MONETARY POLICY: THE NEW ZEALAND EXPERIENCE 1985-1990

This article reproduces a paper prepared by Grant Spencer, Chief Manager of the Reserve Bank's Economic Department, for presentation to the 1990 Sesquicentennial Conference of the New Zealand Association of Economists, held at Auckland, August 1990.

INTRODUCTION

Following New Zealand's change of Government in July 1984, a major programme of economic reform was undertaken. The programme was based on a strategy of financial and economic liberalisation, supported by macro policies intended to provide a stable financial environment. Monetary policy was assigned directly to the task of permanently lowering inflation which had run persistently above the OECD average over the previous decade. This paper reviews the disinflation experience over 1985-1990, tracing the main monetary policy developments in the context of the broader policy environment, the changing nature of the transmission mechanism and changes in monetary policy operating procedures. The conclusion of the paper attempts to summarise the main lessons that have been learnt from the monetary policy experience over the period.

INFLATION OBJECTIVES AND PERFORMANCE

While monetary policy has been consistently aimed at lowering inflation since mid-1984, the Government's inflation objectives have become increasingly specific as inflation has fallen. Initially, the aim was to achieve inflation at or below New Zealand's major trading partners.[1] Then, as inflation fell over late 1987 and early 1988, Government saw the need to reinforce its commitment to a firm monetary policy. The Minister of Finance was concerned to ensure that the momentum of economic reform was maintained in the Government's second term of office and a monetary policy objective of price stability by the early 1990s was seen as consistent with this broader strategy.[2]

The more specific price stability objective, later defined as 0-2 per cent increases in the CPI, was also seen to be consistent with the new governing legislation for the Reserve Bank that was taking shape in early 1988. In line with other public sector reforms, the new legislation was intended to clarify the objectives of monetary policy and improve the accountability of the Reserve Bank for achieving them.[3] In the context of what monetary policy can achieve in the long term, and consistent with the assignment of monetary policy since 1984, Government established in the draft legislation that price level stability would be the sole goal of monetary policy.

With the passing of the Reserve Bank Act in December 1989, specific accountability provisions within the Act have required the Governor and the Minister of Finance to

1 Budget Statement 1986, page 15.
2 Various press releases by Minister of Finance in early April 1988 confirmed this target.
3 For a full description of Reserve Bank Act (1989), see RBNZ *Bulletin* March 1990.

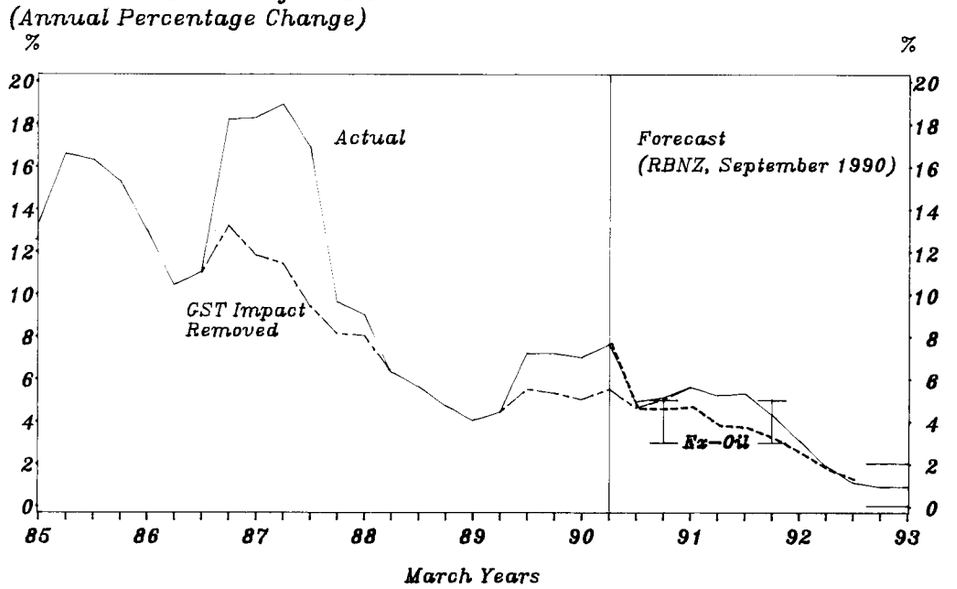
formally agree on what they mean by 'price stability'. Accordingly, the Government and Bank are now committed to achieving 0-2 per cent annual increases in the CPI by December 1992.[4] A further accountability provision of the Act requires the Governor to make - and publish - six monthly policy statements to Parliament. In the first of these statements (April 1990) the Bank set out intermediate inflation target ranges that it intended to achieve during the transition to the final objective. Subsequently, in the Bank's second monetary policy statement (reproduced in this edition of the *Reserve Bank Bulletin*), the intermediate target range for 1991 was revised upwards to allow for the first round effects of the recent oil-shock; the final target, however, remained unaltered. The Bank's most recent (September) inflation forecasts are shown in relation to the intermediate and final targets in figure 1.

In terms of the actual inflation performance to date, figure 1 shows that CPI inflation (adjusted for direct effects from the Goods and Services Tax (GST)) was reduced from a peak of 16 per cent in June 1985 to a low of 4 per cent in March 1989. Temporary setbacks occurred in late 1986-early 1987 and again in mid 1989. On both occasions, GST increases added to demand pressures and inflation expectations. In 1986, the GST effect was reinforced by an unintended easing of monetary policy, the domestic stock market boom and the lagged effects of a large wage round in 1985/86. In 1989 the reversal was much less severe, although the GST effect was reinforced by strong growth in food prices, arising both from poor local growing conditions and booming export commodity prices.

