Accountability of Central Banks: Aspects and Quantification

Jakob de Haan[*], Fabian Amtenbrink[**] and Sylvester C.W. Eijffinger[***]

[*] Department of Economics, University of Groningen, The Netherlands

[**] Department of Law, University of Groningen, The Netherlands

[***] CentER, Tilburg University, The Netherlands; Humboldt University, Berlin, Germany and College of Europe, Brugge, Belgium

Version, May 1998

Abstract

This paper starts with a discussion of the various aspects of accountability of central banks. On the basis of this discussion we construct an indicator for accountability for 16 central banks, including the European Central Bank. It is shown that the degree of accountability differs considerably and that the ECB has a rather low score. The indicator is used to examine the relationship between central bank independence and accountability. It is concluded that although there appears to be a negative relationship between independence and accountability, this does certainly not imply that a central bank cannot both be independent and accountable.

JEL Codes: E52, E58

Keywords: central bank independence, central bank accountability, European central bank

> "Economists and practitioners in the area of monetary policy generally believe that the degree of independence of the central bank from other parts of government affects the rates of expansion of money and credit and, through them, important macroeconomic variables, such as inflation and the size of the budget deficit." (Cukierman et al., 1992, pp. 353-354).

> "Monetary policy is a key determinant of the economy's macro economic performance. ... That this key determinant of what happens to society ... should be so removed from control of the democratically elected officials should at least raise questions." (Stiglitz, 1997, p. 19).

1. Introduction

As follows from the first citation above, nowadays is it widely believed that a high level of central bank independence (CBI) coupled with some explicit mandate for the bank to restrain inflation are important institutional devices to assure of price stability. It is thought that an independent central bank can give full priority to low levels of inflation, whereas in countries with a more dependent central bank other considerations (notably, re-election perspectives of politicians and a low level of unemployment) may interfere with the objective of price stability (Cukierman, 1992). In other words, CBI makes a monetary policy directed towards low levels of inflation more credible. Indeed, there is quite some evidence for a negative relationship between central bank independence and inflation (see Eijffinger and De Haan, 1996 for a review). This evidence generally consists of regressions using proxies for CBI based on the statutes of the central bank. Popular as the view referred to above may be, the concept of central bank independence has always had its critics.[1] As follows from the second citation above, one potential objection towards a completely independent central bank is lack of accountability. Indeed, Cukierman (1994) argues that CBI reduces the credibility problem at the cost of placing monetary policy in the hands of unelected officials. According to Cukierman this becomes more problematic in times of large unexpected economic shocks. Levy (1995, p. 191) goes further and even argues that "democracy requires that central bank independence be limited so that the makers of monetary policy cannot stray far from the will of the people as embodied in their duly elected representatives." We do not share this view. Where it, in our point of view, comes down to is to which extent there is a mechanism to make sure that the central bank behaves optimal from a welfare point of view. As Fischer (1994, p. 293) puts it: "An important reason to expose central bankers to elected officials is that, just as the latter may have an inflationary bias, the former may easily develop a deflationary bias. Shielded as they are from public opinion, cocooned within an anti-inflationary temple, central bankers can all too easily deny that cyclical unemployment can be reduced by easing monetary policy". Or, in the words of Briault et al. (1996, pp. 18-19): "Delegation of power to an unelected authority might be interpreted as a dilution of democracy: an empowered, but unaccountable, central bank gives rise to a `democratic deficit'. Democracy is a compelling - if ultimately intangible - argument for accountability. .... Fischer uses precisely this point to pinpoint a potential danger facing the Bundesbank - the desire to target inflation below its socially optimal level. And, of course, such a danger then applies equally to the European Central Bank, should it come into play".[2] Briault et al. conclude that there is a problem of a democratic deficit, especially if the central bank is given goal independence, i.e. the scope for the central bank to set the ultimate goals of monetary policy.

Indeed, the basic argument for the democratic accountability of central banks is that delegation of powers to unelected officials can only be acceptable in a democratic society if central banks are one way or another accountable to democratically elected institutions. Briault et al. (1996) even consider it in terms of fundamental political or even ethical demand for democracy. Still, one should not conclude that delegation of power to unelected officials in itself lacks democratic legitimation. In the case of central banks, such a legitimation can be found in the legal basis of the central bank, which generally constitutes an act of Parliament. Yet, this one time act of legitimation cannot replace mechanisms of democratic accountability.

An important issue is the relationship between accountability and central bank independence. It is very often thought that an independent central bank cannot be very accountable and vice versa. However, according to Eijffinger and De Haan (1996) such a trade-off does not exist in the longer run. A central bank, continuously conducting a policy which lacks broad political support, will sooner or later be overridden. Recently, Nolan and Schaling (1996) have come up with another view. They argue that for a given target level of inflation the optimal degree of central bank accountability (in their definition) is higher the lower is the degree of central bank independence. Using an indicator of central bank accountability as recently developed by Briault et al. (1996) and the Eijffinger-Schaling index for independence, Nolan and Schaling (1996) report a significant negative relationship between central bank accountability and central bank independence. De Haan (1997) shows, however, that if the Grilli-Tabellini-Masciandaro and Cukierman indicators for CBI are used, this relationship vanishes. So the conclusion of Nolan and Schaling that accountability may serve as a partial substitute for independence is not very well founded.[3]

This paper has several purposes. First, we provide a definition of accountability and its various aspects. Second, on the basis of this definition we construct an indicator for central bank accountability for 16 central banks (including the ECB) based on information which relates to the situation in 1997. Third, we use this indicator to examine the relationship between CBI and accountability.

The remainder of the paper is structured as follows. Section 2 offers our definition of accountability. Section 3 discusses how the economic literature to date has dealt with the issue of accountability. The fourth section presents our indicator for accountability, while section 5 analyses the relationship between our indicator and the Eijffinger-Schaling indicator for CBI. The final section offers some concluding comments.

2. The concept of accountability

The Oxford English Dictionary defines accountable as "obliged to give a reckoning or explanation for one's actions; responsible". The latter is defined as: "legally or morally obliged to take care of something or to carry out a duty; liable to be blamed for loss or faillure". So it is clear that accountability is more than just "the degree to which central banks explain or make visible their policies to Parliament and/or the public" (De Beaufort and Hoogduin, 1994, p. 81). The definition of Demertzis et al. (1998) focus on performance; they define accountability as meaning that policy makers can and will be held to account for the economic performance of the targets in their care, i.e. policy makers will be held responsible for how close the indicators of economic performance come to the target values set.

In our view the concept of central bank accountability has three main features:

1. decisions about the *ultimate objectives* of monetary policy;
2. *transparency* of actual monetary policy;
3. who bears *final responsibility* with respect to monetary policy.

