ANZ RESEARCH

AUGUST 2018

NEW ZEALAND PROPERTY FOCUS

GOING GLOBAL

This is not personal advice. It does not consider your objectives or circumstances. Please refer to the Important Notice.

INSIDE

CONTRIBUTORS

Sharon Zollner
Chief Economist
Telephone: +64 9 357 4094
E-mail: Sharon.Zollner@anz.com

Liz Kendall
Senior Economist
Telephone: +64 4 382 1995
E-mail: elizabeth.kendall@anz.com

Philip Borkin
Senior Macro Strategist
Telephone: +64 9 357 4065
Email: Philip.Borkin@anz.com

ISSN 2624-0629

Publication date: 21 August 2018

SUMMARY

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

FEATURE ARTICLE: GOING GLOBAL

New Zealand's housing market has slowed at the same time as a number of other markets, particularly Australia. So is the New Zealand housing market being dragged down by global developments? Our analysis suggests probably not. But it could be in the future. The recent slowing in the local market appears to reflect primarily domestic factors, including investor wariness and policy changes. Affordability constraints also appear to be weighing in Auckland – and some international markets like Sydney. But other domestic factors are offsetting; credit is generally available, population growth continues and interest rates remain low. Moreover, the RBNZ has monetary and macro-prudential policy ammo if required. Nonetheless, in the event of a global shock, there is a risk that the New Zealand housing market could be significantly affected. Global housing markets have become increasingly synchronised over time, particularly in downturns. This ups the stakes, particularly given that household debt is close to record highs.

PROPERTY GAUGES

The housing market has been a bit softer recently. Sales have taken a step down in recent months, with affordability constraints, policy uncertainty, and a softer pulse in the economy dampening the market – and there is a risk that this recent softening could persist. But offsetting these headwinds, the market is being supported by population growth and pent-up demand. Credit is generally available for those with good serviceability prospects, and the OCR is now expected to be low for even longer. We expect to continue to see further modest price increases nationwide. But there could be some volatility in the housing market data ahead, especially with the foreign buyer ban coming into effect.

ECONOMIC OVERVIEW

Economic momentum has slowed and the underlying domestic demand pulse is looking weaker. Business pessimism is impacting decisions, profitability is squeezed and credit is more difficult to come by for firms. The housing market is being affected by a number of headwinds and household spending growth is modest. There are a number of factors that are likely to boost activity through the remainder of the year and net exports and fiscal spending will provide some support to growth, but the outlook for underlying domestic demand is looking less assured. We expect that CPI inflation will increase, boosted by temporary factors, but that the underlying pulse will be slow to lift and could disappoint down the track, on account of a weaker domestic activity picture. As such, we see the RBNZ remaining on hold for the foreseeable future. Given the balance of risks, we think the next move is more likely to be a cut than a hike; there are a number of risks that could easily move our views in that direction.

MORTGAGE BORROWING STRATEGY

We have flat-lined our OCR forecasts and feel that there is a non-trivial chance that the next move in the cash rate is actually a cut. As such, our favoured borrowing strategy is to keep fixing for shorter durations. And with the 1-year fixed rate still the lowest point on the curve, that is the 'sweet spot' in our view and still our favoured strategy. While the chance of the OCR being cut again may make floating rate borrowing seem attractive, given that it is the highest point on the curve and conditions for a rate cut are likely to take some time to develop, we don't see value there yet.

FEATURE ARTICLE: GOING GLOBAL

SUMMARY

New Zealand's housing market has slowed at the same time as a number of other markets, particularly Australia. So is the New Zealand housing market being dragged down by global developments? Our analysis suggests probably not. But it could be in the future. The recent slowing in the local market appears to reflect primarily domestic factors, including investor wariness and policy changes. Affordability constraints also appear to be weighing in Auckland – and some international markets like Sydney. But other domestic factors are offsetting; credit is generally available, population growth continues and interest rates remain low. Moreover, the RBNZ has monetary and macro-prudential policy ammo if required. Nonetheless, in the event of a global shock, there is a risk that the New Zealand housing market could be significantly affected. Global housing markets have become increasingly synchronised over time, particularly in downturns. This ups the stakes, particularly given that household debt is close to record highs.

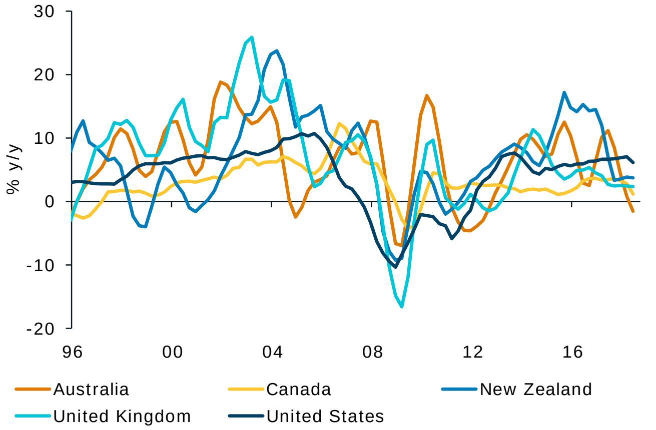
GLOBAL COOLING

Housing markets have cooled recently in some economies. The moderation has generally been concentrated in major cities, meaning nationwide data masks the extent of the softening in some pockets (figure 1).[1] For example, in London house prices have fallen 2% from their peak at the end of 2017 amid slowing activity, Brexit fears, and affordability constraints. Similarly, in inner city New York, house prices are also reported to be falling. In Beijing, house prices are falling as a result of policy measures, which have seen sales fall to historic lows. And here in New Zealand, Auckland is leading the way down.

But most notable for New Zealand is the fact that the Australian housing market has slowed considerably; again, concentrated in major cities. This slowing has the potential to be particularly significant for New Zealand, not only because of our economic ties, but because our banking system is directly linked, with the major New Zealand banks owned by Australian parent banks. House prices have fallen 2% nationwide in Australia over the past year and 5% in Sydney, with 12 consecutive months of decline. In Melbourne, house prices are flat over the year, but have fallen almost 3% over the past four months.

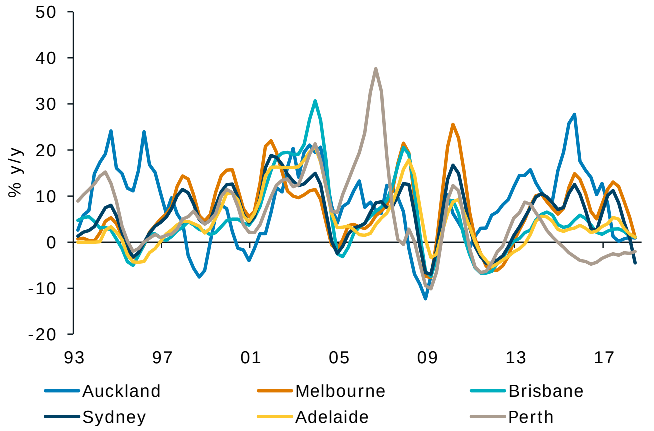
The softening in housing markets in some global pockets – and particularly in Australia – has occurred at the same time as New Zealand's housing market has slowed – especially Auckland's. Since the start of 2018, house prices in New Zealand have risen only 1.2%, with house prices falling 1.8% in Auckland over that period. This raises the question: is the New Zealand housing market being dragged down by developments elsewhere, particularly those in Australia? Or if not a direct causal relationship, are the causes of the slowdowns in the various markets at least similar? And most importantly, what does this imply going forward?

Figure 1: House price inflation in selected countries (annual)



Source: Haver, REINZ, RP, ANZ Research

Figure 2: House price inflation in selected Australasian cities (annual)



Source: Haver, REINZ, RP, ANZ Research

[1] https://www.bloomberg.com/news/articles/2018-07-31/are-house-prices-falling-from-sydney-to-new-york

FEATURE ARTICLE: GOING GLOBAL

GLOBAL HOUSING MARKETS ARE LINKED

New Zealand house prices do tend to be related to those in global markets. Figures 3 and 4 show a measure of global house price inflation that extracts the most common trend across a number of global housing markets.[2] This "global factor" attempts to abstract from idiosyncratic factors such as policy changes in individual countries. It accounts for between 30-45% of the variation in house price inflation across the countries included in the data set, which means as much as 70% of movements are explained by idiosyncratic domestic factors.

The take out: global housing markets are indeed synchronised, but there's a lot more going on than that.

