

Corporate Hedging Toolbox

Considerations for Corporate Hedging Activity

First Quarter 2021

New Year, New Toolbox

Welcome to the Q1 Corporate Hedging Toolbox - our practical guide for corporate risk managers. We use a variety of quantitative tools to make sense of financial markets, and offer hedging considerations to address some of the challenges facing corporate treasuries. Contact mike.jones@asb.co.nz to subscribe or go [here](#).

In this edition:

Summary

Foreign Exchange

- Market themes
- Hedging considerations
 - Spot
 - Forwards

Special Topic – How could the NZD surprise this year?

- Options
- Hedge tenor
- Exporter strategies
- Importer strategies

Interest rates

- Market themes
- Hedging considerations & strategies

Valuations Chart Pack

- FX valuation models
- FX position in cycle
- Interest rate pricing
- Forwards/breakevens

Appendix / Glossary

Summary

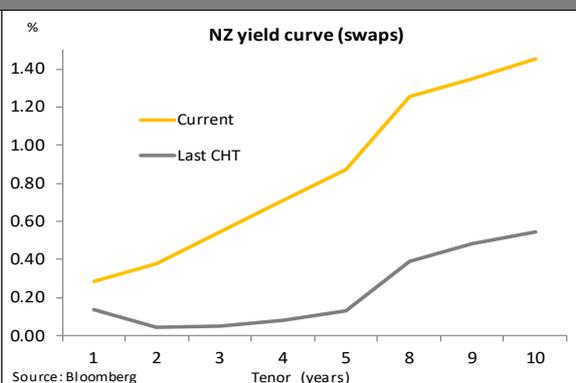
Interest rates

- The trend has changed. Corporates should re-examine their [interest rate hedging strategies](#) in light of the new market backdrop.
- Standing aside may no longer be the most appropriate strategy. Floating rates aren't about to race higher, but it may still make sense to maintain fixed-rate hedge ratios or look for opportunities to move them up. This particularly applies to corporates that recently increased debt exposures.
- Despite the jump in wholesale rates, [“breakeven”](#) analysis still suggests there may be value in the curve for corporates looking to add pay-fixed cover at shorter-term (1-3 year) horizons. Forward pricing further along the curve looks a little rich to us so we'd prefer to wait for dips.

Foreign exchange

- Our [Special Topic](#) takes a look at where the NZ dollar could surprise this year and finds the upside risks outweigh the down. We also add a new NZD/AUD fair-value model to our [valuations](#) section.
- Reduced 'signal' from market factors means individual business factors should be the major driver of decisions around FX tenor and instrument selection at present. But [exporters](#) worried about a higher NZD this year may consider revising up the order levels, lifting hedge ratios above policy midpoints, and/or using a higher share of forwards in the hedge book.
- For [importers](#), we prefer options strategies, and think partial premium collars may be useful here.

Feature chart: wholesale yields rocket higher



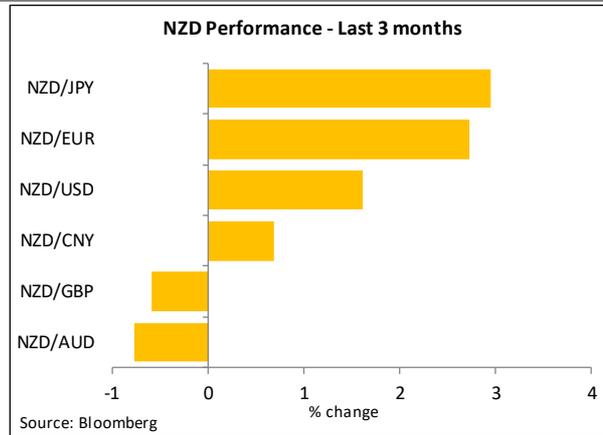
	Last 3 months	Next 3 months
NZ economic pulse	↑	↑ Against the odds, the economy has recovered all its COVID losses. We expect further, albeit slightly softer, growth this year.
NZD/USD	↑	↑ The trend higher has been supported by strengthening fundamentals and a weaker USD. Both trends are expected to stick around.
NZD/AUD	→	↑ The outlook for monetary policy in the antipodean economies is diverging again, with the RBNZ likely to blink first in reducing stimulus.
NZ wholesale interest rates	↑	→ Rates have come a long way fast, and are perhaps overdue a period of consolidation. But the trend is higher.

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Please refer to the important disclosures at the end of this document.

Foreign Exchange - Market Themes

- USD weakness remains the dominant force in global currency markets. The weaker greenback has tended to float all boats over the past three months.
- The AUD and NZD have continued to perform near the front of the G10 pack, reflecting ‘reflating’ global growth expectations and the associated gains in global commodity prices.
- NZD currency pairs have also drawn support from improving domestic fundamentals and the end of the negative interest rate debate in NZ.



FX Hedging Considerations – What should you be thinking about?

Spot Position

The NZD/USD has now risen a little over 13 cents from its March 2020 lows, and forecasters expect this uptrend to extend into the mid-0.7000s.

This is essentially a mean reversion of sorts – the 10-year NZD/USD average is 0.7350. But expectations for further USD weakness and NZ’s relatively positive fundamentals will also be influencing forecasters’ constructive NZD views.

