Risk management in the Reserve Bank: a 2003 perspective

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The December 1999 issue of the *Bulletin* contained an article describing the then newly formed Risk Assessment and Assurance Department in the Reserve Bank and explaining how the Bank managed its risks. This article provides a 2003 perspective on these issues.

1 Opening comment

No discussion of risk management appears complete without a seemingly obligatory definition of risk management. In the case of the Reserve Bank, with its view of the importance of an integrated approach to this subject, the definition is best considered in two parts: "risk" and "management".

Risk is defined in the traditional sense in that it refers to both the probability of an event and the consequence or impact of an event should it occur. The implicit assumption is that the consequence or impact will be negative relative to the objective of the activity being referred to, but this need not be so. However, it is on the basis of the implicit assumption of negative consequence that we operate.

The term 'management' needs no definition here other than to say that it is used in its usual context, meaning the web of authorities and processes used to guide an activity toward the objective being sought.

So, in respect of the Bank, risk management is about better identification, monitoring and management of events that could frustrate intended outcomes. It should make success more certain by improving the management of the downside of activities undertaken by the Bank.

2 General philosophy on risk management

Consistent with the general philosophy of it being an integral part of the general management task, risk management is not seen as a separate task or activity within the Bank. Risk management is a process fully integrated with the overall management task. This task is made up of:

- An open policy development and implementation process with active participation by a broad range of personnel with a variety of responsibilities and perspectives. This occurs primarily through participation in the various internal committees described in the Governance section of the 2002/03 *Annual Report*. (See box 1 for a summary.)
- Regular reporting of progress toward planned outputs and outcomes across functional areas within the Bank, submitted to the Governor and Board. This is summarised each month in a "Balanced Scorecard" report to the Governor and Board, identifying performance against objectives across the Bank's functions. Performance reporting culminates in the Bank's *Annual Report*, submitted each year to the Minister of Finance, Parliament and the wider public.
- Regular management affirmations that policies and procedures set up to help ensure that expected outcomes are achieved are being followed. These are in the nature of positive assurances given by the head of each department to the Governor each quarter. In addition, the Governor and Deputy Governor are required to attest annually, in the Bank's Annual Report, to the veracity of the Bank's financial statements and internal control systems.
- Reporting of incidents or issues that have or could have been a significant or material problem. This process - known as Proactive Problem Management (PPM) - includes "near misses" and is designed to gain the most learning out of any incident, with a view to reducing a recurrence in the future. The PPM process is Bank-wide and depends for its success on being used as a learning device, and not as a source of disciplinary action.

Box 1
Governance structure

The Bank's governance structure comprises three main elements: the Board of directors; the Governor; and the internal management structure.

Board of Directors

The Reserve Bank has a Board of Directors. The Board of Directors must comprise not less than five and not more than seven non-executive members appointed by the Minister of Finance, and the Governor. As a result of a recent amendment to the Reserve Bank of New Zealand Act, the Board is chaired by a non-executive director, appointed by the non-executive members of the Board.

The role of the Board of Directors is different from that of the Board of a listed company. The Reserve Bank's Board has no involvement in directing Reserve Bank policy, monetary or otherwise, or in directing the use of the Bank's resources. These responsibilities are vested solely in the office of Governor. Rather, the Board's primary function is to monitor the performance of the Governor and the Bank, on behalf of the Minister of Finance. The Board does this by holding monthly meetings at which it receives extensive briefings on the Bank's activities, decisions and policies. At these meetings, the Board also provides advice to the Governor, typically on the state of the New Zealand economy and internal governance issues.

The Board also has an Audit Committee. All three members are non-executive directors. The Board Audit Committee monitors the internal audit function, receives reports from the Bank's external auditors and reviews the Bank's annual financial statements.

The Board also has responsibilities in the appointment of the Governor and Deputy Governor. The Governor is appointed (or re-appointed) by the Minister of Finance only on the Board's recommendation. The Deputy Governor is appointed by the Board on the recommendation of the Governor.

The Governor

The Reserve Bank of New Zealand Act vests authority for managing the Bank in the Governor and makes the Governor accountable for the Bank's actions. In monetary policy, and in most other matters, decision-making authority resides with the Governor alone. The Governor is appointed for a five year term. The Act sets specific criteria under which the Minister of Finance can dismiss the Governor.

Management structure

The Reserve Bank's senior management team is made up of the Governor, a Deputy Governor (designated as the Deputy Chief Executive) and the heads of the Bank's various departments. The departments are the main functional units in the Bank, with each department being responsible for administering one or more of the Bank's functions.

The Governor receives advice from a number of internal committees within the Reserve Bank. These are:

- the Governor's Committee, which meets weekly to consider the management and day-to-day operation of the Bank;
- the Monetary Policy Committee, which meets weekly to advise the Governor on economic and financial developments;
- the Official Cash Rate Advisory Group, which advises the Governor on monetary policy decisions, typically eight times a year;
- the Financial System Oversight Committee, which meets fortnightly to consider policy and other issues relating to the financial system;
- the Risk Management Committee, which meets monthly to consider risk management frameworks for the Bank's activities;
- the Reserves Oversight Committee, which meets quarterly to consider the Bank's foreign reserves activity; and
- the Communications Committee, which meets weekly to consider communications issues and the Bank's reputational interests.

