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Improving the Management of a Central Bank--A Case Study

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Abstract

This paper examines how major efficiency gains and improved effectiveness were simultaneously achieved at the Reserve Bank of New Zealand over a five-year period. It identifies the business management concepts that were used to transform the organization, outlines how they were applied, and evaluates the benefits obtained. The paper concludes that substantial real efficiency gains were achieved, while effectiveness was maintained or enhanced. Looking more widely, the business management concepts used to achieve these benefits could be applied to other central banks.

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G20, M10, M12, M14, M19, M41,
N20, N27, O20, O29,

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2/ Many people have helped with the production of this paper. The author particularly thanks Mr. Brock Short, Ms. Claudia Echeverria, Mr. Andrew Hook and Mr. Stephen Dawe (Corporate Planner, Reserve Bank of New Zealand) for their ideas and assistance.

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Summary

This paper examines the fundamental transformation of the management of the Reserve Bank of New Zealand (RBNZ) from 1988 to 1993. As part of New Zealand's economic and public sector reform, its central bank moved from vague and multiple objectives, subservience to the Government of the day, and limited external scrutiny to a single explicit objective, operating autonomy, and tight accountability. Internally, new management concepts were systematically applied. Startling efficiency gains were achieved, without significant changes in functions: for example, staff numbers and real operating costs fell 43 percent. At the same time, effectiveness was maintained or improved. Culturally, the RBNZ made an often painful shift toward a "business management" approach.

The first section of the paper comments briefly on the increasing accountability pressures facing central banks and the need for a response. It notes that little information is currently available on the operating costs of central banks.

The second section describes the RBNZ's organizational transformation and analyses the key features of the reform. It outlines the historical starting point, the external environment of radical reform, how business management concepts were applied over a five-year period, the efficiency gains achieved, and evidence of enhanced effectiveness. The section also considers the role special factors may have played. It notes that the mechanisms employed by the RBNZ were neither new nor unusual and that they would be available to other central banks. The reductions in operating costs represented real efficiency gains, and, apart from motivation, no major special factors operated.

A third section attempts to analyze the organizational transformation process at the RBNZ. It identifies and describes the business concepts applied at the RBNZ under three headings: how the institution was reoriented, the management mechanisms used, and the internal impact of change. The successes achieved and the limitations encountered in the application of business concepts are briefly outlined.

Finally, the paper concludes that the RBNZ achieved major efficiency gains without a loss of effectiveness by applying business management concepts. The RBNZ's experience suggests that business management concepts can, with minor limitations, be successfully applied in central banks to increase efficiency. However, doing so challenges many historical central banking practices, and has a substantial internal impact.

I. Introduction

The workings and even the functions of central banks often seem esoteric to the populations they serve. Lifetime career structures have limited interchange of central bank staff with other institutions or private sector businesses and encouraged exclusivity. Management within central banks has emphasized control, experience, and hierarchy. Reporting to the external world has focused more on economic policy discussions than organizational accountability.

These traditions arose from the history and nature of central banking. However, they are at variance with the modern management principles that developed to cope with the turbulence of rapid change. Central bank traditions also sit uncomfortably beside growing demands in many countries that publicly funded organizations prove their effectiveness and demonstrate their efficiency.

Central banks must recognize these new pressures. An effective response will demand new skills and techniques. Organizational performance must be measured and accountability established. The management systems, resource levels, and operating style of central banks must be reviewed and, if necessary, be changed. This poses a risk--might efforts to improve efficiency jeopardize effectiveness?

At one central bank, this was not the case. Over five years, the Reserve Bank of New Zealand (RBNZ) achieved dramatic efficiency gains. At the same time, its effectiveness increased. 1/ How this was done offers instructive insights.

Management is more art than science. No formula for successful organizational transformation can be set out here, but central bankers facing similar challenges may find ideas to consider for their own institutions. By anticipating and managing change, central banks can retain management control of their internal resources and gain credibility with the societies that they serve. However, change has its price--the abandonment of cherished or comfortable practices and traditions in favor of more efficient management practices.

Little published information is available on the nature of central bank operating costs, or what an efficient central bank should cost. Precise data on central bank operating costs is hard to obtain from published sources; where available, it is often difficult to interpret. The range of functions central banks perform varies considerably. Differences in accounting concepts and policies would also complicate any comparison. The operating costs of the RBNZ cannot therefore be readily compared with those of other central banks. However, the costing techniques and detailed external reporting developed by the RBNZ point the way forward.

The perceptions of those affected by change generally differ as much

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1/ In this paper, "effectiveness" refers to how well an organization meets its operational objectives. "Efficiency" refers to the quantum of resources applied to operations. To be effective means to produce planned outputs; to be efficient means performing activities with minimum inputs.

as they agree. The management and staff of the RBNZ have contributed to this article in many ways, but the views expressed are solely those of the author.

II. Organizational Transformation at the RBNZ 1/

1. The historical background

The RBNZ was founded in 1934. Over the next 50 years, it performed most traditional central bank tasks:

- issuing currency;
- developing monetary and fiscal policy;
- advising the Government on monetary and fiscal policy;
- implementing monetary policy via credit control, interest rates, and exchange rates;
- managing interbank liquidity, settlements, and payments systems;
- acting as banker to the banks and lender of last resort;
- supervising the financial system;
- acting as banker and fiscal agent for Government;
- administering exchange control and investment regulations;
- collecting economic statistics;
- advising on economic and fiscal policy;
- registering government debt instruments;
- representing New Zealand in international financial forums.

However, the RBNZ had little real power. It provided advice on economic policy--sometimes heeded by Government, but more often not. A retiring career Reserve Banker described the RBNZ, a little unkindly, as "a social club for people with an interest in economics."

In fact, the "social club" became an institution, for better and for worse. Staff joined early in their careers. Senior appointments went to people who had spent their entire working lives at the RBNZ. Few outsiders joined at senior levels, so the overall experience base was narrow. In a regulated economy, the RBNZ's "customers" were captive, encouraging an inward focus.

The RBNZ's statutory objectives were vague and not necessarily consistent:

> "Monetary policy....shall be directed to the maintenance and promotion of economic and social welfare in New Zealand, having regard to the desirability of promoting the highest level of production and trade and full employment, and of maintaining a stable internal price level."

With these often contradictory objectives, and politicians in direct charge of monetary policy anyway, no-one could judge the RBNZ's

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1/ One dictionary defines the term "transform" as having three meanings: to change in composition or structure, to change the outward form or appearance of, and to change in character or condition. All of these applied to the RBNZ, where changes went beyond those implied by terms such as reform or restructure.

effectiveness or measure its performance.

On the efficiency side, measurement was little better. In a regulated economy, the RBNZ's operations often produced arbitrary financial results. The monopoly on currency issue generated ample income to pay operating costs. The "bottom line" meant very little. Cost control had a low priority.

Inexorably, the RBNZ developed many of the negative traits associated with a bureaucracy. Administrative convenience became an important consideration. Precedent or the practices of other central banks strongly influenced behavior. Staff took their continued employment for granted. Indeed many staff believed that the RBNZ's profitability justified their jobs, ceasing to recognize that profits came mainly from a monopoly granted by taxpayers.

Over the years, Parkinson's Law operated remorselessly. Clumsy administrative systems proliferated and internal service departments swelled, keeping people busy but not productive. Surplus technical staff, often economists, were given management posts in fields outside their expertise. Remuneration systems were bureaucratic, complex, and costly to administer, rewarding seniority over performance.

"Managers" directly controlled few resources. Management of staff, their main resource and largest operating cost, was largely centralized. Managers received little information about output or input costs and had few incentives to improve efficiency. Decisions were taken at very senior levels on information filtered through a long chain. Delegation of decision-making was limited and relied mainly on rules and precedents.

Budgeting was incremental, reactive, and too broad for real scrutiny. The status quo was the starting point for resource decisions--operations facing new pressures struggled while resources stagnated in declining areas. Productivity levels around the organization varied greatly.

Senior management knew of these problems, but was not sure how to tackle them. Under immediate pressures from the external environment and with little business management experience to draw on, senior management tended to focus on technical issues.

2. <u>Pressures for change</u>

The RBNZ's external environment changed very suddenly. In 1984, a new Government confronted the results of previous economic policies. Major economic reforms were rapidly implemented. Almost overnight, exchange control ended, financial markets were deregulated, and subsidies to farmers and manufacturers disappeared. Business was forced to move from "cost plus" to competitive pricing, from lobbying to marketing.

