Alan Bollard: Flexibility and the limits to inflation targeting

Speech by Dr Alan Bollard, Governor of the Reserve Bank of New Zealand, at a private function, Auckland, 30 July 2008.

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Introduction

The New Zealand economy, like many others around the world, is going through a tough time. The cost of living is rising and there is a risk of persistent inflation emerging. However, there is also a broad and quite rapid slowing underway in retail spending and the housing market. The extraordinarily large and persistent rise in international oil prices has made New Zealand poorer – it now costs us more to produce and to consume, and the economy needs to adjust to that. This is a difficult combination of influences not seen since the oil shocks of the 1970s.

On the positive side, food commodity prices are also generally going up and this has benefited our dairy sector in particular. There is some evidence that international meat prices are now on the move upwards also.

To add complication, financial markets and banking systems around the world remain very unsettled. Credit markets worldwide began malfunctioning following the US subprime crisis, and have not yet returned to normal. Risk aversion remains widespread. Indeed, some people think the credit situation will get worse before it gets better.

The New Zealand dollar exchange rate has fallen somewhat in response to these domestic and international pressures. On a trade-weighted basis, the exchange rate remains at high levels, but there are big differences in the level of the dollar against particular currencies. We are at historical highs against the US dollar and the Japanese yen, but well below average against the Australian dollar – and almost exactly historically "normal" against the euro and the British pound.

These are strong influences, and they tug in many different directions. Through all this, the Reserve Bank's task of maintaining price stability is a difficult one. Many other central banks are facing similar challenges. In New Zealand we are arguably starting from a relatively good position, in that interest rates have been at firm levels and restraining inflation pressure for some time, and have room to fall in response to the weakening economy and abatement of the inflation pressure. For some other countries, growth is set to weaken markedly while inflation concerns remain, but real interest rates are already low or negative.

In this speech, I would like to put current circumstances in the context of the internationally accepted inflation-targeting framework for monetary policy, as applied in New Zealand. I want to ask the question: although the framework has stood the test of time – almost twenty years and counting – is it up to the challenges we face now? I will start by affirming that price stability is the best contribution monetary policy can make to economic growth and prosperity. Overall macroeconomic stability, however, also depends on a sound overall government policy framework that does not itself contribute to economic fluctuations. It also depends strongly on what is happening beyond our borders, with foreign demand and foreign interest rates.

And, this is one of those times that shows that the New Zealand economy is subject to powerful external forces. Monetary policy can only do so much. The challenge for us is to be flexible in buffering these forces as they hit the economy, without undermining public confidence in our commitment to price stability. In some cases – such as the rise in oil prices – we need to make difficult judgements about how best to look through unavoidable near-term inflation spikes, while ensuring that inflation returns to target over the medium term. All of this is consistent with and envisaged by the Policy Targets Agreement.

I'm going to conclude that the framework does work relatively well, and is the best approach we and many others have yet found, among a limited number of viable alternatives. Of course, we continue to seek improvements to it. But overall, although current circumstances are indeed very difficult, the framework, and our interest rate decisions to date, position us well to take on the difficult challenges that we face in the years ahead.

Back to basics: the role of price stability in macroeconomic policy

It is now universally accepted that price stability is a cornerstone of modern, well-functioning economies. Inflation is costly in a social justice sense, because it arbitrarily redistributes wealth among different groups in society. Not only does inflation blunt the link between effort and reward, it typically hits hardest those who can least afford it.

Inflation is also costly because it obscures the relative price signals that must come through clearly if the economy is to adapt to change and make the most of opportunities for growth. At present, high oil prices should be encouraging energy efficiency and alternative fuels development. High dairy prices should shift land use towards dairy production. An environment of stability in the general level of prices helps these signals come through so that the right consumption, investment and other business decisions are made.

It is also generally accepted that maintaining price stability is the best contribution that monetary policy can make to help an economy realise its maximum sustainable growth rate. The maximum rate itself depends on the microeconomic decisions of individual households, businesses, savers and investors responding to myriad price signals and opportunities for technological improvement. Good monetary policy is about promoting, through price stability, a stable background for these decisions. Other elements of economic policy that also contribute to good decision making and stability include fiscal prudence, the rule of law, and a regulatory framework that does not introduce economic distortions.

