Independent review of the operation of monetary policy

Submission by the Reserve Bank of New Zealand
September 2000

Introduction

1. The Reserve Bank of New Zealand is pleased to offer this submission to the Independent Review of the Operation of Monetary Policy. It is separate and distinct from the submission offered by the Non-executive Directors' Committee (NEDC) of the Bank's Board.

2. While this submission is intended to "stand alone" as a statement of the Bank's views on the operation of monetary policy, it is supported by a considerable volume of additional documentation which will be made available to the reviewer. The additional documentation referred to throughout this submission will also be made available to the public on the Bank's website [*www.rbnz.govt.nz*].

3. In addition, the Governor and senior executives of the Bank will be pleased to discuss with the reviewer all aspects of monetary policy relevant to this enquiry.

The Reserve Bank of New Zealand Act

4. The conduct of monetary policy over the past decade has been governed by the Reserve Bank of New Zealand Act 1989 (the 1989 Act). This Act established the single objective of price stability for monetary policy and established the current governance structure for the conduct of monetary policy. Key features of this structure include the requirement that the Governor and the Minister of Finance/Treasurer should jointly agree and publish policy target(s) consistent with the objective of maintaining price stability (the Policy Targets Agreement or PTA). The Act assigns to the Governor the right to make policy and operational decisions in accord with that PTA without further reference to the Minister of Finance/Treasurer. In the jargon, this confers 'instrument independence' on the Governor. The Act also establishes for the Bank's Board of Directors a clear role in monitoring the performance of the Governor in terms of the monetary policy objective. The Board is unambiguously not an *ex ante* participant in, or direct contributor to, monetary policy decisions.

5. The origins and motivations for the passage of the 1989 Act bear repeating. They flow quite directly from a concern that New Zealand's experience of high and variable inflation from the late 1960s had been damaging to the nation's growth and broader economic performance, and damaging to social equity. The

Act grew from a recognition that the politics of monetary policy decisions are typically skewed in the direction of avoiding or deferring the up-front real economic costs of actions to keep inflation down (and hoping that the medium-term inflationary consequences do not materialise). The outcome is a bias towards higher inflation outcomes that is damaging to the longer-term welfare of the nation.

6. The 1989 Act set out to establish an institutional framework that counteracts that bias. It aims to insert incentives into the monetary policy decision-making process which re-weight that process in favour of the maintenance of price stability over the medium-term. It does so by employing some fairly conventional devices borrowed not so much from monetary policy theory as from the general thinking and practice of corporate governance and management literature. Thus, we find a concern about clarity of objective, clear division of responsibility, alignment of decision-making authority with responsibility, and ensuring that those assigned authority are held accountable for their decisions. To support these features, and to bolster the pre-commitment to price stability, the process of policy-making – and in particular of any retreat from the objective – is made highly transparent.

7. The model developed in New Zealand and embodied in the 1989 Act was new and untried at its inception. It has, however, proved to be a compelling model, and we now find variants on the New Zealand charter in many countries, both developed and developing. We believe that the thinking represented in the 1989 Act can be considered as a unique and very significant New Zealand contribution to the theory and practice of monetary policy. It has been internationally influential because it deals effectively with the challenges of policy-making in the context of conflicting incentives.

8. Our view is that the basic monetary policy framework provided by the 1989 Act remains sound. Moreover, it is not obvious that there are better models available for New Zealand to borrow from at this stage. That does not mean that monetary policy cannot be effective within alternative decision making structures. Over the last decade or so, we have observed the United States, Australia and other countries achieve and maintain price stability with somewhat "looser" decision frameworks. But we can envisage circumstances in which the constraints embedded within our structure provide an important protection that is missing from looser frameworks.

9. While the 1989 Act provides the economic objective and governance framework for monetary policy, the specific policy approach to be adopted is not prescribed. All that the Act requires is that the choice of policy approach be made explicit within the PTA. It would be possible for the PTA to establish a monetary targeting or a nominal GDP targeting approach, for example, were that considered to be the most sensible way to maintain medium term price stability. From the outset, the policy approach established by the PTA has been inflation targeting.

