Basis risk with NZ OIS under unconventional policy

- In an accompanying note, we outlined the RBNZ’s possible unconventional policy tools.
- Governor Orr has indicated his preference for negative rates over QE.
- The risk scenario is that the RBNZ might inject significant liquidity into the banking system, say via QE or unsterilised FX intervention.
- In this event, market rates may trade below the OCR, and nearer to the penalty rate on banks’ settlement accounts, unless the RBNZ adjusts banks’ credit tiers.
- NZ OIS is referenced to the OCR, not interbank transactions. That means there is a scenario in the future where market rates may fall sharply, but OIS doesn’t move. BKBM-OIS could conceivably trade below zero.
- We see such a scenario as unlikely. But investors should be aware of this risk if using OIS to position for a deep easing cycle by the RBNZ or hedging other instruments. Swaps provide a cleaner exposure to the potential for further RBNZ easing.

Negative rates and NZ monetary policy implementation

In a recent media interview, Governor Orr expressed a preference for negative interest rates over QE, and our working assumption at this stage is that this will be the initial unconventional policy option, if the need arises.

The RBNZ runs a ‘fully cashed up’ system, with total settlement cash in the NZ system having averaged $7.6b in June, and between $7.2b and $8.4b over the past two years. Each institution with a settlement account has individual limits, or credit tiers, the balances of which are remunerated at the OCR. If banks hold cash in excess of their individual limits, they are remunerated at a penalty rate 1% below the OCR (see Chart 1). The RBNZ has set the levels of the individual credit tiers and manages the quantum of cash in the system such that short-term interest rates trade at or near to the OCR.

With a negative OCR, the RBNZ wouldn’t be forcing extra liquidity into the banking system. This means market rates should continue to trade near to the OCR, even at negative levels.

Scenarios where system-wide liquidity increases sharply

There are scenarios where the RBNZ does choose to inject, or offer, significant amounts of reserves into the banking system via unconventional policies. These include QE, unsterilized FX intervention and targeted, or unlimited, term funding schemes. If any of these measures were implemented in size, some or all the banks would ultimately breach their existing credit tiers.

In such circumstances, the RBNZ could choose to abandon the credit tiering scheme for banks, and remunerate all balances at the OCR (similar to the US Federal Reserve system, where required and excess reserves are paid the same interest rate). This would enable market interest rates to continue to trade near the OCR, even with significant amounts of liquidity in the NZ banking system.

If the RBNZ didn’t adjust the credit tiers, money market rates would likely, in time, trade at levels nearer to the penalty rate, rather than the OCR (just as Eonia trades nearer to the ECB’s -0.4% depo rate than its 0% refi rate – see Chart 2). In this case, the relevant policy rate for monetary policy would be the penalty rate, not the OCR.

The drawback of abandoning the credit tiering system is that it exposes the banking sector to the full cost of the negative interest rate policy. A tiering system (i.e. providing exemption amounts from the penalty rate) shields banks from the full costs of the negative rate policy. In theory, this should allow the central bank to cut the penalty rate deeper into negative territory, lowering the effective lower bound for monetary policy.

1 Readers can read more about the specifics of the RBNZ’s current monetary policy implementation in an RBNZ Bulletin article.
2 Targeted lending schemes need not inject liquidity into the system. The BoE’s Funding for Lending Scheme (FLS) allowed banks to borrow UK Treasury bills in exchange for eligible collateral. However, the ECB’s TLTRO and the BoE’s later Term Funding Scheme involved an increase in central bank reserves.
As a hypothetical example, say the RBNZ reduced the OCR to -0.5% and then implemented a QE programme such that settlement cash grew to $30b. If it abandoned the credit tiers for the banks, the implied annual cost to the banking sector would eventually grow to $150m.

An alternative hypothetical example is that the RBNZ could cut the OCR to +0.5% before implementing QE. If the RBNZ retained a tiering system, that portion of reserves above banks’ individual limits would be subject to the penalty rate which, based on the current margin, would be -0.5%. Because a lower portion of bank reserves would be exposed to the rate of -0.5%, the cost for the banking sector would be reduced compared to the previous example. In this instance, money market rates would eventually trade nearer the penalty rate.

Implications for OIS

NZ overnight indexed swaps (OIS) have a floating rate that references the RBNZ’s main policy rate, the OCR. In most other countries, the floating rate references an overnight traded interbank rate.

This distinction matters if the RBNZ were to inject a significant amount of liquidity into the system and retain a credit tiering system (where those tiers bind). In the hypothetical example above, where the RBNZ implements QE after cutting the OCR to +0.5%, money market rates would fall, over time, as banks sought to on-lend excess balances above their credit tiers, to avoid the penalty rate. But the OCR would still be at +0.5%. This means OIS rates may not fall, even if the rest of the money market complex does.

Therefore, NZ OIS could be an imperfect instrument to express a view on the extent of the RBNZ easing cycle – there is basis risk effectively. NZ OIS may also not provide a very good hedge for other money market instruments in this scenario. It is possible that BKBM could, over time, trade nearer the penalty rate while OIS is barely changed. At the current 100bp spread between the OCR and penalty rate, that means BKBM-OIS could, in principle, trade deeply negative. Of course, the RBNZ has the option of changing the spread between the penalty rate and the OCR.

Based on Governor Orr’s previous comments it appears unlikely that the RBNZ will go down this route. Instead, it seems his preference is to cut the OCR to negative before considering different unconventional policy options. Even if the RBNZ were to inject a significant amount of liquidity, it could always eliminate or amend the credit tiering framework, in order to keep market rates near the OCR. We suspect the RBNZ might manage any negative impact on bank profitability by providing a subsidised long-term lending scheme rather than tiering of bank reserves.

Nonetheless, it is a non-zero risk that investors should be aware of if using OIS to position for RBNZ cuts in the future. We think swaps are a cleaner instrument to express such a view.

One way to position for this risk scenario would be to receive NZ one year swap and pay one year OIS against it (NZ OIS is illiquid beyond one year). The current spread is around 27bps, which is towards the top of its 12 month range. We’re not convinced this scenario is very likely, let alone in the next 12 months, but the risk-reward is potentially very appealing.
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