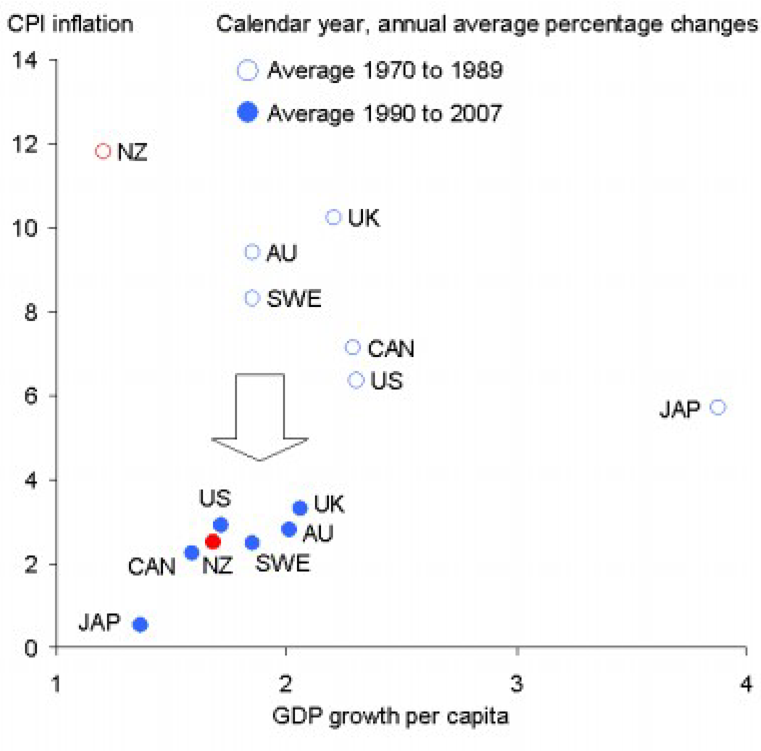
Wide-ranging evidence and research in New Zealand and abroad establishes three key lessons about the interaction of growth and inflation. First, that there are many determinants of the long-run level of economic growth. The level of inflation (let alone inflation targeting) is not the only thing that matters. Second, to try persistently to promote growth with loose monetary policy will in all likelihood simply generate a higher level of inflation, which will damage growth prospects in the long term. Third, a monetary policy that loses sight of the importance of price stability will probably contribute to large economic cycles, as inflation gets out of hand and then needs to be reined in with an economic crunch.

Figures 1 and 2 show that New Zealand actually illustrates the second lesson most clearly, compared to many other countries. In our case, lower inflation has been associated with a higher level of GDP growth per capita. We should not forget that this decade we have enjoyed the longest stretch of continuous growth since comparable records began.

The figures show the experience of a number of other OECD countries in reducing inflation from the high levels of the 1970s and 1980s to the low levels of the past couple of decades. All except the US and Japan have followed New Zealand in becoming inflation targeters.

That the determinants of growth are complex is illustrated by Australia, the UK and Sweden lowering their levels of inflation without much difference in growth, and US and Canada having lower growth in the low inflation period. Japan had much lower growth in the low inflation period, but this reflects that Japan's low inflation period was one where the Japanese central bank was persistently but unsuccessfully trying to stimulate the economy, rather than a deliberate effort to hold inflation very close to zero.

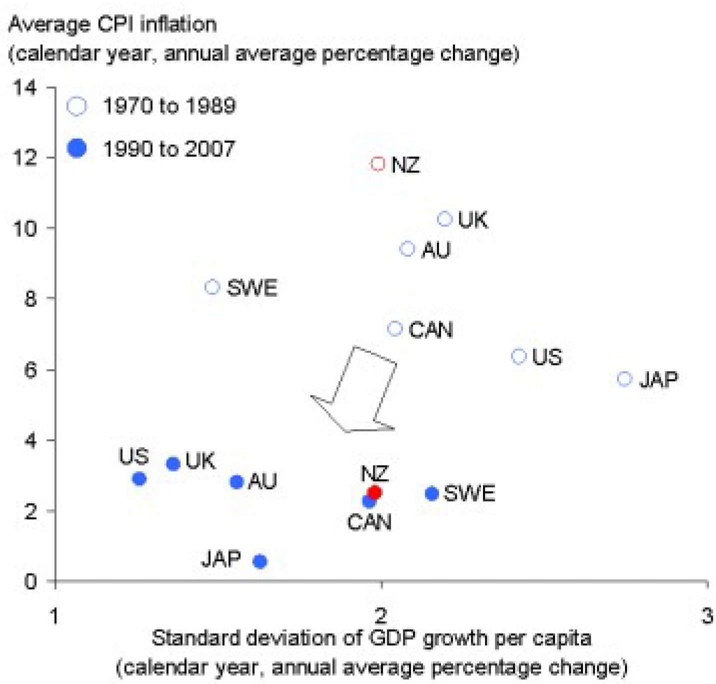
Figure 1. Inflation and average GDP growth per capita, selected OECD countries



Sources: Statistics NZ, DataStream, Statistics Sweden, Government of Japan Cabinet Office. Country key: AU Australia, CAN Canada, JAP Japan, NZ New Zealand, UK United Kingdom, US United States, SWE Sweden.

