ANZ Research

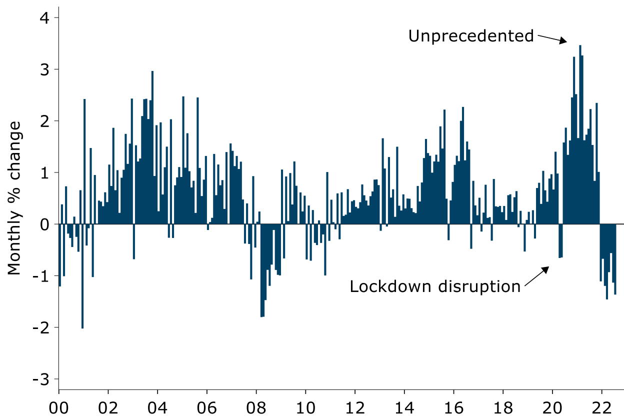
August 2022

New Zealand Property Focus

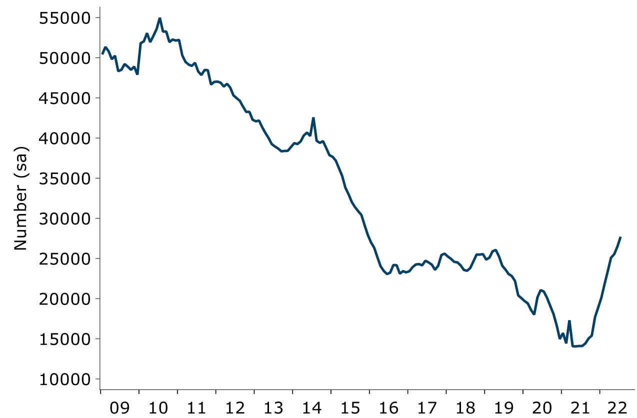
No place for green shoots

At a glance

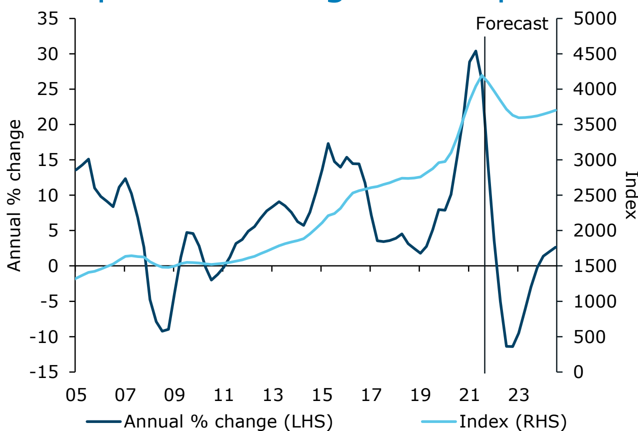
July saw an eighth consecutive monthly fall in house prices



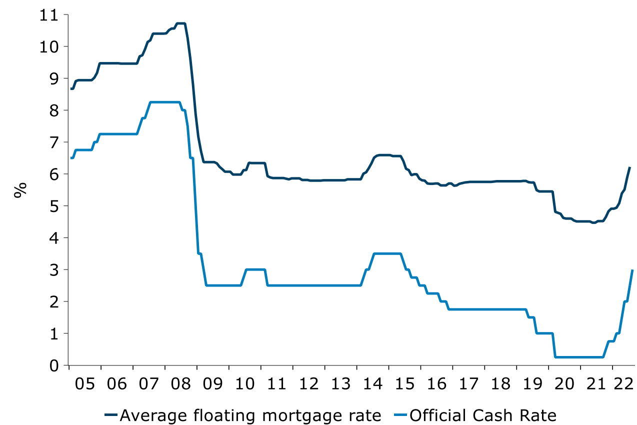
Slowing sales means inventories are still lifting



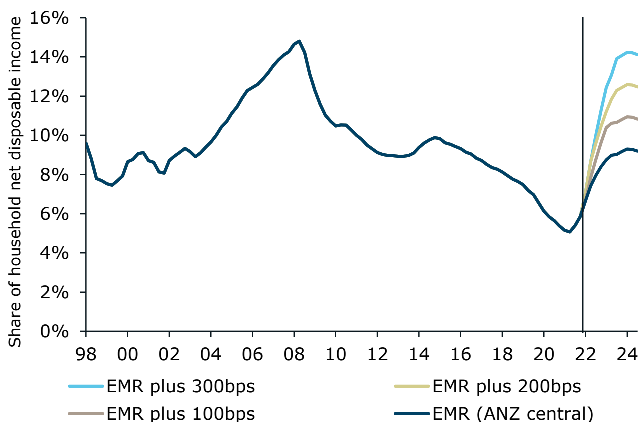
We maintain our forecast for a 15% peak to trough fall in prices



As mortgage rates lift with the OCR



Household debt servicing burdens look "contained" on our OCR call



Housing risks are mixed

RENT — Downside risks to net migration represent a downside risk to housing demand.

SALE — A global shock that saw unemployment rise quickly would be toxic for the housing market.

If CPI inflation doesn't fall as fast as expected, interest rates may have to go higher than forecast.

Stronger wage growth than expected is an upside risk to housing in the short term. But the RBNZ would respond by taking rates higher. Improving housing outcomes may be an early signal that monetary tightening isn't getting enough traction.

Source: RBNZ, REINZ, Stats NZ, CoreLogic, Macrobond, Bloomberg, ANZ Research

This is not personal advice nor financial advice about any product or service. The opinions and research contained in this document are provided for information only, are intended to be general in nature and do not take into account your financial situation or goals. Please refer to the Important Notice.

Contact

Sharon Zollner, Miles Workman, or David Croy for more details.

See page 13

INSIDE

At a glance	2
Housing Market Overview	4
Regional Housing Market Indicators	6
Feature Article: From OCR to mortgage rates	7
Mortgage Borrowing Strategy	11
Weekly Mortgage Repayment Table	12
Mortgage Rate Forecasts	12
Economic Forecasts	12
Important Notice	14

ISSN 2624-0629

Publication date: 25 August 2022

Summary

Our monthly *Property Focus* publication provides an independent appraisal of recent developments in the residential property market.

Housing market overview

The housing market continues to shed momentum as the ridiculously high starting point gets a reality check from higher mortgage rates, the turn in buyer sentiment, and continued progress towards eroding the housing deficit. But none of this is new news. The 8% fall in house prices to date marks roughly the half-way point in our forecast for a 15% peak to trough decline. Risks to the outlook are mixed. On the downside, inflation may hold up longer than expected, forcing interest rates higher. But if this is accompanied by stronger-than-expected nominal wage growth, there will be an offset to borrowing capacity. That means the risk in that scenario would be that interest rates may need to go higher to achieve the required housing slowdown, rather than greater downside risk to house prices. The risks around net migration feel skewed to the downside presently, a potential negative for housing demand. And hard-landing risks for the broader economy remain highly pertinent. Even 8% off their peak, house prices remain highly vulnerable should we see a sharp rise in unemployment. See our Market Overview.

Feature Article: From OCR to mortgage rates

Why have some fixed mortgage rates fallen lately despite the Official Cash Rate lifting another 50 basis points in August? By providing an overview on how mortgage rates are determined, we hope to answer this very question in this month's feature. Intended as a beginner's guide, we gloss over some of the nitty gritty, rather providing a high-level overview of what banks do, where they get their funding from, and key ways in which the cost of that funding can change. In particular, we hone in on how the OCR – and expectations of what the OCR may do in the future – impact floating and fixed mortgage rates. See this month's Feature Article.

Mortgage borrowing strategy

While floating mortgage rates have increased since the last edition of our Property Focus was published, fixed rates are all lower (on average across the big-4 banks). While that may seem like a strange development, it has come about thanks to a combination of credit demand and supply factors, and moderating expectations for the future path of the OCR (as discussed in our feature article). Looking ahead, we are mindful that the recent rise in wholesale interest rates may exert renewed upward pressure on fixed mortgage rates. They could rise at any time, but ultimately, how high fixed mortgage rates go and how long they hold up for depends on how sticky inflation proves to be. On that score, the balance of risks looks skewed to inflation being higher for longer. That risks a higher OCR than we are currently forecasting, and in turn, higher wholesale interest rates. Given recent falls in fixed mortgage rates, it may be worth fixing for longer than 1-year so as to deliver some certainty. See our Mortgage Borrowing Strategy.

