ASB

Economic Note

7 April 2020

COVID-19: Market stocktake & what we're watching

- Our modelling suggests further material declines in the NZD/USD are unlikely from here unless the NZ outlook fundamentally changes. But we're quick to reiterate our prior advice around focusing less on the (highly uncertain) outlook and more on stress-testing exposures, retaining flexiblity, preparing for continued volatility.
- We think the RBNZ will be successful in its quest to keep the wholesale interest rate curve very low and flat.
- We flag a few 'stress gauges' to watch that will be important in determining broader market sentiment.

Summary and key take outs

The past few weeks have been a wild ride, both in financial markets and life in general.

On 12 March, we wrote on COVID-19 market impacts and our thoughts on managing through the uncertainty. Since then, we've entered full lockdown, had a mini hurricane blow through financial markets, and witnessed policymakers globally scrambling to repair the damage.

We thought it was time to take stock.

In this note, we provide an overview of the current state of NZ foreign exchange and interest rate markets and offer a few thoughts on where to from here. We also outline the key financial markets "stress gauges" we're watching. Finally, the appendix provides a layperson's guide to the string of support measures that have been directed at NZ financial markets to date. To summarise:

Foreign exchange: A scramble for US dollars has been the dominant theme in currency markets. There have been periods of intense illiquidity and volatility, but the situation now is much improved from two weeks ago. Corporates should now be able to access the market with more confidence. In terms of the outlook, our modelling suggests further material declines in the NZD/USD are unlikely from here unless the NZ outlook fundamentally changes. But we'd reiterate the advice of our mid-March note around focusing less on the (highly uncertain) outlook and more on stress-testing exposures, using lower hedge ratios or FX options to retain flexiblity, and trying to use volatility to your advantage.

Interest rates: Interest rates in many parts of the world are now at record lows. We think the RBNZ will be successful in its quest to keep the NZ wholesale interest rate curve very low, and very flat. Base rates are one thing though, but credit spreads can still rise, lifting the all-in cost of borrowing. This is happening already, but nowhere near to the extent of the GFC. Moreover, there are still options available to policymakers if spreads widen further.

What are we watching: We flag a few 'stress gauges' we're watching that will drive sentiment in other markets including corporate/bank credit spreads, measures of risk aversion, NZ government bond spreads, and US short-term funding markets.

Mike Jones – Senior Economist (649) 301 5661 mike.jones@asb.co.nz

Markets Stocktake – Foreign Exchange

What's happened?

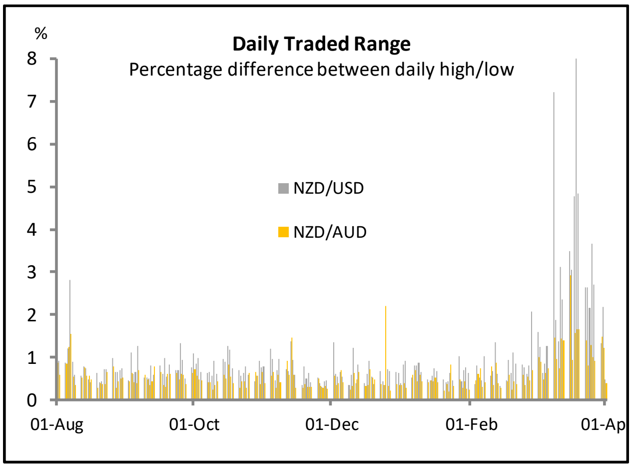
A scramble for US dollars was the dominant theme in FX markets through the first part of the COVID-19 crisis. The USD surge reflected a number of factors, notably hoarding on the part of firms and banks as worries about USD funding strains intensified. US investors' home bias and the big dollar's status as the world's reserve currency added to the intense USD demand such that many of the major FX pairs experienced some of the largest falls since the GFC.

At times, movements were borderline-disorderly and liquidity-impaired. The GBP/USD fell five cents in a single day. On 19 March, the NZD/USD opened at 0.5730, fell to around 0.5475, jumped back above 0.5900, before closing pretty much back where it started at 0.5700.

