Expectant

Inflation expectations and the OCR

- **The RBNZ believes that inflation expectations are set to remain high for a long time.**
- **If lower petrol prices and the CPI rebase push inflation expectations lower, the RBNZ will be feeling a lot more comfortable in early-2007.**

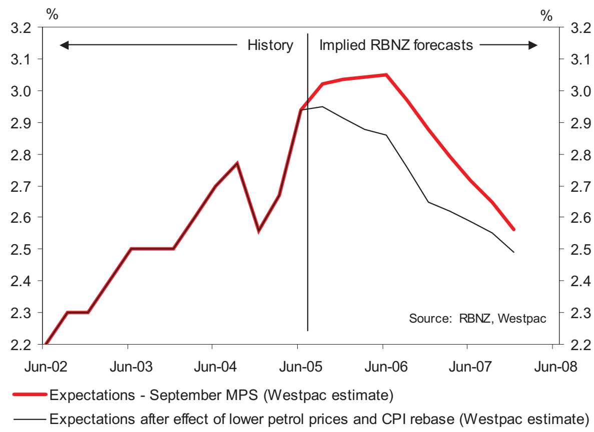
Inflation expectations are an integral part of the Reserve Bank's (RBNZ) forecasting process. In this article we briefly canvass why inflation expectations are important, how they are incorporated in the RBNZ framework, our view on their likely evolution, and the probable monetary policy implications. The nub is that in the current environment, the OCR is going to depend on near-term inflation developments.

Why are inflation expectations important?

Economists pay attention to inflation expectations for the simple reason that they are an important determinant of inflation. If inflation is widely expected to rise employees will demand higher wages and businesses will seek to raise prices. In turn, higher wages and higher prices could actually cause inflation. In short, inflation expectations can be self-fulfilling.

Not surprisingly, the RBNZ is worried that "high headline inflation presents a material risk to medium-term inflation expectations". That's not to say the RBNZ is concerned with near-term inflation *per se*. Their focus is clearly on medium-term inflation. But short term inflation can push inflation expectations up. And higher inflation expectations can push medium-term inflation up. No matter how you dress it, near-term inflation will have an impact on the OCR in coming quarters.

Figure 1: Inflation expectations



Inflation expectations according to the RBNZ

The trouble with inflation expectations is that they are hard to measure and even harder to predict. The Reserve Bank tries to get a handle on inflation expectations using a range of surveys, but the one used in their model is the RBNZ Survey of Inflation Expectations, 2-Year-Ahead measure. This asks about 70 business leaders and economists what they expect the inflation rate to be in two years time. At the last survey, taken shortly after inflation hit 4%, the average response was 2.9% – up from 2.7%.

It is all very well having an idea of where inflation expectations are now. But the Bank also needs to predict what expectations are likely to be in the future. The Bank's discomfort with inflation expectations sitting at 2.9% surely depends on whether expectations are set to rise further, or to fall! So in order to predict inflation expectations into the future, the RBNZ uses the following equation[1]:

[1] See Hargreaves, Kite and Hodgetts, *"Modelling New Zealand Inflation in a Phillips Curve"*, Reserve Bank of New Zealand Bulletin, September 2006.

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Inflation Expectations =

$$
\begin{aligned}
& \quad 0.75 * \text{Expectations last quarter} \\
& + \; 0.175 * \text{Past inflation (0 - 5 qtrs)} \\
& + \; 0.075 * \text{RBNZ forecast of inflation (2 – 11 qtrs)} \\
& + \; \text{judgement}
\end{aligned}
$$

The first line basically says that inflation expectations are very persistent – if they rise, they stay high for a long time. The second two lines suggest that expectations depend more on past inflation than on RBNZ forecasts of *future* inflation (the weight on past inflation is 0.175 versus 0.075 on inflation forecasts).

The RBNZ does not publish its forecast of inflation expectations. However, using the RBNZ's official CPI forecasts and the equation above, we have been able to reproduce the inflation expectations forecast underlying the September *Monetary Policy Statement*, shown as the red line in Figure 1.[2] The first thing to notice is the effect of June's sudden increase in headline inflation to 4%. Surveyed expectations jumped to 2.9% immediately. But the really crucial factor is that the Reserve Bank would have been counting on expectations remaining above 3% until late 2007. No wonder the RBNZ's September *Monetary Policy Statement* was so hawkish. The document referred to inflation expectations repeatedly, beginning right on the first page.

Figure 1 also illustrates why the Bank will be watching near-term inflation developments closely. In the Bank's model, inflation expectations are very sensitive to movements in headline inflation. To illustrate this sensitivity, we have run a simple thought-experiment. As we mentioned in a recent Bulletin[3], it now looks as though inflation in 2006Q4 will be 0% q/q – far below the RBNZ's forecast of 0.7% q/q. This is just a temporary blip arising from falling petrol prices and Statistics New Zealand's rebase of the CPI. However, if we plug this one simple change in quarterly inflation into the Bank's expectations equation, and leave everything else unchanged, we get the thin black line in Figure 1. The expectations forecast would be 0.25% lower.

OK, so lower headline inflation will reduce inflation expectations in the RBNZ model by 0.25%. But will it change the Reserve Bank's thinking? Well, we think it could make quite a difference to the interest rate forecast when the modellers at the RBNZ crank the handle on their model, for two reasons:

1. It is much easier to drag expectations down from 2.7% than it is to drag them down from 3%. Lower inflation expectations today leave the Reserve Bank less work to do in controlling inflation.
2. Lower inflation expectations imply higher *real* interest rates (the interest rate adjusted for inflation expectations). An OCR of 7.25% will be more effective, meaning less need for further interest rate increases.

All up, a change in inflation expectations of 0.25% could change the Bank's interest rate forecast by around 30 to 40 basis points. (Of course, other factors will also be affecting the Bank's interest rate forecast, such as improved consumer confidence, improved business confidence, high capacity utilisation, and the higher exchange rate). The Reserve Bank's model is very sensitive inflation expectations. We believe that this sensitivity was a key reason behind the change in tone from the June *MPS* to the September *MPS*. If expectations fall sharply on the back of lower petrol prices, the effect could be just as large on the downside.

The Westpac view – our research suggests that expectations less persistent

We are less troubled than the RBNZ by the recent increase in inflation expectations. In an upcoming Bulletin, we will outline our own research on the topic. According to our research, expectations are very sensitive to petrol price movements, and are less persistent than the Reserve Bank believes. Barring resurgent petrol prices, we expect inflation expectations to fall sharply from early 2007 onwards. That is why we expect the RBNZ's current tightening phase to be very short lived.

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[2] The actual inflation expectations forecast used may have differed from our estimate if the RBNZ applied "judgement".
[3] Reweighting to the rescue, 10 October 2006.