Housing market overview

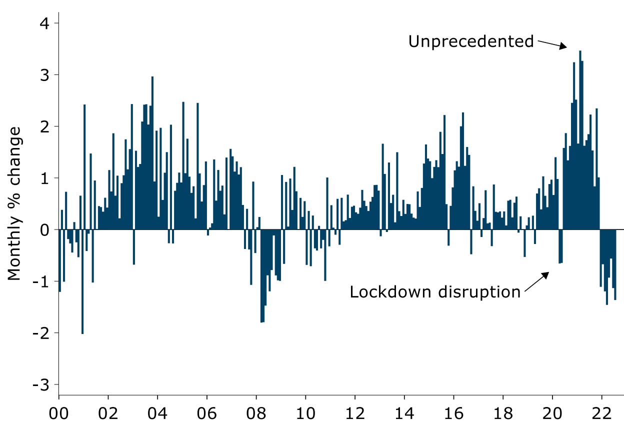
Summary

The housing market continues to shed momentum as the ridiculously high starting point gets a reality check from higher mortgage rates, the turn in buyer sentiment, and continued progress towards eroding the housing deficit. But none of this is new news. The 8% fall in house prices to date marks roughly the half-way point in our forecast for a 15% peak to trough decline. Risks to the outlook are mixed. On the downside, inflation may hold up longer than expected, forcing interest rates higher. But if this is accompanied by stronger-than-expected nominal wage growth, there will be an offset to borrowing capacity. That means the risk in that scenario would be that interest rates may need to go higher to achieve the required housing slowdown, rather than greater downside risk to house prices. The risks around net migration feel skewed to the downside presently, a potential negative for housing demand. And hard-landing risks for the broader economy remain highly pertinent. Even 8% off their peak, house prices remain highly vulnerable should we see a sharp rise in unemployment.

A deflated bouncy castle

July's 1.4% m/m fall (ANZ seasonal adjustment) in the REINZ House Price Index (HPI) marked the eighth consecutive monthly decline since late last year. And with the index now 8.1% below its November 2021 peak, we're roughly at the half-way point in our – lightly pencilled in – forecast for a 15% peak to trough decline.

Figure 1. Monthly house price inflation (sa)



Source: REINZ, Macrobond, ANZ Research

Annual house price inflation in now running at +0.6% (on a three-month moving average basis), but should be negative in the August data, and on our forecast, running at about -11% by Christmas.

Broadly, housing market themes are little changed from our last edition. Prices are down a bit more (as expected), the data suggest there are further declines to come, and we're yet to see any convincing signal that prices are finding a floor. But we do expect some form of floor given the tight labour market and robust household income growth. However, at this stage it's fair to say that the floor is more like that of a deflated bouncy castle than solid concrete.

What are the risks?

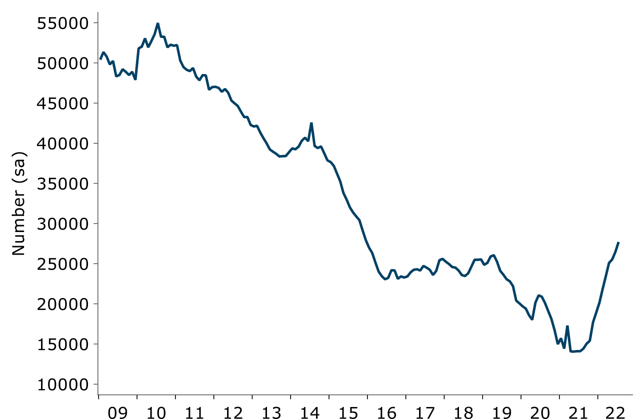
With little new news to report this month (from a housing momentum perspective), and no change to our forecast for house prices, it's a good time to reflect on the risks around the housing outlook.

Larger or smaller cyclical forces than we've pencilled in present a risk on both sides. These risks pertain not only to uncertainties around the impact of rising mortgage rates on housing (particularly given strong nominal wage growth and the giddying-high starting point for house prices), but also uncertainties around how typical seasonal patterns in the housing market will play out over the coming year or so.

New listings tend to increase significantly between September and November, gearing up for pre-Christmas sales. They then tend to drop in December and January, as we all go on holiday, before getting a second wind in February and March ahead of the usual slowdown in winter.

If COVID-19 has taught us anything, it's that forecasts based on typical seasonal patterns during times of significant disruption are fraught with extreme uncertainty. So far, listings appear to be back to obeying their typical seasonal pattern, but a larger-than-normal increase in new listings over the coming summer, combined with the fact that slow sales are pushing inventories higher (figure 2), could easily tip the balance towards softer price outcomes than expected over the coming summer.

Figure 2. Properties available for sale



Source: REINZ, Macrobond, ANZ Research

Housing market overview

Conversely, the very tight labour market could remain that way for longer, keeping already-strong wage growth stronger for longer, meaning rising mortgage rates will have less sting than otherwise – both in terms of debt-servicing burdens and, crucially for house prices, borrowing capacity. That could see housing demand hold up a little better than we've assumed, and limit any sense of urgency to sell among would-be sellers. It seems inevitable, however, that the RBNZ would in this scenario deliver a higher-than-otherwise OCR – they would still need to put the squeeze on households, and the housing market, to get enough inflation-fighting traction. So it would likely be a short-lived revival.

Indeed, with inflation and wage cost pressures where they are, **upside interest rate risks** feel a lot more pertinent to our central view right now than downside interest rates risks do. Sure, the economy could tank, taking inflation and interest rates with it (see the next big risk), but that's more of a "tail end" risk (eg via a terms of trade shock from offshore) than something we can put too much weight on in our central forecast.

As we've been flagging for a while now, the higher that wage inflation pushes, the less sting there is in the tail of rising interest rates, and the more the RBNZ will need to hike the OCR to get the same amount of inflation-fighting traction. And while this may sound counterintuitive, it's important to note that a lot of the wage growth we're seeing at present isn't the healthy (ie sustainable) kind. Labour productivity isn't the main driver; the too-tight labour market is. That means higher wage costs either need to come out of firms' profits (which would hit its limits pretty fast), or firms' need to become less dependent on labour (more easily said than done), or else it goes straight into prices (ie CPI inflation). The latter cat-and-mouse dynamic is what economists call the dreaded wage-price spiral, which can zap economic confidence, generate the need for even more aggressive action by the RBNZ, and add to economic and financial market volatility.

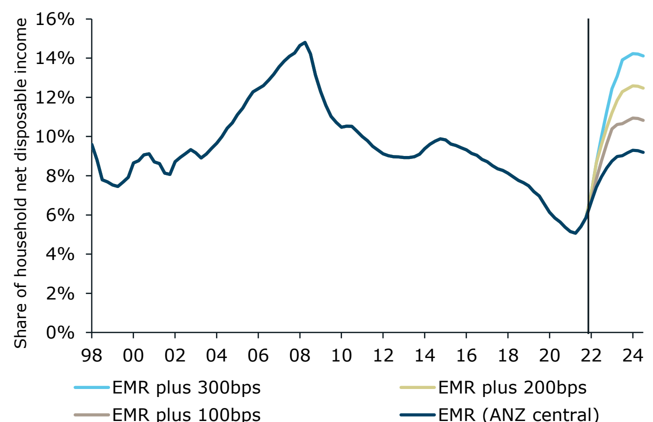
Bringing this risk back to housing, we can think about it in net terms: the labour market may remain tighter for longer (with nominal household income growth stronger than otherwise), and in the short run this could provide support for nominal house prices. But the RBNZ wouldn't sit back and watch it go. They'd raise the OCR by more, seeing debt-servicing burdens rise again, and household borrowing capacity fall back.