With significant 'one-off' inflationary effects from central and local government charges in mid 1990, and the effects of recent oil price increases expected to flow

Figure 1

Consumers Price Inflation
(Annual Percentage Change)



4 The Policy Targets Agreement was signed 2 March 1990.

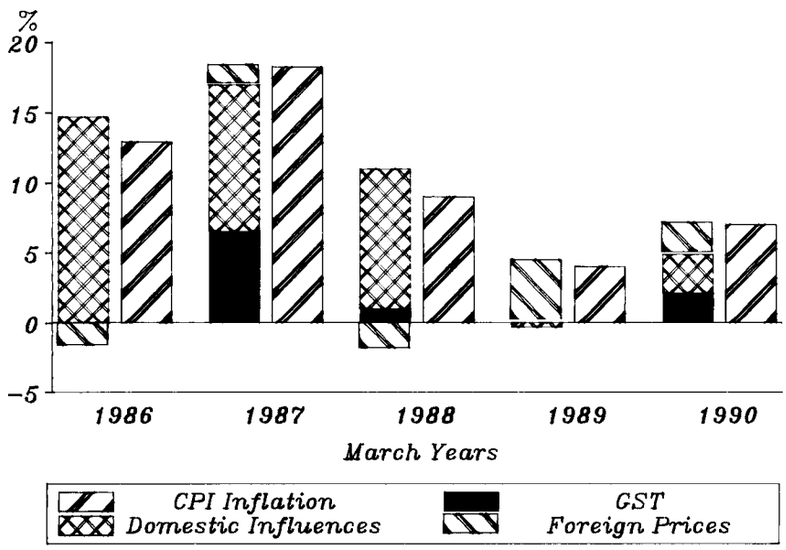
through over the next several quarters, the Bank will again find that 'one-off' factors prevent a further reduction in (ex-GST) CPI inflation over the coming year. The policy settings required to achieve the final 0-2 per cent target in 1992 will depend very much on wage setting behaviour in relation to prospective inflation and productivity trends over the next two years. In particular, it will depend on the willingness of wage setters to accept the oil-shock as an unavoidable reduction in national income. The main risks and tradeoffs involved in this transition are discussed in the Bank's September *Monetary Policy Statement*.

MONETARY POLICY TRANSMISSION

The overall downward trend in CPI inflation over 1985-1990 disguises some important shifts that occurred between the main channels of monetary policy transmission. In the early (pre-crash) period a large part of the disinflationary pressure came through a strong exchange rate and low traded goods prices, while prices in asset markets and non-traded (including protected) sectors continued to rise strongly. In the post-crash period, on the other hand, the relative contributions were reversed as the fortunes of the traded goods sector improved through a lower exchange rate and improved export prices, and the previously protected and non-traded sectors were brought under considerable pressure. This shift in the relative contributions to lower inflation is seen in figure 2 where GST-exclusive inflation is broken down into domestic and foreign influences.[5] The causes of the shift between transmission channels must be considered in the context of the major policy and external developments during the pre and post crash periods.

Figure 2

Relative Contributions to CPI inflation
(Year to March Percent Changes)



5 Domestic influences include unit labour costs, margins and house prices; foreign influences include the exchange rate, export prices and import prices. The breakdown is based on Reserve Bank econometric model equations where a 10 per cent change in foreign prices will normally lead to a 4.8 per cent change in consumer prices, assuming no flow-on into wages.

Pre-Crash Period

The monetary policy experience from the time of the float in March 1985 through to September 1987 was affected by a number of dominant factors which, when combined together, tended to focus monetary policy pressure on the traded goods sector. These included:

- the initial catch up effects following removal of the 1982-1984 prices and wages freeze and, in particular, the large 20 per cent wage round in 1985/86;

- the interaction of a tight monetary policy and financial deregulation; and

- the world environment of booming equity markets and weak pastoral commodity prices.

According to the standard Dornbusch open-economy model, a tightening of monetary policy causes a temporary overshoot in the exchange rate due to the faster speed of adjustment in financial markets relative to real goods and labour markets. In 1985, this effect of a tight monetary policy was accentuated by the impact of the financial deregulation that occurred from mid 1984 onwards. The shift from quantity to price based credit rationing meant that both individuals and businesses became free to adopt preferred higher levels of debt. The resulting (temporary) decline in private savings more than offset the improvement in Government's savings performance, thus leading to a net capital inflow and further upward pressure on the exchange rate.

At the same time as firms and households were gaining freer (but more expensive) access to credit, rapid growth in previously repressed sectors - such as the financial and business services industries - was putting upward pressure on the equity and property markets. With foreign property and equity markets also booming, the combined effect was to push the New Zealand equity market up by 160 per cent over 1985 and 1986. In such an environment, with investment analysts confidently predicting further market gains, investors failed to be deterred by historically high interest rates in the 20-25 per cent range - perhaps not surprising given the tax deductibility of nominal interest by corporates and the absence of any capital gains tax. Nor were many banks daunted by the risks of funding an asset market boom. Some locally based New Zealand banks in particular were willing lenders to the 'entrepreneurial' sector as they attempted to maintain market share in the face of increasing competition from new and existing foreign banks.

In addition to the pressure coming from booming asset markets, the disinflation process was hampered by the 20 per cent 'catch-up' wage round in late 1985 early 1986. While there was no way that the exposed sectors of the economy could afford such wage increases, the continuation of cost-plus pricing in the protected sectors of the economy - combined with a heavily centralised pay fixing system - meant they had little choice in the matter. The result was a further inflationary stimulus and an inevitable decline in the profitability of businesses selling into open competitive markets.

While recognising the contrasting effects that monetary policy was having on the exposed and protected sectors of the economy, there was little that the Reserve Bank could do to redress the imbalance apart from continuing its calls for a more rapid completion of the liberalisation process, particularly in the areas of tariff reductions and

labour market deregulation. Given the considerable stresses on the primary export sector in particular - coming from weak pastoral commodity prices, the removal of subsidies and falling land prices as well as high interest and exchange rates - there was no real scope for monetary policy to be further tightened, despite the obvious inflationary pressures being generated in the equity and property markets.

Indeed, the very weak state of the export sector probably contributed (subconsciously) to the unintended slippage in monetary policy that occurred in the first half of 1986 as overall economic activity was also easing. In the event, the interest rate decline turned out to be premature as continuing asset price growth and the introduction of GST[6] led to a resurgence of domestic demand through mid 1986. Subsequently, the monetary policy stance was tightened through the latter part of 1986 and into early 1987.

A clear implication from the monetary policy experience over 1985-1987 is that a greater effort should have been made to open up the real goods and labour markets at an early stage of the deregulation process. This would have allowed monetary policy pressure to be spread more evenly across the economy. More specifically, it would have permitted a more effective constraint on the excessive growth in asset markets over the period - and a less severe constraint on the exposed export industries, which were already experiencing a downturn.

In light of the unexpected strength of activity in 1986, a further lesson from the period is the potentially potent influence of wealth effects and inflation expectations on domestic demand. Following the 1986 experience, the Bank was very careful only to allow short term interest rates to ease during 1987/88 when clear evidence was available of falling inflation expectations; this effectively meant that bond rates were required to lead short term rates down. Unfortunately, the evidence from bond rates and from survey information tells us that inflation expectations have fallen only slowly and with a considerable lag behind actual inflation reductions. This is particularly true of inflation expectations in the household sector.