Individuals were directly affected too. Income tax rates dropped and tax shelters disappeared. New, uniform consumption taxes came in. As businesses grew leaner and meaner, unemployment and underemployment moved from the workplace to the benefit queue. Individual choice and responsibility became fashionable ideas, challenging an entrenched culture of state dependence. "Accountability" became a household word.

Public sector reform was an economic, fiscal, and ideological necessity. Corporatization and privatization forced state-owned business enterprises to adopt private sector management models. The management of core public service departments and agencies changed too, in a drive to clarify objectives and improve efficiency. The principles applied included decentralization, separation of policy advice from service provision, explicit output definition and reporting, and accrual accounting. Departments negotiated service contracts with Ministers, worked under Chief Executives with fixed-term contracts, and measured their performance using output-based indicators. Professional bodies developed new reporting standards to make this accountability a reality.

It was clear that public sector reform would not spare New Zealand's central bank. However, the changes had special meaning for the RBNZ. The new Government wanted sustainable price stability, and would empower an independent central bank to achieve it. "Autonomy" was on offer, but only in exchange for greater accountability. The central bank would set clear, measurable objectives and report on its effectiveness and efficiency.

There were internal demands for change too. Some managers who were challenging centralized, bureaucratic management models wanted more freedom to manage and more control over their resources.

3. Opening moves

Directions for organizational transformation first emerged in the mid-1980's. The concept of central bank autonomy had prompted much thought within the RBNZ--what should its role and outputs be? Traditional activities such as exchange control were disappearing. It was clear that the size and nature of the RBNZ's resource base would have to change.

In 1987 an internal report identified management information systems as a prerequisite for better resource management at the RBNZ. Acting on this idea, senior management recruited a specialist with a wide brief. 1/ The drive for improved management information systems soon became a catalyst for change.

By design, some highly visible changes occurred almost immediately:

- The RBNZ defined its outputs in detail. 2/
- All accounting information was coded by output.
- All staff, including the Governor, filled in timesheets to record their work by output.

1/ This was the author. His brief was to develop systems for external accountability, Board monitoring of senior management, and internal delegation of responsibility, as well as to advise on effectiveness and efficiency.

2/ Appendix II discusses the concept of output accounting and lists RBNZ outputs.

- Internal services and overheads were costed and reported to managers.

- Managers received monthly cost reports, by output.

- The Annual Report presented much more financial information, and made the general reader its target audience.

- Participative budgeting was introduced for some discretionary expenses.

- Control of computer development moved from computer specialists to managers.

Other areas were earmarked for later work:

- Defining measurable objectives at all levels.

- Developing management skills.

- Decentralizing personnel management.

- Introducing effectiveness auditing.

- Continued development of costing and budgeting.

These changes sounded innocuous. In reality, they strongly challenged the existing culture. At a more personal level, they threatened many people's jobs.

The speed of change itself marked a new style. Lengthy consultation and a search for consensus were abandoned. The Governors, acting on the advice of "outsiders," made rapid decisions and issued marching orders. Many grumbled, but everyone marched.

At the strategic level, mechanisms were developed to embody the concepts of central bank autonomy in workable institutional arrangements. The statutory framework introduced by the Reserve Bank of New Zealand Act 1989 institutionalized an independent but accountable central bank. 1/ The RBNZ was given the primary objective of price stability, and the autonomy to achieve it.

In return, the RBNZ would report to Parliament on its effectiveness and efficiency. Binding, detailed public contracts would specify inflation targets and operating expenses. The legislation, which the RBNZ helped draft, incorporated a reporting framework similar to that for other public sector organizations. It included some modifications to recognize the RBNZ's greater independence and was consistent with the RBNZ's new management information systems. The RBNZ thus helped shape the accountability mechanisms it would be monitored by in future.

Almost immediately, newly available cost information confirmed what many already knew. The RBNZ was overstaffed, with productivity in many

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1/ Appendix I details the accountability provisions of this legislation.

areas low. Throughout the public sector, consultants were reporting on efficiency, and the RBNZ would not escape scrutiny. The choice was clear--change, or be changed. The RBNZ also felt a moral obligation to live up to its own call for improved economic efficiency.

Under a newly appointed Governor, the RBNZ began raising productivity. An initial wave of voluntary redundancies reduced staff numbers by 20 percent within a year. The costs of staff separation were high, but they were recovered many times over through reductions in continuing costs. Demonstrable efficiency gains helped fend off immediate external review.

More management information emerged from the new systems. Output reporting revealed that too many resources were applied to activities of marginal relevance. Often, the overheads allocated to managers from support departments and corporate programs exceeded their direct operating costs. Internal service areas came under pressure to cut costs and provide better customer service.

For some time the RBNZ had been thinking about modernizing its remuneration systems, but in practice little had changed. The new information systems reported remuneration comprehensively for the first time, identifying the full cost of each individual to the organization. This revealed major overpayment in some cases, particularly where staff held loans on favorable terms. Responding, the RBNZ began to move away from expensive, complex fringe benefits to a "cash package" remuneration system.

4. The "Middle Game"

Other "change agents" were brought in. These newcomers vigorously challenged the status quo. Comparisons with other organizations demonstrated that the RBNZ was doing many mundane things badly: property management, currency processing, accounting, personnel management, and basic administration. The traditional "do it in-house" approach had not worked well. New staff with wider business experience were recruited. Consultants were brought in for specialized projects. The paternalistic "job-for-life" philosophy became discredited.

Budgeting became the path to greater efficiency. A small committee (the Governors and two change agents) undertook an annual zero-based review of all expenditure. Managers submitted detailed resource budgets for scrutiny and challenge. The review group pared back budget submissions, sometimes drastically. Outputs having little relevance or value were scaled back or abandoned. 1/ The review process also did something else: it clearly identified which managers were part of the problem and which were part of the solution.

As efficiency improved, the emphasis moved from budgeting to planning. Resources were shifted to priority outputs. Managers tried to establish performance measures for each of their outputs (often no easy task). A new culture of management-by-objectives and productivity improvements developed amongst the better managers. For example, the

1/ For example, the RBNZ ceased to produce subsidized "news reviews" which merely duplicated products available from other sources.

computer services manager moved away from expensive mainframe computing, focused on customer service, and cut staff numbers. His reward for shrinking his resource base was a promotion--a clear signal that the rules of the management game had changed!

To deal with managers who were reluctant to act, a new tool was available. The internal audit unit, now under new management, had introduced "performance auditing." Managers who lacked the skill or motivation to achieve efficiency gains came under close scrutiny. The review committee imposed budget cuts where managers failed to respond to the new thinking.

Change was often traumatic. As managers learned how to achieve higher productivity, their early unrealistic promises of "no more staff cuts" came back to haunt them. Communication between management and staff deteriorated when staff numbers continued to fall. Redundancy arrangements became especially contentious. Staff who were leaving often felt aggrieved, while those kept on saw less valuable staff receive generous redundancy payments. The reward for competence and motivation appeared to be sterner performance requirements, with remuneration falling as fringe benefits were cut back. Staff grew cynical as total numbers fell but senior management numbers did not. Morale fell.

5. Culmination

Structural changes early in the transformation were incremental. Sections or activities moved between departments, or simply shrank. By 1990, with total staff numbers reduced by over 25 percent, only the hardest decisions remained. Management structures were now the main constraints on efficiency gains. The historical organizational structure no longer suited the RBNZ's outputs or objectives, and it looked alarmingly top-heavy.

The Governor took personal responsibility for restructuring. In September 1990, four of the RBNZ's eleven departments disappeared. 1/ Nearly half of the RBNZ's senior management group left via retirement or severance. A group of middle-ranking executives and some further staff were also made redundant. This time redundancies were compulsory.

Restructuring proved decisive. Direct cost savings were substantial, but the main gains were less tangible. A leaner, more logical management structure simplified the decision-making process. The new management team adopted a different management style, giving more responsibility to staff. Many formal distinctions were eliminated: executive lunches, rank-based travel entitlements, and even the term "executive" all disappeared. Staff complaints of double standards diminished.

The new structure was derived from the RBNZ's functions, but it did not follow them slavishly. Some departments, notably Banking Supervision

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1/ Charts 1 and 2 show the old and new organization structures. Chart 2 reflects the RBNZ's current responsibilities, derived from an output-based perspective. Chart 1 was compiled from a departmental perspective prior to the new legislation, and includes activities such as exchange control which had in fact ceased by that time.

and Currency, focused on a single function. In other cases several departments had formal roles in a function, to ensure policy advice was subject to review and challenge. 1/

Efficiency gains continued as the new structure settled down. Departments grew used to the new management disciplines, and reaped benefits from them. Management took initiatives to rebuild commitment and morale: responding to the findings of a staff survey, improving communication, and emphasizing teamwork.

