ARTICLES

Independent review of the operation of monetary policy: final outcomes

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On 7 August 2001, the Treasurer announced the results of the independent review of the operation of monetary policy. This article outlines these outcomes, focusing particularly on the modifications to the Bank's governance arrangements resulting from the Review.

1 Introduction and background to the independent review of the operation of monetary policy

In May last year, the Government announced the Terms of Reference for an independent review of the operation of monetary policy in New Zealand ("the Review") and appointed Professor Lars Svensson of Stockholm University to conduct the Review. At that time, the legislation that established the framework under which New Zealand monetary policy operates, the Reserve Bank of New Zealand Act 1989 ("the Act"), had been in place for a little over 10 years. It therefore seemed timely to the Government to examine whether that framework, and the Reserve Bank's operations within it, were appropriate to the characteristics of the New Zealand economy and consistent with best international practice. The Reserve Bank welcomed the Review as an opportunity to obtain an independent perspective on the monetary policy framework and to take stock of its own performance over the preceding decade.

In announcing the Terms of Reference of the Review, the Treasurer, Hon. Dr Michael Cullen, emphasised that some central features of New Zealand's monetary policy framework were not open for review. Dr Cullen stated that the statutory objective of monetary policy – price stability – was a critical feature of the monetary policy framework and would not be subject to review. The Government also indicated that it would not be considering changes that would lessen the Reserve Bank's autonomy in formulating and implementing monetary policy. Although these key elements of New Zealand's monetary policy framework were ring-fenced from the Review, the Terms of Reference did require the reviewer to examine a wide range of issues related to the operation of monetary policy. In particular, the reviewer was required to:[2]

1. examine the way in which the Reserve Bank interprets and applies its inflation target, with a view to ensuring that this approach is consistent with avoiding undesirable instability in output, interest rates and the exchange rate;
2. assess whether the Reserve Bank has an adequate range of policy instruments and is using its current instruments effectively in altering monetary conditions in the desired direction;
3. consider the range of sources, availability, type and timeliness of data available to the Reserve Bank, and the impact of these variables on the Reserve Bank's forecasting and decision-making;
4. consider whether the Reserve Bank's decision-making process and accountability structures promote the best outcomes possible;
5. examine the co-ordination of monetary policy with other elements of the economic policy framework; and
6. review the Reserve Bank's communication of monetary policy decisions to ensure that these decisions are explained to the public and financial markets in the simplest, clearest and most effective way.

[1] The author would like to thank Geof Mortlock for his contribution to this article. The appendix to this article draws heavily on the work of Dean Minot and Dominick Stephens.

[2] A copy of the Terms of Reference can be found at http://www.rbnz.govt.nz/monpol/review/index.html

Professor Svensson presented the Treasurer with a report containing his conclusions and recommendations on 28 February 2001[3] and the report was made available to the public at that time. On 7 August, after considering Professor Svensson's report, consulting with other political parties and receiving advice from the Treasury, the Bank, and the Bank's non-executive directors,[4] the Treasurer announced the Government's final decisions emerging from the Review. At the time this article was written, the decisions requiring amendments to the Act had not been passed by Parliament. However, in announcing these outcomes the Government noted that they had cross-party support for these amendments.

This article summarises the Government's decisions in relation to the Review, with a particular focus on the outcomes pertaining to the Bank's governance arrangements. There are two key strands to this topic: the monetary policy decision-making framework; and the arrangements for ensuring that monetary policy decision-making is subject to effective accountability and monitoring. These issues attracted the most attention during the course of the Review. These were also the areas where Professor Svensson proposed the most far-reaching changes.

In section 2 of this article, we briefly summarise Professor Svensson's recommendations and the Government's response. In section 3, we discuss in more detail Professor Svensson's recommendations relating to governance and the Government's related final decisions. Section 4 makes some concluding comments. An appendix to this article puts the Bank's governance arrangements into an international context by summarising the key governance features of a number of other central banks.