While it is generally accepted that an even-handed approach to deregulation will give the best long term results, there is clearly room for debate over the optimal sequencing of reforms during 1984-1987 when it was not possible politically to move ahead rapidly on all fronts. In the labour market, for example, the very damaging effects of the 1985 wage round must raise doubts as to the wisdom of Government withdrawing from the wage setting arena while the centralised wage bargaining process remained immune to competitive pressures. The eventual unemployment costs of the disinflation policy could no doubt have been substantially reduced had nominal and real wage growth been contained in that early period.

More fundamentally, however, it has often been argued that financial deregulation should have been delayed until such time as more progress was made in freeing up the real sector. Such an approach would no doubt have allowed a less disruptive pattern of adjustment once financial deregulation was introduced, particularly if inflation and macro-imbalances had been brought under control beforehand. However, there are two major problems with this policy prescription - at least in the context of the 1985-1987 New Zealand experience.

First, the need to establish an effective discretionary monetary policy required much of

6 A 10 per cent value added tax, introduced 1 October 1986.

the financial sector to be deregulated. In particular, effective control over the reserves base of the banking system required interest rates and the exchange rate to be freed up. A floating exchange rate in turn required the removal of capital controls to ensure an efficient foreign exchange market. Thus, while the literature on economic liberalisation[7] suggests that financial deregulation should be preceded by real sector deregulation which should in turn be preceded by macro-stability, the achievement of macro-stability in the New Zealand (1984/85) environment required a rapid and sizeable dose of financial deregulation.

Second, the political environment surrounding the economic liberalisation programme in 1984/85 contained a considerable element of urgency. In order for the Government to build a credible programme of reform it was important to establish an early momentum and this would not have been possible if any one part of the reform process had been put on hold, pending progress in some other part. Such an approach would have created incentives for groups/sectors to lobby against the whole reform process. Under the strategy actually adopted, the more exposed sectors were given strong incentives to support more rapid deregulation in the remaining protected sectors.

Post-Crash Period

Following the renewed tightening of monetary policy in late 1986, significant reductions in inflation and domestic activity began to show through by September quarter 1987 (figures 1 and 5). The disinflation process then maintained its momentum through into 1988 as the effects of the sharemarket crash were felt throughout the corporate sector. In contrast to the pre-crash period, as seen in figure 2, the bulk of disinflationary pressure over 1988 and 1989 came from reductions in domestic as opposed to foreign cost pressures. This shift in emphasis resulted from three main factors:

- monetary policy in New Zealand remained firm while most of the major countries eased substantially;

- the previously buoyant and/or protected sectors went through a major shakeout; and

- strengthening export commodity prices over 1988-1989 and a sharp (10 per cent) exchange rate depreciation in mid-1988.

While the Reserve Bank eased policy somewhat in early November 1987, it was concerned to maintain downward pressure on inflation at a time when progress on disinflation was only just beginning to show through. With an inflation rate still well above the major economies, New Zealand could less afford to run an easy monetary policy. As it turned out, the more relaxed stance adopted by New Zealand's trading partners made it easier for New Zealand policy to stand firm. The growth in world demand and commodity prices through 1988-1989 meant that New Zealand's previously stretched export sector began to see improvement while the domestic sectors came under pressure.

Of course, as firms began to fail in the investment and property sectors, calls were made

7 e.g. Edwards S., "The Order of Liberalisation of the External Sector in Developing Countries", Essays in International Finance, Princeton, December 1984; or Kreuger A.O., "Problems of Liberalisation", World Economic Growth, San Francisco, Institute of Contemporary Studies/ICP Press, 1984.

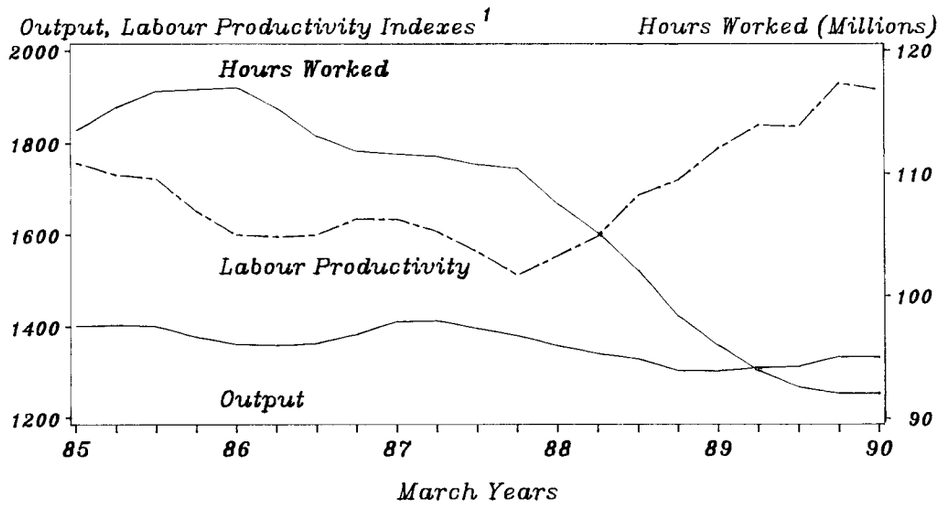
for a softer monetary policy in order to cushion the impact of some very large debt positions. However, the Bank and Government took the view that the majority of 'entrepreneurial' failures were the inevitable result of overambitious balance sheet expansions during the boom period. Also, in attempting to maintain a credible commitment to its monetary policy objectives, the Bank was very reluctant to renege on its earlier warnings that excessive borrowing would not be bailed out once asset markets turned down.

While the shakeout of the investment and financial sectors followed fairly directly from the accentuated boom-and-bust cycle in the property and equity markets, the factors coming to bear on the manufacturing sector were more complex. In the pre-crash period, the pressures on 'exposed' parts of the manufacturing sector arising from reduced rates of import protection and the strong exchange rates had been offset by the continuing buoyancy of domestic demand. Following the crash, however, manufacturers were faced with increased foreign competition, continuing low returns in export markets **and** a rapidly weakening domestic economy. The result was a period of major rationalisation involving reductions in employment well in excess of output.

