Monetary policy frameworks – Norges Bank in the light of the literature and international practice

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The past 20 years have brought major changes in monetary policy, in Norway and abroad. Most central banks now have instrument independence, and price stability is the common objective of monetary policy. The organisation of the monetary policy decision within central banks has also changed. This decision is now typically taken by a committee. There have also been major changes in terms of transparency and communication.

These developments are the product of both economic theory and historical developments. Despite similar developments across countries, there are still differences, particularly in the composition, size and working methods of monetary policy committees, but also in how central banks communicate. Differences across countries are probably a reflection of different economies and different traditions. Theoretical and empirical research provide guidance as to the optimal framework, but do not give a clear answer.

1 Introduction

In the late 1960s, Phelps (1967) and Friedman (1968) showed how economic agents' expectations can limit the authorities' options. The experience of the 1970s and 1980s, both in Norway and abroad, revealed that there is no long-term trade-off between unemployment and inflation. This acknowledgment has played a significant part in the shift in most OECD countries to price stability as a primary objective of monetary policy. Lucas (1972) showed that the relationships between economic variables are not stable but are affected by the design of economic policy. Only by studying individual agents' economic behaviour can one arrive at stable relationships for how economic policy works. Kydland and Prescott (1977) noted that authorities can achieve long-term policy goals only by making a credible commitment to them. They presented arguments for making central banks independent of political authorities and having binding monetary policy objectives.

Over the past 20–30 years, economic theory and historical experience have provided guidance on how monetary policy should be organised and implemented. There have been major changes in how central banks operate. Their implementation of monetary policy has many similarities, but there are also differences between countries. In this article, we look more closely at whether these differences are significant. We also present an overview of international practice and the recommendations from the monetary policy literature.

2 Recommendations from the literature

The economic literature provides some guidance on how countries today should organise and implement monetary policy.

The central bank should be independent

Economic theory suggests that responsibility for the day-to-day implementation of monetary policy should be delegated to an independent central bank. The work of Kydland and Prescott on rules of conduct for economic policy in the late 1970s was crucial to this conclusion. In their work, economic agents (enterprises and households) do not systematically misjudge what the authorities intend to do in the future. Economic agents look forward when they make their decisions so that expectations of economic developments influence actual economic developments. If wage-earners expect high inflation, they will demand higher wages than if they had expected low inflation. If enterprises expect high inflation, they will raise prices more than if they had expected low inflation. Thus, expectations of high inflation will in themselves contribute to high inflation. This means that there is no long-term trade-off between inflation and unemployment. It is important, therefore, for inflation expectations to be stable and low. This suggests that monetary policy should have price stability as a primary goal, as this will help to anchor inflation expectations at a low level. When there is confidence that inflation will remain low and stable over time, there is also scope for monetary policy to stabilise short-term fluctuations in the real economy. However, politically elected authorities might be tempted to pursue a too expansionary monetary policy in the short run, for example to secure re-election. Politicians' promises of conducting a monetary policy with the objective of price stability may, therefore, be seen as having little credibility, and economic agents may have reason to expect high inflation. One solution to this problem is to transfer responsibility for monetary policy to a body which is not exposed to this temptation, such as an independent central bank. (See, for example, Walsh (2003)

[1] The views expressed in this article are those of the authors and are not necessarily the view of Norges Bank. We would like to thank our colleagues at Norges Bank for their comments.

and Dornbusch, Fischer and Startz (2004) for further details.)

Decisions should be transparent

From a democratic point of view, delegating the implementation of monetary policy – an important part of economic policy as a whole – from elected representatives to an independent body may be considered problematic. It is therefore important for the central bank to have a clear mandate and to be transparent, so that elected representatives, the press and the public can always verify that the central bank is managing monetary policy in line with its mandate (see, for example, Blinder (1998)).

Interest rate decisions should be taken by a monetary policy committee

Democratic arguments may also suggest that decisions by an independent central bank should be taken by a committee. If the mandate for monetary policy is formulated in general terms, this leaves room for interpretation. It may, therefore, be an advantage for monetary policy not to be shaped by just one person's interpretation.

Recent research indicates that decisions by a committee also have other benefits. A committee's decisions will be based on a broader range of information and assessments than those of an individual. Committees can also act as insurance against serious misjudgements. However, the literature does not give clear answers

What is it possible to communicate externally?