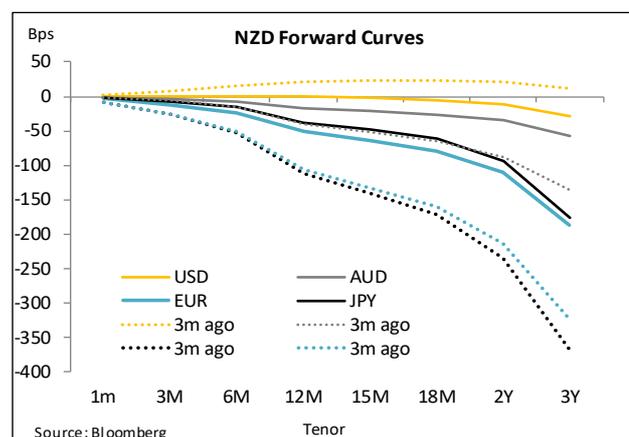
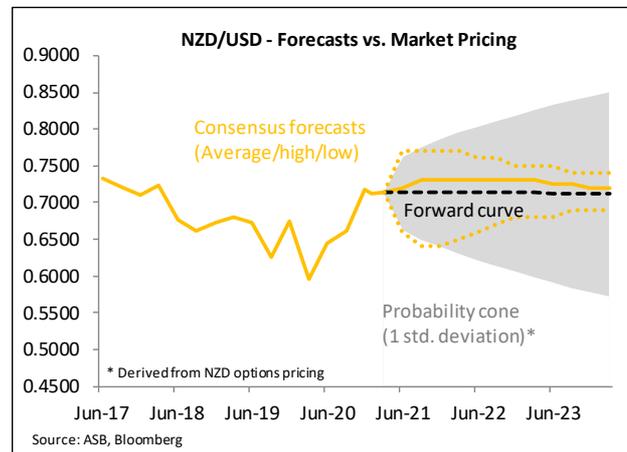
The *dispersion* of forecasts, both analyst forecasts and probabilities implied from market pricing, has continued to narrow as vaccines have reduced global uncertainty and volatility has reduced.

As we outline in our *Special Topic* below, we view the balance of risks facing the NZD/USD this year as tilted to the upside, assuming COVID risks remain contained.

Hedging Instrument - Forwards¹

Forward points are much less of a consideration for corporate hedgers than in the past. Forward curves have been gravitating closer to zero for many NZD pairs, and this trend has continued over the past three months. In NZD/USD for example, the forward curve is basically flat near zero right out to the 18 month tenor.

In other words, forward rates for many NZD currency pairs will be barely different to spot exchange rates. This means there is less cost/benefit available to importers and exporters for hedging forward than has been the case in the past. For example, back in 2014 it would ‘cost’ an importer roughly three cents off the spot rate to lock-in a one-year NZD/USD forward rate, with exporters reaping the equivalent benefit. The change has been driven by the big



¹ See Appendix for the ‘what’ and ‘when’ of the hedging instruments discussed in this section.

drop in interest rates in NZ relative to the rest of the world.

So, in summary then, the NZD/USD spot rate is roughly mid-range and forecast to mean revert, and forward points are, in most cases, very small. The absence of any extremes or oddities in market pricing unsurprisingly doesn't yield much in the way of compelling implications for corporates. Indeed, the reduced 'signal' from market factors means individual business factors should be the major driver of decisions around foreign exchange tenor and instrument selection (spot/forwards/options) at present.

CHT Special Topic – How could the NZD/USD surprise this year?

Our last Special Topic looked at how corporates with FX exposures should react to exchange rate shocks. Shocks are, by definition, unexpected. But being the start of the year and all it's worth thinking again about where the NZ dollar could surprise folk this year, and how well hedging strategies are set up to cope.

There's an old markets adage that currencies normally gravitate towards the "path of most pain". And for the NZD/USD, we reckon that is the upside.

For a start, it's not priced. Consensus forecasts have the NZD/USD hovering around the low to mid 0.7000s this year. Option pricing is consistent with around a 12% chance of the kiwi breaching 0.8000 this year. Our general sense is that the corporate community is also a little dubious on the chances of the strong rally of late last year continuing.

Certainly, if COVID rears its head on our shores again, the NZD/USD will head back into the 0.6000s in short-order. But parking that risk for a moment, let's consider what could happen if things go to plan, and the NZ recovery continues to pleasantly surprise.

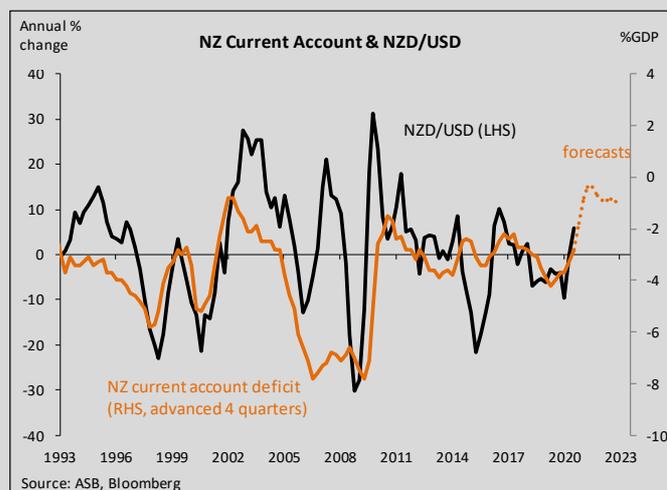
NZD fundamentals already justify the NZD/USD around the low 0.7000s (see valuations section). And if the vaccine rollout and super-accommodative fiscal & monetary policy keep the global recovery going, we'll likely see more support for commodity prices, bolstering NZ's already positive trade picture. NZ's COVID-free status, assuming it's maintained, and booming housing & construction sectors will also see the NZ economy outperform many of our trading partners. We think the RBNZ will have to call time on its policy of lowering interest rates this year, but it will be some time before it delivers rate hikes. This might actually see the currency doing the tightening work for the RBNZ in the meantime.