Inflation targeting

10. The origins of the choice of inflation targeting are described in detail in the *Reserve Bank Bulletin* article *"Origins and early development of the inflation target"*.[1] To a significant extent, the choice was a default one: none of the alternatives offered much prospect of achieving and maintaining price stability without throwing the real economy around excessively. The choice of inflation targeting itself reflected a concern for economic "efficiency" – or, as we now tend to say, a concern for the "stability" of the real economy.

11. Without examples to be guided by, the specifics of the inflation-targeting approach were developed from a pragmatic application of first principles. The common thread through the original design and its evolution has been the same concern for economic efficiency. Any inflation-targeting arrangement requires some discretionary choices to be made. These include the extent of inflation variance allowed around the target, the speed of return to target when inflation is disturbed, the selection of which inflation disturbances to respond to and which not, and the extent to which policy lags are allowed for. These choices can impact on the expectations and behaviour of price-setting agents, and on the short-run stability of the real economy, and it seems that there may be some trade-offs to consider. First and foremost, as central banks have stepped up their efforts to control inflation, greater price stability and also greater macro-economic stability overall have been achieved. But because the world is an uncertain place, because policy works with lags, and because not all inflation shocks have the same implications, attempting to restrain inflation within very tight limits would not necessarily further improve macro-economic stability. While the effect on price expectations and price-setting behaviour *may* continue to be beneficial, the even larger movements in real interest rates that might be required in an attempt to get extreme stability in inflation would risk inducing larger cycles in the real exchange rate and the real economy more generally. For these reasons, inflation targeting in New Zealand has always featured a forward-looking approach with a target range and caveats.

12. Such trade-offs are unlikely to be stable through time and across different circumstances. In our own case, the choices involved in this trade-off have changed as times and circumstances have themselves changed – there has inevitably been a good deal of "learning by doing". New Zealand's inflation rate has declined sharply and has now stabilised at the level of our international peers after many years of persistently higher inflation. Many of the structural and regulatory features of the New Zealand economy relevant to the conduct of monetary policy have changed. The global market environment has changed – inflation has fallen internationally and capital flows have become larger and more pervasive. In part also, the Bank has learned that some structures and practices work better than others, and amendments have been made to reflect that. As others have adopted similar approaches to monetary policy, we have

been able to observe their experiences and borrow from them where to do so seemed likely to improve our performance.

13. Distinct from the choice of an inflation-targeting structure and the specific design of that approach, there are policy implementation issues. These implementation issues are of two forms; each will be addressed in turn in the next two sections. The first implementation issue relates to the judgement calls made on the appropriate stance of policy at each point in time. The second relates to the selection and use of policy instruments employed to achieve the desired stance. Our practice has evolved in both areas, but more so with respect to the second. In relation to both areas, with the benefit of hindsight there are things that we wish we had done somewhat differently. But unless we were blessed with foresight, we doubt that a re-run of history would produce consistently better judgement calls on the stance of policy. In terms of the selection and use of policy instruments, however, we acknowledge that it would have been helpful to have moved to the Official Cash Rate approach rather earlier than was the case.

The way in which monetary policy is managed in pursuit of the target

14. As already noted, the choice of monetary policy approach is reflected in the specific target(s) for policy laid out in the PTA. A supporting paper outlines in more detail how the PTA has evolved over the past decade [see *"The evolution of Policy Targets Agreements"*]. Clearly, there has been some degree of evolution, but the core components – a target band set at a low but positive rate of measured consumer price inflation, with allowance to depart from that band in certain circumstances – remain intact.

15. The CPI inflation target of 0 to 2 per cent enunciated by the Minister of Finance from April 1988 and agreed between the Minister and the Governor in the first PTA in 1990 was understood to be ambitious. It lay well below our inflation experience of the previous couple of decades, and was almost certainly below the range that most New Zealanders perceived as likely or achievable at that time. There was an element of "shock treatment" in the choice of the target. The Government of the day was determined to improve New Zealand's economic performance decisively. It was clearly willing to accept that hard decisions with sometimes harsh short-term consequences were necessary to achieve that ultimate elevation in national economic performance.