[3] A copy of this report can be found at http://www.rbnz.govt.nz/monpol/review/index.html

[4] The Treasury, the Reserve Bank, and the Bank's non-executive directors each provided the Treasurer with a written response to Professor Svensson's report. These can be found at www.rbnz.govt.nz/monpol/review/index.html

2 Summary of Review recommendations and outcomes

1 Overall assessment of the operation of monetary policy. Although Professor Svensson noted that there were some episodes where, with the benefit of hindsight, monetary policy moves could have been better timed, his overall assessment of New Zealand's monetary policy over the 1990s was very positive. However, Professor Svensson was critical of the Bank's use of the Monetary Conditions Index between mid-1997 and March 1999. This was a shortcoming that the Bank itself had acknowledged in its submission to the Review. On the current operation of monetary policy, Professor Svensson concluded that "...monetary policy in New Zealand is currently entirely consistent with the best international practice of flexible inflation targeting...".

2 Monetary policy decision-making structure. Professor Svensson believed that vesting monetary policy decision-making power in a single person (the Governor) means that the quality of monetary policy decisions is too dependent on one person. To address this risk, he recommended that monetary policy formulation become the responsibility of a committee consisting of the Governor, the two Deputy Governors and two other senior members of the Bank's staff, to come into effect at the end of the Governor's current term of office.

The Government decided not to adopt this recommendation. The judgement of both the Treasurer and the Bank was that the current framework has significant benefits in terms of providing a clear accountability structure and clarity of communications. Moreover, the framework contains sufficient safeguards to protect against the single decision-maker risk. However, as noted later in this article, the Bank's governance arrangements will be modified to further reduce any risks associated with a single decision-maker structure.

3 Recommendations relating to the Bank's Board of Directors. Professor Svensson argued that the capacity of the Bank's Board of Directors to monitor the performance of the Bank and the Governor would be enhanced if the Board were chaired by a non-executive

director (rather than the Governor, as at present) and if those holding the positions of Governor and Deputy Governor ceased to be members of the Board. He also recommended that the Board publish an annual report outlining its assessment of the performance of the Bank and Governor as a way of increasing the transparency of the Board's role and strengthening the Bank's accountability arrangements.

The Government accepted the recommendation that the Board should be chaired by a non-executive director and that those holding the positions of Deputy Governor should cease to be on the Board. However, it was decided to retain the Governor as a Board member in order to ensure good communication flows between the Bank and the Board. The recommendation for the Board to publish an annual report has been adopted.

4 Other measures intended to strengthen monitoring. Professor Svensson recommended that the Bank should hold an annual conference on the performance of monetary policy and related issues. He also recommended that the Finance and Expenditure Committee (FEC), the Parliamentary select committee responsible for overseeing financial and economic matters, should be provided with sufficient resources to enable it to review the Bank's monetary policy performance more effectively.

The recommendation to hold a regular conference on monetary policy issues was supported, although it was decided that these conferences will probably be held about every two years rather than annually. At the time this article was prepared, the recommendation concerning the FEC was being considered by the Government.

5 The Policy Targets Agreement. Professor Svensson recommended that the Policy Targets Agreement (PTA), the document that sets out the operational objective of monetary policy, should generally only be re-negotiated once every five years, at the start of a Governor's term of office. This recommendation reflected a desire for the PTA to be an enduring document and not subject to frequent review. It was also recommended that the wording of the PTA be altered to make it explicit that monetary policy should have a medium-term focus. And Professor Svensson recommended that the operational target for monetary policy should be specified as a "point target" of 1.5 per cent (the mid-point of the current inflation target), rather than as a 0 to 3 per cent band.

The Treasurer did not support the recommendation that the PTA should generally only be re-negotiated at the start of a Governor's term. He took the view that, at times it can be useful for the PTA to be renegotiated, because it is important that the Government of the day shares ownership of how the price stability objective is operationalised.

