# Evolving Voluntary Rules For The Operation Of The European Central Bank*

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**Abstract**

**Despite the independence offered by the Maastricht Treaty, the ESCB will wish to bind itself by voluntary rules in the conduct of monetary policy, because of the demands of policy itself. The ESCB has no history of successful pursuit of price stability, although it can borrow some reputation from the existing national central banks. It will therefore need to make a strong and verifiable precommitment about how it will run monetary policy if it is to be seen as highly credible by those who affect prices. The example from other central banks shows the ESCB will need to be open, straightforward and highly transparent in its conduct of policy. This openness will both help to dispel any fears that the ESCB will be subject to covert influence to follow objectives other than price stability and help fill the 'democratic deficit'. The ESCB will need to persuade the public, governments, the European Parliament and financial markets that it is pursuing price stability effectively and at minimum cost. Thus, although external sanctions may appear limited, the ESCB is likely to choose to make itself highly 'accountable' in the conduct of policy.**

The focus of attention in rule-making tends to be on formal rules. In the context of the European Union this has tended to mean a focus on rules made at the European level. However, as pointed out in Shipman and Mayes (1989), European integration involves the development of rules at a whole variety of levels. Some of these new rules do not have the force of law.[1] A case in point is the European Central Bank (ECB) and the system of central banks (ESCB) where much attention has been directed to the statutes and the relevant articles in the Maastricht Treaty.[2]

This paper focuses not on the formal rules but on the rules that the ECB and ESCB choose to impose on themselves in operating the single monetary policy in Stage 3 of EMU.[3] While there are some constraints on these rules from the formal rules, even at quite a detailed level,[4] most of the system of rules can be determined by the ECB/ESCB itself.

Informal rules play an especially important role in the conduct of monetary policy because, by precommitting itself to undertaking particular courses of action if specific events occur in the future, a central bank can reduce uncertainty and as a result reduce any costs that monetary policy places on society.[5] This is particularly important when a central bank has price stability as its goal, as is the case for the ESCB. *If* the central bank can explain in advance how it will react to ensure price stability is maintained in the face of the various shocks that assail the economy in the future *and* it can make commitments to undertake these actions which people believe, *then* the task of monetary policy will be eased as people will tend to act *today* on the assumption that price stability will continue in the future. If they assume there will be inflation, then their actions today will indeed tend to contribute to that inflation tomorrow and the central bank will have to run policy tighter than it otherwise would to prevent these inflationary pressures from actually resulting in inflation.[6]

The ECB was opened in July 1998. Since there are lags in the economic system, the

when the ESCB is operating. These actions have been based in part on people's guesses of what will happen to inflation when the ESCB is responsible for monetary policy in the euro area. The ESCB has not been able to speak for itself to explain what it will do when the time comes but the European Monetary Institute (EMI) was set up to take all the necessary measures for the ESCB to come into full and efficient operation on the very first day of its existence.

The EMI mapped out many of the crucial features of what monetary policy will look like under the ESCB in a series of papers entitled *The Single Monetary Policy in Stage Three* (EMI, 1997a,b,c).[7] The key facets are summarised in Table 1. Some of the key decisions, such as the exact choice of targeting regime are still to be made. This is unfortunate because certainty would have been helped by knowing the answer already. This paper focuses on the aspects of the voluntary rules that the ESCB will need to impose on itself to help convince people of the extent of their determination to maintain price stability that can be decided in advance.

Section 1 explores how a credible new system of rules might be put together. It contrasts the two obvious sources for such rules: (a) 'borrowing' rules from existing institutions which have a good reputation for price stability and hoping that some of that reputation will also be transferred (b) creating new rules which embody the characteristics of credible commitments. Section 2 then considers the particular characteristics of rules for a monetary policy that is aimed at maintaining price stability. Section 3 explores the characteristics of the systems of voluntary rules that other central banks have adopted in recent years, with a particular focus on New Zealand. Section 4 concludes with implications for the actions the ESCB is likely to take.

## 1 Adopting a System of Voluntary Rules

### *1.1 The Basis of Choice - experience or some wider set*

Various factors are likely to have a substantial effect on the choice of rules to govern the formulation of European monetary policy. The most obvious is that the people involved are likely to be heavily influenced in their choice of scheme by the rules with which they are familiar from their own central banks. (It is still unusual for anyone to have worked in more than one central bank.) This does not mean that there is any compulsion for the new rules to lie within the set of existing rules from the member national central banks.

Clearly the creation of these European monetary institutions provides an opportunity to improve on the rules of all of the existing members. Indeed, creating a new institution provides an opportunity to get away from the constraints of the past and develop a system of rules that draws on best international practice or the prescriptions of the appropriate theory.[8] Many of the European central banks have altered their rules of operation in recent years, as they have become more independent.[9] The Bank of England, for example, altered its rules last year following changes announced by the new government. Those rules have been explicitly structured both to try to improve the quality of execution of monetary policy and to convince the wider public that this improvement in quality will occur (George, 1997; King, 1997). Thus, although the arrangements set out in the Maastricht Treaty for the ESCB are clearly different from those facing a national central bank in either a federal or unitary state, there is adequate precedent to draw on.[10]

### *1.2 Coherence*

There is always the danger that choosing a new rule system is achieved by implicitly listing

No one would do this literally but, if the temptation is to support rules with which one is most familiar, then any which most central banks currently apply will be much easier to agree than those where there is considerable variety of practice. Taking such a route will, however, tend to lead to complexity rather than simplicity, as different systems tend to reflect different philosophies. These philosophies or cultures will reflect not just the way the central bank operates but the way the society as whole thinks and operates in delivering the outcomes of macro-economic policy.

Thus, for example, in Finland wages and salaries are largely determined by centralised bargaining. The parties to the bargain believe that if the pressures are sufficiently great it will be possible not merely to negotiate bargains that result in reductions in real wages when needed to prevent unacceptable levels of unemployment but even to negotiate decreases in nominal wages.[11] In these circumstances the central bank can adopt a rather different approach to influencing the price expectations of wage bargainers than it can in say, Canada, where bargaining is much more dispersed. Convincing a room full of people and convincing the public at large may require very different approaches.

Hence coherence requires that the rules adopted by the central bank fit with the system governing how the whole of society operates. In the case of the ESCB this is quite a problem because the macroeconomic decision-making is unique and, indeed, to a large extent, untried. There is no single euro area government to match the single central bank. The ESCB thus has to influence the member state governments both separately and jointly. The Stability and Growth Pact limits the scope for the member states to use fiscal policies in a manner that will affect inflationary pressures unfavourably. However, it is yet to be discovered whether some states are prepared to pay penalties or whether governments will view the limits on deficits as unduly large and operate well within them.[12] In many respects it is diversity rather than similarity which faces the ESCB in formulating the rules that will govern monetary policy.

Clearly, to some extent, bargaining power in the discussions over the appropriate rules will reflect the size of the existing institutions or their respective economies or populations. However, deciding on a rule system is not akin to deciding on the capital subscription from the member central banks. Choosing an amalgam could easily produce an inconsistent combination. The Bundesbank, for example, has got considerable freedom of action and flexibility as a result of its forty years of successful reputation building. That freedom does not stem from the rule structure itself and just transposing the rule structure does not necessarily transpose the operating freedom as well that is necessary to make the system work well.[13]

What is more likely, therefore, is that the primary ingredients of the new system will tend to come from specific sources, so that the new organisation will develop a definable 'culture' for their operation. The way this is developed might very well be similar to the approach outlined by Gold (1993) for the development of new regulations by the Commission of the European Communities, where the experience set of the original drafter is very important. In any case the flavour of the new system will also depend heavily on the deliberations in the EMI even though it does not assume responsibility for these specific rules of operation. Indeed, the direction that the EMI has moved is one the main themes of this paper.

