation that it is possible to harmonize, namely regulation that takes the form of rules. This is a significant advantage of the application of rules in an international context. There is one rule in particular for which further harmonization is required: deposit insurance. Externalities in regulation are internalized by ensuring that regulators bear the costs of regulatory failures. In an international context this is most effectively done by requiring home countries that authorize banks to provide world-wide investor protection.

In the absence of systemic risks all that would be required is that regulators provide the same level of protection to overseas residents as they do to domestic. As can be seen from Table 7.2, that is not currently the case. However, it was noted above that deposit insurance is also an important mechanism for discouraging runs. Thus where bank failures can threaten overseas financial systems as well direct customers of banks, deposit insurance has to be adequate to avoid risks of runs. This means not only

that deposit insurance should be domestically supplied, but also that it should be set at a minimum level.

While rules have particular attractions in an international context, it would be a mistake to place undue emphasis on them. Rules are inflexible, legalistic and often blunt in the way in which they deal with problems. Discretion allows for more flexibility and more subtlety in the application of regulation. Even in an international context, both forms of regulation will be required.

## **8.5 Centralization versus Coordination**

Where there is discretion in regulation – namely authorization, supervision and rescues – there are problems in ensuring that domestic regulators pay adequate attention to the international repercussions of their actions. There are two possible responses that can be made. First, regulation can be coordinated; second, regulation can be centralized.

Principles of subsidiarity imply a preference for national autonomy in regulation. This means that, unless there are good arguments to the contrary, international problems of regulation should be solved through coordination rather than centralization wherever possible. Centralization undermines competition in regulatory rules and thereby potentially threatens competition in financial services. Where regulation is inflexible then innovation is stifled.

Coordination may be achieved through the establishment of committees, where standards of regulation can be evaluated and disputes resolved. This is suitable for dealing with externalities that involve a limited number of countries. The principle of independence of national regulatory bodies with

periodic resolution of international issues is one to which international committees are well suited.

This is not true when international linkages become widespread and interactions between different countries financial systems routine. In that case, the scale of international coordination that is required to internalize externalities undermines national autonomy in regulation. Integration creates a single European financial market that makes geographical delineation of regulatory boundaries meaningless. If all countries have an interest in the preservation of all countries' financial systems, then coordination in regulation by committee risks too much interference by different parties in the regulatory process.

Coordination by committee encounters the problems traditionally associated with collective decision-taking: excessive bargaining, high communication costs and lobbying from pressure groups of national authorities. Deadlock may result. A central body is required that has appropriate incentives to collect information on the activities of banks that relate to the Community as a whole and can act rapidly to stop system-wide problems from emerging. The importance of having a centralized Federal Reserve Board in the US that could take an instant decision to underwrite the US financial system during the stock market crash of 1987 cannot be overstated.

The third and fourth types of externality mentioned above – arising through counterparties, interbank markets and the single currency – create the conditions for a single financial market. The principle of subsidiarity therefore requires that responsibility for regulation be transferred to a central body when either European financial integration is well advanced or the single currency is introduced.

## 8.6 Institutional Arrangements

If centralization of regulation is appropriate then the next question that arises is whether this implies the creation of a single regulatory agency. A general principle that should be followed in designing a regulatory structure is that the incentives on regulators should be related to the quality of regulation they provide. To the extent that regulatory failure may in part be due to inappropriate authorization in the first place, then a single regulatory agency that is responsible for authorization, supervision and closure would appear necessary.

Against this is the problem of monitoring the performance of the regulator. Regulatory capture may result in some form of collusion between banks and regulators to hide information about the poor financial condition of a bank. An example of this is the US Savings & Loans crisis, where regulators and elected politicians used a 'capital forbearance' strategy, allowing insolvent institutions to continue operations in the hope of a recovery.

This argues against authorization and closure being undertaken by the same regulatory body. If these are not separated then those who have authorized banks may be reluctant to acknowledge their failure. A case can be made for a central bank chartering banks and providing liquidity to financial institutions where needed, and a separate regulatory agency responsible for deposit insurance taking care of solvency and closure decisions. Both institutions should have supervisory and monitoring powers.

Deposit insurance should be financed out of (risk-based) premiums. In exceptional circumstances where large-scale insolvencies occur, funds accumulated by the insurer may be inadequate to meet claims for compensation. In such extreme cases it may be necessary for taxes to be

levied to meet the shortfall. In other words, where compensation cannot be paid from insurance funds, then transfers to depositors from the public at large through the tax system may be required.

## **8.7 Should Regulatory Rules Be Harmonized?**

Even if regulation is centralized, it need not be the same across all countries. We argue, however, that the same relations between risk and regulation should be applied throughout the Community, i.e. regulation should not be used to provide implicit subsidies to some countries' banking systems.

As previously noted, however, banking systems do differ appreciably between countries; so risks differ across countries. Thus for any particular system of risk-based regulation, variations in regulation across countries are to be expected. If that were not the case, then high-risk banking systems would implicitly be subsidized by low-risk systems.

## **8.8 Summary of Principles of Regulation**

The nature and activities of banks necessitate a form of regulation that differs from that of other financial institutions. Deposit insurance and lender of last resort facilities are central to the protection of depositors and avoidance of systemic failures. Deposit insurance should be associated with problems of insolvency and lender of last resort intervention with liquidity problems. In determining whether a bank is insolvent, however, regulators should take account of divergences between private and social valuations associated with, for example, 'too big to fail' principles.

