

NEW ZEALAND PROPERTY FOCUS

April 2017

INSIDE

Chief Economist Corner:	
Productivity Puzzle	2
The Property Market in Pictures	6
Property Gauges	10
Economic Overview	12
Mortgage Borrowing Strategy	13
Key Forecasts	14

CONTRIBUTORS

Cameron Bagrie
Chief Economist
 Telephone: +64 4 802 2212
 E-mail: Cameron.Bagrie@anz.com
 Twitter @ANZ_cambagrie

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

David Croy
Senior Rates Strategist
 Telephone: +64 4 576 1022
 E-mail: David.Croy@anz.com

HARDER AND SMARTER

SUMMARY

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

CHIEF ECONOMIST CORNER: PRODUCTIVITY PUZZLE

Productivity growth is at the heart of lifting real incomes and boosting living standards i.e. growing outputs faster than inputs. As few would favour a severe house price crunch, the far more attractive way for housing to become more affordable is for **incomes to lift. Unfortunately, productivity figures for New Zealand don't make for pleasant reading. The trend has waned, and GDP growth per capita has been weak. We've seen good headline GDP growth but it has been driven by more inputs, particularly more labour. Of course stronger employment is a good thing, but lifting broad living standards requires a bigger return on our efforts. On some levels weak productivity growth doesn't tie in with anecdote. It also must be kept in mind that weaker productivity growth has been a global phenomenon, with New Zealand being 'less bad' than many others. The economic impact (cost) of natural disasters in recent years will have also suppressed productivity, though to what extent is impossible to know. All up, the productivity or GDP per capita story is not as bad as headline figures portray. However, they are still not flash, and lifting productivity performance is essential if living standards are going to rise and the likes of housing affordability agendas met.**

PROPERTY GAUGES

Housing market momentum is moderating, notably in Auckland, as the combination of higher mortgage rates, LVR restrictions, stretched affordability and tighter credit criteria impact. A tug-of-war continues between a fundamental mismatch between supply (building consents are falling) and demand (net migration is still strong) which **points up for prices, and broader "conditions" including affordability and rising interest rates, which say down. The failure of rents to kick on leaves us biased against the thesis that shortages will rekindle market momentum in a strong fashion. It's a factor, just not the key one at present. We view prospects for higher interest rates as a key factor restraining the market and we're not expecting another surge in house prices for a while.**

ECONOMIC OVERVIEW

The economy is still recording decent momentum, supported by what are now reasonably familiar forces. Late-cycle behaviours are apparent, but unlike historical experience, we do not believe the economy has the same degree of imbalances at this point in the cycle that would typically result in boom/bust type cycle. There are tensions across the economy though, with tighter credit and financial conditions a challenge for the likes of housing supply and a headwind for growth. The next move in the OCR will be upwards, but time remains on the RBNZ side.

MORTGAGE BORROWING STRATEGY

Mortgage rates remain virtually unchanged compared with last month. This is thanks largely to the fact that wholesale interest rates have held steady over that period, having edged up in late 2016 before stabilising of late. The mortgage curve remains tick-shaped, as has been **the case for some time now, with the 1 year rate the "low point" on the curve. Intensifying competition for deposits does risk another leg up in mortgage rates given the importance of deposits as a source of funds, but this now looks to be factored into the term structure. As such, in our view, 1 year remains the sweet spot for borrowers. However, longer terms do offer more certainty.**

CHIEF ECONOMIST CORNER: PRODUCTIVITY PUZZLE

SUMMARY

Productivity growth is at the heart of lifting real incomes and boosting living standards i.e. growing outputs faster than inputs. As few would favour a severe house price crunch, the far more attractive way for housing to become more affordable is for incomes to lift. Unfortunately, **productivity figures for New Zealand don't make for pleasant reading**. The trend has waned, and GDP growth per capita has been weak. **We've seen good headline GDP growth** but it has been driven by more inputs, particularly more labour. Of course stronger employment is a good thing, but lifting broad living standards requires a bigger return on our efforts. On some levels weak productivity growth **doesn't tie in with anecdote**. It also must be kept in mind that weaker productivity growth has been a global phenomenon, with New Zealand being 'less bad' than many others. The economic impact (cost) of natural disasters in recent years will have also suppressed productivity, though to what extent is impossible to know. All up, the productivity or GDP per capita story is not as bad as headline figures portray. However, they are still not flash, and lifting productivity performance is essential if living standards are going to rise and the likes of housing affordability agendas met.

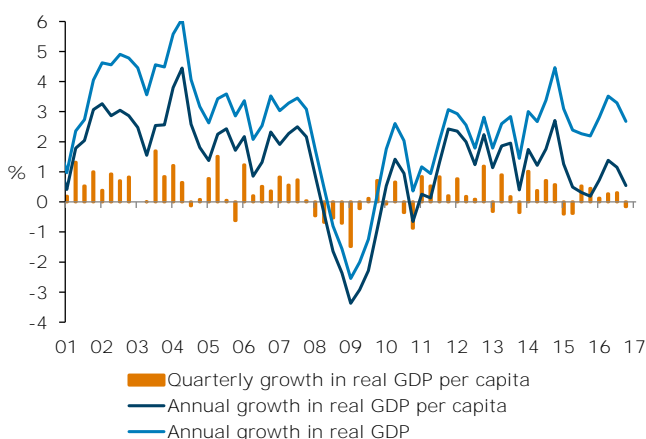
THE PUZZLE

Productivity is the engine of an economy. It sits at the heart of lifting incomes and living standards. This in turn provides more flexibility to invest in the likes of better healthcare, housing, roading, the environment and providing a social safety net. All are intertwined. Highly productive economies are high-wage economies. Most discussion on housing affordability glosses over the income side of the equation. All else equal, we could solve the housing affordability problem over time if income growth were a lot higher. And higher real incomes and productivity go hand in hand.