Strategically, the new accountability mechanisms have worked well. The RBNZ's price stability objective has been made concrete by specifying target inflation ranges, set out in formal public agreements between the Minister of Finance and the RBNZ. 2/ RBNZ goals and activities are monitored in more detail via a comprehensive Annual Report presented to the Minister of Finance. This report is subsequently tabled in Parliament, and the RBNZ appears before a committee of Parliament.

On the efficiency side, a separate five-year Funding Agreement between the RBNZ and the Minister operates. This specifies a level of operating expenditure 3/ which the RBNZ can deduct in calculating the net profit available to the Government. Spending in excess of this amount is deducted from the RBNZ's reserves; underspending is added to reserves. The agreement provides for renegotiation if the RBNZ's functions change substantially. Reserves are large in relation to annual expenditure, so the RBNZ's spending is in practice constrained mainly by public scrutiny.

6. Effectiveness and efficiency achievements

Startling efficiency gains were achieved in just a few years. Staff numbers, still growing in 1988, fell by 43 percent in five years (Chart 4). Operating expenses fell by 34 percent in nominal terms and 43 percent in real terms (Chart 5).

Costs can always be cut at the expense of outputs, and internal turmoil can damage organizational performance. Did the RBNZ's effectiveness suffer?

The effectiveness of a central bank is not easy to measure. Many factors interact to determine macroeconomic outcomes. Perceptions are often as valid as any quantitative measure. However, the available evidence suggests that the RBNZ's effectiveness certainly did not diminish.

After decades of double-digit inflation, the annual change in New

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1/ Chart 3 illustrates the functional roles of RBNZ departments.

2/ Price stability has been defined as a measured inflation rate of 0-2 percent. The Policy Targets Agreement allows for measured inflation to move outside of that range in certain exceptional circumstances (e.g. a major terms of trade shock, material changes to indirect taxes, a significant natural disaster, or a major divergence between the measured index and a version of the index that excludes interest rates).

3/ Operating expenditure excludes interest and other costs of servicing financial liabilities--Appendix III provides further detail of cost classifications.

Zealand's Consumer Price Index fell to one percent in 1991, and has remained within the 0-2 percent target range since then. Inflationary expectations in New Zealand fell to the lowest level ever recorded. There is broad public acceptance of the RBNZ's price stability goal. Both major political parties subscribe to it.

In managing financial markets, the RBNZ handled the challenges of deregulation and the "Crash of '87" well. No registered banks failed. 1/ Interbank settlement and financial markets functioned smoothly. Liquidity forecasting became increasingly accurate. Volatility in domestic money markets and foreign exchange markets dropped markedly. Foreign reserves were effectively and credibly managed.

The improvement in currency operations, formerly a backwater, was remarkable. Note and coin issue was unified, with coin operations transferring smoothly from the Treasury to the RBNZ. The general public welcomed major changes to currency denominations and formats. Implementation of the changes proceeded smoothly. Huge cost reductions were achieved--the unit cost of new notes fell by one third while efficiency in processing used notes improved greatly.

Banking operations contracted to the core central bank role as the Government's retail banking moved to the private sector. Much smaller transaction volumes allowed the RBNZ to merge its banking operations with other work.

Like many central banks, the RBNZ was a de facto property manager. Its properties were originally built as secure facilities for currency storage and processing, but had substantial spare office space. To promote efficiency, property management was recognized as a distinct (if involuntary) output of the RBNZ. Taking a commercial approach, the RBNZ's property manager charged departments market rentals, rationalized the RBNZ's own use of space, and increased rental income.

Overall, operating style changed dramatically. The simple, transparent arrangements of the new Act brought the RBNZ under public scrutiny, often intense and sometimes highly critical. The RBNZ consciously sought a higher public profile, communicating directly with politicians, interest groups, and the general public.

As the Government, the business community, and the general public grew accustomed to an independent central bank, they became more supportive of its role. Citizens could see what their central bank did, how it made its profits, and how resources were used. The RBNZ's efficiency gains contributed to its credibility. 2/ Outside the country, the effectiveness of New Zealand's central bank attracted favorable comment. So did its new accountability arrangements.

Anecdotal comments from visitors to and from other central banks

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1/ One financial institution monitored by the RBNZ did fail, and the main government-owned bank required a government contribution to a recapitalization plan.

2/ Appendix III provides a breakdown of 1993 revenue and expenses by output group. More detailed information on the costs and revenues of individual outputs is reported internally.

suggest that the RBNZ is now a more focused, businesslike organization than its peers, operating under more streamlined management systems. Efficiency in the use of resources appears to be a much more prominent management priority at the RBNZ than at most central banks. The business skill and experience base at the RBNZ also appears to be relatively wider.

Improved effectiveness and efficiency is a journey, not a destination. The RBNZ is now consolidating the dramatic gains of recent years. The new management systems and business disciplines will help the RBNZ meet the needs of its stakeholders and continually improve its operations.

A more subtle benefit has been realized too. It is a common criticism that central bankers lack familiarity with the realities of business. Instituting business disciplines at the central bank helps to fill that knowledge gap and disarm such criticism. 1/

7. Special factors?

Did the transformation of the RBNZ reflect special factors? For example, might the large reduction in operating costs at the RBNZ merely reflect factors such as a change in the quantity or type of work performed or an exceptional starting point?

Is, or was, the role and functions of the RBNZ markedly different from that of other central banks?

The role of the central bank differs from country to country for many reasons. However, the range of functions performed by the RBNZ, currently or in the past, is neither unusual nor narrow. 2/ The situation of New Zealand's central bank under its previous statute was similar to that in many industrial countries whose central banks have a mainly advisory and operational role. The new statute reflects the current trend toward more autonomous central banks focused on price stability.

Did the work performed by the RBNZ change substantially?

The RBNZ acquired more independence to act in accordance with its policy views, but the tasks themselves--whether policy development or operational--did not change in nature. The only changes to the RBNZ's functions or operations likely to materially affect operating costs were the acquisition of coin issue responsibilities and the relinquishment of most retail banking work. Neither of these changes affected many staff. Their net cost impact was in fact adverse and was not material to total operating costs. The reductions in operating costs represent real efficiency gains.

1/ One manager in the RBNZ's Banking Supervision Department commented that while he sometimes found his new responsibilities irksome, it made him more aware of the impact of regulatory requirements on those he dealt with!

2/ Chart 3 sets out the RBNZ's current functions.

Appendix IV demonstrates the trends in operating costs by output class, over the five-year period 1990-94. 1/ The table demonstrates that efficiency gains have been achieved across the board, reflecting improvements in the direct performance of functions and reductions in overhead costs such as internal services. Total costs have now stabilized at a much lower level, and budgeted movements in the costs of particular functions are relatively small.

Was New Zealand's central bank unusually inefficient in absolute terms?

The RBNZ, like most New Zealand business organizations, had plenty of scope for greater efficiency when the economic reform process began. Efficiency gains of similar order were achieved in other organizations, particularly state-owned business enterprises. Efficiency at the RBNZ clearly lagged "best business practice," but the absolute level of inefficiency present at the outset of the transformation cannot be easily quantified.

Was New Zealand's central bank particularly inefficient compared with others?

This seems unlikely. The RBNZ operated in ways broadly similar to those of central banks in other industrial countries. Indeed, its organizational structure and management systems were largely modeled on these institutions, particularly the Bank of England. Many attributes of the "old" RBNZ--centralized bureaucratic administration, a narrow experience base, strong hierarchies, exclusivity, conservatism, paternalism--are characteristic of central banks. The management systems and practices in place at the RBNZ before transformation were "traditional for the industry."

Is the RBNZ easier to manage than other central banks?

In a relatively small organization, the "information problem" associated with general management is not great. Senior management can with relative ease monitor and review operations in detail. This is particularly true of the transformed RBNZ, where management systems have been streamlined and good management information systems are operating.

Central banks which operate as part of a country's civil service may acquire the inefficiencies often endemic in the public sector, or find their freedom of action in internal management restricted. The RBNZ was not bound by civil service rules, pay scales, or employment conditions. Nor was it subject to ongoing or detailed scrutiny by either the Government or a government audit body. The five-year funding agreement made it possible to take a rational approach to operating expenses without the constraints of an annually imposed budget.

The RBNZ enjoyed some advantages arising from its small size and lack of imposed management constraints.

1/ Functional accounts were first published in 1989, but these were subject to some qualification and were unaudited. External audit of the RBNZ's functional accounts began in 1990.