16. Reflecting the long experience of New Zealanders with high rates of inflation, we too recognised that hard decisions would be necessary both to achieve, and then to maintain, a rate of inflation consistent with price stability. It was always doubtful whether the costs of disinflation could be significantly reduced simply by the adoption of a low inflation target – shifting the public's expectations as to future inflation trends from a presumption of on-going inflation to a

presumption consistent with the newly established inflation target would require demonstrated success. However, any gains we could make would be of value. For this reason, and because developing a constituency for ongoing price stability would be important for the long-run payoff from price stability, a vigorous public communications programme was an integral and prominent part of the Bank's monetary policy strategies from the outset. That programme deliberately stressed the Bank's determination to achieve the targets set for it in the PTA.

17. Reference to the public communications programme is relevant at this point because, to some degree at least, broader perceptions of how monetary policy has been managed are reflective more of the Bank's hard-edged public rhetoric than the actual policy decisions. There have been occasions in which gaps between the rhetoric and the reality of monetary policy decisions have emerged. In contrast to the image of the Bank as pursuing its inflation objective with unflinching determination, we have sometimes accepted the need to lengthen transitions or soften the impact of shocks in order to reduce the real sector costs associated with some monetary policy decisions. We see that in the establishment of a four year path to the initial 0 to 2 per cent target; in the Bank's recommendation in 1990 to lengthen that trajectory in order to better accommodate a decline in the exchange rate; in the use of "caveats" in the PTAs to accommodate the impact of particular shocks; in the decision not to tighten monetary policy in 1996 notwithstanding inflation being outside the target range; and in an increase in the relative emphasis given to the most persistent elements of inflation.

18. A particular concern identified in the first of the terms of reference for this Review relates to whether the Bank has applied its inflation targets in a manner consistent with avoiding unnecessary volatility in output, interest rates and the exchange rate.[2] As noted above, the choice of inflation targeting over alternatives, and the specific design of our inflation target, inherently involve a concern with the stability of the real economy. But it is only since 1999 that the PTA itself has explicitly recognised the need to take such matters into account.

19. The recent incorporation into the PTA of such an explicit recognition of a concern for real economic stability may reflect the same basic worry that has led to this review. Has the 1990s experience in New Zealand demonstrated that inflation targeting in general, or our inflation target design in particular, or our tactical policy choices, increased volatility in a way that was unnecessary? On the face of it, our nearest neighbours across the Tasman originally took a more flexible approach to targeting inflation and perhaps in part because of this seem to have been able to generate better and more stable economic outcomes with low inflation. With respect to the exchange rate, through the 1990s we experienced a very large swing, to the detriment of actual and potential exporters and import-competers.

20. There is a general perception that New Zealand experienced a bumpy ride through the 1990s. Annual growth of real GDP swung between –2.3 per cent in mid 1991, 7.2 per cent in mid-1993, –1.2 per cent in mid 1998, and 5.7 per cent in late 1999. And the TWI exchange rate swung from around 61.9 in early 1990 to 53.2 in late 1992 (a depreciation of around 15 per cent), 69.4 in early 1997 (an appreciation of around 30 per cent), and 47.7 in late 2000 (a depreciation of around 30 per cent). Meantime, the inflation rate entered the decade at close to 6 per cent but fluctuated within a fairly narrow range (effectively 1 to 2½ per cent) from the end of 1991.[3]

21. To what extent were these macro-economic swings caused by monetary policy? To what extent was the considerable stability of the inflation rate bought at the expense of increased instability elsewhere? Not surprisingly, we have thought about this issue extensively. At the outset, it is worth rejecting the idea that New Zealand's real economic stability has *worsened* in the inflation targeting period – if anything, the economy has been *more* stable through the 1990s than before [see *"Output volatility in New Zealand"*]. This outcome is consistent with our understanding that focusing monetary policy consistently on the achievement and maintenance of price stability should be beneficial for macro-economic stability in general. Nor is it clear that economic volatility in New Zealand has worsened relative to the OECD set of comparator countries.

22. We can also reject the suggestion that New Zealand's exchange rate cycle during the 1990s was exceptional. A good number of modern economies with floating exchange rates and open capital markets have also experienced large swings in their real exchange rates in recent years. For example, in the 1990s, the United States, the United Kingdom, and Japan all experienced periods of real exchange rate appreciation of around 30 percent, which is comparable to the trough to peak movement in the real value of the New Zealand currency between mid 1992 and early 1997.

