Preparing the ECB for Enlargement

CEPR Policy Paper No. 6

Richard E Baldwin, *Graduate Institute of International Studies Geneva and CEPR*Erik Berglöf, *SITE, Stockholm School of Economics and CEPR*Francesco Giavazzi, *Università Bocconi, Milano, and CEPR*Mika Widgrén, *Turku School of Economics & Business Administration and CEPR*



Centre for Economic Policy Research

The Centre for Economic Policy Research is a network of over 550 Research Fellows and Affiliates, based primarily in European universities. The Centre coordinates the research activities of its Fellows and Affiliates and communicates the 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 a European economics research organization with uniquely wide-ranging scope and activities.

CEPR is a registered educational charity. Institutional (core) finance for the Centre is provided by major grants from the Economic and Social Research Council, under which an ESRC Resource Centre operates within CEPR; the Esmée Fairbairn Charitable Trust and the Bank of England. The Centre is also supported by the European Central Bank, the Bank for International Settlements, the European Investment Bank; 23 national central banks and 41 companies. None of these organizations gives prior review to the Centre's publications, nor do they necessarily endorse 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 report are those of the authors and not those of the Centre for Economic Policy Research.

Sanjit Maitra

Rafael Repullo

Andrew Smith

Juha Tarkka

Michael Saunders

Kermit Schoenholtz

Miguel Sebastián Gascón

Executive Committee

Chair Guillermo de la Dehesa

Vice Chair Hans de Gier

Villy Bergström David Folkerts-Landau Jan Krysztof Bielecki Francesco Giavazzi Diane Coyle **Denis Gromb** Jim Cunningham Marc Hendriks **Kevin Darlington** Bengt Holmström Jan Häggström **Quentin Davies Bernard Dewe Mathews** Giles Keating Joachim Fels John Lipsky

Joachim Fels John Lipsky Philippe Weil
Fernando Fernández Méndez David Lipton Richard Woodworth
de Andes Sergio Lugaresi
Leonhard Fischer Gerard Lyons

Officers

PresidentRichard PortesChief Executive OfficerStephen YeoResearch DirectorMathias Dewatripont

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

Tel: (44 20) 7878 2900 Fax: (44 20) 7878 2999 Email: cepr@cepr.org Website: www.cepr.org

© Centre for Economic Policy Research October 2001

Contents

Executive Summary

- 1. Introduction
 - 1.1 The structure of our argument
- 2. ECB enlargement: As early as June 2005?
 - 2.1 Maastricht criteria and procedures
- 3. The new ECB members will be quite different, and this matters
- 4. Decision-making in an enlarged and unreformed Governing Council
 - 4.1 Current voting rules and shadow voting
 - 4.2 The Executive Board's power to lead
 - 4.3 A hypothetical alliance in an enlarged Governing Council
 - 4.4 Status quo bias in an enlarged and unreformed ECB
 - 4.4.1 A spatial voting analysis
 - 4.4.2 ECB reactions to random macro shocks
 - 4.4.3 Reacting to big asymmetric shocks affecting large members
 - 4.5 Summing up
- 5. Reform options: New voting rules for the Governing Council
 - 5.1 The 'ideal' central bank
 - 5.2 Three reform options
 - 5.2.1 Rotation
 - 5.2.2 Representation
 - 5.2.3 Executive Boards and Monetary Policy Committees
- 6. Problems with representation and rotation

- 6.1 Accountability
- 6.2 Political acceptability
- 6.3 Under rotation or representation the Council might fail to make the appropriate monetary policy decisions
- 7. A Recommendation
 - 7.1 Analogy with competition policy
- 8. Modalities: The Commission's opportunity and duty
 - 8.1 Article 5
 - 8.2 Who moves first?
 - 8.3 Postponing is not an option
 - 8.4 The responsibility of the Commission
 - 8.5 Timing: reform before enlargement

Appendix – Article 5 of the Nice Treaty and relevant articles of the ECB Statutes

References

List of tables

- 5.1 Rotation in an ECB 30, maximum number of years without a vote
- 5.2 Size and composition of monetary policy committees
- 6.1 The voting power of Euroland's core under a system of independent rotation
- 6.2 Interest rate decisions under three voting models, following a shock that hits France and Germany

List of figures

- 4.1 Enlargement and the increasing difficulty of ECB decision-making
- 4.2 Possible coalitions in the Governing Council
- 4.3 EMU GDP and population shares under current and future memberships
- 4.4 How ECB enlargement raises the *status quo* bias in interest rate decisions
- 4.5 How the ECB 33 would react to a shock in the core of EMU
- 5.1 Distribution of EMU 12 GDP (current prices)

Executive Summary

Enlargement of EMU will soon be a reality. Under current rules, the central bank governor of each new EMU member will get a vote on the European Central Bank's (ECB) key decision-making body, the Governing Council. Euroland's interest-setting body will thus expand from its current 18 members to 30 or more members – clearly too many for efficient decision-making.

The economies of the new EMU members will more closely resemble that of Ireland than that of Germany or other core Euroland nations. They are small, with high growth and high structural inflation. The Governing Council thus risks becoming divided between a dozen or more high-growth, high-inflation 'Irelands' and a handful of 'core' nations, with the 'Irelands' having enough votes to set interest rates while accounting for only 20% of Euroland output.

Enlargement will weaken the relative power of the body's leader, namely the president and Executive Board. Enlargement without reform would also create an opportunity for coalitions formed by EMU members with less-synchronized economies to prevail, setting interest rates for the whole area. Lastly, enlargement might induce a *status quo* bias, making it more difficult to react to significant changes in the macroeconomic climate.

This Paper argues that, as a matter of urgent concern, the ECB and/or the European Commission should formulate a response to this challenge. The urgency stems from the fact that even medium-term challenges may have immediate effect when they are predictable. Every day, financial markets must price ten-year euro debt instruments with an eye to future monetary policy, which, ultimately, depends on the ECB's decision-making structure. It is therefore important to provide clear indications that the ECB's numbers problem will be solved.

Although ECB reform was not on the Nice agenda, EU leaders at the Nice summit recognized that ECB reform is a precondition for enlargement. Article 5 of the Treaty (the so-called enabling clause) enables the EU to modify the Bank's decision-making procedures without convening a new intergovernmental conference (IGC). Given the way in which the final deal was handled in Nice, this was probably a wise strategy. ECB reform is too important to be thrown into a big political horse-trading pit. A declaration annexed to the Treaty indicates, however, that this matter should now be dealt with rather urgently: 'The conference expects that a recommendation ... be presented in the shortest delay possible.'

In a 21 June 2001 press conference in Dublin, ECB President Wim Duisenberg acknowledged that there is a problem, but suggested that the process of solving it could wait. In response to a question about ECB reform proposals, the president said: 'We will come with suggestions in that respect [solving the numbers problem], as soon as the Nice Treaty has been ratified by all the parliaments, including of course the Irish Parliament, and we hope that at some time that will happen. At least that is my personal hope.'

Waiting for ratification would be a mistake. It is true that the enabling clause cannot be employed before the Nice Treaty enters into force, yet this is not a reason for postponing discussion and study of reform options, and much less a reason for keeping such preparations secret. Ratification might not come before June 2002, and this is too long to wait – not only because ECB reform might become entangled with the eastern enlargement process; it would

viii Executive Summary

also be a sign of weak governance to admit there is a problem but fail to initiate a solution process.

There are three leading contenders for reforming the Governing Council's decision-making rules: rotation, representation and delegation. Both rotation and representation have shortcomings: neither of them is likely to lead to appropriate monetary policy decisions. Best practice in central banking strongly argues in favour of delegation to an independent committee.

The EU has clear supranational executive power in only two areas: competition policy and monetary policy. In the case of competition policy, the power is delegated to a committee – the Commission – and decisions are made without formal consultation with either the Council of Ministers or EU members in general. Delegating interest rate decisions to a committee is thus consistent with both best practice in central banking and current EU practice.

The committee in charge of monetary policy decisions should include the six members of the Executive Board (EB) plus a few non-executive members. Our preferred membership of such a committee is 11: 6 EB members and 5 non-executive members.

Removing national central bank (NCB) governors from the Governing Council, however, has a cost. NCB governors have credibility in the eyes of their fellow citizens. They are typically viewed as eminent citizens in touch with national sensitivities. Cutting them out of the ECB process entirely might seriously weaken the ECB's accountability and political acceptability. To redress this, and to ensure that the full range of monetary conditions has a voice, we suggest that the views of central bank governors could still enter the process, but only as information that Committee members use to reach their decision. The NCB governors would continue to be part of the Governing Council, but this would become, as far as monetary policy decisions are concerned, a consultative body, ensuring that the governors can continue to function in the role as national 'listening posts'.

If ECB reform is an urgent matter, who has the right incentives to put a proposal on the table? The Nice Treaty requires the ECB to act unanimously in making its recommendation. But none of the solutions outlined above (rotation, representation and delegation to a committee) is likely to gather unanimity among NCB governors. As in the case of the composition of the Commission, many NCB governors will baulk at giving up their vote in the Council, even temporarily, as would be necessary in a rotation system. IMF-style representation is also likely to run into political problems. There might be agreement (among the current members) on the proposal to group the new entrants (though none of the current members) in a couple of constituencies, carrying one vote each, but it is impossible to design a rule that gives a permanent vote to Ireland but not to Hungary. In any case, this would not avoid swelling the composition of the Governing Council; and at the same time it would break the rule whereby governors vote as individuals, not as representatives of a member central bank. The ECB is thus likely to experience deadlock for any reform proposal with big-member versus small-member schisms at the forefront.

