

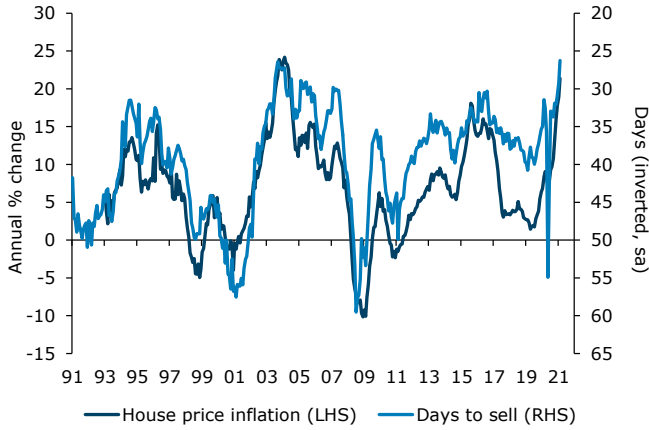
New Zealand Property Focus

Nothing lasts forever



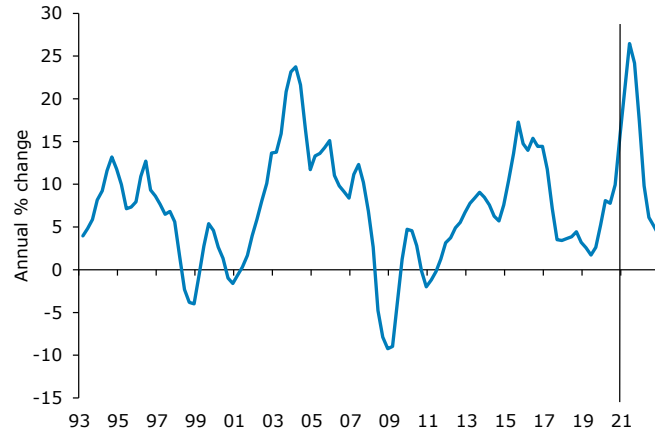
Market exceptionally tight

Days to sell at record low



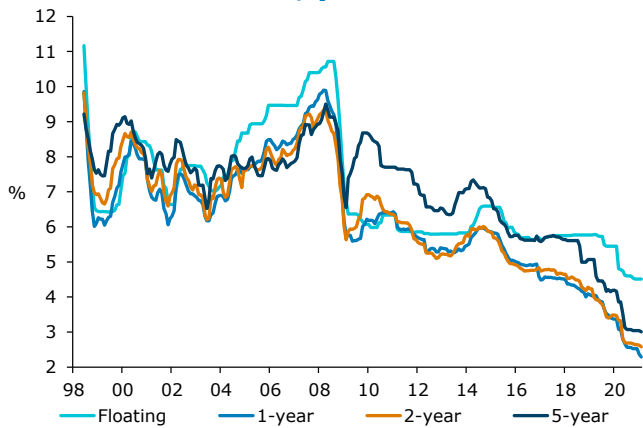
Extreme house price rise

22% increase since May 2020



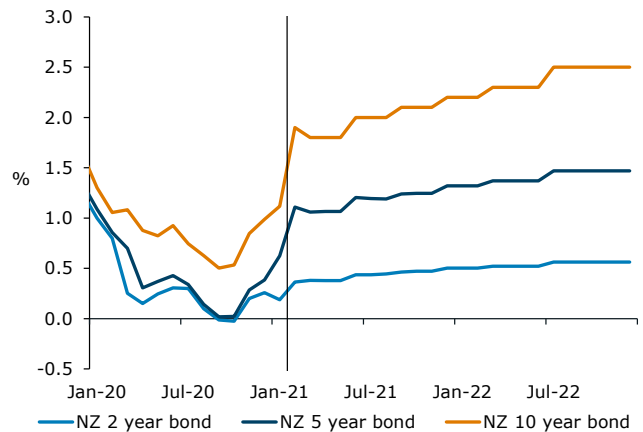
Easy financing conditions

Low interest rates, plentiful credit



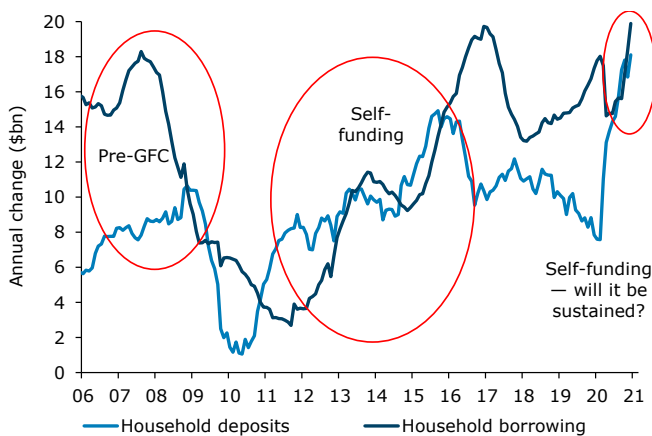
But nothing lasts forever

Long-term market rates rising



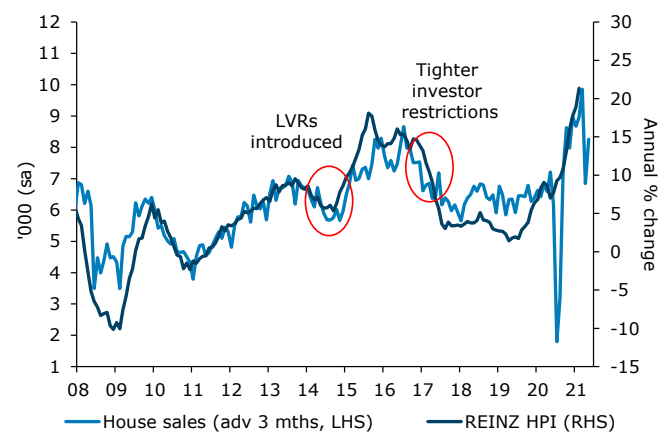
Deposit growth likely to slow

Meaning credit could be a constraint



Housing market to cool

Policy changes likely to weigh too



Source: Bloomberg, RBNZ, REINZ, Statistics NZ, ANZ Research

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](#).



Contact

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

See [page 15](#).

INSIDE

At a glance	2
Housing Market Overview	4
Regional Housing Market Indicators	5
Feature Article: Nothing lasts forever	6
Mortgage Borrowing Strategy	13
Weekly Mortgage Repayment Table	14
Mortgage Rate Forecasts	14
Economic Forecasts	14
Important Notice	16

ISSN 2624-0629

Publication date: 17 March 2021

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 run hot, with strong demand and limited supply. House prices continue to increase at an alarming pace, with the market very stretched. Lower interest rates appear to have been now built into house prices, and affordability and credit constraints are expected to see house price inflation slow eventually. But cooling may take some time, given current extreme tightness, fear of missing out and continued increases in house price expectations. Our forecasts build in a further 5% lift in house prices by June from the February level, taking annual house price inflation to a peak of 27%. This assumes that monthly gains slow markedly, particularly once loan-to-value restrictions come into effect. Recent strength in the housing market poses upside risks to our broader economic forecasts, and could see the RBNZ normalise policy sooner than we currently expect. See [Housing Market Overview](#) for more.

