Reserve Bank forecasting: Should we feel guilty?

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1 Introduction

Thank you for the invitation to address you today. I last addressed the Society in April 1995 on why I was strongly in favour of the Government's issuing inflation-indexed bonds. Notwithstanding some concerns about the tax treatment of those bonds, and their inaccessibility to small investors, I believe that the issue of the bonds has been successful, and I am very glad that the Government proceeded to issue them.

Today, I want to talk on quite a different matter. You, as actuaries, spend a lot of your time assessing the viability of pension schemes, and in doing that you need to make assumptions about the rate of inflation, the rate of return on investments, and a host of other things. And of course sometimes your assumptions turn out to be wrong, because the one thing you can all be absolutely certain of is that the future will never turn out to be quite the same as you assume it will be.

Well, I have a great deal of sympathy for you. Like you, I as a central banker spend a great deal of my time trying to make an assessment of the future. And like you, I rarely get it absolutely right.

Recently, the Reserve Bank has been severely criticised by a number of people for having misread the economy in recent months, and in particular for failing to head off the two quarters of negative growth which New Zealand experienced in the first half of this year. One major newspaper has gone so far as to suggest that our forecasting record is 'abysmal'. In recent days, with the New Zealand dollar up sharply against the US dollar, we have also been criticised for allowing this to happen. I believe the critics are wrong.

2 The accuracy of Reserve Bank projections

The Reserve Bank devotes very considerable effort to its projections. We study a very wide range of data from New Zealand sources on production, prices, wages, money supply, bank credit, business and household confidence, and much more. We have developed a series of so-called indicator models, which help us to assess what is happening in the economy at the present time, before we have the official GDP figures available to us. We have developed a sophisticated model of the whole economy to help us with medium-term forecasting, after looking carefully at the work done in other similar countries, particularly in Canada and Scandinavia. Before each quarterly projection, a group of Reserve Bank staff fans out across the country and talks to upwards of 40 businesses and business organisations to get an up-to-the-minute impression of what a small number of hopefully-representative firms are experiencing. We have, for example, talked with 54 companies and business organisations throughout the country in the last few weeks, in preparation for our November *Monetary Policy Statement*. We get information from the non-executive Directors of the Bank itself, and from a large number of informal sources, such as letters, phone calls, and the meetings which I myself have throughout the country. We talk to Statistics New Zealand to try to get an understanding of what lies behind some of the statistics. We talk to the producer boards to get an understanding of what is happening in the agricultural sector. As a result, we go into each quarterly projection 'round' armed with a very great deal of information on the New Zealand economy.

We do not ourselves make forecasts of the international economy, but instead use the monthly *Consensus Forecasts*, produced by Consensus Economics Inc. in London. These reflect the assessment of a group of forecasters in each of the major countries to which New Zealand exports, and historically the average of these forecasts has tended to outperform the forecasting performance of any single forecaster. We certainly have no reason to believe that we could produce better forecasts for our overseas markets than can the forecasters 'on the ground' in the countries concerned.

But despite all this effort, we often end up wishing, with the benefit of hindsight, that we had run monetary policy slightly differently. Unfortunately, it is *inherent* in the way in which monetary policy works that at times we will wish we had done things a little differently. Why? Because monetary policy has its effect on the real economy with a considerable lag, and its effect on inflation with an even longer lag. To make matters worse, the lags are not even stable. This means that to avoid making errors we would have to have perfect foresight, and of course I am not embarrassed to admit that we have nothing of the kind.

Indeed, the situation is even worse than that. Not only can we not see into the future with perfect foresight, we do not even know precisely where the economy is at present. To be sure, we receive lots of anecdotes, and some of the data we analyse may only be a few weeks out of date. But the most comprehensive measure of output in the economy, the estimate for Gross Domestic Product, is not available for almost three months after the end of the quarter to which it refers - and then for the next year or so that figure is subject to revision, often to very substantial revision. Thus for example, the first estimate made by Statistics New Zealand for GDP in the March quarter of 1996 indicated that the economy was growing at an annualised rate of some 1.5 per cent. A year later, Statistics New Zealand estimated that the annualised growth rate for the March quarter of 1996 was actually some 4.2 per cent. The policy implications of those two numbers are radically different. Cynics have suggested that God made economic forecasters to make weather forecasters look good. But at least weather forecasters can look out the window, and with reasonable accuracy know what the weather is at the present time. Economic forecasters do not have that advantage.