Blinder (2007) argues that the appropriate volume and style of central bank communication depend sensitively on the type of decision-maker. He differentiates between three types of decision-makers:

- *Individual decision-maker:* The governor of the central bank is solely responsible for decisions.
- *Collegial committee:* Members of a collegial committee agree in advance that their individual differences of opinion must be subordinated to the common good, lest the authority of the group be undermined. Such a committee arrives at a group decision that somehow springs from the collective wisdom of the group as a whole and is embraced by all of its members. There may or may not be a formal vote at each MPC meeting. But if there´s one, it is expected to be – and normally is – unanimous or nearly so. A collegial committee can reach agreement in a variety of ways. Blinder considers two cases: In a *genuinely-collegial committee,* the members may argue strenuously for their own points of view behind closed doors, but they ultimately compromise on a group decision, and then each member takes owner-ship of that decision. There may or may not be a formal vote; but regardless, there are no (or negligible) public disagreements. In what he calls an *autocratically-collegial committee* the chairman more or less dictates the group "consensus."
- *Individualistic committee:*Members of an individualistic committee not only express their own opinions verbally, but probably also act on them by voting. The group's decision is made by literal majority vote. At MPC meetings, positions are offered, the pros and cons are debated, committee members weigh the equities of the case, and then they vote. Unanimity is not necessarily expected; it may not even be sought.

Blinder argues that genuinely-collegial and individualistic committees may find it difficult to produce an immediate statement after the interest rate decision. "An autocratically-collegial committee, however, should find it much easier to prepare a detailed statement to be issued at the end of the meeting. Indeed, the chairman may walk into the meeting room with a draft of the statement in his pocket." Furthermore, Blinder argues that "the vote on monetary policy is an essential piece of forward-looking information when decisions are made by an individualistic committee. Therefore, such a committee should always announce its vote promptly, probably naming names. (…) The case for announcing votes and names is more equivocal on collegial committees. Obviously, if there are any dissenting votes, announcing them will impair the committee's ability to project the aura of consensus that it desires."

Blinder believes "that revealing (conditional) forecasts of its own behaviour is quite possible for a central bank with an individual decision-maker, rather more difficult – but perhaps still possible – for an autocratically-collegial MPC, and probably out of the question for the other two types." He suggests that a genuinely-collegial MPC "may have to content itself with a statement of its 'bias' or 'balance of risks', while a truly individualistic MPC may have trouble doing even that." This is a view which appears to be shared by the Bank of England (see Lomax (2007)).

about the ideal size, composition and working methods of committees taking monetary policy decisions. Nor is it clear what might be the correct division of duties between the central bank's staff and the monetary policy committee. Maier (2007) provides an overview of the literature on monetary policy committees.[2]

The central bank should influence interest rate expectations through communication

In the monetary policy literature, the terms "transparency" and "communication" tend to be used interchangeably. However, it may be useful to reserve the term "communication" for central banks' active use of transparency as a means of influencing agents' expectations.

One important feature of modern monetary policy theory is that economic agents make their decisions on the basis of expectations of the future. The impact of monetary policy will, therefore, depend at least as much on agents' expectations of future movements in interest rates as on their current levels. Thus, for monetary policy to be as effective as possible, it is necessary for agents to understand the central bank's intentions in its rate-setting. In addition, it is important that the central bank makes its response pattern known, so that agents' reaction to new information has a stabilising effect. Thus, modern monetary policy theory suggests that the central bank should be open about (communicate) its response pattern and its expectations of movements in interest rates and the economy.[3] (See, for example, Woodford (2005) and Svensson (2007).)

Monetary policy theory implicitly assumes that decisions are made by a single person. The central bank can then easily communicate an explicit expected interest rate path by being completely open about the reasoning behind its interest rate decisions. If the decisions are made by more than one person (a committee), however, there may be some conflict between the need for transparency and the need to influence agents' interest rate expectations effectively. The central bank runs the risk of speaking with too many voices, with the result that its signals about monetary policy ahead become unclear.[4, 5]

Empirical research suggests that the minutes of a monetary policy committee's discussions can provide indications of the orientation of monetary policy ahead (see, for example, Gerlach-Kristen (2004)). Some central banks communicate the orientation of monetary policy ahead directly by publishing an interest rate path.