Labour productivity in manufacturing grew strongly, by 28 per cent through 1988 and 1989 (figure 3), making a major contribution to the downward trend in overall unit labour cost inflation (figure 4). Contributions to productivity growth also came from the services sector with public sector restructuring gaining momentum and rationalisation in the transport, communications and financial sectors.

Figure 3

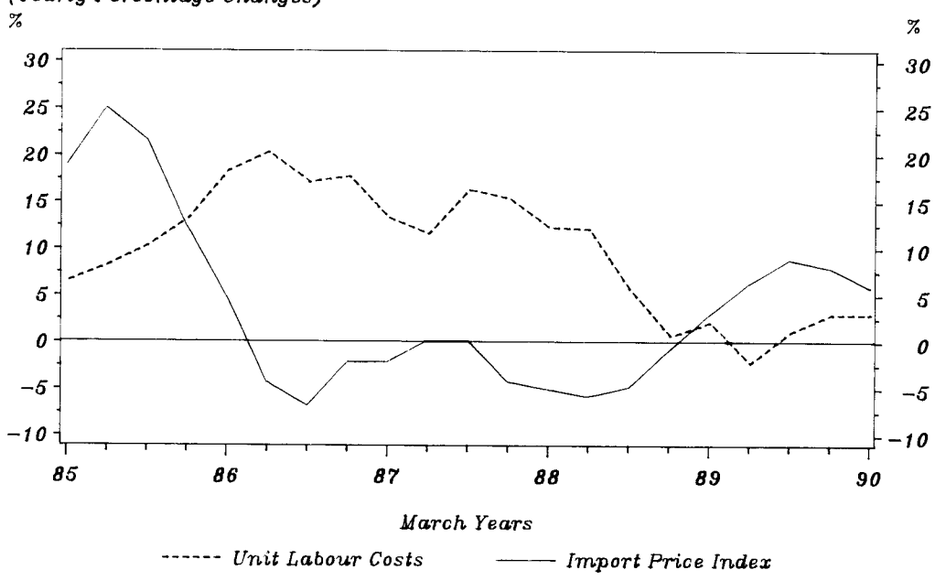
Trends in the Manufacturing Sector



1. Bases: March 1978=1000

Figure 4

Influences on Inflation
(Yearly Percentage Changes)



The contrasting behaviour in both manufacturing and services over the pre and post-crash periods suggests that measures to increase competition in any particular sector may be slow to deliver significant productivity gains - and hence cost savings - until such time as that sector experiences a downturn in activity.

In the context of the transmission of monetary policy, the other major development in the post-crash period was the easing of policy in August 1988 that led to a 10 per cent fall in trade weighted exchange rate index (TWI). The decision to ease policy was based on the significant progress that had been made in reducing inflation over the year to June 1988 and the clear signs of weakness in domestic activity that were evident in the first half of 1988. The Bank was particularly aware of the stresses coming to bear on the manufacturing sector as a result of falling levels of protection, the decline in domestic demand, and the renewed strength in the real exchange rate (figure 6). The Bank considered that some unwinding of the previous upward exchange rate pressure was inevitable and indeed desirable given the weak condition of the traded goods sector.

The direct import price effects of the 1988 depreciation are seen in figure 4. Simulations on the RBNZ model suggest that the flow through to producer and consumer prices was consistent with past experience, the 10 per cent depreciation adding about 4.5 per cent to CPI inflation over the following year. The real exchange rate (figure 6) nevertheless fell by 10 per cent through late 1988; due to the strong negative impact of unit labour cost growth over this period. In other words, ULC gains contributed something like 4.5 per cent of the real depreciation while the nominal exchange rate adjustment contributed the remaining 5-6 per cent.

Figure 5

Gross Domestic Product
(Annual Average Percent Changes)

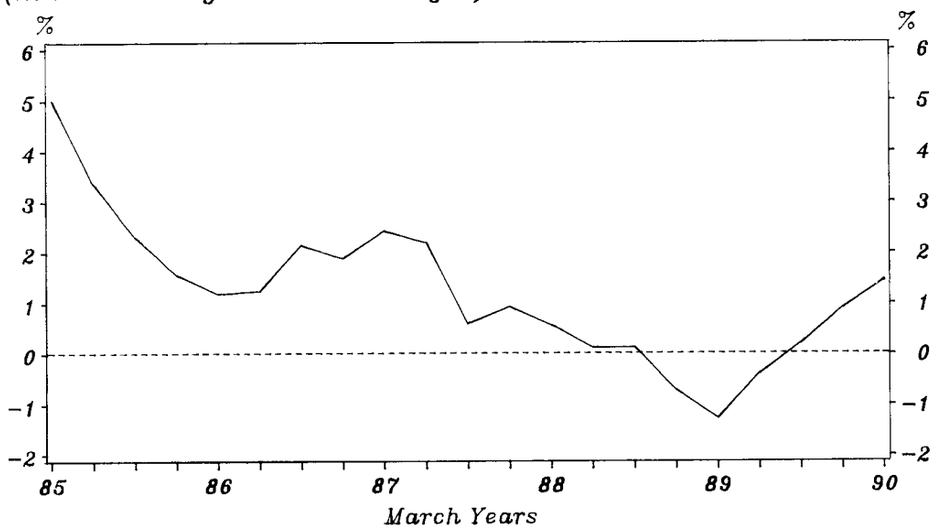
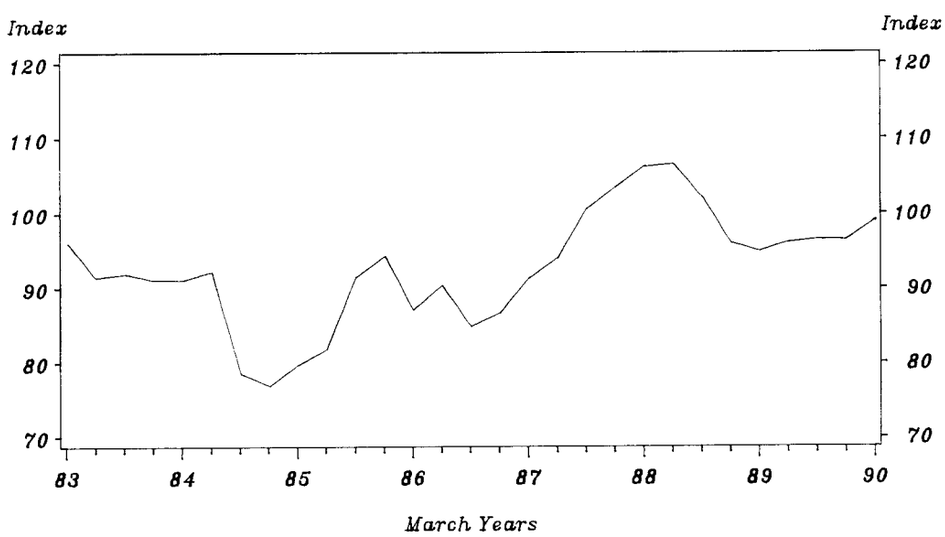