Feature Article: Nothing lasts forever

The housing market has had a spectacular run over the past year, fuelled by easy financing conditions, with interest rates low and credit readily available. But this environment is not expected to last forever. Interest rates are expected to rise, albeit gradually, with longer-end interest rates expected to lift first. This is expected to pass through only very slowly to costs faced by borrowers, but eventually, debt-servicing is expected to become more expensive. Meanwhile, abundant bank funding has ensured that credit has been readily available to meet demand, but slowing deposit growth, bank caution and policy changes are expected to see credit conditions become more of a constraint. Eventually, these factors, alongside affordability limits and other headwinds, are expected to see a slowing in the housing market, though the timing is uncertain, and conditions are expected to tighten only gradually. To the extent that some in the market are assuming current very easy financing conditions will continue, expectations may be disappointed, potentially weighing on the market more than we currently expect. See [Feature Article: Nothing lasts forever](#) for more.

Mortgage borrowing strategy

Mortgage rates have not changed over the past month, leaving the entire term structure of average mortgage rates at what we believe are record lows. As has been the case for some time, the 1-year fixed rate remains the lowest rate and that makes it attractive, and we still like it. However, with wholesale interest rates rising, and the economy rebounding such that yet-lower interest rates are now very unlikely, the key question for borrowers is: does it make sense to fix for longer? We think it does, and given the low margin between 2 and 3-year rates, and 4 and 5-year rates respectively, we see merit in adding some 3 and 5-year terms into the mix. Doing so will cost more, and while we think there will be plenty of time for those electing the cheaper 1-year to be able to re-fix later, adding some longer terms to the mix will increase certainty. See [Mortgage Borrowing Strategy](#) for more.



Housing market overview

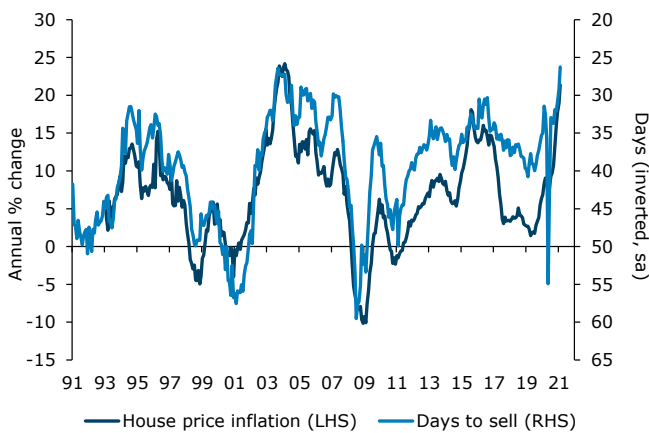
Summary

The housing market continues to run hot, with strong demand and limited supply. House prices continue to increase at an alarming pace, with the market very stretched. Lower interest rates appear to have been now built into house prices, and affordability and credit constraints are expected to see house price inflation slow eventually. But cooling may take some time, given current extreme tightness, fear of missing out and continued increases in house price expectations. Our forecasts build in a further 5% lift in house prices by June from the February level, taking annual house price inflation to a peak of 27%. This assumes that monthly gains slow markedly, particularly once loan-to-value restrictions come into effect. Recent strength in the housing market poses upside risks to our broader economic forecasts, and could see the RBNZ normalise policy sooner than we currently expect.

Extremely tight

Housing market strength showed no signs of abating in February, with house prices up another 3.7% in the month and days to sell hitting new record lows – pointing to continued extreme tightness. Annual house price inflation has reached 21% (figure 1).

Figure 1. Annual house price inflation and days to sell



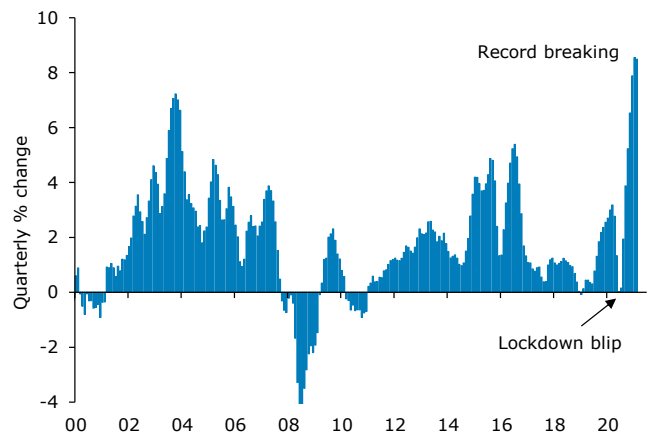
Source: REINZ

Demand continues to be boosted by easy financing conditions (see [Feature article: Nothing lasts forever](#)) alongside a speculative dynamic and potentially some front-loading of purchases ahead of the re-imposition of loan-to-value ratio (LVR) restrictions.

Added to that, new listings of existing properties have not kept up with the increase in house sales, and the construction industry is facing delays and constraints. Building continues at a very high level, but supply disruption and labour shortages are making it difficult to meet such high levels of demand. That's leading to limits on building activity, and higher build prices.

For house prices it has been the perfect storm, with these increasing at an astonishing rate of 9% per quarter (figure 2).

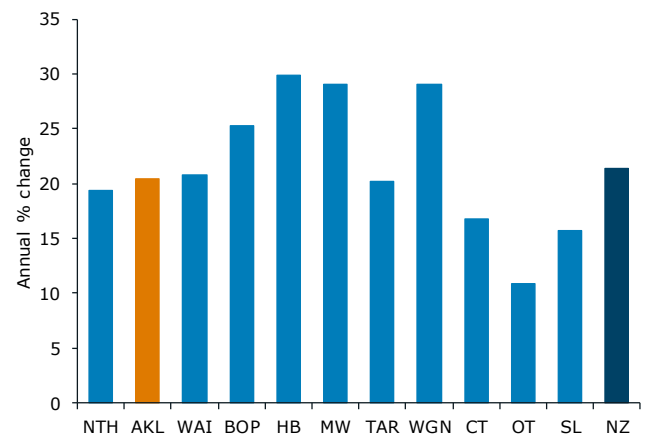
Figure 2. Quarterly house price inflation



Source: REINZ

Strength has been broad based regionally too, though domestically focused regions appear to have seen the strongest gains – namely, Hawke's Bay, Manawatu-Whanganui, Wellington and Bay of Plenty (figure 3).

Figure 3. Annual house price inflation



Source: REINZ

Relentless

House price gains have massively outpaced income growth, seeing [housing unaffordability problems](#) continue to worsen. The speed of price gains appears completely unsustainable in this regard and we do expect to see house price inflation moderate in time.

Lower interest rates now [appear to be capitalised](#) into house prices. And limits on purchasing power will increasingly provide a constraint, as more and more potential buyers struggle to both cobble together a deposit and/or cover mortgage repayments (even at low interest rates). On the credit side, we expect that headwinds will start to weigh too, as LVR restrictions take effect, broader credit requirements become more binding, and bank liquidity becomes less plentiful (see [Feature article: Nothing lasts forever](#)).