In a democratic society, elected politicians should decide on the *ultimate objectives of monetary policy* because they have democratic legitimation. It is questionable whether it is legitimate in a democratic system to leave the decisions on the objectives of monetary policy in the hands of an independent institution, which is not subject to elections or ministerial responsibility. Indeed, the Roll Report (p. 3) concludes that "in a democracy, a central bank cannot both be independent *and* free to determine its own objectives". Furthermore, these objectives should be clearly defined. For instance, the primary objective of the ECB as described in primary Community law is to maintain price stability. At the same time, the ECB has also, without impairing this primary objective, to support general economic policies in the Community. Although many central bankers would consider an inflation rate between zero and two percent consistent with price stability, one may wonder whether a somewhat higher inflation rate is still in accordance with the mandate of the ECB.[4] More fundamentally, the objective of price stability has different interpretations: price level constancy versus zero inflation. Depending on which interpretation is chosen, monetary policy has to smooth out random shocks to the price level or not. Fischer (1994) has shown that the objective of long-run price level constancy implies a strategy for monetary policy that provides low uncertainty as regards the price level for the long run but comparatively high uncertainty for the short run, while the objective of zero inflation yields lower price level uncertainty for the short run but high and rising uncertainty for the long run. So, there is some room for manoeuvre for the ECB with respect to the goals of monetary policy (De Haan, 1997). More fundamentally, it is up to the ECB to decide under what circumstances policies, which support general economic policies in the Community, impair the primary objective of price stability. In other words, the ECB has too much goal independence.[5] Where a central bank has both instrument and goal independence the body charged with holding the central bank accountable is not provided with an effective statutory yardstick to evaluate the performance of the bank, and thus to hold the bank accountable for its conduct of monetary policy.

The choice of a single objective also simplifies the monitoring of central bank performance. As Glastra (1997, p. 324-25) put it: "Performance control is facilitated, first, by the existence of one goal rather than multiple ones (or by their unambiguous ranking), and secondly, by the existence of a clearly stated and narrowly defined statutory goal. The announcement of a single goal (or a primary goal), rather than several unranked goals, enables authorities and public opinion to control performance more effectively. It is easier to control a narrowly defined target than a broadly defined objective...". The difficulties resulting from multiple objectives may be avoided to some extent by the introduction of a clear hierarchy according to which any secondary objectives may only be pursued as long as they do not conflict with the primary objective.

The statutes of many central banks are rather vague in terms of final objectives, or contain various (possibly conflicting) objectives without giving indications as to their prioritization. For instance, the Bundesbank has a prime objective (formally referred to as defence of the value of the currency) which is not very specific. Even more vague is the objective of the Dutch Central Bank (to regulate the value of the Guilder in a welfare enhancing way). The Federal Reserve System faces multiple objectives which may be conflicting. According to section 2A (1) sentence 1 of the Federal Reserve Act: "The Board of Governors of the Fed and the Federal Open Market Committee shall maintain long run growth of the monetary and credit aggregates commensurate with the economy's long run potential to increase production, so as to promote effectively the goals of maximum employment, stable process, and moderate long-interest rates." Neither the Federal Reserve Act nor any other law provides for any hierarchy. A good example of a clear prescription of objectives is the Reserve Bank of New Zealand which has as its primary objective: the pursuit of price stability. The governor of the Reserve Bank of New Zealand has to agree with the government a tight target range for inflation. In this so-called Policy Target Agreement (PTA) the concept is clearly defined and a target range for the inflation rate is provided. Such a contracting approach, as modelled for instance by Walsh (1995), is often considered as a way to achieve accountability.

The need for a clear monetary objective for a central bank is increasingly recognised. Goodhart (1993, p. 4) is in favour of a quantified and statutory objective for containing inflation, arguing that the term price stability is to vague: "It will always be possible for the Governor to say: "Well, we have lived in a very difficult world, doing everything we can to achieve price stability".

Transparency is a very important element of accountability. As Glastra (1997, p. 323) puts it: "Accountability requires that the central bank, at the very least explain and justify its policies or actions, and give account for the decisions made in the execution of its responsibilities." Whatever other arrangements concerning democratic accountability may exist, their scope is limited without transparency because information concerning the behaviour of the central bank is crucial for the evaluation of its performance (see also Demertzis et al., 1998). As Alan Greenspan put it: "In a democratic society all public policy making should be in the open, except when such a forum impedes the primary function assigned to an institution."[6]

The transparency of the central bank policy depends upon whether and to what extent decision-making bodies of the bank are required to publish minutes of their meetings and/or the (reasoned) decisions they have taken. Where the reasons for a certain monetary policy decision lay open and the proponents and opponents of a particular decision become known it is easier to make a judgement and to hold central bank officials and, in case of a participation on the monetary policy board of the bank, government officials accountable for their behaviour. Moreover, a central bank should be required to report in regular intervals on its past performance and future plans for monetary policy in accordance with the monetary objective. This is even more important where a clear monetary objective is missing because in such cases the central bank can only be judged on the basis of its own statements. As follows from the citation from Greenspan, sometimes there may be sound policy reasons not to reveal everything. Still, only those matters of policy-making should remain closed which are really essential (one can think of interventions on exchange markets). To this end it would be useful if explicit rules were provided for in the legal basis of a central bank laying down the conditions under which minutes and decisions may be withheld. The envisaged new Bank of England Act sets a positive example in this respect, as it regulates such conditions profoundly.

With respect to the *final responsibility for monetary policy*, we think that three issues are crucial: the relationship with Parliament, the existence of some kind of override mechanism and the dismissal procedure for the central bank governor.

The relationship between the central bank and Parliament has to play a major role in any evaluation of the democratic accountability of the central bank itself. It has been argued that Parliament always holds the ultimate responsibility for monetary policy since it can change the legal basis of the bank. Parliament's legislative power can function as a mechanism of what the Roll Report in a broader context describes as *ex ante* control whereby Parliament sets the rules with which the central bank must comply. Moreover, it can also in principle function as a mechanism of *ex post* accountability because Parliament may decide to change the legal basis of the bank as a reaction to a certain behaviour. A closer look reveals the diversity in the legislative procedure applicable in the different constitutional systems. On the one hand, a difference between single and dual chamber parliamentary systems can be observed. In parliamentary systems with two chambers the procedure for amending the legal basis is more complex. Firstly, two chambers rather than one chamber will examine the legislative proposal. Secondly, if the second chamber does not agree with the first chamber, the hurdles for the legislation to be adopted are higher (see section 3 for more details).

