Comparison of Reserve Bank and NZIER inflation outlook narratives

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Editor's note

In this piece we examine how the macroeconomic stories told in the forecast publications of the Reserve Bank and the New Zealand Institute of Economic Research (NZIER) compare over history.

Executive summary

The objective of this memorandum is to provide a comparison of the inflation outlook stories of the Reserve Bank and the NZIER, and to identify differences that might cast light on the disparity between the NZIER's CPI inflation forecasting performance and our own. It covers the period from June 1995 onward, corresponding to that examined by Satish Ranchhod in "A comparison of the Reserve Bank's forecasts of inflation and GDP to external forecasts".

The main findings are:

- The NZIER appears to have had in their forecasts an implicit monetary policy reaction function that is less responsive to movements of inflation away from the centre of the target range than ours has historically been forecast to be.

- Most of the NZIER's superior performance happened in the period 1998 to 2000 when the exchange rate fell sharply and there were a large number of positive price shocks.

- The NZIER attaches more weight to cost-push factors in forecasting inflation than we do. However, this does not seem to contribute significantly to their better performance.

- The NZIER has sometimes forecast earlier and stronger economic growth than we have. This might have made a small contribution to their higher and more accurate inflation forecasts.

Recurring themes and possible lessons

The inflation projections of both the Reserve Bank (Reserve Bank) and the New Zealand Institute of Economic Research (NZIER) are influenced by a large number of factors. These include assumptions about exogenous variables, formal models of how the economy operates, an implicit or explicit monetary policy reaction function and judgement imposed on all of these. Separating out the net impact of these factors, and comparing respective performances, is a very difficult exercise. However, the Reserve Bank and NZIER 'stories', as published in Monetary Policy Statements (MPSs) and Quarterly Predictions (QPs), differed in four main respects that merit attention.

Monetary policy reaction function

The NZIER appears to have an implicit monetary policy reaction function that is less responsive than ours when inflation deviates from the centre of the target band. When inflation is expected to move (rise) away from the middle of the band, the QPs often include wording indicating that they expect the Reserve Bank to set policy tight enough to just stop inflation breaching the target. If inflation has moved outside the target band, or is expected to do so soon, then the QPs usually say that monetary policy will be set tight enough to bring inflation back closer to the mid-point of the range in two or three years time. In contrast, we have tended to talk of inflation falling more quickly.

This appears to be an important factor contributing towards the NZIER's superior inflation forecasting performance. They appear to have held the view that either:

- the Reserve Bank has targeted inflation more flexibly than our forecasts have suggested, or
- any given level of monetary conditions takes longer to affect inflation than we believe.

However, given that other work has shown that their growth forecasts are not particularly different from ours, the latter explanation seems less likely.

Period 1998 to 2000

The NZIER's superior CPI inflation forecasting performance is particularly noticeable for projections published from 1998 to 2000. The main reason for the NZIER's greater forecasting accuracy during this period was the impact of the decline in the exchange rate. The TWI fell from 62.9 in December 1997 to 49.6 in December 2000. The NZIER generally adopted lower exchange rate assumptions than us over this time. This is likely partly because their forecasts around this time were generally produced several weeks after ours, at a time when the exchange rate was falling rapidly. They might have also assumed a greater passthrough from any given change in the exchange rate but that is not clear from their narrative accounts.

During this period there was also a series of individual price increases that could not have been easily predicted. These include rises in oil prices, related transport costs, tertiary education fees, fruit and vegetable prices and the cigarette excise tax. The balance of unpredictable shocks probably fell in the NZIER's favour.

Cost-push analysis

The NZIER has focused more on cost-push factors than we did. These include oil prices, New Zealand's export commodity prices, exchange-rate passthrough, PPI flow-throughs and other one-off input price increases. Commentary in QPs is approximately evenly divided between cost-push influences and demand pressures. The NZIER has tended to comment on indicators like their own capacity utilisation measures but they do not seem to make an explicit estimate of the output gap. Of course, we rely much more on an output gap framework for preparing inflation projections and for communicating our thinking.