If monetary policy works well, it can help the economy adjust to the unforeseen shocks which will inevitably hit us from time to time, whether these be sudden changes in export prices, sudden changes in import prices, or whatever. This should have a tendency to smooth fluctuations in output to some extent. But it is quite unrealistic to expect that monetary policy can eliminate the business cycle completely, and we have never claimed that we can do so. No matter how prescient the Reserve Bank had been, the sudden collapse of the Korean economy was always going to have a hugely negative impact on the New Zealand forestry industry, and on parts of the New Zealand tourist industry. We should not, and do not, feel embarrassed about being unable to fully offset events such as that.

In years past, some economists, recognising the very great practical problems involved in forecasting over the period relevant to monetary policy, suggested that as a substitute for economic forecasting central banks should simply concentrate on keeping some measure of money supply growing at a rate consistent with the inflation target. Alas, central banks around the world found that keeping money supply growing at a stable rate was not only very difficult to do in practice but it also provided rather poor control over inflation. As a result, virtually all central banks admit to having abandoned such a monetarist approach to monetary policy, and even those central banks which continue to base policy on money supply numbers to some degree often find it necessary to depart from a strict adherence to those targets.

Other monetary policy ‘rules’ have been devised, the most famous of these perhaps being that named after Professor John Taylor of Stanford University. The Taylor rule involves setting interest rates in response to deviations in the rate of inflation and the level of output from their targeted levels.

But all of these rules involve a simple rule of thumb as a guide to policy in a situation where the central bank must of necessity set policy for an economic situation which is 18 to 24 months into the future, and therefore can not be foreseen with any certainty whatsoever. The only way the Reserve Bank could avoid the embarrassment of being wrong about the future at least as often as being right would be to stop publishing our projections. Indeed, most central banks do not publish detailed projections for either the economy or for inflation. The Bank of England does, as does the Swedish central bank. But the Reserve Bank of Australia does not, the Bank of Canada does not, the Federal Reserve Board in the United States does not, and the Bundesbank does not. We still believe that publishing our projections is helpful to an understanding of what the Reserve Bank is doing, but life would certainly be rather more comfortable for us if we did not.

What of the present situation? How seriously have we misread the situation? The first point to note I think is that the

Bank's primary responsibility is to keep the inflation rate within the target which has been agreed with Government. That is the measure against which the Bank should be held accountable. The inflation target was originally 0 to 2 per cent, but has been 0 to 3 per cent since December 1996. We first entered that inflation target in 1991 and, with the exception of the year to June 1995 (when we exceeded the target by 0.2 per cent, in part as a result of a very sharp increase in vegetable prices two months before the end of the year), and 1996 (when we were slightly above the target throughout the year), the inflation rate has been within the agreed target throughout that period. For all of 1997 and for 1998 to date, we have not only been within the target, but have been close to the middle of the target. At no point since first entering the target band in 1991 have we driven inflation below the bottom of the band, and indeed at no point has inflation gone below the *mid-point* of the band which applied at the time. This hardly suggests an abysmal forecasting record, nor that the Bank has operated policy excessively firmly. On the contrary: overall, it suggests that the Reserve Bank has done its job well.

As an aside, I don't propose to comment in detail here on why we have had to have policy rather tighter in New Zealand in recent years than has been necessary in Australia. That matter has been dealt with in a good article in the Bank's quarterly *Bulletin* not long ago. The key point is that we clearly experienced a conjunction of inflationary pressures, including quite strong increases in housing prices, in the mid-nineties, whereas Australia had a rather different experience. If inflationary pressures in the two countries converge, I have no doubt that in due course we will find that monetary conditions in the two countries will converge also. Indeed, that seems to have happened to a considerable extent in recent months.

