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The OCR limbo: How low can you go?

Summary

- An OCR of -0.25% or even lower is technically possible. However, at some point a lower OCR becomes ineffective and beyond that, potentially outright contractionary. Where this point might lie is highly uncertain.
- There is a risk that the mortgage credit channel becomes ineffective if the OCR goes below +0.50%. An OCR below -0.25% is unlikely to be passed through to corporate borrowers, given 'zero floors' in contracts. But the NZD channel is likely to still be effective down to even lower levels of the OCR.
- Overall, we are not at all certain that the impact of a negative OCR across all channels would be net stimulatory.

Limits to low policy rates

With the OCR widely forecast to be at 0.75% by the end of the year and the global outlook shaky, the RBNZ's foray into uncharted territory looks set to continue.

Negative policy rates have become far from rare overseas, and, at the August MPS, the RBNZ mentioned that negative interest rates are part of the unconventional monetary policy toolkit. So how low could we go?

There are several constraints on lower policy rates, determining how low the OCR could fall.

- The **zero lower bound** was once thought of as a common-sense limit. Charging people to lend you money? Ridiculous. But global experience over the past decade shows that common sense is no longer a constraint.
- The **effective lower bound** is the point at which the net impact of a still-lower policy rate would no longer be stimulatory – and may even flip to contractionary – for economic activity. The various channels for monetary policy will hit their limits at different policy rates, and the point at which lower rates become counter-productive overall is very difficult to estimate – hard enough to identify at the time, let alone in advance.
- The **physical lower bound** is where the transmission of monetary policy completely breaks down as mass cash hoarding takes place. It is the interest rate at which people will prefer to take out wads of cash and pay to store and insure it. Short of banning high-denomination notes or cash altogether (ideas that have been seriously suggested), this is as far as it is possible to go. Theoretically this bound is around -0.75% or slightly lower.

In this paper we focus on the murky effective lower bound. To assess where this might lie, we must examine the different channels for monetary policy.

The various monetary policy channels have different limits

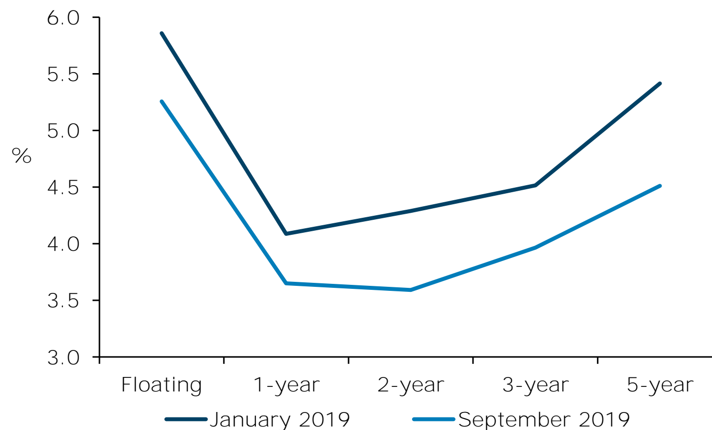
There are several key channels through which lower policy rates impact the economy: mortgage lending, corporate lending, the exchange rate, and inflation expectations. We go through each in turn.

Mortgage lending channel

Traditionally, the most powerful monetary policy transmission channel in New Zealand has been the pass-through to interest rates for mortgage borrowers. As figure 1 shows, the cuts taking the OCR from 1.75% to 1.00% this year have been extremely effective in lowering mortgage rates, albeit by different amounts at various maturities.

It's not just the floating mortgage rate that has fallen; the entire mortgage curve has dropped as the wholesale yield curve has priced in a lower-for-longer OCR (and the relentless global rally in long rates had a big part to play too).

Figure 1. NZ mortgage rate curve



Source: interest.co.nz, RBNZ, ANZ Research

However, from here on down, as we discussed in our Weekly of 26 August, competition for bank deposits as the key funding source may limit OCR pass-through to deposit rates. It isn't entirely clear where the floor for deposit rates is. Internationally, over the past decade, negative policy rates have in some cases been passed through to corporate deposit rates – particularly for very large deposits – but banks have been reluctant to pass on negative rates to households.