It is not clear, though, that this has contributed to the out-performance of the NZIER forecasts. It may do so modestly to the extent that the influence of cost-push factors might be more protracted than we believe because monetary policy might act more slowly than we project (see above). However, the gaps between the Reserve Bank and NZIER forecasts have been lower in the last couple of years when the difference between our output gap and their cost-push frameworks appeared most pronounced.

Economic growth projections

There were several occasions from 1996 to 1999 when the NZIER was forecasting earlier and stronger economic growth than we were. Their inflation forecasts were generally between 1.0 and 1.5 per cent higher than ours during these years.

Further analysis of the data is required to see to what extent the NZIER commentaries were reflected in differences in GDP projections.

Conclusions

The narrative accounts in Monetary Policy Statements and Quarterly Predictions suggest that the NZIER's superior inflation forecasting performance has been mainly attributable to:

- their monetary policy reaction function,
- the impact of a large fall in the exchange rate, and
- a series of positive price shocks in the period 1998-2000.

The NZIER has also placed more emphasis on cost-push influences and has sometimes anticipated faster economic growth than the Reserve Bank. However, these factors do not appear to have had a major influence on forecasting performance.

Appendix

Chronological comparison

This first part of this appendix compares Reserve Bank and NZIER narrative stories about factors likely to drive CPI inflation. It covers the period from June 1995 onward. A table summarising the inflation outlook from each Monetary Policy Statement (MPS) and a corresponding Quarterly Predictions (QP) is included later in the appendix.

1995

The June and December MPSs both said that wage growth would place upward pressure on inflation, and the December publication cited a positive output gap as another influence.

The QPs stated that wage growth was taking place but it would not be a problem because it would not flow on fully into prices. They saw lower demand pressures up to mid-1996. But later tax cuts would place significant pressure on underlying inflation.

In December 1995, the published Reserve Bank and NZIER forecasts for underlying inflation 5 to 9 quarters ahead were very similar, being no more than 0.2 percentage points apart.

1996

The June 1996 MPS and QP listed similar factors driving inflation eg, weakening growth in labour costs but rising housing costs.

In December, we saw aggregate demand slowing in 1998 and consequently underlying inflation falling rapidly. We forecast the annual change in underlying inflation to be 0.3 per cent for the year to December 1998.

The NZIER expected stronger economic growth and said inflation would stay above the mid-point of the target range because of the difficulties in controlling inflation when the economy is growing at 3 per cent. They forecast the annual change in underlying inflation to be 1.7 per cent for the year to December 1998.

The Reserve Bank target measure outcome for the year to December 1998 was 1.1 per cent. Growth of GDP fell from 4.1 per cent in the March 1996 year to 3.1 per cent in March 1997 and to 1.9 per cent in March 1998.

1997

The June MPS projected inflation to decline over the following 18 months, mainly due to the effect of the recent TWI appreciation, then to rise as the fiscal stimulus contributed to a positive output gap. The June QP also saw inflation declining initially, but starting to rise after only 6 months as a result of a consumption-led recovery (presumably triggered by the tax cuts). In other words, the two outlooks were similar except that the NZIER saw consumption rising earlier.

The outlooks in December were quite different. The MPS said that inflation would decline after mid-1998 due to the Asian crisis (and thus import prices), weak house prices and rents, and flatter electricity and local authority rates charges. We forecast the annual change in CPIX to be 1.2 per cent in the year to March 2000.

The QP forecast that prices would surge in 1999 as a result of a falling exchange rate and growing domestic demand fuelled by tax cuts and increased government spending. They forecast the annual change in underlying inflation to be 2.7 per cent for the year to March 2000.

The Reserve Bank target measure outcome for the year to March 2000 was 1.7 per cent.