Figure 3: New Zealand house price inflation and global factor (large dataset)

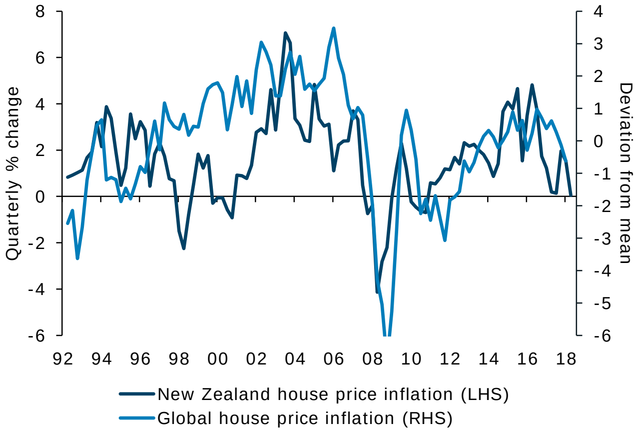
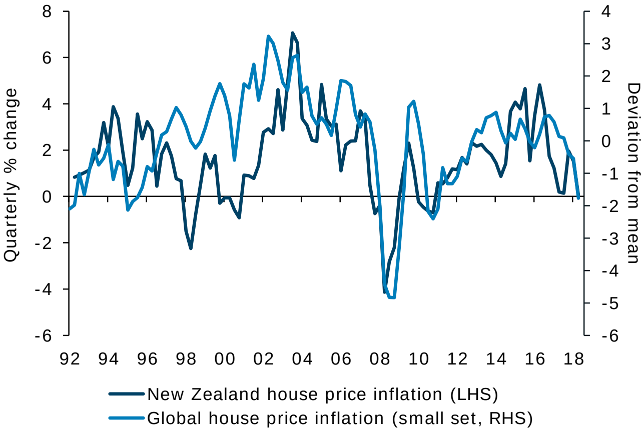


Figure 4: New Zealand house price inflation global factor (smaller, more timely dataset)



Source: Haver, REINZ, RP, ANZ Research

As can be seen in the charts above, econometric analysis suggests that global house price inflation does indeed move together with that in New Zealand. The global factor has a statistically significant contemporaneous relationship with nationwide house price inflation, after controlling for immigration inflows, interest rates, availability of credit, and the inherent persistence in house price inflation.[3] Looking at the relationship by country, overall Australian house price inflation is no better than any other global housing market at explaining house price inflation in New Zealand, despite the geographical and financial closeness between the two countries.[4]

However, Sydney house prices can help to explain house prices in Auckland, suggesting that there are some factors that are common to both these markets that are not detectable at a national level. Some obvious candidates include foreign buyer interest and agglomeration: both Sydney and Auckland have had an outsized share of population growth in recent years (as has Melbourne). And going forward, the correlation between Sydney and Auckland is likely to be heightened by the fact that they are the least affordable city markets in their respective countries.

Why might global housing markets move together?

There are a number of channels through which global developments can affect national housing markets in similar ways.

First, business cycles across economies can be linked as a result of trade, confidence effects and fluctuations in world prices, with the coincidence of recessions and housing market downturns well documented.[5]

Second, financial links are also important, in particular similar cycles in both the price and the availability of credit.

- The long-term secular decline in global interest rates has been mirrored in New Zealand, contributing to increases in house prices.
- Relatedly, increases in global liquidity on the back of unconventional monetary policy have compressed risk premia and credit spreads, making banks' offshore funding cheaper.

---

[2] This is constructed using principal components analysis. It is the first principal component extracted from quarterly house price inflation in Australia, Canada, Denmark, Euro area, Sweden, United Kingdom and United States. The choice of countries is based on the availability of comparable data back to 1995. We also estimate a common factor from the smaller group (for which more up-to-date data is available) of Australia, Canada, the UK and US to analyse the most recent period.
[3] Based on an ordinary least squares regression.
[4] Australian house prices are not a statistically significant explanator of New Zealand house prices.
[5] See IMF Global Financial Stability Report April 2018, chapter 3 for references.

- Some financial institutions are active in more than one market. While different financial regulation across markets will ensure a fair degree of independence, as collateral values rise (fall) in one market, financial institutions may, at the margin, have greater (less) risk appetite in their lending decisions in others. It may only apply at the extremes of the cycle. But while unmeasurable, these links may be relevant for New Zealand, due to our direct links with the Australian banking system.
- As well as affecting the absolute cost of a mortgage, low rates of return from risk-free assets may encourage investors to take on more risk, making housing more attractive to both investors and owner-occupiers alike. Foreign purchasers' decisions will be similarly influenced. While the proportion of house sales to foreigners is estimated to be low in New Zealand (and lower than in Australia), the channels described above may encourage increased foreign investment in markets like Auckland and Sydney if likely returns are perceived to be favourable. And the extent – and impact – of this may be understated if foreign capital is being used to fund purchases by residents.

Consistent with financial links being important for domestic economics (and housing markets), the IMF estimates that global financial conditions (combining measures of the price and availability of credit) account for 20-40% of domestic financial conditions on average across a range of economies.[6]

Global house prices are significantly affected by macroeconomic and financial developments (figures 5 and 6).[7] With these two factors, proxied by the ANZ Global Leading Index and ANZ Global Liquidity Index, we can explain a very large proportion of the variation in quarterly global house price inflation. However, when it comes to explaining New Zealand house prices, global house prices themselves have more explanatory power than the underlying drivers of the global housing cycle. This likely reflects the fact that global housing prices capture all of the linkages described above fully, whereas measures of macroeconomic and financial conditions may be imperfect proxies and capture only specific aspects.

Figure 5: Global house price inflation and ANZ Global Leading Index

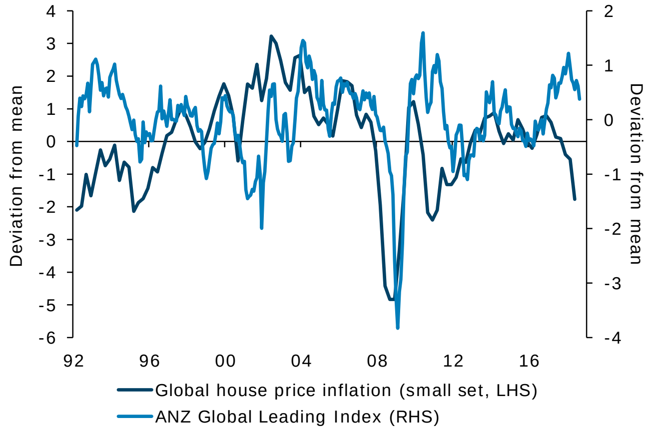
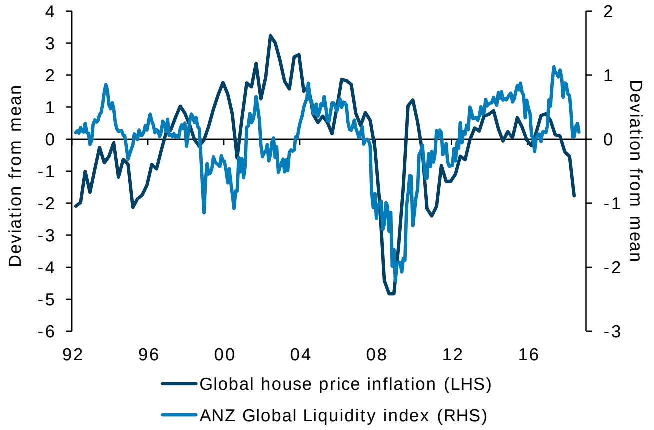


Figure 6: Global house price inflation and ANZ Global Liquidity Index



Source: Bloomberg, Haver, RP, Thomson Reuters, Datastream, ANZ Research

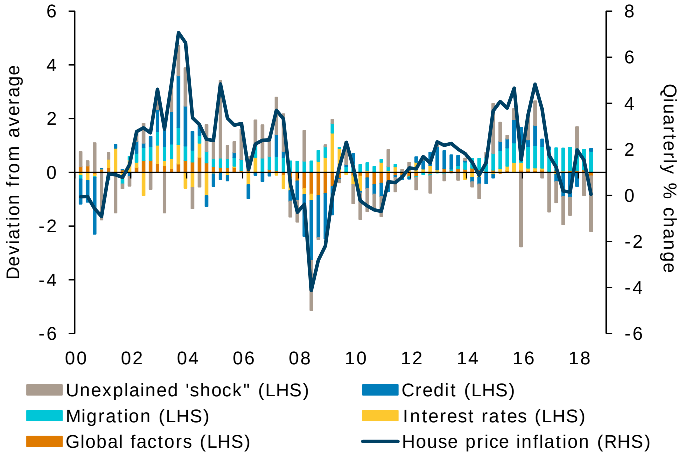
NEW ZEALAND'S RECENT SLOWING

Figure 7 shows a decomposition of quarterly house price inflation in New Zealand. Global factors (in orange) have played an important role in New Zealand housing market developments at times – most notably during the 2008/09 recession. But there appears to have been only a negligible impact of global factors on the nationwide housing market this year, at least to date. Rather, it appears that the recent slowing in the New Zealand market has been driven by factors that are not global and, indeed, are not explained by the model's variables of migration, interest rates, or the decline in credit growth, the negative impacts of which dissipated some time ago.[8] The most likely candidate is idiosyncratic domestic factors, such as investor wariness and policy changes. A number of policy and tax changes have been proposed or implemented by the Government, aimed at making residential property investment less attractive. They appear to have worked.

---

[6] IMF Global Financial Stability Report, April 2017, chapter 3.
[7] Based on an ordinary least squares regression that also includes the IMF Financial Conditions Index, which is available to December 2017.
[8] Investor demand fell significantly after the RBNZ implemented loan-to-value restrictions on investor lending in October 2016, with monthly lending to investors halving at that time. Credit availability was a drag during that period too, both on the housing market and on the economy more generally.