In a nutshell, the RBNZ wouldn't be doing its inflation-fighting job if they didn't act to re-impose the effective tightening that higher nominal incomes had eroded. So any relief to the housing market provided by higher-than-expected nominal wage growth would likely prove to be short-lived. Ups and downs in the housing market are in practice a big part of how monetary policy works in New Zealand – not the Reserve Bank's choice, but rather a function of the proportion of their wealth kiwis hold in housing, which is for a whole bunch of reasons, not least tax policy. In that context, housing will possibly be one of the earliest barometers of whether the RBNZ is actually doing enough to squeeze households and get inflation down. If green shoots start emerging in housing before inflation is unambiguously on the right trajectory, the OCR will go higher, pronto.

Given we're still talking about hard-landing risks, it might seem absurd to talk about the risk that interest rates could end up going significantly higher than currently expected. But it would just be a continuation of current trends. And the fact is, we've all got to get our heads around a re-inflating economy and what that may mean for how restrictive a given interest rate is – and will remain – in practice.

It also pays to remember that the RBNZ keeps noting that household balance sheets are "robust" to rising rates. Indeed, based on our aggregated income and debt analysis (assuming 5% annual income growth in the forecast), our expectation for the OCR peaking at 4% would still leave households' debt servicing burden well below pre-GFC levels (figure 3). To get back to those levels, an additional 300 basis points (or thereabouts) would need to be added to the effective mortgage rate (EMR). And more if wage growth turns out higher.

Figure 3. Household debt servicing



Source: RBNZ, Macrobond, Stats NZ, ANZ Research

In practice, then, the nutty level of house prices relative to incomes, rather than debt-servicing costs, is likely to be the weaker link in the chain as interest rates rise. But even there, higher nominal income growth is nibbling away at our severe unaffordability problem from the bottom at the same time falling house prices are nibbling away at the top – a silver lining to our inflation problem for sure, though obviously it would be better if we hadn't ended up in

this affordability corner in the first place.

With the RBNZ determined to cool the economy and squeeze out excesses, and the fundamental housing demand-supply balance having changed significantly over the past two years, real house prices relative to incomes are going to come down. A flurry of inflation and associated nominal wage inflation may well ease that transition (by meaning fewer people end up in negative equity than if nominal house prices did all the adjusting), but it won't prevent it.

Perhaps the most dramatic risk to the housing outlook comes from downside employment risks. While the pace of income growth matters, if employment contracted sharply and significantly, it could really pack a punch for housing by forcing house sales (ie by households who can no longer service their mortgage). In that world, it may not matter (immediately at least) what interest rates were doing. If a household has abruptly lost a large chunk of its income, it will struggle to service its debt even at ultra-low mortgage rates.

If these types of risks were forecastable with any degree of certainty, chances are they would never materialise, as policy makers could adjust to avoid them. But happen they do, and typically when the business cycle is getting a little too big for its boots (as it may well have done on the back of all the pandemic-related stimulus). For a small, open economy like New Zealand, it's often a global event that finally takes the business cycle down. And with this much global debt accumulation, vulnerabilities in risk markets and crypto, fragilities in China's property market, heightened geopolitical tensions, pandemic uncertainty, and some big question marks around sovereign credit risk in parts of Europe as monetary conditions are tightened, we're not short of potential catalysts.

The bottom line: we could see house price falls peter out if unexpectedly high nominal income growth makes today's mortgage rates less intimidating. Mortgage rates are still negative in real terms, after all (ie they are lower than the rate of inflation). But any housing green shoots would be greeted by the RBNZ wielding broad-spectrum herbicide. The fact is, to beat inflation, the RBNZ needs to – and will – keep the squeeze on households and the housing market. That suggests upside for house prices is limited, particularly in real terms (ie deflated by the general level of prices). Meanwhile, hard landing risks haven't gone away; housing could easily deteriorate more than we've pencilled in, particularly if downside employment risks materialise. In that scenario (eg due to a global terms of trade shock like those that killed off the 1990s and 2000s business cycles), housing could see a very real correction.

Housing market indicators for July 2022 (based on REINZ data seasonally adjusted by ANZ Research)

	Median house price			House price index		# of monthly sales	Monthly % change	Average days to sell
	Level	Annual % change	3-mth % change	Annual % change	3-mth % change			
Northland	$734,115	4.0	-3.8	10.3	-2.0	147	-2%	54
Auckland	$1,132,287	-5.6	-3.4	-7.0	-3.8	1,488	-14%	44
Waikato	$816,420	8.3	-1.6	3.7	-1.8	452	-11%	43
Bay of Plenty	$893,557	3.8	-0.8	1.2	-2.4	327	+4%	53
Gisborne	$646,124	0.3	-4.5	-1.6	-2.0	44	+38%	47
Hawke's Bay	$763,439	1.0	-5.0	-1.6	-2.0	171	+13%	56
Manawatu-Whanganui	$598,041	-0.2	1.6	-3.5	-3.5	220	-5%	45
Taranaki	$644,195	15.8	-1.2	3.7	-1.0	138	+4%	39
Wellington	$853,781	-5.6	-4.6	-12.6	-6.6	541	+14%	59
Tasman, Nelson & Marlborough	$778,997	4.1	0.0			170	-7%	52
Canterbury	$695,779	13.7	0.8	8.9	-1.3	787	-7%	34
Otago	$665,668	-3.6	-0.8	2.4	0.4	328	-2%	42
West Coast	$347,886	14.9	0.3	2.4	-3.4	28	-30%	64
Southland	$427,765	0.4	-2.6	5.3	-0.3	125	+9%	33
New Zealand	**$833,922**	**-1.7**	**-2.7**	**-2.8**	**-2.9**	**4,813**	**-7%**	**44**

Feature Article: From OCR to mortgage rates

Summary

Why have some fixed mortgage rates fallen lately despite the Official Cash Rate lifting another 50 basis points in August? By providing an overview on how mortgage rates are determined, we hope to answer this very question in this month's feature. Intended as a beginner's guide, we gloss over some of the nitty gritty, rather providing a high-level overview of what banks do, where they get their funding from, and key ways in which the cost of that funding can change. In particular, we hone in on how the OCR – and expectations of what the OCR may do in the future – impact floating and fixed mortgage rates.

What do banks do?

Before diving into how mortgage rates move, it is probably useful to provide a quick overview of what a bank does in terms of its borrowing and lending. In the broadest sense, a bank is not all that dissimilar to a retailer: banks buy (or borrow) something, add a margin to cover costs and profit, and then sell (lend) it to their customers. The "value add" provided by banks in this context largely comes from their ability to assess credit risk and allocate credit efficiently.

In the case of mortgage lending, the cost of the end product (eg the home loan interest rate) will reflect:

- the bank's funding cost (ie the cost of obtaining the money in order to lend it out),
- the cost of the bank's broad infrastructure (branch network, payments systems etc),
- other operational costs (including regulatory and risk),
- plus the bank's profit margin.

In a world of dynamic financial markets, the most variable part of all that, with by far the largest impact on changes in mortgage rates, is banks' funding costs.

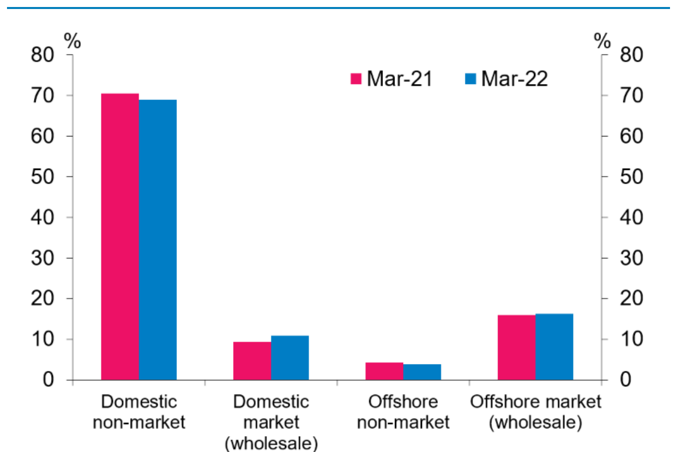
So where does the money that banks lend to homeowners (ie the funding) come from?