Fortunately, the Nice Treaty allows the European Commission to propose a reform and we encourage the Commission to do so. The Commission decides by a simple majority, so it will find it easier to come to a decision. Moreover, the Commissioners oversee the interests of all EU

Executive Summary xiv

institutions, including that of the ECB, and the nature of ECB reform will surely have implications for other EU institutions. EU leaders entrusted the Commission with the responsibility for making sure that a recommendation reaches the Council '... in the shortest possible delay'. This implies that the Commission may find itself in the position of having to put its own proposal on the table. We recommend that the Commission prepare for such a possibility.

1. Introduction

The European Central Bank (ECB) has been under siege for some time. Yet even though it is too early for an evaluation, the Bank's decision-making structure has worked well so far, having proved its mettle in a series of challenges – the Russian and LTCM crises, the oil and food price hikes, the stock market tech-wreck and the US slowdown. But is the ECB ready for the challenge of enlargement?

Eastern enlargement of the European Union will happen, so enlargement of EMU membership will become a reality in the near- to medium-term. Under current rules, the central bank governor of each new EMU member gets a vote on the European Central Bank's key decisionmaking body, the Governing Council. We can therefore say with confidence that Euroland's interest-setting body will, in the foreseeable future, increase from its current 18 members to 30 or more – clearly too many for efficient decision-making. Indeed, we argue that this 'numbers problem' poses a serious threat to the smooth functioning of European monetary policy. Quite simply, enlarging an unreformed ECB to include 5 or 12 new members would turn the Council into a big, unwieldy group, opening the door to many problems. Even in the most optimistic view, ECB decision-making would become much harder, and this would favour a status quo bias. Such an ECB would have trouble performing a central bank's main task – taking tough decisions at the right time. Moreover, given the diversity of EMU members, the Governing Council could experience fractious debates, a loss of democratic legitimacy and – potentially - a loss of credibility. The outcome, however, could be worse. The economies of the potential new members more closely resemble that of Ireland than that of Germany or other core Euroland nations. They are small, with high growth and high structural inflation. This could result in a scary, but with any luck improbable, scenario, in which the Governing Council becomes divided between a dozen or more high-growth, high-inflation 'Irelands' and a handful of 'core' nations, with the 'Irelands' having enough votes to set interest rates while accounting for only 20% of Euroland output.1

This Paper argues that, as a matter of urgent concern, the ECB and/or the European Commission should formulate a response to this challenge. The urgency stems from the fact that even medium-term challenges may have an immediate effect when they are predictable. After all, every day financial markets must price ten-year euro debt instruments with an eye to future monetary policy, which, ultimately, depends on the ECB's decision-making structure. It is therefore important to provide clear indications that the ECB's numbers problem will be solved. It does not have to be solved today, but the most basic principle of good governance demands that EU leaders demonstrate that they are both aware of this problem and capable of instituting a process that will solve it. Nothing would be worse than the perception that political

¹ Some of the arguments in this Paper draw on work in the authors' two earlier publications – Baldwin, Berglöf, Giavazzi and Widgrén (2000, 2001).

2 Introduction

unpleasantness is preventing the EU's decision-making bodies from tackling this tough problem. Fortunately, the first step has been taken.

Although ECB reform was not on the Nice agenda, EU leaders at the Nice summit recognized that it is a precondition for enlargement. Article 5 of the Treaty (the so-called enabling clause) allows the EU to modify the ECB's decision-making procedures without convening a new intergovernmental conference (IGC). Given the way in which the final deal was handled in Nice, this was probably a wise strategy. ECB reform is too important to be thrown into a big political horse-trading pit. A declaration annexed to the treaty indicates, however, that this matter should now be dealt with rather urgently: 'The conference expects that a recommendation ... be presented in the shortest delay possible.'

Unfortunately, the next step has not yet been taken.

In a 21 June 2001 press conference in Dublin, ECB President Wim Duisenberg acknowledged there that is a problem, but suggested that the process of solving it could wait. In response to a question about ECB reform proposals, the president said: 'We will come with suggestions in that respect [solving the numbers problem], as soon as the Nice Treaty has been ratified by all the parliaments, including of course the Irish Parliament, and we hope that at some time that will happen. At least that is my personal hope.'

Waiting for ratification, however, would be a mistake. It is true that the enabling clause cannot be employed before the Nice Treaty enters into force, yet this is not a reason for postponing discussion and study of reform options, and much less a reason for keeping such preparations secret. Ratification might not come before June 2002, and this is too long to wait. There are two good reasons why delay is a mistake.

First, it would be a sign of weak governance to admit that there is a problem and then fail to initiate a solution process. People would wonder whether the real cause of the delay was an inability of any reform option to garner unanimous support from the ECB's Governing Council (as is required by the Nice Treaty). A strong, well-functioning bank should demonstrate publicly that it has the capacity to undertake whatever reforms are necessary to remain strong and well-functioning.

Second, the ECB reform process might become entangled with the eastern enlargement process. Consider the delays. Suppose the ECB waits until June 2002 before unveiling a proposal. Surely any reform proposal will need to be discussed and studied. Indeed, the Nice Treaty requires the EU heads of state and government to consult with the European Parliament and the Commission before agreeing the reform proposal unanimously. The consultation could be lengthy, as could be the process of achieving unanimity among EU members (witness the difficult politics involved in the unanimous adoption of the reforms that 'solved' the European Commission's numbers problem at the Nice summit). The EU member states will then have to ratify it according to their constitutional provisions. Typically, the ratification process alone takes between 12 and 18 months, so, adding on 6 months for study and consultation, the delay suggested by the ECB would mean the reform would take effect around January 2003. This, of course, is exactly when EU enlargement will either be happening or have just happened. Given the delicate and highly political nature of ECB reform (any workable reform will reduce the role of national central bankers in monetary policy-making) and the delicate politics of enlargement, it would seem unwise to have both occurring at the same time. For example, if the ECB reform timetable were delayed, or the EU enlargement schedule accelerated, it is

Introduction 3

possible that some Central European nations would have to ratify the ECB reforms. Since they would not have been involved in the formulation of such reforms, this might pose difficult problems.

1.1 The structure of our argument

Our Paper takes the Nice Treaty declaration seriously, and provides a contribution to the process of forming such a recommendation. We do this in seven steps.

- 1. We argue that ECB enlargement will rapidly follow EU enlargement.
- 2. We argue that the EMU newcomers will differ from current members; in particular, they will grow faster and have higher structural inflation.
- 3. We study how the ECB's interest-setting body, the Governing Council, would function with 30 or so members, assuming its voting rules were unreformed.
- 4. We present options for reforming the Governing Council's decision-making rules, focusing on the three leading contenders: rotation, representation and delegation.
- 5. We point out the shortcomings of rotation and representation (these have sometimes been indicated as the most likely solutions). We show, by means of a few examples, why neither of them is likely to lead to appropriate monetary policy decisions.
- 6. We describe our recommendation: delegation to a committee that should include the six members of the Executive Board (EB) plus a few non-executive members. Our preferred membership of such a committee is 11 6 EB members plus 5 non-executive members.
- 7. We discuss modalities. We argue that any ECB reform proposal with big-member versus small-member schisms at the forefront is likely to result in deadlock. Fortunately, the Nice Treaty allows the European Commission to propose a reform, and we encourage the Commission to do this. The Commission decides by a simple majority so it will find it easier to come to a decision. Moreover, the Commissioners oversee the interests of all EU institutions, including that of the ECB, and the nature of ECB reform will surely have implications for other EU institutions. Lastly, the exact formulation of the Nice Treaty makes it clear that EU leaders entrusted the Commission with the responsibility for making sure that a recommendation reaches the Council '... in the shortest possible delay'. This implies that the Commission may find itself in the position of having to put its own proposal on the table. We recommend that the Commission prepare for such a possibility.

Readers who accept that ECB enlargement is a pressing issue, and who are acquainted with the reform options most frequently discussed, can skip the next four sections of the Paper and jump straight to Section 6, which details our policy recommendations.

2. ECB enlargement: As early as June 2005?

How soon will Central and Eastern European newcomers to the EU enter into the Economic and Monetary Union (EMU)? Many believe this to be a distant event. For example, in response to a question by a member of the European Parliament, ECB President Duisenberg said, 'Fortunately, we still have some time to go before we come to a decision, or until the heads of state come to a decision on this' (5 March 2001). We disagree.

2.1 Maastricht criteria and procedures

Those who believe EMU enlargement is a long way off typically assert that the Maastricht Treaty imposes long waiting periods, and in any case few of the new members would qualify for EMU membership under the well-known Maastricht criteria. This is mistaken thinking on two counts – facts and politics.

A glance at the data shows that Central and Eastern European countries (CEECs) are in pretty good shape on the Maastricht criteria. On the difficult debt and deficit criteria, the frontrunner candidate nations are now better prepared for EMU membership than the current members were at a comparable stage. On the exchange rate criterion, the CEECs are again in better shape now than the incumbents were five years before they joined. It is only in respect of the long-run interest rate condition that the newcomers have problems, mainly because few of them have issued the ten-year government bonds that are typically taken as a yardstick for the interest rate criterion.

The facts on the minimum waiting period dictated by the Maastricht Treaty are also not what they might seem.² The Treaty's *de jure* procedure for joining EMU involves meeting specific targets over specific 'reporting periods', and these imply that the EMU membership vote can come no sooner than 27 months after EU accession. Even if the answer is 'yes', the EMU-members-elect will typically need time to adopt the euro. The founding members took 8 months and Greece took 6. Thus, according to this reasoning, voting rights in the ECB's Governing Council could come no sooner than 33 months after EU accession.

The *de facto* procedure, however, has been quite different. On the longest reporting period – two years for the stable exchange rate criterion – the waiting-period rules were bent for Italy and Finland, and these exceptions sliced nine months off the Treaty-mandated timeline. Carefully compiling all the exceptions that have been made to date and taking account of the fact that many newcomers are, or soon will be, *de facto* euro-ized,³ we calculate that the

² See Baldwin, Berglöf, Giavazzi and Widgrén (2001) p73 for details.