Figure 7: Decomposition of New Zealand house price inflation



Source: Haver, RP, RBNZ, REINZ, Statistics NZ, ANZ Research

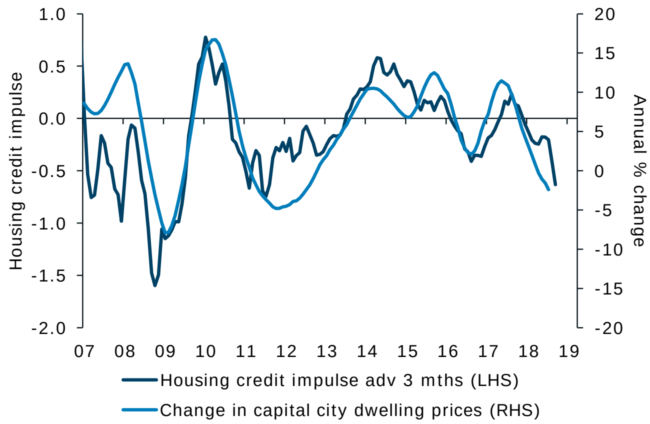
How does New Zealand compare to Australia?

In recent times, idiosyncratic domestic factors appear to have contributed to housing market slowing in both Australia and New Zealand. There are both similarities and important differences across these factors.

Policy changes restricting credit availability have occurred in both markets – broadly, though not exactly, around the same time. However, the availability of credit is currently very different in the two countries. Figure 8 shows that the Australian market has seen credit availability pared back sharply, as reflected in the credit impulse (the change in the change in mortgage credit). This is widely considered to be a direct result of the Royal Banking Commission. By contrast, credit appears to still be generally available in New Zealand for households with good serviceability prospects who are meeting current macro-prudential requirements, as shown by figure 9. Another important difference between Australia and New Zealand is that there does not appear to be pockets of oversupply in New Zealand as there are in parts of Australia (particularly inner city apartments), which is likely to be exacerbating price adjustments there.

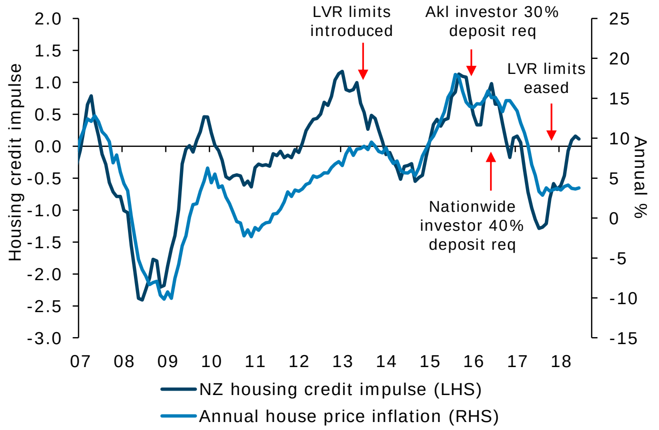
Based on these differences, it does not appear that the recent slowing in Australian and in New Zealand markets is directly linked. In particular, there is no evidence of a common credit dynamic taking place as a result of synergies between the New Zealand and Australian banking systems. This implies that the slowing thus far in the Australian market does not imply that risks are particularly heightened for the New Zealand market at present. Nonetheless, this does not rule out flow-on impacts should the Australian market experience a significant slowdown and pass some unknown 'tipping point'.

Figure 8. Australian housing credit impulse and capital city house prices



Source: RBA, CoreLogic, ANZ Research

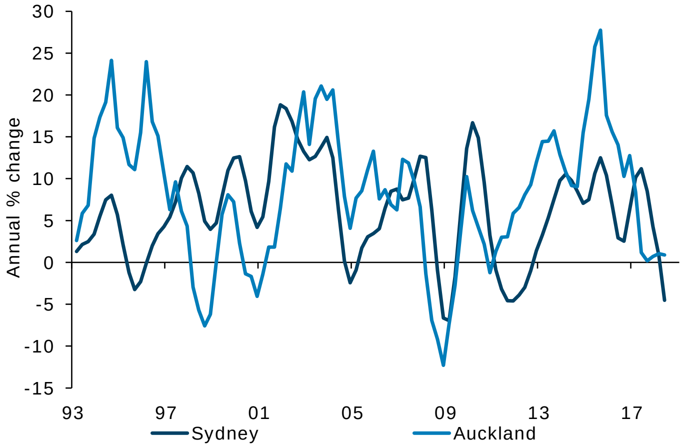
Figure 9. New Zealand housing credit impulse and house prices



Source: RBNZ, REINZ, ANZ Research

While Australian and New Zealand markets appear to have been affected primarily by domestic factors, both the Auckland and Sydney markets have seen a more pronounced slowing than nationwide markets. The more pronounced slowing in Auckland likely partly reflects a larger effect from policy changes, particularly the recently introduced foreign buyer ban, with foreign investment a greater proportion of sales there. But it appears that something else is going on in these markets too. While not causal between the two, it appears that a common theme is taking place in these city markets: affordability constraints.

Figure 10: Auckland and Sydney house prices

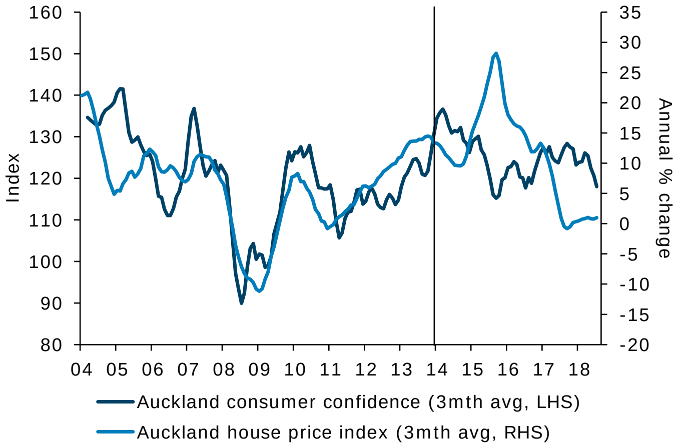


Source: RP, REINZ, ANZ Research

Affordability: A common international theme

Stretched affordability appears to be at play in Auckland. It seems Auckland households in aggregate no longer feel good about house price rises (figure 11). This phenomenon is broad-based across other New Zealand regions, reflecting that house prices are high nationwide. But these concerns are particularly relevant in our largest city because affordability constraints are more binding there, with the proportion of income required for mortgage servicing on a median house (with a 20% deposit) in Auckland significantly higher than in the rest of New Zealand: 47%, compared with 29% in the rest of the country. Buying a house is now out of reach for many, and buyers generally seem wary about the cost of entering the market – or are simply unable to. This same theme is common in commentary across a number of international major cities currently, including Sydney, London and New York.

Figure 11: Auckland consumer confidence and Auckland house price inflation



Source: ANZ Roy Morgan, REINZ

The fact that affordability constraints are now biting reflects how expensive house prices have become – mortgage rates are still very low, after all. Major cities in many countries have experienced strong demand, pumped up by easy financial conditions, low policy rates, compressed spreads and reduced volatility. But key to the house price response has been whether housing supply growth in these markets has been constrained.

As a general rule, supply-constrained markets tend to have high and variable house price inflation, and tend to experience more boom-bust cycles, even if fundamentals remain relatively steady.[9] This means that major city markets will tend to be more affected by housing cycles than nationwide markets. Prices move on the whims of expectations and risk appetites of both buyers and lenders, and if supply isn't growing quickly to release the pressure, house prices can easily become untethered from any kind of sensible 'true value' based on incomes.

[9] See Huang & Tang (2012).

House price expectations can build on their own momentum over a period of many years, as more investors jump on the bandwagon. The fact that affordability constraints are now biting in major cities may partly reflect the fact that the momentum in expectations for continued capital gains has now played itself out, with purchasers starting to become more circumspect on future returns.

As well as population growth tending to be strongest in major cities, the fact these markets have outperformed and now are least affordable may also have been influenced by the fact that major cities tend to be the most liquid housing markets and therefore the most appealing to foreign buyers. That is, major cities tend to have higher number of sales, inventory of homes on the market, and market participants than in other areas, which makes them easier to both enter and exit as a financial asset market.

UPPING THE STAKES

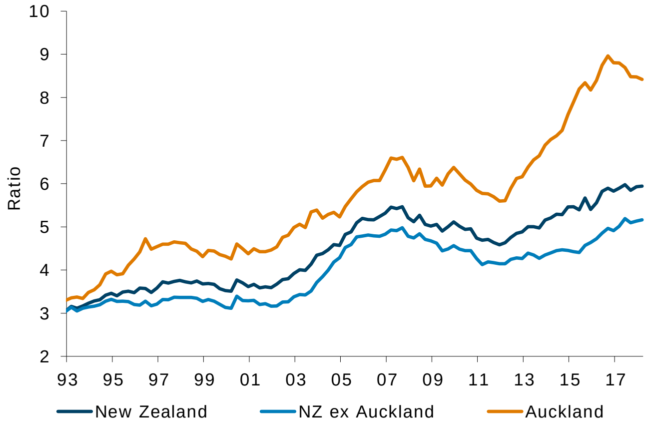
While global factors do not appear to have contributed to the recent slowing in the New Zealand market, there is a risk that they could in the future. The IMF has found that global housing markets have become increasingly synchronised over time, but especially in major cities (which have now become very expensive) and particularly during recessions.[10]

This increased synchronisation has occurred as financial systems have become more integrated and investor flows have increased – including global investor flows. Financial links are particularly important for major cities that tend to have more global connections (and perhaps because they are more supply constrained). In the lingo, systemic risk has increased. In the event of a downturn, shocks in localised housing markets could have (more) pervasive effects, with the financial system transmitting – or even amplifying – the effects. As a result of this phenomenon, the IMF speculates that synchronisation in house price movements could be a useful predictor of downside risks to growth, particularly when leverage is high, as it is now.