There are a number of sources, with the RBNZ's Liquidity Policy setting limits around how much lending can take place against each source. They include:

- Deposits – ie money borrowed from households and businesses who put their money in term deposits or park it in a savings or call account. Some of this funding (like term deposits) is very stable and banks can confidently lend against it, since depositors have contractually agreed to a specific term. On the other hand, some of these funds (like the money in savings accounts) can be withdrawn at any time.
- Wholesale funding (ie borrowing) – usually at scale – from other financial institutions and banks, both domestic and international.
- Borrowing directly from the RBNZ (normally against high-quality liquid assets such as government bonds or pooled low-risk mortgages as collateral).
- Shareholder capital.

As figure 1 shows (taken from this RBNZ banking sector overview), domestic non-market funding (largely domestic deposits) makes up the lion's share of bank funding in New Zealand. That means changes in the cost of these deposits (eg changes in term deposit interest rates) are a significant driver of changes in mortgage rates.

Figure 1. Bank non-equity funding source (locally incorporated banks)



Source: RBNZ

What moves interest rates?

Perhaps the best place to start is by introducing the concept of the yield curve. In a small economy like New Zealand with financial markets that are open to the world, the yield curve is effectively in two parts. The short end of the yield curve (ie interest rates for borrowing for just one night, through to borrowing for 2 to 3 years) is influenced largely by what the Reserve Bank of New Zealand does and says, while changes in the long end of the yield curve (like the 10-year bond) are influenced more by offshore factors.

That being the case, imagine the yield curve as your left hand holding a ribbon at one end, and your right hand holding it at the other. Your left hand moves up and down with the RBNZ's changes to the Official Cash Rate (OCR), while your right hand moves up and down with longer-dated rates, such as that on the 10-year government bond. Anchored at both ends, the ribbon between your hands is free to flap in

the winds of "the market". As a "big player" in the New Zealand government bond market at times, the Reserve Bank can influence these longer-term rates, but normally it's global factors that have the bigger say, particularly in terms of day-to-day movements. And since not many people choose to fix their mortgages longer than about three years, the shorter end of the curve is the most important here.

Most of the time, the yield curve has an upward slope to it, reflecting the fact that in order to be persuaded to hand over your money for longer, you typically want a higher return in exchange. But at times, the yield curve can become inverted (as it is now). This means some longer-term rates are lower than shorter-term rates. There are many reasons the curve might invert, but generally, it means market participants are expecting short-term interest rates (particularly the OCR) to fall at some point in the future. That makes lenders more willing to accept a lower interest rate for lending for a long time.

So expectations of where the OCR will go are a big driver of the shape of the yield curve – and therefore fixed mortgage rates. But why does the OCR move?

The OCR is set by the RBNZ in accordance with the Monetary Policy Committee (MPC) remit to:

- keep inflation between 1% and 3% over the medium term (with a focus on keeping future average inflation near the 2% target midpoint); and
- support maximum sustainable employment. Importantly, this is not as-low-as-you-can-get-it unemployment. Unemployment that's "too" low is not sustainable, and aiming for it can lead to unnecessarily large booms and busts in the economy that can be quite damaging. Maximum sustainable employment is the level of employment where labour resource is deployed as much as possible without these boom-bust risks building. It will depend on things the RBNZ has absolutely no control over, like education levels and the health system, and policies that influence work incentives.

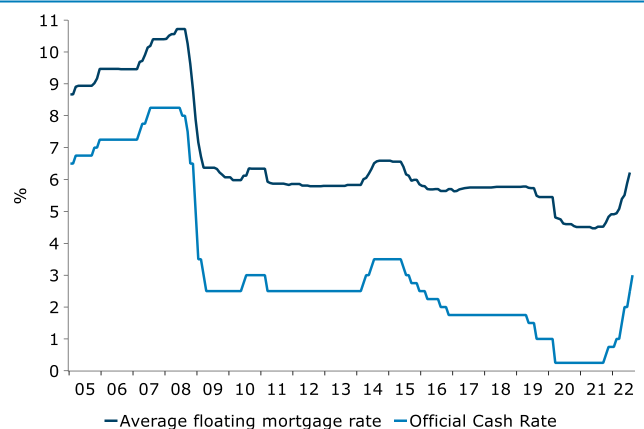
The RBNZ's main tool to meet these objectives is the OCR. Currently, inflation pressures are too high, and the labour market is too tight (by too tight, we really mean 'unsustainable'). Higher interest rates cool the economy and eventually inflation. Monetary tightening is therefore needed, but it tends to work with a lag (up to a couple of years!) as it filters through the economy. And that means the RBNZ needs to be forward-looking when setting the OCR.

But knowing exactly how inflation and labour market dynamics are going to evolve over the medium term is no easy feat. It's hard enough to work out the true state of affairs here and now. Economic shocks always happen, and monetary policy will always need to adjust to the changing conditions. If it looks like inflation is going to be too low or too high without policy adjustment, the MPC are likely to move the OCR. Thus, economic outcomes and changes to the economic outlook affect the MPC's judgement about the right level for the OCR.

The MPC meet every 6-7 weeks to set the OCR, but can make unscheduled "out of cycle" decisions at short notice too if conditions warrant (eg a natural disaster, pandemic, terrorist attack, or financial crisis).

Changes in the OCR (which is the overnight borrowing rate when banks borrow from the RBNZ and each other) is the key driver of changes in floating mortgage rates. On the deposits side of the ledger, this is also the rate to which the interest rates on call and savings accounts are most closely linked.

Figure 2. Floating mortgage rate and OCR



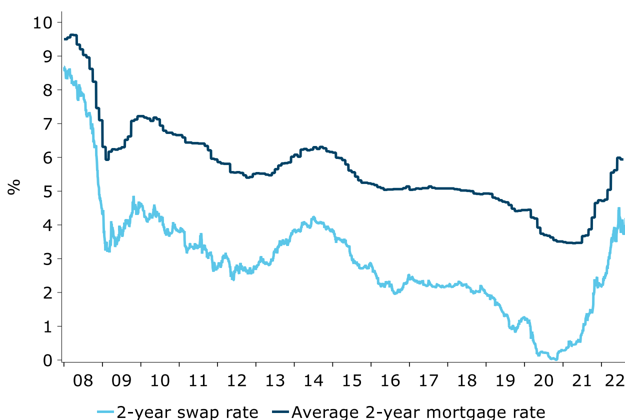
Source: RBNZ, Macrobond, ANZ Research

But for wholesale interest rate markets, and in turn, fixed mortgage rates, expectations of where the OCR will be in the future are key. If you think the RBNZ is going to steadily raise the OCR over the next 12 months, for example, that will mean you'll demand a higher interest rate to lend to someone for a year.

In practice, that means the OCR doesn't actually need to change for fixed rates to move. Expectations for the OCR just have to change. Market pricing for the OCR 1 year from now is currently sitting at around 4.1%. With the OCR currently at 3%, this upward-sloping expectation for the OCR is already built in to where wholesale term rates are trading today.

It's entirely possible (in fact it's guaranteed) that economic data and events will come out before the next MPC decision, suggesting inflation pressures are either stronger or weaker than previously thought. And that will very likely see market pricing for future OCR decisions immediately move in response. Indeed, wholesale market rates can and do move at any time, independent of an MPC decision. Retail borrowing and saving rates are less volatile, simply because customers wouldn't thank their bank for changing their mortgage rates every day (or every hour!), but they naturally follow the trends in wholesale rates closely (figure 3).