All of these factors, if realised, would serve to push the NZD higher. Particularly when set against a backdrop of further USD weakness, as remains the view of our CBA colleagues. The historical relationship with NZ's (rapidly improving) current account balance alone suggests trend appreciation will continue (chart below).

So how high could NZD/USD go? 0.8000? We wouldn't rule it out. NZD/AUD too could press higher into the 0.9000s given the more circumspect policy stance of the RBA.

The NZD/USD's long-run equilibrium is currently pegged at around 0.6950. A climb to 0.8000 would place the currency 15% above this level, taking it to levels that are stretched by historical standpoint, but by no means unprecedented.

In the least, we think the risk of an 0.8000 NZD/USD (and higher cross rates too) is something corporates should be thinking about. Below, we discuss some hedging strategies.



Source: ASB, Bloomberg

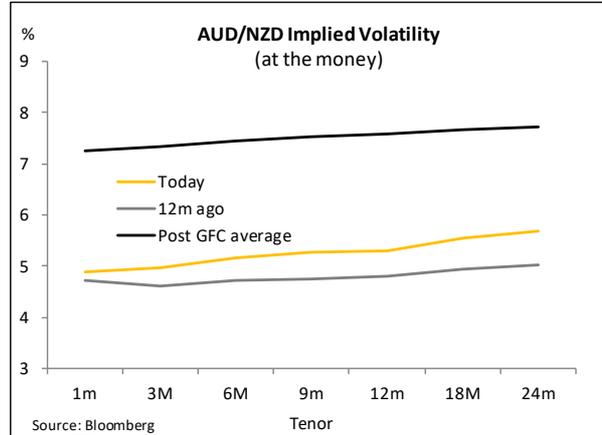
Hedging Instrument - Options

Option volatility (vols), and hence the price of options for corporates, fell in November as COVID vaccines were announced. The vaccine news reduced global uncertainty and hence volatility in markets. These lower vols levels have been sustained in the three months since.

Still, vols remain above the pre-COVID levels of a year ago. But as we said last time, we don't see vols reverting to these low levels for the foreseeable future given the permanently higher level of uncertainty about the outlook.

Overall, vols are not at levels that would make options particularly expensive for corporates in a historical context.

And, as discussed below, there are various scenarios in which an option strategy could usefully be employed to hedge in the current environment. This is particularly the case for AUD/NZD, for which vols are particularly low compared to other NZD currency pairs (chart above).



Hedge Tenor

Decisions around FX hedge tenor should be driven primarily by business requirements – things like the timing of exposures, treasury policies, and commercial requirements for certainty or flexibility. The influence of market factors on tenor decisions should be a secondary, but nevertheless important, consideration. We discuss these market factors here.

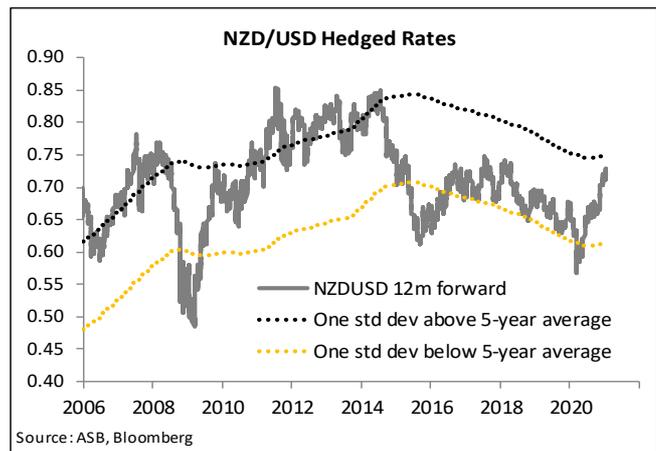
For an exporter, an opportune time to be thinking about increasing FX hedge duration (i.e. increasing the average tenor of the hedge book) is when available hedge rates are close to cyclical lows. Conversely, exporters should think about reducing hedge duration when hedge rates are cyclically high. Of course, for importers, the reverse of all this applies.

By gradually increasing/reducing hedge duration when the currency moves into historically high/low areas, corporates may be able to add incremental value to their hedging strategies relative to typical benchmarks.

One way to get an objective steer on where the NZD might be in the cycle is via models that track all-in hedge rates relative to some sort of average. Our hedge duration model (table above) tracks 1-year forward hedged rates against a 5-year moving average. It generates a cyclically high/low “signal” – a possible trigger to rethink hedging duration – when hedged rates move more than one standard deviation away from this average.

Hedging Duration Model				
	+1 st dev	-1 st dev	Cyclically low	Cyclically high
NZD/USD	0.7494	0.6130	●	●
NZD/JPY	82.30	64.00	●	●
NZD/AUD	0.9965	0.8720	●	●
NZD/EUR	0.6475	0.5265	●	●
NZD/GBP	0.5815	0.4520	●	●
NZD/CAD	0.9740	0.8110	●	●

NB: rates are 12-month forward rates



As with the last CHT, the model is not generating signals at the moment. This is reflective of the extent to which most NZD currency pairs are now tracking ‘mid-range’, having recovered from cyclically low levels in the wake of the last year’s lockdown volatility. The closest pair to a signal is the orange ‘warning’ light for a NZD/USD cyclical high (table above). Whether or not the NZD/USD gets to the 0.7494 trigger level, now might be a good time to think about what the strategy would be, if any, if the kiwi does keep pushing higher.