As for growth volatility, in all cases except Sweden, lower inflation has been associated with less volatile per capita growth performance – though the difference is only slight in New Zealand's case (Figure 2).

Figure 2. Inflation and volatility of GDP growth per capita, selected OECD countries

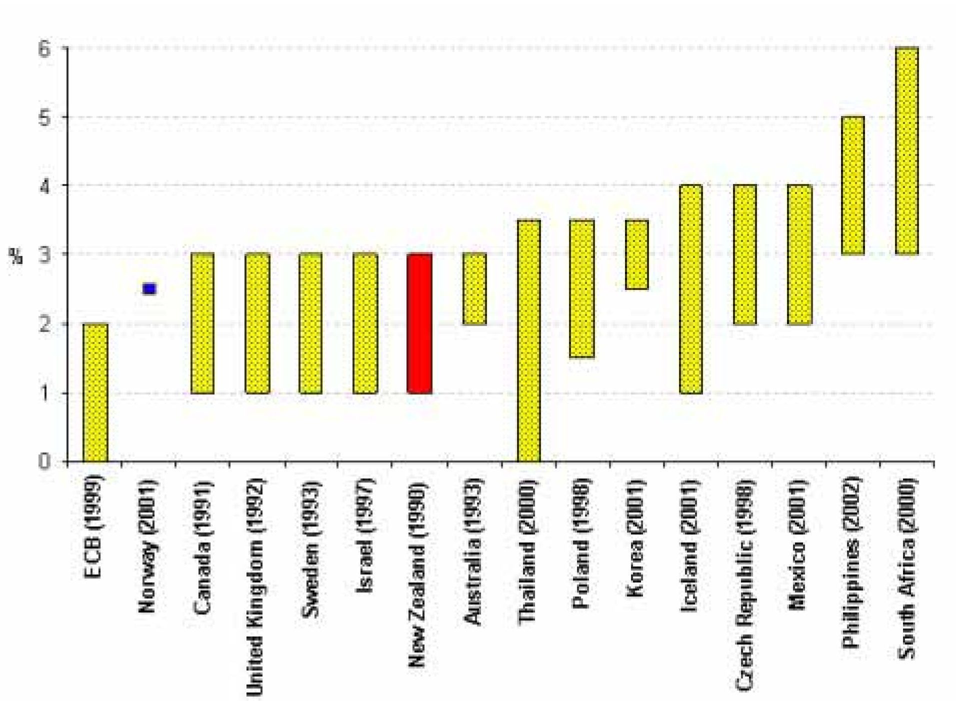


Sources: Statistics NZ, DataStream, Statistics Sweden, Government of Japan Cabinet Office. Country key: AU Australia, CAN Canada, JAP Japan, NZ New Zealand, UK United Kingdom, US United States, SWE Sweden.

The international inflation-targeting framework, New Zealand style

A target in terms of the rate of CPI inflation is now a mainstream way of expressing a commitment to price stability in terms of a measurable statistic. In fact, inflation targeting is one of New Zealand's successful exports. Since New Zealand's adoption of inflation targeting following the Reserve Bank of New Zealand Act 1989 (the Act), over 20 countries have followed.[1] Some of these are shown in Figure 3. Many of those who began inflation targeting relatively early are, like New Zealand, open economies with floating exchange rates. Quite a few of them are also, like us, small and strongly influenced by the prices of commodities on international markets. The list includes both developed economies and emerging economies, from the West and from the East. This long, growing and diverse list of economies suggests strongly that inflation targeting is a monetary policy strategy that can handle a wide range of circumstances and shocks.

Figure 3. CPI inflation target ranges, selected countries with date of commencement of inflation targeting



Sources: Roger and Stone (2005), ECB. The ECB's target is specified as below, but close to, 2 percent.

In our case, Parliament has defined in the Act the framework within which the Reserve Bank must target inflation. As is well known, the Act specifies that maintaining price stability is the Reserve Bank's primary function (section 8). The Act also makes the Reserve Bank operationally independent, but accountable to Parliament and the general public for its operations in pursuit of price stability. Finally, the Act provides for the specific policy target to be negotiated between the Governor and the Minister of Finance (effectively on behalf of Cabinet). This, of course, is the familiar Policy Targets Agreement (PTA). The Board of the Reserve Bank and Parliament's Finance and Expenditure Select Committee have the formal

[1] Roger and Stone (2005) provide a comprehensive review of the international experience of inflation targeting.

responsibility for regularly monitoring and evaluating the Reserve Bank's and Governor's monetary policy performance. Of course, we are also informally evaluated by the financial markets, and by everyone else with an interest in monetary policy, on a continuous basis.