Figure 3. 2-year swap rate and 2-year mortgage rate



Source: Bloomberg, Macrobond, ANZ Research

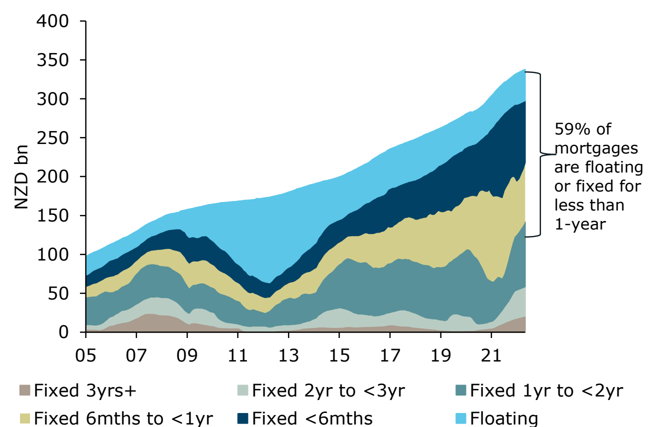
The importance of expectations also means when the next MPC decision does roll around, markets pay extremely close attention to the RBNZ's assessment of recent events, and their forecasts, including for how high they think they will raise the OCR. The market is free to disagree with the RBNZ about the outlook, but in practice, the RBNZ's forecasts have a huge influence – particularly when they are hot off the press, before any data surprises come along to muddy the waters. After all, it's fair to assume that the Committee knows their own minds best.

Thus, through its forecasts and its words, the RBNZ can influence the yield curve, not just the overnight interest rate that it directly sets. However, the further you go out on the yield curve, the less influence the OCR (and expectations thereof) have in determining wholesale funding rates, and the more influence longer-term bond yields will have (eg the yield on 10-year government bonds).

Bonds are a form of longer-term borrowing, and a very popular choice for government funding (corporates can issue them too). Of course, when you're lending to someone for such a long time, their likely ability to pay you back becomes a more important consideration. But since no one is querying the NZ Government's solvency, our sovereign bond yields tend to move closely with other global bonds. For example, the yield on the New Zealand 10-year government bond tends to move broadly in step with the US 10-year government bond. But for NZ mortgage rates, given there is very little fixing done in the 5+ year space, the influence of fluctuations in these longer rates tends to be minimal.

Indeed, given the fact that around 60% of home loans are either fixed for less than a year or floating, the actual and expected OCR is by far the most significant driver of overall mortgage rate changes.

Figure 4. Residential mortgage by fixed term



Source: RBNZ, ANZ Research

So summing up how this all interacts with New Zealand mortgage rates: floating rates tend to move in step with the OCR, and shorter fixed periods (eg 6 months to 1 year) are very heavily influenced by expectations of where the OCR will go over the coming year or so. And while longer-term rates (eg 10-year government bonds) are not overly influential for mortgage rates (given average fixing durations), these still act as an anchor of sorts as you travel along the curve (eg 5 years). You can think of the OCR and government bonds as the foundation from which mortgage rates are built.

But wait, there's more.

Banks don't have the power to tax like governments do, so naturally have to pay more to borrow. The premium relative to government bonds that a bank must pay to secure funding for a home loan is often called "the spread". It tends to move with economic conditions, and in particular the balance between the supply of, and demand for, credit. If demand for credit is very high, the spread might widen as banks access more funding to meet its customer's needs. If the supply of credit is very abundant, and demand is not strong, banks will be able to call on their cheapest funding sources and the spread will narrow. This additional layer means mortgage rates may not

move in lockstep with wholesale markets, but they do tend to move in the same direction on average over time.

Some hypotheticals

Now we've got these concepts under our belt, let's look at some hypotheticals. Let's say the OCR is at 3%. Let's assume market pricing is consistent with two more 50 basis point hikes at the next two RBNZ decisions. These hikes would take the OCR to 4%, and let's further assume that going in to the OCR announcement markets expect the OCR to remain at 4% for the next 2 years. As it happens, that's what markets broadly expected as we went to print. Let's further assume that long-term interest rates remain unchanged throughout, for simplicity.

Now let's roll the clock forward to the next RBNZ meeting, which is scheduled for October. Broadly speaking, one of three scenarios may play out:

1) The first is the "as expected" scenario. The RBNZ delivers the 50 basis point hike and signals that there is one more hike to come. Given that the RBNZ did and said what was expected, nobody is surprised. The OCR has gone higher, and that likely means the floating mortgage rate would rise too, by more or less the same amount as the OCR. But 1 and 2-year wholesale rates (and by extension, 1 and 2-year fixed mortgage rates) probably wouldn't move much, as they would have already moved in anticipation of the hike just delivered, and the next one that's expected. 1 and 2-year mortgage rates may creep higher over time as the OCR goes from 3% to 4% (ie the average expected OCR over time rises), but these changes would likely be mild.

2) The second is what we'll call a "downside" scenario. In this case, let's say the RBNZ delivers the 50 basis point hike, but signals that this is the last one (ie the OCR will stop at 3.50%). That would come as a surprise to markets, who went into the decision not just expecting a 50bp hike on the day, but also a clear signal of another hike after that. Under this scenario, the floating mortgage rate would likely rise with the OCR. However, 1 and 2-year wholesale rates (and by extension, 1 and 2-year fixed mortgage rates) would probably fall as markets consider the impact of a 3.5%, rather than 4%, peak in the OCR.

3) The last one is the "upside" scenario where, let's say the RBNZ delivers a 50 basis point hike, but says it now believes it'll need to deliver three more (opposed to just one more) 50 basis point hikes after that, ultimately taking the OCR to 5%. Like the second scenario, this will come as a surprise to markets. Just as in the other two scenarios, the floating mortgage would probably rise with the OCR. However, 1 and 2-year wholesale rates (and by extension, 1 and 2-year fixed mortgage rates) would probably rise (possibly quite sharply) as markets consider the impact of a likely 5%, rather than 4%, peak in the OCR in the future.

Thus even with an identical OCR move on the day, fixed mortgage rates could go up, down, or sideways.

The outlook

Our current OCR call is for two more 50bps hikes this year, taking the OCR to 4% in November, and market pricing is close to that too. The fixed mortgage rate projections on page 12 are consistent with this profile. But surprises that change expectations happen all the time. This can be either surprises in the RBNZ forecasts, as described in the scenarios above, or else from the economic data directly as it come out. The market (and bank economists) sift the tea leaves constantly regarding how the RBNZ will likely be thinking about the economy and the future path for the OCR – there's no need to wait for RBNZ decision days to take a punt on that. Therefore, wholesale interest rates and fixed mortgage rates can move substantially even between RBNZ meetings.

Barring an unexpected shock, we see more upside risk to the OCR outlook than downside (as described in the Housing Market Overview). That leaves wholesale rates vulnerable to adjusting higher, taking mortgage rates with them. Indeed, wholesale interest rates have been creeping higher for some time, implying upward pressure on fixed mortgage rates currently (see Mortgage Borrowing Strategy next page).

Mortgage borrowing strategy

This is not financial advice about any product or service. The opinions and research contained in this document are provided for information only, are intended to be general in nature and do not take into account your financial situation or goals. Please refer to the Important Notice.

Summary

While floating mortgage rates have increased since the last edition of our Property Focus was published, fixed rates are all lower (on average across the big-4 banks). While that may seem like a strange development, it has come about thanks to a combination of credit demand and supply factors, and moderating expectations for the future path of the OCR (as discussed in our feature article). Looking ahead, we are mindful that the recent rise in wholesale interest rates may exert renewed upward pressure on fixed mortgage rates. They could rise at any time, but ultimately, how high fixed mortgage rates go and how long they hold up for depends on how sticky inflation proves to be. On that score, the balance of risks looks skewed to inflation being higher for longer. That risks a higher OCR than we are currently forecasting, and in turn, higher wholesale interest rates. Given recent falls in fixed mortgage rates, it may be worth fixing for longer than 1-year so as to deliver some certainty.

Floating mortgage rates across the big-4 banks lifted again last month, but as figure 1 shows, average fixed mortgage rates have moved in the opposite direction – down! As noted in the summary, in broad terms, that reflects (1) a shifting balance in the supply and demand of credit as credit demand slows, and (2) earlier falls in wholesale interest rates as markets began to price in recession risks (and an expectation that OCR cuts might occur in 2023) here and in key offshore markets like the US.