Moral hazard problems associated with both lender of last resort activities and deposit insurance necessitate screening and monitoring of banks.



Regulation (in particular capital requirements and insurance premiums) should, as far as possible, be risk based. This will also in part overcome problems of ownership of banks by non-financial enterprises.

In an international context, externalities arise that lead national regulators to take inadequate account of the international consequences of their actions. Since rules can be harmonized while discretionary regulation cannot, rule-based regulation plays a particularly important role in international banking. This suggests that increased emphasis should be placed on deposit insurance as a means of ensuring that regulators take account of losses suffered by overseas depositors. In the presence of systemic risks, minimum levels of deposit insurance will be required.

We have suggested that principles of subsidiarity argue against centralization of regulation until a later stage of financial integration. In particular, central committees should be able to provide adequate coordination of regulation so long as externalities only involve a few countries. It is when financial systems become firmly integrated or the single currency is introduced that a central regulatory agency becomes inevitable.

We argued that there is a case for separating regulatory functions associated with authorization and lender of last resort from those of closure and deposit insurance. Finally, we noted that the same system of regulation should be used across the Community as a whole but, with risk-based regulation, that would imply variations in regulation (for example, capital requirements) across countries.

---

## **9 Conclusions and Recommendations**

---

The European Central Bank has been primarily perceived as an instrument of macroeconomic policy. Supervision and preservation of the stability of the financial system have received less attention. In part this is probably simply because macroeconomic issues have dominated the agenda to date and there has been insufficient opportunity to consider regulatory issues in depth. However, it in part also reflects a concern about entrusting the ECB with wider regulatory powers.

There are two reasons for this concern. First, principles of subsidiarity argue against centralization of regulation. Second, there is a belief that an over-emphasis on the preservation of the financial system's stability may mitigate against the ECB's role of controlling inflation. This latter concern is particularly applicable to lender of last resort functions. If there is lender of last resort intervention, then monetary creation may have macroeconomic consequences.

We believe that these concerns are misplaced and that the relegation of regulatory functions may have serious consequences for the operation of the European financial system. We base this conclusion on the observation that in an integrated financial market, and in particular with a single currency, national regulation is seriously deficient. Indeed, it is almost meaningless to talk about national regulation in a truly integrated market. Harmonization is vital, and while some parts of a regulatory system can be harmonized through agreement on common rules, many cannot. Discretion is as important a part of regulation as rules. One element of discretion relates to the application of lender of last resort facilities. These are the proper responsibility of a central bank, so the ECB will necessarily be drawn into lender of last resort functions.

The concern about the monetary consequences of lender of last resort functions is misplaced because monetary expansion is short-lived and can be sterilized when normal conditions prevail. What presents more serious concerns is insolvency. This requires regulatory bodies to play a role in restructuring, merging and closing banks. In particular, closure is related to the payment of compensation of insurance to depositors. We have argued that deposit insurance plays a central role in avoiding systemic failures and we have thus proposed that it be set at a minimum level. In effect, a single market means that issues of insolvency are handled at a Community level though they may well fall outside the jurisdiction of the ECB.

We now turn to a detailed description of our proposals. We begin in Section 9.1 by describing the structure of regulation that we envisage prevailing with a single currency. In Section 9.2 we describe how to get there through the transition phase.

## 9.1 Stage Three Proposals

- **The ECB should be concerned with the stability of the financial system and in particular with the authorization of banks and the operation of lender of last resort intervention.**

We have discussed at length why this is required and why current concerns are misplaced. In particular, we have noted that coordination by committee is inadequate once a single European financial market and single European currency emerge. A central agency is required to have authority over regulation and to ensure that failure is corrected expeditiously.

- **There is a case for separation of authority over illiquidity and insolvency.**

Authorization and illiquidity are the proper concerns of the ECB; insolvency and closure are not necessarily its concerns. A central agency is required to administer insolvency, closure and the operation of deposit insurance, but this need not be the ECB. The case for separation revolves around the improved incentives that separate agencies may have to administer the closure of banks and the reduced risks of regulatory capture that may thereby result. This must be set against the possible duplication of activities that may be involved in having two agencies.

- **The role of deposit insurance in investor protection should be strengthened and minimum levels of insurance imposed.**

There are two arguments for this. First, in contrast to lender of last resort intervention, deposit insurance is rule based. It provides a more credible form of protection than does lender of last resort and is thus more likely to limit risks of contagious failures. Second, in an international context it is easier to harmonize rules rather than discretion. In particular, if deposit insurance is to limit risks of systemic failure as well as providing investor protection, then minimum levels of deposit insurance will be required.

- **Regulation (in particular capital requirements and deposit insurance premiums) should be risk based.**

The arguments presented about regulation in the last section centred around the specific functions of and risks to banks. Insurance in the form of deposit insurance and lender of last resort backing should be provided because of the vulnerability of banks to contagious runs (a market failure) and their important position in the payments system. The recommendations in this Report therefore relate to any deposit-taking institution, irrespective of the other functions that such deposit-taking institutions undertake. Of course, the functions of such institutions will affect their risks of failure. Regulation should reflect

those risks; but it should not attempt to force distinctions between the different activities of banks.