Although inflation-targeting countries differ somewhat in their implementation details, the key elements of an inflation target plus independence plus accountability are widely accepted. Even non-inflation-targeting countries, such as the US and Japan, have independence and accountability arrangements that result in their central banks interacting with the public and financial markets in much the same way as in New Zealand. We all regularly review and document the economic outlook, adjust interest rates accordingly, and appear before our empowering legislatures to explain these interest rate decisions and how we intend to ensure that inflation evolves consistent with our targets.

All of this activity reflects that inflation targeting in practice is not as simple as just a target number for CPI inflation, with interest rates going up when inflation goes up and down when inflation goes down. Considerable analysis is involved in deciding when and by how much to move interest rates in response to the forces influencing the economy. We make choices and judgements about the path of inflation we will aim for over the medium term, and what risks need to be taken into account. The judgements are complicated by the lags with which monetary policy acts on the economy, and the uncertainty involved in forecasting.

All central banks are keenly aware of the interaction between monetary policy and output, interest rate and exchange rate volatility. Good monetary policy means being flexible about responding to price and demand pressures in that light.

We place a lot of importance on explaining how we intend to use this flexibility, setting out our analysis and assumptions so that others may evaluate our performance. This is for two reasons. First, they are what a public agency should do in a democratic society. Second, and just as importantly, regular explanation and clear resolve about price stability help ensure that the public's inflation expectations remain "anchored" – that is, consistent with ongoing price stability. Anchored expectations make the job of monetary policy easier, and create the room to be flexible in accepting fluctuations in the actual inflation rate. With anchored expectations, such fluctuations will not undermine public confidence that price stability will be maintained over the medium term.

In our case, the numerical target itself, "future CPI inflation outcomes between 1 percent and 3 percent on average over the medium term", incorporates flexibility. The "medium term" is not formally defined, but we normally aim to ensure inflation is within the range in the second half of a three-year forecast horizon.

Other PTA clauses reinforce the flexible approach. Clause 2(a) requires the Reserve Bank to monitor a range of prices. This explicitly ensures that the reference to the CPI does not blinker our view of inflation pressure in the economy – we should "look at everything". The use of the CPI reflects that it is readily accessible and understood, and calculated by an independent agency (Statistics New Zealand).

Clause 3(a) recognises that specific prices, such as oil and food currently, will sometimes move a lot, causing CPI inflation to move temporarily away from the target. However, Clause 3(b) then says that these circumstances are not reasons to lose sight of the medium term inflation target.

Finally, Clause 4(b) requires that in pursuing the target the Reserve Bank should avoid unnecessary volatility in output, interest rates and the exchange rate.

Through these clauses, the PTA provides guidance both to the Reserve Bank and to the general public about what flexibility means. Among other things, it means that we should not be "trigger happy" in responding to new events, but should use the full width of the target range, in light of the particular shocks that arise. In the absence of a PTA we would take this approach anyway, because it is good monetary policy practice, but having the PTA express it explicitly is helpful from an expectations point of view.

As Figure 3 shows, all inflation-targeting central banks in developed countries tend to cluster around a fairly narrow range of target numbers very similar to New Zealand’s (emerging economies tend to have slightly higher ranges). The lower bound of 1 percent is there because of the danger of deflation, while the upper bound reflects the evidence that sustained inflation above around 3 percent hurts growth. Alan Greenspan said that price stability exists when people do not factor inflation into their decisionmaking, and research evidence suggests that a numerical target below 3 percent accords well with this idea.

The success in reducing inflation around the world (using inflation targets or otherwise) is probably not all due to better monetary policy, though the evidence suggests that monetary policy played no small part. Beneficial circumstances, including the long period of strong productivity growth in Asia and resulting falling prices of Asia’s exported manufactured goods, no doubt helped. Institutional features such as the exact specification of targets probably matter much less than the good conduct of monetary policy – that is, the appropriate use of flexibility.