The existence of some kind of override mechanisms has been described as a recognition of the government's ultimate responsibility for monetary policy. However, in examining override mechanisms attention has to be paid to the type of override mechanisms and the procedure for its application. Generally, three types of override mechanisms can be distinguished, including (in descending order): the right to issue instructions, the right to approve, suspend, annul or defer decisions, and the right to censor decisions on legal grounds. Especially the first one may enhance the accountability. For instance, as long as the Bank Law 1948 has not been changed, the Minister of Finance has the right to give the Dutch central bank certain instructions concerning the conduct of monetary policy. Whether he really uses this right is of limited importance. If he does not, the Minister thereby implicitly approves of actual policy and is to this extent accountable vis-à-vis Parliament. Similarly, the Reserve Bank Act 1989 gives the New Zealand Minister of Finance the right through a so-called Order in Council the right to override the objective of price stability; the Bank remains in charge of monetary policy but should aim for the objective as specified by the government. This type of override mechanism is of a very different nature than e.g. the right of the German government to suspend a decision of the governing council (Zentralbankrat) of the Bundesbank, since only the first gives the government the power to really change monetary policy.[7]

The simple fact that government can override the central bank does not necessarily add to the democratic accountability of monetary policy. Rather, the conditions under which an override mechanism can be applied should be laid down in detail. The necessity for detailed provisions on the conditions under which the central bank can be overridden increases with the seriousness of the override mechanism. Override mechanisms can build a bridge between the central bank and the democratically elected institutions, *i.e.* parliament and executive government. The override mechanism can function as a tool to hold the central bank accountable on a continuous basis by providing the government with the possibility to intervene. However, at the same time it has to be ensured that the mechanism is not used as a tool for undesired political influence by the executive government. The procedure for the application for the override mechanism itself needs to be transparent. The decision to apply the override mechanism should be made public. Furthermore, the procedure to apply an override should provide for some kind of review (like a possibility for the central bank to appeal) to make sure that the override is being used carefully.

The dismissal procedure can account to a mechanism of *ex post* accountability if a central bank official can be dismissed on grounds of bad performance in terms of realising stated objectives.[8] Supporters of independent central banks emphasise the importance of long and non-renewable terms for central bank officials. However, short tenure may enhance the accountability of the central banker vis-à-vis the appointing body by giving the latter a chance to review the track record of the former in regular and short intervals. With respect to dismissal, the most important question is therefore whether and under what circumstances central bank officials can be dismissed. Dismissal may function as a sanction for poor performance by linking the tenure of central bank officials to policy results, *i.e.* meeting the predetermined monetary policy target. This is the case for the Reserve Bank of New Zealand where the PTA between the governor of the Bank and the Minister of Finance lays down the policy targets which the former has to achieve. Inadequate performance can result in the dismissal of the governor. In contrast, the president of the ECB can only be dismissed if he no longer fulfills the general conditions required for his performance or in case of serious misconduct.

3. Accountability in the economics literature

Most of the literature on central banking focuses on central bank independence (see Eijffinger and De Haan, 1996 for a review). The basic set-up of this literature is the dynamic inconsistency problem of monetary policy (Kydland and Prescott, 1977). When monetary policy is subject to dynamic inconsistency, policy outcomes are suboptimal if the government cannot precommit: ex ante optimal plans are not credible because private sector agents recognize the government's incentive to reoptimize later. Expectations will then be formed in anticipation of this ex post incentive, thereby bringing the economy off the optimal path.

We can illustrate this line of reasoning as follows. It is assumed that policy-makers seek to minimize the following loss function:

$$L(\pi_t) = w\pi^2 + (y_t - ky_n)^2 \qquad \textbf{(1)}$$

where w>0 and k>1, whereas output is driven by a Lucas supply curve:

$$y_t = y_n + \beta(\pi_t - \pi_t^e + u_t) \tag{2}$$

where π is inflation, π^e is expected inflation, y_t is output, y_n is the natural output and u_t is a random shock. Policymakers minimize (1) on a period by period basis, taking the inflation expectations as given. This gives:

$$\pi_t = \frac{\beta(k-1)y_n}{w + \beta^2} + \frac{\beta^2}{w + \beta^2}\pi_t^e - \frac{\beta^2}{w + \beta^2}u_t \tag{3}$$

With rational expectations inflation turns out to be:

$$\pi_t = \frac{\beta(k-1)y_n}{w} - \frac{\beta^2}{w + \beta^2}u_t \tag{4}$$

If policymakers were to follow a rule taking into account private rational expectational behaviour, inflation would be:

$$\pi_t = \frac{-\beta^2}{w + \beta^2}u_t \tag{5}$$

As the same level of output is realised in both cases, the latter outcome is clearly superior. No matter what factors exactly cause the dynamic inconsistency problem[9], in all cases the resulting rate of inflation is sub-optimal. One possible solution to this problem is delegation of monetary policy. The idea is that the government hands over the sole responsibility of policy conduct to an independent and "conservative" central banker (Rogoff, 1985). However, institutional changes aimed at reducing possibilities of the central bank to engage in discretionary policy, run the risk of producing suboptimal stabilization policies. So the task of central bank design is to balance the need to limit the inflationary bias (to enhance credibility) with the need to maintain sufficient flexibility for policymakers to respond to economic disturbances (stabilization). Indeed, Rogoff (1985) shows that if monetary policy is set at the discretion of a conservative central banker, a lower average time-consistent inflation rate will result.[10] However, while such central bankers will, in equilibrium, produce a lower inflation than does the government, stabilization of the real economy will in this case be suboptimally low. Lohmann (1992) therefore agues that partial delegation of monetary policy yields superior outcomes. She introduces the possibility to override the central banker at a strictly positive but finite cost. Now government can choose: either override the central bank or accept monetary policy of the central bank (see Eijffinger and De Haan, 1996 for further details). A real world example of such a construction is the aforementioned possibility for the Dutch minister of Finance to override the central bank.

It follows from the foregoing that there is a clear link with the third aspect of accountability as exemplified in the previous section (decisions about the ultimate objectives of monetary policy). In case there is an override mechanism, government ultimately decides about monetary policy. Whether it uses the override mechanism is of less relevance, since simply the possibility of such an override will influence the behaviour of the central bank. This link with accountability is also present in an alternative line of research which has "solved" the dynamic inconsistency problem by contracting (Persson and Tabellini, 1993; Walsh, 1995; Svensson, 1997). The idea is to let the principal of the central bank impose an explicit inflation target for monetary policy and make the central banker explicitly accountable for his success in meeting this target. Walsh has argued that an optimal linear inflation contract can eliminate the inflationary bias. The solution is superior to Rogoff's solution as there is no effect on output variability.[11] However, this initial conclusion has been shown not to be robust. Introducing uncertainty in the simple inflationary bias model partially restores the Rogoff (1985) result, i.e. the trade-off between credibility and stabilization reappears. Relevant references here are Herrendorf and Lockwood (1998) and Svensson (1997).

Also this solution has been criticized by McCallum (1995). He argues that if government cannot commit to the optimal penalty schedule before various types of nominal contracts are concluded the optimal contract will not be credible. Still, one response to this critique is that an institutional solution may be able `to save society from itself' as contracts and targets are highly visible arrangements and the political costs for a government reneging on them may be so high as to make them work (Muscatelli, 1997).

