Inflation Targeting—The New Zealand Experience

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1 The New Zealand Inflation Background

Beginning about 1967, New Zealand experienced a stretch of high inflation that lasted more than two decades. For much of that period, consumer inflation ran in the mid-teens, with peak inflation just short of 20 per cent (Figure 1). Inflation was never politically tolerable. Reflecting that fact as well as the reluctance to grapple with the underlying sources of inflationary pressures, New Zealand made two attempts during the 1970s to outlaw inflation by way of wage and price controls. In the early 1980s, a further attempt was made by way of a comprehensive freeze on wages, prices, rents, interest rates, dividends, directors' fees, and the exchange rate. It was the obvious unsustainability of that last and most draconian attempt at market suppression that finally paved the way for the sweeping reforms and deregulations introduced by the 1984 Labour government. Included in the package of reforms was a new approach to the operation of monetary policy that was designed to attack New Zealand's persistent inflation problems at their source.

Soon after the 1984 election, the Reserve Bank of New Zealand (RBNZ) was directed to focus monetary policy solely on containing inflation. It was in that context that the New Zealand dollar was floated in 1985. Progress in restraining inflation was slow, probably because of the

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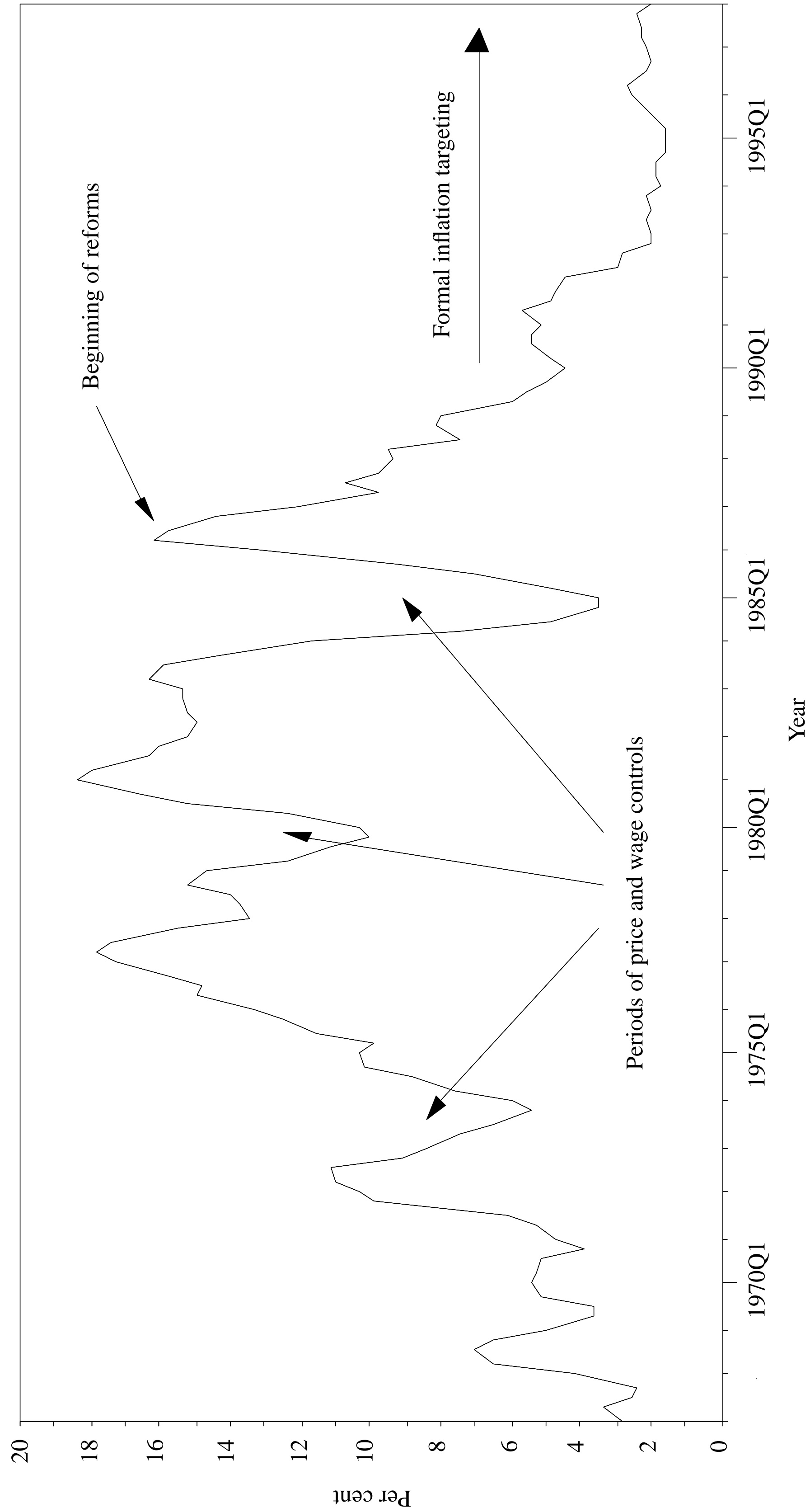
Figure 1