Exporter Strategies

It's been a relentless march higher for the NZ dollar since March, but we still don't think waiting for a correction is a good strategy for an exporter. Waiting risks burning through hedge cover and becoming under-hedged.

As detailed in our Special Topic above, NZD fundamentals are strengthening and we find the upside risks to be more compelling than the down. Exporters worried about this risk might like to think about:

- Revising up the currency level at which they would add to cover levels.
- Looking to lift overall hedge ratios back above policy midpoints over time.
- For those that have a reasonable level of certainty over exposures, a strategy of using dips in the spot rate to increase the share of forwards in the hedge book might make sense.

We still think it's worth exporters carrying a residual amount of option cover in the option book (i.e. a higher amount compared to pre-COVID). This ensures some participation or 'insurance' in the event COVID risks materialise and we get the knee-jerk heavy sell-off in the NZD. The increased flexibility from optionality is also useful to retain given the additional uncertainty many exporters face over underlying exposures (revenues) given strained supply chains and other COVID disruptions.

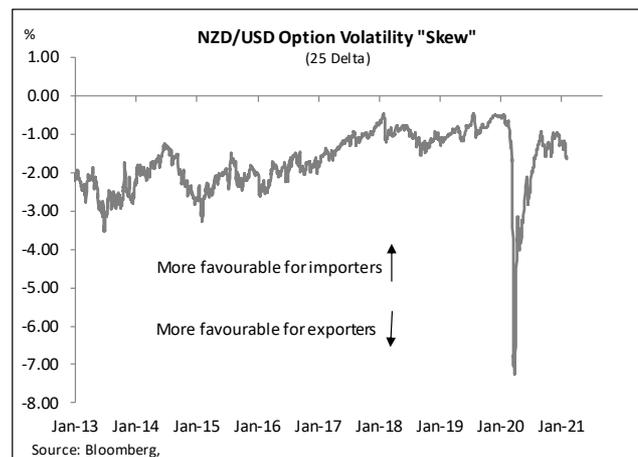
One example of how this might be achieved is via a strategy of purchasing short-dated call options that, if exercised, can be rolled out through the forwards to cover longer-dated exposures. The option volatility curve for calls is downward sloping out to two months which boosts the cost effectiveness of this strategy.

Importer Strategies

For many importers, the strong gains in the NZD since mid-2020 means there's a good chance achieved hedged rates are already above budget rates. This naturally reduces the urgency around hedging, as does the generally constructive outlook for the currency described above.

For those needing/wanting to add to hedge levels, this sort of backdrop lends itself more to option-based hedging strategies. In return for some cash outlay, or alternatively some 'give-up' in terms of hedged rates, these strategies provide flexibility to participate in any further gains in the NZD all while locking in a worst case rate that protects against the risk of a sudden fall in the NZD on any COVID-related (or other) market fallout.

We think collar structures have appeal. The option volatility "skew" (the market's traded preference for puts over calls) has held at more favourable levels for these sorts of structures relative to the 2020 situation, although it has eased off a bit over the past couple of months (chart opposite).

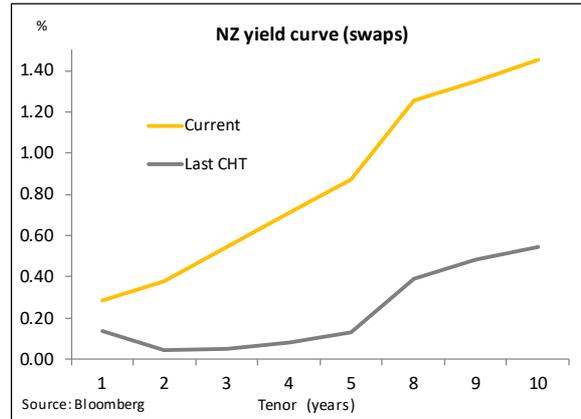


- By way of an indicative example, a six-month zero-cost collar that locks in a worst-case NZD/USD rate of 0.6900 would allow participation in any rallies up to a cap of around 0.7450.
- A 'partial-premium' collar may be preferable whereby the amount of topside participation in the above example is enhanced via the payment of premium. Indicatively, and assuming a US\$500k face value, the cap

rate in the above example would move up to around 0.7600 for the payment of NZ\$4k.

Interest Rates – Market Themes

- Globally, the ‘lower for longer’ trend in interest rates has been brought to a screaming halt. This reflects a string of positive news for the global economy, most notably the advent of viable COVID-19 vaccines.
- Markets have backed right off the idea of further interest rate cuts, particularly in NZ. Longer-dated interest rates are even pricing the beginnings of interest rate ‘normalisation’ (see [RBNZ pricing](#)). Yield curves are much higher, particularly at longer-dated tenors.
- The NZ swap curve is up 15bps (1-year) to 90bps (10-year) since the last CHT with back-end rates up 30-50bps in the past month alone. Interest rate markets are basically deducing that, with the RBNZ much closer to achieving its economic objectives, the days of extraordinary stimulus are numbered. 2022 is the year the market expects the punch to start draining from the bowl.