3 Is there consistency between theory and practice?[6]

It is customary to compare Norway with the traditional industrialised countries in the OECD area. In this section, we look more closely at the frameworks in these countries (see overview in Table 1). We will look at the Norwegian system in more detail in Section 4.

Independent central banks

In all of these countries, it is the political authorities which define the overriding objective of monetary policy, often through legislation. The level of detail in which the authorities specify this objective varies somewhat, but the common denominator is that responsibility for the implementation of monetary policy is delegated to a central bank which is independent in its use of policy instruments to achieve the objective.

In most of the countries, price stability is the objective of monetary policy. This can either take the form of inflation targeting or be indirect through a fixed exchange rate, such as in Denmark, where the exchange rate is pegged to the euro. In some countries, such as the UK and Norway, the goal of price stability has been quantified by the political authorities. In Sweden and the euro area, the central banks themselves (Sveriges Riksbank and the ECB) have quantified the goal of price stability, although the general objective of price stability is laid down in law.

Today's monetary policy can be viewed as the result of a long learning curve to which both economic research and the authorities have contributed. The lesson learned from economic theory and economic policy in the 1960s, 1970s and 1980s was that unemployment cannot be reduced in the medium to long term by accepting slightly higher inflation. The goal of monetary policy needs to reflect what the central bank can realistically achieve. Over time, monetary policy can determine inflation, but output is determined by the supply of labour, capital, technology and adaptability. Low inflation is monetary policy's contribution to stable and strong economic growth over time.

In some countries, including Norway, central bank legislation contains provisions which allow the political authorities to issue instructions to the central bank.[7] These provisions ensure that any instructions are issued through a predefined framework and with full transparency. Such provisions can be found in the central bank acts in the UK, New Zealand, Canada and Australia, among others, but the formulations concerning the application of these provisions vary somewhat.[8]

[2] Other overview articles include Berger (2006), Blinder (2007), Sibert (2006), Vandenbussche (2006), Fujiki (2005) and Gerling et al. (2005).

[3] This argument assumes that the central bank does not normally make significantly poorer forecasts than other economic agents (see Amato, Morris and Shin (2002) and Svensson (2006)). See Mishkin (2004) and Goodhart (2001) for other counterarguments.

[4] This problem is discussed by Stefan Ingves, Governor of Sveriges Riksbank in Sweden: "If different members were to send out different signals as to what should happen at the next meeting, it may also cause uncertainty as to which of them one should believe the most." (Ingves 2007)

[5] In theory, it is impossible for a committee which votes on each interest rate decision to have interest rate expectations based on a single consistent story, partly because the expected median member – and so the story on which the expectations are based – could change from meeting to meeting in the future.

[6] The account presented here is based on information from the various central banks' websites.

[7] Political authorities will always be able to instruct the central bank by changing the law. However, this would be a major undertaking, and the threshold for embarking on such a process would normally be high.

[8] In the UK, for example, the Act states that there must be "extreme economic circumstances" before the Bank of England can be given directions.

Table 1: Institutional framework for monetary policy in various countries

Country:	Monetary policy objective	Who makes the monetary policy decisions[1]	Decision-making rule in practice	Endogenous interest rate path	Press release	Publication of minutes	Evaluation by external organisations
Australia	Explicit inflation target	Committee (9) Other Internal/external (full-time/part-time)	Consensus	No	Yes, when there is a change in the interest rate	No	No
Canada	Explicit inflation target	Committee (6) Experts Internal (full-time)	Consensus	No	Yes	No	No
Euro area	Price stability	Committee (19) Experts Internal (full-time)	Consensus	No	Yes, with a press conference	Published 30 years later	Yes
Japan	Price stability	Committee (9) Experts Internal/external (full-time)	Majority	No	Yes, the voting results are published in a press release	Published minutes. Views are presented in an anonymous form, but the voting results are published. Complete information is published 10 years later.	No
New Zealand	Explicit inflation target	Governor Internal (full-time)	Only one decision-maker	Yes	Only one decision-maker	No committee	No
Norway	Explicit inflation target	Committee (7) Other Internal/external (full-time/part-time)	Consensus	Yes	Yes, with a press conference	No	Yes
UK	Explicit inflation target	Committee (9) Experts Internal/external (full-time)	Majority	No	Yes, when there is a change in the interest rate	Minutes are published two weeks after the meeting. Views are presented in an anonymous form, but the voting results are published.	No
Switzerland	Price stability	Committee (3) Experts Internal (full-time)	Consensus	No	Yes	No	No
Sweden	Explicit inflation target	Committee (6) Experts Internal (full-time)	Majority	Yes	Yes, with a press conference	Minutes are published two weeks after the meeting. Views are disclosed, and the voting results are published.	No
US	Price stability Employment Moderate long-term interest rates	Committee (12) Experts Internal (full-time)	Majority	No	Yes, the voting results are published in a press release	Minutes are published three weeks after the meeting. Views are presented in an anonymous form, but the voting results are published. Complete information is published 5 years later.	Yes