Nevertheless, the danger of trying to produce combinations that will provide 'something for everyone' rather than focusing on achieving the objectives for having the rules will always be in the background.[14] Compromises previously reached in some other areas of EU rule-making[15] show that the danger can be real.

*1.3 Borrowing*

The most obvious source of influence from existing institutions in the current circumstances is likely to be the Bundesbank. Not only does it represent the largest economy but it has also been leading monetary policy for most of the member states for many years and has a good public reputation for achieving price stability - the primary objective of the ECB. By 'borrowing' the Bundesbank's system of operation, even with significant amendments, the ESCB might hope to 'borrow' much of the Bundesbank's reputation as well.[16,17] Clearly, wherever the specific merits lie, there is an incentive to try to adopt whichever methods will allow the new institutions to converge on the 'best' rather than on the average of the existing systems.

The formal rules of the ESCB as laid down in the Maastricht Treaty clearly owe a lot to the formal rules governing the Bundesbank. There is therefore a temptation to think that it would make equal sense to borrow the informal rules from the same source. However, to some extent this prima facie view is mistaken as specific features of the German system, designed to give adequate power to a central bank to act, yet an adequate role for Landesbanken to reflect Germany's federal structure, do not translate well to a new European level institution that does not have Germany's institutional history. In many respects the German Federal Banking Act of 1957 gives rather more opportunity within the Bundesbank structure for regional political influence than might be felt desirable for the ESCB.[18]

This 'borrowing' of reputation from others, by adopting a known rule system that outsiders have grounds for thinking will be effective, reduces the need for the ESCB to establish its reputation by action (Castren, 1998) and speeds up the process of reputation-building considerably. If the ESCB has to wait to be fully convincing until it has been running monetary policy for several years the costs to the European economy from the higher expectations of inflation could be considerable.

However, as I argue later, treating the development of the new rule system as principally an inward discussion of the relative merits of the systems used by the member national central banks is mistaken. In the first place reputation can be 'borrowed' from the rule systems of central banks outside the EU and indeed from new structures that appear plausible.[19] However, more importantly, it is necessary to consider the purpose of monetary policy as laid down in the Maastricht Treaty and the wider issues of how the new ESCB/ECB will want to establish its reputation in tackling price stability. I therefore turn first to what is required in setting rules for the operation of monetary policy.

Of course, reputation is attached to people as well as to institutions and rule systems. Having the existing national central bank governors on the Governing Council of the ESCB is a means of trying borrow as much personal reputation as possible, as is the choice of the members of the Executive Board of the ECB.[20]

## 2 Rules for Monetary Policy

The primary objective of the ECB (art. 2) is to maintain price stability. Although there are detailed remarks on the structure of the ECB and ESCB, there are almost no remarks in the Treaty about how price stability is to be achieved. Except for the fact that there is scope for constraints to be imposed on monetary policy through the adoption of other priorities for the exchange rate by the Council of Ministers. The only constraints that are imposed on macroeconomic policy, which have implications for monetary policy, fall largely on the fiscal policy of governments of the member states through the excessive deficit procedures and the

prohibition of any monetisation of public sector deficits by the ESCB. However, Article 2 does go on:

> Without prejudice to the objective of price stability, it {the ESCB} shall support the general economic policies in the Community with a view to contributing to the achievement of the objectives of the Community as laid down in Article 2 of the Treaty. The ESCB shall act in accordance with the principle of an open market economy with free competition, favouring an efficient allocation of resources, and in compliance with the principles set out in Article 3a of this Treaty.

However, these are very generalised principles. No attempt is made to spell out what 'price stability' is or what 'maintaining' it means.[21] This is a problem common to most central banks and this form of words is very close to that used by banks with a good record in achieving price stability (an example of borrowing in operation).[22]

*2.1 Clarity and Credibility*

Many governments round the world have preferred to be more explicit themselves about the target of monetary policy than is the case for the ESCB.[23] The UK, for example, has set an explicit target: - that the 12 monthly rate of growth of the consumer price index (RPI), after allowing for the effect of indirect tax changes, should not deviate by more than 1 percent from 2.5 percent. New Zealand has an explicit Policy Targets Agreement (PTA) between the Governor of the Reserve Bank and the Minister of Finance, which spells out what monetary policy is to achieve in even more detail. However, it is not a necessary requirement for price stability to spell every detail out in a contract with the central bank. Other forms of contract can also work well but the nature of the complete relationship between the government or parliament or people as the principal and the central bank as their agent may be more complex and less explicit.[24]

The Maastricht Treaty deliberately gives the ESCB very considerable independence. That independence includes being able to explain what the ESCB understands by the term 'price stability'. Of course the ESCB will be constrained in practice to picking a definition which accords with current international understanding of the meaning of the term in order to comply with the spirit of the Treaty.[25]

While rules will be needed within the ESCB to come to decisions over monetary policy, these are not just a set of largely arbitrary conditions that can be worked out in private, kept secret and not communicated outside the ECB. If monetary policy is to be effective it must be *credible* - and if it is to be credible it must be clear and readily understood. Credibility is to some extent a rather special concept among economists as it reflects the degree to which the pronouncements of the central bank are *believed* - as reflected in the price of bonds and the exchange rate - a point that is developed further, later in this section. *The ESCB therefore has to set out what it is going to do, how it is going to do it and provide enough information relating to its decisions that it can be understood, judged and acted upon by those with an interest in financial markets round the world.*

Some central banks have, over time, developed a sort of code by which their intentions, though expressed in very few words, are in fact clear to those who have cracked the code.[26] The Reserve Bank of New Zealand for a time used such codes: 'comfortable' meant 'not likely to seek any changes at present'; 'watching conditions closely' meant that the Bank was worried where things were going and was likely to act if the inflation target got

message is addressed can understand the code. Domestic money markets may manage this fairly readily but foreign operators, even if quite large, may have difficulty and the general public will find it impossible.[27] While the ECB may be able to adopt some code it is likely that elementary clarity will be required initially.

The ESCB's pronouncements on the future development of the European economy, particularly on inflation, and their conclusions for the setting of interest rates will be dissected with great interest. There will be an army of ESCB watchers just as there is an army of Fed watchers in the US and smaller contingents in the EU member states at present.

Communicating with this army is difficult as they try to read meaning not just into what is said but into what is not said as well. Anyone who can work out better than the others what the ESCB may or may not do next stands a chance of making a profit. They will assess the ESCB's forecasts. If they think the ESCB is wrong then they will take a position in the market based not on what the ESCB says now but on what they think it will have to do in the future.

If the ESCB is not believed or is not clear, then market participants will tend to act in a manner which the ESCB thinks inappropriate. In particular, if people find the ESCB unclear or its reasoning for its view on the future for inflation weak, they will act on the basis that inflation may be *higher* than the ESCB suggests.[28] If it were just a matter of symmetric disagreement with people sometimes thinking that the ESCB is too pessimistic and sometimes too optimistic then there would be no impact on people's expectation of inflation or on the costs of monetary policy. However, if they are uncertain then this will unambiguously raise expectations of inflation and make the task of the ECB more difficult. Uncertainty leads people to be cautious and insure themselves for bad outcomes. That insurance comes at a cost.