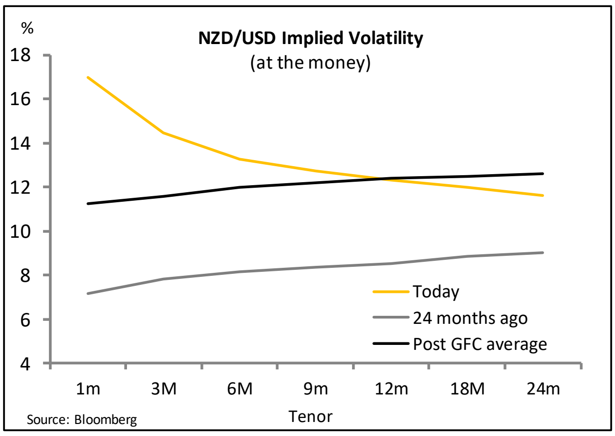
Central bank actions – notably the reinstatement of large central bank swap lines with the US Federal Reserve, and the Fed's support for various USD funding markets like the commercial paper market, have since helped quell the USD shortage. FX markets have thus regained some semblance of 'normality'. However, low liquidity and wider-than-usual dealing spreads remain a feature of the NZD/USD spot market. Our calculations suggest bid-offer spreads in the wholesale market were around three times as wide as normal during the month of March.

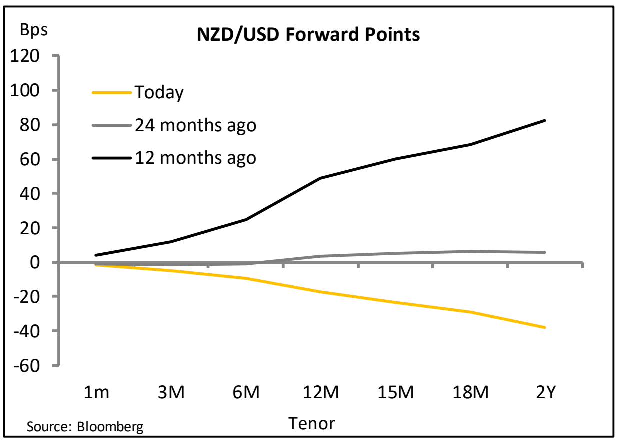
Higher than usual volatility is also expected to stick around. We will remain in a cloud of economic uncertainty for some time and FX markets will be reacting to news-flow that can change fast. Recall how quickly the US went from relatively unaffected by COVID-19 to the epicentre of the crisis.

The daily traded ranges in the NZD/USD and NZD/AUD average 1.1% and 0.7% over the long run. In March, these increased to 2.9% and 1.2% respectively (see chart opposite), with the larger increase in NZD/USD ranges showing it's been the US dollar that has caused most of the volatility in FX markets.



Implied volatility, used to price FX options, briefly spiked to close to GFC levels in mid-March. It has since settled down a little (six-month "vols" are at 13%, down from the 22% highs). Interestingly, the FX volatility 'curve' (implied volatility across a range of tenors) shows market participants are pricing in a marked reduction in FX volatility for later this year (gold line in LHS chart below).





Finally, currency forwards markets have also been heavily disrupted at times. Forward points fell sharply as the NZD slumped, briefly making selling NZ dollars forward extremely expensive. But RBNZ intervention in the FX swap market has since restored order in this market, and NZD forward points are now not far different from when we did our last update in mid-March.

What's our take?

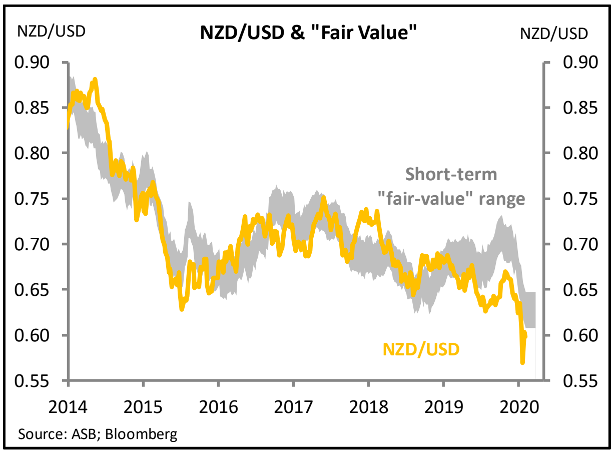
In summary, FX market conditions are more difficult than they were at the start of the year but are vastly improved from the situation two weeks ago. Corporates should now be able to access the market with more confidence. Further, we suspect the RBNZ will act quickly to address any further flare ups. Larger-sized orders or longer-dated forwards will have to be managed carefully, although we doubt there's too much of either going on given the lockdown.