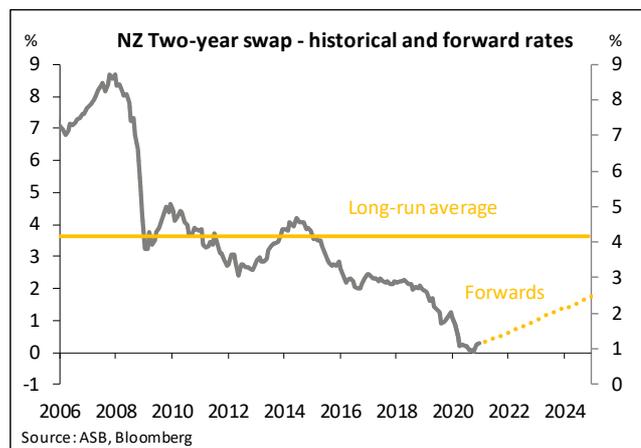


Interest Rates – Hedging Considerations & Strategies

- **The trend has definitively changed.** Globally, the tide has gone out on negative interest rates now that the vaccine rollout has begun and the world economy is responding to 2020’s flood of stimulus. In NZ, the economy has defied any predictions of macro-level weakness and the question is suddenly when the the Reserve Bank will start *reducing* interest rate stimulus. Interest rates have risen a looong way, and some consolidation is probably due. But the trend for higher long-term rates, and hence steeper yield curves, will remain in our view. It will be more gradual in future, and there will be set-backs, but the lows are behind us.

- **Market pricing has reponded.** The cost of hedging against future interest rate increases has increased, in some cases markedly. Yield curve steepening particularly affects forward pricing and this has moved up a lot (chart opposite).

However, “[breakevens](#)” are at far from outrageous levels for shorter-term (1-3 year) hedges, suggesting there is still value in the curve for corporates looking to add to levels of pay-fixed cover at these terms. Further ahead (3+ years), our sense is that pricing has run too far given the risk profile.



- **This being the case, we think corporates can be patient in accessing particularly longer-dated pay-fixed hedges.** Interest rates are unlikely to race higher in a straight line, thus waiting for dips to lock in fixed-rate cover may be preferable – particularly at the longer-term horizons mentioned above. The NZ and global economies, while on a path towards trend improvement, will still run into the odd hiccup this year. COVID is still with us and so is the risk of more lockdowns and other disruptions. Central bankers will also be keen to limit how far long-dated interest rates rise for fear of prematurely snuffing out the recovery.
- **Given the changes in the markets backdrop, corporates should re-examine their interest rate hedging strategies**

to make sure they are still appropriate. In our last CHT we said that the current environment supports lower levels of average fixed interest rate hedging cover. This was due to both a) interest rate risk having reduced, and b) the outlook for wholesale interest rates being tilted to the downside. The first point is still true. Interest rate risk has reduced for most corporates thanks to the structural decline in interest rates of recent years and, more importantly, the associated reduction in interest rate *volatility*.

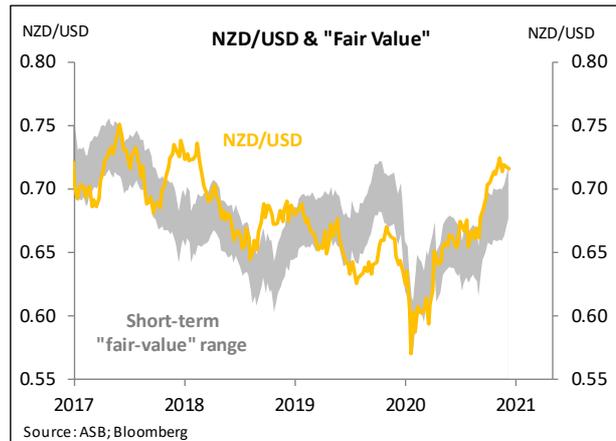
But, as above, the second point is no longer valid. Accordingly, the case for letting fixed interest rate hedging ratios erode towards the lower end of policy bands, as we suggested last time, is no longer as clear cut. It may now be more appropriate to maintain hedge ratios at current levels or start to move them up when opportunities present themselves. The latter particularly applies to those corporates that have increased their debt exposures through the COVID period.

- **We still think interest rate optionality is worth a look for those happy to pay for the extra flexibility.** It's a more prudent alternative relative to going completely unhedged, for example. Optionality also suits those corporates that are juggling particularly uncertain debt exposures as a result of COVID disruptions; hedge cover can be costlessly (excluding premium payment) removed if these exposures don't materialise.
- **It's now very much a tail-risk rather than anyone's core view, but for those that are still worried about or exposed to negative wholesale interest rates, now is a better time to think about hedging against this risk.** Late last year the horse had bolted. Market pricing had moved to reflect a strong expectation of a negative Official Cash Rate meaning hedging against this risk (for example via interest rate options – discussed in our [last](#) CHT) was often prohibitively expensive. But now that interest rates have lifted and a negative OCR is no longer priced in, the economics of hedging this risk are more favourable (notwithstanding it is a much lower probability risk).
- It's possible to structure a pay-fixed interest rate hedging structure that also protects against negative floating rates. For example, a corporate may wish to add some fixed-rate hedging cover to lock-in current low rates. But they're also worried that the presence of a "zero-floor" in loan documentation may impact the effectiveness of new swap hedges if floating rates were to go negative at some point (this issue was discussed in detail in our last CHT). A pay-fixed hedge can be structured that embeds an interest rate "floor". In this way, the corporate is hedged against the risk rates move higher while, for the price of the "floor" option, also not being negatively impacted should floating interest rates (BKBM) ultimately go negative.