If global factors have become more important over time, then by extension this means that domestic factors have become less important. This unfortunately implies that domestic policy setting may have less scope to affect housing market developments than in the past. It also means that our usual methods for understanding developments in the housing market may increasingly need to take this into account. On the other hand, IMF work finds that domestic macro-prudential policy can help and tend to reduce synchronisation. The fact that we have an existing framework for implementing macro-prudential policy provides a useful buffer. However, it is important not to be complacent.

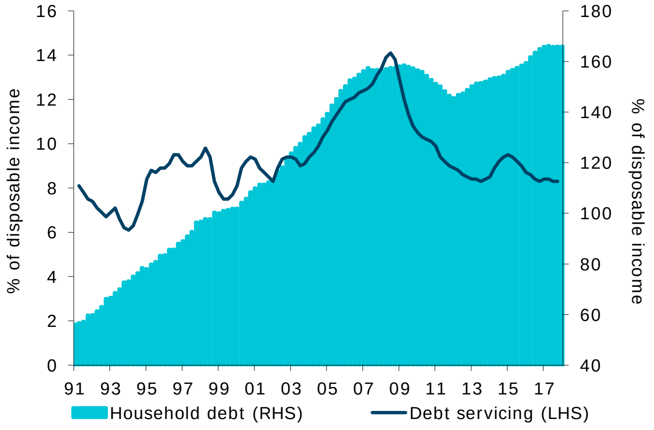
In the event of a global shock, there is a risk that the New Zealand housing market could be significantly affected. As a small, open economy, New Zealand tends to be buffeted by external events. And with global housing markets more synchronised (especially in downturns), the potential for external shocks to have greater effects on the New Zealand housing market than previously ups the stakes even further. This is particularly the case given that our house prices are already very high relative to both incomes and in international comparisons. And with household debt close to record highs, households may be even more vulnerable in the event of a housing downturn.

Figure 11. House price to incomes



Source: Statistics NZ, REINZ, ANZ Research

Figure 12. Household debt

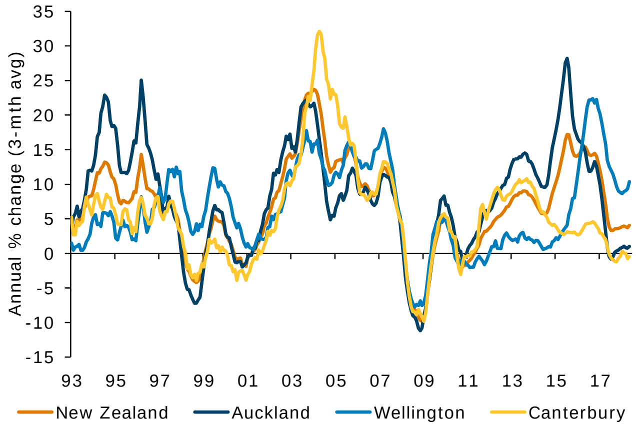


Source: RBNZ, ANZ Research

[10] See IMF Global Financial Stability Report April 2018.

PROPERTY MARKET IN PICTURES

Figure 1. Regional house price inflation

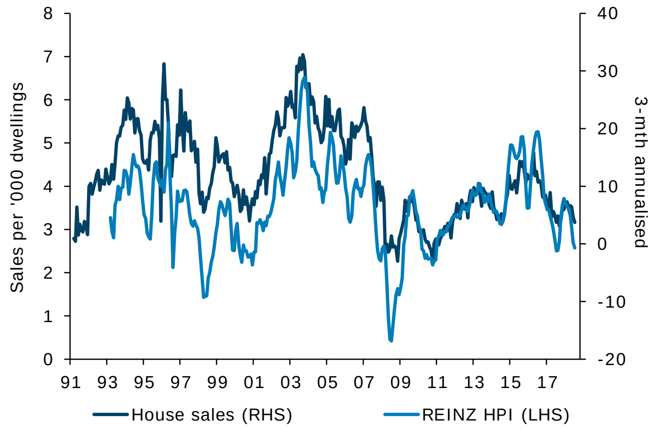


Source: ANZ, REINZ

House prices increased in July, after a soft June quarter. The REINZ House Price Index (HPI) increased 0.4% m/m in July, after declining over the past three months. Annual growth ticked up slightly to 4.1% y/y (3mma) from 3.8%. But much of the strength over the past year was seen in the second half of 2017. Over 2018 to date, house prices have risen only 1.2% nationwide.

Regional divergence remains stark. House prices in Auckland continue to fall – down 0.2% m/m in July and 1.8% over the year to date. Other markets remain tight. In the rest of New Zealand, prices increased 0.9% m/m to be up 7% over the past year (3mma). There have been particular pockets of strength over the past year in Manawatu-Wanganui, Bay of Plenty, Wellington and Southland.

Figure 2. REINZ house prices and sales



Source: ANZ, REINZ

Sales volumes and prices tend to be closely correlated, although at times tight dwelling supply can complicate the relationship.

We estimate that seasonally adjusted house sales fell 3.8% m/m in July, after falling 6.5% in June. **Sales have taken a step down**, with 5,900 sales in July (seasonally adjusted), after running at about 6,500 per month between November and May. We estimate that sales are 2.2% higher than a year ago (3mma). Sales have fallen in Auckland in particular, down 13% over the year to date. That said, declines have recently been seen across a range of regions. Despite this, housing markets are tight outside of Auckland and Canterbury.

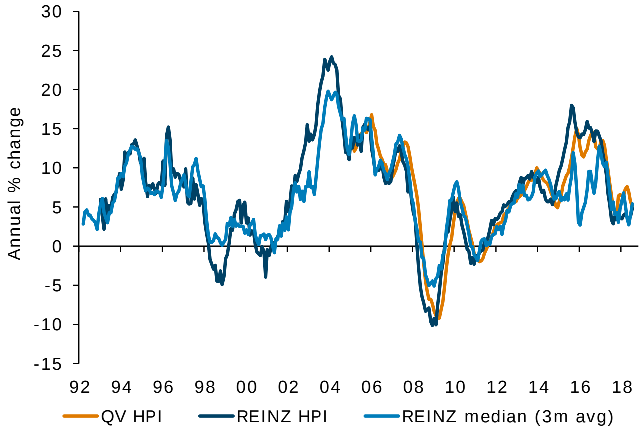
Figure 3. Sales and median days to sell

Source: ANZ, REINZ

How long it takes to sell a house is also an indicator of the strength of the market, encompassing both demand and supply-side considerations. Larger cities tend to see houses sell more quickly, but deviations in a region from its average provide an indicator of the heat in a market at any given time.

Housing markets outside Auckland and Canterbury remain tight. Nationwide the median time to sell a house was stable at 38 days in July (sa). Days to sell lengthened for Auckland from 41 to 43 days on average (compared to a historical average of 36 days). In Canterbury, it's taking a bit longer than average to sell properties, at 38 days. By contrast, days to sell remain below average in all other regions, with markets tight.

Figure 4. REINZ and QV house prices

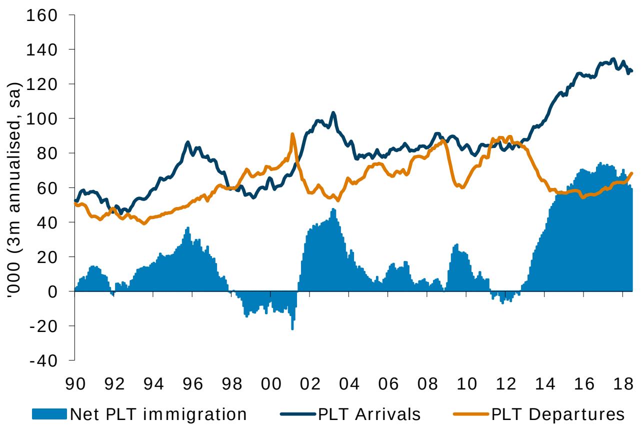


Source: ANZ, REINZ, QVNZ

There are three monthly measures of house prices in New Zealand: the median and house price index measures produced by REINZ, and the monthly QVNZ house price index. The latter tends to lag the other measures as it records sales later in the transaction process. Moreover, movements do not line up exactly, given differing methodologies (the REINZ house price index and QVNZ measures attempt to adjust for the quality of houses sold).

The REINZ median sale price fell 0.2% m/m (sa) in July. Annual growth is running at 5.2% y/y (3mma), but has been quite volatile of late. The QVNZ measure of price growth has moderated to 5.1% y/y. The REINZ HPI – our preferred measure – is sitting a touch below the other two series (4.1% y/y 3mma).