The structure of banking systems differs appreciably across countries. Universal banking is commonplace in some countries but not in others. Regulation should not interfere with the operation of universal banking where it is practised. Indeed the elimination of restrictions on universal banking is likely to increase its use as financial institutions attempt to exploit economies of scope of different banking functions.

Where possible, regulation should be properly priced. This applies in particular to capital requirements and premiums charged on deposit insurance. Currently solvency ratios bear a loose relation to the risks of financial institutions, and market as against credit risks are not incorporated in ratios. To avoid risks of failure, requirements are set at high levels although this creates barriers to entry. Instead, it would be preferable to sacrifice simplicity for more accurate measures of risk that take account of, for example, correlations between risks. Elsewhere, regulation should be tailored to the risks of institutions. In particular, supervision (frequency of monitoring) should reflect the risks of institutions. To the extent that capital requirements are risk based, the need for risk-based insurance premiums may be diminished, but probably not eliminated entirely. Premiums on deposit insurance should be sufficient to ensure that schemes are in general self-funding. In extreme cases, however, it may be necessary to supplement claims on insurance funds from general taxation.

## **9.2 The Transition to Stage Three**

We have identified four steps in the Community's financial integration (see Table 9.1). In the first step, barriers to the free flow of banking services are reduced by the home country principle. Externalities that cannot be internalized through harmonization of rules can be dealt with through home

**Table 9.1: The Four Steps of Transition.**

|        | <i>The Process</i>  | <i>The Externality</i>   | <i>The Response</i>   |
|--------|---|--|---|
| Step 1 | Freedom to establish  | Investor protection in host country                            | Home country deposit insurance and monitoring by central committee  |
| Step 2 | Major presence of overseas banks in domestic markets                            | Systemic risks in host countries                               | Minimum level of home country deposit insurance. Ability of central agency or committee to administer rescues and lender of last resort |
| Step 3 | Integration of European markets through interbank markets and cross-border runs | Cross-border systemic risks                                    | Central regulatory agency to ensure that supervision is adequate and administer rescues and lender of last resort                       |
| Step 4 | Single European Currency  | Community-wide systemic risks and payments system consequences | Stage 3 proposals   |

country deposit insurance, bilateral negotiation and committees of central bankers.

In the second step, bank failures can have wider repercussions on domestic financial systems. Minimum levels of deposit insurance provided by home countries are required to ensure not only that investors are protected but also that risks of runs are avoided. Coordinated action to stem systemic failures in member countries will then be required. It may be possible to administer rescues and lender of last resort facilities through centralized committees; but the allocation of responsibilities will have to be clear to allow the rapid implementation of decisions. This may be done by empowering individual committee members (on a rotating basis) to take certain decisions in the event of crises.

In the third step, where European banking markets become integrated through interbank markets and the risks of runs spread across borders, there appears to be no way of avoiding risks of serious Community-wide financial disturbances without the establishment of a regulatory agency. This must be responsible for overseeing the adequacy of supervision in different countries and for coordinating responses to financial crises.

The final step is the creation of the single European currency. Our proposals for this step involve a natural progression from the proposed regulatory system described for the previous step; and they imply that the creation of a single regulatory agency will probably *precede* the introduction of a single European currency.

---

## Notes

---

1. See the document prepared by the EC Commission, 'One Market, One Money', *European Economy*, 44, 1990.
2. The DM-zone principle is articulated in Giavazzi and Giovannini (1989) and further confirmed in Weber (1991).
3. In the words of Dr Hans Tietmeyer (as reported in the *Financial Times*, 12 June 1991): 'one of the most successful and best monetary constitutions in the world'.
4. A detailed analysis is provided by Grilli, Masciandaro and Tabellini (1991). For a review of the literature, see Swinburne and Castello-Branco (1991).
5. Overdraft facilities provide financing to Treasuries at concessionary terms. This is why a ban on automatic overdraft facilities is essential even though central banks can always offset the undesired liquidity effects of overdraft financing, in the open market or otherwise. National parliaments can always raise overdraft limits to lower the cost of debt, making it increasingly difficult for the central bank to control the money supply. If the ban on overdrafts is included in the statute, and therefore becomes part of the Treaty, national parliaments, after ratification of the Treaty, lose any freedom to alter the clause by ordinary legislation.
6. A number of other serious questions arise with lender of last resort functions. These are discussed in Part II.
7. See e.g. Bishop *et al.* (1989), Eichengreen (1990), Giovannini and Spaventa (1991), Wyplosz (1991). Canzoneri and Diba (1990) present a theory which backs the Report's recommendation. They point out, however, that they assume that deficits play no useful role and agree that theirs is 'a one-sided view'.
8. As noted by Padoa-Schioppa (1990), 'the more stringent the monetary rules, the less may be the fiscal rules'.
9. Krugman (1991) and Blanchard and Katz (1992 forthcoming) have observed that economic and monetary integration in the US has probably led to more specialization among the States. If this pattern were to apply to Europe in the future the risk of industry-related country-specific shocks would increase, not decrease as is often expected.
10. There exist several differences between the two schemes. For example, an insurance scheme always opens up issues of moral hazard and adverse selection. On the other side, insurance is desirable when subscribed to by a large number of customers and when the possible shocks are very large but rare enough. In the present case, as argued further, insurance could be only limited in its coverage because there are few subscribers.
11. Naturally, the insurance scheme would not entirely solve the debate on fiscal recklessness: it would displace it to the Community level and open up new issues of moral hazard and adverse selection. Furthermore, with a federal budget, countries may refrain from taking all necessary steps to avoid, or lessen the effects of, adverse disturbances because of the transfer of resources that they can expect from the other member countries (moral hazard). Even worse is the possibility that countries with a sound fiscal management will refuse to join a club that accepts potential free riders (adverse selection).
12. New York City is the unavoidable case in point.