³ With its currency-board peg to the DM, Estonia has effectively been using the euro since EMU started, and Estonians have seriously contemplated adopting the euro as their national currency once banknotes have been issued in January 2002. This would mean no delay, or a very short delay, between the Council's approval and

minimum delay between EU accession and joining EMU is 18 months, 15 months faster than the 33 months suggested by the by-the-book procedure.

Politics, moreover, will be a dominant factor in EMU enlargement. The Maastricht Treaty delegated the EMU entry decision to a political body – the EU's Council of Ministers. The nations whose EMU membership qualifications are being evaluated are voting members of this body when the decision is taken. Given this, it is clear why the Maastricht rules have been bent in the past. (For example, exceptions were made to the two-year ERM membership requirement: at the time of examination Italy had been in the ERM for only 15 months and Finland for 16 months. This exception was well reasoned and both countries had satisfied the 2-year period before EMU's launch; but it set a precedent. It will therefore be exceedingly difficult to hold a nation like Estonia to a 2-year waiting period. Estonia has, after all, been tied to the euro, via its DM currency board, for longer than Greece.) Once an exception is made for one new Member State, how likely is it that the others will be denied? The political nature of the deciding body should also make it clear that exceptions will be made in the future when the EU's new members ask to join EMU.

In summary, given the many exceptions made in the past and the relative well preparedness of the newcomers, it will be hard, if not impossible, to delay EMU enlargement on the basis of a strict interpretation of Maastricht. This is especially so because the new EU members will have significant power in the Council of Ministers, including, importantly, veto power during the 2006 negotiations on the EU's next long-term budget plan (the so-called Financial Perspective) that could leave the EU without a budget.⁴ In our view, this means that if EU enlargement happens in January 2004, the first new EMU members could join as early as 1 June 2005.

The precise date of EMU enlargement, however, is not nearly as important as recognition of the fact that it is not a distant event. Whether it takes place 18 months or 3 years after EU enlargement, the ECB will face an important expansion of its membership in the foreseeable future. Since this event is foreseeable it can affect financial markets today – again, these markets must today and every day decide on how to price ten-year bonds. In short, EMU enlargement is a pressing matter.

voting rights in the ECB. Also, in August 2001, Hungary announced it would peg to the euro in order to speed up EMU accession. Other applicants may follow this example.

⁴ The next Financial Perspective covers the period 2007–13. Discussion on this is likely to take place between 2004 and 2006. (The 2000–06 Financial Perspective talks started with the publication of Agenda 2000 in July 1997 and continued up to the official adoption at the General Affairs Council in June 1999.) Importantly, this will coincide with the period during which the new EU members will be trying to get into EMU.

3. The new ECB members will be quite different, and this matters

Although the Central European nations in the EU membership queue are significantly poorer than the EU incumbents, they will grow much faster in the coming decades as incomes catch up with Western European levels. From a macroeconomic and central banking perspective, this makes the prospective EMU members very different creatures. Quite simply, poor, fast-growing nations tend to experience higher structural inflation rates. This effect – the so-called Balassa-Samuelson effect – is easily explained.

Poorer nations typically have lower price levels than rich nations. Specifically, although the prices of traded goods do not vary much from those in rich nations, the prices of non-traded goods, especially construction and labour-intensive services, are typically lower because wages are lower. As productivity, incomes and wages catch up, so do the prices of non-traded goods. Given the initial income gap between the average applicant nation and the EU 15, this catch-up could take 2 or 3 decades. During these decades, the newcomers will have higher inflation rates if they attain the higher growth rates necessary to converge. Note that this inflation simply reflects rising living standards: it is very different from inflation driven by too much money chasing too few goods. Nevertheless, this difference will pose problems.

An inflation differential induced by Balassa-Samuelson effects poses a tough problem for central bankers – what might be called the 'assignment problem'. As recent experience with Ireland and Spain suggests, it is not easy to determine precisely the extent to which inflation is induced by healthy growth rather than being the result of an overheating economy. In the first two years of EMU, inflation in Spain and Ireland was, respectively, 1.7% and 2.2% above the EMU average. In Ireland, about one-third of this can probably be attributed to higher productivity growth (see Alesina *et al.*, 2001). In Spain, however, productivity growth has been below the EMU average since the start of EMU, so that excess inflation can only have come from a growth of demand in excess of the potential economic growth in output; that is, from overheating. Both countries, however, argued that their excess inflation was structural. This led to a showdown with Ecofin and the ECB, which were asking them tighten fiscal policy to slow down domestic demand. Difficulties of this kind will be common in an enlarged EMU.

The structural inflation differences will also mean that policy-makers in the newcomer nations will have views on inflation that systematically differ from those of the Euroland 'core' – Germany, France, Italy and the Benelux nations. In the next section, we work out just what sort of problems this could cause under the ECB's current decision-making structure.

4. Decision-making in an enlarged and unreformed Governing Council

So far we have argued that EMU enlargement is a pressing matter and that the EMU newcomers will experience higher structural inflation than the average incumbent. Given this, the natural question is: how will the newcomers affect the ECB?

We shall argue that enlarging the ECB without reforming its rules would result in a large, unwieldy body that would find it difficult to make tough decisions quickly. To this end, we shall look at three sets of calculations.

- The first set shows that increasing the number of national central bank governors on the Governing Council reduces the relative power of the Executive Board. To the extent that the Executive Board provides leadership, this power shift bodes ill for the ECB's ability to react promptly.
- The second set considers a natural coalition in the Governing Council and shows how enlargement alters its power. The coalition we focus on is an alliance between the Executive Board and the Euroland 'core'; that is, the 7 nations with fairly well synchronized economies that currently make up 85% of Euroland's total GDP. This coalition can now dominate decision-making with 13 of 18 votes. After enlargement to, say, an ECB of 30 (the current 18 plus all 12 newcomers), the non-core nations will have an absolute majority despite accounting for only one-fifth of Euroland output. Moreover, the Balassa-Samuelson effect suggests that their views on monetary policy may differ systematically from those of the core nations. Again, this would be a worrying development for the euro zone.
- Lastly, we consider how an expanded ECB would react to various types of macroeconomic shocks. What these calculations show is that the *status quo* bias that is, the tendency of the ECB to wait too long before adjusting to a new situation will grow significantly worse with EMU enlargement.

Before turning to the numbers, however, we review the ECB's current decision-making rules.

4.1 Current voting rules and shadow voting

According to the ECB Statutes, interest rate decisions are made by a simple majority of the Governing Council (GC), where each NCB governor and each EB member holds a single, unweighted vote. Anecdotal evidence, however, suggests that votes are rarely taken – rather, the Council seeks to reach decisions by consensus.

Consensus, however, does not necessarily mean that all GC members agree with the decision. Reaching a consensus can be made easier by the way the meeting is run. Assume they start with a 'tour d'horizon' during which each NCB governor explains economic conditions in their

country in relation to the overall Euroland conditions. These statements give the president a lot of information on the preferred interest rate move of each governor (presumably they know pretty well the views of fellow EB members), thus allowing the mental exercise of 'shadow voting' and, having computed the possible outcomes, the proposition of a decision that could win a vote. If the other GC members realize that the tabled proposal will win a vote, dissenters have nothing substantial to gain from disagreeing. Indeed, being outvoted in a small club is unpleasant, so the dissenters are likely to act collegially and join the consensus. This means that formal voting rules matter, even if formal votes are rarely taken.

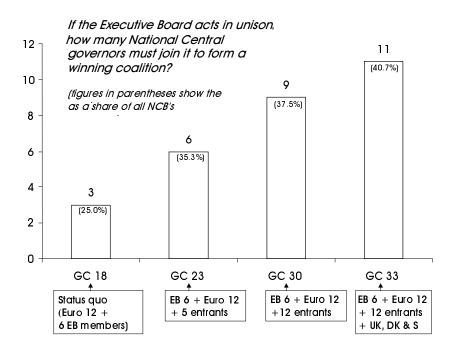
In any case, since EU leaders thought ECB rules important enough to mention in the Treaty of Nice (Article 5), we presume that rules matter and proceed accordingly.

4.2 The Executive Board's power to lead

Precise analysis of decision-making procedures requires precise assumptions concerning the behaviour of decision-makers. Here we suppose that the ECB president (who chairs the Executive Board and the Governing Council) proposes an interest rate change, and, if the proposition is contentious enough to require a vote, a simple majority of Council members is necessary to adopt the proposition. The Council currently includes 18 voters – 6 EB members and 12 NCB governors – each with 1 vote. With this group, the simple majority rule means 9 votes are needed for the president's proposal to be adopted (the president decides in the case of a tie). If the 6 EB members act in unison (they meet privately in advance of each GC meeting), the president's proposal will win whenever it attracts the votes of at least 3 NCB governors. With 12 NCB governors at the table, this is relatively easy. Enlargement will change this.

⁵ An important limitation in proposing changes to the voting rules in the Governing Council of the ECB is that no outsider knows how the procedure for setting interest rates works – and unfortunately, at least for our analysis, the precise decision-making details do matter, as shown in von Hagen and Supel (1994) and De Grauwe *et al.* (1999).

Figure 4.1: Enlargement and the increasing difficulty of ECB decision-making



Note: EB = Executive Board Source: Authors' calculations.

Figure 4.1 considers what decision-making would look like when 5 (say Estonia, Hungary, Czech Republic, Slovenia and Poland) of the applicants have joined EMU, when all 12 of the applicants are in and when all 12 applicants plus Denmark, Sweden and the United Kingdom are in. These ECB enlargements imply a GC of 18, 23, 30 and 33 voters respectively (eventually, the euro will probably also include many more nations as the EU expands beyond the current 12 applicants, but a GC of 33 suffices to make our point). The bars show how many governors would need to join the EB in order to pass any particular interest rate change.