1998

In the May, August and November publications both we and the NZIER picked a flat near-term profile but rising inflation in 1999. Our reasons were similar in some cases, both of us expecting strengthening demand further out. However, the NZIER expected the impact of the exchange-rate depreciation to be greater and they expected growing Producer Price Index (PPI) inflation to feed through into consumer prices, ie cost-push factors.

As a result, we forecast the annual change in CPIX to be 1.3 per cent in the year to March 2001 and they forecast the annual change in underlying inflation to be 2.4 per cent for the same period. The Reserve Bank target measure outcome for the year to March 2001 was 3.1 per cent.

1999

In the March, May and August MPSs we were "comfortable" regarding the inflation outlook. We saw a "balance of downward forces" over the medium-term due to excess capacity in the economy. Only in the November MPS did we express concern about a more pronounced inflation cycle. But we still expected inflation to stay within the 0 to 3 per cent target range. And we forecast the annual change in CPIX to be 1.5 per cent on average over the second half of 2001.

The March and June QPs forecast that inflation would rise "gradually" and "reasonably steadily" respectively. This was attributed to pressures from the PPI and rising world commodity prices. The September QP referred to general inflationary pressures from an economic upturn. The NZIER forecast the annual changes in the Reserve Bank target to be 2.9 and 2.6 per cent for the final two quarters of 2001.

The Reserve Bank target measure outcome for the second half of 2001 was 2.1 per cent.

2000

In March and May we saw some specific price increases in the short-term and a small positive output gap generating modest inflationary pressures later over the forecast horizon. In August and December we said inflation would spike to 3 per cent (August) and 4 per cent (December) due to the impact of factors such as the lower NZD, cigarette prices, petrol prices and transport costs. However, we projected inflation to fall back quickly to about 1.5 per cent. We forecast the annual change in the CPI to be 1 1/2 per cent on average over the second half of 2002.

As early as March the NZIER said inflation would go above 3 per cent. They said then that inflation was "bubbling along" in the near-term with rises in food prices, export commodity prices and some PPI measures. In the medium-term they expected increased oil prices and pressure on the capacity of the economy. The June and September QPs conveyed a similar story expecting inflation to peak at 2.7 and 3.0 per cent. In December the NZIER said inflation would rise to 4.3 per cent but tightened monetary policy would bring it back "fairly quickly" to 1.5 per cent by mid-2003. They forecast the annual change in the Reserve Bank target to be 2.1 and 2.0 per cent for the final two quarters of 2002.

2001

The March, May and August MPSs projected inflation to return reasonably soon to about 1.5 per cent. Available resources were expected to roughly match growth in demand. In November we said we now believed there had been a positive output gap since the middle of the year. We also saw lingering effects of the past exchange rate depreciation and we incorporated an upswing in inward migration. We forecast the annual change in the CPI to be 1 1/4 per cent on average over the second half of 2003.

The 2001 QPs also forecast that inflation would decline after the spike "fairly quickly". But by "fairly quickly" they mean something rather slower than we do. Like us, they refer at times to aggregate demand and potential output but this does not feature as prominently as in MPSs. Instead, they referred to the prices of New Zealand's export commodities and oil prices as dominating CPI movements. They forecast the annual change in the Reserve Bank target to be 1.9 per cent in each of the last two quarters of 2003.

2002

The March MPS envisaged inflation falling away but not as quickly as previously projected. In May we said it would not decline until mid-2003. Almost all our discussion, particularly in the August MPS is in the context of an output gap analysis. We forecast the annual change in the CPI to be 1 ¾ per cent on average over the second half of 2004.

The March, June and September QPs all expected inflation to ease over the six months ahead, though the time might have been pushed out as the year proceeded. They expected inflation to decline because of stabilising oil prices and an appreciating exchange rate. They forecast the annual change in the Reserve Bank target to be 1.9 per cent in each of the last two quarters of 2004.