Here in New Zealand, it would likely take a more negative policy rate than elsewhere to push deposit rates towards zero. International evidence suggests that the more reliant a banking system is on domestic deposits for funding, the more constrained banks will be in taking these rates lower. In New Zealand, as a result of core funding rules passed in 2010 designed to reduce reliance on short-term foreign wholesale funding, banks are very dependent on household deposits. This naturally limits how far/how fast deposit rates can fall, reducing pass-through of cuts to the OCR to lending rates as well. A near-zero deposit rate could probably still be brought about, but it would potentially take a deeply negative OCR to achieve it, and it would be associated with a sharp hit to credit availability if bank deposits fell markedly as a result. This effect would be in addition to the negative impact on banks' appetite to lend that comes from squeezed margins.

Generally, negative interest rates have been effective in lowering mortgage rates overseas, albeit not 1:1. But in some cases, such as in Switzerland, mortgage rates perversely *increased* as policy rates fell deeply negative, as banks attempted to retain margins and profitability.

The diminished pass-through of the lower OCR to bank funding costs/deposit rates (and hence lending rates) already observed suggests that the OCR in New Zealand may already not be all that far from the effective lower bound for the mortgage lending channel. We will have to watch the behaviour of mortgage rates to gauge when it has been hit.

Of course, the bulk of New Zealand mortgage borrowing is on fixed terms. A reduced pass-through to the floating mortgage rate from a lower OCR is therefore of less concern if fixed rates continue to fall. However, the New Zealand yield curve is already extremely flat – there is just 40bp difference between the 3-month and the 15-year yield currently, suggesting limited downside for fixed mortgage rates from here too. Of course, were longer mortgage rates to rise because of increasing bank funding costs, for example, the RBNZ could intervene to offset that. But that's a case of running to stand still, not adding stimulus versus today's baseline, with funding conditions currently benign.

An important additional consideration is that squeezed margins and reduced bank profitability could reduce credit availability, further hampering monetary policy transmission. Appetite to lend is of course not directly observable, but credit growth will require close monitoring as well.

All up, we estimate the effective lower bound for the mortgage lending channel could kick in around +0.50%. From that point on, the RBNZ would have to closely monitor both rate transmission and credit growth to determine whether the mortgage interest rate channel is still effective.

Corporate lending channel

An OCR below -0.25% is unlikely to be passed through to many corporate borrowers given the 'zero floors' that are prevalent in lending contracts in New Zealand. Many documents specify that the floating rate will be the BKBM rate or 0% (eg 'if the 3-month BKBM rate is less than 0%, then it will be deemed 0%'). This means that an OCR below about -0.25% would not be passed through to these borrowers, assuming a BKBM-OCR spread of 20-25bp, which has been the historical average. It is worth noting that if funding conditions were to tighten, however, this spread would likely widen, making the effective floor higher.

Another factor to bear in mind is that corporate borrowers can hedge their floating rate risk using a swap transaction, but these swaps are not subject to the same 'zero floor' provisions, meaning that negative rates would result in mismatch risk and impaired hedging.

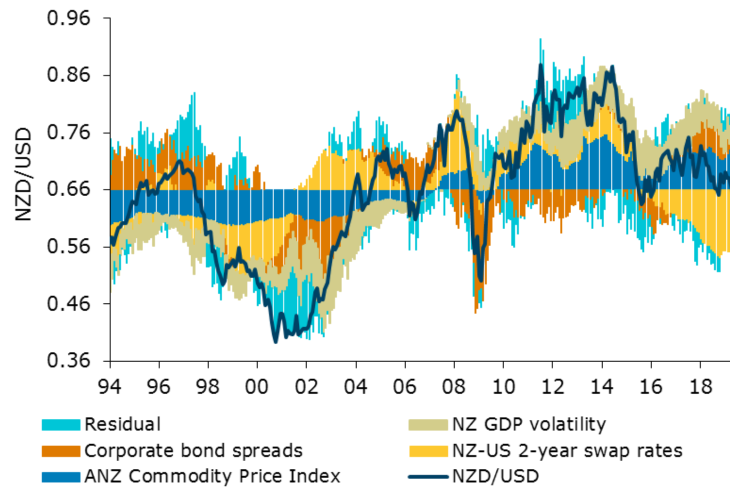
Exchange rate channel

The exchange rate channel is very important in a small, open economy such as New Zealand. A negative policy rate would be passed through to wholesale and money markets, and would likely keep downward pressure on the NZD through narrower interest rate differentials with the rest of the world, easing overall monetary conditions.

Accordingly, the RBNZ may deem that an OCR lower than -0.25% could be appropriate if the benefits of a lower exchange rate are seen to outweigh the downsides via other channels, eg tightening credit availability.