[1] The number of committee members is in brackets. Required qualifications for members are divided into experts and other. *Experts* refer to members with particular qualifications in macroeconomics, monetary policy or financial markets. *External* refers to members who do not take part in the daily operations of the central bank. In the UK, the four external members work at the central bank full-time but they have a separate secretariat and are not directly involved in the bank's daily operations. All members of Sveriges Riksbank's Executive Board work full-time, but they also have responsibilities other than making monetary policy decisions.

Sweden is an example of a country where the political authorities have not established a statutory right to instruct the central bank on interest rate decisions. The Swedish Central Bank Act states: "No public authority may determine how the Riksbank shall decide in matters of monetary policy."

The different countries have organised monetary policy in slightly different ways, but, in all cases, monetary policy is implemented by an independent central bank with price stability as its sole or primary objective.

Transparency

Central banks attach importance to transparency, and publish accounts of the background for monetary policy decisions.

Central banks present their view of the economic situation and outlook in inflation and monetary policy reports. Some disclose the reasoning behind their interest rate decisions in statements and press conferences immediately following the decision. These include the ECB and the central banks of New Zealand, Australia and Norway. Other countries issue brief statements and provide further information about their reasoning at a later date in the form of detailed minutes of meetings of the monetary policy committee. These include the UK, Japan, the US and Sweden.[9] These central banks also disclose how the individual committee members voted. Common to the central banks that publish minutes and voting results is that monetary policy decisions are taken by committees whose members work in the central bank or on monetary policy matters on a full-time basis. Actual practice seems, therefore, to be in line with Blinder's view (see box "What is it possible to communicate externally?").

Several countries also address the issue of democracy by having their central banks report to the political authorities in various ways. In Norway, this includes Norges Bank's annual report being submitted to the Ministry of Finance and subsequently communicated to the Storting (Norwegian parliament), and its governor appearing at a hearing before the Storting. In Sweden, Sveriges Riksbank must submit a report to the Parliamentary Finance Committee at least twice a year,[10] and its governor attends a hearing in the Riksdag (Swedish parliament) in connection with these reports. In the UK, the governor of the Bank of England and members of the monetary policy committee attend Parliament for regular hearings on the bank's inflation reports. The Bank of England must also write an open letter to the Chancellor if inflation deviates from the target by more than a percentage point, explaining how and when the bank will get inflation back on target.[11] The Governor of the Bank of England has said the following about this arrangement (King 2005): "When the time comes for me to write an open letter to the Chancellor… I will welcome the opportunity to explain how we expect to bring inflation back to target and over what horizon. Such letters are an integral part of the policy framework, not an indication of its failure." In the US, the chairman of the Federal Reserve must testify before Congress every six months to give an account of the economic situation and the implementation of monetary policy. A written report is submitted to Congress at the same time.

There is considerable public interest in monetary policy. It is the subject of regular discussion in the media and financial markets. Many financial institutions continuously assess developments in the economy and the possible implications for monetary policy. In several countries, monetary policy is also evaluated by an independent group of experts. In the US, a group of independent economists known as the Shadow Open Market Committee have been evaluating monetary policy since as far back as 1973.[12] Another example is the ECB, where independent economists and market participants discuss monetary policy in the euro area through a series of conferences entitled The ECB and Its Watchers.[13] In Norway, monetary policy is evaluated each year by Norges Bank Watch.

As the literature recommends, international practice is for central banks to be transparent, and this transparency has increased in recent years. However, the countries achieve transparency in different ways.

Monetary policy committees

In most of the countries, monetary policy decisions are made by committee (see Table 1). One exception is New Zealand, where interest rate decisions are formally made by the governor alone.[14] In practice, though, the governor of the Reserve Bank of New Zealand reaches his decision after seeking the advice of an internal committee. In Canada, decisions on monetary policy are, in practice, delegated to an internal board, even though by law[15] it is the governor alone who bears the responsibility.