In addition the move to a point target was not accepted. Although the adoption of a point target would be making explicit the Bank's current practice of targeting the mid-point of the band so as to minimise inadvertent breaches of the band, the Treasurer considered that a point target could be misinterpreted as a move towards a stricter inflation target. However, the Government did see merit in being explicit about the medium-term focus of monetary policy in the wording of the PTA when it was next negotiated.

6 Data availability. Professor Svensson recommended that Statistics New Zealand produce a monthly series of the Consumers Price Index (currently available at a quarterly frequency) and a monthly measure of industrial production (currently unavailable at any frequency). He considered that monthly data for consumer prices would assist the Bank to monitor and react to inflation developments and that a monthly industrial production index would enable the Bank to track economic activity more effectively.

These recommendations were not adopted. It was considered unlikely that a monthly series of consumer prices or industrial production would provide sufficiently meaningful information for monetary policy purposes to warrant the cost, given that New Zealand data tend to be volatile over short periods. It was therefore decided that, within the limited resources available for data generation, other areas of data development could be more usefully pursued.

7 Technical recommendations for the Bank to pursue. In his report, Professor Svensson provided the Bank with some suggestions of a more technical nature that he believed would enable it to further improve its analysis and communications. The suggestions were that:

i the Bank should more systematically collect and report on medium and long-term inflation expectations as a way of assessing the credibility of the regime;

ii the Bank should develop more informative ways of expressing uncertainty – Professor Svensson was critical of the Bank's move to round its published projections to the nearest half per cent, a move intended to convey the uncertainty that inevitably surrounds projections;

iii the Bank should publish a regular report outlining its activities and findings with respect to its financial system oversight role, such as indicators of financial system stability;

iv there were some areas where the Bank's macroeconomic model, the Forecasting and Policy System (FPS), could be further refined, although Professor Svensson noted that the refinements he proposed would probably not make a material difference to policy outcomes.

The Bank saw merit in all of these suggestions and, in its response to the Review, undertook to follow up on them. In the case of the recommendation to publish more information in relation to the Bank's financial system oversight responsibilities, the Bank noted in its response to Professor Svensson's report that an annual Bulletin article is published covering some of these issues. We indicated that the Bank has recently increased the resources it directs to financial system oversight by forming a new team to monitor and analyse macro-prudential indicators and capital market developments. As a result, it is likely that the Bank will increase its publication of financial system stability issues.[5]

We will be considering how best to implement the other three suggestions as part of our on-going research and policy development agenda.

[5] This issue of the *Bulletin* contains the first of what is intended to be a regular series of articles on macro-prudential indicators and related issues.

3 Governance-related recommendations and outcomes of the Review

The most far-reaching recommendations made by Professor Svensson relate to the Bank's monetary policy decision-making structure and the monitoring role of the Bank's Board. This section discusses the rationale underlying Professor Svensson's recommendations in these areas, and the Bank's and Government's reactions to them.

3.1 Recommendations and outcomes related to monetary policy decision-making

As noted earlier in this article, Professor Svensson recommended that monetary policy decisions should be made by a committee consisting of the Governor, the two Deputy Governors and two other senior members of Reserve Bank staff, rather than by the Governor alone, and for this to come into effect after the end of the Governor's current term of office.

Professor Svensson's view was that vesting responsibility for monetary policy decisions in a single individual carried with it the risk that the quality of monetary policy was too reliant on the judgement and personal qualities of one person. He acknowledged that this had not yet been problematic in New Zealand, but argued that this was "...to a large extent because of the exceptional qualities of the current Governor, Dr Brash". He noted that there was no guarantee that future appointees would be of such a high calibre. Professor Svensson argued that assigning responsibility for monetary policy decisions to a committee would mean that monetary policy would not be so heavily dependent on the qualities of one individual.