Figure 6

Real Exchange Rate Index
(June 1979 =·100)



MONETARY POLICY INDICATORS

Following the float of the New Zealand dollar in March 1985, the Reserve Bank achieved discretionary control over the monetary base of the New Zealand financial system. The Bank was therefore in a position, for the first time, to effectively pursue targets for the money and/or credit aggregates; a strategy which had been continually frustrated under the 'adjustable-peg' exchange rate regime. However, it was readily apparent at the time that the effects of financial deregulation would hinder any such targeting strategy by severely distorting the underlying relationships - between the aggregates and the ultimate inflation target and also between the aggregates and the policy instruments. As discovered by the monetary authorities in most of the major countries, the unsettling effects of financial deregulation meant that no one monetary indicator could be relied on to guide monetary policy.[8] Rather, it was necessary to assess monetary conditions on the basis of a range of indicators; sometimes called the check-list approach.

A check-list approach has been followed in New Zealand from 1985 through to the present. The indicators considered have been:

- exchange rate;
- level and structure of interest rates;
- growth of money and credit;
- inflation expectations; and
- trends in the real economy

The relative emphasis between interest rates and the exchange rate has shifted over time, but these two principal indicators together have played a far greater role in guiding policy over 1985-1990 than the money and credit aggregates. As seen in figure 9, the major distorting effects of reintermediation[9] on Broad Money (M3) and Private Sector Credit (PSC) occurred over 1985/86. However, ongoing changes in the structure of the financial sector and shifts in overseas borrowing/lending behaviour have continued to cloud the interpretation of short term movements in the aggregates. The Bank nevertheless recognises that the longer term trends in money and credit growth still contain useful information about trends in nominal income and inflation.[10] The latter two indicators on the above list have been used primarily to condition the Bank's assessment of the first three indicators. In particular, shifts in inflation expectations have an important bearing on the interpretation of - and hence policy responses to - interest rate trends.

Over the period from March 1985 through late 1987, the Bank's assessment of monetary conditions tended to focus on the yield gap; the difference between the rates on 90 day

8 Since the early 1980s, most of the major countries have continued to set formal monetary targets, but have often found good reasons for departing from them.

9 Deregulation allowed banks to compete effectively for funds, thus causing a rediversion of savings back from the non-banks to the banks.

10 For evidence on the relationship between nominal income and the money and credit aggregates, see for example Cruse P.F.J., "Monetary Aggregates as Targets for Monetary Policy", RBNZ Working Paper W90/1, March 1990.

bank bills and 5 year government securities. However, while an inverse yield curve was considered necessary to reinforce expectations of falling inflation and hence falling interest rates, the range of accepted variation in the yield gap for any given policy stance was quite wide - as reflected in the path of the yield gap (figure 8). With the exchange rate playing a secondary role as an indicator, it too was allowed to move through a wide range of variation (figure 7). Considerable uncertainties surrounded the operation and transmission of the new monetary policy regime within the newly deregulated financial system. Consequently, the Bank tended only to adjust policy settings when the yield gap and the exchange rate pointed clearly to a situation of excessive ease or tightness. This increase in interest rate and exchange rate volatility was also experienced by the major economies as they disinflated during the early 1980's.

Following the fall in the exchange rate in August/September 1988, a conscious decision was made by the Bank to allow less variation in both interest rates and the exchange rate. In recession, the real economy had become a lot more sensitive to interest rate and exchange rate increases than in earlier years. Also, after the initial 10 per cent depreciation, the inflation outlook had become more exposed to exchange rate decreases. Apart from these concerns about the direct effects of variations in interest and exchange rates, there was also a shift at this time towards giving greater emphasis to the exchange rate in monetary policy formulation. It was becoming increasingly apparent through 1988 that the information content of the yield gap as a monetary indicator was diminishing relative to the exchange rate. In particular, the increasing volatility of the risk premium in bond rates was introducing noise into the yield gap, therefore reducing its worth as an indicator of policy pressure on real short term interest rates. In addition, the evidence from the 1985-1987 period was suggesting that a large proportion of the

Figure 7

Monthly Average Nominal Exchange Rate & 90 Day Bill Rate.