The main projected influences on inflation in each MPS and QP are listed in the table below.

Time	**Reserve Bank**	**NZIER**
Jun 1995	21 June close-off Inflation is expected to exceed 2 per cent soon but a return toward the centre of the band is expected by mid-1996 after a June 1995 peak. Expected influences: **Wage growth** to rise further Profit margins to fall Risks: **Tax cuts** have not been incorporated, as details have not yet been published. Construction costs might fall Wages, profit margins, exchange-rate pass-through and commodity prices might depart from projections.	2 June close-off Inflation is expected to fall to 1.9 per cent by March 1999 due to: a strong exchange rate, low wage pressures, and sustainable growth. Commodity prices will be strong in 1995 but will decline in 1996. Risks: • **Demand** does not decline so quickly. • **Wages** grow faster. • **Commodity prices** grow faster or longer than expected. There is a "box" on updated price equations on page 26.
Dec 1995	5 December close-off Inflation will be close to the top of the band for several quarters longer than expected a few months ago. Due to: Pressure from positive output gap Greater **wage** rate pressures But low **profit margin** growth Risks: **Exchange rate pass-through** (from the appreciation) might be less or slower than expected, (which would cause inflation to be higher). Our **output gap** estimate could be wrong **Construction costs** might be higher or lower **Labour supply response** to the fiscal package. **Fruit and vegetable prices** might take longer to return to "normal" levels.	24 November close-off **Lower demand pressures** over the next 6 months will see underlying inflation dip to 0.8 per cent in June 1996. **Wage growth** is not expected to be a problem as there will not be full flow-on to prices. But later **tax cuts** will place significant pressure on underlying inflation, causing it to peak at 2.0 per cent in Sept 1998. Turner study of OECD countries is noted. Rising output can be inflationary regardless of the output gap. Excess demand is more inflationary than the same level of deficient demand is disinflationary. The costs of output overshooting are greater than those of undershooting.
Jun 1996	17 June close-off The (near-term) outlook is worse than projected even a few months ago due to further expected increases	24 May close-off Over the next 2 quarters inflation stays high: Higher wages and lower productivity

	in **house prices** (particularly), **food**, **transport costs** … In the medium-term inflation will fall and would even undershoot our target if policy was not changed in due course. **Commodity prices** will fall (though **oil** might rise). Growth in **unit labour costs** will slow. **House price** growth will slow.	growth Pressure on construction prices Rising house prices, rents and section prices Later inflation abates: Slowing output growth Low employment growth "Subsiding" house prices
Dec 1996	26 November close-off **Aggregate demand** will strengthen in 1997 then slow in 1998. Pressures on capacity will ease. We will see slower growth in **house prices** and **import prices**. Underlying inflation will fall rapidly. Risks are balanced: Weaker world possible Strong **fiscal stimulus** possible	22 November close-off In the near term house prices will remain steady or decline slightly. Offsetting this will be more general inflationary pressures from recent high wage settlements, tax cuts and a slower appreciation of the NZD. In the medium-term inflation will stay away from the target mid-point because of the difficulties in controlling inflation when the economy is growing at 3 per cent, and the likelihood of a positive bias in the CPI.
Jun 1997	6 June close-off Inflation is expected to decline over the next 18 months due to the effect of the recent **TWI appreciation**. Then it will rise as the **fiscal stimulus** contributes to a positive output gap. Uncertainties (MPS title): Risks are evenly balanced. Our estimate of the **sustainable growth rate** could be too high or too low. Our (cautious) assumption of a long lag in **ER pass-through** could be wrong. **Car prices**, as recorded by Statistics NZ might fall more than we expect. **House price** trend could go up or down.	5 June close-off Underlying inflation will continue to fall over 1997 reaching a trough of 0.9 per cent in the final quarter. It will then increase gradually over 1998 and 1999 as a result of the consumption-led recovery. "Tight monetary conditions over 1998 and 1999 prevent inflation nearing 3 per cent."
Dec 1997	2 December close-off In the near-term inflation is expected to rise as the impact of the earlier ER appreciation "no longer masks domestic price trends". After mid-1998 it will decline due to: • **Asian crisis** (and thus import prices)	21 November close-off Inflation will be "dormant" over the next four quarters. However, prices will surge in 1999 due to: The impact of a falling exchange rate on