23. This is not to say, however, that monetary policy did not contribute at all to the scale of the macro-economic swings experienced. In order to achieve and then maintain price stability, monetary policy is required to offset forces acting on the economy outside the influence of monetary policy. In so doing, ongoing assessments have to be made as to what these forces are, how strong they are, and how they are likely to influence the economy over the period until monetary policy actions can have an effect. With the benefit of hindsight, there are occasions in the 1990s when our assessments missed the mark. Two are worth noting. We were slow to recognise the pace of acceleration of the economy in 1992/93, and slow to recognise the joint impact of the Asian crisis and the beginning of an extended drought through 1997 and early 1998. But we would argue that we responded quickly when we recognised the emerging problem –

quickly enough to prevent these large inflationary and deflationary impulses to the economy from causing substantial price instability and even larger and more costly swings in the real economy [see "*New Zealand business cycle developments since 1996*"].

24. Given the inherent problem of operating a policy that has a lagged impact on the economy without the aid of a crystal ball, are there general lessons for the design of an inflation target and for the way in which policy is run under such a target? We have reviewed the economic literature on how to deal with uncertainty, and undertaken research of our own [see *"Monetary policy in an uncertain world"*]. In short, there do not appear to be general lessons. At times, it might prove to be beneficial to adjust interest rates more gingerly, and at times more aggressively, but it is not at all easy to determine which alternative is relevant at the time.

25. In this light, how do we interpret the requirement in the PTA to consider the impact of monetary policy actions on the stability of the real economy? As already noted, this consideration is already implicit in the design of any inflation target. Moreover, to a significant extent, monetary policy actions aimed at the maintenance of price stability also work to stabilise the path of the real economy.[4] A supporting document discusses these matters in some depth [see *"Inflation targeting in principle and practice"*]. Unfortunately, while research offers some insights, mostly it is too simplistic in its handling of real world complexities to provide a blueprint for how to act. The trade-offs mentioned in paragraph 11 are not easily evaluated or exploited. This implies that a judgement has to be made in the light of each particular shock being experienced. A decision to moderate the initial policy reaction to a shock may be consistent with avoiding unnecessary volatility, but not if the consequence is a stronger inflationary impulse which ultimately requires longer and stronger monetary policy action to return the economy to general price stability.

26. Of one thing, however, we are reasonably confident. Monetary policy acts with a lag, and policy design that takes the lag into account will be more efficient, and so more beneficial for real economic stability, than policy that does not. It is for this reason that policy actions within an inflation targeting structure are best guided by forecasts – even where those forecasts are imperfect, and even where those forecasts are themselves heavily influenced by very recent events. As the structure of the economy changes, it is likely that the lags in monetary policy transmission will also change, and policy design should take this into account. Since the early 1990s, it appears that the pass-through into local prices of nominal exchange rate changes has become more muted, thereby effectively lengthening monetary policy's lags (by elevating, in a relative sense, the role of the slower part of monetary policy transmission that works through economic activity). As we have observed this development, we have tended to push out the point in the forecast horizon that we use to guide today's policy decisions.

27. Overall, we feel that the notion of a single price stability objective for monetary policy is the preferred structure, and that inflation targeting is a good choice within that structure. Such an arrangement delivers primary focus on keeping inflation under control over the medium term – and over the medium term inflation is all that monetary policy can affect – while incorporating concern for the effect of monetary policy actions on the real economy within the design of the inflation target. The introduction into the PTA of a reference to avoiding unnecessary instability is consistent with our understanding of the relevant theory and experience. That the introduction of this reference brings to the surface issues on which we have incomplete knowledge (and may as a consequence risk muddying the clarity of decision-making responsibility and accountability) is a reflection of the nature of the world we live in.

The instruments of policy

28. The current operational approach employed by the Reserve Bank is very conventional in the sense that similar structures are employed in most other successful central banks. Elsewhere it has proven to be robust in the face of shocks, and effective in terms of delivering outcomes sought, and we have no reason to believe that the same will not be the case here.

29. There has, of course, been considerable evolution in our operational approach to reach our current position. That evolution is outlined in the supporting document [see *"The evolution of monetary policy implementation"*].

30. The Bank's mid-1980s operational approach used quantitative mechanisms rather than the current price-based (interest rate) system. The reasons for that included the idea that structural reforms made it sensible to anchor monetary policy by way of a quantitative target (a version of base money, "primary liquidity") while allowing interest rates and the exchange rate to shift as necessary in response to shocks.