But is it fair to suggest that the Bank was slow to ease policy in response to the Asian crisis, or to the drought? It is worth recalling that the present easing cycle began when our *Monetary Policy Statement* was issued in December 1996. At that time, an easing, even the relatively moderate one which we indicated was appropriate, seemed a fairly bold move. Inflation had been outside the top of the target band all year, Government had announced a major increase in government spending for the next three years, and a major reduction in income taxes, although deferred by a year, was within the period relevant to monetary policy. Moreover, financial markets were much less confident than we were that inflation was trending down, and kept monetary conditions tighter than we felt was necessary almost constantly for more than the next four months. Nobody, in New Zealand or elsewhere, was predicting the Asian crisis at that time, though it was at that time that monetary conditions relevant to economic activity in the first part of 1998 were determined. Nobody, in New Zealand or elsewhere, was predicting the drought at that time.

Throughout 1997, the Reserve Bank continued to ease monetary conditions gradually. During the first months of 1997, most of the easing took the form of lower interest rates. Through the balance of the year, the easing took the form of a lower exchange rate, with interest rates somewhat firmer. But in interest-rate-equivalent terms, we sanctioned an easing of some 3 percentage points between December 1996 and 1997.

And how reasonable was the assessment in the *Monetary Policy Statement* we issued in December 1997? In October that year, the *World Economic Outlook* published by the IMF projected that world economic growth would continue at above 4 per cent per annum for the balance of the decade. This projection was made in the knowledge of the emerging problems in Asia, but in the expectation that relatively robust growth would continue in the United States and Europe. A few weeks later, the South Korean economy was clearly in serious difficulty, but the mean of the November *Consensus Forecasts* projected that industrial production in Korea would grow by almost 8 per cent in 1998. Industrial production in Japan was projected to grow at what seemed like a very modest 2 per cent this year. We were suspicious that perhaps the *Consensus Forecasts* were not picking up the seriousness of the deterioration in the world situation. For the first time, we deliberately departed from our traditional use of the mean of the *Consensus Forecasts*, and instead used a pessimistic sub-set of those forecasts. We had a hunch that the situation could turn out even worse than these numbers suggested but, with the overwhelming majority of international forecasters continuing to project strong growth in key markets such as Australia, the United States, and Europe, we stayed with that pessimistic sub-set.

Even though, with the wisdom of hindsight, it is clear that the growth we projected for the New Zealand economy in 1998 was too optimistic, that is not the same as saying that monetary policy itself was flawed. Every quarter, the Bank produces a new quarterly projection, and adjusts its position in the light of new data. Perhaps of even greater importance, the Bank allows financial markets very considerable leeway to adjust monetary conditions in the light of new data *between* those quarterly projections. The real issue is not whether the Bank's projections were absolutely correct; they will never be. Rather the issue is whether the Bank allowed monetary conditions to evolve appropriately in the light of new information, and I believe that we did.

Over the 10 months since December 1997, the easing of monetary conditions has accelerated so that today monetary conditions are the equivalent of almost 10 percentage points easier than they were in December 1997, and more than 9 percentage points easier than they were *projected* to be now, back in December 1997. Of course, not all of that easing has been through reduced interest rates: the exchange rate has fallen substantially also. But 90 day interest rates today are at levels last seen in early 1994, and indeed, apart from that brief period in early 1994, New Zealand has not seen lower 90 day rates, or lower floating rate mortgages, since the very early seventies! Part of that easing has come about as the Bank has announced its new quarterly projection, but most has occurred as the market has interpreted the new data to mean that inflationary pressures are continuing to abate even more rapidly than the Bank's forecasts envisaged. And while we have from time to time sought to rein in the speed of the market easing, for the most part we have sanctioned it because we too could see that the emerging data justified easing beyond that envisaged when our projections were completed. Remember that when market conditions change and the Bank sanctions that change by its silence, the Bank has effectively taken an action. Each Wednesday morning at 9.00 a.m. when the Bank says nothing, that silence contains deliberate meaning, which the markets understand very well. In my business, silence does not mean abdication.