In general, if the central bank is not always able to decide on monetary policy as government is able to interfere, this may enhance accountability and reduce independence. Still, on the basis of the foregoing analysis, we would argue that on theoretical grounds this reduction in independence is welfare increasing. In both the Lohman and Walsh models government (or parliament) ultimately bears the final responsibility for monetary policy and this yields more superior outcomes in comparison to the situation where the central bank bears ultimate responsibility. Also on empirical grounds, it can be argued that for the inflation performance of central banks the issue of who bears the final responsibility for monetary policy is not crucial. Recently, De Haan and Kooi (1997) have decomposed various indicators of central bank independence and they conclude that in fact only instrument independence is related to the inflation performance in OECD countries.

With respect to the ultimate objectives aspect of accountability there is no inherent trade-off between accountability and independence. If the law stipulates that the objective of the central bank should be price stability, the central bank, of course, no longer has goal independence. However, both in the theoretical and empirical literature on central bank independence, this has been considered as positive. For instance, in constructing his measure of central bank independence, Cukierman (1992) takes this issue into account as follows. If the statute of a central bank defines price stability as the primary policy goal, the central bank concerned gets a high score on this part of his index, since "in Rogoff's terminology, it measures how strong is the "conservative bias" of the central bank as embodied in the law" (Cukierman, 1992, p. 377).

One important reason that various authors argue that there is a trade-off between independence and accountability has to do with the concept of a "conservative" central banker. From a practical point the concept of a "conservative" central banker seems void, if only since the preferences of possible candidates for positions in the governing board of a central bank are generally not very easy to identify and may change after they have been appointed. This uncertainty is crucial in a number of models, like that of Nolan and Schaling (1996). Nolan and Schaling (1996) change the central bank's loss function (1) into:

$$L(\Pi_t) = (w - x_t)\Pi_t^2 + (y_t - k.y_n)^2 \qquad x_t \sim N(0,\sigma_x^2) \tag{6}$$

where x_t is a random shock to the central bank's inflation stabilisation preferences. Defining accountability as a mechanism whereby agents' actions are made apparent to the principal, these authors argue that if agents are unsure of how the central bank is going to act (i.e., there is uncertainty over the central bank's inflation versus output stabilisation preferences) their expectations of inflation are less accurate than they otherwise would be. Generally, it is likely that inflation expectations will be higher. It follows that inflationary expectations may be reduced both by an increase in accountability (in the definition of Nolan and Schaling), and/or an increase in the degree of central bank independence. For a given target level of inflation the optimal degree of central bank accountability is higher the lower is the degree of central bank independence. It will be clear, that the concept of accountability that Nolan and Schaling seem to have in mind is rather different form ours. In fact, Nolan and Schaling seem to refer to what we have dubbed transparency. So in section 5 we will analyse whether there is a trade-off between this aspect of accountability and central bank independence. Before we turn to this issue, we first develop an indicator for accountability of central banks, based on the approach as outlined in the previous section.

4. An indicator for central bank accountability

In this section we will quantify the concept of accountability as outlined in the previous section. In line with indices for central bank independence, our analysis is based on central bank laws. In other words, we take the views of the legislator as our starting point.[12]

With respect to decisions about the *ultimate objectives of monetary policy* we distinguish between the following aspects:

1. does the central bank law stipulate the objectives of monetary policy?
2. is there a clear prioritization of objectives?
3. are the objectives clearly defined?
4. are the objectives quantified (in the law or based on document based on the law)?

As explained in the previous section, we think that the central bank law should provide the objective(s) of monetary policy. To be sure, from the point of view of democratic accountability it is secondary, what the objective consists of. Thus, although in the majority view price stability is the favourable monetary objective, it is not a pre-condition for an accountable central bank. Yet, the less a central bank is bound to specific objectives the more difficult it becomes to evaluate the bank's performance, since a suitable yardstick is missing. The evaluation of central bank performance is the central element of central bank accountability and a clearly stated objective is therefore essential. It is also important that in case of various objectives a clear prioritization is provided, since otherwise the central bank is still in a position to decide upon the ultimate objectives of monetary policy. As follows from our discussion of the objective of price stability, it also helps if the objective is clearly defined. The provision of quantified objectives - e.g. a maximum inflation rate - may enhance accountability. For instance, in the case of New Zealand politicians decide on the rate of inflation they consider to be acceptable ex ante. The electorate can then decide - also on the basis of realised inflation rates - whether they agree with these policy choices. Very often, however, these quantifications are missing. Article 1 (1) Bank Act 1993 of France states *e.g.* that: "The bank shall formulate and implement monetary policy with the aim of ensuring price stability. It shall carry out these duties within the framework of the Government's overall economic policy." The objective of price stability is not closer defined in the Bank Act 1993, or any other law. Instead, the Bank itself quantifies the objective of price stability in its Annual Report. Price increases, as measured by the consumer price index, should not exceed 2%.

With respect to the *transparency* of actual monetary policy we distinguish between the following aspects:

5. must the central bank publish an inflation or monetary policy report of some kind, in addition to standard central bank bulletins/report?
6. are minutes of meetings of the governing board of the central bank made public within a reasonable time?
7. must the central bank explain publicly to which extent it has been able to reach its objectives?

Our fifth aspect has been suggested by Briault et al. (1996). As they put it: "...these reveal information on the authorities' reaction function - its actions, objectives and intentions - and thus on the distribution of the authorities' inflation preference" (p. 34). In a similar vein, transparency will be improved if the minutes of the governing council are publicly available. Of course, to be meaningful this should not take thirty years as in Germany. The usefulness of publication of minutes depends on other institutional arrangements. For instance, the Reserve Bank of New Zealand does not publish any minutes. However, the reason for this is to be found in the institutional structure of the Bank, according to which monetary policy decisions are effectively taken by the governor himself, rather than by a collegial body. The legal basis of the ECB does not contain any provisions on the publication or even maintenance of minutes of the meetings of the Governing Council of the ECB. Once again primary Community law leaves it for the ECB to decide whether, to what extent, and under what conditions minutes of the meetings of the Government Board are published. Under the proposed new Bank of England Act the obligation to publish minutes of the Monetary Policy Committee (MPC) is included. According to this, the minutes will have to include the voting preferences of the members of the MPC taking part in a particular meeting. However, one exception is planned, that is the publication of the minutes of meetings relating to decisions to intervene in the financial markets. Minutes of such meetings have to be published eventually, that is within six weeks of the publication of the statement about the decision to intervene.

Transparency will be improved if the monetary authorities have to explain the extent to which they were able to reach the final objectives of monetary policy. Whether this obligation is prescribed in the law or has another origin is less important, as long as it is clearly prescribed what the central bank is supposed to do. The legal basis of the ECB/ESCB foresees the publication of reports on the activities of the ESCB on at least a quarterly basis. Whether and to what extent they will include details on the past performance and projections on the future development of monetary policy and/or self-proclaimed targets for monetary policy, is left to the ECB to decide, as the Maastricht Treaty and ESCB Statute do not include any details on the contents of these reports. The Fed does not publish regular monetary policy or inflation reports as such. However, the Chairman of the Board of Governors is obliged to forward a report on its objectives and plans with regard to the development of the monetary and credit aggregates twice a year. The Reserve Bank of New Zealand and the Bank of England are obliged by law to publish reports on the development of monetary policy on a regular basis. The New Zealand central bank is obliged to deliver a policy statement, which includes a review and assessment of the implementation of monetary policy in the period subsequent to the previous statement and a statement including the Bank's proposal for the implementation of monetary policy with the goal of achieving price stability for the succeeding 5 years.[13] Similar to the Reserve Bank of New Zealand, the Bank of England publishes a monetary policy report in the form of an inflation report, which not only assesses the past developments, but includes an outlook concerning the development of inflation.