CPI Inflation in New Zealand, 1966-96 (Annual Percentage Change, Excluding Credit Services and GST)



remaining large fiscal deficits that had emerged in the early 1980s, the 20 per cent exchange rate devaluation of 1984, and the sharp price adjustments that occurred as the 1982-84 price and wage freeze was lifted. Overlying those influences was the local counterpart to the global equity market boom running up to October 1987, no doubt exacerbated by financial deregulation, which sustained household confidence and business activity in New Zealand for much longer than the rigorous monetary policy then applying would have suggested was likely or even possible. Also significant for measured inflation was the introduction of a comprehensive 10 per cent goods and services tax in New Zealand in late 1986, which increased in July 1989 to 12.5 per cent.

After the 1987 crash, progress towards price stability was made, with inflation falling under 2 per cent during 1991, and being maintained between 1.1 per cent and 2.4 per cent since.

The Reserve Bank of New Zealand Act 1989 (RBNZ Act) formalized a structure that had been evolving since 1984. While this can be seen as just another part of a broader program of reform of public sector agencies, it is also the case that a major motivation for the new Act, especially on the part of the Labour government, which introduced the legislation, was a desire to institutionalize price stability—to oblige future governments to be open about their objectives with respect to inflation, and similarly to oblige the RBNZ to be transparent in its assessment of inflation risks and to be accountable for its performance in the operation of monetary policy.

In the design of the new monetary policy structure, as with much of the New Zealand reform process, careful attention was paid to incentives. It was recognized that if the time-inconsistent nature of the monetary policy process imparts a bias towards inflation, then it is important to introduce structures that counteract that bias.

2 The Role of the Inflation-Target Regime

An explicit inflation target is only one element of the New Zealand monetary policy regime. More fundamental is the setting of a *single* goal of price stability, together with provisions for operational autonomy and stringent requirements for accountability and transparency. It is, therefore, difficult to conclude that the introduction of an explicit inflation target has been the overriding factor in New Zealand's changed inflation performance.

There can be little question, however, that there has been a fundamental change in New Zealand's inflation performance. In the face of an unusually long and strong recovery, which began in late 1991, inflation has remained low by past standards. This represents a clear break with the behaviour we had seen through the previous couple of decades.

What we cannot be certain about is the extent to which the RBNZ Act and inflation targeting can take the credit for this improved inflation performance. Two factors deserve careful consideration in this assessment. First, since 1984 governments have brought a fundamentally different attitude to macroeconomic management compared with that of earlier periods. Governments that were willing to commit themselves to far-reaching reforms across all sectors of the economy were never likely to be tolerant of continuing high inflation, or to shrink from the hard decisions needed to contain inflation, regardless of the precise monetary policy regime in place.

Second, the inflation performance of New Zealand's trading partners was also improving sharply through the 1980s and into the 1990s. The international attitude with respect to the impact of inflation had shifted. It is unlikely that New Zealand could have been immune to that changed philosophy even had it wished to be.

Beyond those specific factors, in assessing the New Zealand monetary policy performance since 1984, it is important to remember the extent of the change taking place elsewhere in the New Zealand economy throughout that period. Much of that change was helpful to the restraint of inflation—in particular, significant fiscal consolidation later in the period, labour-market reforms, and major reductions in barriers to international trade. Other aspects of government policy, however, while having undoubted merit in the sense of being supportive of longer-term efficiency and macroeconomic performance, have posed real challenges to the conduct of monetary policy and the inflation path in the short term. Notable in that respect have been the shift from income to consumption taxes, and the emphasis on "user pay" principles in the provision of public services (particular examples can be found in the health, education, public housing, local government, and electricity sectors).

