Dwelling prices and interest rates

Insights on the Auckland Economy

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Key points

- Mortgage rates are rising slowly and this has some impact on dampening house price growth.
- Effective interest rates would have to rise sharply for there to be a significant impact on house prices, given the underlying demand and supply situation.
- Alternatively, there would have to be a dramatic fall in existing demand and/or unprecedented growth in housing provision.

Many economists, including us, lay a portion of the blame for rapid house price rises in recent years on lower interest rates. According to the Reserve Bank, the effective mortgage rate for home loans fell from 8.82% in September 2008 to just 4.85% as of February 2017. The question thus arises as to what impact rises in the effective mortgage rate have on house prices.

Mortgage rates are on the way up

Commentators are divided as to when the official cash rate (OCR) will rise. The Reserve Bank itself believes this is unlikely until 2019 despite the recent spike in inflation. But already, mortgage rates are on the rise, and the link between the OCR and the mortgage rate home purchasers pay their bank is becoming less clear.

There is some debate as to why this is. Banks say that the cost of funding their lending book is rising. Some disagree with this (see here for instance)

Regardless of the reasons, there is general agreement that, barring some cataclysmic event that sees the Reserve Bank forced to cut the OCR sharply, or that dramatically lowers the cost of borrowing overseas, mortgage rates will continue to tick up slowly.

Of course there are other factors at play – people don't simply pay more for a house because interest rates are lower. They pay more because they are competing with other people for an in-demand product. This competition is the result of population growth, a stronger economy with lower unemployment, investment demand or a slow supply response. We know these factors have played out in Auckland and other parts of New Zealand in recent years, which has contributed to the pressure on house prices.

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A simple model of interest rates and prices

But it is a useful to consider what impact interest rate changes alone would have on property value, all else held equal. i.e. assuming demand and supply are fairly evenly balanced and that there is not a huge upswing in unemployment. In times of excess demand as we are currently seeing, this exercise helps estimate an upper bound for likely impacts on prices.

The results of our analysis are revealing. A 0.25% rise in the effective mortgage rate (the increment in which the OCR tends to be adjusted these days), would see prices fall 2.2% in the absence of excess demand. Effective mortgage rates would have to rise from 4.85% to around 6% ***in the absence of excess demand*** to see prices fall as far as they did in the Global Financial Crisis (GFC) – by about 9%. A rise to the 8.82% effective mortgage rate we saw in 2008 would, all else held equal, lead to a 27% decline in prices.

Effective mortgage rate	% reduction in dwelling value as rates rise
4.85%	starting point
5.10%	-2.2%
5.35%	-4.4%
5.60%	-6.5%
5.85%	-8.4%
6.10%	-10.3%
6.35%	-12.2%
8.82%	-26.7%

Effective mortgage rate	% increase in dwelling value as rates fall
8.82%	starting point
6.35%	21.8%
6.10%	24.5%
5.85%	27.4%
5.60%	30.3%
5.35%	33.4%
5.10%	36.7%
4.85%	40.0%

Source: Chief Economist Unit, Auckland Council

What does this mean?

First, this analysis gives us an insight into the impact of the fall in rates in the years since the GFC. The change in the effective mortgage rate would, in times of excess demand, generate a 40% increase in dwelling prices. In places like Auckland, where house prices have doubled, this clearly does not explain the full change, but highlights the role interest rates do play. Second, there is little reason to believe that dwelling prices will fall more sharply than set out in the chart as interest rates tick up. And in fact, interest rate rises are likely to result in much smaller impacts than this.

The reason is precisely the one just presented – prices have doubled in the last decade while interest rates probably explain about 40% of the rise.

Other factors – strong population growth, the slow growth in housing supply, a stronger economy with lower unemployment, investment money looking for a home – have accounted for much of the price increase. These factors persist.

Estimating the impact of changing rates

We started by assuming a 20% deposit and a starting interest rate of 4.85. Assuming a fixed dwelling price, we estimated fortnightly repayments for a 30-year loan period. Assuming a purchase is made, the ability to service the loan falls as interest rates rise, making the mortgage part of the dwelling price fall. The 20% deposit part of the property value is unaffected as the ability to repay debt has no impact on this.

A rise in interest rates from 4.85% to 5.85% would lead to a 12% increase in fortnightly repayments, or a 10.6% fall in the mortgaged component of the property value. As the deposit component does not change in value, the overall decline in the property value is 8.4%. Mathematically:

New value = 80% x (100%-10.6%) + 20% = 91.6% of the original value.

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