The message from Figure 4.1 is that enlargement gravely weakens the *relative* power of the EB. The number of central bank governors that must be lined up almost quadruples, from three to 11, as the GC expands from 18 to 33 members. Even as a share of the NCB governors sitting at the table, enlargement raises the bar from just 25% to over 40% of them. Plainly this will make it much harder for the EB to guide monetary policy decisions.

Of course, if the GC attempts to make decisions by unanimity, the problem is much more severe. Getting 12 governors to agree is hard; getting 27 to agree will be very, very hard.

This sort of vote counting is as far as we can go without being more specific about the motivations of the various GC voters. To go further, we need to assume something about the various objectives of the decision-makers. The next two sets of calculations do just that.

4.3 A hypothetical alliance in an enlarged Governing Council

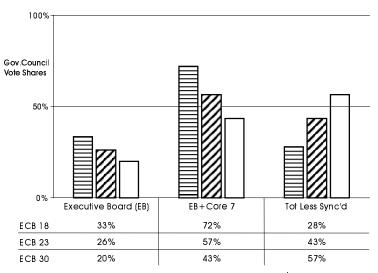
Another way to analyse the impact of enlargement on the ECB is to look at hypothetical coalitions in the pre- and post-enlargement Governing Council. To do this, however, we need to

address the issue of the EB's and the NCB governors' positions on monetary policy. Let us assume that the six EB members have no national bias; they care about Euroland inflation, which, statistically speaking, is a weighted average of the national inflation rates. Now, given that a fistful of 'core' nations dominate the EU's GDP (France and Germany alone account for over half), the national inflation rates of these same nations must – arithmetically speaking – also dominate the Euroland inflation average. This means that the EB will find natural allies among the NCB governors of these 'core' economies – even if these governors took a purely national perspective (and even more so if they took a purely Euroland perspective). More specifically, let us assume that governors from the 'core' Euroland nations all vote together with the EB, but that the non-core, or less-synchronized, nations have a different view on the best monetary policy for Euroland. As we shall see, under this analysis, GC decision-making is relatively smooth in the current EMU because the Euroland average is dominated by seven nations whose macroeconomies are reasonably synchronized (Germany, France, Italy, the Benelux countries and Austria).

Again, enlargement will change this. The applicant nations are now, and will remain for decades, different from the core nations when it comes to inflation and growth. This means that it will be harder for the EB to get its way, since various coalitions of non-core nations can have a blocking majority and there is the possibility that the EB's efforts to pursue the Euroland averages could be frustrated.

Figure 4.2 shows the evolution of a blocking coalition made up of the less-synchronized nations among EU incumbents and applicants. Specifically, we consider enlargement in 2 waves and assume that all 12 entrants want to join, but that the United Kingdom, Sweden and Denmark stay out. This gives us the current ECB 18, the future ECB 23 (6 EB members plus 12 incumbent governors and five governors from the Czech Republic, Estonia, Hungary, Poland and Slovenia) and the ECB 30 (the ECB 23 plus the other applicants, leaving Turkey aside). Notice that the EB's voting weight shrinks significantly, from one-third to one-fifth, and that the coalition of the EB and the core 7 (Germany, France, Italy, the Benelux countries and Austria) shrinks from a dominant 72% to just under the critical 50% mark. The flip side of this coin is that the total voting weight of the less-synchronized economies rises to over a half, enough in theory to dictate Euroland interest rates.

Figure 4.2: Possible coalitions in the Governing Council

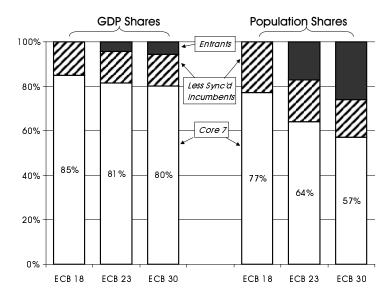


Note: The last two columns add to 100%. The 1st bar is the ECB18, 2nd bar is ECB23 and 3rd ECB30.

Core 7 = Germany, France, Italy, The Netherlands, Belguim, Luxumbourg, Austria. Less synchronized = Ireland, Portugal, Spain, Finland, United Kingdom & Entrants in ECB23 & 30.

Source: Authors' calculations

Figure 4.3: EMU GDP and population shares under current and future memberships



Now, comparing Figure 4.2 and Figure 4.3, we see that the ECB 30 would find itself in an unhappy situation. The 16 less-synchronized nations, which together account for only 20% of the Euroland economy, would have enough votes to set monetary policy for the whole area.

Clearly, this is not a highly likely scenario – central bankers from the less-synchronized nations may well act with no particular regard to their own nation's situation. It does, however, highlight the fact that up to now the question of whether central bank governors have national or Euroland perspectives has been blurred. Even under the extreme supposition that all NCB governors act from a purely national point of view, the combined votes of the core-economy governors and the synchronicity of their economies would have ensured that the ECB focused mainly on the Euroland average. Moreover, to say that this core-economies-outvoted scenario is unlikely is not to say that it is implausible. A well-designed decision-making mechanism should avoid even the possibility of such outcomes.

4.4 Status quo bias in an enlarged and unreformed ECB

The simple counting of votes, although very transparent, belies the complexity of ECB decision-making. According to informal accounts, the president, backed by the Executive Board, sets the agenda. This matters a great deal, as anyone who has tried to oppose a chairman knows. To be more specific, we consider an alternate view of the ECB decision-making process.

4.4.1 A spatial voting analysis

To make more precise predictions about the ECB's reactions to various macroeconomic shocks, we need to be much more specific about the assumed behaviour of the decision-makers and their range of options.

Basically, the Governing Council decides on interest rate *changes*, with these changes usually ranging from 25 to 50 basis points up or down. We assume that the GC's actual choice must lie in the range that extends from plus 0.5 percentage point to minus 0.5 percentage point. The ideal interest rate change for each EMU member lies in this range; a moment's reflection reveals that this also means the ideal Euroland interest rate change (which will be a weighted average of the members' ideals) also lies in this range. Moreover, we assume that the central bank governors on the GC know exactly what the ideal rate change is for their own nation, but they also know that the ideal will change over time in an unpredictable manner (in reaction to future macro shocks, institutional changes, and so on). We characterize this uncertainty in a simple manner, namely by assuming that future ideal rates for each EMU member are randomly determined, with future ideal rates having an equal probability of lying anywhere in the interval -0.5% to +0.5%.

Turning to the objectives of GC voters, we assume that EB members are interested in the Euroland average, but that each NCB governor adopts a purely national perspective. If the EMU members correctly calculate their ideal rate change (and we assume they have), the EB's ideal interest rate change is a weighted average of those of EMU members. Now, a bit of elementary probability theory tells us that since the members' ideal rates are uniformly distributed, the EB's

⁶ Technically, we assume it is uniformly distributed.

ideal future policy stance can be approximated by a standard bell-shaped probability curve with its centre at zero (this is called the Central Limit Theorem).⁷

Having discussed the motives of GC voters and their choices, we turn next to the issue of how they interact strategically.

To be specific about the decision-making procedure, as we must be in this sort of calculation, we assume that the president makes a take-it-or-leave it interest rate offer to the GC. That is, the voters have the option of accepting the proposal or keeping interest rates unchanged until the next meeting (all the EB members are assumed to support the president's proposal). If the EB is smart, and we assume it is, it only proposes a rate change that it thinks will win the vote (i.e. attract a simple majority). The first-best option for the EB is to propose its ideal, which is by assumption the ideal for Euroland. If, however, the EB anticipates being unable to win a majority on this, it will propose something that is close to, but not equal to, its ideal.

4.4.2 ECB reactions to random macro shocks

This set-up enables us to consider the impact of enlargement on the *status quo* bias; that is, the possibility that the ECB will not be able to respond to events because of its decision-making structure. We first establish, however, what would happen in the case of a completely random macroeconomic shock that disturbs the initial situation. Start from a *status quo* where the optimal Euroland interest rate change entails no change, and suppose that a random shock shifts the weighted average of ideal interest rates to the right. The EB controls the agenda, so it would never propose a lowering of the interest rate after such a shock, so the key question is: 'Can the Executive Board garner enough votes to increase the interest rate towards the new ideal point for Euroland?' In the current ECB, this means that the EB needs three NCB governors to support its proposal.

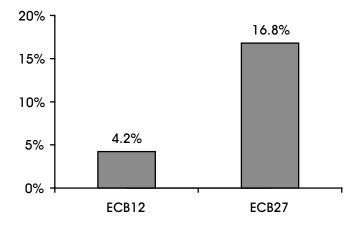
Since the EB needs only three votes, it is quite likely that any sort of macro shock that leads to an increase in the Euroland average will entail national ideal positions such that the EB can find at least three allies for its policy. To look at this in another way, note that it is extremely unlikely that the ideal (i.e. Euroland weighted average) interest rate has increased, yet 10 out of the 12 central bank governors would prefer the *status quo* to an interest rate increase. Using the actual GDP weights of the EMU 12, our simulations for the *status quo* outcome are quite low, at about 4%. This means that in the current ECB, the *status quo* bias is quite low. The reason is simply that the balance of power between the EB and the NCB governors is such that the Euroland ideal rate will typically be pursued, even if the governors vote along purely national lines.

What does EMU enlargement do to the *status quo* bias? In the case of the ECB 33 (EB 6 plus 27 member countries and using current GDP weights), our simulations show that the bias increases enormously, more than fourfold. Although the probability of a *status quo* bias is fairly low, our simulations suggest that a big, unreformed ECB would suffer from a *status quo* bias in one out of six of its decisions. This is not good news for a central bank that is trying to establish a reputation as an effective institution. Figure 4.4 shows the precise results.