With respect to the *final responsibility* for monetary policy we distinguish between the following aspects:

8. is the central bank subject to monitoring by Parliament (is there a requirement - apart from an annual report - to report to Parliament and/or explain policy actions in Parliament)?
9. has the government (or Parliament[14]) the right to give instructions?
10. is there some kind of review in the procedure to apply the override mechanism?

11. has the central bank possibility for an appeal in case of an instruction?
12. can the central bank law be changed by a simple majority in Parliament?
13. is past performance a ground for dismissal of a central bank governor?

Question 8 has been suggested by Briault et al. (1995). Indeed, while the transparent conduct of monetary policy supports Parliament in its decision-making process about the performance of the bank, institutionalised contacts support the overall transparency of monetary policy. Parliament has the opportunity to review the performance of the central bank with regard to monetary policy on a regular basis, while the central bank at the same time can explain and justify its conduct. These contacts have to be foreseen in the legal basis of the central bank.

The importance of an override mechanism has also been suggested by Briault et al. However, here we follow a somewhat different approach as we consider only government's right to give instructions in certain (well defined) circumstances to be relevant for accountability. Furthermore, as explained in the previous section, it is important whether some kind of review procedure is part and parcel of the override mechanism. The possibility of the central bank to appeal should be part of this procedure.

Question 12 is included since we believe it is important that Parliament should be able to change the central bank law. Indeed, it has been argued that the mere threat of a change of the law will ensure that even independent central banks (like the Bundesbank) will ensure that monetary policy will in general be in accordance with the wishes of elected politicians (Gormley and De Haan, 1996). There are, however, some cases in which the power of Parliament may be restricted somewhat. In the US, for instance, the President has the power to veto a change, in which case a two third majority in Congress is required to change the law.[15] Still, for the ECB the power of Parliaments is much less as a change would require amendment of primary Community law, which implies that all countries have to agree.

Finally, as argued in the previous section we think that if past performance is a ground for dismissal this may enhance accountability.

In constructing our indicator we simply add the number of positive answers on all the aspects that we have distinguished. This implies of course that we think that the aspect of the final responsibility is most important. The answers to the questions relate to the laws as prevalent in 1997. A special situation arises in this respect for the UK. With the change of government in 1997 the new Labour government has announced major institutional changes to grant the Bank of England more independence in the implementation of monetary policy while at the same time ensuring the accountability of the Bank. It has been agreed upon between the executive government and the Bank of England that these new arrangements which have been announced by the Chancellor of the Exchequer operate *de facto* until the proposed bill has been accepted by Parliament. Therefore, we have used the proposed new Act as the relevant basis for the UK. Table 1 provides our assessment of the accountability of 16 central banks at the time of writing.[16]

It is shown by this index that the ECB has a low degree of democratic accountability.[17] The assessment of the Bank of England, which is based on the proposed new legislation, shows, that the envisaged reforms provide for a high degree of accountability of the Bank. In fact the envisaged arrangements provide for a higher degree of democratic accountability than is the case for the Reserve Bank of New Zealand.

Tabel 1 An indicator for central bank accountability

Aspect:	Australia	Belgium	Canada	Denmark	France	Germany	Italy	Japan	Netherlands	NewZealand	Spain	Sweden	Switzerland	UK	US	ECB
1.	*	_	*	*	*	*	-	*	*	*	*	-	*	*	*	*
2.	-	-	-	-	*	*	-	-	-	*	*	-	_	*	-	*
3.	-	-	-	-	*	-	-	-	-	*	*	-	-	*	-	*
4.	-	-	-	-	-	-	-	-	-	*	-	-	-	*	-	-
Subtotal	1	0	1	1	3	2	0	1	1	4	3	0	1	4	1	3
5.	-	-	*	-	-	-	-	-	-	*	*	*	-	*	*	-
6.	-	-	-	-	-	-	-	-	-	-	-	-	-	*	*	-
7.	*	-	*	*	*	-	*	*	-	*	*	*	-	*	*	*
Subtotal	1	0	2	1	1	0	1	1	0	2	2	2	0	3	3	1
8.	*	-	*	*	*	-	*	*	-	*	*	*	-	*	*	-
9.	*	*	*	-	-	-	*	*	*	*	-	*	-	*	-	-
10.	*	-	*	-	-	-	-	*	*	-	-	-	-	*	-	-
11.	*	*	-	-	-	-	-	-	*	-	-	-	-	-	-	-
12.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	-
13.	-	-	-	-	-	-	-	-	-	*	-	-	-	-	-	-
Subtotal	5	3	4	2	2	1	3	4	4	4	2	3	1	4	2	0
Total	7	3	7	4	6	3	4	6	5	10	7	5	2	11	6	4

5. Independence and accountability

As outlined in the introduction, nowadays it is widely believed that central bank independence may foster price stability. However, as Issing (1998, p. 4) points out: "The independence of a central bank is not an end in itself but only a means of achieving an objective set by the legislature. The associated purpose-orientied transfer of responsibility implies that the central bank is to be held accountable for its decisions. In particular, it has to disclose and justify the progress it has made in attaining its final goal, its monetary policy strategy, and its ongoing monetary policy measures." How well do independent central banks score in this respect? In answering this question, we have updated one indicator for CBI and compare it with our indicator for central bank accountability.

Eijffinger and Schaling (1993) and Eijffinger and Van Keulen (1995) have constructed an index for CBI which is based on three issues: the location of the final responsibility for monetary policy, the absence or presence of a government official on the board of the central bank and the fraction of board appointees made by government. To be more precise, they ask the following questions:

1. is the bank the sole final policy authority; is this authority not entrusted to the central bank alone, or is it entrusted completely to the government?
2. is there no government official (with or without voting power) on the bank policy board?
3. are more than half of the policy board appointments made independently of the government?

If the central bank has the sole responsibility for monetary policy, a country gets a double score. In case of joint responsibility, it gets a normal score, and if only government is responsible, it gets no score. In case of an affirmative answer to questions 2 and 3, a country receives a normal score. Eijffinger and Schaling add one to the total score so that the least independent central bank gets a score of one, and the most independent bank receives a score of five.