Housing market overview

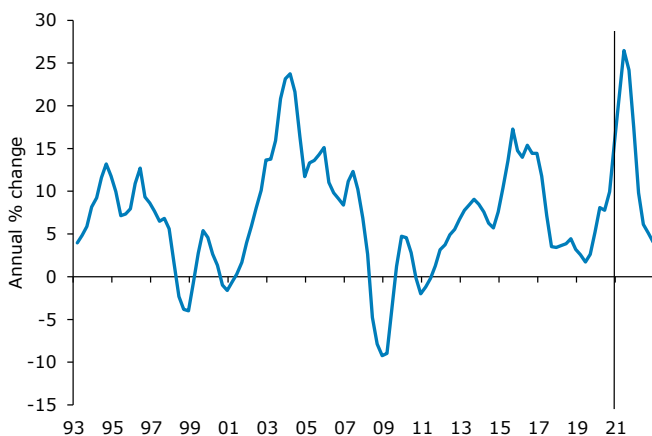
But with still-enthusiastic buyers able to participate, and the market very tight, these affordability and credit constraints may take some time to kick in and see house price inflation slow, especially with house price expectations continuing to increase.

House price inflation peak almost 27% y/y; upside risks to economic outlook

Assuming only modest house price gains to June (5% total), annual house price inflation peaks at almost 27% in mid-2021, before moderating (figure 4).

Ultimately, we expect that house price inflation will return to something more normal – and sustainable – in time. It is entirely possible we see house prices flatten or even decline at some point after such a rapid run-up, particularly if the threat of eventual interest rate hikes becomes more imminent. But the extent and timing of cooling is very difficult to determine.

Figure 4. ANZ house price inflation forecast



Source: REINZ, ANZ Research

The sheer speed of the run-up in house prices in the past six months points to a slightly higher – and faster – peak in house price inflation than seen in the boom of the 2000s. There are a number of [key differences](#) between now and then, but, like then, the strength of the domestic housing market is providing a powerful impetus to the economy more broadly.

The strong housing market is supporting new building and household spending, with flow-on effects to incomes and confidence. Recent continued strength in the housing market poses some upside risk to our forecasts for GDP, although this is going head-to-head with closed border headwinds. Given demand pressures in areas where there are capacity constraints, like the construction industry and the availability of some goods, it is possible we see more upwards pressure on inflation too. We will update our forecasts after the release of [Q4 GDP on Thursday](#).

For the RBNZ, a stronger outlook for the labour market and inflation would be welcome. However, problems of housing unaffordability are only intensifying, adding to [pressure on policymakers](#) more broadly. Upside risks to the outlook could bring forward when the RBNZ might contemplate [policy normalisation](#) (ie higher interest rates). Our current forecasts assume that the OCR might be lifted in mid-2023, but risks are skewed to this occurring sooner. For now, the RBNZ will continue to monitor how developments are unfolding and will be eager to see stronger inflation and employment manifest before pulling back on stimulus. But with core inflation rising, inflation expectations gravitating to target, and the labour market more resilient than expected, criteria to rein in stimulus are looking more achievable – even if we aren't there yet.

Housing market indicators for February 2021 (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	\$636,194	16.7	10.8	19.4	8.4	233	+2%	40
Auckland	\$1,098,347	24.2	6.3	20.5	6.9	3,318	+14%	28
Waikato	\$715,343	22.8	5.4	20.8	7.7	828	+10%	26
Bay of Plenty	\$833,815	26.2	5.6	25.3	11.2	489	+0%	26
Gisborne	\$551,858	31.7	2.2			59	+22%	30
Hawke's Bay	\$684,866	36.5	10.9	29.9	12.9	209	+38%	29
Manawatu-Wanganui	\$537,920	26.6	11.9	29.1	15.0	336	+8%	22
Taranaki	\$513,964	25.9	4.6	20.3	8.6	185	+12%	20
Wellington	\$840,407	23.7	8.3	29.1	11.5	632	+29%	30
Tasman, Nelson & Marlborough	\$686,000	14.3	3.4			220	+69%	28
Canterbury	\$549,331	18.0	5.1	16.8	7.1	1,129	+8%	24
Otago	\$646,242	19.1	2.6	10.8	7.4	434	+28%	27
West Coast	\$290,762	33.4	11.8	19.0	6.0	72	+10%	38
Southland	\$394,206	22.1	5.1	15.7	7.7	174	+2%	21
New Zealand	\$788,252	22.5	6.2	21.4	8.5	8,257	+21%	26



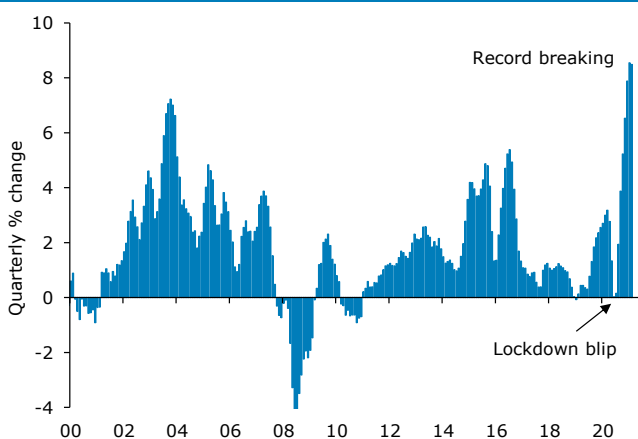
Summary

The housing market has had a spectacular run over the past year, fuelled by easy financing conditions, with interest rates low and credit readily available. But this environment is not expected to last forever. Interest rates are expected to rise, albeit gradually, with longer-end interest rates expected to lift first. This is expected to pass through only very slowly to costs faced by borrowers, but eventually, debt-servicing is expected to become more expensive. Meanwhile, abundant bank funding has ensured that credit has been readily available to meet demand, but slowing deposit growth, bank caution and policy changes are expected to see credit conditions become more of a constraint. Eventually, these factors, alongside affordability limits and other headwinds, are expected to see a slowing in the housing market, though the timing is uncertain, and conditions are expected to tighten only gradually. To the extent that some in the market are assuming current very easy financing conditions will continue, expectations may be disappointed, potentially weighing on the market more than we currently expect.

Hot housing market supported by easy financial conditions

The housing market has been running rampant since mid-2020, with prices up 22% since May. In recent months this strength has shown no sign of abating (see [Housing Market Overview](#) for more). The speed of the recent upturn has been unprecedented, with record-breaking quarterly gains in prices (figure 1).

Figure 1. Quarterly house price inflation



Source: REINZ

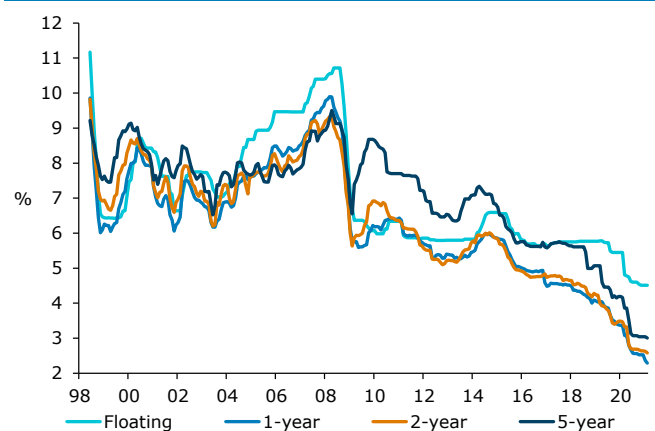
A number of factors have supported the recent run-up in house prices, but a key one has been very easy financing conditions. Record low interest rates have boosted demand for housing and credit, and resulting price pressures have been exacerbated by very tight supply in the market. Meanwhile, abundant bank

liquidity, particularly as a result of the RBNZ's Large Scale Asset Purchase (LSAP) Programme (sometimes called "quantitative easing", or "QE"), has ensured that credit supply has also been readily available to meet this demand. A [speculative dynamic](#) also appears to have been at play. Immigration is not likely to have played a large role, given very low inflows overall, but a change in the mix of immigrants may have had an impact in pockets.