Certainly, both the March and June quarter GDP figures were weaker than we had envisaged when we did our projections. But it is inappropriate to compare our published projection, completed six weeks or so prior to the publication of the GDP estimates, with the estimates of market economists immediately prior to the release of those estimates if by that comparison something meaningful is implied. All of us revise our estimates as new pieces of the jigsaw emerge, and the fact that we have been revising down our own internal estimates is amply illustrated by the extent to which we have been willing to accept conditions very much weaker than envisaged in our projections.

The last few months illustrate the point rather well. In our August *Monetary Policy Statement*, we estimated that the June quarter GDP figure would, when released, show that GDP had contracted by 0.2 per cent. On that basis, we estimated that the economy would have a certain level of unused capacity, resulting in weak inflation pressures. On that basis, we indicated that the appropriate level of monetary conditions, on the MCI, would be around zero during the following three months. By 25 September, when Statistics New Zealand released their first estimate of June quarter GDP, it was clear that inflationary pressures were abating much more quickly than we had expected in early August as we completed the *Monetary Policy Statement*, that GDP had probably reduced by rather more than 0.2 per cent, and that easier monetary conditions would be appropriate. And in fact monetary conditions just prior to the release of the June quarter GDP numbers on 25 September were not zero but -290. We issued a 'that's about far enough for the moment' statement on 7 October, by which time conditions had reached -370.

To repeat, the real issue is not whether our quarterly projections were correct, but rather whether those projections were reasonable in the light of the data available to us at that time, and whether our response in terms of sanctioning easier monetary conditions was appropriate as new data emerged. Certainly, monetary conditions have eased very substantially over the last 18 months and, as we see it at the moment, that has been appropriate.

Do we feel in some sense 'guilty' that we did not ease earlier? Even looking back, the decisions which we took seem reasonable in the light of the information available at that time. So, no, we don't feel 'guilty'. As President Harry Truman once said, 'Any schoolboy's hindsight is better than the President's foresight'.

In summary, I have no doubt about the professional excellence of my staff, or about the rigour they bring to our projections four times a year.

Inherent in the criticism which has been made of the Bank in recent weeks is the view that we have unnecessarily constrained the economy by failing to allow monetary conditions to evolve as the emerging data have suggested was warranted. If that's true, we will see inflation go near to, or below, zero. Well, the latest annual inflation number was 1.7 per cent, above the mid-point of the inflation target agreed with Government, and slightly above market expectations. I don't know of too many commentators who are projecting inflation to go anywhere close to zero over the next year or two.

Our projections are not an end in themselves; they are merely a guide to the markets as to how the Reserve Bank is thinking given current data. Nobody who is informed expects them to come precisely true, because the world is always changing. That's why we constantly allow the markets to adjust monetary conditions as new data emerge.

Why, then, all the criticism? Partly it is that people always want someone to blame when times are tough, and the Reserve Bank is an easy target for a cheap shot. Also, I think people instinctively want certainty, even when it is not to be had. In that sense, the Reserve Bank will continue to disappoint those who want everything to be black-or-white for as long as the Bank continues to be open and honest.

3 What about the rising exchange rate?

The only other point I would like to touch on briefly relates to the sudden strengthening of the New Zealand dollar over the last few weeks. Since 23 September, when the New Zealand dollar reached 0.492 against the US dollar, the kiwi has strengthened against the US dollar by nearly 9 per cent (as of late 19 October). This is pretty dramatic stuff, and the appreciation has clearly worried some exporters who fear it may be the beginning of a new period of strong exchange rate appreciation. Indeed, the Meat and Wool Economic Service of New Zealand has estimated, presumably on the assumption that no forward exchange cover has been taken at lower exchange rates and that the appreciation is not soon reversed, that a 10 per cent rise in the exchange rate would see farmers' returns on lamb drop by 17 per cent, on beef by 14 per cent, and on wool by 12 per cent.

I am bound to say that the present mix of monetary conditions is not one which makes me terribly enthusiastic. Given the propensity of us New Zealanders to borrow as soon as cash-flow constraints allow, I worry that at present levels interest rates have become undesirably low. I certainly don't see much evidence that, at these lower interest rates, New Zealanders will be rushing to increase their savings in order to fund our on-going appetite for borrowing.