In terms of where things go from here, a good starting point is where the NZD currently stands in relation to past currency cycles. We like to use a purchasing power parity (PPP) or real exchange rate model for this. The OECD currently estimates the long-run PPP equilibrium of the NZD/USD to be around 0.7000. On this basis, it is currently around 15% "undervalued" at around 0.5900. In past cycles, the currency has bottomed out 20-30% below its PPP equilibrium (for example around 20% in the GFC). Assuming a 25% deviation for the sake of the argument would take us to 0.5600, coincidentally where the NZD/USD bottomed-out a fortnight ago.

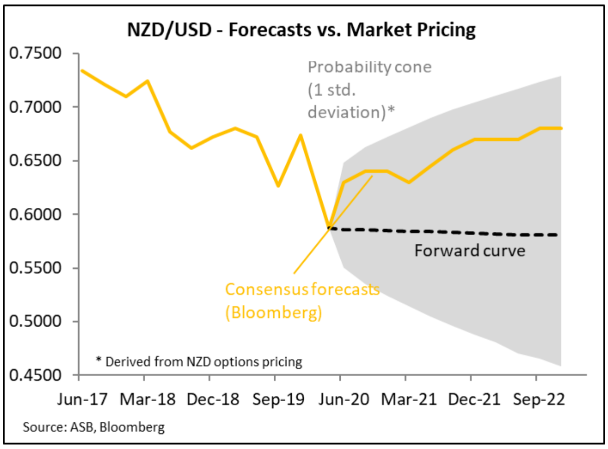
The point here is that NZD/USD correction we've seen from the 0.6400-0.6600 range of January/February into the 0.5500-0.6000 range now looks broadly consitent with historical precedent. Calls for further falls into the 0.4000s look a bridge too far, at least based on this analysis.

There are also a couple of fundamental NZD supports to consider. First, NZ's terms of trade went into this crisis at all-time highs and are not expected to fall materially over the next year. Indeed, falling NZ export prices are likely to be offset by falling import prices, particularly for oil. NZ also has a stronger fiscal position than most and may well come out of the crisis in better shape economically thanks to the proactive containment and support measures enacted to date.

These factors add weight to the idea material declines in the NZD/USD are unlikely from here, unless the NZ outlook fundamentally changes. Our short-term NZD/USD valuation model currently estimates a "fair-value" range of 0.6050-0.6450. Fair value has fallen about 5½ cents since the start of February. Declines in commodity prices and the spike in risk aversion have done most of the damage (negative contributions of 4 cents and 2.5 cents respectively), offset slightly by a widening in NZ-US interest rate differentials (+1 cent).



All of this hopefully provides some perspective around the cyclical position of the NZ dollar and some considerations for the outlook. However, uncertainty is high. This can be clearly seen by the big widening in the probability distribution around future levels of spot NZD/USD (grey area in chart below). What's more, for many businesses there will obviously be far more pressing issues to attend to as we enter the second week of lock-down. Instead of getting too wrapped up in where the NZD could get to, we'd again reiterate the advice of our mid-March note in stress-testing, taking any forecasts with a big grain of salt, and taking steps to keep your powder dry such as lowering hedge ratios or using options.