3 Expectations and the Constituency for Price Stability

Ultimately, the credibility of the formal commitment to price stability is derived from the willingness of the central bank to abide by that commitment, the willingness of the government of the day to support it (or, at least, to acquiesce in the process), and the willingness of the voting public to support politicians who are committed to price stability. In that context, the explicit inflation target, together with the associated accountability arrangements and transparency requirements, has been helpful in the New Zealand setting.

For the RBNZ, the explicit and transparent commitment to price stability has undoubtedly concentrated institutional attention on the

monetary policy task. The inflation target is relatively narrow, and has a high profile. The Bank cannot escape difficult monetary policy decisions; indeed, we are obliged to confront them early. As in other countries—perhaps more so, given the small size of the economy—we are subject to lobbying and other pressures to "modify" our policy settings to recognize particular regional or sectoral difficulties. The policy framework and the explicit targets are important in the institutional response to such pressures and have allowed us to deflect such pressures more readily than would otherwise have been the case. Moreover, there can be little doubt that the explicit target has enabled the RBNZ to focus its public rhetoric very effectively on a clear and unambiguous goal.

For the political establishment, the explicit character and transparency of the monetary policy arrangements does appear to have altered, in a significant way, the nature of the monetary policy debate. That New Zealand should aim to maintain price stability, or some close approximation, has proved quite difficult to challenge politically. Indeed, in the recent elections, there appeared to be little electoral advantage in arguing that low inflation was not a desirable objective. The political debate has tended to be on the monetary policy framework—in particular, on the precise specification of the target—rather than on whether inflation targeting should be abandoned. Government ministers seem to be maintaining some distance between themselves and the day-to-day operation of monetary policy, leaving the public debates about monetary policy to the RBNZ. Political behaviour is also influenced by the fact that the government, in the form of the Minister of Finance/Treasurer, is a signatory to the inflation target—that is, the Policy Targets Agreement (PTA). It formally binds the government to the price stability objective, while leaving it free of any burden in relation to justifying day-to-day monetary conditions or particular monetary policy actions. In doing so, the structure also maximizes the chances of focussing political debate on the longer-term objectives rather than on the short-term tactical issues.

For the public at large, including the financial markets, it is arguable whether the explicit inflation target has been the key element in altering and anchoring inflation expectations, or whether it is the accountability and transparency arrangements that have mattered more. Of course, it could simply be that the achievement of some success in restraining inflation has been the more significant influence on public and market attitudes.

A difficulty in this kind of discussion lies in attempting to back up our judgmental assessments with hard evidence. It would be gratifying to be able to show that the adoption of a firm commitment to price stability really did change the formation of inflation expectations beyond what would have been achieved by simply delivering price stability. But the fact is that the

evidence we have for New Zealand is not conclusive (see Figure 2). We can look for tell-tale evidence in the structural changes in the short-run Phillips curve. What we tend to find is that the evidence of a structural break is very sensitive both to the data used (for example, the measure of inflation expectations or the estimate of "potential" output) and to the form of the Phillips curve (that is, whether it is linear, non-linear, asymmetric, and so on). Moreover, even if we did find conclusive evidence of a structural break, it would be difficult to ascribe it entirely to the change in the monetary policy regime rather than to concurrent changes in other areas of economic policy.

4 Inflation Targets and Policy Implementation

The dynamic of the policy implementation process has clearly shifted in New Zealand. It seems reasonable to conclude that the move from multiple and shifting targets, under political control, to a single, announced inflation target with operational responsibility delegated to an independent central bank has aided markets in anticipating future policy directions and positioning themselves accordingly.