Figure 5. Net permanent/long-term immigration

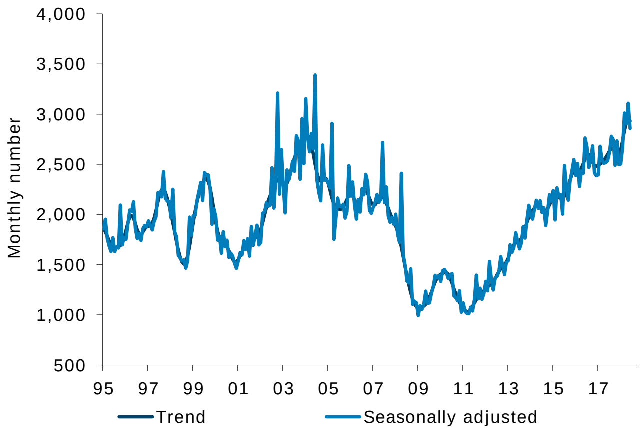


Source: ANZ, Statistics NZ

Migration flows to and from New Zealand are one of the major drivers of housing market cycles. The early-1970s, mid-1990s, mid-2000s and most recent house price booms have coincided with large net migration inflows.

In seasonally adjusted terms, there was a net monthly inflow of 4,840 migrants in June – 240 fewer migrants than in May. Arrivals dipped and departures lifted in the month. **The cycle is continuing to ease gradually from high levels, but it remains a slow grind.** In annual terms, there has been an inflow of 65,000 permanent and long-term migrants over the year to June. This is 10.2% below the annual peak seen in July last year.

Figure 6. Residential building consents

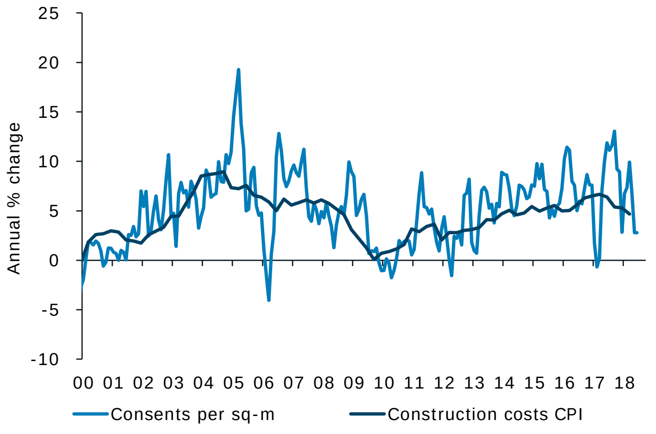


Source: ANZ, Statistics NZ

Consent issuance has been volatile recently. Dwelling consent issuance fell 7.6% m/m in June, following May's 6.9% rise. Multi-dwelling consents fell 14.4%, after lifting 7.6% last month. Consents for 'houses' fell 3.1%, after lifting 6.4% m/m in May.

In trend terms, growth in dwelling consent issuance has been easing since March (from 3.5% m/m to 0.1% currently). In annual terms, dwelling consent issuance is running at a high level of 32,889, with the size of houses consented having trended smaller over time. The construction industry is grappling with challenges, including capacity constraints, low productivity, and financing strains from profit squeeze and reduced credit availability. Yet recent data shows resilience in activity, at least so far.

Figure 7. Construction cost inflation

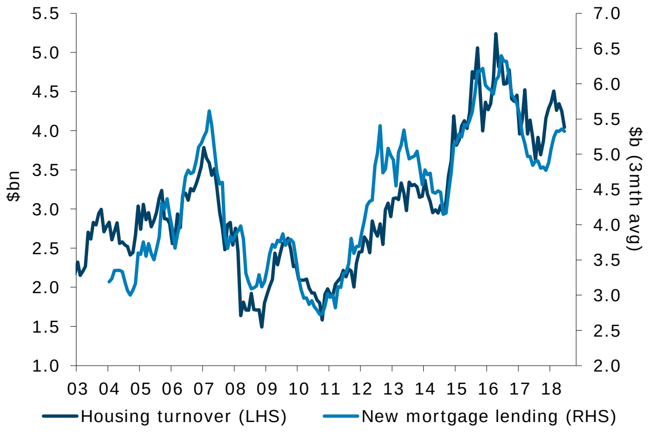


Source: ANZ, Statistics NZ

Construction cost inflation is more moderate. The value of consents per square metre – a proxy for construction cost inflation – was stable in July, after moderating recently. It is currently running at 2.8% y/y (3mma) down from 10% in March. The CPI inflation measure of construction costs was up 3.9% y/y in June 2018, down from the recent peak of 6.7% in March 2017.

Construction cost inflation is expected to continue at a moderate pace, but recent softening may indicate firms are wary of passing through cost increases, despite an evident profit squeeze, perhaps because sentiment is generally downbeat. Anecdotes are beginning to suggest that momentum in building cost inflation may be waning, but we are not seeing weakness, at least at this stage.

Figure 8. New mortgage lending and housing turnover

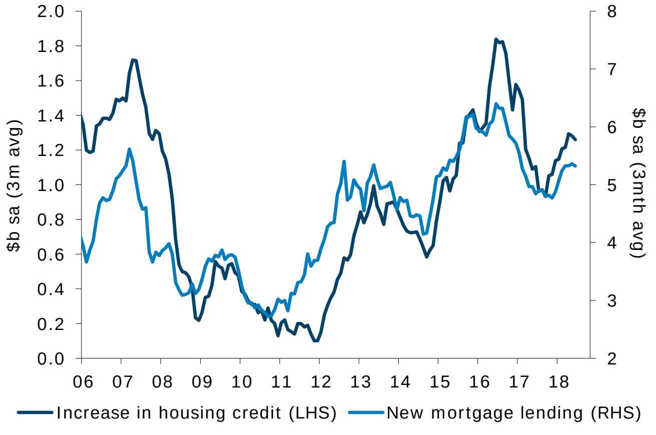


Source: ANZ, RBNZ

New residential mortgage lending figures are published by the RBNZ. They can provide leading information on household credit growth and housing market activity.

We estimate that new mortgage lending fell 7.5% m/m in June in seasonally adjusted terms to be down 0.6% on a 3-month average basis. **New mortgage has been broadly stable, although June's print may indicate tentative signs of slowing, consistent with the recent step down in house sales.** New lending to first-home buyers is up over the past year, rising 13% y/y in June. However, first-home buyer lending took a step down over the month and currently comprises 15% of overall lending.

Figure 9. New mortgage lending and housing credit

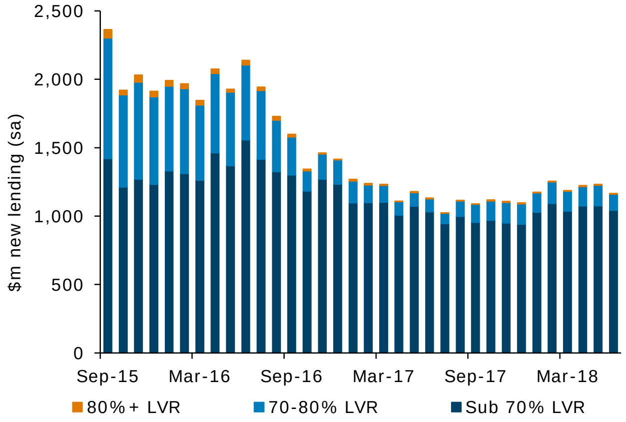


Source: ANZ, REINZ, RBNZ

In seasonally adjusted terms, total housing lending increased 0.5% m/m in June. In annual terms, credit growth is running at 5.7% y/y. **Housing lending has been growing at a consistent pace per month since early 2017.**

Moderation in housing lending growth is possible in coming months, given tentative signs of stabilisation in new mortgage lending and the recent step down in sales. We do not envisage the rate of housing lending growth slowing significantly from here, but with banks prudent, loan-to-value ratio restrictions in effect and housing market activity taking a step down, a more moderate pace of lending growth may persist for the foreseeable future.

Figure 10. Investor lending by LVR

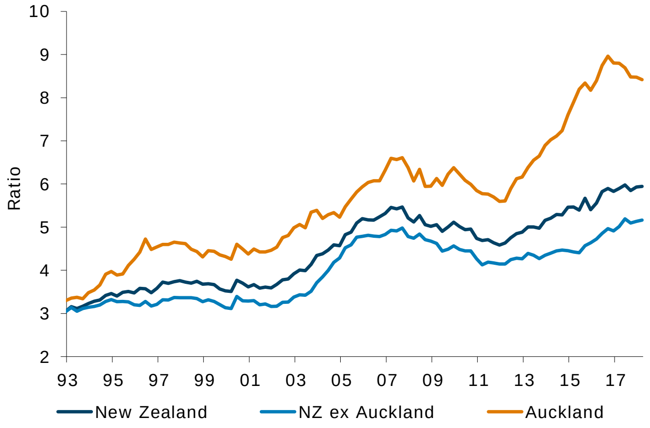


Source: ANZ, RBNZ

On a seasonally adjusted basis, new lending to investors fell 3.0% m/m in June. But looking through monthly volatility, **new lending to investors has been broadly flat since late 2016** – increasing about $1.2bn per month. This is 40% below the $2bn of new lending per month seen through H1 2016.

Investor lending comprises 24% of new lending, down from 35% in mid-2016. This lower share relates, at least in part, to the impact of LVR restrictions (which came into force in October 2016). These restrictions were eased modestly at the start of the year and we expect further adjustments to be cautious. Investor lending is now on less-risky terms. In June, the share of total investor lending at LVRs of less than 70% was 88% (seasonally adjusted). That is a far greater share than in late-2014, when it was less than half.