Table 3 shows the updated indicator. As various central bank laws have been changed over the last years, it is important that our indicator for central bank accountability and the indicator for CBI refer to the same moment. Indeed, previous comparisons of accountability and CBI can be criticized on this account.[18]

Figures 1-3 shows the relationship between the various aspects of accountability and the updated indicator of CBI. Table 2 shows the regressions. It follows that there appears a negative relationship between CBI and two aspects of accountability, albeit that the relationship between CBI and transparency is a weak one. Our first aspect of accountability shows a positive relationship with CBI, albeit that this relationship is not significant.

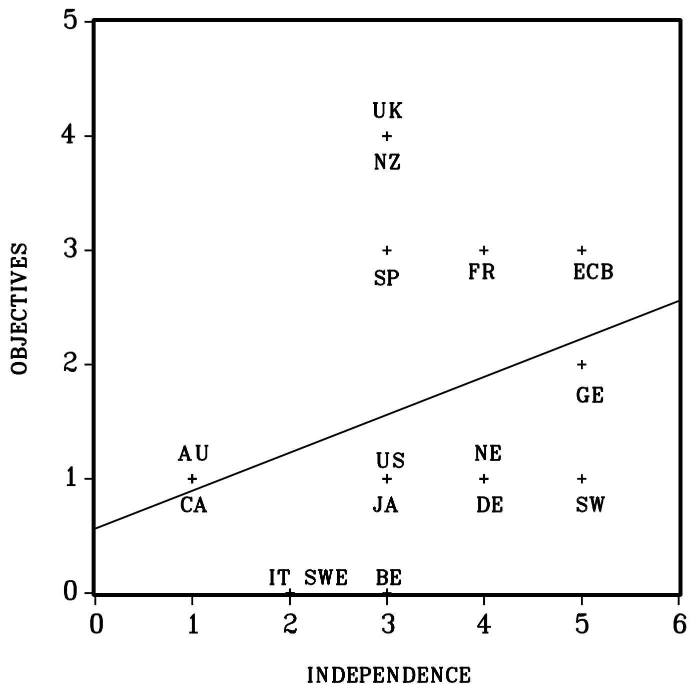
Tabel 2 The updated Eijffinger-Schaling indicator for central bank independence

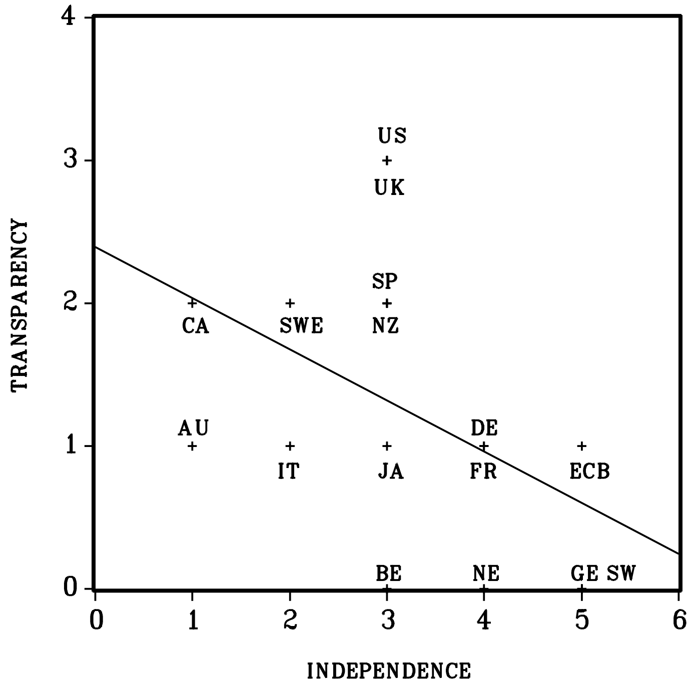
Aspect:	1.	2.	3.	Total
Australia	-	-	-	1
Belgium	*	*	-	3
Canada	-	-	-	1
Denmark	**	*	-	4
France	**	*	-	4
Germany	**	*	*	5
Italy	-	*	-	2
Japan	*	*	-	3
Netherlands	**	*	-	4
New Zealand	*	*	-	3
Spain	*	*	-	3
Sweden	*	-	-	2
Switzerland	**	*	*	5
UK	*	*	-	3
US	*	*	-	3
ECB	**	*	*	5

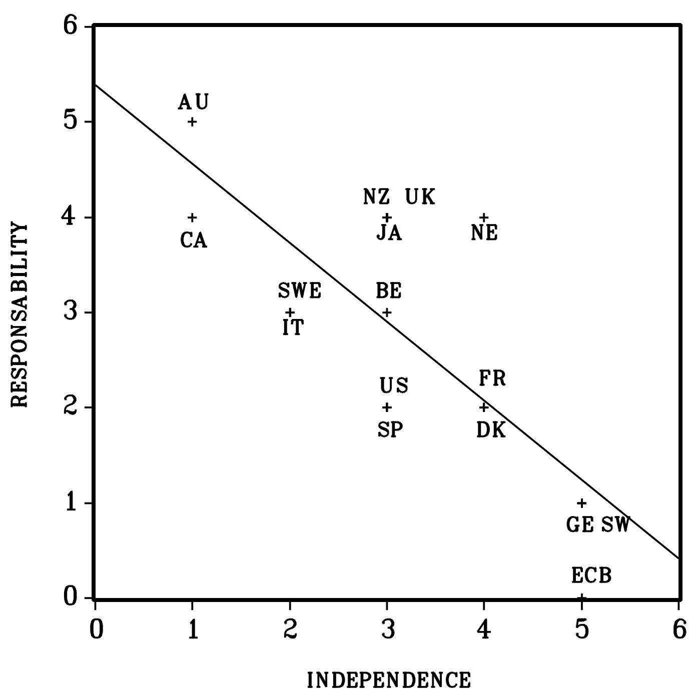
Table 3. Simple regressions between CBI and aspects of accountability

Aspect of accountability:	Constant:	Accountability:	R^2 (adj.)
Objectives	2.71 (5.44)	0.29 (1.23)	0.03
Transparency	3.92 (8.16)	-0.58 (-1.92)	0.15
Final responsibility	5.11 (10.47)	-0.70 (-4.38)	0.55
Total	4.50 (5.90)	-0.23 (-1.86)	0.14

Figures 1-3 Accountability and independence




TRANSPARENCY
INDEPENDENCE
US
UK
SP
NZ
CA
SWE
AU
IT
JA
DE
FR
ECB
BE
NE
GE SW


RESPONSABILITY
INDEPENDENCE
AU
CA
NZ UK
JA
NE
SWE
IT
BE
US
SP
FR
DK
GE SW
ECB

6. Concluding comments

Most politicians in Europe nowadays seem to be convinced that the future ECB should be very independent. Indeed, there are compelling reasons for this view (De Haan, 1997). Still, as follows from the citation of Stiglitz at the beginning of this paper, this does not mean that central bank accountability can be neglected. Democratic accountability should not necessarily be regarded as a restrictive mechanism limiting the independent position of the central bank but, on the contrary, can be seen as a validating mechanism legitimising the independent position of a central bank.[19] Thus, the relationship between central bank independence and democratic accountability is characterised not primarily by a trade-off between the two principles. A central bank with a proper accountability mechanism is not simply a central bank which has been stripped of its independence (central bank accountability = the reciproke of central bank independence). Although some aspects of accountability may interfere with central bank independence, the concepts are definitely not adversaries. Indeed, as the Roll-report already put it a central bank should be independent and accountable.