### *2.2 The Effect of Monetary Policy on Inflation*

Monetary policy has an impact on inflation with a lag (see Mayes, 1996, for example, for an explanation). In order for policy to be effective, not only must it be forward looking and based on forecasts of what might happen without the intervention of policy but it must be able to explain, with substantial quantitative precision, what its effect will be on inflation and on the real economy.[29]

The impact on policy comes through a number of routes, which are usually collectively known as the 'transmission mechanism'. The principal routes of influence come through interest rates (as the ESCB will be able to control some key short interest rates) onto the cost of borrowing and through the exchange rate for the euro (against currencies not pegging to it). The change in the exchange rate will affect purchasing power and hence both it and the change interest rates will affect income and wealth. The exchange rate change will also affect import prices from non-euro regions, which feed directly into the consumer price index. These effects on income and wealth affect net demand and hence inflationary pressure in the EU. However, there is one additional mechanism that is important in the current context.[30] That is the effect on people's *expectations* of inflation. By acting promptly, slowly or inconsistently the ESCB can affect people's expectations. If people expect inflation to rise, *even if they are wrong,* they will act on this basis and the ESCB's job will become more difficult.[31]

Take a simple example. Say, inflation is running at 1 percent a year and the ESCB correctly forecasts the pressures on the economy and what will be necessary to keep inflation at one percent. If the ESCB is not believed and people instead think that prices will rise at 2

basis that inflation will be 2 percent. This will thus tend to be a self-fulfilling prophecy and the ESCB will have to tighten monetary policy again to offset it.[32] Thus the costs of monetary policy in terms of output and unemployment will be higher than if the ESCB were believed in the first place.

This line of argument applies, whether a central bank is pursuing price stability through targeting inflation directly or indirectly through an intermediate money target. The money target is used as the best simple indicator that future prices will be stable, which the central bank thinks it can rely on. It is thus not necessary to get into the, as yet, unresolved debate set out in EMI (1997a) about whether inflation targeting, money targeting or some derivative of them is the best way forward. However, it would greatly assist the credibility of the ESCB's likely policy if that debate could come to a conclusion.

The extent to which the expectations part of the transmission mechanism is important depends on the extent to which people form expectations by looking forward to what is likely to happen rather than looking at history. If history has been for high inflation or lack of credibility in the central bank's setting of monetary policy then the central bank will want to encourage people to look forward. The more people believe that the central bank will be successful, the less costly and less difficult the implementation of monetary policy will be. Thus clarity, consistency and credibility are all in the interests of the ESCB and it will want to set its rules voluntarily in a manner that will maximise this outcome.

Unlike an existing institution the ESCB will have no history of success to rely on in order to establish its reputation. Hence, on the one hand, it will need to set up a system of rules and *precommitments* to action which will convince people of its good intentions and, on the other, it will want to try to borrow credibility from its predecessor institutions by adopting rules which will appear at least as good as those successfully implemented by its predecessors. These member state central banks are of course only predecessors in the sense of setting monetary policy. They will remain in existence in the ESCB but will not any more determine monetary policy individually for their states.

I shall return to the issue of precommitment in a moment but the point to note here is that we have now come across a conflict or at least a potential conflict in choosing the cultural flavour of the voluntary rules to be set regarding monetary policy in the ESCB. Establishing a reputation in advance implies an open approach to rule setting so that outsiders can be clear about the quality of decision-making. However, some institutions like the Bundesbank, which have a long history of successful monetary policy making, have not found it necessary to be as open (Marsh, 1992; Dean and Pringle, 1994).[33]

The other central banks in the EU follow a variety of paths. The Bank of England, for example, has recently become much more open. Its monetary policy committee has a majority of 'outsiders' who have to make up their minds about what to do on the basis of the evidence the Bank's staff provides and any other evidence from other sources that they can draw on. To be persuasive everyone needs to set out their evidence and the basis for their judgement. It is not just a matter of the Governor making up his own mind and issuing an ex-cathedra statement of what monetary policy will be. If for no other reason (Mayes, 1997a) the members of the monetary policy committee will be jointly and severally responsible for their decisions and will want to be able to justify their stance after the event. The publication of a version of the minutes after the meeting will enable the recording and explanation of any divergence.

An opposing view of the need for clarity is based on the idea that participants in the

public for holding them. This is more understandable where the members of the decision-making body are not involved in central banking full time and have to run their own businesses the rest of the time (as with the board of the Reserve Bank of Australia, for example). If their views were known individually then others might be able to act on them commercially. There will be enough people present at the meetings that the members can expect their views to be known within the ESCB and that their views will become known by their own governments. It therefore becomes more difficult to see why the entire proceedings would need to be confidential. Indeed an open ESCB would seek to avoid some of the constraints from Article 10.4

> The proceedings shall be confidential. The Governing Council may decide to make the outcome of its deliberations public.

and take a fairly liberal view of what is meant by the word 'outcome', by explaining decisions and setting out the counter arguments that were rejected even if there is no attribution by name.

### *3.3 Precommitment*

One advantage of having a clear system of known rules is that these can be used to bind the central bank to a course of action in the future, hence increasing its credibility in the present. If an institution has discretion over the way it may act then some people are likely to expect that, under pressure, it may use that discretion to weaken the fight against inflation (see Rogoff, 1985, *inter alia*). This has been thought likely to generate an inflationary bias in the way macro-economic policy is run.[34] This temptation is particularly obvious in the case of governments that wish to be re-elected.

Although there may be no long-run benefit in terms of output or employment to be gained just from manipulating fiscal or monetary policy, they can be used to have a short-run influence (see Faruqee *et al*. 1997, for example).[35] Since, typically, the favourable impact on incomes (say from a tax cut) comes through more rapidly to consumers (electors) than the adverse consequences from the ensuing inflation, it may be possible to 'bribe' electors successfully even though they may be worse off in the long-run.[36] Even though many electors will see through this, especially if the device is repeated (Kydland and Prescott, 1977), Reserve Bank (1996) shows that it has been used on many occasions by governments. Such moves can be particularly effective if they come as a 'surprise'.[37]

To offset this incentive and try to persuade financial markets that such devices will not be used, governments typically try to pre-commit themselves to not acting in this way. New Zealand has been particularly active in this regard and the Financial Responsibility Act of 1994 requires governments not only to use transparent accounting methods but also to explain the long-run consequences of their short-run actions. The excessive deficit procedures in the Maastricht Treaty are a similar action in the same direction - trying to limit the inflationary options for future governments.

However, the option which is more widely used is to try to set up a rule system for the central bank which gives it the power and duty to offset any such fiscal actions should they occur and the independence to make sure that the government cannot influence the management of the Bank at the time. The simplest of these is to give the heads of the central banks long-term contracts and to make them liable to lose their jobs if they are not effective in the fight against inflation.[38]

The rules for the independence of the ECB and ESCB in the Treaty go part way to achieving this outcome. The President is appointed for eight years and is explicitly required neither to receive nor seek instructions from outside on monetary policy. However, there are no explicit sanctions applied should a President bow to political pressure. To be fully credible it is likely that the ESCB will want to make some sort of voluntary performance pre-commitment (indeed the EMI has already thought this way, see Table 1, item 2). As I shall argue later such sanctions need to be harsh enough that they are thought to bring realistic pressure on the bank and yet the performance required needs to be feasible enough that there is a reasonable chance that the bank could succeed. If the chances were low then there would be great reluctance to become a governor/president of the central bank.