Even at the higher interest rates which prevailed earlier in the year - allegedly the highest real interest rates in the developed world - New Zealanders were enthusiastic borrowers and reluctant savers, at least in fixed-interest form, suggesting that, whatever the arithmetical calculation implied about real interest rates, most New Zealanders did not *perceive* interest rates as particularly high in real terms. Certainly, our real interest rates are not out of line with those in similar countries today.

In any case, I have long ago had to face the fact that central banks have very limited ability to affect the mix of monetary conditions. To be sure, we could push up interest rates, but only at the cost of putting still further upward pressure on the exchange rate. I know of no way in which the Reserve Bank can both reduce the exchange rate and increase interest rates. (Of course, we could ease monetary policy further, thereby reducing both interest rates and, presumably, the exchange rate, but the appropriate level of monetary conditions is something which we have to judge in the light of the overall inflationary pressures, or lack of them.)

What we do know is that international foreign exchange markets have been through a period of quite extraordinary turbulence in recent weeks. During one 24-hour period, the US dollar depreciated by 10 per cent against the Japanese yen in the biggest one-day movement in that exchange rate since most currencies were floated in 1973. Over a three-day period, the dollar fell by almost 20 per cent against the Japanese yen, again an unprecedented movement.

In fact, *most* of the apparent recent strength in the New Zealand dollar has been simply a reflection of the decline in the US dollar. Against the German mark we had, as of 19 October, appreciated by less than 5 per cent; against the Australian dollar we were almost exactly unchanged; and against the Japanese yen, we had depreciated by 8 per cent. The Trade-Weighted Index had appreciated by little more than 1 per cent (all comparisons with rates on 23 September). Throughout this recent period of extreme turbulence in international financial markets, the New Zealand dollar has barely been outside a narrow range of 55 to 57 on the Trade-Weighted Index.

Moreover, it is also clear that the New Zealand dollar has fallen a very long way since its peak in April 1997, at 69.1 on the TWI. There seems not the slightest risk of our approaching these levels again in the near future. Indeed, there is some evidence to suggest that the current 'bounce' in the New Zealand dollar has a great deal to do with turmoil among the hedge funds in New York. Certainly, market gossip suggests that some of these funds have been selling out of so-called short kiwi positions in recent weeks, causing upward pressure on the New Zealand dollar as a result. But before you rush to denounce these funds for putting upward pressure on our currency, keep in mind that they were instrumental in putting some downward pressure on our currency in the process of establishing the short-kiwi positions which they now appear to have been unwinding. When these short positions have been closed out, the upward pressure on the currency could well dissipate quite quickly.

Having said that, neither I nor anybody else I know has a dogmatic view about the appropriate, 'fair', or equilibrium exchange rate for the New Zealand dollar. My own guess is that it is somewhat stronger than the present exchange rate. Certainly, on an inflation-adjusted basis, the long-term average trade-weighted exchange rate is a little higher than the present level. But just as the exchange rate almost certainly overshot during the period of almost four years in which it was appreciating, so it may overshoot 'on the other side'. Given New Zealand's large current account deficit, and still-heavy dependence on world commodity markets, some further weakness in the currency in the short-term would not be at all surprising.

One thing we know with confidence, and that is that if financial markets feel disinclined to continue investing in New Zealand in large amounts at current low interest rates, either interest rates will rise somewhat or the exchange rate will fall somewhat. The Reserve Bank's responsibility is to ensure that, whatever the mix of monetary conditions, we continue to deliver price stability.

4 Conclusion

On 26 June this year, I gave a speech entitled *Monetary Policy in a Dangerous World*. Though delivered about two hours after the release of the weak March quarter GDP numbers, it was, of course, written several days before that release. In it, I warned that we could well be facing 'the most serious shock to hit the New Zealand economy since the oil shocks of the seventies'. But I also said that the reforms of the last 15 years, including a monetary policy committed to delivering on-going price stability, put us in a good position to weather the storm. Nothing that has happened since 26 June has changed my mind, either about the seriousness of the shock or about our ability to weather the storm.