Dealing with large shocks: flexible inflation targeting in practice

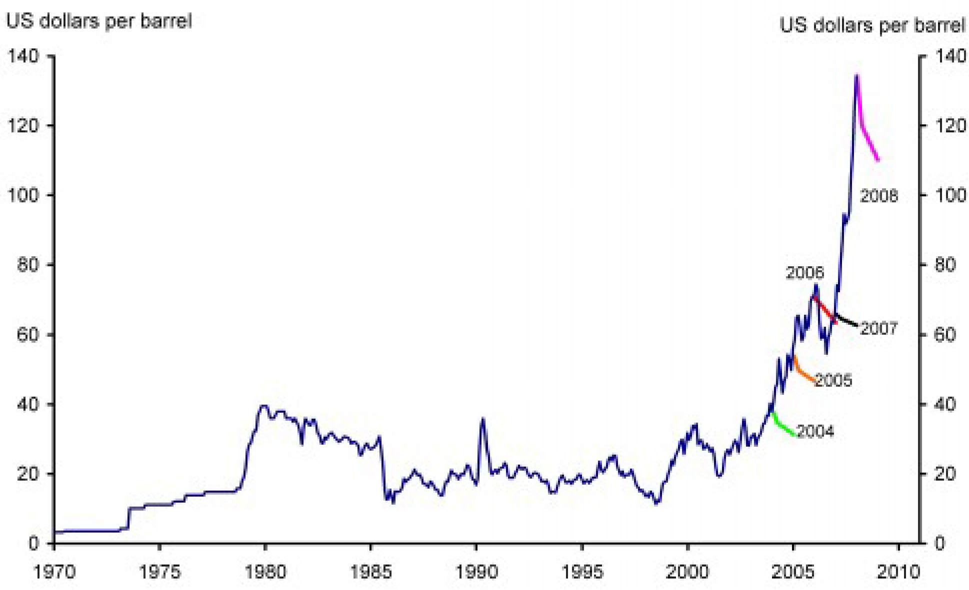
Flexibility requires difficult, but unavoidable, judgements about how best to respond to economic developments as they unfold, but without jeopardising medium-term price stability. Shocks can be big or small, and of a variety of types demanding different treatment. The structure and behaviour of the economy changes, and people learn, over time. Some types of behaviour, such as housing and asset price cycles, can be quite destabilising, in that they tend to generate boom-crash dynamics.

As a result, interest rates move, sometimes by a lot. This is true not just in New Zealand but in other developed economies (inflation targeters and otherwise). Different economies face different pressures at different times, and targets are specified a little differently, but the swings in policy rates over time are similarly large across a diverse range of countries. For example, over this decade to date, the US policy rate fell 6½ percentage points between 2000 and 2004, then rose more than 4 percentage points between 2004 and 2007, and fell again by more than 3 percentage points through to this year.

Unpredicted and temporary price shocks are relatively easy for monetary policy to deal with. By definition, they happen too quickly to respond to anyway, and their short duration lessens the risk that they will destabilise the economy. An example is a sharp rise in fresh vegetable prices due to bad weather, that everyone reasonably expects to be reversed when the weather improves. We look through such shocks, consistent with the PTA’s focus on the medium term.

When a shock is persistent, or forecast to evolve over a long period of time (say years), it is much more difficult to judge the appropriate response. A very good current example is oil prices. Over the past four years or so, international oil prices in US dollar terms have quadrupled. Consensus forecasts have consistently failed over this time to give any hint this might happen, as can be seen in Figure 4. Though the rising New Zealand dollar over this period has offset the impact on local prices a bit, the impact of the oil price shock on CPI inflation over this time is clear, and it accounts for a large part of why CPI inflation is where it is today.

Figure 4. International oil prices and Consensus projections

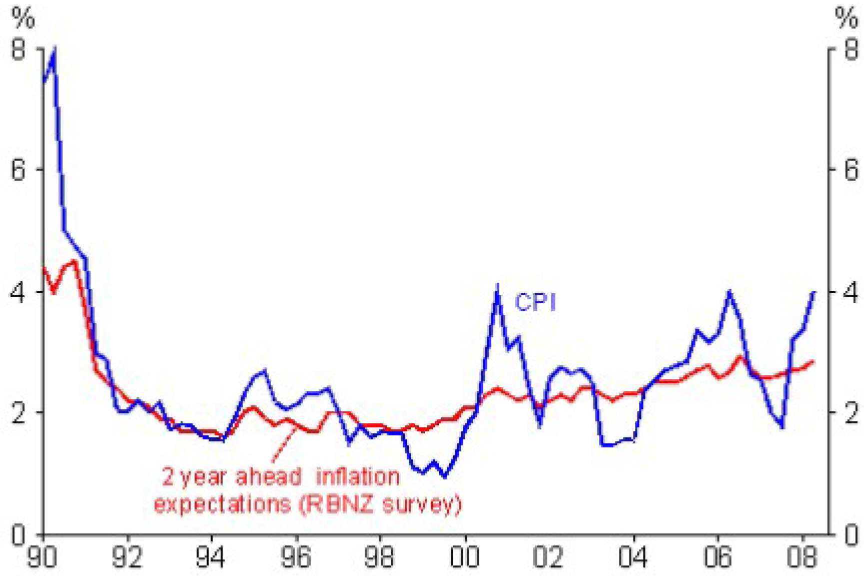


Sources: Datastream, Consensus Economics Inc. Projections are as at June of the year indicated.