Did the RBNZ employ new or unusual technical mechanisms to improve its effectiveness and efficiency?

The business management concepts applied at the RBNZ are commonplace. The resource management tools of planning and budgeting are used by most organizations, and "management by objectives" is widely practiced. The technical mechanisms employed were thus, in principle, neither new nor unusual.

However, applying business management concepts to a central bank is something of a novelty. Central banks generally draw their reference points, role models, and mentors from the central banking world rather than from business enterprises in their home countries. They may have planning and budgeting systems, but these operate within a conservative, traditional culture. It is rare to find external appointees with major resource management responsibilities. 1/

The determined application of modern business management concepts by change agents brought in from outside the central banking world and given free rein was thus unusual. However, this "technical mechanism" is readily available to any central bank.

Was the RBNZ more motivated toward greater efficiency?

New Zealand's parlous economic situation and a strong efficiency thrust throughout the public sector gave impetus to change. Economic restructuring coincided with an ideological shift toward market disciplines and improved productivity. Professional organizations had established a clear framework for externally reporting on effectiveness and efficiency. Accountability expectations were high.

Working in a small and relatively homogeneous society, central bank staff in New Zealand were painfully aware of the impacts of radical economic restructuring on the wider community. Indeed many felt directly responsible for the impacts of a tight monetary policy. Two successive Governors were appointed from the business sector, as were most Board members. Change agents from the outside world were employed at senior levels.

In these circumstance the call to "practice what you preach" was particularly powerful. Motivation may have had a decisive impact.

III. Applying Business Management Concepts

Organizational transformation is a complex process. If not managed well, it can fail in many ways. The organization may lose effectiveness, in the short term or more fundamentally. Efficiency gains may be dissipated by the change process itself. Results will fall well short of expectations--elephants labor mightily to give birth to mice.

1/ Central bank governors tend to focus on policy issues and external relations rather than internal management. A governor appointed from outside may have formal accountability for managing the central bank, but in practice resource management falls to career central bankers.

In transforming itself, the RBNZ tried to apply business management concepts--effectiveness, efficiency, performance measurement, management accountability, customer service, and quality management--to even its most esoteric functions. 1/ This process was generally successful. However, not everything worked well. Some initiatives faced major resistance, achieved only limited success, or had unplanned negative impacts.

No simple analytical classification can capture the dynamic complexity of major organizational change. However, for convenience the initiatives taken at the RBNZ are here considered under three headings:

1. Reorientation of the institution
2. Management mechanisms
3. Internal impacts.

1. Reorientation of the institution

Appointment of outsiders: Change was driven and shaped by newcomers to central banking. These change agents had wide fields of action, with direct access to the Governor and the Board.

The influence of wider experiences and different styles was dramatic and highly positive. This was widely recognized, despite some dissatisfaction from "career staff." The principle of appointing the best person for the job, from inside or outside the central bank, is now established. Senior vacancies are often advertised externally. A number of current managers are "outsiders," and other recruits are more likely to have previous work experience.

However, external experience is still concentrated in a few areas. Management acknowledges the benefits of a wider experience mix, but, in practice, intellectual ability and academic qualifications still weigh most heavily in recruitment. Effective arrangements to interchange staff with the private sector are not yet operating. This lack of wider experience and knowledge affects how the RBNZ does its work, and must limit credibility with the business sector.

Emphasis on outputs and customers: New accounting systems added a dimension to every measurement of revenue and cost--the output it related to. 2/ Planning, budgeting, and management information systems tried to shift management thinking away from departments. By design, outputs crossed organizational boundaries.

Managers in line departments were told to consider their outputs from the point of view of their "customers." Internal customers were defined for service departments. Staff training emphasized customer service concepts.

1/ For example, all policy papers are required to meet formal performance standards of conciseness, technical quality, rigor, and readability by the target audience. Performance against these criteria is measured by independent internal review.

2/ Appendix II discusses the concept of "output accounting" and lists RBNZ outputs.

Reorienting thinking around outputs took time. However, there is now a widespread awareness that the RBNZ exists only to perform specified functions, effectively and efficiently. Staff are more likely to ask how the outside world will react, and consult with a wider range of parties.

The customer concept has been harder to apply. A central bank must serve both short-term immediate customers and a much broader group of long-term stakeholders, whose respective needs can, at times, conflict! However, the customer concept has helped direct thinking outward. Internally, service departments focus more clearly on meeting the needs of their customers in line departments.

Changes to organizational culture: Many aspects of organizational culture--the sum of staff values, attitudes, and behavior--are invisible to insiders, who take them for granted. A culture is not always what it seems to be. Formal management systems, communication channels, or codes of conduct may bear little relation to the working reality.

Changing the RBNZ's culture was not easy. The nature of personal interactions amongst staff had to alter--more directness and less "niceness," more teamwork and less politicking. The change process relied mainly on leadership by example and new incentive systems. Making managers accept personal responsibility for decisions was a key goal.

The RBNZ culture has certainly shifted. Change is itself viewed more positively. Behavior relies more on judgment, less on rules. Initiative is more likely to be encouraged. The management team will often confront a difficult decision, express a diversity of views, and set a clear direction rather than search for consensus. Staff throughout the RBNZ are franker and less likely to hide their opinions. Status barriers have been lowered in many ways.

However, any culture is tenacious. Change is probably less profound than it appears--during consolidation, some regression is likely. This would not be entirely negative: many positive aspects of the old culture, notably trust between management and staff, suffered during the turbulence of transformation.

Pragmatism and practicability: The RBNZ's career staff had strong theoretical and analytical backgrounds. In development work, they tended to emphasize careful planning and logical sequence; in decision-making, the focus was on gathering data and exhaustively analyzing options. Faced with the challenge of improving internal management without help from outsiders, much was thought and said, but little done.

In contrast, no detailed blueprint was prepared at the outset of the transformation. Changes to management information and management systems were determinedly pragmatic. Developments proceeded to meet immediate priorities, not in logical technical order. Decisions were based mainly on the intuitive judgment of outsiders. Implementation often proceeded without careful planning. A "good enough" solution was the goal, not a perfect one.

This pragmatic approach sometimes led to problems. Some changes would have progressed more smoothly with thorough planning. However, pragmatism delivered major improvements to effectiveness and efficiency quickly at moderate cost.1/

2. Management mechanisms

Improved management information systems: Changes in resource management systems were dramatic. 2/ The RBNZ now has modern accounting, costing, performance measurement, and reporting systems. Chargeout systems price internal resources realistically. Managers at all levels know the full costs of their outputs. The Board receives regular reports comparing actual performance with objectives and budgets, in a "commercial" format.

The development process itself helped to establish effective management systems and identify ineffective managers. Accurate management information priced resources correctly and spurred productivity improvements. System developments were not cheap. However, ongoing costs are moderate--the benefits of good management information far exceed its cost.

Comprehensive budgeting: The RBNZ's budgeting system had been rudimentary, incremental, and centralized. The new budgeting system was thorough, zero-based, and participative. All cost items were budgeted in detail by line managers, and challenged by a small senior team. Costs in overhead areas received particular scrutiny.

The budgeting process brought managers into corporate decision-making, tested their skills and motivation, and identified huge opportunities for cost savings. It demanded that managers weigh costs against benefits, and created the foundation for a more businesslike culture.

There were teething problems. The crucial link between planning and budgeting was unclear at first. Zero-based, very detailed budgeting placed a heavy administrative burden on all concerned. Many omissions and errors occurred, confusing reported outcomes.

Budgeting took some time to establish itself culturally. Early procedures for "budget variations" and a "contingency pool" weakened the incentives for managers to be thorough in their annual budgeting. Managers often focused unduly on aligning expenditure line by line with budget. Analysis of departmental outcomes was distorted by the wide range of starting points and attitudes. Good performers sometimes missed their tough targets, while the less ambitious could easily beat theirs--the best apparent performance could simply reflect many years of inefficiency.

These teething problems were ironed out as the process developed. Budgeting is now a meaningful accountability mechanism--the reasons for variances from budget are as important as the variances themselves.

1/ The comments here on a more pragmatic approach refer to management decisions, and are not necessarily applicable to policy issues.

2/ Systems providing operational information had generally kept pace with needs, and their ongoing development was not an important feature of transformation.

A focus on resource costs: Prior to transformation managers had little reliable cost information. They tended to focus on incremental disbursements rather than the full cost of operations. There was also a bias towards control, tradition, and highest possible quality. With little business experience, RBNZ staff were at a disadvantage in negotiations with external suppliers.