No device of this form can be completely credible (McCallum, 1995; Canzoneri *et al.* 1997). Havrilevsky (1995) points out that the Federal Reserve has reacted to political pressure despite its technical independence.[39] Governments have the power to unmake laws and alter treaties. However, some of the literature, in the tradition of Rogoff (1985), seems to have got itself into an odd preoccupation with the idea that central bank governors will tend to renege on their contract because accountability is weak. As McCallum (1995) also points out (the other 'fallacy' referred to in his article) central bankers have in practice tended to carry out their tasks without such sanctions. Thus, the absence of an optimal contract in the sense of Walsh (1997) is not a barrier to the ESCB following either credible commitment or credible pre-commitment. One can also argue the obverse proposition that governments of member states may run excessive deficits deliberately despite their commitment not to and the penalties to be imposed if they do.

## 3 Choosing Self-imposed Constraints

### *3.1 The EMI's Proposals*

In its preparations for the setting up of the ESCB/ECB the EMI (1997a) noted five key conditions for a credible monetary policy (reproduced here as Table 1). The first two of these are examples of voluntary rules that the ECB will want to impose on itself. The first is that the ECB will want set out a clear explanation of how it defines price stability in quantitative terms and the second is that it will want to set out specific targets and criteria about how its performance should be judged, thereby enhancing its 'accountability'. As Castren (1998) explains, a central bank will tend to offer accountability as means of establishing its credibility where it does not have a strong reputation on which it can trade.

#### *3.1.1 Defining Price Stability*

It is indicative that the EMI should have used the word 'quantitative'. Some central banks, such as the Federal Reserve can get by without a specifying any numbers. There (see Reserve Bank, 1996, for example) a behavioural definition is thought to be in operation. 'Price stability' becomes 'controlling the general level of prices in such away that inflation does not feature in ordinary thinking of people when they undertake their transactions'. Thus this definition is a statement about results not about price levels, inflation or variations in the rate of inflation. It has considerable prima facie appeal but it is still the case that quantitative decisions have to be made by market participants about what they expect inflation to be. Furthermore people's behaviour may change over time. In a world where double-digit inflation is common, price changes of one or two percent may be neglected (or pervasive indexation may mean that all inflation is taken into account without any quantitative limit). However, in a more stable world, time horizons may lengthen. Even 1- percent inflation a

The ESCB will have quite a complex raft of decisions to take in coming to this definition (see Haldane, 1997, for a survey). It needs to decide what prices are being discussed, is it the CPI, as in most explicit targets, or a wider definition of prices that includes producer prices or even asset prices? It could be narrower, focusing only on some sectors. Similarly, it has to decide on whether it is discussing the price level, the rate of inflation or some average over the cycle as in Australia. There is a continuing debate (Brash, 1997) over whether one should aim at no increase in prices over the longer term (Feldstein, 1996), or no increase after allowing for measurement errors or at some very low rate of inflation. Aiming for a decline in prices in line with productivity, as suggested by Robertson and Friedman, is currently rather out of favour.

However, there is no need to make any recommendation in the current context, merely to note that the ESCB will want to be explicit enough that it can anchor expectations and remove all doubts of manipulation. Ultimately it will make the choice itself but it will no doubt bear in mind what the public, member state governments and international opinion thinks. Such decisions are not irrevocable and, in an obvious sense, there is no 'right answer'.

### *3.1.2 Performance Targets*

More interesting is how the ESCB chooses to set its specific aim and how its actions can be assessed against that yardstick. The more specific the target the easier it is to judge the ESCB's performance. The more ambitious the target the greater the chance of failing to achieve it. The less ambitious the target the higher inflation expectations will be and hence the greater the cost of monetary policy. Indeed a comprehensive assessment of performance would not include simply the assessment of the result, be it an inflation rate or a growth in the money stock, but an assessment of the costs of its achievement. Such costs might be thought of in terms of variability in the real economy (excluding the effects of supply shocks), real interest rate margins over the rest of the world or exchange rate measures.

Although markets are very sophisticated, most targets will need to be very straightforward if they are to influence the actions of the ordinary person and be publicly acceptable. They will also need to be readily observable (Castren, 1998; Reserve Bank, 1996). However, it is unlikely that any target could be so simple, the measurement of performance so straightforward and the credibility so high that simple comparison of numbers after the event would suffice. Most central banks feel they have to explain. Indeed the Bank of England, for example, is required to explain, if inflation goes outside the 1.5 to 3.5 percent range set down for it, why it happened and what it proposes to do about it. We can infer that action will be taken if the explanation is insufficient, whatever the nominal independence of the Bank and its decision-makers.

### *3.1.3 Giving Account and Being Held to Account*

However, it is misleading to put the focus on explaining after the event. The main reason that central banks explain their policy actions is not because they are preparing for being *held to account* by governments, parliaments, media or the public but because they need to in order to convince markets that they are taking the appropriate actions and making the appropriate judgements over what is likely to happen in the future. They therefore need to *give an account* of what they are doing in policy making (to use the phraseology of Briault *et al*, 1996). Secrecy can lead to uncertainty in markets and hence to increased costs of monetary

A credible system will thus come from a combination of reputation established by past actions or 'borrowed' from predecessors and a set of voluntary rules on

> the definition of the target,
> the way performance will be assessed relative to the target,
> the sanctions for poor performance,
> the way in which policy is formulated, decisions are made, explained and publicised.

The more independent the central bank then the more developed this set of voluntary rules is likely to need to be.

*3.2 Voluntary Rules In Practice*

Existing central banks have had to develop voluntary rule systems for implementing monetary policy. In what follows I shall draw heavily on the New Zealand system as it provides one of the clearest models to follow. Their position in 1989 was much more similar to that of the ESCB than that of most of the EU central banks, including the Bundesbank, is at present. Like the Bank of England in 1997, they faced the wish to move to a new structure to which they wanted to attach as much credibility as possible.

The nature of the rule system depends crucially on who chooses the target and the degree to which other formal regulations are laid down from outside the central bank. Thus, in this respect, the New Zealand system is less interesting than some because the Reserve Bank Act 1989 specifies not just the objective of price stability (section 8) but

> that there shall be, in advance, a *policy targets agreement* between the minister (of finance) and the governor for the term of office of that governor (section 9);
>
> that at least every six months the Bank shall deliver and publish a *Policy Statement*, which is referred to parliament, that covers
> (a) the policies and means to be used to achieve the policy targets
> (b) the reasons for adopting the policies
> (c) how policy is to be formulated and implemented over the next five years
> (d) a review and assessment of policy over the previous period
> (section 15).[40]

In this case not only is the target specified but the need to give account is also set out, with a specified frequency and an indication as to content. The ESCB's requirement, set out in Article 109b3

> The ECB shall address an annual report on the activities of the ESCB and on the monetary policy of both the previous and current year to the European Parliament, the Council and the Commission, and also to the European Council. The President of the ECB shall present this report to the Council and to the European Parliament, which may hold a general debate on that basis.
>
> The President of the ECB and the other members of the Executive Board may, at the request of the European Parliament or on their own initiative, be heard by the competent committee of the European Parliament.

is not particularly prescriptive. The ESCB can thus choose what appears appropriate rather than having the procedures imposed on it.