Readers may find these changes confusing or even a bit challenging to understand, but there is logic to what has happened, and we discuss this in more detail in our feature article. But now that we have seen fixed mortgage rates fall, the question is; will those lower rates be sustained, or is there a risk that we see a turnaround? We think the risks are skewed to the latter, and that's because:

- key short-term wholesale interest rates fell between the RBNZ's May Monetary Policy Review and its August Monetary Policy Statement, but they are now on their way up again;
- That rise in the 2-year swap rate (around 25bps in the past 7 days) takes it back towards where it was in June, when mortgage rates were much higher;
- we think there is a real risk that the RBNZ may need to take the OCR beyond 4%, and/or keep the OCR elevated for a more sustained period once it reaches whatever level it tops out at.

At the moment, we are forecasting a 4% peak in the OCR, but given the skew of inflation risks, it could well end up higher. RBNZ OCR hikes to date have dented confidence, but wage increases have been easier to come by thanks to a tight labour market. And blocked supply chains are keeping goods prices elevated, even though energy prices have come down. These are all things one could debate at length, but the hurdle for an upside surprise isn't high at the moment given that financial markets are still pricing in (ie expecting) OCR cuts from May next year, which seems a stretch.

Borrowers need to do their own research, and be comfortable with decisions they make. For our part, when we see falls in mortgage rates against the backdrop of a renewed rise in wholesale interest rates and a still-potent inflationary backdrop, we think it's worth considering taking advantage of the recent fall by locking in for a little longer than just 6 months or 1 year, which are the cheapest rates.

Some borrowers will value certainty and predictability over achieving the lowest cost (which may mean taking risks), and simply going with the cheapest rate may not end up being the cheapest or least stressful long-term strategy. Regular readers will be familiar with breakevens. Right now, they show that the 1-year rate only needs to rise to 5.90% in a year's time before it'd end up being cheaper being fixed for 2 years at 5.44%. That's a decent jump from the current 1-year rate of 4.98%, but remember, the average 1-year rate was at 5.33% a month ago, and it could easily rise towards 5.90% if the RBNZ has to take the OCR beyond 4%.

Figure 1. Carded special mortgage rates^

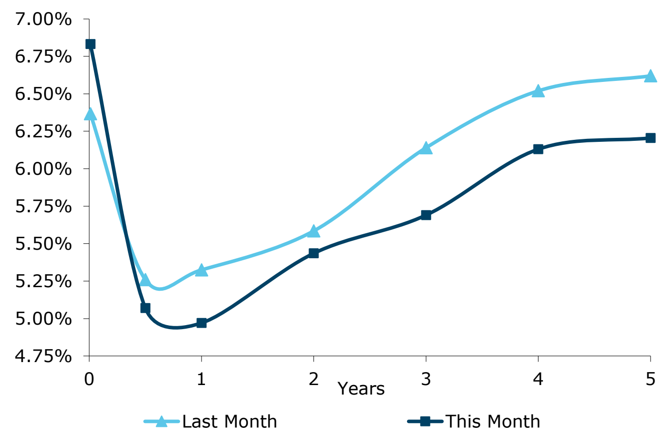


Table 1. Special Mortgage Rates

		Breakevens for 20%+ equity borrowers			
Term	Current	in 6mths	in 1yr	in 18mths	in 2 yrs
Floating	6.83%				
6 months	5.07%	4.87%	6.08%	5.72%	6.07%
1 year	4.97%	5.48%	5.90%	5.90%	6.20%
2 years	5.44%	5.69%	6.05%	6.34%	6.83%
3 years	5.69%	6.05%	6.52%	6.58%	6.72%
4 years	6.13%	6.30%	6.51%		
5 years	6.21%	#Average of "big four" banks			

^ Average of carded rates from ANZ, ASB, BNZ and Westpac.

Source: interest.co.nz, ANZ Research

Key forecasts

Weekly mortgage repayments table (based on 25-year term)

Mortgage Size ($000)	Mortgage Rate (%)													
	4.50	4.75	5.00	5.25	5.50	5.75	6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75
200	256	263	270	276	283	290	297	304	311	319	326	333	341	348
250	320	329	337	345	354	363	371	380	389	398	407	417	426	435
300	385	394	404	415	425	435	446	456	467	478	489	500	511	522
350	449	460	472	484	496	508	520	532	545	558	570	583	596	610
400	513	526	539	553	566	580	594	608	623	637	652	667	682	697
450	577	592	607	622	637	653	669	684	701	717	733	750	767	784
500	641	657	674	691	708	725	743	761	778	797	815	833	852	871
550	705	723	741	760	779	798	817	837	856	876	896	917	937	958
600	769	789	809	829	850	870	891	913	934	956	978	1,000	1,022	1,045
650	833	854	876	898	920	943	966	989	1,012	1,036	1,059	1,083	1,108	1,132
700	897	920	944	967	991	1,015	1,040	1,065	1,090	1,115	1,141	1,167	1,193	1,219
750	961	986	1,011	1,036	1,062	1,088	1,114	1,141	1,168	1,195	1,222	1,250	1,278	1,306
800	1,025	1,052	1,078	1,105	1,133	1,160	1,188	1,217	1,246	1,274	1,304	1,333	1,363	1,393
850	1,089	1,117	1,146	1,174	1,204	1,233	1,263	1,293	1,323	1,354	1,385	1,417	1,448	1,480
900	1,154	1,183	1,213	1,244	1,274	1,306	1,337	1,369	1,401	1,434	1,467	1,500	1,534	1,567
950	1,218	1,249	1,281	1,313	1,345	1,378	1,411	1,445	1,479	1,513	1,548	1,583	1,619	1,655
1000	1,282	1,315	1,348	1,382	1,416	1,451	1,486	1,521	1,557	1,593	1,630	1,667	1,704	1,742

Mortgage rate projections (historic rates are special rates; projections based on ANZ's wholesale rate forecasts)

	Actual			Projections						
Interest rates	Dec-21	Mar-22	Jun-22	Sep-22	Dec-22	Mar-23	Jun-23	Sep-23	Dec-23	Mar-24
Floating Mortgage Rate	4.9	5.1	5.9	6.9	8.0	8.1	8.1	8.1	8.1	8.1
1-Yr Fixed Mortgage Rate	3.6	3.9	5.1	5.5	5.6	5.6	5.6	5.5	5.4	5.3
2-Yr Fixed Mortgage Rate	4.3	4.5	5.6	5.6	5.8	5.6	5.5	5.4	5.4	5.3
5-Yr Fixed Mortgage Rate	4.9	5.1	6.3	6.8	6.4	6.2	6.2	6.0	6.0	5.9

Source: RBNZ, ANZ Research

Economic forecasts

	Actual			Forecasts						
Economic indicators	Sep-21	Dec-21	Mar-22	Jun-22	Sep-22	Dec-22	Mar-23	Jun-23	Sep-23	Dec-23
GDP (Annual % Chg)	-0.2	3.1	1.2	-0.1	4.4	2.2	2.8	1.9	1.6	1.0
CPI Inflation (Annual % Chg)	4.9	5.9	6.9	7.3(a)	6.7	6.1	5.0	3.9	3.1	2.5
Unemployment Rate (%)	3.3	3.2	3.2	3.3(a)	3.3	3.4	3.4	3.6	4.0	4.5
House Prices (Quarter % Chg)	5.4	3.7	-2.3	-3.0(a)	-3.4	-3.2	-2.4	-1.0	0.1	0.2
House Prices (Annual % Chg)	30.4	26.2	14.1	3.6(a)	-5.1	-11.4	-11.4	-9.5	-6.2	-3.0

Interest rates	Dec-21	Mar-22	Jun-22	Sep-22	Dec-22	Mar-23	Jun-23	Sep-23	Dec-23	Mar-24
Official Cash Rate	0.75	1.00	2.00	3.00	4.00	4.00	4.00	4.00	4.00	4.00
90-Day Bank Bill Rate	0.97	1.61	2.86	3.93	4.10	4.10	4.10	4.10	4.10	4.10
10-Year Bond	2.39	3.22	3.86	4.25	4.00	4.00	4.00	3.75	3.75	3.75

Source: ANZ Research, Statistics NZ, RBNZ, REINZ

Contact us

Meet the team

We welcome your questions and feedback. Click here for more information about our team.