13. See von Hagen (1990).
14. See Begg *et al.* (1990).
15. Interestingly, the Greek problem is due less to the size of its debt – smaller than in Belgium, Ireland or Italy – than to the size of its primary deficit.
16. This casual evidence is buttressed by more formal work, e.g. Blanchard and Summers (1984).
17. For some recent information see Hughes and Smith (1991).
18. Eichengreen (1990) finds a positive relationship between debt size and interest rates in the US. Bishop *et al.* (1989), Goldstein and Woglom (1992 forthcoming) provide additional information, especially for the US and Canada.
19. Formally, inflation acts as a tax on fixed interest assets. We separate out money because it has zero nominal yield and can be printed at will by the authorities.
20. 'Foreign currencies' in this context mean non-Community currencies. It must be remembered, however, that one of the prescriptions of the Delors Report is that EMU governments be forbidden from borrowing in third currencies – presumably because it is feared that such borrowing may affect the exchange rate policy of the union, or, in case of sterilization, the common monetary policy.
21. The same proposals are in Bishop *et al.* (1989) and Bishop (1990).
22. See Bishop *et al.* (1989) and Bishop (1990).
23. The Cooke ratios, proposed by the Bank for International Settlements and by now widely accepted, require that banks' capital be a given proportion of their assets, the higher the riskier are the assets. See Part II.
24. It has been argued on the one hand (see Giovannini and Spaventa (1991)) that making entry conditional on fiscal adjustment may be the effective political sanction that provides weak executives with the political incentive they lack to tackle their budgetary problems. While there is some merit from the point of view of the country concerned, it is not necessarily in the union's interest to be used *ex ante* in the political debate as a scapegoat for difficult policy decisions. When in the EMU these countries will have to solve the problem – in any way they wish except through inflation.
25. This view has been championed by Germany and is articulated in several official documents, for example the 1990-1991 Annual Economic Report of the EC Commission (*European Economy*, 46, December 1990) or 'Convergence in the European Community', *Bank of England Quarterly Bulletin*, August 1991.
26. This view has been well characterized in the following statements found in the British Press: 'If sterling does join, the biggest change will be the transfer of responsibility for Britain's monetary policy from the Bank of England to the Bundesbank which, as the central bank keenest on sound money, sets the pace for other to follow. This would be a blessing: Tory governments may like appointing City gents as governors of the Bank, but Mr Karl Otto Pöhl would do a better job.' (*The Economist*, 21 September 1985.) 'In place of money supply targetry, long since discredited, we would have that unflinching guardian of monetary rectitude, the Bundesbank, standing as guarantor against Britain's endemic propensity to generate double-figure rates of inflation.' (*Financial Times*, 28 September 1987.) An analytical presentation of this view can be found, for example, in Giavazzi and Pagano (1988).
27. For a formal development of this argument see Giovannini (1991).

28. The effect might be reduced to the extent that domestic residents already borrow at lower rates in the low-inflation countries. This possibility is suggested by the massive capital inflows observed into Spain, Italy, and Portugal. If the practice of borrowing in foreign currency were widespread, the fall in domestic rates would have a small effect on aggregate demand: most residents would already enjoy the low expected cost of borrowing. However, the very fact that central banks in Spain and Italy keep trying to use interest rates to control domestic demand and inflation (thus sterilizing the capital inflows whenever they threaten to cause a reduction in domestic interest rates) suggests that a non-negligible number of residents in those countries are still constrained to borrow in domestic currency. The undesirable effects on aggregate demand of the fall in nominal interest caused by the decision to peg the exchange rate to a low-inflation country are discussed in Walters (1990); see also Giavazzi and Spaventa (1990).

29. See for example Alesina and Grilli (1991).

30. The ideal scenario would be a final EMS realignment before the Maastricht Summit. As noted in Begg *et al.* (1990), an appreciation of the Deutschmark is needed to accommodate the Eastern Europe shock.

31. This argument is made forcefully by Froot and Rogoff (1991), who note in addition that even in the fast track it may be impossible to commit not to realign on the day of the final monetary reform. If this were true, then the sooner is the expected date of the transition to a single currency, the higher will be the pressure on prices and wages in the high-inflation countries. 'Pushing up the date of monetary union may do nothing to help credibility.'

32. The realignment that accompanied the entry of the Italian lira into the narrow band can be neglected as purely technical. It only lowered the extent to which the lira could appreciate within the band, without affecting the extent to which it could depreciate.

33. Portugal, and Greece especially, have further to go in terms of integration and inflation. Joining EMU from double-digit inflation would be just too disruptive for them.

34. In many respects the Bretton Woods agreements were doomed from day one because the post-war dollar shortage had been allowed to be a prime source of concern, as has been demonstrated by Triffin (1960).