Lower mortgage rates have played a key role but are expected to lift eventually

Since February 2020, the lowest mortgage rate (the 1-year) has fallen 110bps, from 3.4% to 2.3% (figure 2). This has occurred on the back of the RBNZ lowering the Official Cash Rate (OCR) 75bps and deploying unconventional monetary policy tools, including the LSAP and bank Funding for Lending Programme (FLP) – see our [ANZ November Property Focus](#) for an explainer on how these tools work. This has occurred in tandem with other central banks providing stimulus and pushing interest rates lower globally.

Figure 2. Mortgage rates



Source: RBNZ, ANZ Research

The recent fall in mortgage rates is not that large in an historical context. The lowest mortgage rate available is now about 7%pts lower than it was in the late 1990s. A number of structural factors (like increased supply of funding globally, lower potential economic growth and declining inflation) have contributed to this steep decline. But although the more recent ~1%pt dip is not that large in this historical context, it has nonetheless had a significant effect in boosting demand for credit and housing.

Changes in interest rates can have a [more potent impact](#) in a low-interest rate environment. This is because the future benefits of owning a house accrue more quickly (are "discounted" less). Or put another more intuitive way, future returns everywhere else are super low and that makes scarce assets like



housing attractive, driving up the price. In short, what else are you going to do with your money? So when interest rates are low and supply is constrained, house prices tend to increase more rapidly in response to small changes in fundamentals, while also being more volatile and vulnerable to overshoots. That's exactly what we have seen.

Bearing in mind this potent effect of interest rate changes at low levels, recent declines in interest rates can justify the large run-up we have seen in house prices – but only if recent declines are seen to be largely permanent. This is likely to have been a key part of the recent speculative dynamic that appears to have been at play.

And yet, mortgage rates are expected to increase at some stage, and those making decisions in the housing market should be mindful of this fact.

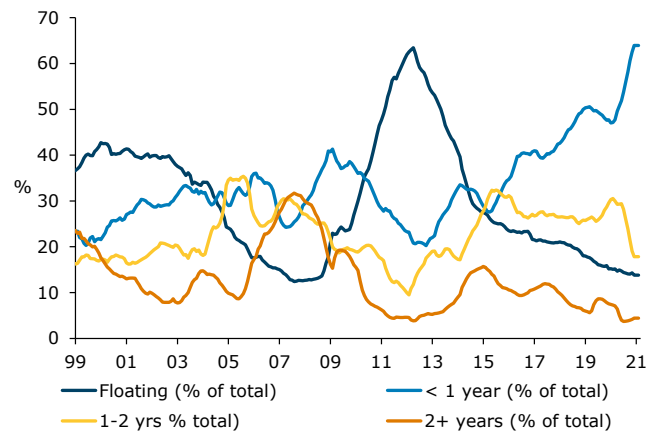
The OCR is expected to be lifted in time...

With the economy doing much better than expected, the OCR is unlikely to be taken lower from here, provided downside risks do not materialise. As a result, the current interest rate cycle is now widely expected to have troughed, and focus has shifted from the possibility that the OCR might need to go lower, to when it might go higher.

Current market pricing suggests that the OCR might be lifted from mid next year. That's sooner than our own expectations, but the difference isn't that much relative to the length of a mortgage. Our current forecasts suggest we could see the OCR being lifted from mid-2023, but the risks are looking increasingly skewed towards sooner than that.

Expectations that the OCR will rise are starting to put upwards pressure on broader shorter-term interest rates, which are a key determinant of bank funding costs and shorter-duration (as well as floating) mortgage rates. Moves higher in these rates tend to pass through quite quickly to higher borrowing costs, given the short amount of time until borrowers need to re-fix. And it is in these shorter-end mortgage rates where a lot of mortgage growth has been happening recently, with almost two-thirds of mortgage lending fixed for one year or less (figure 3).

Figure 3. Share of mortgages



Source: RBNZ

...and long-term market interest rates are rising even faster, primarily on global developments

Although the OCR remains at 0.25% and the RBNZ has signalled that it expects to keep it there "until it is confident that consumer price inflation will be sustained at the 2 percent per annum target midpoint, and that employment is at or above its maximum sustainable level", longer-term wholesale interest rates have already started to rise.

This reflects:

- higher global interest rates, which in turn have increased on expectations of higher cash rates elsewhere;
- expectations that the next move in the OCR will be up, and not down (with talk of a negative OCR now a distant memory!); and
- less downward pressure on domestic bond yields from the LSAP programme.

The impact of global interest rates has been the most potent factor.

New Zealand long-term interest rates (five years and longer) have always been highly correlated with global interest rates. That's largely because New Zealand and foreign bonds are substitutes, and there's a high level of foreign participation in our bond market. Bond yields – or interest rates – move inversely with the price of the bond, so as the prices of various countries' bonds move together, the yields do too. The local connection to global interest rates is also a reflection of the fact that the economic cycle here is also driven to an extent by the global economic cycle. Right now, global yields are rising as economies overseas recover and the inflation outlook improves.



Domestic considerations, including expectations that the next move in the OCR will be up, do impact our longer-term interest rates, but they tend to be more influential in setting the level, rather than the direction of interest rates. At the moment, New Zealand has (and typically has had) a higher cash rate (currently 0.25%) than both the US and Australia (both currently at 0.10%). As a result, the general level of all of our interest rates (from the OCR to the 20-year government bond yield) is a touch higher. Our interest rates will go up and down with US and Australian yields, but off a higher base.

Other domestic policy settings like the LSAP can also influence longer-term interest rates. The whole purpose of the LSAP is to keep downward pressure on long-term government bond yields, which lowers market yields more broadly. Since it was introduced, the LSAP has suppressed bond yields. But since the programme started, the RBNZ has reduced the size of its weekly bond purchases and shifted the mix of bonds it buys away from longer-term bonds (like 10-20-year bonds) and towards shorter-term bonds (like 2-3-year bonds). This means limited downward pressure on longer-term bond yields and swap yields to offset current global pressures.

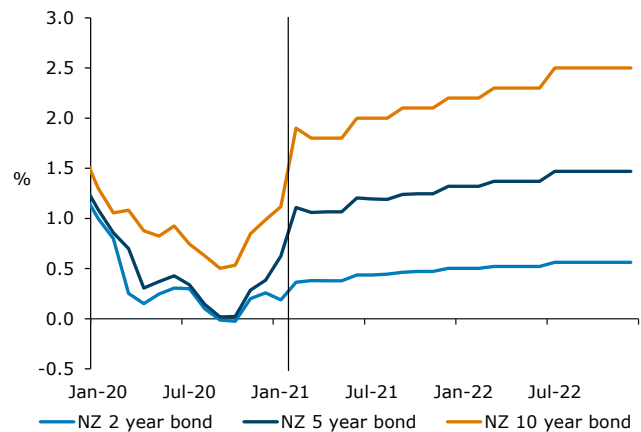
Mortgage rates set to gradually lift

Higher long-term bond yields will eventually drive mortgage rates higher. As longer-term (say 10-20 year) interest rates rise, this tends to gradually filter along the shorter part of the curve, pulling up 5-10 year rates and, to a lesser degree, 3-4 year rates. Equivalently, potential rises in mortgage rates are likely to start with 5-year mortgage rates and then filter back down the mortgage curve in time. But for now, with the OCR on hold and the RBNZ committed to leaving the FLP in place until the middle of next year, there will be much less pressure on very short-term (say 6-12 month) mortgage rates to rise. Floating and very short-term mortgage rates tend to move more in tandem with the OCR, and that's on track to remain at 0.25% until at least the end of this year, if not longer.