31. In the event, this proved to be an unsatisfactory anchor for policy, and resulted in what we judged to be unnecessary instability in interest rates and the exchange rate. By the time the 1989 Act came into force, the Bank was heavily influencing the short run path of financial prices through, in effect, issuing threats to use its quantity-based instruments. Over time, the threats – conveyed through various kinds of statements and signals known colloquially as "open mouth operations" – became the key instrument of policy. Of particular relevance is the fact that statements and signals were able to achieve significant changes in financial prices without any supporting change in the underlying formal supply conditions for primary liquidity.

32. The focus on statements and signals evolved over time as the Bank's understanding of the policy transmission mechanism evolved, and as the transmission mechanism itself changed. Initially, the slope of the yield curve received considerable attention; subsequently, the direct price effects of exchange rate movements came to dominate. By 1992-93, monetary policy was articulated, in many respects, in terms of exchange rate comfort zones. Learning from the experience of 1993-94, interest rate considerations also started to figure more prominently alongside exchange rate considerations.[5] This duality proved confusing in a signalling context, and set the scene for use of the Monetary Conditions Index (MCI), which became the next evolution in focus.

33. The MCI was a weighted summation of exchange rates and interest rates, with the weights reflecting each variable's medium term, *ceteris paribus*, impact on aggregate demand and thus inflation. From 1997, the MCI was being used to identify the overall stance of policy being sought and to describe the likely direction and extent of change in stance going forward. Moreover, within the context of monetary policy implementation via open mouth operations, we also indicated the extent to which monetary conditions, expressed in MCI terms, could depart from a nominated "desired" level before policy action became likely. Anticipating such policy action, financial markets would adjust short-term interest rates in response to exchange rate movements that took the MCI beyond the indicated limits.

34. Our experience of using the MCI in this fashion was not entirely satisfactory, from two angles. First, the range over which we indicated that monetary conditions could vary before policy action became likely turned out to be too narrow. Unnecessary short-term interest rate volatility was thereby induced. Second, the onset of the Asian crisis coincided almost exactly with the MCI's elevation in the monetary policy implementation schema. In response to a shock of that sort, it was appropriate that the exchange rate should decline sharply and overall monetary conditions ease substantially. The Bank's quarterly *Monetary Policy Statements* attempted to accommodate that need for a decline in the exchange rate by reducing the "desired MCI" and thereby signal a willingness to see interest rates decline. However, in attempting to accommodate that exchange rate decline, we were typically moving our MCI target zones somewhat too late and too little. As a consequence, short-term interest rates rose from late 1997 as the exchange rate fell, rather than declined as would have been appropriate. In other words, we initially under-estimated the seriousness of the Asian shock, and therefore somewhat under-estimated the extent to which it was appropriate for monetary conditions to ease [see *"New Zealand business cycle developments since 1996"*].

35. While the New Zealand economy was always going to be hard hit by the twin shocks of the Asian crisis and the droughts that affected rural New Zealand in the summers of 1997/98 and 1998/99 – there is no way that monetary policy can offset real impacts of that sort – our assessment today is that monetary policy was not as helpful in cushioning those shocks as it could have been. As already noted, it was appropriate that the New Zealand dollar should fall in response to those shocks. We cannot similarly argue that interest rates should have risen as they did. We can't be definitive about the impact that that rise in interest rates had on growth outturns in the first half of 1998, especially given the coincident timing of the interest rate rise and the sharp cessation of growth. However, it does seem likely that the use of the MCI implementation framework, in the way that was chosen, shaped the monetary policy response to the Asian crisis in a manner that was on balance unhelpful, and added unnecessary interest rate volatility.

36. Whatever framework we choose for the implementation of monetary policy, we should expect to encounter periodic stresses as the economy responds to the inevitable shocks and surprises visited upon a small open economy in a world of open current and capital markets. We have over recent years spent considerable energy exploring options for alternative or supplementary instruments of policy which might help moderate the amplitude of the exchange rate cycle. Chief amongst these has been an exploration of the Chilean experience with partial capital controls designed to moderate the inflow of private capital. This was particularly relevant at times during the mid-1990s as the exchange rate reached its cyclical peak. It was clear that the currency had reached levels which were unlikely to be sustained, and which were placing significant strains on the tradables sector. At the same time, however, domestic interest rates were, if anything, lower than would have been desirable to restrain a buoyant domestic economy. Notwithstanding that New Zealand's real exchange rate variance over the economic cycle is in line with that experienced by other developed open economies, such conflicts between tradable and non-tradable sector interests naturally spark intense interest in options that might offer the ability to modify the impact of policy.