35. Von Hagen (1990) provides a fascinating description of this kind of evasion in the United States. His main conclusion, that 'fiscal restraints do little to reduce the likelihood of extreme outcomes in fiscal performance', is highly relevant.

---

## References

---

- Begg, David, Jean-Pierre Danthine, Francesco Giavazzi and Charles Wyplosz (1990), 'The East, the Deutschmark and EMU', in *Monitoring European Integration: The Impact of Eastern Europe*, Centre for Economic Policy Research, London.
- Bishop, Graham (1990), 'The Creation of an EC "Hard Money" Union', Salomon Brothers, July.
- Bishop, Graham (1991), 'The EC's Public Debt Disease: Discipline with Credit Spreads and Cure with Price Stability', Salomon Brothers, July.
- Bishop, Graham, Dirk Damrau and Michelle Miller (1989), 'Market Discipline Can Work in the EC Monetary Union', Salomon Brothers, November.
- Blanchard, Olivier and Lawrence Summers (1984), 'Perspectives on High World Real Interest Rates', *Brookings Papers on Economic Activity*, No. 2.
- Blanchard, Olivier (1990), 'Suggestions for a new set of fiscal indicators', OECD, Department of Economics and Statistics Working Paper, no. 79, April, and OECD, *Economic Outlook*, 47, June.
- Blanchard, Olivier and Larry Katz (1992 forthcoming), 'Regional Fluctuations', *Brookings Papers on Economic Activity*.
- Canzoneri, Matthew B. and Behzad T. Diba (1990), 'Fiscal Deficits, Financial Integration, and a Central Bank for Europe', unpublished, Georgetown University, December.
- Canzoneri, Matthew, Vittorio Grilli and Paul Masson (eds.) (1992 forthcoming), *Establishing a Central Bank: Issues in Europe and Lessons from the US*, Cambridge University Press.
- Davis, Phil (1990), 'The Financial Sector and the UK Economy', paper for the MTEA conference.
- De Grauwe, Paul and Lucas Papademos (eds.) (1990), *The European Monetary System in the 1990s*, Longman, London.
- De Grauwe, Paul and Wim Vanhaverbeke (1991), 'Is Europe an Optimum Currency Area? Evidence from Regional Data', CEPR Discussion Paper No. 555, May.
- De Nardis, Sergio and Stefano Micossi (1991), 'Disinflazione e re- inflazione in Italia: le implicazioni per la politica monetaria', *Moneta e Credito*, June.
- Dornbusch, Rudiger and Mario Draghi (eds.) (1991), *Public Debt Management: Theory and History*, Cambridge University Press.
- Eichengreen, Barry (1990), 'One Money for Europe? Lessons from the US Currency Union', *Economic Policy*, 10, April, pp. 117-88.
- Eichengreen, Barry (1990), 'Is Europe an Optimum Currency Area?', CEPR Discussion Paper No. 478, November.
- Froot, Kenneth and Kenneth Rogoff (1991), 'The EMS, the EMU, and the Transition to a Common Currency', *NBER Macroeconomics Annual*, MIT Press, Cambridge MA.
- Giavazzi, Francesco and Alberto Giovannini (1989), *Limiting Exchange Rate Flexibility: the EMS*, MIT Press, Cambridge MA.

- Giavazzi, Francesco and Marco Pagano (1988), 'The Advantage of Tying One's Hands: EMS Discipline and Central Bank Credibility', *European Economic Review*, Vol. 32, No. 5, pp. 1055-88.
- Giavazzi, Francesco and Marco Pagano (1991), 'Confidence Crises and Public Debt Management', in Dornbusch and Draghi (eds.).
- Giavazzi, Francesco and Luigi Spaventa (1990), 'The New EMS', in De Grauwe and Papademos (eds.).
- Giovannini, Alberto (1991), 'European Monetary Reform: Progress and Prospects', *Brookings Papers on Economic Activity*, No. 1.
- Giovannini, Alberto and Luigi Spaventa (1991), 'Fiscal Rules in the European Monetary Union: a No-Entry Clause', CEPR Discussion Paper No. 516, January.
- Goldstein, Morris and Geoffrey Woglom (1992), 'Market-Based Fiscal Discipline in Monetary Unions: The Evidence From the US Municipal Bond Market', in Canzoneri *et al.*
- Grilli, Vittorio, Donato Masciandaro and Guido Tabellini (1991), 'Political and Monetary Institutions and Public Financial Policies in the Industrial Countries', *Economic Policy*, 13, October.
- Gros, Daniel (1991 forthcoming), 'A Note on Seigniorage in the EC', *European Journal of Political Economy*.
- Hughes, Gordon and Stephen Smith (1991), 'Economic Aspects of Decentralized Government: Structure, Functions and Finance', *Economic Policy*, 13, October.
- Krugman, Paul (1990), 'Policy problems of monetary union', in De Grauwe and Papademos (eds.).
- Krugman, Paul (1991), *Geography and Trade*, forthcoming.
- OECD (1987), 'Prudential Supervision in Banking', Organisation for Economic Co-operation and Development, Paris.
- Missale, Alessandro (1991), 'Debt Maturity: the Evidence', PhD dissertation, MIT, August.
- Padoa-Schioppa, Tommaso (1990), 'Fiscal Prerequisites of a European Monetary Union', mimeo, January.
- Swinburne, Mark and Marta Castello-Branco (1990), 'Central Bank Independence: Issues and Experience', unpublished manuscript, IMF, June.
- Triffin, Robert (1960), *Gold and The Dollar Crisis*, Yale University Press, New Haven CT.
- Von Hagen, Jürgen (1990), 'A Note on the Empirical Effectiveness of Formal Fiscal Restraints', mimeo, Indiana University, Bloomington, January.
- Von Hagen, Jürgen and Manfred Neumann (1991), 'Real Exchange Rates Within and Between Currency Areas: How Far Away is EMU?', Indiana Center for Global Business Discussion Paper No. 62, April.
- Walters, Alan (1990), *Sterling in Danger*, Fontana, London.
- Weber, Axel (1991), 'Reputation and Credibility in the European Monetary System', *Economic Policy*, 12, April.
- Wyplosz, Charles (1991), 'Monetary Union and Fiscal Discipline', *European Economy*, Special edition no. 1.