In these circumstances, we have real choices about how to respond. We can either let any further anticipated direct inflation consequences of the shock come through, or try to offset them with tighter policy than otherwise.

The PTA does not explicitly address long-lasting shocks, but as noted before, it does provide sufficient guidance and scope for the Reserve Bank to take a sensibly flexible approach. The basic approach of looking through the near-term, unexpected inflation impact is the same. However, the key judgement with this kind of persistent, high-profile shock is about the heightened risk that the period of elevated headline CPI inflation might lead the public to question the Reserve Bank's commitment to the medium term inflation target, and plan and act on the basis of a higher expected inflation rate. Getting inflation expectations down again can be very costly, as shown by New Zealand's own economic history – let alone the history of countries that have experienced hyperinflation such as the Weimar Republic in the 1920s, Argentina in the 1980s and Zimbabwe currently.

Figure 5. CPI inflation and inflation expectations



Sources: Statistics NZ, RBNZ.

There is thus much less scope to be sanguine about long-lasting price shocks compared to sudden and ephemeral shocks, because the risk is greater that inflation expectations could drift away from the target range. Currently, inflation expectations appear to remain anchored at a level consistent with the target range, though there is a slight upward drift, apparently reflecting the sustained elevation of headline inflation (Figure 5). The key requirement in this sort of situation is that policy is kept tight enough to ensure that inflation expectations remain anchored.

Sustained oil price inflation is just one stark example of a shock that might persist for some time. There are actually two other large and sustained shocks all at work on the New Zealand economy at the moment: a retrenching housing market after the biggest housing boom ever, and very strong dairy prices. Also, very large increases in other commodity prices such as steel and fertiliser, while having a smaller direct effect on CPI, have had a substantial impact on business costs in some sectors.

The appropriate response to the housing market downturn is fairly straightforward, because it is a demand-driven shock. With weak domestic spending, loosening policy to bring demand closer to the economy's supply capacity is also consistent with keeping future inflation on target.

The dairy price shock is more difficult, as it combines a positive stimulus to demand (increased income for dairy farmers and associated industries) with a negative stimulus (the reduction in real household disposable income due to rising prices of dairy products). We need to judge the net effect on demand, and account for the upward risk to inflation expectations from the price increase itself. A complication is that the exchange rate will tend to move in response to the terms of trade effects of the dairy price movement, and spread its impact further around the economy.

The oil price shock is of the most difficult type. For a net oil importer such as New Zealand, it reduces disposable incomes and demand (suggesting looser policy is appropriate), but also has a direct upward impact on inflation and presents upward inflation expectations risks (suggesting tighter policy is appropriate). The exchange rate will respond to the terms of trade movement in this case also.

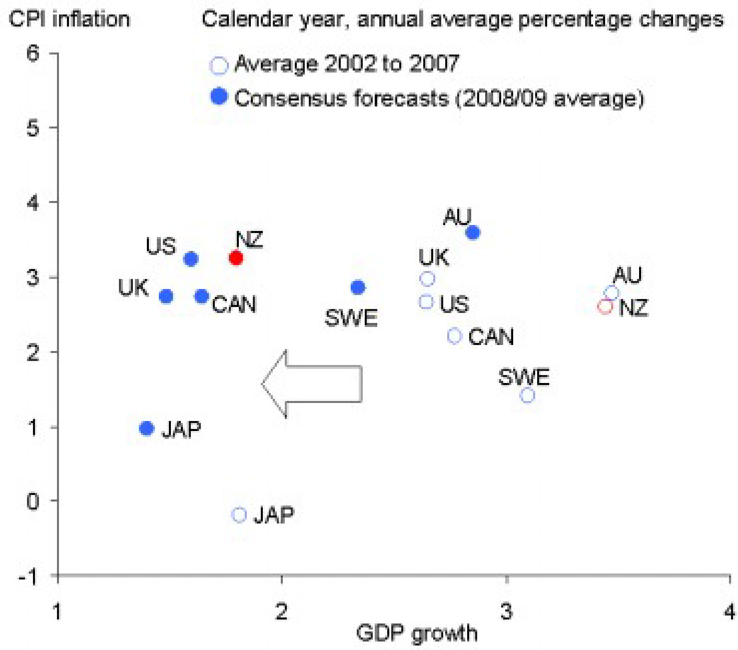
The overall impact of this mixture of large shocks of different types produces the complicated picture we have at present. Demand is weak, but the economy's supply capacity is under pressure from higher oil and other input prices. On top of these movements in the supply-demand balance, prices are rising. The overall adverse movement in the terms of trade as oil prices have continued to rise, while dairy prices have at least paused, leaves New Zealand poorer. Adjustment to the relative price shock, which in this case is sourced from the fundamentals of supply and demand in international markets, has to occur through a combination of lower real wages and lower real profit margins.