37. The conclusions reached from our exploration of these alternative or supplementary instruments are available in a supplementary paper [see *"Alternative monetary policy instruments"*]. In short, while we have been anxious to explore these matters, we have found that any gains in helping us to achieve price stability with a more stable exchange rate would have been more than outweighed by the adverse impact on economy-wide resource allocation efficiency.

Information used by the Reserve Bank

38. Given that, as acknowledged earlier, our assessments of the state of the economy have at times been inaccurate (and monetary policy has consequently

proven to be inappropriately tight or easy), it is important to reflect on the question of whether our information base is adequate, and on whether we process and analyse the available information effectively (see later). Background notes provide information on the data sources employed by the Bank in the course of setting the stance of policy [see *"The projection process and accuracy of the RBNZ projections"*], and our assessment of the adequacy of the information available for monetary policy decision-making purposes [see *"Data challenges in the monetary policy process"*].

39. The New Zealand economy has been subjected to significant structural change over the past 15 years, and to significant external shocks. Economists rely heavily on data in forming their judgements, and more, better and more timely data almost by definition assist decision-making. There have certainly been occasions over the past decade when data revisions or the emergence of late data have caused the Bank to reassess its previous views of the state of the economy and therefore of the appropriate stance of monetary policy.

40. However, while we expect that there would be positive returns to greater investment in data, we also expect that such investments would face sharply diminishing returns. Put another way, while we will always appreciate more and better data, it is not obvious how large an incremental investment in data could be justified by improved monetary policy decisions. At heart, the New Zealand economy is small and comparatively undiversified, and therefore relatively heavily affected by shocks that cannot themselves be foreseen. And whatever the quality of the data available to us, the quality of our decisions will inevitably be dominated by the quality of our judgements on such matters as the shifting nature of relationships in the economy, the changing mood of investors and consumers, the nature of structural shifts in the economy, and the risks of future shocks from external sources. It is in those areas that the battles for good monetary policy are won and lost.

The monetary policy decision-making process

41. The Bank's monetary policy decision-making process is described in detail in the supplementary paper *"The monetary policy decision-making process"*. Our focus covers both the processing of information – including, in particular, through forecasting – and the distilling of the lessons of such analysis into a decision on the desired stance.

42. This process has been adapted and developed over the years with the conscious aim both of improving the structure of our deliberations, and of opening the decision process to alternative interpretations of current data. Such developments reflect our awareness that policy mistakes can be caused by misreading the state of the economy. Although we believe that the greater part

of most forecast errors is an inevitable consequence of not being able to read the future within an economy that is inherently quite volatile, we are obviously concerned to maximise our ability to read changes in circumstances as quickly as possible.

43. With respect to the sharp end of the decision-making process – making the final decision on the policy stance – we take a keen interest in the experience of other central banks, and other agencies, in using alternative decision-making structures. The current New Zealand structure of a single decision-maker is somewhat unusual, but not unique. It is our observation that while some of the alternative structures look rather different *de jure*, in a *de facto* sense those differences may be rather less marked, and highly dependent on the nature of the individuals selected (under both models) and circumstances. There are numerous pros and cons. In principle, a committee decision-making structure is less vulnerable to the quality of the individuals selected, and more open to alternative perspectives. But that is more true the larger the committee size (and it is unlikely that in New Zealand enough qualified individuals without conflicts of interest would be available for a large standing committee). One's preference for a single person or committee decision-maker model may also be affected by the extent of discretion provided to the decision-maker. Under an inflation-targeting arrangement, there is discretion over the selection and use of instruments, but not over the goal of policy. Moreover, clarity of communications is an important component of transparency; a single decision-maker model lends itself to greater clarity.

44. It is not our intention to express firm views on the preferred model for decision-making, but we are conscious that the Non-Executive Directors of the Board have given considerable attention to this issue.