⁷ That is, future policy choices are a weighted average of EMU members' ideal rate changes in the future. Since these latter rate changes are random, their weighted average is also random. By the central limit theorem, the likelihood of any particular average being optimal can be well approximated by a normal distribution.

⁸ By symmetry it does not make a difference whether we move to the right or left.

Figure 4.4: How ECB enlargement raises the status quo bias in interest rate decisions



Source: Authors' calculations

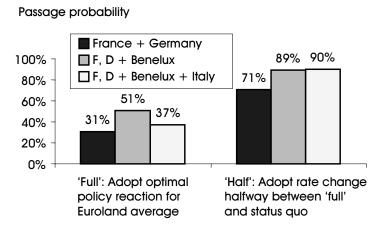
4.4.3 Reacting to big asymmetric shocks affecting large members

Another question is how well the ECB 33 can react to shocks that are concentrated in the core Euroland economies. To consider this question we study three scenarios. First, we assume that only France and Germany are hit, and that the shock is such that the ideal interest rate for these two countries is +0.5 percentage point (i.e. they need a big interest rate increase). Second, it is assumed that the Benelux countries follow the same pattern, and, third, that Italy also joins this group. In all cases, we assume that the ideal interest rates for the other EMU members are uniformly distributed on the +0.5 to -0.5 range. Of course, all three shocks will raise the Euroland weighted average ideal above the initial *status quo* level of zero.

Again, we calculate what each of these shocks does to the Euroland and EB's ideal interest rate policy. We also calculate the probability that the EB can win a vote to increase interest rates. To quantify this, we look at two situations. First, we compute the probability that the EB would win a vote on increasing the rate all the way to the Euroland ideal. Second, we compute the probability that it would win a proposal to increase the rate to halfway between the *status quo* and the Euroland ideal.

In Figure 4.5 it has been assumed that the EB tries to pass the full policy reaction first in the ECB 27. The respective bars of 'Full' give the passage probabilities of this proposal. It can be clearly seen that in the case of such asymmetric shocks, the ECB's capacity to act is quite limited, with the probability of passing an optimal policy in the ECB 33 falling below half in all three scenarios. By contrast, the figures for the current ECB membership (not shown in the diagram) are quite high, exceeding 95%. The bars showing the passage probabilities for a halfway policy are higher, but the main message of this figure is that the probability of passing an optimal policy in the ECB 33 may fall below one-half.

Figure 4.5: How the ECB 33 would react to a shock in the core of EMU



Source: Authors' calculations

4.5 Summing up

An enlarged but unreformed ECB would not function well. Its size and diversity suggest that it would face severe difficulties – difficulties that would hinder its ability to make tough decisions quickly that were in Euroland's best interest. More specifically, enlargement will weaken the relative power of the body's leader, namely the president and Executive Board. Enlargement without reform would also create an opportunity for coalitions formed by EMU members with less-synchronized economies to prevail, setting interest rates for the whole area while representing only about 20% of the Euroland's GDP. Lastly, enlargement might induce a *status quo* bias, making it more difficult to react to significant changes in the macroeconomic climate.

In short, an enlarged and unreformed ECB will have a serious 'numbers problem'. This makes ECB reform an imperative. We now consider what form this might take.

5. Reform options: New voting rules for the Governing Council

Politics and national jealousies will play a huge role in determining the ultimate solution to the ECB's 'numbers problem', and we shall address these in turn. We start, however, by considering what would, in our opinion, be the best way to manage Europe's monetary policy in a world without political constraints.

5.1 The 'ideal' central bank

The perfect monetary policy keeps inflation low and stable while simultaneously stabilising aggregate demand fluctuations – providing monetary stimulus in downturns and monetary restraint in upturns.

This is a tricky business for both economic and political reasons. The economics of it are hard since the relationships between monetary policy, output and inflation are subject to long and unpredictable lags. One thing is clear, however. A loose monetary policy stimulates output and boosts inflation, but the output boost usually comes before the inflation. It is this that makes the politics tricky. A central bank that cares about both unemployment and inflation will try to exploit this short-run/long-run trade-off in an attempt to reduce unemployment. A government may also be tempted to exploit this trade-off to win elections. If a monetary stimulus is correctly timed, the political benefit of higher output will appear before the election, with the political cost of higher inflation appearing only afterwards. Of course, investors and workers are aware of these temptations, so typically the results are higher-than-desired inflation and a lack of central bank credibility.

There is a solution to this quandary that has now been almost universally adopted, including, importantly, by the ECB Statutes. It is to make sure that the central bank: (1) is independent of elected governments on a day-to-day basis, and (2) is clearly focused on keeping inflation low and stable. This solution poses problems of its own, of course, especially concerning legitimacy and democratic accountability.

No central bank can operate without the public's trust, so some sort of democratic accountability is essential. Yet the balance between accountability and independence is a fine one. Ultimately, accountability means that sufficiently poor performance will lead to some sort of sanction. Without this, citizens may suspect that the central bank could drift 'off mission', perhaps pursuing some pet monetary theory or favouring one particular social group. With sanctions, the citizens can rest assured that the central bank will do its job, or else. The problem is that it can be difficult to distinguish between warranted use of such sanctions and unwarranted uses that threaten the Bank's independence. Unfortunately, there is no consensus on the best form or means of control of such sanctions. Nations across the world have adopted a wide range of solutions, but nevertheless the implication of all this is clear.

The ideal monetary decision-making body would consist of experienced and highly competent individuals who are primarily concerned with keeping the Euroland inflation rate low and stable. Competency, not nationality, should be the key qualification. This body should have enough members to provide a healthy debate and a robust representation of different points of view, but it should be small enough to be able to make tough decisions quickly. The members should not represent elected governments; they should be independent. Yet they should be democratically accountable, in the sense that in the unlikely event of extraordinarily poor performance they would eventually face some form of sanction.

Going from the ideal to the real is the next topic.

5.2 Three reform options

Looking ahead at an ECB Council comprising 30+ members, pure logic tells us that any reform must restrict the number of votes on the Governing Council (GC). Since everyone recognizes the importance of a strong agenda-setter in such a body, any reform must remove the automatic voting right that each EMU national central bank (NCB) governor now has. This is why any such reform will be politically difficult.

Specifically, there are three basic options for keeping the body of decision-makers at a reasonable size, all of which involve a reduction in the number of NCB governors who are allowed to vote. The options are:

- Rotation:
- Representation; or
- Executive decision.

We consider these in turn, keeping the best for last.

5.2.1 Rotation

Rotation means that not every central bank governor would have a right to vote at each meeting. There can be many forms of this. The main parameters are the number of central bank governors with a vote and their tenure as vote-casters. As Table 5.1 shows, the smaller is the number of voting governors and the longer are the vote-casting tenures, the longer nations will have to go without a vote.

At one extreme, there could be only a few NCB governors on the GC, say three, with long appointments of, say, 5 years. Thus the GC would have a highly stable composition, with only a small number of voters. In an EMU with 24 members, however, this would mean that at any one time 21 central banks would be without a vote. With perfectly even rotation, a typical central bank would have to wait 35 years for its governor to have a vote. At the other extreme, there could be many voting central bankers, say 12, with short tenures of, say, 6 months. This would leave only 12 of the 24 central banks without a vote and no central bank would be without a vote for more than 6 months. The membership of such a GC, however, would vary frequently – not something that boosts credibility and predictability – and with 18 voting members it would strain the limit of decision-making expediency.

Note that non-voting central bank governors could still participate in the discussion preceding a vote, or at least be present during the discussion (as is done in the US Fed). Indeed, in the rapid rotation model, it would be essential for all central bankers to stay continually abreast of events and the evolving discussion.

Table 5.1: Rotation in an ECB30, maximum number of years without a vote

Numbers show the maximum number	Suppose there are 24			
of years without a vote	central bank governors on the Governing Council			
	Nui	mber of gove	rnors casting v	otes:
	3	8	12	24
Voting-casting term: 0.5 yrs	3.5	1	0.5	0
1 yrs	7	2	1	0
2 yrs	14	4	2	0
5 yrs	35	10	5	0

Source: Authors' calculations

Analogy with the European Commission's numbers problem

The European Commission has a remarkably analogous number problem. It now consists of 20 voting members who formally take decisions by simple majority, but enlargement will increase this number by 13 (under current rules, Poland would get two Commissioners), resulting in a Commission of 33.

The Commission's numbers problem was 'solved' in Nice with the rotation option, although actual decisions on the rotation details were postponed until the 27^{th} member joins. The fact that this proved politically acceptable to the European Council in Nice is important, since the same EU leaders will decide on how to solve the ECB's numbers problem. Moreover, in March 2001, ECB President Wim Duisenberg told the European Parliament (5 March 2001): 'I think that the rotation model, but now I am speculating, will be the most likely outcome of that discussion [on ECB reform].' It is important to note, however, that the premise of nationality-based rotation belies the assertion that central bank governors are independent experts, not national representatives.

Real-world example: rotation in the Fed's Open Market Committee

Partial rotation is the system adopted by the US Federal Reserve Bank (the 'Fed'). There, the body responsible for taking monetary policy decisions, the Federal Open Market Committee, includes the 7 members of the Board of Governors – a body which corresponds to the ECB Executive Board – as well as the president of the New York Fed, and, on a rotating basis, 4 out of the remaining 11 presidents of the regional Federal Reserve Banks. The remaining 7 regional bank presidents attend the meeting but do not cast a vote. This system guarantees that the majority always lies with the 7 members of the Board of Governors. As mentioned above, this feature may be crucial in avoiding both the *status quo* bias and the possibility of a regional bias in Fed decisions.

It should be noted that the Fed model is specific to the history and characteristics of the United States. Unlike the European case, 11 out of the 12 US Federal Reserve Banks are relatively equal in terms of the size and importance of the regions they represent, and this makes rotation more

palatable. The permanent seat of the New York Fed is justified by the special role that this bank has historically played in the Fed System. The financial market is disproportionately located in New York, and all open market operations are undertaken through the New York Fed.