And of course, interest rate differentials are not the only drivers of the NZD – commodity prices and global risk aversion seize the wheel regularly too (figure 2). Direct currency intervention remains an option as well, though the BAU constraints on when this can be implemented are fairly binding. That could be changed, of course.

Figure 2. Drivers of the NZD



Source: Bloomberg, ANZ Research

Inflation expectations channel

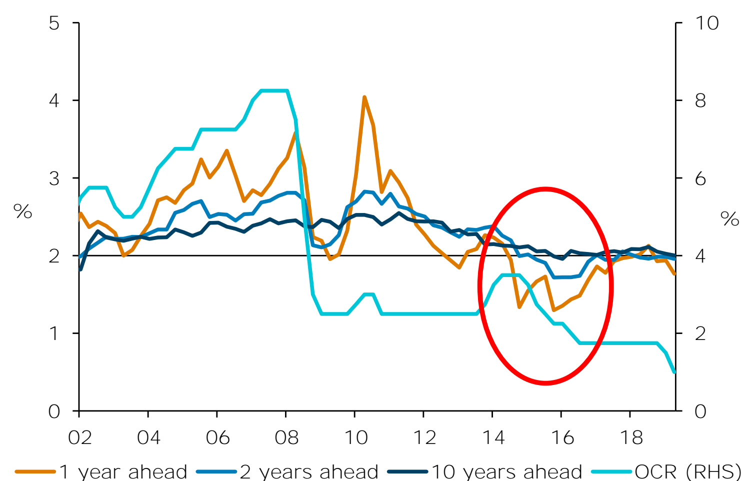
The final channel for monetary policy is inflation expectations. Inflation expectations are self-reinforcing; if firms expect higher inflation, they will set prices and offer wage rises in line with this.

The theory goes that lower policy rates will lead to higher inflation expectations as a higher economic growth rate is anticipated. However, policy rate cuts do tend to bring about a flurry of bad news stories, including about how inflation is looking likely to undershoot the target.

Abroad, the effect of prolonged negative interest rates on inflation expectations (and inflation for that matter) has been mixed. Sweden is a good case study of how unconventional monetary policy (including negative interest rates since 2015) helped to lift inflation expectations back towards target. But in Japan, inflation expectations actually fell when negative interest rates were implemented.

Here in New Zealand, there is no evidence yet that the most recent 50bp cut in the OCR has increased inflation expectations, but the OCR cuts of 2016 did help stem the decline in inflation expectations at that time (figure 3). We will be watching the surveys closely from here, as will the RBNZ, no doubt.

Figure 3. Inflation expectations and the OCR



Source: RBNZ, ANZ Research.

Putting it all together

As we discussed in our note of 17 July, we estimate that a low in the OCR of -0.25% is technically possible – and indeed an even lower rate can be achieved but likely at a significant cost to both interbank market functioning and bank profitability. Adding quantitative easing at the same time would up the ante further, requiring some technical fixes (including facility repricing).

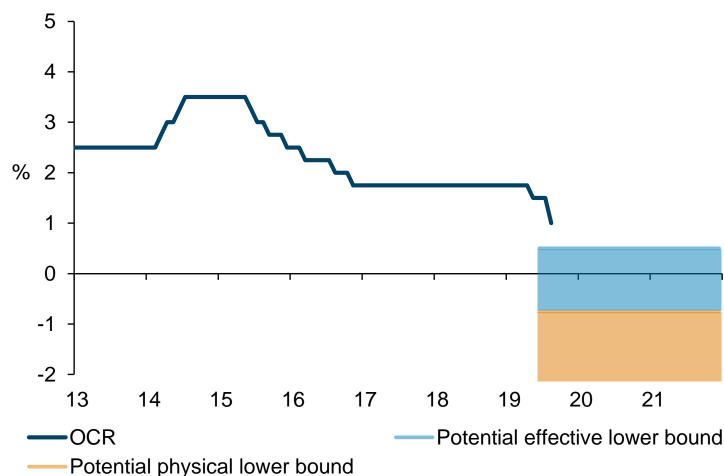
With an OCR of say -0.25%, 'zero floors' in corporate borrowers' contracts will be kicking in, mortgage rates will likely no longer be falling, and negative impacts on credit availability may be at play. The exchange rate would likely be providing stimulus. But it is not self-evident that, without further interventions to offset the negative impacts, monetary policy would still be stimulatory on balance.