A stream of comprehensive cost information flowed from new systems. Innovative accounting techniques captured and reported the full costs of resources, particularly staff remuneration and benefits. Many internal services were charged for directly, by usage. Even the remaining "overheads" were charged and reported on a unit basis which facilitated comparisons with other organizations. 1/

In a knowledge-based industry like central banking people, are the main resource and the main cost. Literally, time is money. Charge-out rates were calculated to emphasize the value of staff time. Managers used these rates in pricing and resource allocation decisions.

Armed with better information, managers became aggressive about challenging costs. They also grew more realistic about the goods and services they purchased, externally or internally. Once costs were compared with benefits, much of the RBNZ's administrative work was seen to be counterproductive. (Bureaucratic administration systems can readily spend $2,000 to make a $1,000 decision or "saving.") Efficiency gains "snowballed" rapidly as new incentives and cultural norms took hold.

The RBNZ now routinely considers alternatives to "in-house" production. Many non-core functions have been contracted out. Specifications, tenders, and performance standards give external suppliers operating flexibility but allow the RBNZ to maintain quality control.

Increased external accountability: New legislation and new professional reporting standards required public sector organizations to disclose detailed information on performance. The RBNZ complied with its accountability requirements enthusiastically, often exceeding them. This partially reflected the RBNZ's desire to fend off external pressures and maintain control of its destiny. However, the spirit of accountability went well beyond immediate self-interest. External accountability became an opportunity to win public support and develop a leadership role.

The RBNZ published detailed, frank information about its objectives, operations, financial results, budgets, and plans. Conflict of interest problems were readily overcome. 2/ The RBNZ's improved external

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1/ Services were charged directly or not according to specific criteria: controllability of usage, practicability of charging, materiality, and desired management behavior.

2/ For example, some feared that publishing a budget showing expected income from market operations could implicitly reveal the "RBNZ view" on future interest rates, and affect financial markets. The simple solution adopted was to apply interest rates derived from market expectations (i.e., from the existing yield curve) to the RBNZ's portfolio of assets and liabilities. RBNZ budgets for 1994 appear in Appendix III.

reporting received favorable comments from Government and Parliament, and three awards in four years from the New Zealand Society of Accountants.

Many benefits emerged from the accountability process. Public understanding of, and support for, the RBNZ's new role increased markedly. Within the RBNZ, the accountability theme reinforced new management systems and incentives.

Systematic organizational planning: As transformation progressed, the emphasis moved from budgeting to planning. The new planning process required all line managers to define their outputs and develop performance measures for them. However, the development of planning lagged that of budgeting by about a year at each stage. Early output charts suffered from many deficiencies. 1/

Planning and budgeting are now integrated. Strategic planning for the RBNZ as a whole begins the process, establishing broad directions. Each division's plan then identifies its outputs and sets performance standards for quantity, quality, timeliness, etc. Division plans are summarized to department plans, scrutinized, and checked against the strategic plan. Finally a corporate plan, oriented around outputs, is compiled.

By initially focusing more strongly on budgets than on plans, the RBNZ reversed the most rational approach to corporate management. This led to internal criticism that "accounting" was dominating corporate management, or that resource cuts would achieve efficiency gains at the expense of effectiveness. This did not occur, largely because much scope existed for immediate efficiency gains.

Performance audit: The traditional control role of audit was reduced in scale. Primary responsibility for internal controls devolved to managers. The internal audit unit acquired a new role instead--auditing effectiveness and efficiency.

The concept and practice of "performance audit" 2/ became a powerful force for greater effectiveness and efficiency. Many managers welcomed independent assistance in analyzing and improving their operations. The Governors and the budget review team used the audit group when major questions about performance or efficiency arose.

The performance audit process had limitations. Some managers resisted audit challenges to their habitual operations. Performance audit reports proved of little use where ineffective managers were the main problem, but senior management delayed new appointments. Audit reviews sometimes moved into nontraditional areas such as organizational development, where audit expertise was strongly challenged.

1/ The RBNZ's output chart was subsequently improved by applying analytic criteria such as relevance, number, nature, scope, and independence.

2/ A traditional audit focuses on compliance with control procedures. A performance audit studies how well an operation, process, or organizational unit achieves its objectives, and at what cost. Other names for this concept include "effectiveness audit" and "management audit."

The RBNZ's internal audit group is now a small unit comprising a few highly skilled staff. It performs traditional financial audits in key risk areas, but focuses mainly on monitoring the internal control measures managers take. Performance audits are now considered routine, and have been integrated into the normal audit program.

3. Internal impacts

Expanded responsibilities for managers: The management hierarchy has been flattened. Management responsibilities were decentralized to line managers. Decentralization was particularly marked in staff management, where personnel specialists lost most control functions and became merely a professional resource that managers could draw on. Managers also acquired greater spending authority, and were expected to take a wider range of operational decisions themselves.

Delegation has made managers accountable mainly for ends achieved, not means employed. Direct control mechanisms remain only where relevant and appropriate (for example, guidelines for managing foreign reserves). The annual plan and budget for each operating unit has become the primary accountability mechanism.

Decentralization inevitably leads to diversity. Differences in approach between managers are sometimes marked, and this can lead to tensions and problems. However, few would now argue for recentralization.

Management renewal: Decentralization substantially changed the skill mix required of line managers. Efficiency gains could only be achieved by substantially reducing the number of management personnel, and improving their quality. Management renewal was a major feature of transformation. Only 15 (29 percent) of the 51 line managers listed on the RBNZ organization chart in 1988 still held line management positions in 1991 (Chart 6). Most of the others left the RBNZ. The 15 survivors were supplemented by an equal number of newcomers, about half internal and half external (Chart 7).

Management skills are a major part of performance assessment and promotion decisions, and management development training is routine. Management positions are no longer used to provide career advancement for technical specialists. Instead, the status and remuneration associated with technical positions have been upgraded to fairly reward those who do not follow a managerial career.

Simpler organizational structures: Many minor shifts of responsibility and resources occurred early in the transformation. Later, comprehensive restructuring rationalized many overlapping responsibilities and reporting lines. The new structure was designed around the RBNZ's functions, not history or the practices of other central banks.

Simpler management structures have produced marked benefits. Work is organized more logically, reaction time is faster, and management costs have fallen markedly. Senior management can focus more clearly on strategic decisions.

However, major benefits were reaped only toward the end of the transformation. The reasons for delay were not technical--there was broad consensus on the best shape for the new structure. Conservatism and work pressures contributed to delay, but reluctance to rationalize the group of senior management personnel was the main constraint. This slowness to act had repercussions: it frustrated subordinate managers, generated much staff cynicism, and damaged the credibility of the change process.

Changed terms of employment: Rationality replaced paternalism as the guiding principle. The "lifetime career" assumption was abandoned. 1/ New employment contracts for over one third of the staff, including all senior staff, provide only fixed-term employment. These contracts are renewable, but renewal depends on organizational needs and performance. 2/

Changes to remuneration went well beyond tinkering. Market data revealed that many staff were overpaid--the result of creeping pay scales and poorly controlled fringe benefit programs. New pay scales were introduced, fringe benefits were frozen or eliminated, and many staff suffered remuneration cuts. Simple remuneration systems based on cash packages replaced cumbersome fringe benefits. 3/ Remuneration was linked more tightly to market norms and individual performance, not length of service.

All staff are now required to achieve "effective" rather than "satisfactory" performance ratings. These terms exemplify a shift in the "burden of proof." To be offered renewed employment contracts or receive increased remuneration, staff must perform their jobs well in a positive sense, not just avoid performance bad enough to justify dismissal.

Redundancy issues proved particularly difficult. It had always been the case, in principle at least, that staff who performed poorly could lose their jobs. However, for those who worked loyally and competently, the expectation on both sides was that a job within the RBNZ would always be found. The move to fixed-term contracts signaled that even effective performers might be released as needs changed.

The RBNZ tried hard to achieve staff departures by mutual consent: negotiated resignation, early retirement, and voluntary redundancy. In many cases this worked. However, some ineffective staff, particularly some in senior positions, would not go, regardless of incentives. In the early stages of transformation, change was often "bent around" those who

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1/ In fact, the assumption had been unwarranted anyway. An internal analysis demonstrated that only 10 percent of the staff hired by the RBNZ had subsequently worked there until retirement.

2/ New employment legislation required all New Zealand employers and employees to negotiate and codify individual contracts of employment. The legislation eliminated a regulated system based on centralized bargaining and collective "awards." Changes at the RBNZ consciously reflected this philosophy.