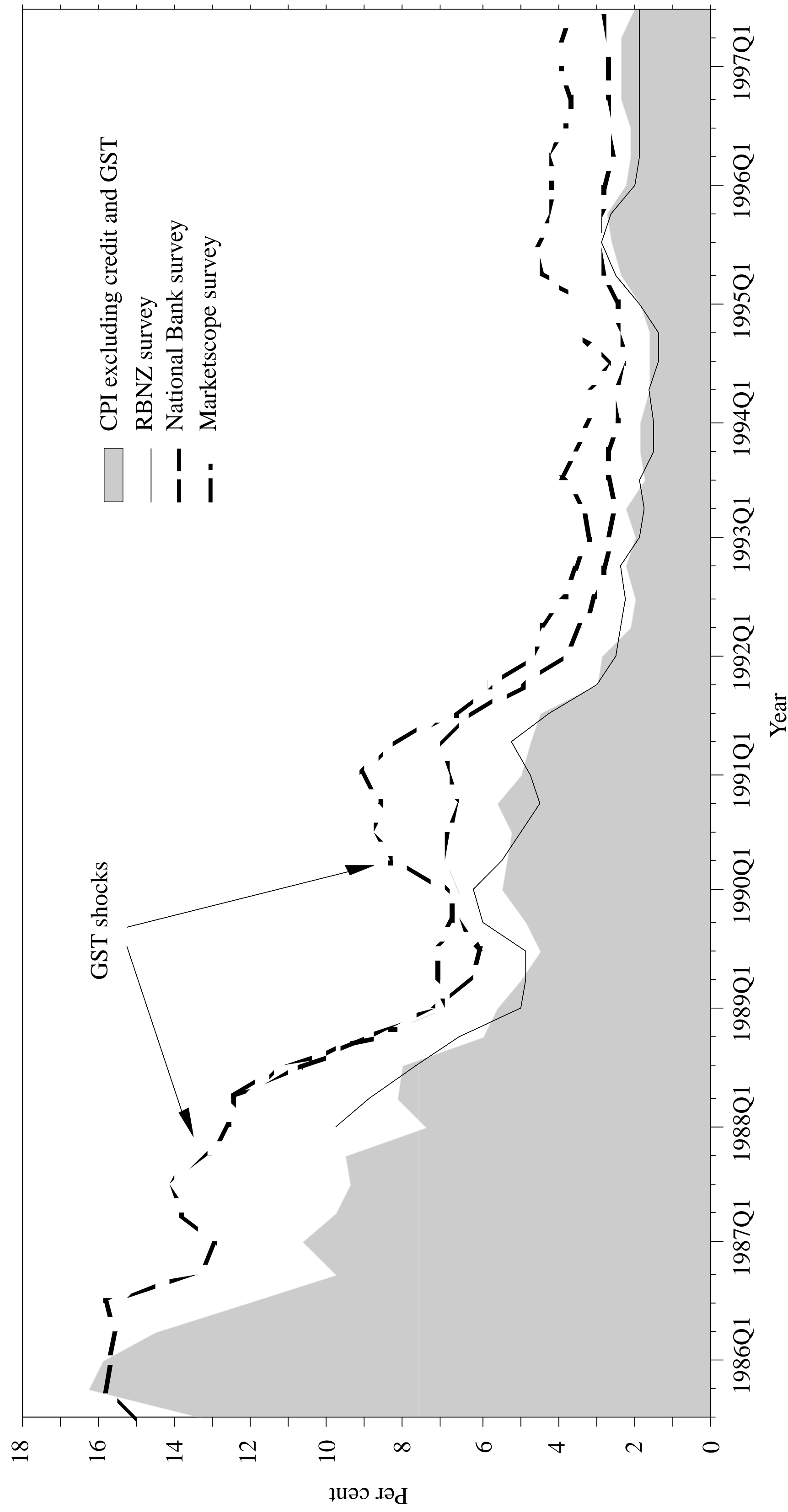
Our experience has been that the clarity of the inflation target, together with the transparency and frequency of our public reporting (via the statutory, six-monthly monetary policy statements, plus the economic projections of the intervening quarters) provide enough information that markets can fairly reliably anticipate the emerging stance of monetary policy. Indeed, we regard successful anticipation by markets as a useful test of our own effectiveness in communicating the policy framework and decision-making process.