It does not make sense for the Reserve Bank to try to prevent this adjustment. Instead, the key policy requirement in this situation is to allow the initial externally driven relative price changes to occur, but keep monetary policy sufficiently firm to ensure that generalised second-round inflation effects do not take hold – in other words, to keep inflation expectations anchored.

We are already starting from a position of high real interest rates in New Zealand, reflecting the need to restrain inflation pressure that has built up in recent years. Indeed, current headline inflation remains above the target range of 1 to 3 percent (though CPI excluding food and energy prices is rather lower). However, our judgement at this stage is that the contractionary effects of the housing downturn, high oil prices and the global credit crunch will substantially outweigh the stimulus from high export prices and projected expansionary fiscal policy. We have thus adopted an easing bias in our monetary policy stance. Our judgement is that the weakness in the economy will be sufficient to bring inflation, and inflation expectations, down over the medium term consistent with the target range.

Our starting position is arguably more favourable than that of other economies, in the sense that there is plenty of room for our projected easing in interest rates as the economy and the existing inflation pressure weaken. Most developed economies are facing much the same, very uncomfortable, combination of slowing growth in the presence of rising inflation pressure, but some are still running very low or negative real interest rates. For the year to June, the US reported 5 percent inflation, Australia 4.5 percent, the euro zone 4 percent, and the UK 3.8 percent. The Governor of the Bank of England recently had to write to the UK Chancellor explaining a departure from the Bank of England's target range, making very similar arguments to the ones we have been using for treatment of oil and food price shocks, and warning that worse is to come. To make things worse, for this group of countries and some other developed countries, growth over the next couple of years looks likely to run one or two percentage points below where it has been in the past few years (Figure 6).

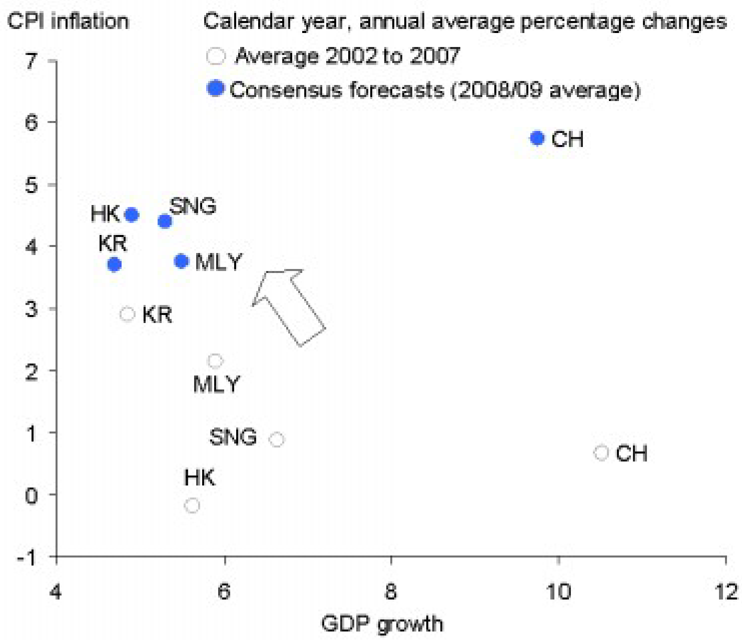
Figure 6. Inflation and growth outlook, selected developed countries



Sources: Statistics NZ, DataStream, Statistics Sweden, Government of Japan Cabinet Office, Consensus Economics Inc. Country key: AU Australia, CAN Canada, JAP Japan, NZ New Zealand, UK United Kingdom, US United States, SWE Sweden.

In some Asian countries, the situation is very difficult indeed, where food in particular forms a much larger proportion of the consumption basket. Singapore's and China's inflation rates are both above 7 percent, and their real interest rates are negative – but monetary tightening is constrained by exchange rate considerations. For the countries shown in Figure 7, the movement towards high inflation with low growth is quite marked.

Figure 7. Inflation and growth outlook, selected Asian countries



Sources: Datastream, Consensus Economics Inc. Country key: CH China, HK Hong Kong, KR Korea, MLY Malaysia, SNG Singapore.

The challenges for inflation targeting

Independence and accountability arrangements for central banking have an unattractive flipside in that they can lead to heightened expectations of what monetary policy is actually able to achieve. Inflation targeting is not an elixir for stabilisation.