	• Weak **house prices** and **rents** • Flatter **electricity** and local authority **rate** charges Uncertainties: • **World economy** (the principal unknown) • **Household spending** • NZ's **productive capacity** • **Non-tradable** inflation might be low • **ER pass-through**	rising import prices, particularly imported inputs. Growing domestic demand fuelled by tax cuts and increased government spending.
May 1998	Close-off 8 May Near-term neutral. Weak (falling) **house prices**, removal of **car tariffs** and weak **world prices** (including **oil**) will be partly offset by flow-through from the **ER fall**. Medium-term: after falling, inflation rises to 1.8 per cent as output gap turns positive in latter half of 1999. Uncertainties are balanced. Downside risks include **policy reforms and structural change** (eg petrol retailing, excise taxes, tariffs and the electricity sector), a **global downturn**, a fall in domestic **confidence** and a sharp **house price** fall. Upside risks include higher **import prices**, faster **world** or **NZ recovery**, **fiscal** policy, **AMP** demutualisation and the impact of monetary policy easing.	Close-off 5 June In the short-term, the weaker NZD will generate some import price inflation. But this will be offset by things like the removal of car tariffs, lower oil prices and the removal of restrictions on parallel importing. Inflation will rise in 1999 as domestic demand increases. However, weaker house price growth and tight monetary policy will keep underlying inflation below the Reserve Bank's 3.0 per cent upper limit.
Aug 1998	29 July close-off. Near-term inflation will be subdued due to falls in **toll charges, petrol** and **car prices**. Medium-term: Inflation will remain between 1 and 2 per cent in 1999 and 2000. A **weak world** will keep import prices down, even though the **TWI** is down. The **negative output gap** will ensure **housing** stays weak. The main uncertainty is the **international outlook**, which we	29 August close-off Businesses are responding to the fall in the NZD by cutting margins (that were increased when the NZD rose a few years earlier). Growing PPI inflation will feed through into consumer prices. But weak domestic demand will prevent inflation rising strongly until late 1999.

	assume is moderately weak.	
Nov 1998	30 October close-off Near-term outlook flat. There will be some **ER pass-through** but this will be offset by subdued **house prices** and by falling **electricity** prices due to new entrants. Medium-term outlook downward due to **weak world**, negative **output gap**, but could be partly offset by changed **road-user charges** (petrol tax) and **HNZ rents**. Risks: "There has rarely been a time of greater uncertainty." **World growth** (high or low) Stronger ER pass-through Weak current account and TWI	25 November close-off Underlying inflation will rise over the next two quarters as recent falls in the NZD feed through into tradable prices. However, this will be offset by the slowdown in house prices and continued weak domestic demand. In the longer term tightened monetary conditions eventually bring underlying inflation back towards the mid-point of the 0 to 3 per cent band.
Mar 1999	1 March close-off Expect inflation to be subdued (mainly below the target mid-point) throughout the projection period. Near-term factors: Weak international **commodity prices** **Petrol and electricity reforms** will create downward pressure New **car prices** (import tariffs removed May 1998) Medium-term: Main factor is **excess capacity** which will persist Also, **import prices** will be subdued. Uncertainties: risks balanced: Downside are that the **world** (Asia) continues to slow or that there is a sharp US correction. Upside is that NZ **household spending** grows more strongly (despite debt).	5 March close-off Underlying inflation will rise gradually over the next 18 months. In the short-term this will be dampened by weak house prices and weak domestic demand. Monetary policy will be tightened later in 1999 and this "eventually" brings underlying inflation back toward the mid-point of the target range.
May 1999	5 May data close-off Near-term: Local authority **rates** to rise **Electricity** to rise (by 11 per cent by one supplier)	8 June text finalised Inflation will pick up reasonably steadily from late 1999 with PPI and world commodity prices leading the way.