- Programmed internal audit activity to monitor the observance of the whole management process. The internal audit activity is in turn monitored by the Audit Committee of the Board, which also receives reports from the external auditors of the Bank and reviews the Bank's annual financial statements.

3 Activities and risks of the Bank

The Bank's risks arise from its activities. The starting point in assessing risks is therefore to identify the Bank's main activities and to understand how these can generate risks. The activities of the Bank are focussed around:

- Monetary policy. This activity involves economic forecasting, decisions on Official Cash Rate (OCR) settings, and other elements of monetary policy implementation, including domestic market activity.
- Financial system stability. This involves bank registration and supervision, acting as lender of last resort to the financial system, responding to bank failure and distress situations, providing advice to the government on financial sector issues and payments system oversight.
- The issuance of currency, involving both supply and, to a limited extent, distribution arrangements.
- Foreign reserves management and intervention capacity. This includes asset and liability management and contains both active and passive management elements. This activity is designed to enable the Bank to intervene in the foreign exchange market where the market has become dysfunctional or in situations of disorderly market conditions.
- The provision of some elements of financial system infrastructure, particularly a real time gross settlement system, a delivery-versus-payment securities settlement system for debt and equity, and a debt registry service (which is expected to be discontinued from December 2004).
- Internal support arrangements necessary for the above; e.g. accounting, financial markets settlements, knowledge management and human resources.

The Bank's functions, and the activities undertaken within them, inevitably entail risks. The main risks are highlighted in box 2.

The Bank has documented a list of the risks it faces, but the list does not provide the primary basis on which risks are managed. Rather, its purpose is to provide a common language to assist discussion and understanding of the management task. And while each type of risk has a fairly specific set of management options associated with it, the extent to which those options are applied depends primarily on the characteristics of the activity.

In summary, the basis of the risk management approach adopted by the Bank follows a hierarchy, activity by activity, based on the following:

- What are the characteristics of this activity?
- What risks does it expose the Bank to?
- What factors give rise to the risks?
- What do we need to do to adequately identify, measure, monitor and manage the risks of this activity?

The Bank addresses each of these matters across all its functions and activities, both within the departments or units with responsibility for particular functions, and within the inter-departmental committees in the Bank that oversee each functional area. Risk issues are assessed in any new policy proposals or activities, and are monitored as part of the ongoing functional reports provided to senior management and the Board.

For example, in the area of monetary policy, the risk implications of policy options are thoroughly assessed in the process of pulling together each *Monetary Policy Statement* and interim OCR decision. Similarly, the risks associated with the policy formulation and implementation process, such as the construction and use of the Bank's forecasting model, are reviewed periodically. In the area of financial system oversight, the risks associated with particular policies are carefully reviewed in the policy formulation process and in consultations with external parties.

The Bank's Risk Assessment and Assurance provides an additional layer of scrutiny, by conducting regular audits across the Bank's functions. In addition, the Bank's external

Box 2 – Nature of the Bank's risks

The Reserve Bank faces a wide range of risks, some general and others unique to central banks. Of these, the most fundamental risk is making errors in relation to monetary policy or financial sector policy, thereby causing damage to the economy or financial system, and to the Bank's reputation and credibility. Policy errors can arise in a number of ways, including through lack of information or incorrect information, uncertainty in our understanding of the way the economy and financial system work, variable and uncertain lags in the impact of policy decisions, unanticipated structural changes in the economy and financial system, and misjudgements in the policy formulation and implementation process. Some of these risks are controllable; others less so.

Risks can also arise in the implementation of our crisis response powers, such as in responding to financial system distress or intervening in the foreign exchange market to counter disorderly market conditions. Again, these risks arise from a range of factors, including the inherent uncertainty that abounds in any financial crisis, the lack of timely and reliable information, and the possibility that the actions we take (or decide not to take) may not necessarily lead to the intended outcomes because of the way other parties react or other factors beyond our control. Again, some of these risks are manageable, but others lie largely outside of the Bank's sphere of influence.

Other more specific risks include:

- credit and interest rate risks associated with our day-to-day liquidity management in domestic financial markets;
- risks associated with holding foreign currency reserves, including credit, interest rate and exchange rate risks;
- risks associated with processing and storing currency, including risks of theft and robbery;
- operational risks in the operation of the real time gross settlement system and security settlement service; and
- risks associated with being a small organisation, such as the loss of key staff and associated corporate memory.

audit arrangements and the occasional use of other third party reviews provide further mechanisms for the management of risks.

4 Managing risks on new initiatives

The overview above outlines the processes for managing risks on a "business as usual" basis. For new initiatives, the Bank has a Project Management Methodology (PMM). The PMM process is designed to be used to assist in the management of new initiatives of all types, including policy development initiatives, as well as initiatives of a more technical nature. The level of specificity in the process is tailored to suit the characteristics of the initiative and its primary objective is to manage the transition to a new "business as usual" status, including any new embedded processes.