Just on the latter, it's interesting to note that while option vols are almost double what they were in late 2019, they are still only just above the long-run average (13% vs. 12%

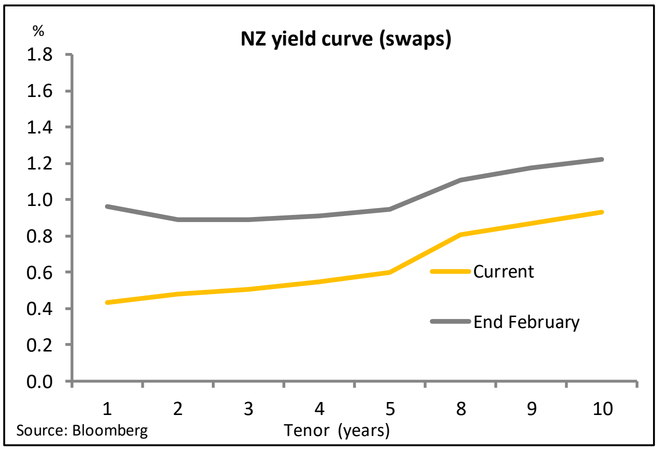
average for the 6 month tenor). So buying options is more expensive now, but not materially so relative to historical norms. Plus you get what you pay for. Insurance costs more in a crisis!

Markets Stocktake – Interest Rates

What's happened?

Interest rates in many parts of the world are now at record lows. Admittedly, it's been anything but a smooth trend. There have been occasional bouts of volatility where rates have risen sharply on concerns about the quantum of debt countries are taking on to fund government support programmes.

For example, NZ 10-year government bond yields rose almost 70bps in the week ending March 19, before the RBNZ's announcement of a huge bond buying programme successfully forced yields back down again. Even now, 10-year NZGBs are trading around 20-30bps above their swap equivalents. Over the long-run, government bonds typically trade 25-40bps *below* swap yields.



Last week's $12b increase in the government's funding requirement means it will be issuing around $800m of new debt per week (prev. $200-$250m), assuming nothing further is added. The RBNZ has said it will purchase $30b of government bonds as part of its quantitative easing programme, but we think this will may now have to step-up materially.

In NZ, the key benchmark wholesale interest rate curve is the swap curve. Most borrowing rates are priced relative to swap, rather than government bonds like in the US. The NZ swap curve has fallen materially since February thanks to the RBNZ's rate cuts, quantitative easing, and declines in offshore bond yields. The entire curve out to ten years now sits south of 1% and is relatively flat.

What's our take?

The RBNZ has a few more tricks up its sleeve to ensure the wholesale interest rate curve remains low and flat. We're confident that RBNZ actions – whether via traditional interest policy, or more unconventional options like quantitative easing, a negative OCR, or extended forward guidance – will be successful in keeping base interest rates at extremely low levels for a long period of time.

Base rates are one thing but credit spreads can still rise, lifting the all-in cost of borrowing. Indeed, this is happening already across a number of markets (see next section). The RBNZ doesn't have as much control over credit spreads as it does base interest rates, but it is nevertheless taking a number of actions to prevent any unwanted rise in borrowing costs via credit pricing (see appendix for details). There are still more options available to the RBNZ too, like outright corporate bond purchases and direct intervention in the interest rate swap market.

The upshot is that, while we may be approaching the limits of how low business and retail interest rates can go, it seems likely rates will remain at these low levels for a long time. Policymakers will want to ensure the economic recovery from the COVID-19 crisis is well in train before even considering letting interest rates rise. This is particularly so now that leverage across the economy is set to jump up, as we borrow to get ourselves through to the other side.

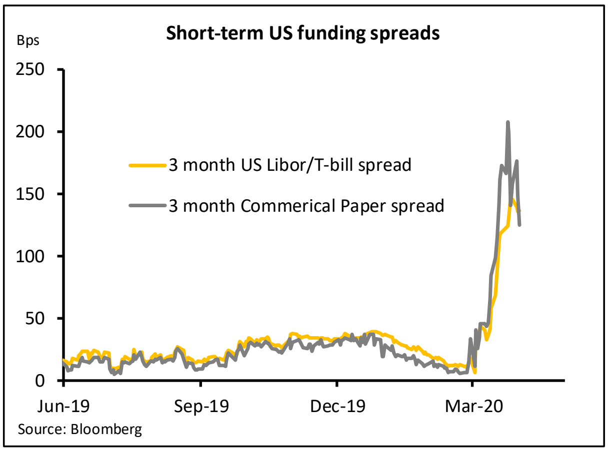
Our forecasts have the OCR staying where it is until 2024.