	Petrol to rise **Food** to fall as drought ends Housing lending is up so **housing items** might rise Despite short-term increases we still expect **petrol** and **electricity** to fall due to reforms. Mortgage interest rates are down so the CPI will be low or negative, but that is irrelevant for monetary policy. <u>Medium term</u>: We still see a balance of downward forces so stimulatory monetary conditions to end of period. <u>Uncertainties</u>: balanced again Downside risk = weak **trading partners** Upside = **consumption** growth A smaller risk is **spillover** from coming price rises.	Consumer price inflation will increase a bit later and a bit more slowly, peaking in March 2001.
Aug 1999	3 August close-off <u>Near-term:</u> Trend to stay around 1.5 per cent but one-offs will cause blip up. As in May, **rates**, **electricity** and **petrol**, plus **motor vehicle registration fees** too now. <u>Medium-term:</u> Comfortable situation. Inflation will rise to 2 per cent due to one-offs then fall back to 1.5 per cent. Later in the period interest rates will need to rise to contain inflationary pressures. Uncertainties: As in May	2 September text finalised Inflationary pressures will return as the economy experiences an upturn, with housing prices probably reviving and oil prices rising. Underlying inflation will rise more slowly than the PPI but this is coming off a higher base. It will peak at 2.7 per cent in June 2001.
Nov 1999	3 November close-off Short-term: We expect the rise in **oil prices** (and ER fall) to lead to rises for **petrol**, **airfares**, **taxi fares, petrochemical products** and **freight**. Medium-term: A more pronounced cycle than projected in August but still within 0-3. **Housing costs** will be the main contributor to rising inflation. **Spare capacity** initially, but less later. **Uncertainties** Upside risks are faster **world recovery** and **oil price** rises generating generalised inflation.	26 November text finalised Over the next few quarters firms will pass on increased costs from: Rising oil prices Higher local authority rates Higher electricity prices Weak dollar Inflationary expectations Consumer price inflation will rise to the top of the band by mid-2000 then hover there for several quarters.

	Pricing intentions are up which suggests a risk regarding **price expectations** and generalised inflation – but we don't think this is a significant risk yet. Downside "risks" are that the US **"new paradigm**" applies here, ie high growth with low inflation, and a downturn in the US and/or Japan. Also noted: Y2K stock build-up makes some data difficult to interpret. Another **drought** is a possibility.	
Mar 2000	3 March close-off Near-term: **Petrol** and **related prices** will rise in the short-term. Generalised inflation will bottom out in a few quarters then rise. Medium-term: Some tightening will be needed later in the projection period to reduce the risk of inflation rising. <u>Risks</u> ("policy issues"): balanced Domestic momentum and **consumer behaviour** surging up. New paradigm in NZ Exchange rate up or down.	3 March text finalised Though the 1999 Q4 CPI figure was very low, inflationary pressure is bubbling along, eg rises in food prices, export commodity prices and some PPI measures. Increased oil prices and pressure on the capacity of the economy will push inflation above 3 per cent. The Reserve Bank might invoke a caveat for oil.
May 2000	4 May close-off <u>Near-term:</u> Output gap is mildly positive (earlier than expected). An upward trend in inflation is becoming apparent with the strengthening economy. <u>Medium-term:</u> Capacity is expected to grow about in line with demand. The small positive output gap won't grow, and later will close (based on tightening endogenous conditions). Inflation will be 1.5 to 2.0 per cent over the next few years. <u>Uncertainties:</u> (risks are balanced) Similar to March, ie global economy, domestic momentum, ER developments, response of inflation to output growth, and now also the degree of excess demand.	Text finalised 2 June Inflation will rise in the next 6 to 9 months: Cigarette tax Petrol prices Lower NZD feeding through to import prices Capacity constraints will start to bite. Inflation will rise to 2.7 per cent but that level will be short-lived, as monetary policy will be tightened.
Aug 2000	2 August close-off Near-term: Inflation to rise further as **petrol** and **cigarette** price rises are not fully captured in CPI yet, eg **transport**	Text finalised 1 September Inflation will peak at the top of the target range in March 2001 with strong ongoing inflationary pressures until the end of 2002.