We, like many others, have found the separation of activities into business as usual and new initiatives necessary because both provide challenges, but the challenges are subtly different. For business as usual, the challenge typically is one of familiarity with the routine, which can lead to complacency and a lack of appreciation of the purposes of processes designed to manage low frequency events. For new initiatives, the challenge is inexperience and ignorance of low frequency events peculiar to the new situation and for which processes need to be considered.

The project management methodology includes a three-level decision structure based on expected cost, a monitoring regime and a project closure review. The key overview mechanism is the project steering committee, the members of which are typically a mix of management of the area with which the project is associated, as well as other members included because of their knowledge or past experience with the subject. The aim of the steering committee is to improve the quality of the project through inclusion of a higher level of relevant experience than might currently be available in the project team. Project steering committees are typically multi-disciplinary and are not constrained by organisational boundaries. In that sense they represent another manifestation of the general management approach adopted by the Bank of making extensive use of cross-departmental committees to help ensure all relevant knowledge and experience in the Bank is available.

5 Other processes for managing risks

The processes used to manage the Bank's risks mainly involve internal management structures, although the internal views on risk issues are informed by much more than our own collective experience. To further inform our views, and as a means of testing our assumptions and processes, the Bank employs various techniques to subject our internal processes to external scrutiny.

For example, in the case of monetary policy, we have established a practice of inviting academic economists and other central bankers to participate in the Bank's monetary policy decision-making process as a means of getting their views on what we do and how they think the process could be improved. In addition, two external advisers to the Governor fully participate in the monetary policy decision process each quarter, attending all meetings in the key week of the quarter and making OCR recommendations to the Governor.

The Bank also seeks to manage monetary policy-related risks in other ways. For example:

- we review and revise the Bank's economic model to ensure that it remains a reliable mechanism for forecasting the New Zealand economy;
- we periodically assess forecasting inaccuracies and draw comparisons with other forecasters, with a view to improving our forecasting ability;
- we develop and have regard to alternative economic models, so as to reduce reliance on the Bank's main model;
- we have regard to a broad range of data, rather than rely on narrow data series;
- we hold regular dialogue with businesses and industry sector representatives, among others, in order to maintain a diversity of information on developments in the New Zealand economy;
- we subject much of our research and analysis to peer review, both internal and external, and generally maintain an environment conducive to contestable policy advice; and
- we place emphasis on recruiting and maintaining high quality staff and infusing the Bank's staff with secondees from other relevant organisations or visiting academics where possible.

In the area of financial system oversight, we use a number of methods to manage the Bank's risks. As with monetary policy, we also seek to ensure that policy proposals are subject to careful internal and external review processes. The obligation to consult interested parties, such as registered banks, on new banking supervision proposals also serves to reduce the risks of policy errors. We also monitor and assess the effectiveness of the policy regime by reference to relevant international standards and codes, and we compare our framework with those of other central banks and supervisory authorities. We also periodically assess the effectiveness of the Bank's banking supervision framework, as we did recently by surveying the boards of directors and auditors of banks to assess the effectiveness of the corporate governance and audit aspects of the supervisory arrangements.

The imminent Financial Sector Assessment Programme (FSAP) to be conducted by the IMF later this year will also be an important device to identify and better manage risks associated with financial sector policy and banking supervision, by getting external views on our approach to achieving financial system stability and how we might be able to improve the quality of the outcome in this area.

Senior management also periodically engage external parties to review aspects of the Bank's risk management systems.

For example, in order to gain further assurance about our general risk management processes, we commissioned a Bank-wide risk review in late 2002. This was conducted by a person familiar with the various roles undertaken by a central bank who also had non-executive director experience. The perspective taken was that of an informed non-executive director of the Bank. The reviewer made a considerable number of comments and recommendations, but concluded that the Bank set a high standard in its risk management and that risk management was "….about trying to identify ways of more easily and certainly achieving objectives which so far as I can see are already being delivered in ample measure." The report has been considered by the Board and all recommendations have been considered and actioned where appropriate.

In the more technology-focussed areas of the Bank, senior management has commissioned quality assurance and implementation reviews by outside consulting firms for some new initiatives. In addition to assisting in maintaining discipline in project management processes, the Bank has found this independent third-party review an important contributor to the acceptance of the technology projects. This has been especially important in areas where the Bank has been providing financial market infrastructure (e.g. payment and settlement systems) and has been out-sourcing significant elements of the service.

The above processes are in addition to the more routine aspects of seeking Board member advice on annual plans, the existence of a Board Audit Committee and an external audit conducted by the Controller and Auditor General, but contracted out to a private sector accounting firm (currently PricewaterhouseCoopers).

6 Conclusion

Risk management in the Bank is undertaken activity by activity because direct line managers are the most knowledgeable about their own activities. They are responsible for the success or failure of their own activities, and ownership of all outcomes – good or bad – is likely to produce the most balanced management approach. A balanced management approach requires a good understanding of the factors that will ensure success as well as a good understanding of the factors that could frustrate that success. Achieving a good understanding means using a wide range of processes and devices to seek informed views, But these processes and devices do not alter the responsibility for the final outcome. That rests directly with the manager concerned. It is our view that quality management must include quality risk management.