5.2.2 Representation

Representation reduces the number of voting central bank governors by grouping central banks together and allocating only one vote per group. As with rotation, many forms of representation are possible. The main parameters are the number of groups and the grouping criteria. One problem with representation is the politically daunting task of deciding on groupings and on the decision-making mechanism within groups.

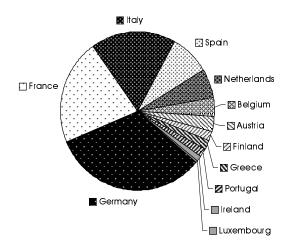
One possibility would require the members of each group to constitute a sufficiently large fraction of the Euroland economy. This, however, would yield uneven groups, given the enormously uneven distribution of GDP even among the 12 current EMU members – the 4 largest economies account for 80% of output with France and Germany alone accounting for over half the Euroland output, see Error! Reference source not found. Figure 5.1 for details. For example, if the aim was to limit the number of voters to 12 in the EU 30, with each group representing a sufficiently large share of GDP, the 5 largest Euroland economies (Germany, France, Italy, Spain and Netherlands) could be given a vote each, dividing the remaining 7 votes among the other 25 nations. Alternatively, a smaller number of groups could be formed, each with its own 'big nation'. Plainly none of these schemes would be politically attractive, given the fact that EMU countries are currently treated equally.

Alternatively, the groups could have an equal number of members, with membership determined on a geographical or other basis. Although the GDP-based group might seem to treat small members unfairly, it might actually end up giving them a greater say. For instance, if Slovakia was bundled with Germany, it would be unlikely ever to have much influence on the group's stance; but if it were part of a large group of small Central European members, its voice might on occasion be heard. It is also possible to combine representation with rotation. For instance, with 24 EMU members, there could be 8 groups of 3, with each group's voting right rotating automatically among the 3 members of each group. If the vote-casting tenure were 1 year, each nation would find itself without a direct vote for 2 years.

Representation in the IMF Board of Directors and in the Bundesbank Council

Representation is the system used to appoint the IMF Board of Directors. Large countries have their own director (the United States, Germany, Japan, France and the United Kingdom), whereas smaller countries form groups with a single director representing each constituency. Some of these constituencies include, along with smaller countries, a few that are of a similar size. One, for instance, includes Belgium, Austria, the Czech Republic, Hungary, Turkey, Slovenia, the Slovak Republic, Belarus and Kazakhstan. The executive director for this group rotates between Belgium and Austria. Others are grouped around a larger country that appoints the executive director, such as the group that includes Italy, Greece, Portugal, Albania and Malta.

Figure 5.1: Distribution of EMU 12 GDP (current prices)



Source: IMF IFS database.

Representation was also the solution adopted for reform of the Bundesbank after German unification. Prior to unification the Bundesbank Council included the seven members of the Board (Direktorium) and 11 Landeszentralbanken presidents. Under the old rules, the addition of 5 new Länder would have boosted the size of the Council to 23, which was viewed as being too unwieldy for serious central banking. Moreover, the extra Landesbank presidents would have seriously shifted power away from the Board. The relative weight of the Direktorium was 39% of Council votes prior to unification: to maintain it at that level with one vote per Landesbank, the size of the Direktorium should have been expanded to 11 members, yielding a Council of 27. This was clearly perceived as being too big.

The solution was to merge the 16 regional banks into 9 and reduce Board members by 1 as well. The Council now includes the 9 regional presidents and 6 Board members. This has the merit of roughly maintaining the Board's vote share at 40% and limiting the number of decision-makers to 15.

5.2.3 Executive Boards and Monetary Policy Committees

In this solution, monetary policy is delegated to a group of independent experts chosen for their competence, experience and reliability. The main parameters are the number of voters, the length of their tenure and the form of democratic accountability.

This is the system adopted in many countries – although, as we have seen, not in Germany with its highly decentralized structure. Under this arrangement, monetary policy is delegated to a board, or a committee, whose composition is unrelated to the regional structure of the country. In some countries, monetary policy decisions are delegated to a Board that includes only full-

time executives of the central bank. Elsewhere, in the United Kingdom for instance, the committee includes both executives and non-executives appointed for fixed terms.⁹

Leaving aside politics for the moment, this clearly corresponds most closely to the ideal monetary decision-making body discussed above. It would consist of experienced and competent individuals concerned mainly with keeping Euroland's inflation rate low and stable. If it had, say, 15 members, 6 on the Executive Board and 9 others, it would be large enough to represent most of the different points of view likely to arise in Euroland but small enough to act decisively when events call for action. The members would not represent elected governments, and with non-renewable 8-year terms they would be largely insulated from political pressures.

One problem, however, is that such a GC would lack accountability (see below).

Table 5.2: Size and composition of monetary policy committees

	Size of the committee	Number of executives	Number of Treasury officials	Number of non- executive independent experts
UK	9	5	0	4
Sweden	6	6	0	0
New Zealand	1	1	0	0
Australia	9	2	1	6
Canada	7	7	0	0

Source: National central bank websites.

The composition of Monetary Policy Committees: some examples

Table 5.2 shows the size and composition of the monetary policy committees in two European nations that are not members of EMU (the United Kingdom and Sweden) and three non-European nations (New Zealand, Australia and Canada). With the exception of New Zealand, the size of such committees varies between six and nine. (See Svensson, 2001, for a criticism of New Zealand's arrangement.) In two cases, the United Kingdom and Australia, the committee includes outside experts. In the UK case, the independent experts are a minority of voters, whereas in Australia they are in a majority, having six of the nine votes. The Australian body also includes a Treasury official.

⁹ On the pros and cons of including independent experts on monetary policy committees, see Lars Svensson (2001).

6. Problems with representation and rotation

The rotation and representation models appear to have been discussed in the ECB, but the difficulties associated with implementing any of these models have immediately become apparent. As President Duisenberg told the European Parliament (5 March 2001):

'You could use rotation, which is the most likely outcome, but then immediately the question arises – would it be for any country acceptable not to take part in the decision-making on monetary policy for some time? Or do you treat countries differently? These are questions which are very sensitive ... Another model would be for example to form constituencies to group countries together, but then you would violate the principle of total independence of the individual participants, because a representative of a constituency would have to defend the interests of his constituency in the governing council. That would run counter to the total personal independence as it is presently formulated and experienced.'

In this section we analyse the rotation and representation models. We show that they fail in three areas: accountability, political acceptability and, on some important occasions, these models might result in the GC not making the right monetary policy decisions.

6.1 Accountability

There seems to be a logical contradiction to the objections President Duisenberg alluded to in the statement reported above. Any objection to losing a vote on the GC is a testimony to the lack of independence of the central bank governors. If, for example, the Spanish governor is totally independent of Spain, Spain loses nothing by not having its governor on the GC. Or does it? Is it possible that the governors are completely independent and yet still serve a national role? The answer is yes.

Under current rules, the NCB governors serve one explicit and one implicit role.

- According to the Treaty, they are independent monetary experts who know a lot about the nation whose central bank they serve.
- > They are the 'ears' of their nation in this closed but hugely important decision-making body.

That is, the NCB governors are important, not only as monetary experts, but also as an important element of democratic accountability. The NCB governors are political appointees in every member state precisely because this appointment process is a key element of democratic accountability within member states.

¹⁰ Note that these changes are likely to be implemented after most of the sitting governors have left office, so personal concern for their place on the ECB is unlikely to be an important factor in governors' objections. The exception is the anomalous appointment for life of Italy's governor, an anomaly that should probably be removed.

Of course, under the terms of the Maastricht Treaty the NCB governors' position on ECB monetary policy must be insulated from national daily politics, but they are clearly a way for member states to ensure that the ECB stays on-mission – to be sure that a whistle gets blown if something starts to go terribly wrong. To make the point, suppose that the ECB made a huge, but honest, policy mistake (as happens to all decision-makers at one time or another). Think about which of the following would be more reassuring to, say, German citizens: (1) the Bundesbank president reassures Germans of their representation, and testifies that 'due diligence' was done; or (2) the same statement comes from a highly competent and experienced technocrat from a Latin nation. Plainly, Germans would find the first more reassuring; this suggests that the presence of the NCB governors on the GC is a form of accountability.

To put it another way, an NCB governor on the GC is both a monetary expert and a national 'listening post', who ensures that the Council is ultimately accountable to someone with credibility in the eyes of the various national electorates.

Taking this as given, any rotation or representation scheme may undermine the credibility and accountability of the ECB in the eyes of Europe's citizens. The ECB has been amazingly effective at avoiding what might be called football-match headlines. When the ECB failed to cut interest rates in March 2001, we did not see the various national presses proclaiming that this meant that their central bank governor had won or lost. Yet it might not have been like this. If, for example, the governors had GDP weighted votes and the whole vote and pre-vote debate were made public, the national presses of various euro members would surely have reported the interest rate decision in 'us versus them' terms. For example, suppose, hypothetically, there were an explicit rotation scheme which meant that this year there was no Spaniard in the voting loop, and the decision was to tighten when Spain's economy would have been best served by loosening. The Spanish press might well have a field day at the expense of the ECB's good name.

6.2 Political acceptability

A natural concern in the case of rotation arises from the possibility that, at a given point in time along the rotation sequence, no voting member comes from one of the seven core EMU countries. On such occasions, which, in the interest of stability, might imply reasonably long spells, monetary policy decisions would be delegated to a group of individuals whose nationalities represent at most 20% of EMU GDP.