As a consequence, the RBNZ is more likely to be in a position of validating market moves, rather than driving them overtly. It seems reasonable to assume that markets would not behave as obligingly were it not, first, for the belief that the RBNZ is committed to pursuing its inflation target consistently, and second, for the acceptance that the Bank does, indeed, have the capacity to deliver monetary conditions consistent with the target, irrespective of the willing compliance of financial markets.

This is not to imply that the RBNZ and local financial markets are in permanent agreement about the likely and preferred direction of monetary policy. We may have different views on the appropriate mix of monetary conditions between interest rates and the exchange rate—a familiar concept at the Bank of Canada—or we may have somewhat different views on the current or prospective extent of inflation pressures. But what does appear to work well in the New Zealand system, and what is somewhat unusual

Figure 2

Annual CPI Inflation and Year-Ahead Inflation Expectations



Note: The RBNZ survey is directed at financial market participants and businesses; the National Bank survey is directed at business clients; and the Marketscope survey is directed at households.

among central bank cultures elsewhere, is that we find that sharing our views with the markets is generally a helpful and stabilizing influence.

5 The Design and Pursuit of the Target

The design of the target, and how to reach it, clearly involve a large and complex set of issues. Precisely what should be targeted is much less a question of what might in theory be preferable than it is a question of what is available and what might work.

5.1 The target measure

New Zealand's choice of a target based on the consumer price index (CPI) reflects two considerations. The first is sheer practicality; other price measures, such as producer prices or national accounts deflators, are not of the same quality, nor are they as timely or as free of revision. We have little real alternative to the CPI.

But even had there been another option, it is likely that we would have chosen a CPI-based measure as the preferred target. That preference arises largely because of the fairly direct link to broader inflation expectations formation, itself a product of public familiarity with the CPI. If inflation expectations embodied in nominal financial prices and nominal wage expectations are mostly related to CPI prices, then stabilizing consumer prices should be the most effective strategy, and should also minimize any adverse consequences in terms of output variability. We cannot be entirely certain about these matters, but we have not seen any strong view emerging that the CPI-based target was a mistake, or that there is clearly a superior alternative.

5.2 The centre of the target range

The issue of what the centre of the target range should be, and the optimal width of the range is not a settled issue in New Zealand, and may never be. We are still of the view that the centre of the target range should be close to price stability after allowing for bias in the CPI. We do not subscribe to the kinds of arguments made by Krugman (1996), Akerlof, Dickens, and Perry (1996), and Fortin (1996) that getting inflation close to zero does not pass a cost-benefit test. In many respects, those arguments are more relevant to the case in which inflation is well above zero and choices exist with respect to how far it should be reduced. They are less relevant to an environment in which the maintenance of something close to price stability is the task at hand.

While the existence of bias in the CPI may justify an average measured inflation rate above zero, it does not necessarily imply that the

target should be specified in terms of the inflation rate. Certainly, a price-level target with a margin of drift could be considered more consistent with true price stability. However, I doubt that we shall see the emergence of support for a price-level target in New Zealand, not least because of the difficult issues of accountability and time-inconsistency that are associated with such a structure.

5.3 The target width

The inflation target serves at least two main purposes in the New Zealand context. The first is as a guide for the public. For this purpose, it makes sense to have a range wide enough to be credible in the sense that there can be a reasonable expectation that inflation outcomes will fall within the range on most occasions. There is some reason to believe that the original 0 to 2 per cent target in New Zealand suffered to some degree from a public perception that it was too narrow to be fully credible.

The target range also serves as an important guide for the central bank—the more so if there are sanctions for failing to stay in the range, as is the case in New Zealand. For this purpose, a relatively narrow range may be preferred, largely because it leaves little leeway for the Bank's attention to be diverted from, or to become too complacent about, the inflation outlook.

What we do not have a good sense of, however, is what the optimal effective range is for guiding policy. Presumably, this is a function of our uncertainty about the structure of the economy, the variability of the monetary policy transmission mechanism, and the nature of the shocks to which the economy is subject. Until we know a good deal more about these matters, we can't say confidently that a 2 percentage point or 3 percentage point range is optimal.

One area in which there are significant differences between our various inflation-target arrangements is with regard to what we describe as "caveats"—that is, the exclusion of various price developments or shocks that temporarily distort the relevant inflation measure. The use of such caveats has obvious implications for the band-width question.