This choice could result in major quarterly 'Inflation Reports'[41] along the lines of that produced by the Bank of England or in some rather more limited discussion, as can be found in the Reserve Bank of Australia's Annual Report, which covers some 70 pages of text, illustrated by well set out multicoloured graphs. The nature of these reports has been determined largely by the banks themselves. Naturally they look at what other central banks do. The general trend has been towards producing not just clearer and more explicit documents but in talking about the future rather than merely setting out a record of the past. The forward look is present because the banks have to look forward in setting policy and because they want to affect people's price expectations. The ESCB's choice will therefore have to be made in the light of the degree of openness that people are becoming used to.

### *3.2.1 Publishing a View of the Future*

The Reserve Bank of New Zealand has taken the need to explain furthest. They publish

(i) their view of how the economy works
(ii) a quarterly forecast in some detail
(iii) an analysis of the risks facing the economy and price stability in particular
(iv) an explanation of how monetary policy will react in the light of (i)-(iii).

This is considerably more than just strict compliance with the Reserve Bank Act would require and is hence largely by choice. They publish their forward look quarterly, producing *Economic Projections*[42] in the quarters between the statutory six monthly *Monetary Policy Statements* because, in their view there is sufficient new information available about the economy each quarter that it is worth reappraising their view of the economy thoroughly. Since they want all those involved in price setting and transactions to do so in the light of a clear understanding of what the Reserve Bank requires from monetary policy over the future that reappraisal needs to be published in sufficient detail.

It is not that they expect that everyone will agree with their view, although naturally they hope that it will be widely supported, but they want everyone to understand that this is the basis on which monetary policy will be run. It is necessary to spell out the view of how the economy works as it is highly unlikely that the scenario spelt out in detailed numbers will actually come about. The assumptions will be too simplistic, the model only an approximation at best and the economy subject to a whole range of unpredictable shocks over the future. Therefore the Bank needs to explain how deviations from that projection should be viewed and what monetary policy must do in order to ensure that inflation remains within the target.

This is best achieved by having a model where the main linkages in the economy, especially those between the instruments of monetary policy and inflation are clearly spelt out. In that way the consequences of the whole range of shocks for inflation and hence monetary policy are known. A crucial part of the model is a monetary policy 'reaction function' that sets out in quantitative terms how the Reserve Bank will respond to shocks that will alter the prospects for inflation unless the Bank responds. Therefore the model itself is published along with supporting documents which show how it responds to shocks (Black *et al.* 1997). The Bank also produces academic discussion papers to ensure that the evidence it

suitable for the non-specialist reader.[43] Because the model is simplified the Bank is careful to explain in some detail how it thinks specific shocks with a reasonable probability to occurrence, such as changes in government policy, should be responded to.

It is a measure of the credibility of this process that the Bank does not normally have to use any instruments (in its case the amount of cash for settlement in the overnight market among the banks) to enforce its view. Given the Bank's stated views, the market itself delivers acceptable outcomes. Occasionally a nudge is required to prevent conditions getting too far out of line but normally this is also in the form of a verbal statement not an action. These statements are labelled 'Open Mouth Operations' (Guthrie and Wright, 1997). The last time the cash target was moved was August 1995 and before that in late 1993 - interests rates doubled in 1994 without there being any change in the cash target.[44]

Other central banks go less far in spelling out the detail of how they say the future but the Bank of England goes rather further in one important respect. It sets out a probability distribution of outcomes for inflation, which fan out into the future on the basis of its past forecasting performance. The Reserve Bank is also moving in that direction, according to its Annual Plan, although it currently intends to produce the probabilities by using stochastic simulations of its model. It will therefore be able to take its own behaviour into account, which tends to limit the likely range of fluctuations in inflation one to two years ahead, when monetary policy has its main impact on inflation.

Clearly the ESCB will face considerable difficulty in producing descriptions of its views in the level of detail currently undertaken in New Zealand. Not only is the history of modelling the euro area and understanding how its components currently interact relatively short but the introduction of the euro and the start of Stage 3 of EMU represents a major structural shift. We can therefore expect behaviour to change. The ESCB will therefore have to take a relatively straightforward view of how the euro economy will work and will wish to concentrate on the more reliable key relationships that determine inflation. This will inevitably tend to shorten the focus of policy and lead to relatively wide probability bands when trying to decide on the appropriate setting of policy. Everyone is aware of these difficulties but credibility will be aided by a clear exposition of how they are being faced. Being silent on the subject merely adds to uncertainty about what the ESCB will be likely to do as new information emerges.

Mayes and Razzak (1997) explain how this procedure was followed in New Zealand, where it too faced a very considerable structural shift after 1984, with a major reform programme at both the macro and micro-economic levels.[45] In the course of less than 10 years New Zealand moved from being probably the most regulated OECD economy to being among the more flexible. Previous well-established econometric models of the economy rapidly became unusable and new ones had to be built. The steady evolution of the *Monetary Policy Statements* and the *Economic Forecasts/Projections* shows how the Reserve Bank coped with this. Nevertheless, right from the beginning, it was clear in setting out and explaining its view of the future and the consequent needs of policy.

### *3.2.2 Publishing Details on the Decision-Making*

One of the most hotly contested subjects concerning the ESCB has been whether the minutes of the Governing Council's meetings should be published. If those meetings remain secret then there is always the suspicion that the members are either reflecting national interests rather than euro area price stability or have a hidden objective different from that laid down by the Maastricht Treaty. However, few central banks are this explicit. An exception is the

arguments put forward, including the record of any vote only a few weeks after each meeting. Even the Reserve Bank of New Zealand gives no information at all on its weekly or special internal Monetary Policy Committee meetings (Mayes and Razzak, 1997) not even saying whether they are scheduled or have taken place. It has successfully resisted attempts to obtain the Minutes through the Official Information Act (on the grounds that it will prejudice policy making). It feels that such disclosure could prejudice the frankness in the expression of views and give the wrong impression that full debate implies indecision or substantial scope for views to change.[46] Thus there is an extent to which openness could start to obscure rather than clarify the Bank's thinking in the mind of the reader.

The Bank of England takes a different view, as does the Fed. (Briault *et al.* 1996), largely because their decision making bodies include 'outsiders'. In such circumstances it is helpful to record the existence of the meetings and their main conclusions (and unresolved disagreements) so that the record can be clear as to how this independent role has been exercised. Furthermore, making it clear that monetary conditions can only be altered at certain discrete times in normal circumstances may reduce the speculation about what the central bank will do.

The ESCB will be much more in the position of the Fed than the RBNZ but not quite the same as the Bank of England because of the lack of individual responsibility by the Governing Council members. However, the prospect for the extent of publication is not clear because the Bundesbank also has this type of structure but has not revealed it deliberations. However, if the representatives on the ESCB's Governing Council wish to maintain their own credibility in the face of contested decisions they may very well favour a degree of openness. Furthermore, the ECB itself is likely to wish to develop a reputation for the high quality of its analysis and moves within the EMI to ensure widespread discussion of their working papers suggests that this may be a route they favoured.