---

## **CEPR Research Programmes**

---

### **Financial and Monetary Integration in Europe**

The experience of the EMS and the design of European monetary institutions have been important areas of CEPR research since 1985. This research has included analysis of the conditions under which the EMS could survive the full liberalization of intra-EC capital movements and those under which the European Community may move toward a monetary union. The programme now covers a set of closely related projects that exploit a variety of approaches to modelling international financial phenomena: the exchange rate and monetary consequences of financial integration; the relevance of the experience of the EMS as a blueprint for the wider reform of the international monetary system; and the implications of EMU for the design of coordinated fiscal policies within the Community.

### **Completing the European Internal Market: the Consequences of '1992' for International Trade**

This programme covers a series of linked projects on the effects of completing the European Internal Market on international trade flows and policy. The unifying theme of the programme is the quantitative assessment of the effects of '1992' on international trade flows, and in particular on EC trade with the rest of the world. The research includes assessments of the trade and welfare implications of replacing *national* trade policies with *Community* policies for particular industrial sectors, modelling the effects of '1992' on third countries' trade, and studies of the role of reciprocity in trade negotiations, notably the Uruguay Round.

## **Economic Transformation in Eastern Europe**

This programme of linked projects will bring together outstanding researchers and policy-makers from West and East European countries and from international organizations. As the East European reform process accelerates, incoming governments face high debt, high interest rates, fiscal imbalance and an industrial structure that is ill suited to exporting to hard currency markets. They must also quickly create financial systems, functioning labour markets, and much more rational tax- subsidy structures. This programme will focus on internal and external stabilization, industrial restructuring, trade reorientation and tax reform, within an overall framework of 'robust sequencing'.

---

## Recent CEPR Books

---

***Unity with Diversity in the European Economy: The Community's Southern Frontier***, edited by Christopher Bliss and Jorge Braga de Macedo

This volume derived from CEPR's Delphi conference of October 1989 addresses the theoretical issues involved in the integration of a diverse economic region and the combined impact of accession to the European Community, financial integration and the single-market programme on Spain, Greece and Portugal. Cross-country papers assess investment and growth in the Community's poorer regions; the effects of membership on output and employment in peripheral regions; and the constraints imposed by rapid monetary and financial integration on national macroeconomic policies.

Cambridge University Press, £30.00/\$59.50, August 1990.

***Public Debt Management: Theory and History***, edited by Rudiger Dornbusch and Mario Draghi

Fiscal convergence and the prospect of a common money lie at the centre of the macroeconomic policy debate as the European Community moves towards EMU. This volume of proceedings of a joint CEPR conference with the Italian Macroeconomic Policy Group, held at Castelgandolfo in June 1989, brings together theoretical, applied and historical research on the management of public debt and its implications for financial stability. Leading international authorities consider the European and US experience to assess the welfare economics of public debt, the dangers that inappropriate debt management will lead to funding crises, capital levies and debt consolidation, the history of the US public debt, political influences on debt accumulation, trade-offs between indexation and maturity, and confidence effects.

Cambridge University Press, £30.00/\$54.50, January 1991.

***European Financial Integration***, edited by Alberto Giovannini and Colin Mayer

Capital markets will be at least as affected as goods markets by the European Community's continued economic integration, and plans for economic and monetary union foreshadow fundamental upheavals in financial services, central banking and monetary and fiscal policies. In this volume, based on a Rome conference held by CEPR and the Istituto Mobiliare Italiano in January 1990, leading international experts examine the implications of Europe's financial integration for the structure and regulation of capital markets and the relationship between the corporate and banking sectors. They also address possible means of overcoming the distortionary effects of member states' differing taxation policies and alternative routes to monetary union.

Cambridge University Press, £30.00/\$49.50, April 1991.

***European Integration: Trade and Industry***, edited by L. Alan Winters and Anthony J Venables

This volume, based on a CEPR joint conference with the Centro Interuniversitario di Studi Teorici per la Politica Economica (STEP) and Confindustria, held at Urbino in March 1990, assesses the implications of completing the European Community's single-market programme. Contributors assess the effects of '1992' on both 'internal' and 'external' economies of scale, the Community's trade with EFTA, Eastern Europe and the rest of the world, the design of technology and taxation policies, and Japanese direct investment in European manufacturing.

Cambridge University Press, £27.50/\$54.50, May 1991.