3/ Moves in this direction were made more attractive by taxation changes in New Zealand which lowered income tax, introduced consumption taxes, and taxed employers on the fringe benefits they provided.

were part of the problem rather than part of the solution. Ultimately, compulsory severance was necessary.

The RBNZ compensated departing staff with generous cash settlements. Under existing law, these were virtually tax-free. However, severance payments often operated perversely. Poorly motivated staff with marketable skills pocketed their windfalls and found jobs elsewhere. Capable, hard-working staff whose severance applications were turned down grew embittered. Staff who left of their own accord rather than "chase redundancy" received no reward. Less favorable redundancy terms, tax changes, and a worsening employment market eventually reduced these perverse incentives.

From the external perspective, the new terms of employment were entirely appropriate. The RBNZ had suffered badly from "staff capture" and needed to act. A situation where the central bank's policies contributed to economic hardship for others while its own staff remained secure and comfortable was not tenable.

Internally, the changes had an inevitable impact on morale. Compulsory redundancies made many feel insecure or betrayed. Loss of job security, combined with static or falling remuneration, embittered some remaining staff. A comprehensive internal survey carried out during the transformation revealed that most staff believed change had been badly handled, and that staff trust in management had greatly decreased despite much management effort. There was much concern that these damaging effects would linger for some time. However, a repeat of the survey after transformation was complete showed much more positive attitudes.

Targeted staff training: Traditionally the RBNZ had generously supported academic study. Support programs discriminated little, either by recipient or by organizational benefit. Staff studying for undergraduate degrees often worked part time for full-time pay. Post-graduate degrees were funded too. By contrast non-graduate staff rarely received outside training.

Per capita expenditure on training increased during transformation, but it was directed very differently. Greater efficiency demanded a new mix of inputs--the RBNZ needed fewer, but more highly skilled, operational staff. Training expenditure moved toward ongoing skill development for all staff. Proposals for academic study support were closely scrutinized, with costs often charged against the budget of the sponsoring department. Expenditure on management training increased.

IV. Conclusions

The transformation of the RBNZ demonstrates that central banks, in some circumstances at least, can achieve major efficiency gains without damaging effectiveness. In addition, achieving and demonstrating more efficient operations can positively enhance a central bank's public image, thereby increasing its credibility and effectiveness.

Motivation was probably a powerful influence on the scope and speed of transformation at the RBNZ. Other than motivation, no major special factors appear to have operated. In particular the RBNZ's functions did not materially change.

Initiatives which can re-orient central banks include:

- appointing outsiders;
- emphasizing outputs and customers;
- changing organizational culture; and
- applying pragmatism and practicability.

Management mechanisms to achieve change include:

- improved management information systems;
- comprehensive budgeting;
- a focus on resource costs;
- increased external accountability;
- systematic organizational planning; and
- performance audit.

The internal impacts of change are likely to include:

- expanded managerial responsibilities;
- management renewal;
- simpler organizational structures;
- changed terms of employment; and
- targeted staff training.

Central bankers often dismiss comparisons with private sector organizations as irrelevant, largely on the grounds that central banks are not profit-seeking bodies. The specialized nature of central banking is another argument frequently cited. However, the transformation of the RBNZ demonstrates that normal business management concepts can be successfully applied to the business of central banking. It also demonstrates that doing so challenges many historical central banking practices. It seems likely that applying business management concepts with strong motivation could increase efficiency at many other central banks.

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Statutory Accountability of the RBNZ

Extracts from Reserve Bank of New Zealand Act 1989

8. Primary function of Bank--The primary function of the Bank is to formulate and implement monetary policy directed to the economic objective of achieving and maintaining stability in the general level of prices. 1/

9. Policy targets--(1) The Minister shall, before appointing or reappointing, any person as Governor, fix, in agreement with that person, policy targets for the carrying out by the Bank of its primary function during that person's term of office, or next term of office, as Governor.

11. Governor to ensure policy targets followed--It is the duty of the Governor to ensure that the actions of the Bank in implementing monetary policy are consistent with the policy targets fixed under section 9 of this Act. 2/

41. Duties of Governor--(1) It is the duty of the Governor to ensure that the Bank carries out the functions imposed on it by this Act.

(2) The Governor has the authority, in the performance of those functions, to act in relation to all matters that are not by this Act required to be dealt with by the Board.

53. Duties of Board 3/--(1) Subject to this Act, the Board of the Bank shall:

(a) Keep under constant review the performance of the Bank in carrying out its functions;

(b) Keep under constant review the performance of the Governor in discharging the responsibilities of that office;

(c) Keep under constant review the performance of the Governor in ensuring that the Bank achieves the policy targets agreed to with the Minister under section 9 or section 12 (7)(b) of this Act;

(d) Determine whether policy statements made pursuant to section 15 of this Act are consistent with the Bank's primary function and the policy targets agreed to with the Minister under section 9 or section 12 (7)(b) of this Act;

(e) Keep under constant review the use of the Bank's resources.

(2) The Board may give advice to the Governor on any matter relating

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1/ Other sections of the Act specify particular functions and powers.
2/ This was often misreported as tying the Governor's salary to the achievement of specified inflation targets!
3/ The Board may recommend that the Minister dismiss the Governor.

to the performance of the Bank's functions and the exercise of its powers.

54. Membership of Board--(1) The Board shall consist of not less that seven and not more than ten members.

(2) The membership of the Board shall comprise:

(a) Not less than four and not more than seven non-executive directors to be appointed from time to time by the Minister;

(b) The Governor;

(c) The Deputy Governor, or if more than one Deputy Governor holds office, each Deputy Governor;

158. "Notional surplus income" defined--For the purposes of section 162 of this Act, "notional surplus income," in relation to a financial year of the Bank, means the gross income of the Bank in that year, after:

(a) Deducting the amount of income estimated to be paid or applied in meeting the expenditure (other than interest expenditure) of the Bank in carrying out the functions and exercising the powers referred to in section 159 (1) of this Act. ... As determined under the relevant funding agreement.

(b) Deducting the expenditure (other than interest expenditure) incurred by the Bank in respect of that year in carrying out the other functions of the Bank;

(c) Deducting interest expenditure incurred by the Bank in carrying out any of its functions;

(d) Deducting any provisions made in accordance with generally accepted accounting practice (other than those taken into account under paragraphs (a) and (b) of this section);

(e) Deducting any net income derived by the Bank from its other functions as shown in the financial statements of the Bank for that financial year;

(f) Adding any net loss incurred by the Bank from its other functions as shown in the financial statements of the Bank for that financial year.

159. Funding agreements--(1) Funding agreements shall be entered into from time to by the Minister and the Governor which shall specify the amount of income of the Bank to be paid or applied in meeting the expenditure incurred by the Bank in each financial year in carrying out the functions imposed and exercising the powers conferred by this Act .... (or) any other Act.

160. Contents of funding agreements--Every funding agreement shall be in writing and:

(a) Shall make provision for the total expenditure to be incurred by the Bank in carrying out the functions and exercising the powers set out in paragraphs (a) to (f) of subsection (1) of section 159 of this Act;

(b) Shall make provision for such items as may, in accordance with generally accepted accounting practice, properly be taken into account in determining the expenditure applicable to those functions and powers;

(c) May provide for the extent, if any, to which any material change in the nature or extent of the work undertaken by the Bank in respect of any of those functions or powers shall require the total level of expenditure to be redetermined between the Governor and the Minister;

(d) May make provision for such other matters, not being matters that are inconsistent with this section, as the Governor and the Minister may think fit.

162. Application of surplus income--(1) The amount by which, in any financial year, the actual net income of the Bank as shown in the financial statements of the Bank for that year exceeds the notional surplus income for that year, calculated in accordance with section 158 of this Act, shall be paid or credited to the reserves of the Bank.

(2) The amount by which in any financial year the notional surplus income for that year

163. Annual report and accounts--(1) Within three months after the end of each financial year, the Bank shall deliver to the Minister:

(a) A report on the operations of the Bank during that financial year;

(b) Audited financial statements for that financial year:

(c) The auditor's report on those financial statements;

(d) A statement of the projected income and expenditure for the next financial year.

(2) The report referred to in subsection (1) (a) of this section shall contain such information as is necessary , in conjunction with policy statements published under section 15 of this Act, to enable an informed assessment to be made of the Bank's performance in carrying out its functions during that year.