What's on the markets Watchlist?

So, what are the things we're watching from a financial markets perspective?

Below we list a few of the key 'stress gauges' or warning indicators we are looking at. These provide us with some insight as to how global financial markets are coping with the COVID-19 crisis and the attendant negative effects on the global economy. They're also relevant to us in NZ. Many are key factors driving sentiment in NZ foreign exchange and interest rate markets, particularly during times of crisis.

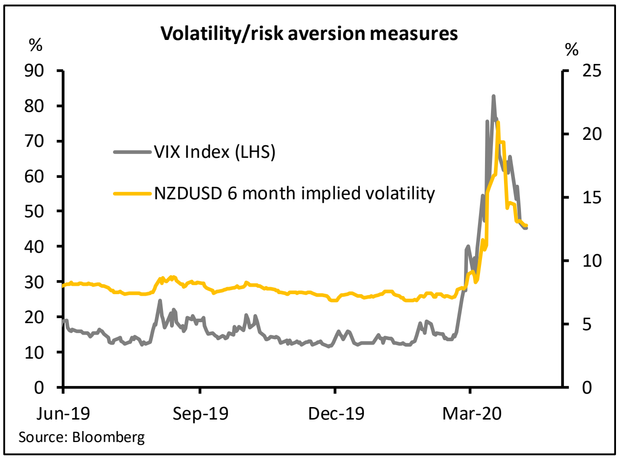
1) US short-term funding markets



- Provides an idea of stress on US short-term bank funding and the demand/supply of US dollars. Strong USD demand has been a key driver of FX markets recently.
- The Fed's commerical paper (CP) facility has seen CP and Libor spreads (to Treasury bills) ease off their recent highs but they remain wide at 150-200bps (cf. 400-500 during GFC) suggesting support for the USD might hang around for a while.

2) Volatility/risk aversion

- High volatility makes investors jumpy, price action less predictable, reduces liquidity (as participants get out of the market), and therefore makes accessing markets more difficult as bid-offer spreads widen.
- NZD implied volalility, used in options pricing, tends to follow broader global volatility indicators like the VIX index. Note that while NZD volatility has certainly risen, it's not too far above the long run average (13% for 6 month tenor compared to 12% long-run average) suggesting FX options may still be a viable option for importers and exporters that need to cover exposures, but are worried about exposure/market uncertainty.
- Downside: volatility measures tend to be quite closely correlated to equity markets, which can be choppy.

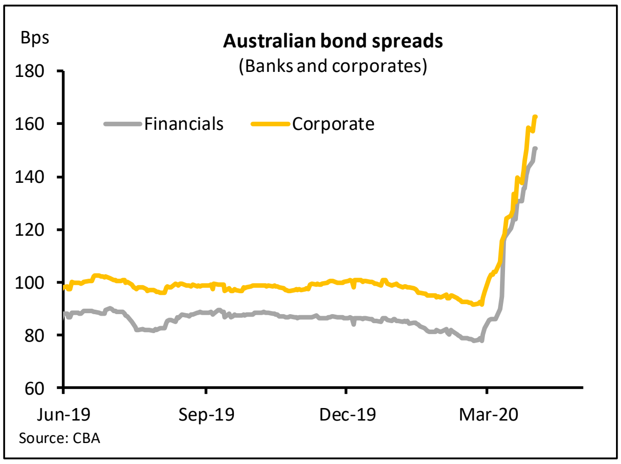


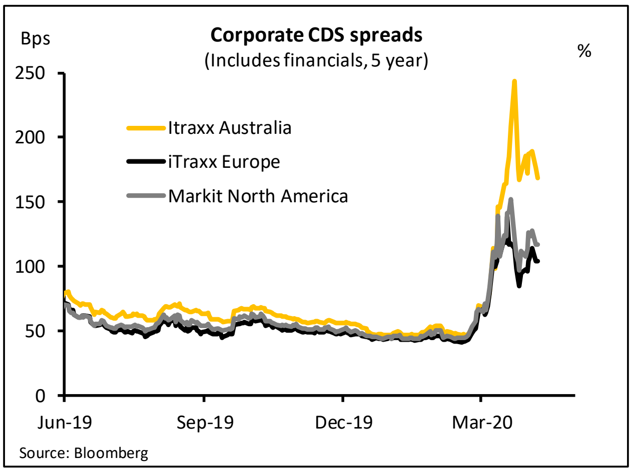
3) Corporate credit spreads[1]