***External Constraints on Macroeconomic Policy: The European Experience***, edited by George Alogoskoufis, Lucas Papademos and Richard Portes

This volume of papers presented at a conference held by CEPR and the Bank of Greece in Athens in May 1990 assesses the impact of the European economies' increased commitment to their exchange rates and the growth of private international capital flows on the formulation and coordination of EC member states' macroeconomic policies. They include cross-country studies of savings and investment, fiscal policy, unemployment and European macroeconomic policies in the 1930s. The volume also contains a study of the effects of the exchange-rate constraint on France and Germany, and studies of the external constraint in Denmark, Spain, Greece, the Netherlands and the UK. Cambridge University Press, £30.00/\$54.50, August 1991.

***Exchange Rate Targets and Currency Bands***, edited by Paul Krugman and Marcus Miller

In recent years, a new programme of research has emerged in international monetary economics, underpinned by a firm theoretical framework grounded in stochastic calculus and the increasing importance of the international arrangements under which national monetary authorities seek to keep their exchange rates within 'target zones'. This volume, largely based on the proceedings of a July 1990 joint CEPR conference with the National Bureau of Economic Research, includes contributions from most of the active participants in this new field. Papers in this volume address the stability of fixed exchange rate regimes in the face of speculative attacks, international efforts to stabilize the US dollar since 1985, the place of the European Monetary System in the international financial system, and the key issues facing a country with a floating currency when contemplating entry into a fixed rate system, such as the UK's late 1990 entry into the EMS.

Cambridge University Press, £30.00/\$54.50, October 1991.

***Establishing a Central Bank: Issues in Europe and Lessons from the US***,  
edited by Matthew Canzoneri, Vittorio Grilli and Paul Masson

This volume of the proceedings of a joint CEPR conference with Georgetown University's Center for German and European Studies and the IMF considers the possible structure and operational procedures of a European Central Bank. Many of the papers draw on historical and contemporary US experience of federal government with a currency union. Issues considered include the role of such a bank in controlling liquidity and supervising financial markets, the implications of proposed voting rules for the development of currency union's monetary policy, and the likely difficulties to be encountered in the *transition* from national to Community monetary policy. Other chapters address the lessons of US 'fiscal federalism' for the smoothing of regional imbalances and the possible role of private financial markets in disciplining member states' fiscal authorities, and also the interaction of the ecu with the dollar and the yen as international reserve currencies once the transition to monetary union is complete.

Cambridge University Press, c. £30.00/\$54.50, April 1992 forthcoming

The above books cannot be obtained from CEPR, but they can be purchased from good academic bookshops or from Cambridge University Press, The Edinburgh Building, Shaftesbury Road, Cambridge, CB2 2RU *or* 40 West 20th Street, New York, NY 10011, USA.

---

## ***Monitoring European Integration: The Impact of Eastern Europe***

---

The 1990 Report, *Monitoring European Integration: The Impact of Eastern Europe*, was the first major study of how developments in Eastern Europe would affect the economies of Western Europe and the process of economic integration among them. The first section of the Report focused on the medium- and long-term implications of the current transformation of Eastern Europe for European production and trade. It also assessed the implications of change in Eastern Europe for EC trade and industrial policies and the likely magnitude of East European trade with the West, given the current state of the capital stock and the potential for industrial restructuring. The Report analysed Eastern exports of energy and agricultural goods, the future of the CAP, and competition between Eastern and Southern Europe. The second section of the Report assessed the medium-term macroeconomic impact of the transformation of the East European economies, focusing on issues such as the consequences of German reunification, East European spending on consumption versus investment, and the likely impact on the EMS of the flows of new investment and capital goods from the West into Eastern Europe. Here the Report assessed the implications of reform in the East for interest rates, pressures for DM realignment, and the case for accelerating EMU in response to the 'Eastern Europe shock'.

Available from CEPR, 6 Duke of York Street, London SW1Y 6LA.

Telephone (44 71) 930 2963 Fax (44 71) 930 8454

£7.50 plus p&p (£0.50 UK, £1.00 elsewhere in Europe, £2.50 the rest of the world) or \$20.00 including p&p.

---

## Related Discussion Papers published in 1991

---

|     |   |  |
|-----|---|--|
| 501 | <b>T Persson<br/>G Tabellini</b>                      | The Politics of 1992: Fiscal Policy and European Integration   |
| 502 | <b>A J Hughes Hallett<br/>P Minford<br/>A Rastogi</b> | The European Monetary System: Achievements and Survival  |
| 509 | <b>J Mélitz</b>                                       | Monetary Policy in France  |
| 512 | <b>P Bofinger</b>                                     | The Political Economy of the Hard-ECU Proposal   |
| 516 | <b>A Giovannini<br/>L Spaventa</b>                    | Fiscal Rules in the European Monetary Union: A No-Entry Clause   |
| 517 | <b>A J Hughes Hallett<br/>D Vines</b>                 | Adjustment Difficulties within a European Monetary Union: Can They be Reduced?                             |
| 519 | <b>M Obstfeld</b>                                     | Dynamic Seigniorage Theory: An Exploration   |
| 520 | <b>J Mélitz</b>                                       | German Reunification and Exchange Rate Policy in the EMS   |
| 527 | <b>C Wyplosz</b>                                      | A Note on the Real Exchange Rate Effect of German Unification  |
| 532 | <b>G S Alogoskoufis<br/>F van der Ploeg</b>           | Money and Growth Revisited   |
| 533 | <b>G S Alogoskoufis<br/>F van der Ploeg</b>           | Debts, Deficits and Growth in Interdependent Economies   |
| 535 | <b>A Giovannini</b>                                   | Currency Substitution and the Fluctuations of Foreign-Exchange Reserves with Credibly Fixed Exchange Rates |
| 545 | <b>P Bofinger</b>                                     | Options for the Payments and Exchange Rate System in Eastern Europe  |
| 552 | <b>A K Rose<br/>L E O Svensson</b>                    | Expected and Predicted Realignments: The FF/DM Exchange Rate During the EMS                                |