How quickly wholesale interest rates rise and at what point that puts pressure on banks to lift mortgage rates is difficult to say. Wholesale interest rates are already well off their lows (for example, the 5-year government bond yield is around 0.90%pts above its low point of 6 months ago). There's been a tiny bit of action in 5-year term deposit rates too, partly reflecting wholesale rates, and partly due to the mortgage borrowing boom having hoovered up an enormous amount of bank funding. We have not yet seen any rise in 5-year mortgage rates. However, pressures are likely to continue to build, given we

expect 5-10-year wholesale interest rates to continue rising over the course of the year, albeit at a more gradual pace than February's jump (figure 4).

Figure 4. Longer-term bond yields



Source: Bloomberg, ANZ Research

The RBNZ bank Funding for Lending Programme (FLP) will help offset upward pressure on mortgage rates by providing a funding source at cheap rates, with more take-up of the scheme expected in time. However, this offset is only expected to be partial. We discuss this in more detail later.

Debt-servicing costs impacted very slowly

Overall, mortgage rate increases are expected to be very gradual. For mortgage borrowers as a whole, the increase in debt-servicing costs that they face will be more gradual still – thanks to the fact that many people are on a fixed rate entered into some time ago, and also for many there may be opportunities to re-fix before rates rise.

We estimate the “effective mortgage rate”, which we define as the average mortgage rate faced by borrowers in aggregate, by observing past fixing behaviour and the rates prevailing at the time, then projecting this forward based on a number of assumptions (see [Mortgage Rate Forecasts](#) table).

While discounts, early repayments and switching complicate the picture, we can estimate the effective rate reasonably accurately, and our analysis shows that it is likely to continue to fall this year (figure 5) even if mortgage rates don't fall any further, or even start rising a little. That is mostly because any borrower rolling off a historic fixed rate (or a floating rate) into a new fixed rate today will pay a lower rate. Eventually, the effective mortgage rate will rise, but with a lag.

Our projections assume that higher longer-term wholesale interest rates will eventually put upward pressure on longer-term fixed mortgage rates. However, they also recognise that many borrowers

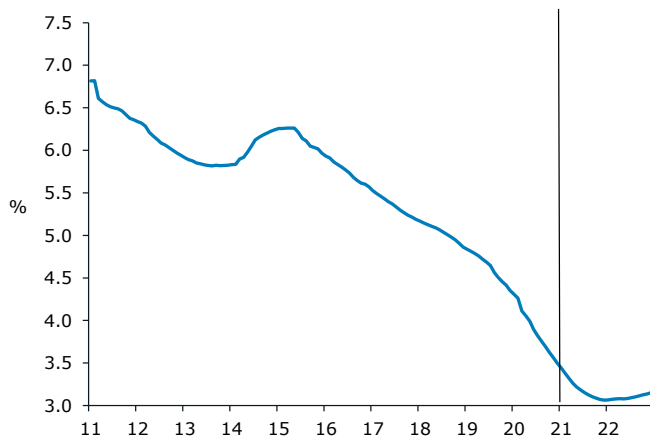


Feature Article: Nothing lasts forever

will simply select the lowest rate on offer. This will affect the composition of borrowing and provide something of an offset. But how these forces offset each other is impossible to say. As such, our projected effective mortgage rate should be treated as an assumption, not a forecast, as we cannot accurately predict borrower behaviour.

We assume that the OCR remains on hold over the projection period, but once the OCR is lifted, the effective mortgage rate will increase further than what is shown here.

Figure 5. Effective mortgage rate

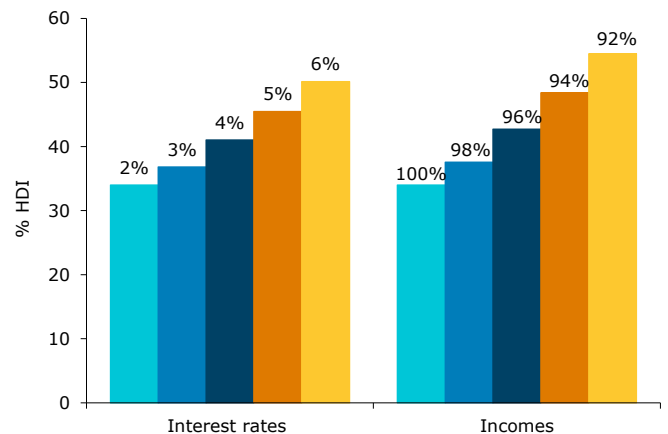


Source: RBNZ, ANZ Research

The increase in debt that has accompanied the recent strength in the housing market will determine how much rising interest rates will impact disposable incomes faced by households. Increased indebtedness makes households more vulnerable to changes in their financial positions – including income changes and higher interest rates. Given this sensitivity, high debt levels are a constraint on how far interest rates can move higher, and how fast.

Given that we expect moves in interest rates will be very gradual, we do not expect that higher interest rates will be a financial pressure point in aggregate, but debt-servicing will naturally become more expensive and some households may find this difficult, particularly if they have entered the housing market only recently with very high levels of debt (figure 6).

Figure 6. Sensitivity of debt-servicing costs (as a share of aggregate incomes) to changes in interest rates and aggregate incomes for a new mortgage borrower



Source: REINZ, Statistics NZ, RBNZ, ANZ Research

Note: This is based on a new borrower buying the median house, with a 20% deposit and average household income.

Of course, if the economy is overheating and inflation takes off, then the RBNZ may need to respond more aggressively than incorporated in our current forecasts. And there is always a risk that dysfunction in wholesale funding markets could see interest rates spike even more than this, but we expect the RBNZ would move swiftly to lower the OCR (potentially taking it negative) in that case. The greater risk, given recent debt accumulation, is the possibility that pressure points emerge in response to unexpected income strains.

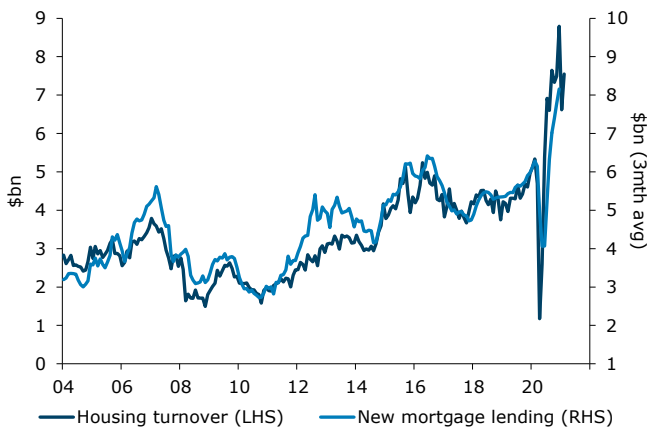
Overall, we expect that debt servicing will remain easy for a long time, given structural shifts towards lower interest rates and the expectation that increases will be gradual from here. But households do need to prepare for the possibility that a greater proportion of their incomes may need to be directed towards mortgage costs in time.