Sharon Zollner
Chief Economist

Follow Sharon on Twitter
@sharon_zollner

Telephone: +64 9 357 4094
Email: sharon.zollner@anz.com

General enquiries:
research@anz.com

Follow ANZ Research
@ANZ_Research (global)

David Croy
Senior Strategist

Market developments, interest rates, FX, unconventional monetary policy, liaison with market participants.

Telephone: +64 4 576 1022
Email: david.croy@anz.com

Susan Kilsby
Agricultural Economist

Primary industry developments and outlook, structural change and regulation, liaison with industry.

Telephone: +64 21 633 469
Email: susan.kilsby@anz.com

Miles Workman
Senior Economist

Macroeconomic forecast co-ordinator, fiscal policy, economic risk assessment and credit developments.

Telephone: +64 21 661 792
Email: miles.workman@anz.com

Finn Robinson
Economist

Macroeconomic forecasting, economic developments, labour market dynamics, inflation and monetary policy.

Telephone: +64 21 629 553
Email: finn.robinson@anz.com

Kyle Uerata
Economic Statistician

Economic statistics, ANZ proprietary data (including ANZ Business Outlook), data capability and infrastructure.

Telephone: +64 21 633 894
Email: kyle.uerata@anz.com

Natalie Denne
PA / Desktop Publisher

Business management, general enquiries, mailing lists, publications, chief economist's diary.

Telephone: +64 21 253 6808
Email: natalie.denne@anz.com

Important notice

Last updated: 22 June 2022

This document (which may be in the form of text, image, video or audio) is intended for ANZ's Institutional, Markets and Private Banking clients. It should not be forwarded, copied or distributed. The opinions and research contained in this document are (a) not personal advice nor financial advice about any product or service; (b) provided for information only; and (c) intended to be general in nature and does not take into account your financial situation or goals.

This document may be restricted by law in certain jurisdictions. Persons who receive this document must inform themselves about and observe all relevant restrictions.

Disclaimer for all jurisdictions: This document is prepared and distributed in your country/region by either: Australia and New Zealand Banking Group Limited (ABN11 005 357 522) (**ANZ**); or its relevant subsidiary or branch (each, an **Affiliate**), as appropriate or as set out below.

This document is distributed on the basis that it is only for the information of the specified recipient or permitted user of the relevant website (**recipients**).

This document is solely for informational purposes and nothing contained within is intended to be an invitation, solicitation or offer by ANZ to sell, or buy, receive or provide any product or service, or to participate in a particular trading strategy.

Distribution of this document to you is only as may be permissible by the laws of your jurisdiction, and is not directed to or intended for distribution or use by recipients resident or located in jurisdictions where its use or distribution would be contrary to those laws or regulations, or in jurisdictions where ANZ would be subject to additional licensing or registration requirements. Further, the products and services mentioned in this document may not be available in all countries.

ANZ in no way provides any financial, legal, taxation or investment advice to you in connection with any product or service discussed in this document. Before making any investment decision, recipients should seek independent financial, legal, tax and other relevant advice having regard to their particular circumstances.

Whilst care has been taken in the preparation of this document and the information contained within is believed to be accurate, ANZ does not represent or warrant the accuracy or completeness of the information Further, ANZ does not accept any responsibility to inform you of any matter that subsequently comes to its notice, which may affect the accuracy of the information in this document.

Preparation of this document and the opinions expressed in it may involve material elements of subjective judgement and analysis. Unless specifically stated otherwise: they are current on the date of this document and are subject to change without notice; and, all price information is indicative only. Any opinions expressed in this document are subject to change at any time without notice.

ANZ does not guarantee the performance of any product mentioned in this document. All investments entail a risk and may result in both profits and losses. Past performance is not necessarily an indicator of future performance. The products and services described in this document may not be suitable for all investors, and transacting in these products or services may be considered risky.

ANZ expressly disclaims any responsibility and shall not be liable for any loss, damage, claim, liability, proceedings, cost or expense (Liability) arising directly or indirectly and whether in tort (including negligence), contract, equity or otherwise out of or in connection with this document to the extent permissible under relevant law. Please note, the contents of this document have not been reviewed by any regulatory body or authority in any jurisdiction.

ANZ and its Affiliates may have an interest in the subject matter of this document. They may receive fees from customers for dealing in the products or services described in this document, and their staff and introducers of business may share in such fees or remuneration that may be influenced by total sales, at all times received and/or apportioned in accordance with local regulatory requirements. Further, they or their customers may have or have had interests or long or short positions in the products or services described in this document, and may at any time make purchases and/or sales in them as principal or agent, as well as act (or have acted) as a market maker in such products. This document is published in accordance with ANZ's policies on conflicts of interest and ANZ maintains appropriate information barriers to control the flow of information between businesses within it and its Affiliates.

Your ANZ point of contact can assist with any questions about this document including for further information on these disclosures of interest.

Country/region specific information: Unless stated otherwise, this document is distributed by Australia and New Zealand Banking Group Limited (**ANZ**).

Australia. ANZ holds an Australian Financial Services licence no. 234527. For a copy of ANZ's Financial Services Guide please click here or request from your ANZ point of contact.

Brazil. This document is distributed on a cross border basis and only following request by the recipient.

Brunei, India, Japan, Kuwait, Malaysia, Switzerland, Taiwan. This document is distributed in each of these jurisdictions by ANZ on a cross-border basis.

Cambodia. The information contained in this document is confidential and is provided solely for your use upon your request. This does not constitute or form part of an offer or solicitation of any offer to engage services, nor should it or any part of it form the basis of, or be relied in any connection with, any contract or commitment whatsoever. ANZ does not have a licence to undertake banking operations or securities business or similar business, in Cambodia. By requesting financial services from ANZ, you agree, represent and warrant that you are engaging our services wholly outside of Cambodia and subject to the laws of the contract governing the terms of our engagement.

Canada. This document is general information only and is not meant to be tailored to the needs and circumstances of any recipient. In addition, this document is not intended to be an offer or solicitation to purchase or sell any security or other financial instrument or to employ a specific investment strategy.

Chile. You understand and agree that ANZ Banking Group Limited is not regulated by Chilean Authorities and that the provision of this document is not subject to any Chilean supervision and is not guaranteed by any regulatory or governmental agency in Chile.

Fiji. For Fiji regulatory purposes, this document and any views and recommendations are not to be deemed as investment advice. Fiji investors must seek licensed professional advice should they wish to make any investment in relation to this document.

Hong Kong. This document is issued or distributed in Hong Kong by the Hong Kong branch of ANZ, which is registered at the Hong Kong Monetary Authority to conduct Type 1 (dealing in securities), Type 4 (advising on securities) and Type 6 (advising on corporate finance) regulated activities. The contents of this document have not been reviewed by any regulatory authority in Hong Kong.

India. If this document is received in India, only you (the specified recipient) may print it provided that before doing so, you specify on it your name and place of printing.

Macau. Click here to read the disclaimer for all jurisdictions in Mandarin. **澳门. 点**击此处阅读所有司法管辖区的免责声明的中文版。

Myanmar. This document is intended to be general and part of ANZ's customer service and marketing activities when implementing its functions as a licensed bank. This document is not Securities Investment Advice (as that term is defined in the Myanmar Securities Transaction Law 2013).

New Zealand. This material is for information purposes only and is not financial advice about any product or service. We recommend seeking financial advice about your financial situation and goals before acquiring or disposing of (or not acquiring or disposing of) a financial product.