Professor Svensson cautioned against the inclusion of people who are not full-time employees of the Reserve Bank on the monetary policy committee. He noted that the inclusion of external members on a decision-making committee might be desirable if it were thought that people within the Bank were too narrow in their approach to monetary policy or not sufficiently 'in-touch' with the economy. However, he concluded that the openness of the Bank's staff, and the Bank's practice of regularly consulting with a wide range of participants in the economy, obviated the need for external members to be included on a decision-making committee.

Moreover, Professor Svensson argued that there were a number of practical factors that would make having external members on a decision-making committee problematic in New Zealand. He argued that, in a country as small as New Zealand, the supply of suitable candidates who would not have conflicts of interests was too small to make having external members on a monetary policy committee viable over time. Also, because external members were not dealing with monetary policy issues on a day-to-day basis, he thought it likely that they would require a significant amount of assistance from Bank staff in order to participate effectively in policy-making, undermining their independence. Professor Svensson concluded that a committee of full-time Bank employees would avoid these disadvantages.

It was the Government's judgement – a judgement shared by the Bank and its non-executive directors – that there was little to be gained, and potentially something to be lost in terms of clarity of accountability and communications, by substantially altering a governance framework that has served this country well since its inception in 1989.

In particular, it was considered that, although there are some risks inherent in a single decision-maker model, the risks are adequately countered by a number of safeguards. We outline these below.

- The process prescribed in the Act for appointing the Governor is one that lends itself to careful selection of a suitable person. Although it is the Treasurer who appoints the Governor, no appointment can be made without the recommendation of the Board of Directors. Therefore, an appointment can only be made where both parties agree on the candidate. This reduces the risk of an unsuitable candidate being appointed to the position of Governor.
- Although the Act gives the Governor independence to formulate and implement monetary policy, the Governor's discretion is constrained by the need to ensure that the policy adopted is consistent with the agreed policy target. The Governor does not have the discretion to vary the target without the agreement of the Treasurer.
- The Board of Directors is charged with monitoring the performance of the Governor on behalf of the Treasurer and informing the Treasurer if it considers that the Governor's performance is inadequate. As a result of the Review, some changes will be introduced to strengthen the Board's monitoring role further. We discuss these changes shortly.
- The Act requires the Bank to be transparent with respect to its monetary policy decisions. Most important in this respect is the requirement to publish *Monetary Policy Statement*s. This transparency not only assists the Board in its monitoring duties but also makes it possible for the news media, financial analysts, and the general public to monitor the Governor's performance closely. This again strengthens the incentives for the Governor to formulate policy in accordance with the agreed policy target and in ways that can be justified before a wide and critical audience.

When announcing the Government's decision to retain a single decision-maker for monetary policy, the Treasurer suggested that the monetary policy decision-making process might be further enhanced by expanding the range of views that the Governor is exposed to in the lead-up to monetary policy decisions. Dr Cullen's suggestion was consistent with moves that the Bank had been making to broaden and give more profile to its external consultation processes. Some measures that we had already implemented were:

- *The extension of the business visits programme*. Every quarter, as part of the monetary policy process, Reserve Bank staff visit around 50 organisations that are selected to represent a broad cross-section of industries and regions. These visits have been a regular part of the monetary policy process for a number of years and are one important source of up-to-date information on economic conditions. More recently, we have further increased the profile that we give to these visits by involving staff at a more senior level, including the Governor and Deputy Governors in some cases. From the March 2001 *Monetary Policy Statement,* we have published the list of companies and organisations consulted in order to increase the visibility of the consultation process.

- *The initiation of a peer review process.* Over the past year, we have initiated a programme where experts in monetary policy from overseas central banks are invited to participate in the monetary policy process and to provide an evaluation of the process and suggestions for improvements. We see peer review as a way of ensuring that our internal processes are subject to frequent evaluation by suitably experienced experts and as an opportunity to draw on international best practice.