Bank liquidity has been abundant

Another key contributor to the recent boom in the housing market has been abundant bank liquidity, particularly strong deposit growth. This has ensured that plenty of funding has been available to respond to strong credit demand, which has seen new mortgage lending increase rapidly as housing turnover has surged (figure 7). See [Box A](#) for a (very) simplified overview on how New Zealand banks generally fund their lending.



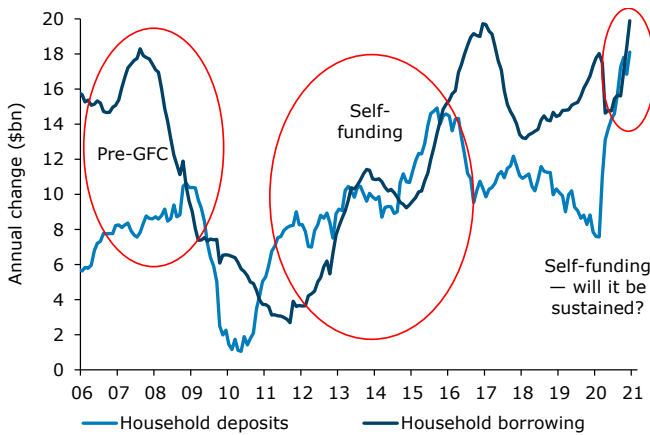
Figure 7. Housing turnover and new mortgage lending



Source: RBNZ, REINZ

Strong deposit growth has allowed banks to largely “self-fund” – that is, growth in mortgage lending has been almost fully met by new growth in household deposits (figure 8). Banks have not needed to tap other funding sources, with plenty of funding readily available to meet the surge seen in credit demand.

Figure 8. Bank “funding gap”



Source: RBNZ, ANZ Research

Strong deposit growth has been driven in large part by the RBNZ’s LSAP programme, which in combination with the wage subsidy injected billions of dollars into the bank accounts of households very quickly. Although bond purchases under the LSAP scheme are directed to markets, purchases do filter through into increasing deposits in the banking system (see our FAQs [here](#) and [here](#) for more on how this works). It is this phenomenon, rather than a change in saving behaviour or the like, that has driven the recent run-up in deposits. This strong deposit growth from the LSAP has also put downward pressure on deposit rates, which itself has helped keep mortgage rates low.

Because this extra cash in the system is mostly sitting in call accounts or relatively short-duration term deposits (a cost of funding for banks not too different from the OCR), banks have not really needed to draw on the FLP for funding, with around \$1.6bn drawn from the scheme by mid-March.

Credit supply is expected to be more limited going forward

Although deposit growth will remain supported by the continuation of the LSAP, the impetus to deposit growth will wane as the LSAP is pared back and fiscal stimulus dissipates. This will naturally reduce the extent to which banks can self-fund. This, in turn, will tend to cool mortgage lending, with banks faced with the decision to either ration lending or raise funds through other means, which would exert upward pressure on mortgage rates.

Depending on how much funding is required, banks might be able to plug the gap with wholesale funding (ie issuing bonds). This is generally a more expensive source of funding than domestic deposits, but because wholesale funding is a not the dominant source of funding and yields have come down a fair amount, the impact on mortgage rates would likely be relatively small. Alternatively, if the gap between credit demand and deposit growth becomes very large, banks may need to start competing harder for domestic deposits, and there’s only one way they can do that – higher deposit rates. That’s a higher funding cost that could lead to higher lending rates. There’s not much sign of it yet, but it’s a very plausible development. Savers will be crossing their fingers.

Banks can also draw on the FLP, and we do expect take up of the scheme to increase in time. The RBNZ has committed to keeping the scheme in place till mid-2022. Given that banks know that they have plenty of time to access the scheme, they will likely do so when it better suits gaps in their funding profiles, rather than immediately. As deposit growth slows, this will also gradually lift the incentive for banks to draw on the FLP.

The FLP is expected to help to bridge some of the gap that may emerge between credit demand and supply as deposit growth slows, and may mean banks do not have to raise deposit rates as soon or by as much. But the scheme will only account for a small portion of banks’ total funding and banks will want to carefully manage the risk of being too reliant on the scheme at particular time horizons, since they will need to replace the funds with other sources down the track. This means that any offset to bridge any funding gap or alleviate upward pressure on interest rates is only likely to be partial.



Feature Article: Nothing lasts forever

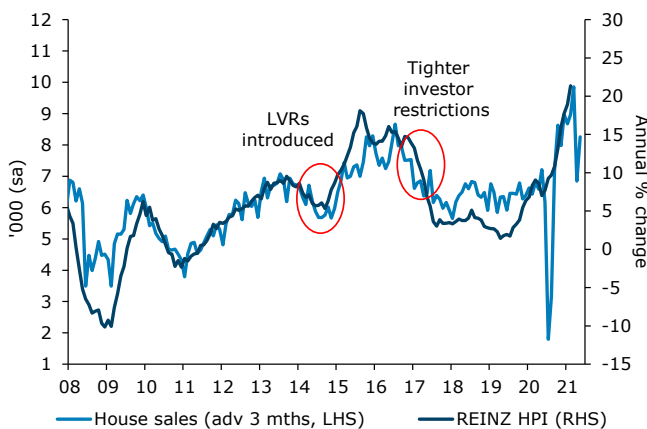
All up, this means that under the scenario where credit demand remains very strong for an extended period, but deposit growth slows, credit conditions are likely to “naturally” tighten.

Credit conditions to weigh, including policy changes

At the same time as bank liquidity is expected to become less abundant, we may see banks become more cautious about riskier lending, given the sheer rise that has been seen in house prices and the apparent unsustainability of current market conditions, particularly if funding is more of a constraint.

We have already seen this start to play out with banks moving pre-emptively to tighten investor loan-to-ratio caps ahead of their re-imposition by the RBNZ. The RBNZ re-imposed previous restrictions effective from March 1, after removing them temporarily at the onset of COVID-19. They are also proposing tightening restrictions on investors from May 1 (limiting lending with equity of less than 40%). These changes are helpful in limiting the build-up of financial stability risks and may curb house price inflation to some degree, but they are not expected to have a large persistent impact on the market (similar to when restrictions have been tightened previously), particularly because equity positions have increased so much on the back of recent house price gains.

Figure 9. House sales and prices



Source: REINZ, ANZ Research

That said, the restrictions could act as to curb some momentum in the market, contributing to a deceleration that we expect is coming as affordability considerations and broader credit headwinds start to weigh. Consistent with this, the RBNZ expects the changes may rein in some “irrational exuberance” in the market. But given recent the sharp run-up in the market that we have already seen, it may be too little

too late to curb expectations that could prove to be unfounded.

Other policy changes could also weigh on housing demand, with the Government expected to make announcements next week. It is uncertain what changes might be considered, but they could impact credit conditions. For example, advice has been sought on a possible cap on interest-only investor loans. This would directly affect credit availability to certain investors but it is unclear how many potential buyers would be affected. Nonetheless, it could reduce demand at the margin, with potentially significant impacts on the cash flow of some investors, especially if they are highly leveraged. Debt-to income limits are also another possibility, but the hurdle to implementing these is higher.