Oman. ANZ neither has a registered business presence nor a representative office in Oman and does not undertake banking business or provide financial services in Oman. Consequently ANZ is not regulated by either the Central Bank of Oman or Oman's Capital Market Authority. The information contained in this document is for discussion purposes only and neither constitutes an offer of securities in Oman as contemplated by the Commercial Companies Law of Oman (Royal Decree 4/74) or the Capital Market Law of Oman (Royal Decree 80/98), nor does it constitute an offer to sell, or the solicitation of any offer to buy non-Omani securities in Oman as contemplated by Article 139 of the Executive Regulations to the Capital Market Law (issued vide CMA Decision 1/2009). ANZ does not solicit business in Oman and the only circumstances in which ANZ sends information or material describing financial products or financial services to recipients in Oman, is where such information or material has been requested from ANZ and the recipient understands, acknowledges and agrees that this document has not been approved by the CBO, the CMA or any other regulatory body or authority in Oman. ANZ does not market, offer, sell or distribute any financial or investment products or services in Oman and no subscription to any securities, products or financial services may or will be consummated within Oman. Nothing contained in this document is intended to constitute Omani investment, legal, tax, accounting or other professional advice.

People's Republic of China (PRC). This document may be distributed by either ANZ or Australia and New Zealand Bank (China) Company Limited (**ANZ China**). Recipients must comply with all applicable laws and regulations of PRC, including any prohibitions on speculative transactions and CNY/CNH arbitrage trading. If this document is distributed by ANZ or an Affiliate (other than ANZ China), the following statement and the text below is applicable: No action has been taken by ANZ or any affiliate which would permit a public offering of any products or services of such an entity or distribution or re-distribution of this document in the PRC. Accordingly, the products and services of such entities are not being offered or sold within the PRC by means of this document or any other document. This document may not be distributed, re-distributed or published in the PRC, except under circumstances that will result in compliance with any applicable laws and regulations. If and when the material accompanying this document relates to the products and/or services of ANZ China, the following statement and the text below is applicable: This document is distributed by ANZ China in the Mainland of the PRC.

Peru. The information contained in this document has not been, and will not be, registered with or approved by the Peruvian Superintendency of the Securities Market (Superintendencia del Mercado de Valores, **SMV**) or the Lima Stock Exchange (Bolsa de Valores de Lima, **BVL**) or under the Peruvian Securities Market Law (Legislative Decree 6 861), and will not be subject to Peruvian laws applicable to public offerings in Peru. To the extent this information refers to any securities or interests, it should be noted the securities or interests may not be offered or sold in Peru, except if (i) such securities or interests were previously registered with the Peruvian Superintendency of the Securities Market, or (ii) such offering is considered a private offering in Peru under the securities laws and regulation of Peru.

Qatar. This document has not been, and will not be:

- lodged or registered with, or reviewed or approved by, the Qatar Central Bank (**QCB**), the Qatar Financial Centre (**QFC**) Authority, QFC Regulatory Authority or any other authority in the State of Qatar (**Qatar**); or
- authorised or licensed for distribution in Qatar, and the information contained in this document does not, and is not intended to, constitute a public offer or other invitation in respect of securities in Qatar or the QFC.

The financial products or services described in this document have not been, and will not be:

- registered with the QCB, QFC Authority, QFC Regulatory Authority or any other governmental authority in Qatar; or
- authorised or licensed for offering, marketing, issue or sale, directly or indirectly, in Qatar.

Accordingly, the financial products or services described in this document are not being, and will not be, offered, issued or sold in Qatar, and this document is not being, and will not be, distributed in Qatar. The offering, marketing, issue and sale of the financial products or services described in this document and distribution of this document is being made in, and is subject to the laws, regulations and rules of, jurisdictions outside of Qatar and the QFC. Recipients of this document must abide by this restriction and not distribute this document in breach of this restriction. This document is being sent/issued to a limited number of institutional and/or sophisticated investors (i) upon their request and confirmation that they understand the statements above; and (ii) on the condition that it will not be provided to any person other than the original recipient, and is not for general circulation and may not be reproduced or used for any other purpose.

Singapore. This document is distributed in Singapore by ANZ solely for the information of "accredited investors", "expert investors" or (as the case may be) "institutional investors" (each term as defined in the Securities and Futures Act Cap. 289 of Singapore). ANZ is licensed in Singapore under the Banking Act Cap. 19 of Singapore and is exempted from holding a financial adviser's licence under Section 23(1)(a) of the Financial Advisers Act Cap. 100 of Singapore. In respect of any matters arising from, or in connection with, the distribution of this document in Singapore, please speak to your usual ANZ contact in Singapore.

United Arab Emirates (UAE). This document is distributed in the UAE or the Dubai International Financial Centre (**DIFC**) (as applicable) by ANZ. This document does not, and is not intended to constitute: (a) an offer of securities anywhere in the UAE; (b) the carrying on or engagement in banking, financial and/or investment consultation business in the UAE under the rules and regulations made by the Central Bank of the UAE, the Emirates Securities and Commodities Authority or the UAE Ministry of Economy; (c) an offer of securities within the meaning of the Dubai International Financial Centre Markets Law (DIFCML) No. 12 of 2004; and (d) a financial promotion, as defined under the DIFCML No. 1 of 200. ANZ DIFC Branch is regulated by the Dubai Financial Services Authority (**DFSA**) ANZ DIFC Branch is regulated by the Dubai Financial Services Authority (**DFSA**). The financial products or services described in this document are only available to persons who qualify as "Professional Clients" or "Market Counterparty" in accordance with the provisions of the DFSA rules.

United Kingdom. This document is distributed in the United Kingdom by Australia and New Zealand Banking Group Limited (**ANZ**) solely for the information of persons who would come within the Financial Conduct Authority (**FCA**) definition of "eligible counterparty" or "professional client". It is not intended for and must not be distributed to any person who would come within the FCA definition of "retail client". Nothing here excludes or restricts any duty or liability to a customer which ANZ may have under the UK Financial Services and Markets Act 2000 or under the regulatory system as defined in the Rules of the Prudential Regulation Authority (**PRA**) and the FCA. ANZ considers this document to constitute an Acceptable Minor Non-Monetary Benefits (**AMNMB**) under the relevant inducement rules of the FCA. ANZ is authorised in the United Kingdom by the PRA and is subject to regulation by the FCA and limited regulation by the PRA. Details about the extent of our regulation by the PRA are available from us on request.

United States. Except where this is a FX-related document, this document is distributed in the United States by ANZ Securities, Inc. (**ANZ SI**) which is a member of the Financial Regulatory Authority (**FINRA**) (www.finra.org) and registered with the SEC. ANZSI's address is 277 Park Avenue, 31st Floor, New York, NY 10172, USA (Tel: +1 212 801 9160 Fax: +1 212 801 9163). ANZSI accepts responsibility for its content. Information on any securities referred to in this document may be obtained from ANZSI upon request. This document or material is intended for institutional use only – not retail. If you are an institutional customer wishing to effect transactions in any securities referred to in this document you must contact ANZSI, not its affiliates. ANZSI is authorised as a broker-dealer only for institutional customers, not for US Persons (as "US person" is defined in Regulation S under the US Securities Act of 1933, as amended) who are individuals. If you have registered to use our website or have otherwise received this document and are a US Person who is an individual: to avoid loss, you should cease to use our website by unsubscribing or should notify the sender and you should not act on the contents of this document in any way. Non-U.S. analysts may not be associated persons of ANZSI and therefore may not be subject to FINRA Rule 2242 restrictions on communications with the subject company, public appearances and trading securities held by the analysts. Where this is a FX-related document, it is distributed in the United States by ANZ's New York Branch, which is also located at 277 Park Avenue, 31st Floor, New York, NY 10172, USA (Tel: +1 212 801 916 0 Fax: +1 212 801 9163).

Vietnam. This document is distributed in Vietnam by ANZ or ANZ Bank (Vietnam) Limited, a subsidiary of ANZ.

This document has been prepared by ANZ Bank New Zealand Limited, Level 26, 23-29 Albert Street, Auckland 1010, New Zealand, Ph 64-9-357 4094, e-mail nzeconomics@anz.com, http://www.anz.co.nz