164. Contents of financial statements--(1) The financial statements shall be prepared in accordance with generally accepted accounting practice and shall include:

(a) A statement of the Bank's financial position at its balance date;

(b) An operating statement reflecting the revenue and expenses of the Bank for that year by reference to the functions carried out by the Bank;

(c) A statement of cash flows reflecting the Bank's cash flow for that year;

(d) A statement of the Bank's commitments as at the balance date;

(e) A statement of the Bank's contingent liabilities as at the balance date;

(f) A statement of accounting policies;

(g) Such other statements as are necessary to fairly reflect the financial operations of the Bank for that year and its financial position at the end of that year;

(h) Comparative actual figures for the previous financial year for paragraphs (a) to (e) and, where appropriate, paragraph (g) of this section.

165. Management statements--(1) The financial statements of the Bank shall be accompanied by a management statement signed by the Governor and the Deputy Chief Executive:

(2) The management statement shall comprise:

(a) A statement of the management's responsibility for the preparation of the annual financial statements and the judgments used in them;

(b) A statement of the management's responsibility for establishing and maintaining a system of internal control designed to provide reasonable assurance as to the integrity and reliability of financial reporting;

(c) A statement that, in the opinion of the management, the annual financial statements for the financial year fairly reflect the financial position and operations of the Bank.

166. Auditors--(1) The Minister may, from time to time, appoint one or more persons (whether as individuals or as the members from time to time of any firm or firms), being persons qualified for appointment as auditors of a company under the Companies Act 1955, to be the auditor or auditors of the Bank.

167. Performance audit--(1) The Minister may from time to time, appoint one or more persons (whether as individuals or as members from time to time of any firm or firms) to carry out an assessment of the performance by the Bank of its powers under this Act.

(2) As soon as practicable after completing an assessment, the person appointed shall submit a report to the Minister setting out the results of that assessment.

(3) A person appointed to conduct an assessment under this section, for the purpose of conducting that assessment:

(a) Shall have full access to all books and documents that are the property of or that are under the control of any person relating to the Bank or its affairs;

(b) May require any director, officer or employee of the Bank or any other person to answer any question relating to the Bank or its affairs;

(c) May, by notice in writing to any person, require that person to deliver any books or documents relating to the Bank or its affairs in the possession or under the control of that person and may take copies of them or extracts from them.

Output Accounting

All accounting systems record the type and value of a transaction. Most organizations add a structural dimension, to record which part of the organization the transaction relates to. Output accounting adds a fourth dimension of information: the output or "product" the revenue or expenditure relates to. The cost of an output can then be compared with the benefits obtained.

Often the organizational location information is used to also substitute for the output dimension. This approximation can be valid, but may not be. Even if structure closely parallels functions, the managers of organizational units can use more detailed information about their outputs to direct resources better and improve efficiency.

In a commercial environment, the benefits usually take the form of revenue. In a non-commercial environment, assessing benefits is largely intuitive and can involve guesswork. However, an organization that does not know output costs must guess at both costs and benefits!

At the RBNZ, outputs were conceived as goods and services delivered to external customers. They were deliberately defined across departmental boundaries. The output set included internal outputs consumed within the RBNZ, to assist with accurate cost allocation and provide an output focus for internal services.

Defining central bank outputs was often difficult. At first, departments tended to produce "what I do" definitions, which meant little to outsiders. Some of the outputs in the initial chart turned out to be too broad, and others too narrow. Criteria evolved to define a useful output chart:

- balancing relevance to external and internal parties;
- achieving a balance between too many outputs (reduced accuracy) and too few (little information value);
- considering the nature of the output (for example, a minor but sensitive output might be separately identified);
- keeping the system readily comprehensible to all staff;
- achieving meaningfulness and comparability by defining only outputs which could conceivably be produced in isolation.

The attached 1992 output chart lists about 120 outputs. These fall into eleven functions or "product groups." External reports provide revenue and cost information by product group (see Appendix 3), and occasionally by individual output. Internal reporting identifies all revenue and costs by output.

Intermediate "outputs" produced for internal consumption (for example, computer and accounting services) are also reported on internally, but their net costs are subsequently absorbed in the costs of external outputs. These intermediate outputs appear in the charts as service and overhead codes.

RBNZ OUTPUT LISTING--APRIL 3, 1992

A: MONETARY POLICY FORMULATION	**B: MARKET OPERATIONS**	**C: FINANCIAL SYSTEM OVERSIGHT (FSO)**	**D: CURRENCY OPERATIONS**	**E. FOREIGN RESERVES MANAGEMENT**
A11 FORMULATING MONETARY POLICY	B11 IMPLEMENTING MONETARY POLICY	C11 REGISTERING BANKS	D11 ISSUING CURRENCY	E11 FX RESERVES PORTFOLIO MGMT
A12 ECONOMIC MONITORING AND COMMENTARY	B12 FORMULATING IMPLEMENTATION STRATEGIES	C21 FORMULATING BANK SUPERVISION POLICY	D12 PRODUCING REISSUABLE BANKNOTES	E12 FX RESERVES PORTFOLIO DVLPMT
A22 SURVEYING EXPECTATIONS	B21 LIQUIDITY MANAGEMENT	C31 FSO REPORTS/ ANALYSIS/ CONSULTATIONS	D13 NATIONAL INVENTORY MAINTENANCE	E13 SETTLEMENT
A31 6 MONTHLY POLICY STATEMENT	B31 PLANNING AND MONITORING DEBT PROGRAM	C41 CRISIS MANAGEMENT DEVELOPMENT	D14 FORMULATING CURRENCY POLICY	E21 FX RESERVES POLICY ADVICE
A41 FORECASTING	B41 DEBT MANAGEMENT OPERATIONS	C42 CRISIS MANAGEMENT (DFC)	D21 COLLECTORS CURRENCY	E91 INFO ABOUT FX RESERVES
A42 SYSTEM AND MODEL DEVELOPMENT	B51 FOREIGN EXCHANGE INTERVENTION	C43 CRISIS MANAGEMENT (OTHER)	D22 FINAL IMPRESSIONS ISSUE	
A51 MONETARY POLICY STATISTICS	B61 FOREIGN EXCHANGE DEALING	C51 BANKING LEGISLATION/ REGULATIONS	D23 WORLD RUGBY CUP ISSUE	
A61 MONETARY POLICY RESEARCH	B71 MARKET MONITOR-ING/LIAISON/ STATISTICS	C61 FINANCIAL SYSTEM ISSUES	D24 25TH ANNIV. ISSUE	
A71 BROAD ECONOMIC ISSUES ADVICE	B72 ANALYZING/REPORT-ING ON FINANCIAL MARKETS	C62 PAYMENTS SYSTEM TASKFORCE	D25 EXPO '92 COINS	
A81 BULLETIN	B91 INFORMATION ABOUT MARKET OPERATIONS	C91 INFO ABOUT FSO	D91 INFO ABOUT CURRENCY	
A82 RB BOOK	B92 TRANSACTION SETTLEMENT			
A91 INFO ABOUT MONETARY POLICY				

F: BANKING SERVICES	**G: REGISTRY SERVICES**	**H: OVERSEAS INVESTMENT COMMISSION (OIC) SECRETARIAT**	**I: OTHER OUTPUTS (NEI)**	**J: PROPERTY MANAGEMENT**
F11 STATE ACCOUNTS	G11 REGISTRY SERVICES	H12 PROCESSING TAKEOVER APPLICATIONS	I11 OTHER ECONOMIC POLICY RESEARCH	J11 STRATEGIC PROPERTY MANAGEMENT
F12 REGISTRY ACCOUNTS		H13 FORMULATING OIC POLICY	I12 OTHER ECONOMIC POLICY ADVICE	J21 ROUTINE BUILDING MGMT/OPERATION
F13 OVERSEAS ACCOUNTS		H14 OFFICIAL INFORMATION ACT REQUESTS	I21 MULTILATERAL AGENCY LIAISON	J31 WTN BUILDING SERVICES
F14 STAFF ACCOUNTS		H21 RBNZ REPRESENTA-TION ON OIC	I22 OVERSEAS CENTRAL BANK LIAISON	J41 BUILDING DEVELOPMENT
F15 OTHER BANKING SERVICES		H22 OIC MEETING	I23 OTHER AGENCY LIAISON	J42 GROUND FLOOR REDEVELOPMENT PROJECT
F16 DFC STANDBY/ INDEMNITY ARRANGEMENTS		H91 INFO ABOUT OIC	I24 OVERSEAS VISITORS TRAINING	J43 2ND FLOOR PROJECT
F17 FORMULATING BANKING POLICY			I25 IMPLEMENTING UN SANCTIONS	J44 3RD/4TH FLOOR PROJECT
F21 SETTLEMENT				J46 2ND FLOOR RENOVATIONS (AKL)
F91 INFORMATION ABOUT BANKING SERVICES				
F92 BANKING SYSTEM PROJECT				