- One of the key transmission channels from financial markets to the 'real economy'. Provides an idea of not only the direction in which wholesale borrowing costs are moving, but also how well credit markets are functioning. *Access* to bond markets is usually difficult during periods where spreads are widening aggresively.
- Credit spreads widened through the first part of March but central bank programmes to backstop bank lending to corporates have seen things stablise since. Spreads neverthless remain markedly wider than the start of the year, offsetting to some degree the big falls in base rates that central banks have implemented.
- The indices we tend to follow are CDS indices globally, and Australian corporate and bank bond spreads as a proxy for what is going on in this part of the world. Note that Aussie bank and corporate spreads have widened 'only' 60-70bps so far, a far cry from the 400bps widening seen during the GFC. The widening has also been much more subdued compared to that seen elsewhere in the world.
- The other thing to keep an eye on is new bond issuance. Recall global funding markets clamming shut was the major escalation point in the GFC. The new issuance market in Asia has been effectively closed since the crisis

[1] How far above benchmark interest rates (usually swap rates) corporates or banks can borrow money in bond markets. A good proxy for movements in bank/corporate borrowing costs generally.

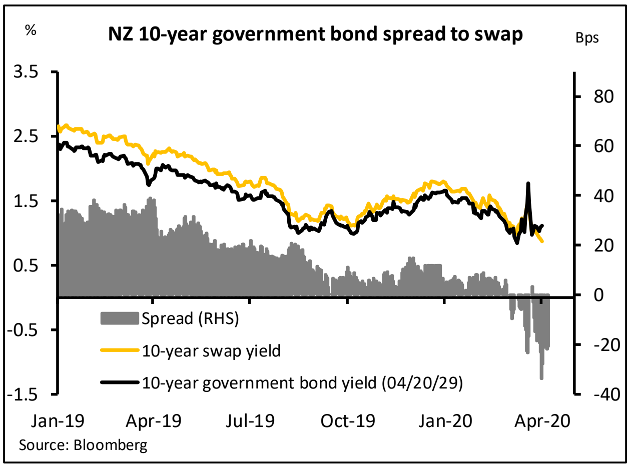
began, but offshore markets stuttered back to life last week with almost US$100b of issuance in the US. This is encouraging.





4) NZ swap spreads (difference between NZ government bond yields and swap yields)

- In simple terms, this spread can be thought about as bank risk vs. government risk. In normal times, government bonds trade 25-40bps below swap yields reflecting the higher credit quality of the government. However, at present, government yields are trading well *above* swap yields at the longer end of the yield curve. This reflects in part the large debt issuance task the government has ahead of it.
- In this sense, you can think of the spread as a sort of "debt absorption index", reflecting how well the market is handling the weight of debt being issued by the government.
- Last week the spread hit the most negative it has been in nine years, suggesting the market was showing signs of indigestion. More front-loaded QE buying from the RBNZ has since seen it move up a little.



Appendix: Layperson's guide to the rescue squad

The support and stimulus packages have been coming thick and fast and it's been easy to lose track. For those interested, we've tried to summarise below, in as simple language as possible, the measures directed at NZ financial markets. This is the list so far, but there will be more.

RBNZ

- **Cut the Official Cash Rate 75bps** to the "effective lower bound" of 0.25%. The Bank promised to keep the OCR there for at least a year, anchoring shorter-term interest rates.