Valuations Chart Pack – Foreign Exchange

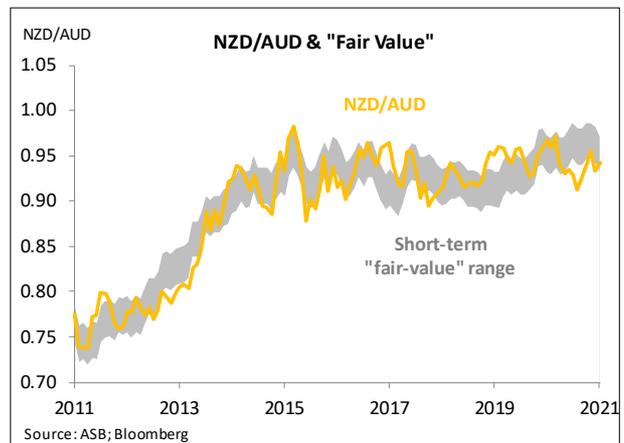
NZD/USD short-term fair-value range **0.6800-0.7200**

- Our short-term valuation model provides an objective estimate of fundamental NZD/USD “fair-value” based on its fundamental drivers: commodity prices, risk appetite, and NZ-US interest rate differentials.
- We’ve been expecting fair value (FV) to correct upwards to the spot rate, rather than the other way around and this has largely played out. FV is up around two cents since the end of 2020, largely driven by rising commodity prices but with widening interest rate differentials contributing as well. The model currently implies a 0.6800-0.7200 FV range.



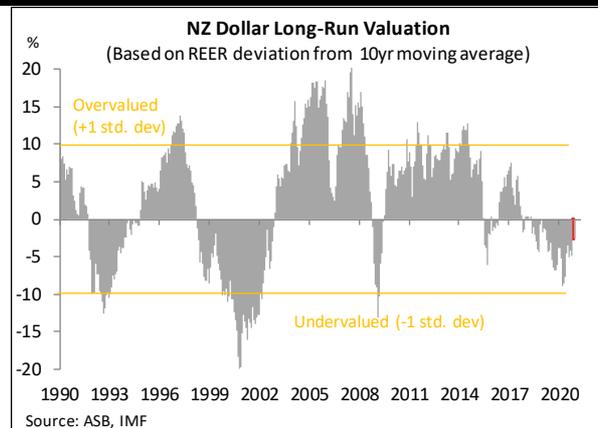
NZD/AUD short-term fair-value range **0.9300-0.9700**

- Our new NZD/AUD short-term valuation model is based on NZ-AU interest rate spreads, relative commodity prices, and relative equity market performance. It currently estimates a 0.9300-0.9700 ‘fair-value’ range.
- Relative interest rates are the main factor pushing up NZD/AUD FV. NZ-AU 2-year swap rate differentials have moved back into positive territory as the NZ market has completely priced out further rate cuts from the RBNZ.
- In contrast, relative equity market performance and commodity prices have tended to favour Australia of late, with these factors acting to reduce NZD/AUD fair value.



NZD/USD long-run equilibrium **0.6950**

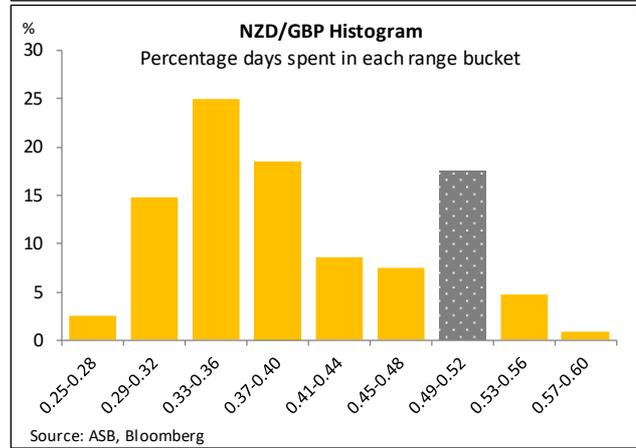
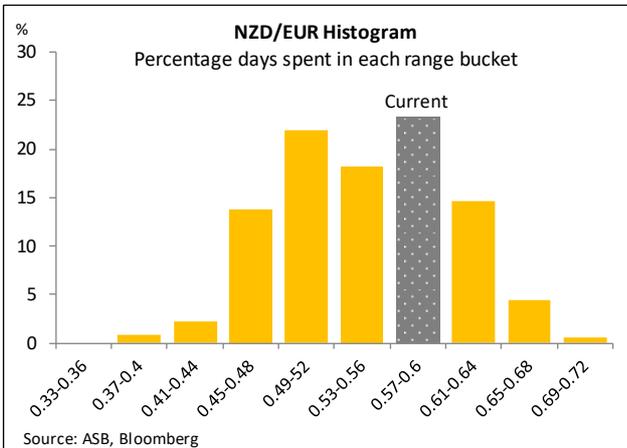
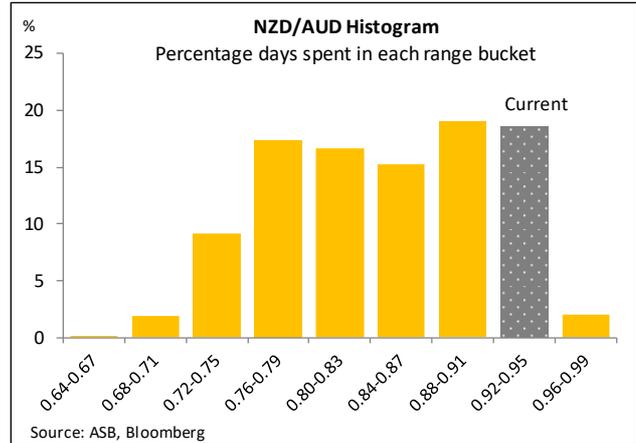
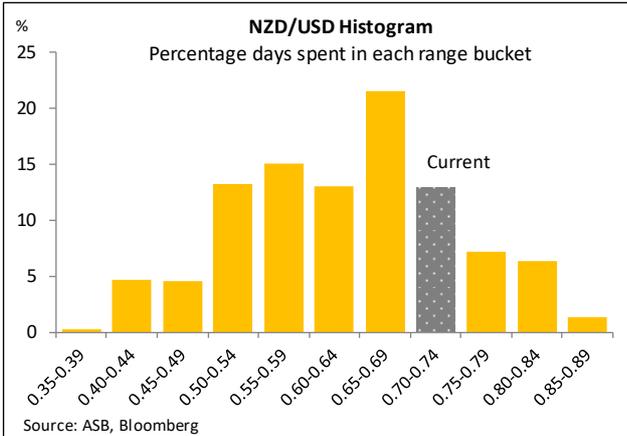
- USD weakness was the stand-out trend of 2020. And this has been reflected in our long-run NZD modelling. On a trade-weighted basis, our real effective exchange rate model estimates the currency is marginally (3%) *undervalued*. We consider a 3% undervaluation as roughly “fair”, taking into account the uncertainties in this sort of estimation.
- By contrast, the sharp run-up in the NZD/USD leaves this pair around 4% *overvalued*. That’s even with the IMF’s estimate of the long-run PPP equilibrium moving up