|            |  |  |
|------------|--|--|
| <b>553</b> | <b>M Klein</b>                                 | Bargaining for the Choice of Monetary Policy Instruments in a Simple Stochastic Macro Model                  |
| <b>554</b> | <b>A A Weber</b>                               | Stochastic Process Switching and Intervention in Exchange Rate Target Zones: Empirical Evidence from the EMS |
| <b>555</b> | <b>P De Grauwe<br/>W Vanhaverbeke</b>          | Is Europe an Optimum Currency Area? Evidence from Regional Data  |
| <b>556</b> | <b>J Mélitz</b>                                | Brussels on a Single Money   |
| <b>562</b> | <b>F van der Ploeg</b>                         | Unanticipated Inflation and Government Finance: The Case for an Independent Common Central Bank              |
| <b>563</b> | <b>A Alesina<br/>V Grilli</b>                  | The European Central Bank: Reshaping Monetary Politics in Europe   |
| <b>566</b> | <b>V Grilli<br/>N Roubini</b>                  | Financial Intermediation and Monetary Policies in the World Economy  |
| <b>569</b> | <b>M J Moore</b>                               | Financial Innovation and the Neutrality of Money   |
| <b>570</b> | <b>E P Davis<br/>C P Mayer</b>                 | Corporate Finance in the Euromarkets and the Economics of Intermediation                                     |
| <b>572</b> | <b>L Guiso<br/>T Jappelli<br/>D Terlizzese</b> | Why is Italy's Savings Rate So High?   |
| <b>580</b> | <b>L E O Svensson</b>                          | Assessing Target Zone Credibility: Mean Reversion and Devaluation Expectations in the EMS                    |
| <b>584</b> | <b>M J Neumann</b>                             | German Unification: Economic Problems and Consequences   |
| <b>585</b> | <b>B Eichengreen</b>                           | Designing a Central Bank for Europe: A Cautionary Tale from the Early Years of the Federal Reserve System    |
| <b>586</b> | <b>W H Branson</b>                             | Exchange Rate Policies for the EFTA Countries in the 1990s   |

|            |   |   |
|------------|---|---|
| <b>590</b> | <b>J Mélitz</b>                                   | A Suggested Reformulation of the Theory of Optimum Currency Areas                           |
| <b>591</b> | <b>A Giovannini</b>                               | The Currency Reform as the Last Stage of Economic and Monetary Union: Some Policy Questions |
| <b>594</b> | <b>A Casella<br/>B Eichengreen</b>                | Halting Inflation in Italy and France After World War II                                    |
| <b>595</b> | <b>A Casella</b>                                  | Voting on the Adoption of a Common Currency   |
| <b>597</b> | <b>L Lambertini<br/>M Miller<br/>A Sutherland</b> | Inflation Convergence with Realignments in a Two-Speed Europe                               |
| <b>598</b> | <b>M J Artis<br/>P Ormerod</b>                    | Is There an 'EMS' Effect in European Labour Markets   |
| <b>599</b> | <b>G Bertola<br/>A Drazen</b>                     | Trigger Points and Budget Cuts: Explaining the Effects of Fiscal Austerity                  |

## Occasional Papers

|          |                     |  |
|----------|---------------------|--|
| <b>2</b> | <b>A Giovannini</b> | The Transition to Monetary Union                     |
| <b>3</b> | <b>R Portes</b>     | The European Community and Eastern Europe After 1992 |
| <b>4</b> | <b>X Vives</b>      | Regulatory Reform in European Banking                |

Single copies of Discussion Papers are available from CEPR for £3.00 (\$5.00), and Occasional Papers for £5.00 (\$10.00). CEPR can accept the following means of payment: i) Sterling cheque drawn on a UK bank; ii) Crossed UK Postal Order; iii) US dollar cheque drawn on a US bank; iv) Eurocheque, denominated in sterling, endorsed with customer's card no.; v) Sterling transfer to the Centre for Economic Policy Research (for bank details and a reference number, please contact CEPR). Orders should be sent to CEPR Discussion Papers, 25-28 Old Burlington Street, London W1X 1LB.

**DAVID BEGG** (Birkbeck College, University of London)

**PIERRE-ANDRÉ CHIAPPORI** (DELTA, Paris)

**FRANCESCO GIAVAZZI** (Università Bocconi, Milano)

**COLIN MAYER** (City University Business School, London)

**DAMIEN NEVEN** (INSEAD, Fontainebleau, and Université  
Libre de Bruxelles)

**LUIGI SPAVENTA** (Università degli Studi di Roma,  
'La Sapienza')

**XAVIER VIVES** (Universitat Autònoma de Barcelona)

**CHARLES WYPLOSZ** (INSEAD, Fontainebleau, and  
DELTA, Paris)