Since the Review, we have taken a further step towards diversifying the processes by which we seek external input in the lead-up to monetary policy decisions, by establishing positions for one or two part-time external advisers.[6] These advisers will be chosen for their broad knowledge of the New Zealand economy and will likely be appointed for one or two year terms. They will be expected to participate in the Bank's internal discussions in the monetary policy process and to contribute their perspectives to those discussions. They will also be expected to provide the Governor with advice in relation to OCR decisions. This advice should provide a useful complement to the OCR recommendations currently prepared by senior Bank staff.[7] As with senior Bank staff who already provide policy recommendations to the Governor, the new advisers are purely advisory in nature, with decision-making power remaining with the Governor.

The single decision-maker model, although used by several other central banks as well as New Zealand, is by no means the only monetary policy decision-making model in use within central banks. The appendix to this article puts New Zealand's monetary policy framework into international context by summarising the monetary policy arrangements of the Reserve Bank of New Zealand and seven other central banks.

6 On 6 September 2001, the Reserve Bank announced that Dr Brent Layton and Ms Kerrin Vautier had been appointed to these positions.

7 For a discussion of the role of the OCR advisory group in the process leading up to monetary policy decisions see "The monetary policy decision-making process", one of the supporting documents to the Bank's submission to the Review. This can be found at www.rbnz.govt.nz/monpol/review/index.html

3.2 Recommendations and outcomes aimed at strengthening the monitoring role of the Board

Professor Svensson made some recommendations relating to the Board that he believed would further strengthen its role. In particular, he recommended that the Board be chaired by a non-executive director, rather than the Governor as at present, and that the Board comprise only non-executive directors (ie that the Governor and Deputy Governors cease to be directors of the Bank). Professor Svensson also recommended that the Board issue a public report annually, setting out its assessment of the Bank's and Governor's performance. He believed that making the monitoring activities of the Board more visible would increase public confidence that the operation of monetary policy is subject to careful monitoring.

Professor Svensson was concerned about the conflicts of interest that could potentially arise from having the Governor and Deputy Governors as Board members, given that the Board's primary role is to monitor the performance of the Governor and the Bank. The Board has to date avoided these conflicts by forming a committee comprising the non-executive directors and delegating the Board's monitoring role to this committee. Professor Svensson's view was that it would be preferable to remove the Governor and the Deputy Governors from the Board completely.

Some, but not all, of Professor Svensson's recommendations with respect to the Board were adopted by the Government. The Government agreed that the Deputy Governors should cease to be on the Board, but decided to retain the Governor on the Board, principally for the sake of facilitating information flow between the Bank's executive and the Board. However, it was decided to remove the Governor as chair of the Board, and to provide for a non-executive chair, appointed by the non-executive directors. It is intended that the Reserve Bank of New Zealand Act will be amended in 2002 to give effect to these changes, with a view to the new arrangements coming into force on or about 1 July 2002.

The Bank and Government accepted Professor Svensson's recommendation that the Board publish an annual report containing its assessment of the conduct of monetary policy.

Reflecting this decision, the Bank's annual report for the year to 30 June 2001 contains a report from the non-executive directors. The scope of this report is broader than that proposed by Professor Svensson in that it covers all areas of the Bank's activities. In its first report, the Board details how it has monitored the performance of the Governor and the Bank over the preceding 12 months. The report then evaluates the performance of the Bank and Governor over the past year against the goals set out in the annual plan for that year. In cases where a planned outcome was not achieved, the Board sets out its assessment of the reasons for these deviations and its view as to whether these deviations were acceptable given the circumstances.

4 Concluding comments

The Review has been a very useful process from the Bank's perspective. It provided a formal opportunity to obtain an independent assessment of New Zealand's monetary policy framework and the Bank's operation within it. The Bank is pleased that the single decision-maker structure for monetary policy was retained because we believe that this arrangement provides significant benefits in terms of clarity of accountability and communications. And we believe that the planned modifications to the Bank's governance arrangements resulting from the Review, in particular the changes relating to the Board of Directors, should further strengthen the accountability arrangements.

Appendix: How do the Reserve Bank of New Zealand's governance arrangements compare to those of other central banks?