Figure 11. Regional house prices to income

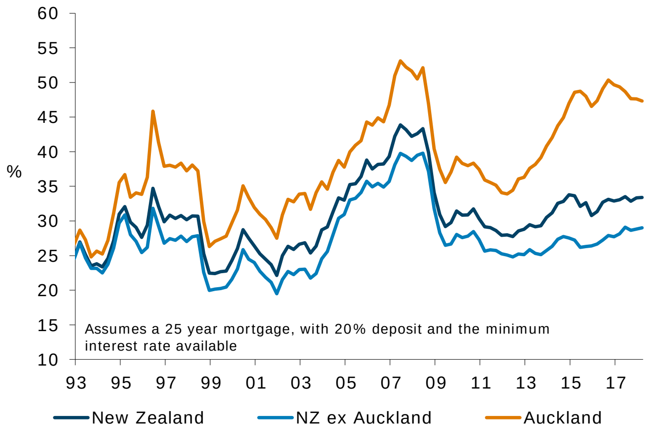


Source: ANZ, REINZ, Statistics NZ

One commonly cited measure of housing affordability is the ratio of average house prices to incomes. It is a standard measure used internationally to compare housing affordability across countries. It isn't perfect; it does not take into account things like average housing size and quality, interest rates, and financial liberalisation. Therefore, it is really only a partial gauge as some of these factors mean that it is logical for this ratio to have risen over time.

Nationally, the ratio has been broadly stable at around 6 times income for the past 12 months. Auckland has seen its ratio ease from a high of 9 times in Q3 last year to an estimated 8.5 times in Q1 2018. While still extremely high, the easing reflects the recent moderation in house price growth. Outside of Auckland, the ratio has continued to rise; at 5.2 times incomes this is at record highs.

Figure 12. Regional mortgage payments to income



Source: ANZ, REINZ, RBNZ, Statistics NZ

Another, arguably more comprehensive, measure of housing affordability is to look at it through the lens of debt serviceability, as this also takes into account interest rates, which are an important driver of housing market cycles.

We estimate that for a purchaser of a median-priced home (20% deposit), the average mortgage payment to income nationally is around 33.3%. However, there are stark regional differences, with the average mortgage payment to income in Auckland just short of 50% for new purchasers. While (just) off its highs, this is still on par with the highs reached in 2007, despite mortgage rates being near historic lows currently. It highlights how sensitive some recent home-buyers in Auckland would be to even a small lift in interest rates.

PROPERTY GAUGES

The housing market has been a bit softer recently, with a number of headwinds weighing on the market. Sales have taken a step down in recent months, with affordability constraints, policy uncertainty, and a softer pulse in the economy dampening the market – and there is a risk that this recent softening could persist. But offsetting these headwinds, the market is being supported by population growth and pent-up demand, credit is generally available for those with good serviceability prospects, and the OCR is now expected to be low for even longer. All up, we expect that the housing market will be relatively muted, but that we will continue to see further modest price increases nationwide. All that said, we expect there could be some volatility in the housing market data ahead, especially with the foreign buyer ban coming into effect.

We use ten gauges to assess the state of the property market and look for signs that changes are in the wind.

AFFORDABILITY. For new entrants into the housing market, we measure affordability using the ratio of house prices to income (adjusted for interest rates) and mortgage payments as a proportion of income.

SERVICEABILITY / INDEBTEDNESS. For existing homeowners, serviceability relates interest payments to income, while indebtedness is measured as the level of debt relative to income.

INTEREST RATES. Interest rates affect both the affordability of new houses and the serviceability of debt.

MIGRATION. A key source of demand for housing.

SUPPLY-DEMAND BALANCE. We use dwelling consents issuance to proxy growth in supply. Demand is derived via the natural growth rate in the population, net migration, and the average household size.

CONSENTS AND HOUSE SALES. These are key gauges of activity in the property market.

LIQUIDITY. We look at growth in private sector credit relative to GDP to assess the availability of credit in supporting the property market.

GLOBALISATION. We look at relative property price movements between New Zealand, the US, the UK, and Australia, in recognition of the important role that global factors play in New Zealand's property cycle.

HOUSING SUPPLY. We look at the supply of housing listed on the market, recorded as the number of months needed to clear the housing stock. A high figure indicates that buyers have the upper hand.

HOUSE PRICES TO RENTS. We look at median prices to rents as an indicator of relative affordability.

Indicator	Level	Direction for prices	Comment
Affordability	Unaffordable	↔/↓	Affordability constraints are very relevant. It is the main reason we see the Auckland market underperforming over the next few years.
Serviceability/ indebtedness	High debt, low rates OK – high rates not	↔/↓	Serviceability looks okay provided interest rates stay low and income growth is solid. Debt levels are high.
Interest rates / RBNZ	Slow ascent	↔/↓	It appears the OCR is not moving for a long time. We see the OCR as being flat for the foreseeable future.
Migration	Peaked	↔/↑	The cycle appears to be easing gradually. But population growth is still solid and inflows are not set to fall sharply.
Supply-demand balance	Demand > Supply	↔/↑	MBIE estimates New Zealand is short 71k houses, with a shortage of 45k in Auckland. Pent-up demand is supporting price increases.
Consents and house sales	Shortage	↔/↑	We expect consents issuance will struggle to push higher, with the construction sector reaching its limits.
Liquidity	Tight	↔/↓	Credit availability is very relevant. Closure of the bank funding gap means there is more wriggle room, but resurgence is not expected.
Globalisation	Mixed bag	↔	Non-resident buyers aren't very influential, but policy changes may dampen demand. The housing market is weak in Australia.
Housing supply	Too few	↔/↑	The Government is going to take a more active role, but there are still questions about crowding out other work and labour shortages.
House prices to rents	Too high	↔/↓	Rents are moving up, with housing shortages apparent, although these are not the only game in town.
On balance	**In recent ranges**	↔	**There could be some bumps in the road ahead, but conditions are supportive of continued price increases.**

PROPERTY GAUGES

Figure 1: Housing affordability

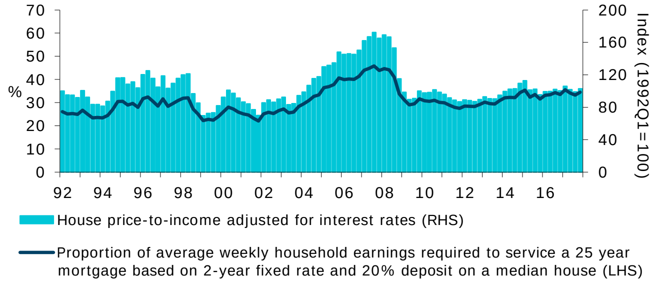


Figure 2: Household debt to disposable income

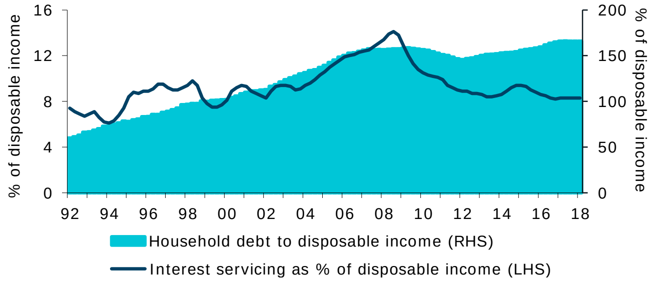


Figure 3: New customer average residential mortgage rate (<80% LVR)