Nothing lasts forever

Easy financing conditions have contributed to the recent spectacular run in the housing market, but while stimulatory financial conditions will be in place for a while yet, support provided to the housing market through these channels is expected to diminish.

Barring an unforeseen negative event, interest rates are expected to increase gradually from current record lows, with debt-servicing costs moving slowly higher as higher mortgage rates pass through to costs faced by households. At the same time, abundant bank funding will be whittled away as deposit growth naturally slows, and banks are also expected to be prudent in their lending decisions, with recent policy changes contributing. An eventual tightening in financing conditions is expected to weigh on the housing market in time, alongside affordability constraints and other headwinds.

However, recent strength in the housing market appears to have been fuelled, in part, by expectations that current easy conditions will continue, interest rates will stay very low indefinitely, and that further capital gains are a sure thing. This means that some people’s expectations may be disappointed, potentially leading to a more marked cooling in the market when headwinds do start to weigh.

The fact is: nothing lasts forever. Current financing conditions reflect a unique set of circumstances that are now evolving. The pace of recent house price gains cannot continue in perpetuity. Participants in the housing market should be mindful of this fact.



Box A: How banks fund lending

In very simple terms, you can think of a bank like a retailer that buys a widget, adds a margin to cover its costs and make a profit, then sells said widget to its customers. More realistically, a bank will borrow the widget, add a margin, and lend it to its customers. Bank capital requirements and other regulations make it a lot more complex than this, but that's the nut-shell version.

The amount of money banks can lend is a direct function of how much funding they can access. And the price at which they can lend is a direct function of how much that funding costs (among other things). Banks have a few places they can source funding, subject to various rules:

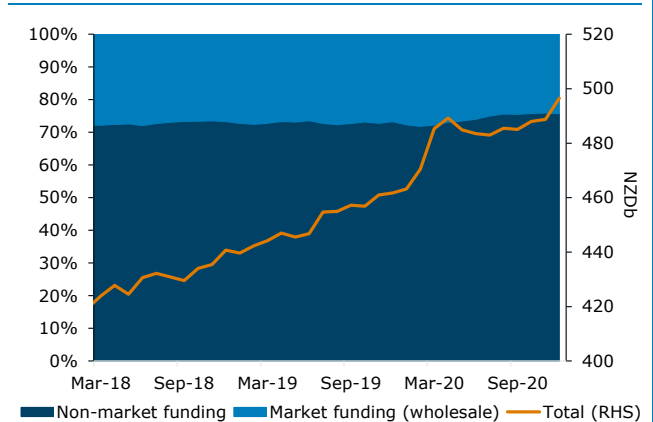
- Deposits made by households and businesses
- Wholesale markets (ie issuing bonds)
- Shareholder capital (eg via retained earnings)
- And more recently, direct funding from the RBNZ via the FLP.

Banks' average funding cost is therefore the average cost of obtaining the money from these sources (which have different costs), in order to meet demand from their customers for housing, personal, and business loans.

When banks set interest rates on lending, they must ensure they recoup their borrowing costs, plus any costs associated with general operations, make a profit, and also appropriately price for the risk that some loans may not be repaid in full (eg defaults, and associated costs). This risk varies based on the type of loan.

The largest source of bank funding in New Zealand is domestic deposits (ie the money sitting in term deposit and call accounts). Domestic deposits account for the lion's share of "non-market" funding in figure A1. The sharp lift in total bank funding seen in early 2020 coincides with wage subsidy payments hitting bank accounts, with the RBNZ's LSAP programme essentially funding it via buying bonds with newly 'printed' money. The resulting sharp increase in deposits left banks with a low-cost, abundant source of funding.

Figure A1. Bank funding



Source: RBNZ, ANZ Research

Funding from wholesale markets and shareholder equity tends to be more expensive than deposit funding, but banks can also access cheap funding for up to three years via the FLP. The FLP was introduced in a bid to keep mortgage rates low. The logic goes that if banks can access funding at the OCR, which is cheaper than most (not all) other sources of funding, they'll be able to lower deposit and lending rates. If the programme was fully drawn, it could in theory provide banks with around \$28bn in funding (the exact amount depends on the collective size of bank balance sheets).

The FLP is significant relative to the total size and growth of bank mortgage lending, which stood at \$295bn at the end of 2020, having grown by \$22bn during that year. However, the FLP would still only provide a relatively small pool of funding compared to the total domestic deposit base, or equally importantly, the stock of mortgage lending that needs to be funded on an ongoing basis (banks don't borrow for 30 years when they issue a 30-year mortgage). This means the FLP can alleviate upwards pressure on rates at the margin, but is unlikely to do a lot to offset a higher funding costs associated with a move to greater wholesale funding as funding growth from the LSAP diminishes.



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

Mortgage rates have not changed over the past month, leaving the entire term structure of average mortgage rates at what we believe are record lows. As has been the case for some time, the 1-year fixed rate remains the lowest rate and that makes it attractive, and we still like it. However, with wholesale interest rates rising, and the economy rebounding such that yet-lower interest rates are now very unlikely, the key question for borrowers is: does it make sense to fix for longer? We think it does, and given the low margin between 2 and 3-year rates, and 4 and 5-year rates respectively, we see merit in adding some 3 and 5-year terms into the mix. Doing so will cost more, and while we think there will be plenty of time for those electing the cheaper 1-year to be able to re-fix later, adding some longer terms to the mix will increase certainty.

Our view

Average mortgage rates have not changed since last month, leaving them at what we believe are all-time lows. With the economy performing better and global interest rates driving longer-term wholesale interest rates here higher, we are likely to eventually see rises in mortgage rates, led by the long end. The prospect of mortgage rates falling further is now very remote, given how the housing market and economy are evolving. All of that leaves borrowers in what is likely to be in a familiar position – asking: is it worth paying a premium to fix for a longer period now that interest rates are at risk of rising? And if so, for how long?

Two key things stand out as fact. First, mortgage rates have never been lower than where they are now (for each fixed term, when averaged across the four major banks). Second, at most banks, and on average, it costs more to fix for longer. But fixing now is cheap – or at least as cheap as it has ever been.

Now let's throw in some judgements. One key one is our view that the OCR and wholesale interest rates are unlikely to go lower from here. The economy simply doesn't need it, and if wholesale interest rates aren't likely to fall, history suggests mortgage rates aren't either, and we don't think the RBNZ's Funding for Lending Programme changes that. Enter the second judgement – wholesale long-term interest rates are likely to continue to lift. In fact, they have already risen a long way, yet mortgage rates have not. As an example, the 5-year NZ government bond yield has risen by almost 0.50%pts since the end of January. All up, there are reasonable grounds to expect that the next move in mortgage rates will be up, not down.

As always, it's a question of when. We expect to see mortgage rates rise gradually over a number of years, so the trick is balancing cost and term, with both of value right now if you share our view that rates will eventually rise. With the 1-year rate both longer and cheaper than the 6-month, picking the 1-year is an easy choice, unless you think rates might fall.