This appendix summarises the key features of the monetary policy framework of the Reserve Bank of New Zealand and compares it with the frameworks in seven other central banks.

As noted in the article, the issue of monetary policy decision-making structures was one that received a lot of focus during the Review. In the process of preparing its submission to the Review, the Bank had regard to the decision-making arrangements at some other central banks. In the remainder of this appendix, we provide a brief outline of the decision-making arrangements in these central banks.

At a general level, monetary policy decision-making models can be divided into three broad categories, although we recognise that within each category the specific organisational structure can vary significantly:

i *Monetary policy decisions made by a single decision-maker (usually the Governor of the central bank).* As noted above, the New Zealand model involves monetary policy decisions being vested in a single decision-maker – the Governor of the Reserve Bank. This model is also formally adopted in some other central banks, for example the Bank of Canada (although in Canada a committee is closely involved in making decisions). As well as being solely responsible for the formulation of monetary policy, it is conventional for the Governor to have formal responsibility also for all other areas of the central bank's operations.

ii *Monetary policy decisions made by a committee that is responsible only for monetary policy.* Another model for monetary policy decision-making is for the power to determine policy to be vested in a monetary policy committee, rather than in just one person. Such a committee is usually accountable to a board that is responsible for monitoring the central bank's performance. This decision-making structure is in place at the Bank of England.

iii *Monetary policy decisions made by a board that is also responsible for making decisions in respect of all of the central bank's functions.* The third basic model for allocating decision-making power is for the power to be vested in the governance board of a central bank, where the board has decision-making responsibility for all aspects of the central bank's operations. The Reserve Bank of Australia and the Bank of Japan are examples of central banks that operate under this model.

One major source of variation between central banks where committees make monetary policy decisions (categories ii and iii above) is in respect of committee composition. In some cases, for example in the case of the ECB and the Riksbank, all members of the monetary policy committee are 'internal' to the central bank—that is, they are full-time monetary policy specialists. Some other decision-making committees contain both internal members and 'external' members who, prior to their appointment to the committee, and sometimes during their tenure, held or hold professional positions outside the central bank. Committees with external membership vary further according to whether the external members have backgrounds closely related to monetary policy or whether they are appointed on the basis of a broader knowledge of the economy.

Each of the decision-making structures outlined above is likely to have different strengths and weaknesses. For example, committee decision-making structures will mean that policy is less reliant on the judgements and qualities of a single individual and will more naturally lend themselves to ensuring that a range of views are taken into account in the policy-making process. However, relative to a single decision-maker, these arrangements have the drawbacks of more complex accountability structures and potentially make the task of communicating monetary policy decisions more complicated.

The fact that different decision-making models exist around the world, and that central banks operating under each of these structures succeed in meeting their monetary policy targets, suggest that there is no single 'right' or 'wrong' monetary policy decision-making model.

The following tables summarise the key features of the governance arrangements applicable to a number of central banks.

Table 1 sets out the objectives of each central bank and the degree of independence from the government that the central bank has in pursuing those objectives.

Table 2 outlines the role and composition of the Board of Directors of each central bank. The role of the Board can vary quite substantially from country to country. Some central bank boards are responsible for the management of all areas of the central bank's activities, including monetary policy formulation, while others, like the Reserve Bank of New Zealand's Board of Directors, do not have management responsibilities, but are charged with monitoring the central bank's performance.

Table 3 summarises the composition of the body responsible for formulating monetary policy at each central bank.