To mitigate the costs imposed on the banking system and ensure smooth transmission of a lower OCR to mortgage rates, the RBNZ could alter their tiering structures for bank reserves (so a smaller proportion is subject to negative rates) and/or implement term lending facilities at favourable interest rates to promote lending, such as Europe's TLTROs. Targeted term lending could promote lending by extending loans to banks at favourable rates, conditional on how much those banks lend to the real economy.

These policies may mean that the OCR could go lower than otherwise. But it's fair to say that Europe's experience of prolonged negative policy rates is not an inspiring example to follow, with persistent mispricing of risk, inflated asset prices, worsening inequality, the hollowing out of pension schemes, misallocation of resources, unsustainable government and private debt, inflation persistently under target, and the wholesale destruction of value in the banking system. But we digress.

Based on the discussion above, the effective lower bound for the OCR across all channels, ie the point at which it is no longer stimulatory for near-term activity, could be anywhere between +0.5% and -0.75% (figure 4), depending on at what point credit availability is significantly impacted and pass-through stops, and also the effectiveness of the exchange rate channel.

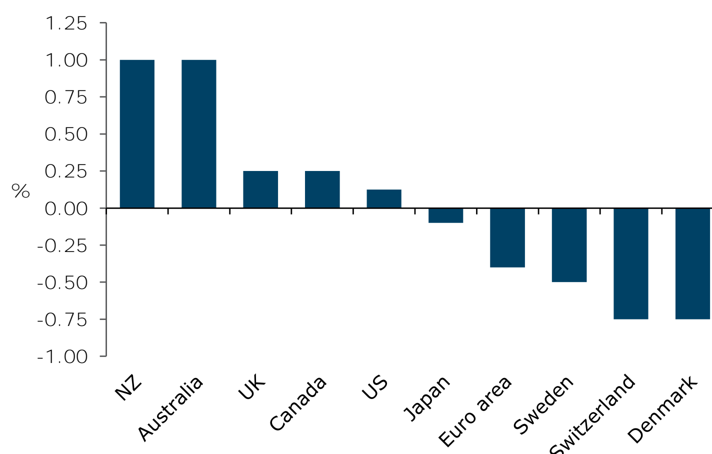
Figure 4. The OCR and potential lower bounds



Source: RBNZ, ANZ Research

If the OCR hits +0.5% the RBNZ will have to closely monitor whether lower interest rates are actually being passed through, whether credit availability is being constrained, and what collateral damage is being caused. Negative interest rates may no longer be uncommon, but they have not been universal, because of exactly these kinds of considerations. The Bank of England has never gone below 0.25%. The Federal Reserve called it quits at 0-0.25% (figure 5).

Figure 5. Policy rate lows since 2008



Source: Bloomberg, ANZ Research

All up, we are not at all certain that a negative OCR would be net stimulatory, but we see -0.25% as a likely limit to how far the OCR could fall. That said, it is possible that the RBNZ could push below this level if it deems it can encourage lending via other means and/or concludes that other channels (in particular, via the NZD) are still effective and likely to outweigh other costs.

Given the uncertainties it may be prudent as the OCR goes below 0.5% to move in smaller steps to cautiously assess whether policy is transmitting effectively or not – for example, in 10bp increments (similar to the ECB and BoJ), rather than the traditional 25bp steps. Alternatively, the RBNZ could avoid negative rates altogether and turn to quantitative easing measures instead (like the Federal Reserve and Bank of England).

Official communication

The RBNZ is at a "very early stage" of unconventional work, but Governor Orr has publically stated a preference for negative interest rates over quantitative easing. We would be far more cautious about jumping to this conclusion, but it is fair to say that a negative OCR is likely to be in the toolkit if the economy were to go into recession or possibly even just if inflation remains stubbornly low.

In 2018, the RBNZ published an unconventional monetary policy scoping document. Following this, then Assistant Governor John McDermott mentioned -0.75% as a possible lower limit for the OCR, but a more likely lower limit around -0.5%. McDermott also noted that it could be detrimental to leave rates negative for too long.

Recently, the RBNZ has pulled back from citing a specific number, noting that there is wide uncertainty around how low the OCR could go. A Treasury document cited -0.20% to -0.35% as a possible limit on the OCR – this was based on an estimate of this being the point at which corporate bond rates may reach 0%, increasing the risk of cash hoarding.

As interest rates probe ever lower uncharted territory, the RBNZ Monetary Policy Committee will have to closely watch whether policy is transmitting effectively through the economy, figure out which channels are working well and which are not, and assess what can be done about it. It will need to carefully assess whether further OCR cuts are likely to be a help or a hindrance to the economy overall. It's complicated.

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