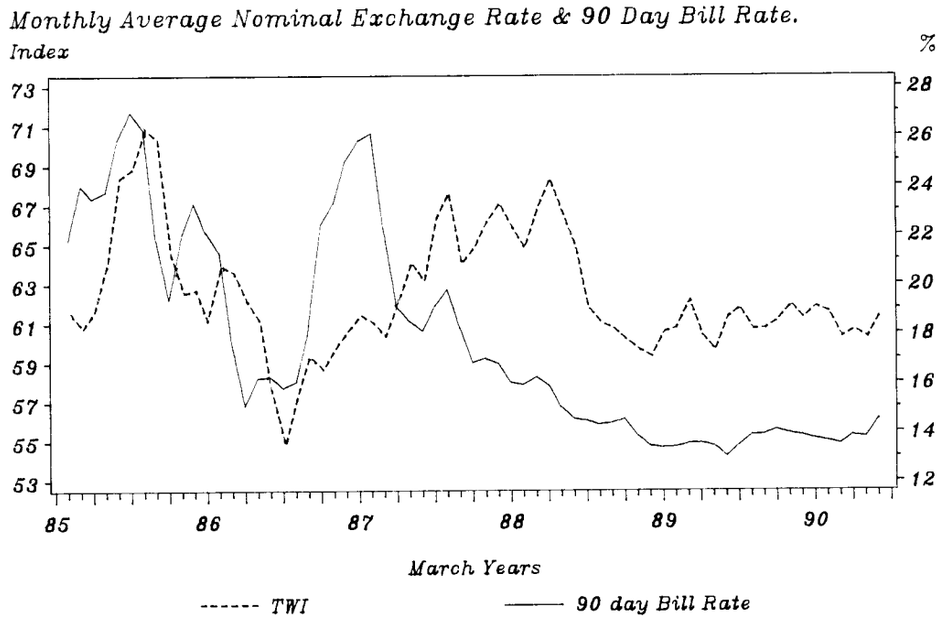
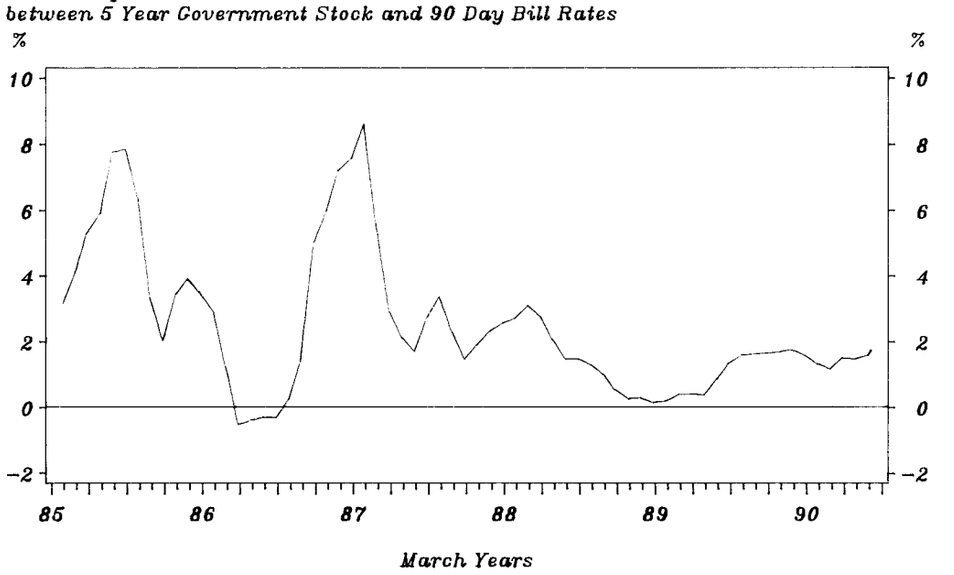


Figure 8

Yield Gap
between 5 Year Government Stock and 90 Day Bill Rates



month-to-month changes in the exchange rate were reflecting shifts in monetary conditions rather than economic 'fundamentals'.

In practical terms, the shift in approach to monetary policy meant:

(i) a greater willingness to adjust policy in order to offset movements in the exchange rate, as measured by the TWI; and

(ii) a lower tolerance of movements in the yield gap for any given exchange rate level.

Combined with a period of relative stability in New Zealand financial markets generally, the shift in policy approach has resulted in an extended period of comparative exchange rate stability[11] (figure 7). It is important to emphasise, however, that the Bank is not attempting to run a fixed exchange rate band. In line with the original aims of the float, the Bank recognises that nominal exchange rate flexibility must be retained in order to facilitate real adjustment to the more significant external shocks facing New Zealand. Indeed, such flexibility will also be necessary to contain the inflationary effects of 'favourable' external shocks.

MONETARY CONTROL MECHANISM

While interest rates and the exchange rate are the principal indicators that have guided monetary policy in New Zealand, the monetary **control mechanism**, since 1985, has been centred on quantities rather than prices. The Bank operates a daily quantity target

11 On a within-month basis, volatility of the NZ$ has been below the average of the major currencies since August 1988. Prior to that it was one of the most volatile of the freely traded currencies.

for settlement cash balances held by banks at the Reserve Bank. Settlement cash is used by banks for end of day settlement with each other and with government. Should the banks run short of cash during settlement, further cash is available from the Bank by discounting Reserve Bank bills of short maturity at a penalty margin - currently set at 1.5 per cent - above market rates. The Bank restricts the supply of both cash and Reserve Bank bills and will not supply cash during settlement via any other mechanism. Consequently, demand is generated for banks to hold a buffer of Reserve Bank bills and cash against unexpected liquidity shortfalls.

Under this system, a change in the monetary policy stance can be achieved by changes to any or all of the settlement cash target, the PL target, or the discount margin. Less overt signals can also be transmitted to the market by changes to the maturity and instrument composition of open market operations. The most common medium for explicit policy adjustments has been the settlement cash target.

Evolution of Framework

The concept of Primary Liquidity was first introduced in late 1984 when the discount window was closed to all government securities over six months to maturity. The aim was then to fully fund net injections into PL arising from public sector and foreign exchange flows, through the issue of long-term government securities. The flow supply of government securities would be set by the full-funding rule, and interest rates would be market determined.

While it was recognised that the transmission of monetary policy would operate primarily through interest rates, it was hoped that a stable relationship might eventually