Table 1
Central Bank independence and objectives

	Independence	Legislated objectives	Legislation	Operational objective	Date adopted
RBNZ	Independent to pursue an inflation target agreed upon by the Governor and the Treasurer.	Formulation and implementation of monetary policy aimed at achieving and maintaining stability in the general level of prices.	RBNZ Act 1989.	Inflation target of 0 to 2% adopted in 1988; 0 to 3% in 1996.	1988
Reserve Bank of Australia (RBA)	Independent to determine monetary policy, but currently an inflation target has been agreed to with the Treasurer.	To ensure that monetary and banking policy . . . will best contribute to: (a) the stability of the currency of Australia; (b) the maintenance of full employment in Australia; (c) the economic prosperity and welfare of the people of Australia.	Reserve Bank Act 1959.	Pursues average inflation of 2 to 3% over the business cycle.	1993
US Federal Reserve	Has independence to conduct monetary policy in pursuit of legislated objectives for policy.	Maximum employment, stable growth, and moderate long-term interest rates.	Act of November 16, 1977.	The Federal Reserve has no numerical inflation target, but holds the view that price stability is necessary for achieving its legislated goals.	
Bank of Canada	Has operational control over monetary policy to pursue a goal agreed to by the Bank and the Government.	To promote the economic and financial wellbeing of Canada.	Bank of Canada Act 1934.	Initial inflation target adopted in 1991. Price stability is currently defined as inflation of 2% +/- 1%.	1991
Bank of England	Has operational independence to pursue price stability. The Chancellor of the Exchequer informs the Bank every year of what price stability is taken to mean, and of the government's economic policy.	To maintain price stability, and subject to that, to support the economic policy of Her Majesty's Government, including its objectives for growth and employment.	Bank of England Act 1998.	Initial inflation target of 1 to 4% adopted in 1993. Price stability is currently defined as inflation of 2.5% +/- 1% reporting range.	1993
Bank of Japan	Has autonomy regarding currency and monetary control.	Currency and monetary control shall be aimed at, through the pursuit of price stability, contributing to the sound development of the national economy.	Bank of Japan Law 1997.	To maintain price stability. There is no explicit inflation target.	1998
Sveriges Riksbank (Sweden)	Has operational independence to pursue price stability.	To maintain price stability.	1999 amendment to Sveriges Riksbank Act.	Maintain price stability – a target of 2% inflation +/- 1%.	1993
European Central Bank (ECB)	Completely independent.	To maintain price stability.	Protocol no 18 of the Statute of the European System of Central Banks and the European Central Bank.	The ECB has an inflation target of less than 2%. Their strategy involves having a reference value for the growth of the M3 monetary aggregate of 4.5%. They also stress that they are interested in inflation, and thus the growth of M3, over the medium term.	1999

Table 2

Board of central banks

		RBNZ (after Review amendments)	RBA	US Federal Reserve	Bank of Canada	Bank of England	Bank of Japan	Sveriges Riksbank	ECB
1	Composition of the governing board	Board of Directors: consists of Governor, up to 7 non-executive directors.	Reserve Bank Board: consists of Governor, Deputy Governor, Secretary of Treasury, 6 other; Note: At least 5 of the 6 "other" board members must be from outside the RBA or the Aust . public service.	Board of Governors **(BoG):** consists of Chair, Vice Chair, 5 others (all full-time members).	Board of Directors **(BoD):** consists of Governor, Senior Deputy Governor, and 12 regional representatives. The Deputy Minister of Finance sits on the Board as a non-voting member.	Court of Directors **(CoD):** consists of Governor, 2 Deputy Governors, 16 non-exec directors.	Policy Board: consists Governor, 2 Deputy Governors, 6 full-time deliberative members.	Governing Council: consists of 11 members. Appointed by parliament, usually from among its members, and tends to reflect the political make-up of parliament.	Governing Council: consists of the Executive Board, and national central bank governors. The Executive Board comprises the President, Vice-President of the ECB and 4 others.
2	Appointed by	The Treasurer.	The Governor General, on recommendation of the government of the day.	The President, confirmed by the Senate.	BoD appointed by Minister of Finance; Governors appointed by BoD on the recommendation of the government of the day.	The Crown, on the recommendation of the government of the day.	Cabinet with the consent of both Houses of the Diet.	Parliament.	Executive Board appointed by the Council of the European Union; central bank governors appointed by own government.
3	Length of term	5yrs.	Governors – 7yrs; others – 5yrs.	14yrs; the chair serves for 4yrs.	Governors – 7yrs; Other directors – 3yrs.	Governors – 5yrs; others – 3yrs.	5 yrs.	Unclear from legislation.	Executive Board -8yrs; CB governors – at least 5yrs.
4	Duties of board	To monitor the Governor's and the Bank's performance. To advise the Treasurer on the Governor's and Bank's performance.	The Board is responsible for all Bank policies except payment systems.	Oversees operations of entire Federal Reserve System.	BoD appoints and oversees the Governing Council, and ensures competent management of the Bank.	To ensure that quality data is used by the Monetary Policy Committee.	To decide on all matters of monetary policy and Bank policy, as well as overseeing the execution of duties by executives.	Appoints and oversees the Executive Board, and oversees the running of the Bank. Reports to Parliament on performance of monetary policy.	Formulates monetary policy.
5	Does the governing board formulate monetary policy?	✗	✓	✓[8]	✗	✗	✓	✗	✓