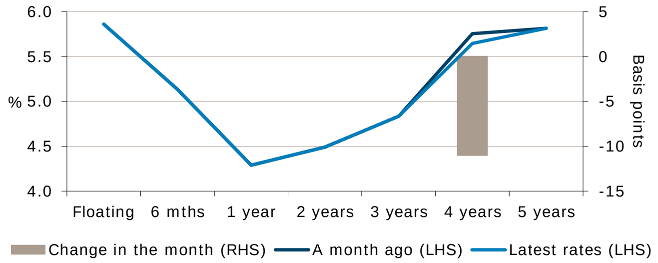


Figure 4: Net immigration

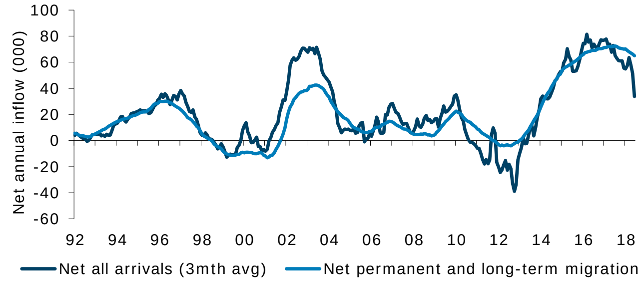


Figure 5: Housing supply-demand balance

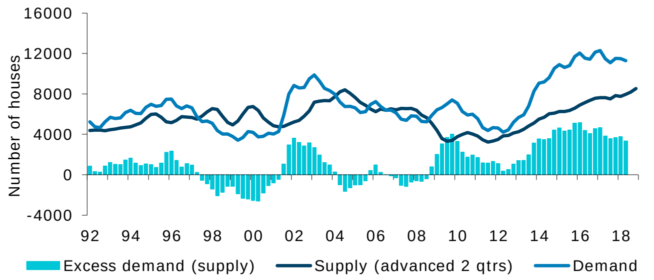


Figure 6: Building consents and house sales

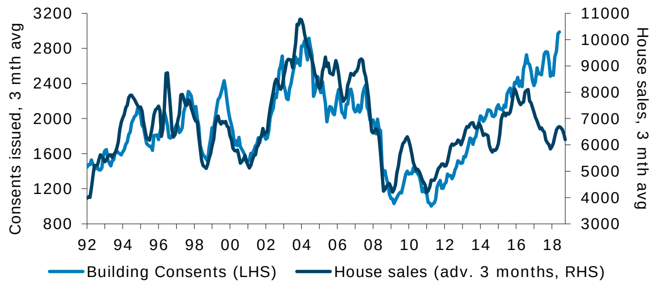


Figure 7: Liquidity and house prices

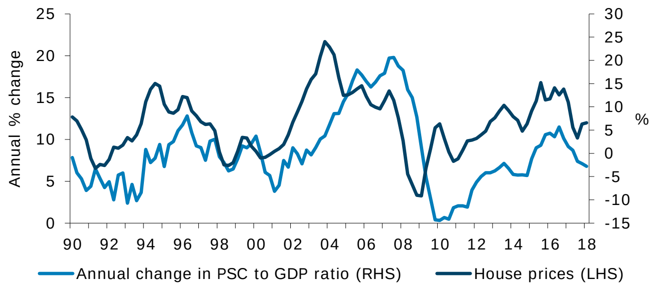


Figure 8: House price inflation comparison

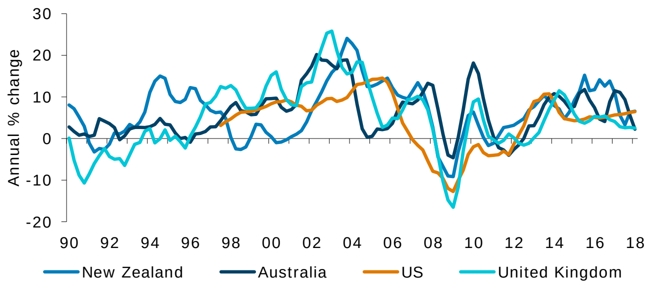


Figure 9: Housing supply

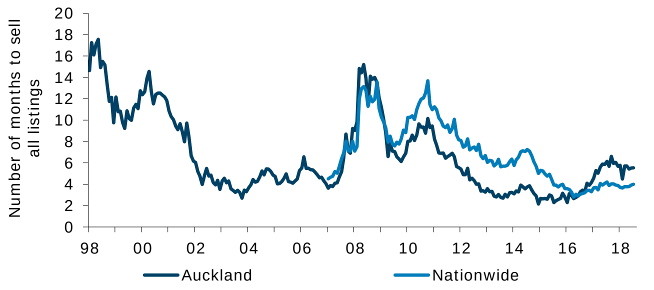
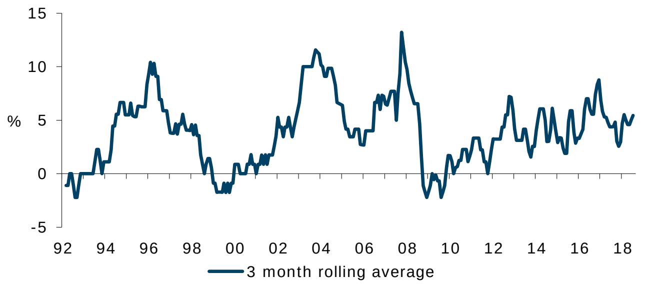


Figure 10: Median rental, annual growth



Source: ANZ, Statistics NZ, REINZ, RBNZ, QVNZ, Nationwide, Bloomberg, Barfoot & Thompson, MBIE

ECONOMIC OVERVIEW

SUMMARY

Economic momentum has slowed and the underlying domestic demand pulse is looking weaker. Business pessimism is impacting decisions, profitability is squeezed and credit is more difficult to come by for firms. The housing market is being affected by a number of headwinds and household spending growth is modest. There are a number of factors that are likely to boost activity through the remainder of the year and net exports and fiscal spending will provide some support to growth, but the outlook for underlying domestic demand is looking less assured. We expect that CPI inflation will increase, boosted by temporary factors, but that the underlying pulse will be slow to lift and could disappoint down the track, on account of a weaker domestic activity picture. As such, we see the RBNZ remaining on hold for the foreseeable future. Given the balance of risks, we think the next move is more likely to be a cut than a hike; there are a number of risks that could easily move our views in that direction.

OUR VIEW

Economic momentum has slowed and in our view the underlying domestic demand pulse is weak. There are a number of factors that are likely to boost measured activity in coming quarters, including a bounce back in milk production, livestock slaughtering (related to M. Bovis) and recent strength in consents. At the same time, net exports are expected to become less of a drag (owing to recent exchange rate depreciation) and fiscal spending will provide some support. But looking through all this, underlying domestic demand has waned.

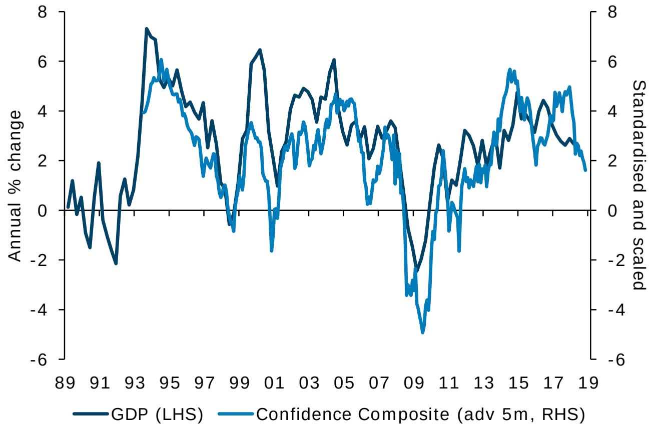
Business profitability is squeezed and credit is difficult to come by, while policy uncertainty continues to cast a shadow. Particular pockets such as construction and retail are also dealing with considerable industry-specific challenges. Importantly, business pessimism appears to be flowing through into firms' decisions, with employment and investment intentions having been pared back considerably.

At the same time, the household sector is feeling less optimistic; not downbeat, but not particularly enthusiastic about spending either. The housing market is being affected by a number of dampening factors, residential investment has topped out, and household spending growth has moderated. In our view, households will be looking to rebuild their saving buffers and will be constrained by already-high levels of debt.

In this environment, **we expect the economy will grow at modest rates of around 2½% – at, or a bit below, trend and well below recent peaks of around 4½%.** And as such, the medium-term inflation picture looks more precarious. In our view, resource pressures are unlikely to intensify from here and we will continue to see a modest inflation picture. To be sure, we expect that CPI inflation will increase in the near term, boosted by temporary factors. But **the underlying pulse is likely to be slow to lift and could disappoint down the track on account of a weaker domestic activity picture.** Our central expectation is that core inflation will increase little-by-little, but remain subdued, and that an OCR hike will not be required to offset inflationary pressures.

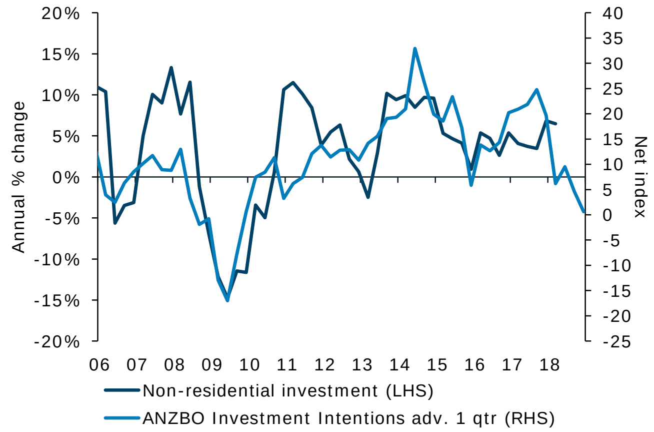
Accordingly, we see the RBNZ remaining on hold for the foreseeable future. However, the RBNZ has sent a clear message that they are willing to do what is required should the economic outlook deteriorate. Given the balance of risks, **we think the next move is more likely to be a cut than a hike and there are a number of risks that could easily move our views in that direction.** Should the domestic picture disappoint, the housing market soften considerably, or external conditions deteriorate, then an OCR cut could eventuate quite quickly.

Figure 1. GDP vs Confidence Composite



Source: ANZ, Roy Morgan, Statistics NZ

Figure 2: ANZ Business Outlook investment intentions and non-residential investment



Source: Statistics NZ, ANZ Research

MORTGAGE BORROWING STRATEGY

SUMMARY

We have flat-lined our OCR forecasts and feel that there is a non-trivial chance that the next move in the cash rate is actually a cut. As such, our favoured borrowing strategy is to keep fixing for shorter durations. And with the 1-year fixed rate still the lowest point on the curve, that is the 'sweet spot' in our view and still our favoured strategy. While the chance of the OCR being cut again may make floating rate borrowing seem attractive, given that it is the highest point on the curve and conditions for a rate cut are likely to take some time to develop, we don't see value there yet.