Figure 9

M3 and PSC
Annual Percentage Changes

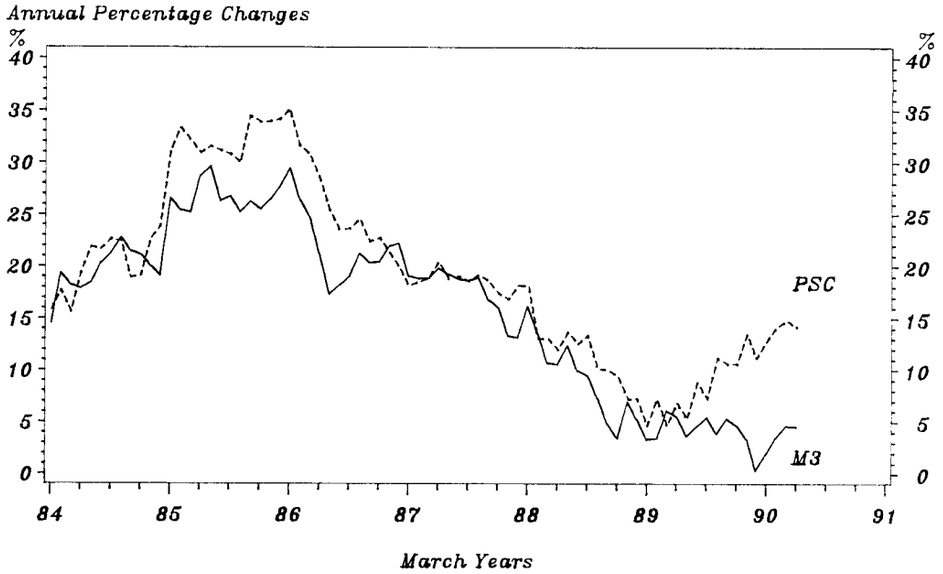
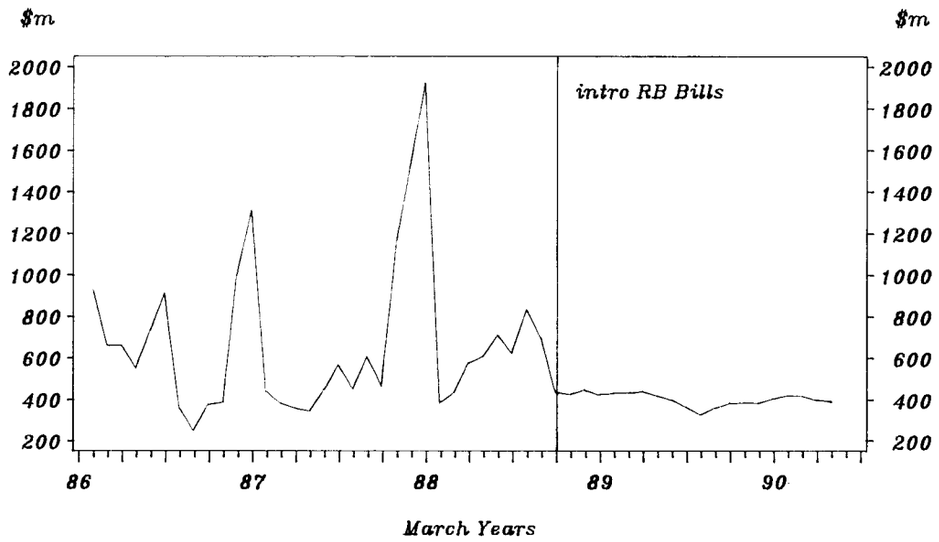


Figure 10

Primary Liquidity
(monthly averages)



emerge between the quantity of PL and the broader money and credit aggregates. In practice, it soon became clear that such stable relationships would not be forthcoming; first, because of the major distorting effects of financial deregulation; and second, because of the strong seasonal pattern in PL[12] (cf. figure 10). However, a quantity-based control mechanism was nevertheless retained - albeit in a more flexible form - for reasons discussed below.

The lesson learned at that early stage was that the full funding of liquidity flows was necessary but not sufficient for effective monetary control. Full funding ensured a stable long-term trend in end-of-year PL levels, but both seasonal and structural shifts in the demand for PL meant:

(i) that PL was not an appropriate instrument for short-term monetary control; and

(ii) that the appropriate trend level of PL would need to be continually reassessed in the light of monetary indicators.

Following the float of the New Zealand dollar in March 1985 it rapidly became apparent that the quantity of settlement cash balances - i.e. the cash component of PL - would be the key instrument for short-term monetary control. The float ensured that settlement cash came under direct control of the Reserve Bank, and the sharp cash squeeze following the float revealed that the demand for settlement cash would remain highly

12 PL was highly seasonal because it mainly consisted of Treasury bills which are used primarily for financing 'lumpy' tax flows.

inelastic provided its own rate remained below market.[13] In this environment the Bank gained considerable leverage over short term interest rates via its daily control of settlement cash balances.

In the initial period following the float, the Bank operated a policy that allowed considerable interest rate volatility, with open market operations only undertaken when liquidity projections indicated large movements in cash balances. By late 1985 it was apparent that liquidity management would be made more efficient - and monetary policy intentions more transparent - through a more active approach to policy. The options were to target more closely either call interest rates or settlement cash balances; the choice was the latter. A settlement cash target was set and targeted daily from early 1986.[14] With target and daily liquidity projections being published, the Bank's cash management operations became predictable, and clearly distinguishable from policy changes which would generally be signalled by changes to the cash target.

The choice to adopt a short-term quantity rather than interest rate target was based on two main factors: first, a cash target was seen to be consistent with the full-funding principle where Government was setting the quantity of public borrowing and long-term interest rates were market determined. Second, the Bank wanted to avoid the potential problem, often experienced under interest rate targeting regimes, of unintentionally accommodating inflationary increases in the demand for cash. The tendency with any operating target is to leave the target fixed until there is clear evidence to support a change. This is particularly so when the change involves a (politically unpopular) increase in interest rates. In the 1985/86 environment of high inflation and rapid structural change, the Bank was eager to minimise this risk of not responding to new inflationary pressures. Of course the cash target approach was less well equipped to guard against a structural decline in the demand for cash, as occurred during the unintended easing of policy in 1986. However, as recently as late 1989, the cash target approach facilitated a rapid interest rate response to renewed (if temporary) inflationary pressures.

The monetary policy operating mechanism, based on a publicly announced daily cash target, has remained essentially unchanged[15] from early 1986 through to the present. The only further change of note occurred in late 1988 when Reserve Bank bills replaced Treasury bills as the sole discountable instrument.[16] The redefinition of PL resulted in a more stable (non-seasonal) path for PL, as seen in figure 10. Consequently, for the first time, PL became available as an effective instrument for transparent monetary policy adjustments. To date, however, while the newly defined PL has been adjusted to accommodate shifts in demand, it has not been used to initiate changes in the policy stance. Apart from the desire to remove all seasonality from PL, the change in definition was seen as consistent with Government's intention to achieve a greater separation between monetary policy and Government's debt management and banking operations.

13 From late 1984 to late 1985, the interest on settlement cash was set at 5 per cent per annum. Since late 1985, the return has been set at 65 per cent of short term (7 day) money market rates.

14 Also in early 1986, the definition of PL was altered to include government securities of up to one month to maturity, as opposed to six months previously. This more effectively reduced the seasonality in PL but not to the extent that would allow a more prominent short-term policy role for PL.

15 Of course, while the operating framework has remained unchanged, the monetary policy settings have been changed on several occasions. Furthermore, as discussed in the Monetary Policy Indicators section,. the approach to monetary policy formulation has varied over the period.

16 Reserve Bank bills of 90 days maturity are issued weekly; bills become discountable at 28 days or less to maturity.

Monetary Control and the Crown's Financial Management

As part of its broader reorganisation of the public sector, Government has attempted to clarify the objectives and responsibilities of both Treasury and the Reserve Bank. Furthermore, Government has made a major effort to bring the management of public sector finances up to speed with the private sector. As part of this process, the newly formed Debt Management Office (DMO)[17] has been keen to establish a relationship with the Reserve Bank that more closely parallels that of a large corporate with its principal merchant banking adviser. In particular, its ultimate aim is to control fully all of the Crown's cash and debt management activities, with the Reserve Bank having to compete with other banks for Treasury business. At the same time the Reserve Bank, under its new mandate of greater independence and greater accountability, has also been concerned to establish a clearer delineation of its own functions and its relationship with Treasury/DMO.