How likely is this to happen in an EMU containing 27 members? Table 6.1 computes such a probability assuming that the size of the GC is fixed at 18, that is, 6 EB members and 12 NCB governors. Rotation is assumed to occur independently, that is, the probability that a particular country has a vote in the GC or on the EB is independent of the presence of any other particular country. As the figures show, even with a perfectly random rotation, the probabilities are not very high. In particular, it is unlikely that no voting member of the GC comes from a core country. This is because giving none of the 7 core-country governors a seat on the GC is rather difficult; the probability of this happening, under a system of independent rotation, is less than 1% (0.795%) in an EMU including 27 countries. Clearly, the probability could be reduced to zero by properly sequencing the rotation.

Note, however, that if rotation also applies to the EB, which is what we have assumed in the computations reported in Table 6.1, the probability that no EB member comes from a core country is relatively large, about 13% in an EMU including 27 members.

Table 6.1: The voting power of Euroland's core under a system of independent rotation

Probability that no member from a core country (%):	EMU of 17	EMU of 24	EMU of 27
– belongs to the EB	0.1	9.2	13.1
– has a vote among the 12 non-EB members of the GC	0.0	0.3	0.7
– is not represented in an 18- member GC	0.0	0.02	0.1

Note: The size of the GC is fixed at 18 = (12 NCB governors + 6 EB members). Euroland's core includes 7 countries. Rotation in the EB and GC is assumed to take place independently.

6.3 Under rotation or representation the Council might fail to make the appropriate monetary policy decisions

When all euro area countries are hit by an identical external shock, the possibility of strong disagreements inside the GC as to the appropriate monetary policy response is mostly academic. Matters could be quite different, however, in the presence of region-specific shocks. Consider a shock that hits only the EMU core (France and Germany) and assume, as we did in Section 4, that NCB governors vote with home conditions in mind. Also assume, as in Table 6.1, that the size of the GC is fixed at 18: 6 EB members plus 12 governors. How likely is it that the Council reaches the appropriate decision on the monetary policy response to such a shock? Under *delegation* the probability that the decision is the right one is, by assumption, 100%. But what happens under the two alternatives? To answer this we must again be very specific about details.

For the rotation option, we assume the rotation occurs independently, as above. For representation, we look at one possibility where smaller nations are grouped around a large nation. Specifically, we consider an EMU with 27 members (all incumbents and 12 newcomers) grouped in four constituencies, constructed as follows. The four largest countries, Germany, the United Kingdom, France and Italy join separate groups, and the remaining members are ranked by size and then assigned to these four in order. In a slight variant on pure representation, we assume three randomly chosen NCB governors represent each group.

¹¹ From the point of view of results, this procedure is the same as the following. Assign the four largest countries in one pre-group, then countries 5–9 to another, 21–24 to the sixth pre-group and 25–27 to the seventh. Then form four groups by allotting one country from pre-groups 1–6 to each group and from pre-group seven to those three where Germany is not a member.

Table 6.2 shows the probability that the GC reaches the appropriate interest rate decision after a shock hits only France and Germany, i.e. that the Council sets interest rates at the level which would be right for Euroland. The bias, relative to the ideal policy, is not negligible, around 5%: the probability of making the appropriate decision is 94% under representation, 96% under rotation.

Table 6.2: Interest rate decisions under three voting models, following a shock that hits France and Germany

Probability that the Council makes the interest rate decision that is 'optimal' for Euroland	EMU of 27	
- Delegation	1.000	
– Rotation	0.957	
– Representation	0.944	

Note: The size of the GC fixed at 18 = (12 NCB governors + 6 EB members).

7. A recommendation

The best, and possibly only, solution to the ECB numbers problem is delegation to a committee. Such a committee could coincide with 6 EB members, or could also include a few non-executive members. The main trade-off here is effectiveness versus political acceptability. In the political-acceptability extreme, the committee could consist of 30 members, thus allowing, on average, each likely EMU member to have a committee member. This, however, would fail on effectiveness grounds. In the effectiveness extreme, it would consist of the 6 members that are in the current EB. It is hard to know where the line should be drawn. When faced with a similar problem, the Bundesbank decided on 15 members, with 6 in the EB; Table 5.2 showed that many nations have opted for a number between 6 and 9. Given the size of the EB, we think a total membership of 11 is appropriate. The committee would thus be composed of the 6 EB members plus 5 outsiders. Needless to say, there is little science in this number.

The committee solution has obvious merits:

- It limits the number of individuals responsible for taking monetary policy decisions;
- It de-nationalizes monetary policy, by removing interest rate decisions from a group controlled by NCB governors and assigning it to individuals clearly identified with the euro area; and
- It enhances the individual accountability of each committee member.

What about the politics of it? According to the ECB Statutes, NCB governors sit on the GC in a personal capacity – they do not represent their countries – and they are forbidden to seek or accept instructions from any private or public body. In other words, they are completely independent. If this view is true, the GC already is a committee of independent monetary experts. In this case, no one should object to nominating the finest experts in the world, even if they do not come from a Euroland member.

This misses the point made above about the governors' role in terms of accountability. NCB governors do have some credibility in the eyes of their fellow citizens. If nothing else, they are typically viewed as eminent citizens in touch with national sensitivities. Therefore cutting the governors out of the ECB process entirely might seriously weaken the ECB's accountability and political acceptability.

To redress this, and to ensure that the full range of monetary conditions have a voice, we suggest that the views of NCB governors could still enter the process, but only as information that committee members use to reach their decision. The central bank governors would continue to be part of the GC, but this would become, as far as monetary policy decisions are concerned, a consultative body, one that ensures that the governors can continue to function in the role as national 'listening posts'.

A recommendation 27

Selection of the committee members would be another important component of the ECB's accountability. The current process used to select EB members seems to be appropriate to the task.

7.1 Analogy with competition policy

The EU has clear supranational executive power in only two areas: competition policy and monetary policy. In the case of competition policy, the power is delegated to a committee – the Commission – and decisions are made without formal consultation with either the Council of Ministers or EU members in general. Thus the idea of delegating monetary authority to a committee has an important precedent in EU practice.

¹² 'The President, the Vice-President and the other members of the Executive Board shall be appointed from among the persons of recognized standing and professional experience in monetary or banking matters by common accord of the Governments of the Member States at the level of Heads of State or of Government, on a recommendation from the Council, after it has consulted the European Parliament and the Governing Council of the ECB.'

8. Modalities: The Commission's opportunity and duty

The Nice Treaty was supposed to implement all institutional reforms necessary to prepare the EU for enlargement. It almost ignored, however, the ECB numbers problem. Given the way in which the final deal was handled in Nice, this was probably a wise strategy: the Bank should be firewalled from political back-scratching, logrolling and grandstanding. Indeed, it is disturbing to think about what might have happened if ECB reform had been on the table at four in the morning on 11 December 2000.

EU leaders, however, did not entirely ignore ECB reform; they agreed a subtle and wise stratagem. In essence, the Treaty of Nice opens the door to a 'single issue IGC'. This is an important decision. The ECB institutional structure is enshrined in the Treaty on European Union. Changing it would normally entail another intergovernmental conference (IGC) – a bad idea for at least two reasons: it might have delayed enlargement, and it would have put the ECB structure into the bubbling cauldron of political trafficking. The Nice solution will, at least to some extent, ensure that ECB reform is considered in a politically uncluttered setting.

8.1 Article 5

Article 5 of the Nice Treaty allows the European Council to change its voting rules, by unanimity and acting on a proposal by the European Central Bank *or* by the Commission, Article 10.2 of the ECB Statutes (see Appendix for the full text). This article specifies the voting rules of the GC: each Council member has one vote, and decisions are by simple majority with the president breaking ties. The procedure envisioned in Nice for changing Article 10.2 is formally identical to that required for any treaty change. Namely, the Council, in the composition of the heads of state or government, must decide by unanimity, and the change needs to be ratified by all member states. The only difference – but, as we have argued, a critical one – is that the consultations and negotiations that precede the Council decision will deal with a single issue.

The Treaty restricts the possible changes to Article 10.2 of the ECB Statutes. This may severely limit the set of feasible reforms, excluding perhaps the possibility of handing over monetary policy decisions to the Executive Board. The point is that Article 12 of the Statutes (see Appendix) specifies that the GC as such is responsible for monetary policy decisions. The matter is unclear, however, since Article 12 also says: 'In addition the Executive Board may have certain powers delegated to it where the Governing Council so decides.'

8.2 Who moves first?

The ECB's Governing Council has a clear incentive to move fast in proposing a change in the Statutes. If it waits, it may be put in the uncomfortable position of having to respond to a proposal tabled by the Commission. Remember that Article 5 of the Nice Treaty specifies that the Council can modify the voting rules of the GC acting on a proposal of the ECB or the

Commission; presumably it would act with whichever moves first. Although the Council will certainly consult the ECB on any proposal put forward by the Commission, and *vice versa*, there will be a clear first-mover advantage. The role of agenda-setter can be powerful. For example, if the Commission proposes a workable solution, opposing it would be an uphill battle for the ECB.

Could the ECB move first? The Nice Treaty requires the ECB to act unanimously in making its recommendation for such a proposal, so the incentive to move fast is not enough to produce a decision. None of the solutions outlined above (rotation, constituencies and executive decision) is likely to gather unanimity among national central bank governors. As in the case of the composition of the Commission, many governors will baulk at giving up a vote in the Council, even temporarily, as would be necessary in a rotation system. Wim Duisenberg's view (expressed in a March 2000 testimony to the European Parliament) that 'rotation in a relatively small Governing Council is the most likely outcome' is wishful thinking. Delegating monetary policy to a committee would, in essence, take the vote away from all governors. In one way this would cause even bigger problems, but at least all the governors would be in the same boat.

IMF-style representation is also likely to run into political problems. There might be agreement among the current members on the proposal to group the new entrants, though not the current members, in a couple of constituencies, carrying one vote each. It is impossible, however, to design a rule that gives a permanent vote to Ireland but not to Hungary. In any case, this would not avoid swelling the composition of the GC; at the same time it would break the rule whereby governors vote as individuals, not as representatives of a member central bank.