OUR VIEW

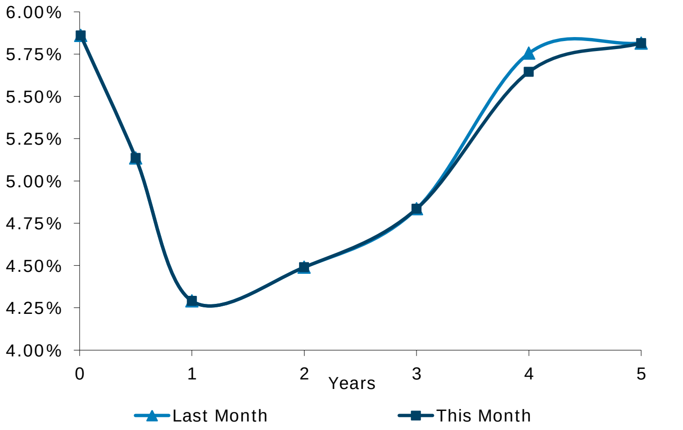
Average mortgage rates across the 'big four' banks were again largely unchanged over the past month. The main change was a reduction in the average special 4-year rate, which fell 0.11%pts to 5.76%. The 1-year rate remains the lowest point on the curve, at 4.29%.

ANZ no longer believes that the next move in the OCR will necessarily be a hike. We have formally 'flat-lined' our OCR forecasts given the clear signal from the RBNZ that the hurdle for a rate hike is high and our belief that activity growth, while not weakening sharply, will struggle to accelerate to a level over the next few years that will see core inflation move sustainably higher. In fact, the balance of risks over the next 18 months or so is that the RBNZ may end up cutting the OCR.

That keeps our favoured borrowing strategy unchanged. We continue to think the 1-year fixed rate offers the most value. It is the lowest point on the curve and is short enough duration to benefit from rate cuts if they were to develop (as opposed to floating rate borrowing, which represents quite a step-up in costs at current rates).

Breakeven analysis supports our view. For instance, to be indifferent between fixing for two years at 4.49% or rolling two consecutive 1-year fixed rates, the average 1-year fixed mortgage rate would need to lift from 4.29% currently to 4.69% in one year's time. That is certainly not a large move by historical standards, but it is certainly inconsistent with our new expectation for the OCR, that is, on hold for a considerable period. There is also an added benefit from keeping borrowing shorter in duration: you maintain the flexibility to take advantage of the possibility of lower rates in the future were they to eventuate.

Carded special mortgage rates^



Special Mortgage Rates		Breakevens for 20%+ equity borrowers			
Term	Current	in 6mths	in 1yr	in 18mths	in 2 yrs
Floating	5.86%				
6 months	5.14%	3.45%	4.59%	4.79%	5.35%
1 year	4.29%	4.02%	4.69%	5.07%	5.53%
2 years	4.49%	4.54%	5.11%	5.88%	6.80%
3 years	4.84%	5.26%	6.10%	6.40%	6.70%
4 years	5.65%	5.80%	6.20%		
5 years	5.82%	#Average of "big four" banks			

Standard Mortgage Rates		Breakevens for standard mortgage rates*			
Term	Current	in 6mths	in 1yr	in 18mths	in 2 yrs
Floating	5.86%				
6 months	5.21%	4.47%	5.31%	5.00%	5.93%
1 year	4.84%	4.89%	5.15%	5.46%	6.11%
2 years	5.00%	5.17%	5.63%	5.98%	6.50%
3 years	5.37%	5.61%	6.05%	6.34%	6.74%
4 years	5.75%	5.98%	6.34%		
5 years	6.04%	*may be subject to a low equity fee			

We believe the decision of where to fix on the mortgage curve is becoming easier for borrowers at present, with the odds of rate hikes over the next few years diminishing. As always, though, each individual borrower should consider their own circumstances. Spreading borrowing over a number of fixed terms is always a strategy that makes sense from a risk-management perspective. That said, we favour keeping those 'tranches' relatively short in duration right now.

^ Average of carded rates from ANZ, ASB, BNZ and Westpac. Sourced from interest.co.nz

KEY FORECASTS

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

Mortgage Size ($'000)	Mortgage Rate (%)													
	4.00	4.25	4.50	4.75	5.00	5.25	5.50	5.75	6.00	6.25	6.50	6.75	7.00	7.25
200	243	250	256	263	270	276	283	290	297	304	311	319	326	333
250	304	312	320	329	337	345	354	363	371	380	389	398	407	417
300	365	375	385	394	404	415	425	435	446	456	467	478	489	500
350	426	437	449	460	472	484	496	508	520	532	545	558	570	583
400	487	500	513	526	539	553	566	580	594	608	623	637	652	667
450	548	562	577	592	607	622	637	653	669	684	701	717	733	750
500	609	625	641	657	674	691	708	725	743	761	778	797	815	833
550	669	687	705	723	741	760	779	798	817	837	856	876	896	917
600	730	750	769	789	809	829	850	870	891	913	934	956	978	1,000
650	791	812	833	854	876	898	920	943	966	989	1,012	1,036	1,059	1,083
700	852	874	897	920	944	967	991	1,015	1,040	1,065	1,090	1,115	1,141	1,167
750	913	937	961	986	1,011	1,036	1,062	1,088	1,114	1,141	1,168	1,195	1,222	1,250
800	974	999	1,025	1,052	1,078	1,105	1,133	1,160	1,188	1,217	1,246	1,274	1,304	1,333
850	1,035	1,062	1,089	1,117	1,146	1,174	1,204	1,233	1,263	1,293	1,323	1,354	1,385	1,417
900	1,095	1,124	1,154	1,183	1,213	1,244	1,274	1,306	1,337	1,369	1,401	1,434	1,467	1,500
950	1,156	1,187	1,218	1,249	1,281	1,313	1,345	1,378	1,411	1,445	1,479	1,513	1,548	1,583
1000	1,217	1,249	1,282	1,315	1,348	1,382	1,416	1,451	1,486	1,521	1,557	1,593	1,630	1,667

Housing market indicators for July 2018 (based on REINZ data)

	House prices (ann % chg)	3mth % chg	No of sales (sa)	Mthly % chg	Avg days to sell (sa)
Northland	5.1	5.8	191	+1%	50
Auckland	-0.2	-1.7	1,713	-4%	43
Waikato	4.4	2.9	609	+1%	43
Bay of Plenty	17.3	1.9	428	-3%	43
Gisborne	0.2	-2.9	51	-5%	35
Hawke's Bay	7.3	1.7	241	-17%	34
Manawatu-Whanganui	8.3	1.2	375	-9%	27
Taranaki	15.8	5.5	162	-11%	35
Wellington	10.1	5.6	657	-4%	30
Tasman, Nelson and Marlborough	18.2	1.9	199	-7%	36
Canterbury	2.1	-1.9	766	-3%	38
Otago	6.2	1.7	335	-7%	28
West Coast	30.8	16.1	35	-6%	52
Southland	8.0	1.5	191	+12%	29
NEW ZEALAND	**6.1**	**1.3**	**5,929**	**-4%**	**38**

Key forecasts

	Actual			Forecasts						
Economic indicators	**Sep-17**	**Dec-17**	**Mar-18**	**Jun-18**	**Sep-18**	**Dec-18**	**Mar-19**	**Jun-19**	**Sep-19**	**Dec-19**
GDP (Ann % Chg)	2.6	2.9	2.7	2.4	2.4	2.4	2.5	2.6	2.6	2.6
CPI Inflation (Annual % Chg)	1.9	1.6	1.1	1.5(a)	1.5	1.8	2.0	2.0	2.0	1.9
Unemployment Rate (%)	4.6	4.5	4.4	4.5(a)	4.3	4.3	4.3	4.4	4.2	4.1
House Prices (Annual % Chg)	3.3	3.6	3.9	3.7(a)	4.1	2.6	1.6	2.0	2.0	2.0
Interest rates (RBNZ)	**Dec-17**	**Mar-18**	**Jun-18**	**Sep-18**	**Dec-18**	**Mar-19**	**Jun-19**	**Sep-19**	**Dec-19**	**Mar-20**
Official Cash Rate	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75
90-Day Bank Bill Rate	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Floating Mortgage Rate	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
1-Yr Fixed Mortgage Rate	4.9	4.9	4.9	4.8	4.9	4.9	4.9	5.0	5.0	5.0
2-Yr Fixed Mortgage Rate	5.1	5.1	5.0	4.9	5.0	5.0	5.1	5.1	5.2	5.2
5-Yr Fixed Mortgage Rate	5.9	5.9	5.9	5.9	5.9	6.0	6.0	6.1	6.1	6.1

Source: ANZ, Statistics NZ, RBNZ, REINZ

IMPORTANT NOTICE

This document is intended for ANZ's institutional, professional or wholesale clients, and not for individuals or retail persons. 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 a recommendation, 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, ANZ does not make any representation as to the accuracy of the views expressed in this document. 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. If trading strategies or recommendations are included in this document, they are solely for the information of 'wholesale clients' (as defined in section 761G of the Corporations Act 2001 Cth).

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. This document is distributed in Cambodia by ANZ Royal Bank (Cambodia) Limited (**ANZ Royal Bank**). The recipient acknowledges that although ANZ Royal Bank is a subsidiary of ANZ, it is a separate entity to ANZ and the obligations of ANZ Royal Bank do not constitute deposits or other liabilities of ANZ and ANZ is not required to meet the obligations of ANZ Royal Bank.

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.

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).

IMPORTANT NOTICE

New Zealand. This document is intended to be of a general nature, does not take into account your financial situation or goals, and is not a personalised adviser service under the Financial Advisers Act 2008 (**FAA**).

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. In addition, ANZ has a representative office (**ANZ Representative Office**) in Abu Dhabi regulated by the Central Bank of the UAE. The ANZ Representative Office is not permitted by the Central Bank of the UAE to provide any banking services to clients in the UAE.

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