- **Introduced a Term Auction Facility** (TAF) to inject cash into the banking system so that it can continue to function as close to normal as possible. Banks can borrow under the TAF for terms up to 12 months using collateral like government bonds or residential mortgage-backed securities. The TAF is designed to keep short-term bank funding costs down, and has been effective so far in doing so. The 3-month bank bill-OIS spread – a key metric of short-term NZ bank funding costs – fell around 20bps after the TAF's introduction and has stayed down. Prior to this the bills/OIS spread had blown out to 45bps from normal levels around 15-20bps.

- **Injected FX swap market liquidity.** At the time the NZD/USD was falling heavily in mid-March, the FX swap/forwards market became one-sided leading to a sharp fall in, particularly short-dated, NZ forward points. This markedly increased the cost of selling NZ dollars in the forward market. The RBNZ added liquidity to correct the market imbalance.

- **Re-established a US$30b FX swap line with the US Federal Reserve.** This was last used in the GFC and is another way of global banks accessing USD liquidity. The swap lines (along with the Fed's commercial paper facility) have helped to alleviate the global shortage of USD funding, but not eliminated it altogether.

- **Made its first ever foray into quantitative easing (QE)**, with a NZ$30b programme of government bond buying (amounting to around 10% of NZ GDP). This involves purchasing government bonds of varying tenors in the secondary market (i.e. off financial institutions rather than directly off the Treasury). QE eases monetary conditions by: 1) flooding the economy with cash, 2) directly lowering government bond yields (by pushing up their price and hence lowering their yield). Lower 'risk-free' yields should then flow through to lower borrowing costs right across the economy.

- Announced a scheme, in collaboration with the NZ government and banks, to deliver **mortgage holidays (deferring principal and interest payments) and guarantee business loans**. 80% of any losses on the loans will be borne by the government, with banks to take the remaining 20%. The scheme is designed to prevent unnecessary business and mortgage defaults through the period of COVID-19 disruption. It doesn't 'cost' the government *necessarily* in terms of additional cash/debt outlay, but it is a contingent liability. It is a smart way of the government encouraging lending while still using banks' credit expertise.

- **Dropped banks' Core Funding Ratio** (CFR) from 75% to 50%. The CFR is the percentage of bank funding that is assumed to be stable and has a maturity longer than a year. This move is basically to give banks more funding options. We doubt banks will materially reduce the average term of their funding in response, it's more about increasing the available options for a time.

- **Introduced Corporate Open Market Operations** (OMO) - another way of providing cash to banks, this time in exchange for corporate bonds and asset-backed securities. It's also a way of giving confidence to the banks in purchasing corporate bonds (one way of banks funding large corporates), by allowing them to be cashed in at the RBNZ. The first tender drew no bids, confirming banks remain pretty cashed up for now.

- A **Term Lending Facility** (TLF) was introduced late last week. While the TAF (see above) provides banks with short-term funding, the TLF allows banks to fund themselves for longer terms out to three years. These funds are then on-lent to businesses under the government's Business Finance Guarantee Scheme (as covered above). The operational details are currently being fine-tuned with the scheme to kick-off in May.

Treasury (NZ Debt Management Office)

- Two large **increases to the government's bond issuance** programme, designed to fund the government's enormous COVID-19 support programme. The funding requirement for the 2019/20 fiscal year now sits at $25b. A full $17b now needs to be raised by June, meaning weekly bond issuance needs to lift from the prior pace of $200-250m to $800m. That's assuming nothing further is added. So far the increased bond tenders have been absorbed relatively well.

ASB Economics & Research			**Phone**
Chief Economist	Nick Tuffley	nick.tuffley@asb.co.nz	(649) 301 5659
Senior Economist	Mark Smith	mark.smith4@asb.co.nz	(649) 301 5957
Senior Economist	Jane Turner	jane.turner@asb.co.nz	(649) 301 5853
Senior Economist	Mike Jones	Mike.jones@asb.co.nz	(649) 301 5660
Senior Rural Economist	Nathan Penny	nathan.penny@asb.co.nz	(649) 448 8778
Senior Economist, Wealth	Chris Tennent-Brown	chris.tennent-brown@asb.co.nz	(649) 301 5915
Data & Publication Manager	Judith Pinto	judith.pinto@asb.co.nz	(649) 301 5660

www.asb.co.nz/economics

@ASBMarkets