[8] The Board of Governors constitutes a majority on the Federal Open Market Committee, which is the Federal Reserve's monetary- policy-making body.

Table 3
Responsibility for monetary policy formulation

		RBNZ (after Review amendments)	RBA	US Federal Reserve	Bank of Canada	Bank of England	Bank of Japan	Sveriges Riksbank	ECB
1	Monetary policy decision making body	Governor.	Reserve Bank Board. (Decision by vote)	Federal Open Market Committee: 7 members of BoG, 5 Presidents of Regional Reserve Banks. (Decision by vote)	The Governor by statute. However, in practice the Governor has agreed to be bound by the decision of the Governing council: Governor, Senior Deputy Governor, 4 Deputy Governors.	Monetary Policy Committee: Governor, 2 Deputy Governors, 2 staff, 4 non-exec. (Decision by vote)	Policy Board. (Decision by vote)	Executive board: Governor, Deputy Governor, 5 others. (Decision by vote)	Governing Council.
2	Length of term	5yrs.	Governors - 7yrs; others - 5yrs.	BoG - 14yrs; Regional Fed Presidents – rotate every year[9]	Governor and Senior Deputy Governor – 7yrs. 4 other Deputy Governors – no fixed term.	Governors – 5yrs.	Whole board - 5 yrs	6 yrs.	Central bank governors - min. of 5 yrs; Executive Board - 8 yrs.
3	Appointed by	Treasurer on the recommendation of Board of Directors.	Governor General on recommendation of the government of the day.	US President appoints BoG, regional Fed Boards appoint Regional Presidents.	Governor and Senior Deputy Governor – Board of Directors with the approval of Government. Deputy Governors – Board of Directors.	Governors appointed by Crown on the recommendation of the Government of the day; 2 staff appointed by Governor; 4 non-exec appointed by Chancellor of the Exchequer.	Cabinet with the consent of both Houses of the Diet.	Governing Council.	Central bank governors appointed by own govt; Executive Board appointed by Council of European Union.
4	Do any members of the policy making body have paid fulltime positions outside of the Bank?	✗	✓	✗	✗	✓ However, current MPC members have given up all outside employment other than academic appointments.	✗	✗	✗
5.	Government representative on body?	✗	Secretary of Treasury.	✗	✗	Treasury Representative. (non-voting)	The Minister of Finance and the minister for economic and fiscal policy (non-voting).	✗	✗
6.	Advisory structures	Monetary Policy Committee made up of governors and senior bank staff. OCR advisory group, consisting of the Governor, 2 Deputy Governors and 6 other members of Bank staff and 1 or 2 external advisers.	Bank staff.	Research staffs of Board of Governors and Federal Reserve Banks.	Regional advice from Board of Directors; data and analysis from bank staff.	Bank staff; regional representatives (send regional info); Treasury representative.	Bank staff.	Bank staff.	National central banks provide regional info; ECB staff.

[9] Except the President of the Federal Reserve Bank of New York who is a permanent member