from 0.6900 to 0.6950.

- Overall, long-run valuations aren't exerting any material corrective forces on the NZD at present. They tend to signal a change in currency direction only when valuations become stretched.

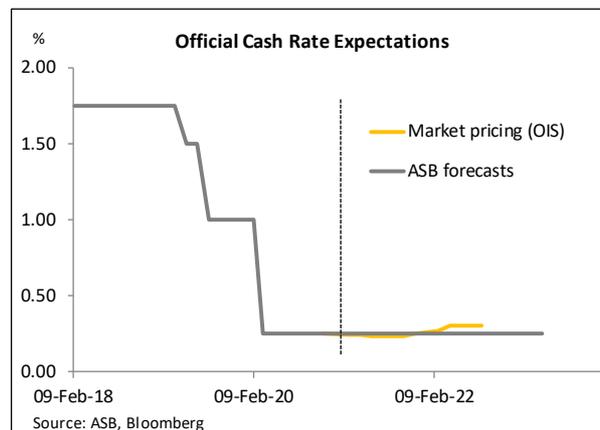
NZD Position in the Cycle – Histograms



Valuations – Fixed Interest

NZ Yield Curve – RBNZ pricing

- We think market interest rate pricing is broadly "fair". A small amount of 'COVID insurance' is priced into the next few RBNZ dates. But the broader picture is one of the OCR expected to remain at 0.25% for 2021, with around a 20% chance of a hike priced by April of 2022.
- The risk profile is evenly balanced. RBNZ rate cuts, or at least a higher probability of such, will quickly be back on the agenda if there are any material COVID flare ups. On the other hand, if recent economic momentum and house price craziness continues, the market might decide the RBNZ needs to withdraw stimulus earlier than



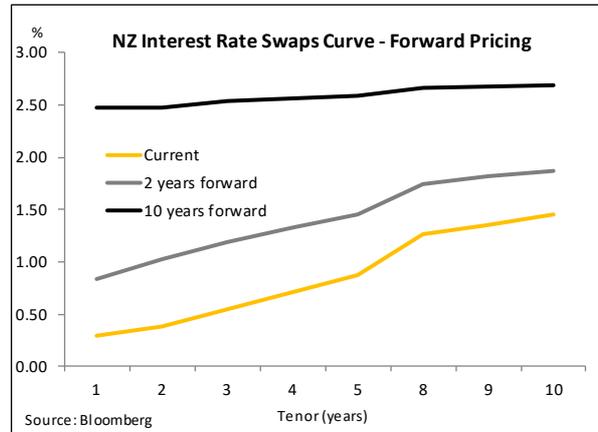
mid-to-late 2022.

Forward Pricing & Breakevens

- There have been some large movements in forward pricing since our last CHT. This reflects the steeper global and local yield curves described earlier.
- The current swap curve has moved up and the forwards market now has the curve rising another 40-60bps over the next two years. Not much, sure, but a massive change from the last CHT in which the swap curve out to 5 years was expected to remain under 0.5% for the next two years.
- So have we reached the time to start lifting levels of fixed-rate interest rate cover? “Breakeven” analysis is useful in providing a guide.

The table shows it is possible to obtain fixed rate cover in the swap market for 3 years at 0.54% (all rates are indicative). The ‘breakeven’ on fixing for this 3-year term is for the 1y swap rate – which perhaps best encapsulates expectations for the RBNZ’s current 0.25% OCR – to be at or above 0.84% in 2 years time (from 0.29% now). If this is not perceived as likely, it’s better off floating. If it is, now would be a good time to increased fixed-rate cover.