45. One issue of governance that we think needs reconsideration, however, is the role of the Governor in relation to the Board. Currently, the legislation establishes the Governor as Chairman of the Board, notwithstanding the fact that the legislation also requires the Board to monitor and evaluate the performance of the Governor. This inconsistency has been dealt with by establishing a Non-executive Directors' Committee that meets independently of the main Board. But it could more neatly be dealt with by the appointment of a chairperson elected from among the Non-executive Directors.

The coordination of monetary policy with other elements of economic policy

46. The Review's Terms of Reference raise the issue of the co-ordination of monetary policy with other aspects of government economic policy. To the

extent that there are co-ordination failures, it is possible that monetary policy's ability to maintain price stability with best effect on the real economy is compromised.

47. Monetary policy's interaction with fiscal policy is an issue on which screeds of analysis has been undertaken within the economics profession. Both arms of macro-economic policy impact on the economy's short run performance, but with quite different implications for the long run. Whereas monetary policy's only lasting effect is on inflation, fiscal policy has no lasting impact on inflation (except insofar as fiscal policy actions can subvert monetary policy from its objective – an issue that is relevant for some emerging economies but not New Zealand in recent times).

48. In our view, monetary and fiscal policy in New Zealand are appropriately co-ordinated by placing each within a decision framework that focuses each on their appropriate medium-term objectives, and that makes those objectives and related actions transparent. In this way, fiscal decisions can take full account of the likely monetary policy response, and *vice versa*. The alternative approach to co-ordination – making fiscal and monetary policy decisions jointly – carries greater risk of diversion of each arm of policy from its appropriate medium-term objective, and weakens the transparency of the whole process [see *"Fiscal and monetary coordination"*].

49. As to the co-ordination of monetary policy and prudential policy, we believe that for the most part there is insufficient day-to-day overlap between them for potential conflicts to raise co-ordination concerns. At the same time, such overlap as there is potentially provides information that is useful for the Bank's reading of the state of the economy. In our view, while a stable financial backdrop is vitally important for macro-economic stability – and therefore high quality prudential policy supports monetary policy – it would not be efficient to use specific prudential policy instruments in pursuit of monetary policy objectives [see *"Prudential policy and monetary policy"*].

The communication of monetary policy

50. As noted earlier, the Bank has accepted since the passage of the 1989 Act that the effective communication of monetary policy was vital to the efficient operation of monetary policy, and essential to minimising any adverse impact of monetary policy decisions. To that end, communications matters have occupied a high proportion of the attention and effort of the senior management of the Bank, and especially that of the Governor. A background paper [see *"Communication of monetary policy decisions"*] outlines in more detail the nature and extent of the Bank's communication work.

51. This close attention to communications has become a hallmark of modern inflation-targeting central banks. Not only is it consistent with minimising the surprises, and therefore the costs, that might sometimes be associated with the implementation of monetary policy, the new transparency of policy-making is an important part of the accountability structure of modern central banking.

52. One particular communications device that we have made much use of is the publication of projections of the macro-economy in the context of announcing decisions on the policy stance. As a background paper notes [see *"Publication of projections"*], policy projections can be thought of as forecasts that aid the determination of the most appropriate policy stance today, reflecting the lags with which monetary policy works. Alternatively, they can be thought of as expositional devices to aid the articulation of the reasoning for policy decisions, again reflecting the fact that monetary policy decisions are made in a forward-looking context. Given our experience, it seems to us that projections are more useful as descriptions of the policy analysis used when making decisions than as predictors of future circumstances per se. Either way, publishing projections provides a useful quality-control check on our thinking, by laying that thinking out in front of other analysts and experts.

53. Broadly speaking, we think it is appropriate to devote as much time and effort to communications as we have done. Building an understanding of what monetary policy is about – what it can hope to achieve and what it cannot – is important for building a robust constituency for price stability. Displaying transparently the nature of the analysis that we use when making policy decisions, and the links between stated objectives and policy actions, aids financial markets to anticipate our policy interests and act accordingly. At the margin, openly publishing the thinking behind policy actions might also encourage public behaviour – choices in respect of saving, spending, investing or consuming – to be consistent with price stability.

54. Nonetheless, there is always room for improvement. For instance, we acknowledge in the background paper on the publication of projections that we may have styled our *Monetary Policy Statements* rather too much as forecasts and rather too little as discussions of the analysis and reasoning behind policy choices.