	costs are expected to increase. Inflation above 3.0 per cent is possible. Medium-term: Inflation will be around 3 per cent from late 2000 to mid-2001 then quickly return to about 1.5 per cent. Uncertainties: Upside are a recovery of **confidence** (the fall might have been caused by concerns about the Employment Relations Act) and external sector responding strongly to the low exchange rate. Downside are that the fall in confidence may be indicating/causing a weakening, with investment and employment falling. Also noted: Magnitude and timing of ER passthrough is uncertain, and one-off price increases might cause generalised inflation. But this is unlikely. It would be more likely if there was significant excess demand.	The continuing low NZD drives the forecasts, affecting prices of imports and exportable goods. Risks: More widespread 2nd round effects from oil price rises. Higher wage demands. A further depreciation of the NZD. Inflation expectations rising, generating more persistent high inflation.
Dec 2000	Close-off 17 November Near-term: We expect 3.8 per cent for Dec 2000 and Mar 2001, due to the impacts of the low NZD and high **oil price**, eg on **airfares, household appliances** and **taxi fares**. It is difficult to disentangle these increases from 1st round effects but we think there is little pressure on core inflation. And inflation should drop back quickly to the mid-point of the band. Near-term risks: More **oil price** hikes Effects of **HNZ rent** cuts Impact of very recent **PPI** rise Rising **import prices**, or falling import prices if ER picks up. (But we expect limited spillover in our open, competitive economy.) Medium-term: Inflation will rise to 4 per cent then fall back quickly to about 1.5 per cent as special factors	Text finalised 22 November. Inflation will rise to 4.3 per cent in June 2001 due to: The impact of the low NZD on prices. Its impact on "momentum". Price increases already announced. Firms supplying the domestic market will stay caught between rising prices and weak demand. The Reserve Bank will look through some price increases. It will raise interest rates and keep them up until 2002. This will bring inflation back "fairly quickly" to 1.5 per cent by mid-2003.

	drop out. A bit further out there will be upward pressure as the output gap becomes more positive. Medium-term risks are skewed upward: **World economy** weaker than expected. **Exchange-rate** doesn't rise as projected. Economy responds as strongly to a low **exchange rate** as in the past. (We assume it doesn't.) **Wages** and **profit margins** rise in response to current spike.	
Mar 2001	Close-off on 22 February Near-term: Inflation will come back quickly from 4 per cent. Medium-term (expected) influences are: Available resources will roughly match growth in demand. Past ER depreciation implies high-ish inflation. Expected later ER rise should reduce inflationary pressure, but this would be diminished if profit margins rise. Overlaid special (one-off) factors include **petrol** and **cigarette price** rises that will soon fall out. **Housing NZ rent cuts** will be greater than previously thought, implying a very quick return to the target mid-point. Risks/Judgements: Spillover from **oil price** rise and ER spike. **Weaker world** likely (bad US news) Impact of **weaker world** on our export prices. Direct effects of assumed modest **exchange rate** rise.	Text finalised on 27 February The spike to 4.0 per cent will be temporary and inflation will be back in the band by the end of the year. A paragraph (page 38) saying firms' capacity utilisation suggests demand is not growing faster than supply. A second paragraph saying actual growth is not likely to differ markedly from potential growth over the forecast period. These two paragraphs suggest that output gap-type analysis is not at the core of NZIER forecasts.
May 2001	30 April close-off Near-term: The recent spike is expected to dissipate quickly so that measured inflation returns to around 1.5 per cent. Medium-term: Persistent inflation returns to 1.5 per cent (from somewhat above 2 per cent) in 2 to 3 years.	Text finalised 29 May There are a few price increases in the pipeline but the annual rate of inflation will decline fairly quickly as the large oil and tobacco price rises fall out of the numbers.