S: **SERVICE CODES**		**V:** **OVERHEAD**
S11 EXTERNAL LIAISON/ REPORTING	S51 INTERNAL PUBLICATIONS	V11 SECTION/DEPART-MENT MGMT/ADMIN
S12 RECORDS MANAGE-MENT PROJECTS	S52 INTERNAL COMMUNI-CATIONS	V15 BANK MGMT/ ADMINISTRATION
S21 CORPORATE ADMIN SERVICES	S53 EXTERNAL COMMS SERVICES & POLICY	V21 ANNUAL/STATUTORY LEAVE
S22 COMMS/DISTRIBU-TION SERVICES	S61 PHYSICAL SECURITY	V23 SICK LEAVE
S23 SUPPLIES/ INVENTORY MGMT	S62 CIVIL DEFENCE	V25 DISCRETIONARY LEAVE
S24 LIBRARY/ARCHIVES	S71 GENERAL LEDGER PROCESSING	V33 UNDEFINED/ UNASSIGNABLE
S25 CATERING SERVICES	S72 RECEIPTS AND PAYMENTS	V41 GENERAL TRAINING
S31 HR CONSULTANCY SERVICES	S73 MANAGEMENT REPORTS	V42 MANAGEMENT TRAINING
S32 PERSONNEL DATA MANAGEMENT	S74 COSTING	V43 TECHNICAL TRAINING
S33 WELFARE/COUNSEL-LING SERVICES	S75 PLANNING & BUDGET SUPPORT	V45 PROFESSIONAL AND TECHNICAL READING
S34 PAYROLL	S81 INTERNAL AUDITING	V61 BARGAINING AGENT ACTIVITIES
S35 SUPERANNUATION FUND	S91 REGISTRY AGENCY SERVICES	
S41 CHARGEABLE COMPUTER SERVICES	S92 DEVELOPMENT PROJECTS	
S42 NON-CHARGEABLE COMPUTER SERVICES		
S43 COMPUTER DEVELOP-MENT PROJECTS		
S44 INFO SYSTEMS PLANNING		
S45 COMPUTER SECURITY		

Statement of Cost of Services for 15 months ended June 30, 1993 1/

(In thousands of New Zealand dollars)

Functions	Operating Income	Operating Expenses	Operating Surplus (Deficit)		
	Actual 1993	Actual 1993	Actual 1993	Budget 1993	Actual 1992
Monetary policy formulation	159	6,710	(6,551)	(7,060)	(5,112)
Market operations	53,826	4,171	49,655	23,627	130,870
Financial system oversight	2,549	4,812	(2,263)	(2,107)	(998)
Currency operations	119,539	22,382	97,157	114,858	91,841
Foreign reserves management	(4,664)	3,321	(7,985)	(25,591)	(29,777)
Banking services	2,998	1,982	1,016	94	1,404
Overseas Investment Commission secretariat	2	766	(764)	(785)	(788)
Public information services	...	...	...	...	(1,064)
Other outputs	--	766	(766)	(750)	(496)
Abnormal items	--	--	--	--	160
Total for functions within funding agreement	**174,409**	**44,910**	**129,499**	**102,286**	**186,040**
Registry services	8,650	7,687	963	200	636
Surplus available for appropriation			**130,462**	**102,486**	**186,676**

Source: Reserve Bank of New Zealand, Annual Report, 1993.

1/ Because of a change in balance date, the RBNZ had a 15-month financial year in 1992/93. Comparative figures for 1992 are for a 12-month period only.

Statement of Income and Expenditure for the 15 Months Ended June 30, 1993 1/

(In thousands of New Zealand dollars)

	1993		1992
	Actual	**Budget**	**Actual**
Income from financial assets	653,814	601,615	709,728
Expenses on serviced liabilities	486,253	462,629	487,015
Net investment income	**167,561**	**138,986**	**222,713**
Other income	**15,498**	**14,968**	**13,190**
Total operating income:	**183,059**	**153,954**	**235,903**
Operating expenses:			
Personnel	23,917	24,725	21,167
Administration	2,485	2,719	2,187
Asset management	7,763	8,231	8,088
New currency issues	11,014	8,978	10,934 6,695
Other	6,935	6,815	(160)
Abnormal/extraordinary items	--	--	
Total operating expenses:	**52,114**	**51,468**	**48,911**
Operating surplus:	**130,945**	**102,486**	**186,992**
Taxation for current year	483	--	316
Surplus available for appropriation	**130,462**	**102,486**	**186,676**
Appropriations:			
Transfer to General Reserve	12,753	--	14,284
Provision for Transfer of surplus	117,709	--	172,392
Total appropriations:	**130,462**	**--**	**186,676**

Source: Reserve Bank of New Zealand, Annual Report, 1993.

1/ Because of a change in balance date, the RBNZ had a 15-month financial year in 1992/93. Comparative figures for 1992 are for a 12-month period only.

Budgeted Cost of Services for the 12 Months Ending June 30, 1994 1/

(In thousands of New Zealand dollars)

	Operating income Budgeted	Operating income Actual (12 months)	Operating expenses Budgeted	Operating expenses Actual (12 months)	Operating surplus (deficit) Budgeted	Operating surplus (deficit) Actual (12 months)
Function	**1994**	**1993**	**1994**	**1993**	**1994**	**1993**
Monetary policy formulation	98	127	5,968	5,367	(5,870)	(5,240)
Market operations	25,045	43,061	3,776	3,336	21,269	39,711
Financial system oversight	1,928	2,039	3,827	3,850	(1,899)	(1,811)
Currency operations	107,807	95,631	16,826	17,906	90,981	77,725
Foreign reserves management	(9,700)	(3,731)	2,906	2,657	(12,606)	(6,388)
Banking services	2,911	2,398	1,000	1,586	1,911	812
Overseas Investment Commission	--	2	617	613	-617	-611
Other outputs	--	--	693	613	(693)	(613)
Total for functions within funding agreement	128,089	139,527	35,613	35,928	92,476	103,585
Registry services (including tax)	6,410	6,920	5,630*	6,149*	780	785
Total for Bank:	134,499	146,447	41,243	42,077	93,256	104,370

Source: Reserve Bank of New Zealand, Annual Report, 1993.

1/ The RBNZ publishes budgets for the coming year in each Annual Report.

Budgeted Income and Expenditure for the 12 Months Ending June 30, 1994 1/

(In thousands of New Zealand dollars)

	Budget 1994 (12 months)	Actual 1993 (12 months)
Income from financial assets	416,781	523,051
Expenses serviced liabilities	294,219	389,002
Net investment income	122,562	134,049
Other income	11,937	12,398
Total operating income:	**134,499**	**146,447**
Operating expenses:		
Personnel	18,018	19,134
Administration	2,016	1,988
Asset management	8,306	6,210
New currency issues	6,361	8,811
Other	6,158	5,548
Total operating expenses	**40,859**	**41,691**
Operating surplus before taxation	**93,640**	**104,756**
Taxation	384	386
Operating surplus after taxation	**93,256**	**104,370**

Source: Reserve Bank of New Zealand, Annual Report, 1993.
1/ The RBNZ publishes budgets for the coming year in each Annual Report.

Reserve Bank of New Zealand Operating Expenses, 1990-94

(In millions of New Zealand dollars)

	1990	1991	1992	1993 1/	1994 (Budget)
Monetary policy formulation	4.6	4.8	5.1	5.4	6.0
Market operations	5.7	4.1	3.6	3.3	3.8
Financial system oversight	4.7	3.9	3.6	3.8	3.8
Currency operations	26.0	28.9	24.5	17.9	16.8
Foreign reserves management	3.4	2.5	2.2	2.7	2.9
Banking services	2.2	1.9	1.8	1.6	1.0
Registry services	6.2	6.5	6.2	6.1	5.6
Overseas Investment Commission secretariat	1.0	0.8	0.8	0.6	0.6
Other outputs	1.1	1.0	0.5	0.6	0.7
Public information services 2/	2.3	1.2	1.1	--	--
Abnormal/extraordinary items 3/	8.2	0.9	(0.3)	--	--
Total	**65.4**	**56.5**	**49.2**	**42.1**	**41.2**

1/ Fifteen-month actuals converted to 12-month equivalents.
2/ The cost of public information services is now reported within the functions to which the expenditure relates, predominantly monetary policy formulation.
3/ These primarily represent one-off costs arising from the RBNZ's acquisition of coin issue responsibilities.