The issue of transparency is confused by a further point, as those central banks targeting inflation directly also tend to be more transparent than those targeting monetary aggregates. This may be coincidence but it is not aided by the fact that most of those targeting inflation directly did so in part because the relationship between monetary aggregates and inflation was, in their experience, too long and variable to make monetary targeting a credible option. Hence they could not have been equally transparent had they chosen the monetary target option. It is yet to be revealed whether the ESCB will choose to maintain price stability by following monetary targets or inflation targets. The EMI (1997) held both options firmly open given the extent of the divide between the two camps. Up till now most EU central banks have not had to take a position in this debate because they have been targeting the exchange rate within the ERM as the most reliable route to maintaining price stability.

Nevertheless, whichever regime is chosen, credibility will be enhanced by transparency. Indeed since the current conflict of views is known, it is even more important that its clear resolution is made public, otherwise people will think that there is a continuing risk of inconsistency in policy.

The problem of transparency is further confused because the two main camps use the word differently. The word is equated with 'clarity' in the discussions by the Bundesbank (Issing, 1998) whereas in the inflation targeting countries it means that what the Bank actually thinks is clear to outsiders. In the former case money targeting scores over inflation targeting as all that is required of the public is observation of single published variable. However this is

more complex procedure of assessment in setting monetary policy (see von Hagen (1998) for example). Inflation targeting may involve complex models but this does not mean that its method is not simple and generally comprehensible.

Thus the money targeters argue that their approach is transparent because the money target and its attainment are readily observable. While the inflation targeters argue that it is the opposite, first, because it does not reflect what the central bank actually does and, second, because its effect on inflation is obscure.

### *3.2.3 Other Aspects of Accountability*

The idea of the Governor and senior colleagues facing a parliamentary committee five times a year quickly became a practice in New Zealand, although there was no explicit requirement for it under the Reserve Bank Act. Furthermore the Bank voluntarily follows a policy of widespread communication through the whole of society by means of speeches, interviews and articles in the popular media. It sees this as not merely the appropriate way to help give account as an unelected and independent body but also to help focus price expectations on stability. It helps speed up the recognition that the Bank has been successful in maintaining price stability and intends to maintain those policies. The Bundesbank (Issing, 1998) expresses exactly the same sentiments, 'The Bundesbank, which has always attached great importance to accountability despite the absence of formal requirements, has practised continuous accountability particularly to the general public in Germany.'

The ESCB faces an even more difficult task. Not only is there no accepted practice but, with a potential population 100 times the size of New Zealand (4 times that of Germany), there is no way in which the communication by a limited number of individuals can be so direct. Worse still the ESCB faces this in an environment where there has been a vigorous debate about a 'democratic deficit'. It therefore has to overcome an adverse perception in some quarters that it is not properly accountable. Given that its members are appointed for a longer period and the ECB has wider independence than the RBNZ then the need for voluntary openness and a willingness to explain is likely to be even greater.

This is the standard dilemma of the principal-agent relationship. The more independent is the agent, the greater the fear by the principal that the agent might pursue a policy different from that intended. Since that principal is the European elector reflected in national governments and ultimately in European institutions, the scope for this fear is considerable. If the ESCB does not want to see its powers clipped it will want to show that it is exercising its mandate in the way it has been asked to do. It can do this in two ways, first of all by making sure that it gives a full account to groups right across the Union, utilising the manpower of the constituent central banks to do so and second by demonstrating its success through the achievement of performance targets. This latter is the second of the main points for policy laid out by the EMI (1997b) (see Table 1).

### *3.2.4 Voluntary Performance Contracts*

The Reserve Bank of New Zealand is unusual in having an explicit performance contract effectively imposed from outside through the Policy Targets Agreement.[47] However, the form of this contract is a good pointer to the sorts of implicit or voluntary contracts that are likely to be adopted by the ESCB.

On the whole central banks have tended to run ahead of governments in seeking to make commitments about price stability (take Canada, Australia and Finland, for example)

explicit targets will increase their credibility (although failure to achieve even a modest target may be worse than making no commitment at all). However, the explicitness of the target depends on the target chosen and that choice is yet to be exercised. Inflation targets seem in practice to be more precise than monetary targets. In general the greater the precision the greater the impact on inflation expectations, however, this will be limited by the believability of the requirement. Although the ESCB is free to choose for itself the choice has effectively been made already (EMI, 1997b, p. 12).

Furthermore the value of the constraint will depend upon the value that both the principal and the agent put on the agreement. In the New Zealand case both parties took it very seriously. Indeed as soon as the Reserve Bank announced in 1994 that it expected to breach the 2 percent boundary the Minister of Finance called for a report from the Board of the Bank on the Governor's performance. He did not wait for the breach to occur (Mayes and Riches, 1996). When it did occur, the enquiry was much more limited. The credibility of the policy is in what it is seeking to achieve. Thus it was as important, in the face of an expected breach of the target, to establish that no more could reasonably be done to maintain price stability in the future, as it was to explore whether more could have been done in the past. It is worth noting that the main criteria that the Board applied for supporting the Governor in his actions were:

- they had found his explanations of policy actions and intentions persuasive at the time
- they had not received any substantive or consistent advice from other quarters that there are better paths that could be followed
- none of the other economic forecasters had had a better record than the Reserve Bank in predicting inflation or the behaviour of the economy.

These are the sorts of criteria that will be applied to the ESCB, whether or not there are formal mechanisms of assessment. The less forthcoming the ESCB is about its thinking and its view of the future then the easier it will be for the outside army of forecasters to claim that they would have run policy better and said so at the time. Ironically the more explicit the Bank is, the more it is likely to be able to act as an opinion former itself. One of the features of both price expectations and inflation forecasts in New Zealand is that the Granger causality runs from the RBNZ projections to expectations and to the forecasts of others, rather than the other way round (see Razzak (1997) for example).

Thus the ESCB has an incentive to set quite stringent performance targets voluntarily and to be explicit about the reasoning behind its actions so that it has goods grounds for justification in public after the event. Even though appointments may be for eight years without the possibility of renewal, bad errors are likely to have an impact, either voluntarily by those who made them or by the force of outside opinion, whether privately expressed by governments or publicly through the media. Ultimately such pressures tend to be effective even if the independence laid down means they have no legal force. The ESCB Governing Council will be operating in the light of this knowledge. While independence means they can successfully resist popular or indeed governmental pressures to depart from the terms of the Treaty it does not relieve them from pressures for good performance in achieving those objectives.

Insofar as it can the ESCB will want to lay out the ground rules itself and operate in a way where it can readily make its own defence. Being open, both in exposing one's views to debate and in being ready to take outside advice based on good evidence into account, gives a

contract imposed on it, it will find it much easier to maintain its independence and the credibility of its monetary policy if it imposes performance targets on itself.