The number of committee members ranges from three in Switzerland to 19 in the ECB. With the ECB, the Federal Reserve, the Bank of England, Sveriges Riksbank and the Swiss National Bank, all committee members are full-time employees of the central bank. In Australia and Norway, the committee also has members who work outside the bank. Whether monetary policy decisions are taken by a committee responsible solely

[9] Sveriges Riksbank in Sweden decided in May 2007 to hold a press conference after every rate-setting meeting rather than only when changing interest rates. It also decided that members of its Executive Board should have their contributions to the discussion attributed to them by name.

[10] Sveriges Riksbank has chosen to use two of the year's three monetary policy reports for this purpose.

[11] This happened for the first time on 16 April 2007, when inflation was 1.1 percentage points above the target of 2 per cent.

[12] See www.somc.rochester.edu.

[13] See www.ifk-cfs.de/index.php?id=1164.

[14] In order to "clarify" the central bank's responsibility for monetary policy, the governor is explicitly given responsibility for setting interest rates in a written contract (the Policy Target Agreement) between the governor and the finance minister.

[15] Bank of Canada Act 8 (1).

for monetary policy, such as the Federal Open Market Committee (FOMC) in the US, or by a body with overall responsibility for all of the central bank's operations, as is the case with Sveriges Riksbank, varies.

In several countries, the legislation contains explicit requirements for the qualifications of committee members, but they are normally quite general, as is the case in Norway (see more detailed discussion in Section 4). In the UK, the requirement is that "the person has knowledge or experience which is likely to be relevant to the Committee's functions". Members of the ECB's Governing Council must have "professional experience in monetary or banking matters". In other countries, such as the US and Sweden, there is, in practice, a requirement that committee members have certain qualifications in macroeconomics, monetary policy or financial markets, although this is not laid down explicitly in law. In Australia, several committee members have their "day jobs" at companies and universities.

Several central banks allow representatives of the authorities to be present at meetings of the monetary policy committee. As a rule, they do not have the right to vote. This includes the Bank of England, where a representative of the Treasury sits in on meetings and can participate in the discussion, and the ECB, where the chairman of Ecofin[16] and a member of the European Commission may attend meetings of the Governing Council. In Sweden, the chairman and vice-chairman of the Riksbank's General Council[17], which is appointed by the Riksdag, are entitled to attend and speak at meetings of the monetary policy committee, but not to table proposals or vote. In Japan, both the finance ministry and the prime minister's office are represented. It is usual for these representatives to speak, and they have the right to table proposals, but not the right to vote.[18] In Australia, the secretary to the Treasury is a permanent member of the monetary policy committee and has the right to vote.

Members of the monetary policy committee are normally appointed by the country's government or parliament, but in some cases the central bank itself also plays a role in their appointment. One example is the US, where the regional Federal Reserve Bank presidents are appointed by their respective regional boards.[19] These boards consist of representatives of banks and different industries, and are intended to reflect a broad cross-section of both the providers and users of banking services in each district. The other seven members of the FOMC are nominated by the US president and approved by the Senate. In Sweden, the six members of the Executive Board are appointed by the Riksbank's General Council. In the UK, the external members of the Monetary Policy Committee are appointed by the Treasury, while two of the internal members are appointed by the bank itself after consulting the Treasury.

Communication of interest rate expectations

The Reserve Bank of New Zealand and Sveriges Riksbank in Sweden communicate their explicit expectations of economic developments and interest rates in separate monetary policy reports in the same way as Norges Bank.[20] The Central Bank of Iceland also presents analyses with its own interest rate forecast. Other central banks indicate the future interest rate path in statements following rate-setting meetings (such as the ECB), or else the future path can be elicited from the minutes of the monetary policy committee's discussions. The Bank of England attaches importance to economic agents forming their own expectations of interest rates based on their understanding of the bank's reaction patterns. For example, the Bank's Governor, Mervyn King, said (King 2006): "We don't say where interest rates will go next for the simple reason that we don't know… Knowledge of our objective and our analysis is all that markets need from us to form judgments about the future path of interest rates."

The central banks are increasingly communicating their expectations of future interest rates. The way in which they do so varies from country to country. Theory does not give a clear answer about what is the best way of communicating expectations, but indicates that this may depend on how decisions are taken by the central bank.