The current very large international forces remind us that small economies like New Zealand are especially dependent on developments offshore. This decade, the New Zealand dollar has been very strong, materially complicating monetary policy – due partly to the sizeable gaps that opened up at various times between our interest rates and those in some other countries, including Japan, the US and Switzerland. Rising commodity export prices have also played a role. There is little we can do about other countries' interest rates or international commodity markets. To state the obvious, we run New Zealand's monetary policy according to New Zealand economic conditions, and other central banks run their monetary policies according to their own economic conditions. The Australian dollar has also strengthened markedly in the past two or three years, largely reflecting similar factors.

Dealing with asset price cycles and their consequences for price stability is another issue that central bankers across the world are grappling with. Housing market booms occurred this decade not only in New Zealand, but also the UK, Australia and the US. The aftermath of these booms is still playing out currently in New Zealand, the UK and the US at least.

On the positive side, there are things that can be done to enhance the environment within which monetary policy operates. These include a wider government policy framework that at least does not contribute to the cyclicality of the economy, and to the tendency for inflation shocks to become entrenched. Even better are government policies that reduce cyclicality – such as the well-known "automatic stabiliser" features of well-designed fiscal policy frameworks. Although economic stabilisation is not the primary motivation for these other policy areas, we do work with other government agencies to try to enhance the stabilisation properties of government policy where possible, including reducing structural distortions that tend to generate economic cycles.

These issues motivate us to continue to look for other instruments that might support the OCR as tools to promote macroeconomic stability. We also look forward to the findings of the Finance and Expenditure Select Committee's Inquiry into the Future Monetary Policy Framework. In both the Supplementary Stabilisation Instruments work we did in 2006 and in our submission to the FEC's Inquiry, we reported that there did not appear to be any magic bullets among the range of potential instruments considered. Having said that, we did find that certain adjustments to tax and other regulatory structures might reduce their contribution to the cyclicality of the economy. Analysis of the other instruments and approaches suggested they would be either ineffective in the long run, or would introduce large economic distortions.

As noted earlier, the differences in central bank mandates, inflation targeting frameworks and monetary policy conduct across countries are not large enough to explain the differences in long-run growth performance we observe. Savings, investment and average interest rate patterns reflect the long-running fact that New Zealanders remain willing to borrow and spend at much higher interest rates than those prevailing in other countries. Conducive policy frameworks, including sound monetary policy, help maximise long run growth performance and prosperity – however, what is also needed is savings and investment behaviour geared towards growth.

Despite spending time looking, we have found no clearly superior alternatives to the flexible inflation targeting approach to maintaining price stability. Such things as monetary targeting and fixed exchange rates have been tried before in New Zealand, as in other countries that are now inflation targeters. Both monetary and exchange rate targeting regimes tend to be very inflexible. They require the burden of many types of shocks to be forced through output, rather than absorbed by the policy instrument itself, and tend to be most suitable for situations where inflation expectations are poorly anchored and the commitment of the central bank to price stability is doubted by the public.

Another alternative that could appear superficially attractive is to require monetary policy to target multiple objectives such as growth, employment, export and the balance of payments. This was the approach taken in New Zealand and many other countries in the post-war period up to the early 1980s. It inevitably had a short-term focus, and resulted in stop-go policies and high inflation. We now know that one instrument cannot succeed in achieving multiple objectives over the cycle. The move to inflation targeting, with its single, clear objective, resulted from the lessons learned in that period. We do not want to re-learn those lessons.

Conclusions

Monetary policy – day to day, month to month and year to year – is about balancing judgements in an uncertain world. It is not a precise tool. Times like the present are particularly challenging, when there are large and persistent shocks on both the demand and the supply sides of the economy.

Nevertheless, we believe the inflation targeting framework provides us sufficient flexibility to deal with the short-term consequences of shocks, without losing sight of the essential medium-term inflation objective. The New Zealand framework and approach is very much like that used in other economies. The next few years will not be easy, but I believe that the framework is the best available, and that the Reserve Bank is up to the challenge of applying it flexibly.

Overall, the framework has been relatively successful. Despite the current shocks we are going through, we expect inflation and inflation expectations over the medium term to be within the target band. The public expects us to meet our target, and this helps to keep expectations anchored.

Very few of the countries who have adopted inflation targeting have given it up. Alternatives that dilute the focus on medium term inflation and price stability could seriously threaten the anchoring of inflation expectations and damage the credibility of the New Zealand macroeconomic policy framework, especially in the current environment of high rates of headline inflation and strong forces on the economy.

References

Roger, S and M Stone (2005) “On target? The international experience with achieving inflation targets”, IMF *Working Paper* WP/05/163.