Concluding comments

55. The Reserve Bank of New Zealand Act 1989 and the current inflation targeting arrangements have been in place for over a decade. During that time, New Zealand has passed through a complete economic cycle. Based on that experience, and after reviewing the logic of the current framework and

observing how others approach similar issues, the Reserve Bank draws the following conclusions:

a) The broad framework embedded within the 1989 Act is well designed, and does not warrant change. In particular, the single focus required of monetary policy has assisted the achievement and maintenance of price stability.

b) Inflation targeting is also an appropriate route to achieving the price stability objective set out in the 1989 Act. Inflation-targeting design naturally takes into account the impact of monetary policy actions on the volatility of the real economy – those aspects highlighted as important in Clause 4c of the Policy Targets Agreement – while maintaining the key focus on price stability, where it properly should be. It is noteworthy in this regard that inflation remained low and stable throughout most of the 1990s, while the volatility of the real economy was less in that decade than in the preceding two.

c) In order to achieve the best possible outcomes on all these dimensions, the design of the inflation target and inflation-targeting practice need to evolve with the evolution of the economy's behaviour. This has happened, most notably in the lengthening of our policy horizon as the lags associated with the exchange rate have altered.

56. This favourable reflection on current and past arrangements is not intended to convey the impression that monetary policy has had a perfect record over the last decade or so, or that nothing new can be learned. Among the lessons that we draw from our experience, a few are particularly worth highlighting.

a) The Policy Targets Agreement structure is a very useful one, in terms of increasing the transparency of monetary policy over and above what would be achieved by section 8's statement of the price stability objective alone. But matters can be carried too far if the PTA is used as a very precise statement of things that are inherently imprecise. For a period in the mid-1990s, encouraged by our success in achieving the target and nervous of being seen to fail, we perhaps drifted into a somewhat mechanical and unduly precise interpretation of the PTA.

b) In any policy arrangement that involves lags, there is a considerable dependence on an unknowable future. We have observed occasions where our assessment of the economy's likely state at the time that monetary policy actions would have their effect was astray. And in these circumstances, the setting of policy is not able to make its maximum contribution to stability across all the relevant dimensions. Although we do not believe that our forecasting capability is structurally weak, we have over the years tried to adapt the process in the direction of opening out to alternative perspectives on the current and likely future state of affairs. There may be more that we can do in this respect, but it is not obvious.

c) Likewise, in terms of the data that we use in forming our view on the current and past state of the economy, there are occasions when we wish we had had better, more timely, and more relevant data. However, we doubt that there is a very high rate of return to spending large sums of money on more or different data collection – although the return on small and well targeted increases in expenditure on data may well make such increases justified.

d) As to the selection of instruments, we believe that the OCR approach is a sound one, and considerably better than the previous approach with its inherent need to influence market conditions through the use of threats. Had we adopted the OCR regime some years ago, we would not have attempted to use the MCI as an implementation device. At the margin, the use of the MCI in this way was unhelpful for the economy, particularly through the injection of greater interest rate volatility.

e) As to the communications aspect of the monetary policy task – an aspect that we regard as very important and in some respects integral to our policy approach – broadly speaking we believe that it has added value. We do not claim a large impact on inflation expectations or on the public support for price stability, but we do claim some impact. While our messages are sometimes necessarily complex, most of the time they are well understood by the intended audience. And we do not claim that we always strike the right balance – probably the *Monetary Policy Statements* need further adaptation – but we are probably not too far off the mark.

57. Finally, there are some issues of governance that have been raised in the course of this and other submissions. We do not offer a conclusion as to the merits or otherwise of the sole decision-maker model versus a committee approach. But we do acknowledge the weakness in the current arrangement for the chairmanship of the Board. This arrangement should be reconsidered.

Endnotes

1 Reddell, M (1999), "Origins and early development of the inflation target," *Reserve Bank Bulletin*, Vol. 62 No.3, pp 63-71.

2 We note the use of the term "undesirable" instability in the terms of reference, in contrast to the term "unnecessary" instability in the current PTA. We are treating these terms as synonymous.

3 The inflation measure used is an ex-interest ex-GST measure of the Consumers Price Index.

4 Such is the case when monetary policy is reacting to demand shocks that have implications for inflation.

5 When low real interest rates had significantly reinforced an already strong (but not yet observed) upswing in the economy.