4 Does Norway differ from other countries?

Independence

Norges Bank is responsible for the implementation of monetary policy in Norway. This is in line with the recommendations from the literature and international practice.

Monetary policy in Norway is oriented towards low and stable inflation. The operational target for monetary policy is annual consumer price inflation of approximately 2.5 per cent over time (see separate box presenting the monetary policy mandate). Norges Bank operates a flexible inflation targeting regime, so that both variations in inflation and variations in output and employment are taken into account.

In several countries, the political authorities reserve the right to instruct the central bank on monetary policy matters. In Norway, the right of instruction is general, but is unlikely to be exercised differently to other countries, where this right is restricted to critical situations. Section 2 of the Norges Bank Act (the "instruction clause", see separate box) states: "The King in Council may adopt resolutions regarding the operations of the Bank." It also contains special rules of procedure that

[16] The Economic and Financial Affairs Council, which comprises the EU's finance ministers.

[17] The Riksdag appoints the 11 members of the Riksbank's General Council, which reflects the political make-up of the Riksdag.

[18] They can also request that a vote on monetary policy be postponed to the next meeting. If such a request is made, the Policy Board is to decide by a vote whether it will accede to this request.

[19] Five of the 12 regional presidents are voting members of the FOMC. The other seven attend meetings and have the right to speak, but cannot vote. With the exception of the Federal Reserve Bank of New York, voting membership of the FOMC rotates between the regional Reserve Banks.

[20] Sveriges Riksbank published its first interest rate forecast in its monetary policy report of 15 February 2007.

Mandate for monetary policy

Monetary policy in Norway is conducted by Norges Bank. The bank's activities are governed by the Act relating to Norges Bank and the Monetary System etc (the Norges Bank Act) passed by the Storting on 24 May 1985. Section 2 of the Act covers the bank's relationship to the government authorities, while section 4 deals with decisions on changes in the exchange rate regime. Sections 19 and 20 authorise Norges Bank to decide the terms and interest rates for banks' deposits with and loans from the central bank.

Pursuant to section 2, paragraph 3 and section 4, paragraph 2 of the Norges Bank Act, the Government issued a new Regulation on Monetary Policy on 29 March 2001. This sets out Norges Bank's mandate for the implementation of monetary policy. Section 1 of the regulation reads as follows:

> *Monetary policy shall be aimed at stability in the Norwegian krone's national and international value, contributing to stable expectations concerning exchange rate developments. At the same time, monetary policy shall underpin fiscal policy by contributing to stable developments in output and employment.*
>
> *Norges Bank is responsible for the implementation of monetary policy.*
>
> *Norges Bank's implementation of monetary policy shall, in accordance with the first paragraph, be oriented towards low and stable inflation. The operational target of monetary policy shall be annual consumer price inflation of approximately 2.5 per cent over time.*
>
> *In general, the direct effects on consumer prices resulting from changes in interest rates, taxes, excise duties and extraordinary temporary disturbances shall not be taken into account.*

Norges Bank commented on this mandate in a letter to the Ministry of Finance on 27 March 2001. Among other things, the letter stated:

> *Monetary policy affects the economy with considerable and variable lags. Consequently, the Bank must be forward-looking in its interest-rate setting. The effects of interest rate changes are uncertain and vary over time. Changes in the interest rate will be made gradually so that the Bank may assess the effects of interest rate changes and other new information on economic developments. If price inflation deviates substantially from the target for a period, Norges Bank will set the interest rate with a view to gradually returning consumer price inflation to the target. Norges Bank will seek to avoid unnecessary fluctuations in output and demand.*

The "instruction clause"

Section 2 of the Act relating to Norges Bank and the Monetary System etc (the Norges Bank Act):

Section 2. Relationship to the government authorities

The Bank shall conduct its operations in accordance with the economic policy guidelines drawn up by the government authorities and with the country's international commitments.

Before the Bank makes any decision of special importance, the matter shall be submitted to the ministry.

The King in Council may adopt resolutions regarding the operations of the Bank. Such resolutions may take the form of general rules or instructions in individual cases. The Bank shall be given the opportunity to state its opinion before such resolutions are passed. The Storting shall be notified of resolutions as soon as possible.