### *3.2.5 Forms of Performance Contracts*

The economics literature is full of suggestions about the appropriate form for voluntary contracts (see Haldane (1997) for a summary). Some of these can be imposed automatically through the structure of assets and liabilities. If a country deliberately denominates its debt in foreign currency or issues indexed linked bonds then it imposes a penalty on itself for failing to maintain price stability. Such an arrangement will also increase the credibility of macroeconomic policy[48] in the fight against inflation because the costs of failure are enhanced and fall more directly on the government and hence on the disapproval of the electorate. This is advocated by Lindbeck (1994) and is cited by the Reserve Bank of New Zealand as one of the reasons for issuing inflation adjusted bonds (IABs).[49]

However, the more common approach is to make a commitment to some rule-based system for running policy. These may be rules relating directly to the final target of policy such as the inflation target rules for the UK, Canada and New Zealand discussed above. They can be rules relating to intermediate targets, such as the money targets of the Bundesbank or the exchange rate targets of the ERM. Such intermediate targets may be preferred (see Castren, 1998) if they can be hit with reasonable confidence when it appears difficult to target price stability directly. However, of course, one must be confident that the intermediate target is reliably linked to price stability (even if the lag is difficult to predict) for the policy to be a credible means of fighting inflation. This is seen most readily in exchange rate targeting in the ERM. If German price stability is credible then a policy that ties one's exchange rate closely to the DM in an open market will tend to export that credibility. Thirdly, rules may take the form of requirements for the setting of policy instruments. Taylor (1993) is most often referred to in the case of instrument rules but he, in fact, points out that the Fed in the US has behaved as if it were following an instrument rule, even though such a rule was not announced and does not seem to have existed.[50]

If the ESCB commits itself to any of the rules then this will help to increase the credibility of its policy by two routes. First of all, it will have a direct effect, as it will help contradict any belief that the ESCB might react to pressure to follow other economic objectives in addition to price stability. Secondly it will reduce uncertainty about the steps the ESCB will take in any specific circumstances, as the detailed response will be known in advance. The scope for such rule systems is also limited by the need for 'simplicity' (Castren and Mayes, 1998). If these rules are to be effective in convincing not just financial markets but the public at large that they will be effective in maintaining price stability they have to be understandable by them - a point emphasised by those choosing inflation targets (Thiessen, 1995) and money targets (Issing, 1998).

## Concluding Remarks

Just because a central bank is independent it does not mean that people will not expect it to be responsible for its actions. The unwritten rules for public behaviour in the society in which the central bank operates will still 'exist' and those running the central bank will feel obliged to act according to them. However, establishing procedures at a European level is difficult enough when rule systems are written down. When they are not, expectations will vary considerably across the EU. If the ESCB wishes to establish that it will operate at the 'strict'

indeed credibility is likely to come from making explicit voluntary precommitments as to intentions, the assessment of performance and consequences when performance does not meet the predetermined criteria. Such precommitments will help reinforce the credibility with which the ESCB can be expected to pursue its goals. The credibility of its early judgements, before it can establish a track record of good decisions, will be enhanced by making clear the quality of the evidence used, the way in which the European economy is thought to work (in particular, the way inflation is determined and monetary policy has its influence on inflation) and most importantly by laying down a set of rules in advance for how policy must respond in the face of the unexpected shocks of the future and the deviations of expected values from their targets. Whether the ESCB chooses inflation targeting, money targeting or some combination, all these factors will still be important for a new organisation hoping to establish a high degree of credibility before it even starts to operate. Indeed, the compatibility with transparency and commitment is one of the main criteria in the choice of the targeting regime.

**Table 1. Key Elements Of A Monetary Policy Strategy In Stage Three**

While it is not necessary to determine the precise details of the ESCB's strategy at this stage, experience suggests that the following five key elements would be an indispensable part of any strategy adopted by the ESCB:

· the public announcement of a quantified definition of the final objective of price stability in order to enhance the transparency and credibility of the ESCB's strategy;

· the public announcement of a specific target (or targets) against which the performance of the ESCB can be assessed on an ongoing basis by the general public, thereby enhancing accountability;

· the use of all available information relevant to the final target of monetary policy. In this sense the strategy is based on a broad set of indicator variables which would help when assessing the risks to future price stability. In line with current practice, it would seem appropriate for this set of variables to include financial variables (in particular the money market yield curve, money and credit aggregates, credit market conditions, bond yields, exchange rates and other asset prices) and various non-financial variables (such as price and cost variables, indicators of aggregate demand and supply conditions including the output gap, the balance of payments and expectations surveys). The ESCB itself will decide on how to use these (or other) indicators, both internally and in its communication with the public, in the light of the specific circumstances prevailing;

· within the set of indicators employed by the ESCB, monetary aggregates should be assigned a prominent role, with either targets or monitoring ranges set for their growth, provided that money demand is sufficiently stable in the long run;

· the ESCB should be in a position to make its own forecasts for inflation and other economic variables. (p.10)

'It appears desirable that that the communication strategy of the ESCB should involve the following elements:

- the publication of its target(s) and details of their derivation
- the regular publication of data and analyses relevant to monetary policy; and
- the explanation of deviations from target and of policy responses by the ECB' (p11.)

Source: EMI (1997a).

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## Endnotes

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[1] Matthews and Mayes, 1994, cover the case of 'soft law' for example

[2] A clear exception is von Hagen (1997) who deals with the wider issue.

[3] As will become apparent this use of the word 'rules' involves a much wider concept than that used in the 'rules versus discretion' literature stemming from Barro and Gordon (1983b). Rules in this narrower sense are referred to throughout but particularly towards the end of Section 4.

[4] For example, Article 10.4 of Protocol no. 3 on the ESCB/ECB explains that the proceedings shall be confidential but the Governing Council may decide to make the outcome of its deliberations public.

[5] See Cukierman (1997) for a clear exposition.

[6] Backus and Driffill (1985) explore these strategies.

[7] These publications also explain the preparatory work that the EMI is doing in setting up econometric models, monitoring information, market instruments, transactions mechanisms, etc.

[8] Recent advances in principal-agent theory have meant that it is now much easier to understand how to craft rules of behaviour such that the chances of obtaining the performance those drawing them up require is optimised (Persson and Tabellini (1993), Svensson (1997), Walsh (1995)). In particular, the theory explains that the more an agent can make it readily clear to the principal that it is doing its job well then the less the principal will need to impose constraints on the agent, because it can be confident that it is getting want it wants from the agent. The ESCB has very few constraints under the Maastricht Treaty but if it does not convince the people of Europe that it is doing what it was required to do then it can expect more constraints to be applied in the future. It is thus the ESCB itself, not an external agency, which has to decide how to make it readily clear that it is doing its job well.

[9] These changes are widespread including not merely Finland, Sweden, Spain and other countries with explicit inflation targets. OECD countries outside Europe, such as Canada and Australia, have also made clear changes, see Bank of Canada (1996), for example.

[10] The biggest differences lie in that principal is not a single government or parliament but more directly the European elector and in the structure of the 'balancing' institutions of government.

[11] The draft of such a nominal wage reduction was actually agreed in response to the major shock of the early 1990s when the collapse of trade with the former Soviet Union and other factors led to a serious fall in GDP and surge in unemployment.

[12] See Artis and Winkler (1998) for a clear discussion.

[13] I am grateful to a referee for this point.

[14] It would be easy to see some combinations targeting rules in this light (Castren, 1998).

[15] Such as the working time directive (Gold *et al.* 1994).

[16] The ideas of establishing credibility by reputation are set out in Barro and Gordon (1983b) and Barro (1983).

[17] There are of course many other sides to reputation as well as the record in achieving price stability and it may be very difficult just to acquire one side of it without the others. I argue later that there are other aspects of the Bundesbank's reputation that the ESCB may be less keen to emulate because the matching external institutions do not exist at the European level.

[18] I am grateful to a referee for this point.

[19] When New Zealand was designing its new system of rules for the Reserve Bank in the second half of the 1980s, many of the ideas were untried in practice, but the inherent logic of the system and the experience in other areas of public policy were sufficient to convince the government and other key groups in society so that inflation expectations fell rapidly - in advance of the evidence from the Reserve Bank's actions.