It follows from our analysis that based on the Maastricht Treaty the accountability of the ECB is poorly arranged for. As pointed out, however, central bank laws sometimes offer opportunities to enhance the accountability by going further than the requirements as prescribed in the law. So how could the accountability of the ECB be strengthened? It is clear that the ECB scores relatively high with respect to the ultimate objectives of monetary policy. The only improvement in terms of accountability would be to define price stability formally and explicitly as an inflation rate (CPI) between 0 and 2%. Indeed, the EMI, in its report on the elements of the monetary policy strategy of the ESCB, has recommended this, stating that "there has been a broad consensus among central banks for several years that a range of 0%-2% inflation per annum would be appropriate" (EMI, 1997, p. 12).

As it will prove difficult - if not impossible - to change the regulations with respect to the final responsibility of monetary policy, the main improvements of the accountability of the ECB can be found with respect to the transparency of actual monetary policy. The future president of the ECB already announced that he will publicly explain to which extent the ECB has been able to reach its objectives within the context of hearing before the European Parliament. The publication of an inflation or monetary policy report and/or the minutes of meetings of the governing board of the ECB could also strengthen the accountability of the central bank. A monetary policy report would certainly contribute to the transparency of actual monetary policy. This could be published quarterly as a supplement to the annual report of the ECB. The EMI (1997, p. 12) has indicated that "the ECB should publicly set targets against which its performance can be assessed and explain its policy action to the public with reference to its targets". The intermediate target of the ECB has yet to be defined. It will be announced publicly, whether as a monetary aggregate or an inflation forecast implicit in the direct inflation targeting strategy. It is foreseen that the ECB should not only announce the target and the details of its calculation, but should also "regularly publish the data and analysis relevant to monetary policy, as well as explanations of the deviation from the target and the policy response of the central bank (EMI, 1997, p. 16).

The publication of the minutes of meeting of the ECB-council is a more sensitive issue. The Maastricht Treaty forbids the ECB from publishing the detailed minutes and votes, as article 10.4 of the Statutes states: "The proceedings of the meetings shall be confidential. The Governing Council may decide to make the outcome of its deliberations public". Still, minutes of the meetings of the Governing Board of the ECB could take a similar form as the minutes of the FOMC meetings of the Fed. Only the outcome of the decision, not the procedure for reaching the decisions, can be made public, thereby stressing that the ECB as a whole should be held accountable, not each of the individuals of its decision-making body (see also Bini Smaghi, 1998).
These published minutes then are not detailed transcripts of the meetings including the voting behaviour and names of the members of the ECB-council, but should contain the monetary policy stance (restrictive, neutral or expansionary) and the arguments put forward by the members.

REFERENCES

Amtenbrink, F. (1998), The democratic accountability of central banks, PhD thesis, University of Groningen.

Bini Smaghi, L. (1988), The democratic accountability of the European central bank, mimeo, European Monetary Monetary Institute, May 1998.

Briault, C.B., A.G. Haldane and M.A. King (1996), *Independence and Accountability*, paper presented at the Seventh International Conference of the Institute for Monetary and Economic Studies, Bank of Japan, Tokyo, October 1995, BoE Working Paper Series, no. 49, April 1996.

Cukierman, A. (1992), *Central Bank Strategy, Credibility, and Independence*, Cambridge: MIT Press.

Cukierman, A., S.B. Webb and B. Neyapti (1992), Measuring the Independence of Central Banks and its Effects on Policy Outcomes, *The World Bank Economic Review*, 6, 353-398.

Demertzis, M., A. Hughes Hallett and N. Viegi (1998), Independently Blue? Accountability and Independence in the New Central Bank for Europe, mimeo.

Eijffinger, S.C.W. and J. de Haan (1996), The Political Economy of Central-Banking, *Princeton Special Papers in International Economics*, No. 19.

Eijffinger, S.C.W. and E. Schaling (1993), Central Bank Independence in Twelve Industrial Countries, *Banca Nazionale del Lavoro Quarterly Review*, No. 184, 1-41.

Eijffinger, S.C.W. and M. van Keulen (1995), Central Bank Independence in Another Eleven Countries, *Banca Nazionale del Lavaro Quarterly Review*, No. 192, 39-83.

European Monetary Institute (1997), *The Single Monetary Policy in Stage Three: Elements of the Monetary Policy Strategy of the ESCB*, Frankfurt, February 1997.

Fischer, S. (1994), The Costs and Benefits of Disinflation, in: J.A.H. de Beaufort Wijnholds, S.C.W. Eijffinger and L.H. Hoogduin (eds.), *A Framework for Monetary Stability*, Dordrecht/Boston/London: Kluwer Academic Publishers, 31-42.

Forder, J. (1996), On the Assessment and Implementation of `Institutional' Remedies, *Oxford Economic Papers*, 48, 39-51.

Glastra, R.M. (1997), European Monetary Union and Central Bank Independence, in: M. Andenas, L. Gormley, C. Hadjiemmanuil and I. Harden (eds.), *European Economic and Monetary Union: The Institutional Framework*, London: Kluwer Law International.

Goodhart, C.A.E. (1993), Minutes of Evidence, in: *The Role of the Bank of England* (House of Commons paper, Session 1993-94; 98-I; vol. 2), HMSO, London.

Goodhart, C.A.E. (1997), Notenbankunabhaengigkeit und Demokratie - Podiumdiskussion, in: Oesterreichische Nationalbank, *Die bedeutung der Unabhaengigkeit der Notenbank fuer die Glaubwuerdigkeit der europaeischen Geldpolitik*, Volkswirtschaftliche Tagung 1997, Vienna, 1997, 166-168.

Gormley, L. and J. de Haan (1996), The democratic deficit of the European Central Bank, *European Law Review*, 21, 95-112.

Haan, J. de (1997), The European Central Bank: Independence, Accountability and Strategy, *Public Choice*, 93, 395-426.

Herrendorf, B. and Lockwood, B. (1998), Rogoff's Conservative Central Banker Restored, forthcoming in: *Journal of Money, Credit, and Banking*.

Issing, O. (1998), The European Central Bank as a new institution and the problem of accountability, Deutsche Bundesbank, *Auszuge aus Presseartikeln*, no. 19, 24 March 1998, 1-7.

Levy, D.A. (1995), Does an independent central bank violate democracy?, *Journal of Post Keynesian Economics*, 18, 189-210.

McCallum, B.T. (1995), Two Fallacies Concerning Central-Bank Independence, *American Economic Review, Papers and Proceedings*, 85, 207-211.