The Bank is a separate legal entity and is owned by the state. The Office of the Auditor General monitors the way the minister exercises his authority in accordance with the Act relating to the Office of the Auditor General of 7 May 2004 and the instructions laid down by the Storting.

apply if the government authorities wish to make such a resolution regarding the operations of Norges Bank. The resolution must be adopted by the King in Council, and may not be delegated to others. The Storting must also be notified as soon as possible, and Norges Bank must be given an opportunity to state its opinion before the resolution is passed. Section 2 also states that before Norges Bank makes any decision of special importance, the matter must be submitted to the ministry.

Since 1986, Norges Bank has followed up this notification duty in practice by holding separate meetings to inform the Ministry of Finance of the reasoning behind its interest rate decisions. This gives the ministry an opportunity to express its views. In the Credit Report 2003, the Ministry of Finance stated the following about the notification duty: "The aim of notification is not to place restrictions on the Executive Board, which is to be free to make decisions on interest rates within the monetary policy guidelines drawn up."

Transparency

Norges Bank is open about the basis for its monetary policy decisions. The Bank's understanding of its mandate and the framework for the implementation of monetary policy has been documented and made public. The bank has also reported on its working methods, including its use of economic models. The basis for

Table 2: Documents for monetary policy meetings and their publication

Document	Publication
A monetary policy report presenting the Executive Board's monetary policy assessments and strategy, as well as Norges Bank's interest rate projections, is published three times a year and serves as a point of reference for the decisions made about the key interest rate over the next four months	2 pm on the day of the monetary policy meeting
A press release containing the interest rate decision, and a document outlining the background and general assessment underlying the interest rate decision	2 pm on the day of the monetary policy meeting
The governor or deputy governor's presentation of charts from the monetary policy meeting[1]	2 pm on the day of the monetary policy meeting
The governor or deputy governor's press conference, where he reports in more detail on the Executive Board's interest rate decision and the background to it. Audio and video from the press conference are broadcast live on the Internet and are subsequently available for download. Besides streaming video, Norges Bank also offers mobile TV and podcast options	2.45 pm on the day of the monetary policy meeting
A report from Norges Bank's regional network[2]	2 pm on the day of the monetary policy meeting

[1] Charts which contain confidential information (such as unpublished forecasts from the OECD and IMF, estimates of wage growth for particular groups which are based on confidential information from employee or employer organisations, data from specific companies, and new, provisional internal analyses) are not made public.
[2] The report is not published in its entirety, as it contains confidential information about specific companies.

interest rate decisions is made public in an extensive press release and press conference on the day the interest rate decision is announced. In its monetary policy report, released three times a year, the bank publishes forecasts for key macroeconomic variables for the next three years, including the bank's own forecasts of its key policy rate. Table 2 provides an overview of publications related to the Executive Board's interest rate decisions. These materials are published simultaneously in Norwegian and English on the Internet.

The minutes of the Executive Board's monetary policy meetings are not published, but the first section of the monetary policy report presents the Executive Board's views and monetary policy strategy. The press release following each monetary policy meeting sets out both the main developments in the economy which have had a bearing on the interest rate decision, and the Executive Board's reasoning.

Norges Bank reports on the implementation of monetary policy in its annual report. When commenting on the monetary policy mandate in its letter to the Ministry of Finance of 27 March 2001, the Bank wrote as follows: "If there are significant deviations between actual price inflation and the target, the Bank will provide a thorough assessment in its annual report. Particular emphasis will be placed on any deviations outside the interval +/– 1 percentage point." The annual report is sent to the Ministry of Finance for submission to the King and communication to the Storting. The government's assessment of monetary policy is presented in an annual credit report[21], which includes Norges Bank's operations. The governor of Norges Bank also attends an open hearing of the Storting's finance committee as part of the committee's consideration of the credit report.

Norges Bank Watch is a series of yearly reports on monetary policy in Norway. The reports are prepared by an independent group of experts appointed by the Centre for Monetary Economics at the BI Norwegian School of Management. Norges Bank Watch is funded in part by the Ministry of Finance. Norges Bank Watch's findings are also presented in the government's credit report. Monetary policy is also discussed in the regular reports on the Norwegian economy from the IMF and the OECD.

The level of transparency in Norges Bank's operations is in line with Section 3 of the Norges Bank Act[22], the recommendations from the literature and international practice.