To the extent that such distortions to measured inflation are excluded, either ex ante or ex post, then the target range tends to be a bit more "roomy" than would otherwise be the case. The question to be addressed, however, is whether in applying this device, we risk mostly fooling ourselves. That is, if we exclude these kinds of "one-off" shocks or distortions to core inflation, it may be easier for us to meet our targets, but perhaps at the risk of undermining market and general public confidence in the Bank's anti-inflation credentials.

The evidence on this from the New Zealand experience is tentative, but favourable. Information on wage behaviour, price behaviour, and inflation expectations suggests that agents do actually tend to "look through" the sorts of items that we exclude from our underlying inflation measure. In that sense, the concept of underlying inflation has sufficient "street" credibility to be usable.[1]

Of course, measuring underlying inflation is a tricky business—each country may take a different approach. In many ways, that is entirely appropriate. Our CPIs are all put together somewhat differently. In addition, our price levels are differently exposed to different supply shocks. In New Zealand's case, over the past 10 years we have had an unusual number of price shocks related to government reform, fiscal consolidation, and structural reforms more generally. Some of those factors are shown in Figure 3, which displays the quite wide divergence among the various inflation measures we employ in New Zealand.

I suspect that such items may figure more prominently on the Bank of Canada's radar screens in the near future as Canada proceeds down the road of significant fiscal and structural change.

6 Issues for the Future

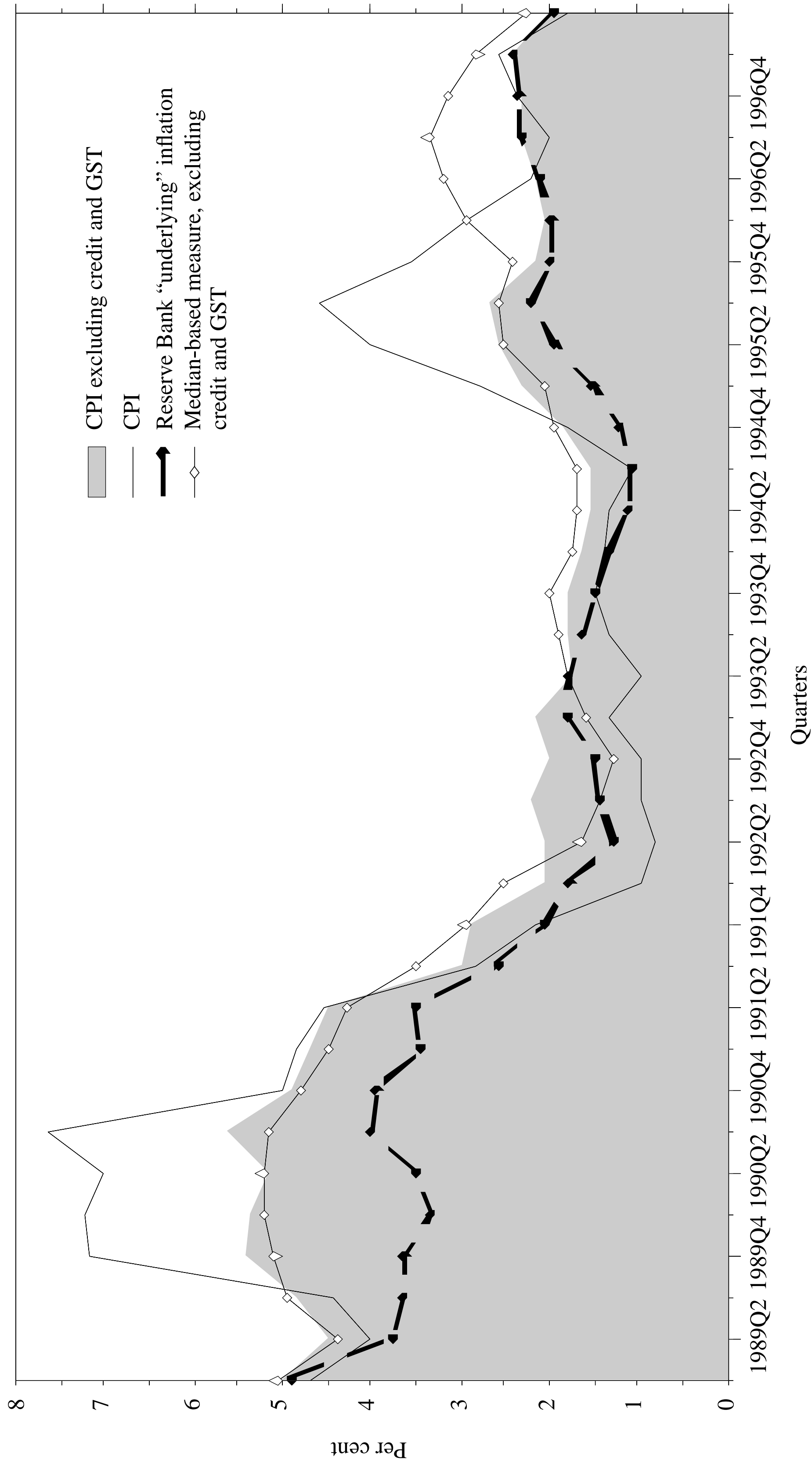
With seven years of experience of operating within our monetary policy framework, what are the key issues that we in New Zealand see before us now?