The moves to date to more clearly separate the two institutions have included:

- transferral of responsibility for managing long-term domestic debt[18] to DMO, with RBNZ acting as agent and adviser on the stock tender programme a debt management;
- transferral of responsibility for managing the official foreign reserves to RBNZ; consistent with Reserve Bank's role as intervention agency;
- replacement of short Government securities (mainly Treasury bills) by Reserve Bank bills as the sole discountable instrument;
- initiation of the transferral of government department accounts from the Reserve Bank to the private sector[19]; however, the Reserve Bank retains the core public account where all departmental accounts are swept daily;
- a shift to market related pricing on the public account overdraft and on government deposits at RBNZ. It is also intended to introduce charging on the Reserve Bank's provision of banking services.

While the Reserve Bank has fully supported these steps toward a more efficient and transparent allocation of responsibilities between the two organisations, it has retained reservations about a complete separation on the basis that it would undermine the existing monetary control mechanism. There are two key issues involved.

The first issue is the retention of the core public account at the Reserve Bank. The flows between this account and the banks' settlement accounts underpin the demand for settlement cash (and hence PL) by the banks. If DMO were free to move the public account to the private sector, it would become necessary to redesign the monetary control mechanism.

The second issue is the continued (de facto) involvement of the Reserve Bank in Government's short-term debt/cash management which occurs as the mirror image of its management of overall banking system liquidity. While it would be possible for DMO to undertake its own cash management operations, the continued presence of the

17 The DMO has been set up as a branch of Treasury.
18 Treasury has traditionally managed the bulk of foreign public debt.
19 The transactions banking business of Government Departments was won under competitive tender by Westpac Banking Corporation.

public account at the Reserve Bank would cause DMO operations to have an undesirable leveraged effect on the short term money market. Furthermore, with the Reserve Bank continuing to run its own money market operations to manage overall system liquidity, there would be at least some duplication of present operating systems.

There is no doubt that an alternative set of arrangements could be devised that would allow effective monetary control under a clean separation of monetary policy from the Crown's financial management. However, the important question that remains in this area is whether any improvements in the efficiency of Government's cash management would be sufficient to offset the transitional, and possible long term costs arising from a fundamental change to the existing monetary control mechanism.

CONCLUSION

Looking back over the New Zealand monetary policy experience since 1985, a number of lessons have been learnt in respect of the operation and transmission of policy, particularly in the context of financial and economic deregulation. These experiences have affected the ongoing management of monetary policy in New Zealand and, in certain cases, may be relevant for policy makers in other countries. The main conclusions from the discussion may be summarised as follows:

- When combining a disinflationary monetary policy with a programme of financial and economic liberalisation, the New Zealand experience confirms that deregulation of real goods and labour markets should progress as rapidly as possible in order to avoid an excessive concentration of policy pressure on the most exposed sectors of the economy. However, even when progress in parts of the real sector is held up, there may be good reasons to press ahead with financial deregulation. It is certainly apparent that, irrespective of the sequencing of reforms, the liberalisation process will unavoidably generate temporary price distortions as resources flow from previously protected to previously repressed activities.

- Notwithstanding the above, large cost increases arising from the partial deregulation of the labour market may be particularly damaging if allowed to occur during a period of disinflation. In the case of the New Zealand labour market in 1985-86, it may have been preferable for Government to have remained involved in the wage setting process until such time as monetary policy and competition pressures came to be felt on employment and wage setting decisions.

- While deregulation was generally expected to reinforce the disinflation process by increasing competitive pressures on margins, the experience showed that 'booming' sectors presented considerable problems for monetary policy. First, the large differences in expected returns between sectors meant that the impact of high interest rates was concentrated in those areas already under pressure; in particular the export sector. The nominal tax base and absence of capital gains tax further reduced the ability of monetary policy to constrain the booming property and 'entrepreneurial' sectors during 1985-1987. Second, when the introduction of competition promoted a boom in an industry, there were few signs of increased efficiency and lower cost pressures until activity in that industry eventually turned down.

- If, as in the New Zealand case, a disinflationary monetary policy puts pressure on the traded goods sector through a (temporary) rise in the real exchange rate, then there seems little doubt that the adjustment process will be made more even - and effective - if the additional pressure on the traded sector can be buffered by favourable export market conditions. This would allow greater monetary policy pressure to be applied than was possible over 1985-1987.

- The New Zealand monetary policy experience has continually reinforced the lesson that inflation expectations are a powerful influence on demand and price setting behaviour. It is therefore important that increases in indirect taxes should be avoided during a period of disinflation. It is also important that interest rates should not be eased ahead of reductions in inflation expectations. Unfortunately, as experienced elsewhere, inflation expectations in New Zealand have only fallen with a considerable lag behind actual reductions in inflation.

- The 1985-90 experience suggests that the exchange rate is a useful indicator of monetary conditions, as well as a powerful direct influence on inflation. With the various money and credit aggregates continuing to be distorted by the effects of deregulation, the nominal exchange rate, and to a lesser extent interest rates, have become the principal indicators guiding monetary policy. However, given New Zealand's history of large external shocks, it is also recognised that exchange rate movements may at times be required to facilitate adjustments in the real exchange rate.

- While the Reserve Bank has found the exchange rate and interest rates to be the most useful indicators for guiding monetary policy adjustments, it has favoured operating targets based on the quantities of settlement cash and primary liquidity (PL). This approach does not assume any stable long run relationship between the controlled quantities and nominal income or inflation; indeed the approach can be vulnerable to structural reductions in the demand for liquid reserves as occurred in 1986. It nevertheless does have the advantage of allowing market information to flow through short-term interest rate movements. In particular a quantity based approach promotes more rapid interest rate responses to new inflationary pressures in the economy.

- Finally, the Government's intention to improve the Crown's financial management and develop a more independent and transparent monetary policy has encouraged moves towards a clearer separation between the functions of Treasury and the Reserve Bank. However, complete separation is not necessarily the best final solution. Certainly, the removal of the public account from the Reserve Bank would require a redesign of the present monetary control mechanism.