The Executive Board – Norges Bank's monetary policy committee

Norges Bank's monetary policy decisions are taken by its Executive Board, which has seven members: the governor, the deputy governor, and five external members. With the exception of Australia, Norway differs from the other countries in that the majority of members are not full-time employees of the central bank.

The members of the Executive Board are appointed by the government. According to Proposition to the Odelsting No. 81 (2002–2003)[23], when appointing

[21] See, for example, Report to the Storting No. 23 (2006–2007) The Credit Report 2006.

[22] **Section 3. Statements by the Bank**

The Bank shall state its opinion on matters that are put before it by the King or the ministry.

The Bank shall inform the ministry when, in the opinion of the Bank, there is a need for measures to be taken by others than the Bank in the field of monetary, credit or foreign exchange policy.

The Bank shall inform the public about the monetary, credit and foreign exchange situation.

The Bank shall inform the public of the assessments on which monetary policy decisions are based.

[23] Proposition to the Odelsting No. 81 (2002–2003) Bill amending the Norges Bank Act and the Financial Institutions Act and repealing the Currency Control Act and the Money and Credit Control Act.

members, importance is to be given to ensuring that the Executive Board reflects a breadth of background and expertise, with particular emphasis on economics and finance and a good grasp of socio-economic issues. The bill states that the Executive Board should be composed of people with different backgrounds in order to ensure that it is capable of critically reviewing its assessments.

As discussed in Section 3 above, some central banks have representatives of the country's government on their monetary policy committees. The political authorities are not represented in any way on the Executive Board of Norges Bank.

The Executive Board is responsible for all of the Bank's operations, including monetary policy. The Executive Board acts as a monetary policy committee when dealing with matters of monetary policy. At the Executive Board's monetary policy meetings, the governor of Norges Bank presents his proposed decision for consideration by the Board's members. The Executive Board has delegated the external communication of its decisions to the governor.[24] It may be appropriate to classify the Executive Board as a collegial committee.

Communication

Norges Bank is one of few central banks in the OECD area to communicate its expectations of movements in interest rates by publishing its own interest rate forecast. In so doing, the bank reveals its position on which interest rate path strikes the best balance between the different objectives of monetary policy. When the interest rate forecast reflects a monetary policy stance that strikes a reasonable balance, it will help to make monetary policy more predictable (Bergo 2006). Although considerable uncertainty still prevails, it is then easier for economic agents to evaluate the interest rate outlook. This helps to make monetary policy more efficient. The interest rate path is conditional on future economic developments and Norges Bank's understanding of how the economy works. This arrangement is in line with the recommendations from theory, but so far only three central banks publish their own interest rate forecasts. The Reserve Bank of New Zealand has published interest rate forecasts since as far back as 1998, Norges Bank since 2005, and Sveriges Riksbank since February 2007. Staff at the Central Bank of Iceland also prepare an interest rate forecast as a basis for interest rate decisions. A number of other central banks are considering publishing their own interest rate forecasts.[25]

5 Summary

The last 20 years have brought major changes in monetary policy, both in Norway and abroad. Central banks have become independent in their use of policy instruments, and the objective of interest rate setting is to promote price stability. In addition, the organisation of decisions internally in several central banks has been altered. In most central banks, decisions are now taken by a committee. Central banks have also become more transparent.

For reasons of democracy, an independent central bank must be transparent. A central bank must also communicate its expectations of developments in interest rates and the economy in order to make monetary policy more effective. The form this communication takes will probably depend on how decisions are taken internally in the bank. If responsibility rests with the governor alone or with a collegial committee, an interest rate path and the associated reasoning can be communicated. With more individualistic committees, this may be more demanding, but they may publish detailed minutes.

There are differences between the frameworks in different countries. These differences apply particularly to the size, composition and working methods of the monetary policy committee, and the way in which the central bank communicates. These differences are probably a reflection of the fact that banks operate in different economies and have different traditions, which can explain different ways of working. Theoretical and empirical research does not give a clear answer about what is the optimal framework.

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[24] For practical reasons, it may be the deputy governor who presents the proposal to the Executive Board and communicates its decision externally, but this will then be on behalf of the governor.

[25] For example, the governor of the Bank of England said in May 2007 (King 2007): "We shall keep in close touch with our colleagues in central banks that do publish forecasts of policy rates to see what we can learn from their experience. If we feel that there are net benefits from following their example, then we will do so."

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