Longer-dated breakevens (3 years +) look a little rich to us, forward markets are probably asking a little too much in terms of RBNZ hikes. So we’d prefer to wait for dips before looking at hedges in these areas.



NZ Swap Curve - Forward Start Matrix							
		Forward Period					
		Spot	6m	1y	2y	3y	5y
Swap term	1y	0.29	0.34	0.47	0.84	1.20	1.79
	2y	0.38	0.51	0.65	1.02	1.36	1.86
	3y	0.54	0.68	0.83	1.18	1.50	1.94
	4y	0.71	0.85	1.00	1.33	1.61	2.02
	5y	0.87	1.01	1.16	1.45	1.70	2.10
	10y	1.45	1.56	1.67	1.87	2.06	2.33

Notes: Rates are indicative only and based on market mids

Appendix - Which Hedging Instrument When?

Instrument	What	When
<p>FX forward</p>	<p>Hedging an FX exposure using a forward contract 'locks-in' a future exchange rate, thereby costlessly providing certainty.</p> <p>Forward exchange rates are determined by adding market-determined forward points to the spot rate.</p> <p>Forward points are driven by relative interest rates between two countries.</p>	<p>Prudent situations to hedge using FX forwards might be when an FX exposure becomes certain (for example a future foreign currency payment is contracted) or when the currency is currently at an acceptable level for a corporate but the risk of an adverse movement would materially impact revenue or cost lines.</p> <p>We don't necessarily advocate "view-based" hedging, but a forward would also be the best hedging product for an exporter (importer) that had a strong view that the currency was about to appreciate (depreciate). Bear in mind though, that if the currency moves in a favourable direction, you are still locked in to deal at the agreed rate, that is, there is zero participation.</p>
<p>FX option</p>	<p>FX options provide the buyer with the right, but not the obligation, to buy/sell foreign exchange at a pre-agreed rate (the option "strike") at some point in the future.</p> <p>Options are usually structured to protect a 'worst-case' rate, while also allowing varying amounts of participation in favourable currency movements. There is usually a premium payable.</p> <p>Implied volatility (currency "vol") is the key market-determined component of option pricing. The other components – spot rate, maturity, strike, amount – are usually stipulated by the buyer.</p>	<p>Options provide flexibility. Buyers of options are not 'locked-in' to do anything (other than pay the option premium).</p> <p>This being the case, situations where options offer value are when a future exposure is uncertain in terms of timing, size, or probability of occurring. Options can be used to hedge or partially hedge the exposure but, if it doesn't materialise or it changes, a buyer can simply walk away or sell the option back to a bank. All that would have been lost is the option premium.</p> <p>Options also offer a prudent alternative to corporates going 'un-hedged'. For example, an exporter requires FX cover at a lower rate than current spot and believes there is a good chance the NZD can fall. Going unhedged carries significant risk. But by buying a call option, the exporter is protected at a worst-case rate in the event they are wrong.</p>
<p>Interest rate swap</p>	<p>An agreement between two parties to exchange a stream of interest payments for a set period of time.</p> <p>In a corporate context, swaps are most commonly used to convert a series of floating interest rate payments (for example on bank debt) to fixed interest payments, as a means of hedging against the risk that market interest</p>	<p>A corporate will enter a fixed for floating swap anytime it wishes to increase the percentage of debt hedged onto fixed rates.</p> <p>This could be for business reasons, for example a corporate's debt load is increasing, or it needs to protect covenants or rating agency metrics from the possibility of higher interest costs. Or it could be for market reasons, for example the economy starts running hotter, increasing the risk market interest</p>

	<p>rates might rise.</p> <p>Note that an interest rate swap can only hedge against market or base rates rising, a swap cannot hedge the funding/credit component of interest costs.</p>	<p>rates rise.</p>
<p>Interest rate swap – forward start</p>	<p>An interest rate swap contract agreed today but with a delayed start date.</p>	<p>A corporate wishes to hedge future interest rate risk now. For example, debt might be low now but forecast to increase materially in three years time, and a corporate wants to hedge against the risk that interest rates rise between now and then.</p>

Glossary

Option Moneyness – A description of where an option’s strike price lies in relation to the spot rate. The further “out-of-the-money” an option is the further away the strike price is from market and the less valuable and cheaper the option is.

NZD Put Option – The right but not the obligation to sell NZ dollars and buy foreign currency at an agreed rate on a particular date.

NZD Call Option – The right but not the obligation to buy NZ dollars and sell foreign currency at an agreed rate on a particular date.

Option Strike – The price at which foreign exchange is transacted in an option contract if the option is exercised.

FX Implied Volatility (often referred to as option “vol”) – Forward looking view of the likely volatility of a particular currency over a certain period. Key determinant in option pricing.

FX Collar – Obtained by the simultaneous purchase and sale of out-of-the-money put and call options, thus locking in a narrow range of possible hedge rates. A collar provides a worst-case rate but also limits participation to a best-case rate in beneficial currency movements.

Zero-Cost Collar – A collar structured for zero cash cost to the buyer. The cost of purchasing an option offering protection to the buyer is exactly offset by premium earned from the simultaneous sale of another option limiting participation in favourable moves.

Option Volatility “Skew” – The difference in implied volatility between a call and a put option that are the same distance out of the money. The skew is essentially the market’s (traded) preference for puts over calls and hence affects the pricing of collars, which incorporates both.

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