	Risks/uncertainties: **World growth** not weak as assumed Weak world growth does not exert downward pressure on NZ prices. **Low ER** gives greater stimulus than so far to exports and import-substitutes. **Wages** rise rapidly.	
Aug 2001	27 July close-off Near-term: Inflation should track back to the mid-point of the range Medium-term: We are assuming little spillover from the recent spike in inflation. As rates rise we should see inflation track back down. Risks/uncertainties: Economy is not at neutral but above full capacity. Assumption that **price expectations** are well anchored could prove wrong – an **electricity** shortage could contribute to another spike. **Weak world** might not cause our export prices to fall. **ER** might not gradually appreciate.	Text finalised 29 August. NZIER continue to expect a fall in the annual rate but there are risks: A surge in demand given resource constraints Electricity prices
Nov 2001	26 October close-off Near-term: Headline inflation will continue to be driven mainly by large movements in a limited number of items. Medium-term: The move back to 1.5 per cent will take some time. We now believe there has been a positive **output gap** since mid-2001 (as noted in last MPS). There are lingering effects of the past ER depreciation. An upswing in inward **migration** has been incorporated. Risks/uncertainties: Threatening **international environment** (OCR was cut 50bpts after 11 September). Risks: Stronger NZ economy and **global recovery**. Inflation expectations rise.	Text finalised 20 November The prices of NZ's export commodities and oil prices continue to dominate CPI movements. Commodity prices are expected to decline over the next 18 months causing inflation to ease.

Mar 2002	1 March close-off Near-term: Special factors keep inflation at around 3 per cent over the March and June quarters. Medium-term: Further out inflation falls away but not as quickly as earlier MPSs suggested. Demand will rise and will affect wages and prices. Risks/uncertainties: mildly to upside. Inflation expectations become unanchored Size of **migration** inflow and its impact Global outlook	Text finalised 27 February Consumer prices have risen this quarter because of the effect of poor summer weather on fruit and vegetable prices. However, annual CPI inflation will gradually fall this year because of: Falling commodity prices Stabilising oil prices A mild NZD appreciation Easing wage pressure A risk is weaker consumption.
May 2002	Close-off 14 May Near-term: We expect June quarter rises for **petrol**, **insurance**, and **electricity**. We note QSBO pricing intentions are up. Medium-term: We expect demand and the ER to rise. A fall in inflation is not now expected until 2003. Risks/uncertainties: balanced • **World demand** might rise Greater impact of **migration** on local demand Offset by: Fragility of **world demand** • Faster **ER** appreciation And **price expectations** could go either way	Text finalised 28 May In the short-term the two main factors are: The rise in oil prices due to Middle East tensions (partly offset by the appreciation of the NZD). The migrant inflow causing higher demand for new housing. Inflation will ease later in the year due to: Oil prices stabilising The effects of a stronger NZD
Aug 2002	Close-off 26 July We now expect: weaker world demand, a more muted response from the economy to demand pressures, and a relatively benign contribution from the labour market. We assume a gradually rising NZD and a return to more normal population growth. All the discussion is in the context of	Text finalised 27 August "We forecast annual inflation of 2.6 per cent to March 2003. Although this remains well above the middle of the ... target band, we do not expect any interest rate increases over the next six months." The appreciation of the NZD helps explain this. Petrol prices have eased slightly, and airfares might too due to the introduction of "no frills" flights. A key risk is oil prices.

	an output gap framework. Hardly any mention of individual cost-push factors.	