Muscatelli, A. (1998), Optimal Inflation Contracts and Inflation Targets with Uncertain Central bank Preferences: Accountability through Independence?, *The Economic Journal*.

Nolan, C. and E. Schaling (1996), Monetary Policy Uncertainty and Central Bank Accountability, *Bank of England Working Paper Series*, No. 54; forthcoming in: *De Economist*.

Posen, A.S. (1995), Declarations Are Not Enough: Financial Sector Sources of Central Bank Independence, in: *NBER Macroeconomics Annual* 1995.

Roll, E. et al. (1993), *Independent and Accountable, A New Mandate for the Bank of England*, The Report of an Independent Panel Chaired by Eric Roll, Centre for Economic Policy Research, October.

Svensson, L. (1997), Optimal Inflation Targets, `Conservative' Central Banks and Linear Inflation Contracts, *American Economic Review*, 87, 98-111.

Walsh, C.E. (1995), Optimal Contracts for Central Bankers, *American Economic Review*, 85, 150-167.

Notes

1. For a general critique we refer to McCallum (1995), Posen (1995) and Forder (1996).

2. See also Gormley and De Haan (1996) and Goodhart (1997) for a critical assessment of the accountability of the ECB.

3. Additionally, Nolan and Schaling use indicators for CBI and accountability which are constructed for different periods as they do not use updated indicators for CBI. The same holds true for De Haan (1997).

4. The EMI (1997, p. 12) states: "While theory does not provide a precise definition of price stability and while measurement problems exist, there has been a broad consensus among central banks for several years that a range of 0%-2% inflation per annum would be appropriate."

5. Goodhart (1997, p. 168) goes even a step further by arguing that "Perhaps the main point is not so much that the ECB with its present goal independence, has a democratic deficit, but rather that the federal institutions of the European Union taken as a whole have such a democratic deficit."

6. A. Greenspan, *Statement before the Committee on banking, Finance, and Urban Affairs*, U.S. House of Representatives, October 13, 1993, 1100-1107, at 1005.

7. At the time of the establishment of the ESCB, override mechanisms in the statutes of the Member States central banks participating in EMU will be considered in contradiction with the EC Treaty, Articles 107 and 108 EC, and the ESCB Statute. Therefore, the legal bases of the national central banks participating in the ESCB are no longer allowed to include any provisions referring to override mechanisms.

8. The appointment of central bank officials may be considered less important for the democratic accountability. It can be argued that it amounts to an *ex ante* mechanism of control by choosing the persons entrusted with the power over monetary policy. Yet, the appointment of central bank officials may be better described as a mechanism of democratic legitimation rather than accountability.

9. One consideration would be the lower unemployment rate resulting from a monetary surprise. Other sources of the time inconsistency problem originate with the public finances. The dynamic inconsistency of monetary policy may first arise, because the incentives for the government to inflate change before and after the public has settled for a nominal interest rate, taking into account its expected rate of inflation. Before the public commits itself, the central bank has an incentive to abstain from making inflation. After positions in government bonds have been taken, policymakers have an incentive to create inflation. Another source of the inconsistency problem also originates in the finances of government and may be referred to as the `revenue' or `seigniorage' motive for monetary expansion. The dynamic inconsistency of monetary policy arises here, because incentives for the government to inflate change before and after the public has chosen the level of real money balances.

10. This approach has been criticized by McCallum (1995), as delegation does not resolve the dynamic inconsistency, it merely relocates it as government has the power to appoint a new central banker. Implicit in the models of those in favour of an independent and "conservative" central banker is that monetary delegation is not that easily changed: delegation is either binding or there are prohibitive costs in changing delegation. Recently, Jensen (1997) has shown that delegation with "reappointment costs" to some extent reduces the dynamic inconsistency. Only in the special case where costs are all

that matter for the government is the dynamic inconsistency resolved completely. An interesting result is that a government which suffers a credibility problem will gain by monetary delegation.

11. However, Svensson (1997) emphasizes that the trade-off between inflation and output variability in the Rogoff-model follows from a particular specification of preferences. If the central bank has a lower average inflation target than society rather than an increased weight on inflation stabilization, average inflation can be reduced without increasing output variability. So, provided the bank is given a suboptimally low inflation target to aim for, the outcome is isomorphic to a Walsh-contract. This implies that the socially optimal level of welfare can be achieved through delegation of authority to a central banker with a suitable desired level of inflation rather than via an incentive contract for the bank. It would appear, therefore, that Svensson's result implies that it is possible to reach the social optimum simply by delegating authority to an appropriately chosen type of central banker.

12. This is not say, however, that only laws determine actual central bank accountability. Indeed, sometimes a central bank may be more accountable than can be inferred from the law. This may be true for the ECB as well (Bini Smaghi, 1998). We will come back to this issue in section 6.

13. From March 1998 onwards, Monetary Policy Statements will be issued in quarterly intervals.

14. In Sweden parliament may give instructions.

15. In Germany a simple majority in the Bundestag may not be enough. If the Bundesrat maintains objections against the existing legislative proposal, the Bundestag can pass the legislation without the consent of the Bundesrat, if the proposed legislation constitutes a Zustimmungsgesetz. Since, according to most commentators, this is the case for the legal basis of the Bundesbank, the Bundestag can pass legislation on the Bundesbank - if necessary - without the consent of the Bundesrat. However, if the Bundesrat has rejected the proposal by a two-third majority the decision can only be overruled by a two-third majority of the votes of the Bundestag.

16. As pointed out before, our index of accountability is not the first. Briault et al. (1996) were the first to construct such an indicator. Their index is based on four criteria: (a) whether the central bank is subject to external monitoring by Parliament; (b) whether the minutes of meetings to decide the setting of monetary policy are published; (c) whether the central bank publishes an inflation or monetary policy report of some kind, in addition to standard central bank bulletins; and (d) whether there is a clause that allows the central bank to be overridden in the event of certain shocks. If the central bank law mentions an explicit escape clause a country receives a numerical value of 2.0. If overriding the central bank is not a *a priori* excluded they assigned a value of 1.0. Finally, if no provision exists they assigned 0. The other characteristics are simply given zero/unity values, and added to a base level of one. Our index is more refined and derived from an explicit definition of accountability.

17. It may seem odd in the view of some readers that we have given the ECB a negative score on question 8 (monitoring by Parliament) although a provision exists on appearances by the President of the ECB before the European Parliament, whereas both in the case of New Zealand and the UK we give a positive score, although no provision exists in the legal bases of the banks. In the latter cases the obligation to appear is based on constitutional convention (Amtenbrink, 1998). With regard to the ECB the provision is - apart from presentation of the Annual Report - not binding.

18. In comparison to the previously published indicators, the scores for France and the UK have been updated.

19. Indeed, Bini Smaghi (1998, p. 4) states: "Accountability can thus be seen as a complement, if not a necessary requirement, for independence: a central bank cannot be made independent if its objectives are not clearly and precisely defined; it cannot remain independent if it does not give account of its actions with a view to its pre-specified objectives."