Kinks in the mortgage curve means there are bigger step-ups from 1-2 years and from 3-4 years, but there isn't much separating 2 and 3-year rates, and 4 and 5-year rates. All else equal, if term is preferred, 3 and 5-year rates look better value than 2 or 4-year. This is borne out in breakevens. For example, they show that the 1yr special rate would need to rise by 0.70% over the next year in order to make 2-years cheaper than back-to-back 1-year fixes. But the 1 year doesn't need to rise at all between years 1 and year 2, suggesting that 3-years offers better value than 2-years.

We still like the 1-year, given how low it is. Crucially, the 1-year is likely to remain low for some time, with OCR hikes still a long way off and the Reserve Bank's Funding for Lending Programme (FLP) in place until June 2022. However, ahead of what we expect to be a slow and gradual lift in mortgage rates, we do see merit in adding some 3-year and 5-year into the mix, with a tilt longer if your budget can afford it and long-term security matters, and a tilt shorter if only cost matters.

Figure 1. Carded special mortgage rates[^]

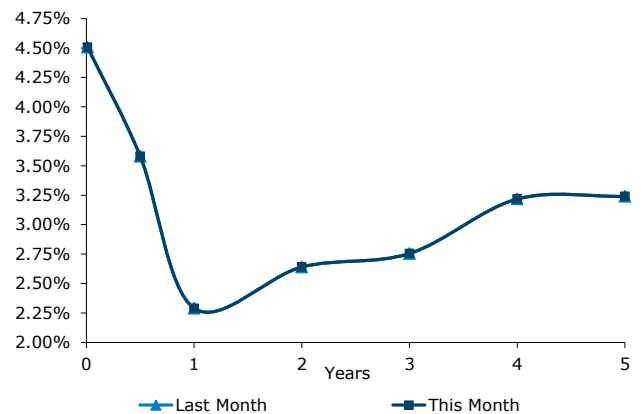


Table 1. Special Mortgage Rates

Term	Current	Breakevens for 20%+ equity borrowers			
		in 6mths	in 1yr	in 18mths	in 2 yrs
Floating	4.51%				
6 months	3.58%	1.00%	2.82%	3.17%	2.93%
1 year	2.29%	1.91%	2.99%	3.05%	2.99%
2 years	2.64%	2.48%	2.99%	3.38%	3.80%
3 years	2.76%	2.89%	3.53%	3.61%	3.64%
4 years	3.22%	3.18%	3.48%		
5 years	3.24%	#Average of "big four" banks			

Source: interest.co.nz, ANZ Research



Key forecasts

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

Mortgage Size (\$'000)	Mortgage Rate (%)													
	2.00	2.25	2.50	2.75	3.00	3.25	3.50	3.75	4.00	4.25	4.50	4.75	5.00	5.25
200	196	201	207	213	219	225	231	237	243	250	256	263	270	276
250	244	251	259	266	273	281	289	296	304	312	320	329	337	345
300	293	302	310	319	328	337	346	356	365	375	385	394	404	415
350	342	352	362	372	383	393	404	415	426	437	449	460	472	484
400	391	402	414	426	437	450	462	474	487	500	513	526	539	553
450	440	453	466	479	492	506	520	534	548	562	577	592	607	622
500	489	503	517	532	547	562	577	593	609	625	641	657	674	691
550	538	553	569	585	601	618	635	652	669	687	705	723	741	760
600	587	604	621	638	656	674	693	711	730	750	769	789	809	829
650	635	654	673	692	711	730	750	771	791	812	833	854	876	898
700	684	704	724	745	766	787	808	830	852	874	897	920	944	967
750	733	754	776	798	820	843	866	889	913	937	961	986	1,011	1,036
800	782	805	828	851	875	899	924	948	974	999	1,025	1,052	1,078	1,105
850	831	855	879	904	930	955	981	1,008	1,035	1,062	1,089	1,117	1,146	1,174
900	880	905	931	958	984	1,011	1,039	1,067	1,095	1,124	1,154	1,183	1,213	1,244
950	929	956	983	1,011	1,039	1,068	1,097	1,126	1,156	1,187	1,218	1,249	1,281	1,313
1000	978	1,006	1,035	1,064	1,094	1,124	1,154	1,186	1,217	1,249	1,282	1,315	1,348	1,382

Mortgage rate projections (fixed rates based on special rates)

Interest rates	Actual				Forecasts						
	Jun-20	Sep-20	Dec-20	Mar-21	Jun-21	Sep-21	Dec-21	Mar-22	Jun-20	Sep-22	
Floating Mortgage Rate	4.6	4.6	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
1-Yr Fixed Mortgage Rate	2.7	2.6	2.5	2.4	2.4	2.4	2.4	2.5	2.6	2.7	
2-Yr Fixed Mortgage Rate	2.7	2.7	2.6	2.7	2.9	3.0	3.1	3.1	3.1	3.1	
5-Yr Fixed Mortgage Rate	3.1	3.1	3.0	3.2	3.9	4.2	4.3	4.3	4.3	4.4	

Source: RBNZ, ANZ Research

Economic forecasts

Economic indicators	Actual				Forecasts						
	Jun-20	Sep-20	Dec-20	Mar-21	Jun-21	Sep-21	Dec-21	Mar-22	Jun-20	Sep-22	
GDP (Annual % Chg)	-11.3	0.4	0.7(f)	1.4	14.6	1.0	1.3	3.3	3.6	4.0	
CPI Inflation (Annual % Chg)	1.5	1.4	1.4	1.2	2.3	2.2	1.7	1.6	1.5	1.5	
Unemployment Rate (%)	4.0	5.3	4.9	5.2	5.5	5.5	5.3	4.9	4.7	4.5	
House Prices (Quarter % Chg)	0.0	3.9	7.9	8.0	4.5	2.0	2.0	1.0	1.0	1.0	
House Prices (Annual % Chg)	7.8	9.9	15.6	21.0	26.5	24.2	17.4	9.8	6.1	5.1	

Interest rates	Actual				Forecasts						
	Jun-20	Sep-20	Dec-20	Mar-21	Jun-21	Sep-21	Dec-21	Mar-22	Jun-22	Sep-22	
Official Cash Rate	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	
90-Day Bank Bill Rate	0.30	0.31	0.27	0.30	0.32	0.33	0.34	0.34	0.34	0.34	
LSAP (\$bn)	100	100	100	100	100	100	100	100	100	100	

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 27 664 3554
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



Liz Kendall (maternity leave)
Senior Economist

Research co-ordinator, publication strategy, property market analysis, monetary and prudential policy.

Telephone: +64 27 240 9969
Email: elizabeth.kendall@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

[15 March 2021]

This document is intended for ANZ's Institutional, Markets and Private Banking clients. It should not be forwarded, copied or distributed. The information in this document is general in nature, and does not constitute personal financial product advice or take into account your objectives, financial situation or needs.

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 or request from your ANZ point of contact.

Brazil, 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.

European Economic Area (EEA): United Kingdom. ANZ is authorised in the United Kingdom by the Prudential Regulation Authority (**PRA**) and is subject to regulation by the Financial Conduct Authority (**FCA**) and limited regulation by the PRA. Details about the extent of our regulation by the PRA are available from us on request. 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 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 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.

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 publication 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 publication 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.



Important notice

Myanmar. This publication is intended to be general and part of ANZ's customer service and marketing activities when implementing its functions as a licensed bank. This publication 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.

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 the Singapore branch of 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.

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 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 this website or have otherwise received this document and are a US Person who is an individual: to avoid loss, you should cease to use this 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: 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 an 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>