The primary issue that I would identify is the one that faced us on day 1: How do we ensure that the structure we now have can endure for the longer haul? The original purpose of the regime shift in New Zealand was to institutionalize the price-stability objective—to ensure that inflationary biases that may emerge in the political process are countered by institutional structures that carry a counter-inflationary imperative. If the institutional structures we now have are to endure, there must be a broadly supportive public constituency. The much-enhanced public communications program we have run in New Zealand over the past few years appears to have assisted materially in strengthening the public constituency for price stability, but we cannot presume that support is robust. In that context, we need to be mindful that during the past few years we have been fortunate to have operated in a supportive political environment, and to have faced a relatively benign international economic environment. Both have been helpful to the

1. That is not to deny the point made earlier that the influence of pervasive, policy-related price adjustments has made the process of reducing inflationary expectations more challenging than it might otherwise have been.

Figure 3

Alternative Measures of Annual Inflation



establishment and success of our current structure. Neither can be presumed to last indefinitely.

It is clear that our structure places a heavy load on our capacity to forecast inflation. To date, while we have made the inevitable forecast errors, none has materially damaged our credibility. So far, so good. But how much has been good luck rather than good management? We must remain alert to the possibility of being seduced by the apparent success of our forecasting over recent years, and falling into the trap of underestimating just how difficult a task we have taken on. The risk to credibility if we fail to adequately read the inflationary tea leaves is obvious. Thus we continue to invest heavily in improving our forecasting capacity and technology. But while doing so, we must also be careful to avoid leaving with the public, the politicians, or the financial markets any impressions about our ability to forecast that are greater than we can reasonably deliver on.

The specification of our inflation target remains in some respects problematic. For example, our targeted "underlying inflation" measure allows for the exclusion of the direct effects of "significant" price shocks arising from various sources. In that formulation, small price shocks in the "caveatable" items are reflected directly in our underlying inflation measure, while larger shocks may be excluded. While the choice of what constitutes a "significant" price shock is clearly arbitrary, the hard-edged accountability structure encourages a very close focus on the precise measure of the underlying inflation—after all, the Governor's continued tenure may be at stake. The obvious dilemma here is how to create and maintain a strong accountability structure, and with that, maximum credibility, while not encouraging a perverse focus on precise numerical boundaries that have no inherent significance.

A related issue is the operation of the accountability-credibility mechanism. In our case, a non-executive board is charged with the responsibility for monitoring the performance of the Governor in terms of achievement of the contracted inflation outcomes. We can be thankful that the board and successive ministers of finance have taken that responsibility seriously. But it is clear that circumstances could arise in which neither the board, nor the Minister of Finance, would have an interest in finding that the Governor had performed inadequately, even when the inflation target had been breached. Transparency, both with respect to the inflation target and by way of the publication of the board's assessments of the Governor's performance, is an important check on slippage in this crucial component in the accountability mechanism. Equally, it is clear that circumstances could arise in which the target range might be breached notwithstanding competent and diligent performance by the Governor—and we should look to the board to make that distinction wisely. The task of the board in

discharging its monitoring role is a challenging one that I suspect has yet to be fully or finally defined in New Zealand's case.

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