8.3 Postponing is not an option

Postponing, as was done for the Commission, is also not an option. The ECB is a young institution in the process of building a reputation. The current members of the GC will not risk taking a decision that would introduce a lot of uncertainty into the process that drives monetary policy decisions.

8.4 The responsibility of the Commission

This likely deadlock offers a unique opportunity to the Commission. The Commission has the responsibility (assigned by Article 5 of the Treaty) to come up with a solution, as well as the incentive to table the only rational proposal. At the same time, it has none of the constraints that stop the GC from doing the same. We expect that the Commission will do this soon. Article 5 of the Treaty, with the surprising agenda-setting power it gives to the Commission, is unlikely to have been drawn up by chance. It was clear to the European Council that the ECB might not be able to produce a consensus plan; hence the possibility for the Commission to step in and table a proposal.

The possible drawback of our recommendation – delegation to an independent committee – is that it would require a somewhat larger treaty change than the one enabled by the Treaty of Nice. A change in Article 10.2 of the ECB Statutes may not be enough to strip voting rights from the GC and assign them to the Executive Board, to say nothing of creating a new body – 'the monetary committee' – made up of the Executive Board and several other independent experts. A new drafting of Article 10.2 to this effect is likely to clash with Article 12, which can

only be interpreted in the sense that the GC as such is responsible for taking monetary policy decisions. As we have argued above, however, there is really nothing that stops a single-issue IGC from extending the changes to the ECB Statutes beyond Article 10.2.

8.5 Timing: reform before enlargement

It should also be clear that ECB reform should take place before the next EU enlargement. The reasons are simple. New entrants will almost certainly view the necessary reforms as a retraction of newly granted powers. Since they will have a veto of such reforms (Treaty changes are subject to national vetoes in the Council), it will be much harder to get any reform passed after EU enlargement. Moreover, as mentioned above, a natural price that the new entrants might ask for would be a lenient judgement on the Maastricht criteria ('you can reform it, if we can join it'). The idea that EMU membership was being traded for agreement on reform would do little to bolster the euro. Moreover, discussing reform in such a situation could raise doubts about the final outcome. And doubt is all that is needed to trigger negative reactions in financial markets. The above reasoning indicates that enlarging an unreformed monetary union would have grave consequences for EMU monetary policy-making, and thus establishes the urgency of reforming the monetary union before it is expanded.

Appendix – Article 5 of the Nice Treaty and relevant articles of the ECB Statutes

From the Maastricht Treaty's Protocol on the Statute of the European System of Central Banks and of the European Central Bank. Emphasis has been added. Note that Article 10.3 refers to decisions that affect the financial disposition of the ECB (e.g. the Bank's capital).

ARTICLE 9. The European Central Bank

- 9.1. The ECB which, in accordance with Article 106(2) of this Treaty, shall have legal personality, shall enjoy in each of the member states the most extensive legal capacity accorded to legal persons under its law; it may, in particular, acquire or dispose of movable and immovable property and may be a party to legal proceedings.
- 9.2. The ECB shall ensure that the tasks conferred upon the ESCB under Article 105(2), (3) and (5) of this Treaty are implemented either by its own activities pursuant to this Statute or through the national central bank pursuant to Articles 12.1 and 14.
- 9.3. In accordance with Article 106(3) of this Treaty, the decision-making bodies of the ECB shall be the Governing Council and the Executive Board.

ARTICLE 10. The Governing Council

- 10.1. In accordance with Article 109a(1) of this Treaty, the Governing Council shall comprise the members of the Executive Board of the ECB and the Governors of the national central banks.
- 10.2. Subject to Article 10.3, only members of the Governing Council present in person shall have the right to vote. By way of derogation from this rule, the Rules of Procedure referred to in Article 12.3 may lay down that members of the Governing Council may cast their vote by means of teleconferencing. These rules shall also provide that a member of the Governing Council who is prevented from voting for a prolonged period may appoint an alternate as a member of the Governing Council. Subject to Articles 10.3 and 11.3, each member of the Governing Council shall have one vote. Save as otherwise provided for in this Statue, the Governing Council shall act by a simple majority. In the event of a tie the President shall have the casting vote. In order for the Governing Council to vote, there shall be quorum of two-thirds of the members. If the quorum is not met, the President may convene an extraordinary meeting at which decisions may be taken without regard to the quorum.
- 10.3. For any decisions to be taken under Articles 28, 29, 30, 32, 33 and 51, the votes in the Governing Council shall be weighted according to the national central banks' shares in the subscribed capital of the ECB. The weight of the votes of the members of the Executive Board shall be zero. A decision requiring a qualified majority shall be adopted if the votes cast in

32 Appendix

favour represent at least two thirds of the subscribed capital of the ECB and represent at least half of the shareholders. If a Governor in unable to be present, he may nominate an alternate to cast his weighted vote.

- 10.4. The proceedings of the meetings shall be confidential. The Governing Council may decide to make the outcome of its deliberations public.
- 10.5. The Governing Council shall meet at least ten times a year.

ARTICLE 11. The Executive Board

- 11.1. In accordance with Article 109a(2)(a) of this Treaty, the Executive Board shall comprise the President, the Vice-President and four other members. The members shall perform their duties on a full-time basis. No member shall engage in any occupation, whether gainful or not, unless exemption is exceptionally granted by the Governing Council.
- 11.2. In accordance with Article 109a(2)(b) of this Treaty, the President, the Vice-President and the other Members of the Executive Board shall be appointed from among persons of recognized standing and professional experience in monetary or banking matters by common accord of the governments of the member states at the level of the Heads of State or of government, on a recommendation from the Council after it has consulted the European Parliament and the Governing Council. Their term of office shall be 8 years and shall not be renewable. Only nationals of member states may be members of the Executive Board.
- 11.3. The terms and conditions of employment of the members of the Executive Board, in particular their salaries, pensions and other social security benefits, shall be the subject of contracts with the ECB and shall be fixed by the Governing Council on a proposal from a Committee comprising three members appointed by the Governing Council and three members appointed by the Council. The members of the Executive Board shall not have the right to vote on matters referred to in this paragraph.
- 11.4. If a member of the Executive Board no longer fulfils the conditions required for the performance of his duties or if he has been guilty of serious misconduct, the Court of Justice may, on application by the Governing Council or the Executive Board, compulsorily retire him.
- 11.5. Each member of the Executive Board present in person shall have the right to vote and shall have, for that purpose, one vote. Save as otherwise provided, the Executive Board shall act by a simple majority of the votes cast. In the event of a tie, the President shall have the casting vote. The voting arrangements shall be specified in the Rules of Procedure referred to in Article 12.3.
- 11.6. The Executive Board shall be responsible for the current business of the ECB.
- 11.7. Any vacancy on the Executive Board shall be filled by the appointment of a new member in accordance with Article 11.2.

ARTICLE 12. Responsibilities of the decision-making bodies

12.1. The Governing Council shall adopt the guidelines and take the decisions necessary to ensure the performance of the tasks entrusted to the ESCB under this Treaty and this Statute. The

Appendix 33

Governing Council shall formulate the monetary policy of the Community including, as appropriate, decisions relating to intermediate monetary objectives, key interest rates and the supply of reserves in the ESCB and shall establish the necessary guidelines for their implementation. The Executive Board shall implement monetary policy in accordance with the guidelines and decisions laid down by the Governing Council. In doing so the Executive Board shall give the necessary instructions to national central banks. *In addition the Executive Board may have certain powers delegated to it where the Governing Council so decides.* To the extent deemed possible and appropriate and without prejudice to the provisions of this Article, the ECB shall have recourse to the national central banks to carry out operations which form part of the tasks of the ESCB.

- 12.2. The Executive Board shall have the responsibility for the preparation of meetings of the Governing Council.
- 12.3. The Governing Council shall adopt Rules of Procedure which determine the internal organization of the ECB and its decision-making bodies.
- 12.4. The Governing Council shall exercise the advisory functions referred to Article 4.
- 12.5. The Governing Council shall take the decisions referred to Article 6.

The Nice Treaty adds the following paragraph:

'10.6. Article 10.2 may be amended by the Council meeting in the composition of the Heads of State or Government, acting unanimously either on a recommendation from the ECB and after consulting the European Parliament and the Commission, or on a recommendation from the Commission and after consulting the European Parliament and the ECB. The Council shall recommend such amendments to the Member States for adoption. These amendments shall enter into force after having been ratified by all the Member States in accordance with their respective constitutional requirements.

A recommendation made by the ECB under this paragraph shall require a decision by the Governing Council acting unanimously.'

References

Alesina, A., O. Blanchard, J. Galì, H. Uhlig and F. Giavazzi (2001), *Defining a Macroeconomic Framework for the Euro Area, Monitoring the European Central Bank No. 3.* Centre for Economic Policy Research.

Baldwin, R., E. Berglöf, F. Giavazzi and M. Widgrén (2000), 'EU Reforms for Tomorrow's Europe', CEPR Discussion Paper No. 2623. Centre for Economic Policy Research.

Baldwin, R., E. Berglöf, F. Giavazzi and M. Widgrén (2001), *Nice Try: Should the Nice Treaty be Ratified?, Monitoring European Integration No. 11.* Centre for Economic Policy Research.

Von Hagen, J. and R. Suppel (1994), 'Central Bank Constitutions for Federal Monetary Policy', *European Economic Review*, 38, pp. 774–82.

De Grauwe, P., H. Dewachter and Y. Aksoy (1999), 'The ECB Decision Rules and Macroeconomic Performance', CEPR Discussion Paper No. 2067. Centre for Economic Policy Research.

Svensson, L. (2001), 'Independent Review of the Operation of Monetary Policy in New Zealand: A Report to the Minister of Finance' available at http://www.iies.su.se/leosven/