[20] Rogoff (1985) explains the idea that the choice of a person with the appropriate reputation as governor of the central bank may be the best way to convince people of the policies that will be followed in the future.

[21] At least, in choosing this particular form of words, the ESCB is spared the difficulty of having conflicting targets. Many central banks have a variety of objectives set for them, relating to price stability, employment, growth and even the balance of payments (take the Reserve Bank of Australia, for example). Since it is frequently impossible to meet all of them simultaneously with the single instrument of monetary policy, the central bank is then faced with the unenviable choice of either alienating the government by announcing a set of priorities for the target or causing uncertainty in markets because they cannot work out what the central bank will do in the face of such a conflict. Having just one primary objective is an enormous advantage and makes both decision-making and its communication to others much easier.

[22] In the Reserve Bank of New Zealand's Policy Targets Agreement, the relationship between price stability and the wider objectives of economic policy is explicit. 'The Bank shall formulate and implement monetary policy with the intention of maintaining a stable general level of prices, *so that monetary policy can make its maximum contribution to sustainable economic growth, employment and development opportunities* within the New Zealand economy.' (emphasis added). Similarly, Article 2 clearly puts price stability first and

[23] The chapters in Haldane (ed.) (1995) provide a clear exposition of the arrangements that the inflation-targeting countries have.

[24] See Grilli *et al.* (1991) for a discussion of various systems.

[25] . There is a huge literature on how to achieve optimal contracts between governments (acting on behalf of society) and central banks (see Walsh, 1995 and 1997, for a clear exposition). One could explore whether the contract for the ESCB is optimal and how it could be improved. However, as the contract for the ESCB has already been agreed and set out in the Treaty that is not debated here. The concern is to explore how the unwritten parts of the system required to run an effective and efficient monetary policy to maintain price stability will be determined and implemented

[26] Codes are used because market operators need to act swiftly if they are not to lose out and any message needs to fit easily onto the news screen and be immediately interpretable correctly.

[27] The RBNZ has from time to time come under pressure, particularly from the US, to use a system of signalling-based interest rates rather than statements. The Bank has resisted this (RBNZ, 1997) in part because well-chosen words do permit the Bank to be clearer. Numbers are not always self-explanatory.

[28] This is explained formally by Briault *et al.* (1996) and Nolan and Schaling (1996) using a model derived from Barro and Gordon (1983a).

[29] Bernanke and Woodford (1997) explain the requirements for such forecasts to reduce variance.

[30] There may well be other channels, such as the credit channel surveyed in Mishkin (1996), but these tend to be of lesser importance by comparison.

[31] They way in which people form expectations affects the costs of inappropriate monetary policy. If people largely look backwards when forming a view of the future and have long memories it will be difficult for a central bank to live down the errors of the past. Therefore, if a central banks wants to get away from the past it will try to develop a system of rules that make it difficult for people to believe that past errors will be repeated. The ESCB is a more complex position because it seeks simultaneously to convince people that despite facing new circumstances it is the behaviour of its most successful constituent national central banks that will be repeated and not that of the less successful.

[32] Clearly if this is only a one time lack of belief the costs will be relatively limited but if the disbelief is enduring (as in the case of the so-called peso problem) then the costs can be considerable. In the peso problem case, although the central bank appears to be doing all that is necessary to maintain price stability in the short run there remains a small suspicion that major action will be required at some stage - in that instance a substantial devaluation.

[33] Indeed Cukierman and Meltzer (1986) and Tabellini (1987) suggest that a measure of ambiguity by the central bank would increase its scope to have an effect on markets, as it would find it easier to 'surprise' them.

[34] Tarkka (1997) shows that in a monetary union, if discretionary policy is followed, the dangers of generating an inflationary bias may be enhanced compared with those prevailing in the individual member states. In effect there is a danger, if international consensus in decision-making is emphasised, that policy will follow the average of previous inflationary experience among the members instead of price stability for the union as a whole.

[35] Moreover considerable harm can be done if the economy is slow to recover from adverse shocks (hysteresis).

[36] Faruqee *et al.* (1997) show that it is likely that the trade-off between inflation and output (employment) in the short-run is sufficiently asymmetric that the short-run gain before inflation rises will be more than offset by the loss when it has to be brought down later.

[37] A referee has pointed out that a more credible central bank like the Bundesbank will by definition have a greater ability to spring effective surprises as such action is not expected.

[38] Again the force of sanction is most widely associated with the New Zealand regime, where the Governor can lose his job if his performance in fighting inflation is deemed inadequate.

[39] It has been suggested that even the Bundesbank had to bow to government pressure at the time of unification (Connolly, 1995).

[40] In addition the Board of the Bank has to keep under constant review the performance of

(a) the Bank in carrying out its functions

(b) the Governor in discharging his responsibilities and in ensuring that the Bank achieves the agreed policy targets

(c) the use of the Bank's resources

and it has to determine whether the Policy Statements are consistent with the price stability objective and the policy targets agreement. If the Board is not satisfied it has to advise the minister in writing and may recommend that the Governor be removed from office. (section 53).

[41] A *Price Stability Report* might fit rather better with the wording of the Maastricht Treaty than an *Inflation Report.*

[42] As from mid-1998 the Reserve Bank has labelled all its quarterly projections *Monetary Policy Statements* but the content is more related to policy and to the detail of the projection in alternate issues.

[43] All the main documents are available not just free in printed form but through the Bank's web site rbnz.govt.nz.

people of their policy intentions. However, his use of the number of speeches by senior figures in the respective banks reported by the BIS as the evidence is problematic as there is no common basis for reporting such speeches. The RBNZ uses speeches to repeat the policy message. It has tried to avoid using them as the vehicle for announcing changes. As it does not report the repetitions it appears from the BIS statistics that few speeches are made, which is far from the truth.

[45] See Bollard and Mayes (1993) for a description and Silverstone *et al.* (1996) for an analysis of the impact.

[46] As Mayes and Razzak (1998) explain the Chief Manager of the Economics Department is required to provide a range of views about how each situation should be handled, even if no one in the Bank actually holds the particular position. Revealing such discussions might indicate a level disagreement, which did not actually exist.

[47] The performance target in New Zealand is unusual in that it is explicit that inadequate performance could result in the governor losing his job. Indeed it was even contemplated for a while that some element of the governor's remuneration might be linked to the success of the bank in controlling inflation, to bring it in line with private sector incentive packages. However, incentives do not have to be contractually personal in this manner in order to be effective. Indeed incentives that have a 'collegiate' impact on the central bank may be more effective as they affect more people.

[48] It is 'macroeconomic' policy rather than just 'monetary' policy, because fiscal policy can contribute to make the fight against inflation more or less difficult. In the case of the ESCB, all the member states would have to choose to issue the appropriate debt. While the ESCB's own assets could be affected by having such a structure (as indeed has been suggested in some of the sorts of linear contracts discussed in Walsh (1995) for example) it is unlikely that this sort of pressure would be as effective as incentives involving the financial wellbeing of individuals.

[49] A subsidiary reason for issuing such IABs is to provide a risk free asset for savers in a world where no bank is 'too big to fail' (Mayes, 1997b).

[50] Of course compatible combinations of these rules will be possible (see Svensson (1997) who advocates 'flexible' implementation of a target rule as the best policy in current circumstances).