Unfortunately, productivity figures for New Zealand in recent years don't make for pleasant reading.

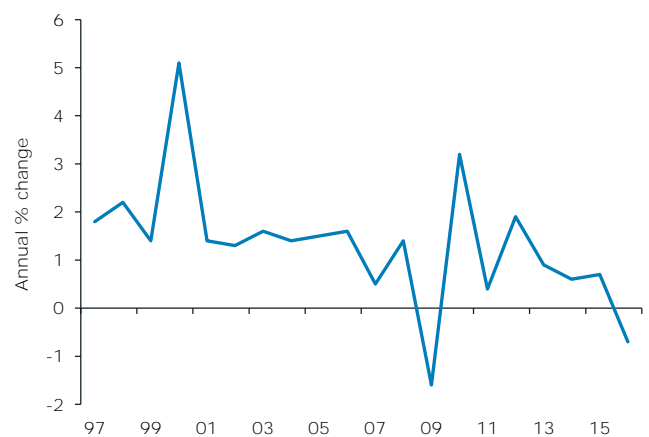
The latest figures showed that in the year to March 2016 labour productivity for the measured sector (which includes all industries except public administration and safety, education and training, health care and social assistance, and ownership of owner-occupied dwellings – thus representing around 80% of GDP) fell 0.7%. This is the weakest result (and the first fall) since 2009. It was driven by a 0.3% fall in the capital-to-labour ratio as well as a 0.4% fall in multifactor productivity.

FIGURE 1: TOTAL AND PER CAPITA REAL GDP GROWTH



Source: ANZ, Statistics NZ

FIGURE 2: MEASURED SECTOR LABOUR PRODUCTIVITY GROWTH



Source: ANZ, Statistics NZ

It was a similar story within the Q4 2016 GDP figures. Although measured on a slightly different basis, they showed GDP divided by hours worked falling for five consecutive quarters to be down 3.8% y/y. Plenty of caution is needed with this measure given that the methodological changes made to the Household Labour Force Survey during the year inflated employment and hours worked figures (diluting inferred productivity). That said, GDP divided by hours paid, or GDP per full-time equivalent employee (taken from the Quarterly Employment Survey) both tell a similar story, with labour productivity on these measures down 0.8% and 0.5% y/y respectively.

A host of commentators are also pointing to weak GDP per capita figures, which paint a similar picture. Real GDP grew 2.7% in the year to December, but in per capita terms GDP increased only 0.5%. The wide gap reflects strong population growth, with net migration running at around 1½% of the resident

CHIEF ECONOMIST CORNER: PRODUCTIVITY PUZZLE

population at present. But it would not be correct to say that poor productivity growth is therefore the 'fault' of strong immigration. Migration is an easy scape goat and has played a role, but it isn't that simple. Who's to say that if the population hadn't grown at all, headline GDP growth wouldn't have been exactly correspondingly lower, leaving growth in GDP per capita the same? In all truth, it probably wouldn't have been, given migrants take a while to settle into the labour market, as we discuss more later. But the upshot is that the real issue is that the data says we have been getting our economic growth primarily through increasing factor inputs, primarily of the labour variety (rather than more machines), ostensibly working harder rather than working 'smarter'. Total hours worked were up a hefty 6.7% over 2016, or just short of 1% per employed person, and there are limits to how far that lever can be pulled.

Of course, a high employment rate is a good thing for an economy and for society. But to really lift living standards, the answer is not to increase working hours per person, but to increase the value of the outputs that that labour effort is producing. That's a much trickier and more nebulous concept, that depends on a multitude of factors, including education, available technology and the amount of capital (per worker), the size of firms, and how easily labour resources can move to take advantage of opportunities (and Auckland's high house prices and hence cost of living are unhelpful for the latter).

Weak productivity data needs to be acknowledged, but on a number of levels the productivity picture is still a surprise. Of course we need to be mindful of the *level* versus the *change*, but even the latter doesn't tie in with anecdotes. Cost control is still permeating strongly as a theme some seven years into the economic expansion; waning productivity is normally associated with *less* cost control. Weak productivity is typically seen at the silly stage of the economic cycle, with rising unit labour costs and rising non-tradable inflation (especially from the services sector). We're just not seeing that, at least not across the board. And we're also seeing the economy become more intensive in its energy utilisation, with electricity consumption (on a GWh basis) at its lowest level as a percentage of GDP ever, at 16% at the end of 2016.

It's easy to identify examples where productivity is strong, particularly in the agriculture sector.

- **Ongoing on-farm innovations** include using drones to monitor livestock, robotic milking plants, renewable energy innovations, cloud accounting that combines physical performance and financial information to inform on-farm decision making, livestock traceability technology being used to monitor performance and disease issues, continued investment in higher-yielding new grass and crop cultivars, and animal, artificial insemination of dairy cows with single-sex semen, mechanical fruit-picking machines for kiwifruit, and the list could go on.
- **We're seeing off-farm/orchard innovations too.** Examples include new separation and extraction technologies to create new ingredients for specific packaged food products, or the development of a low lactose whole milk powder, which could be big in the Asian market, increasing value-add. Again there are numerous other examples.

But the official statistics are clearly telling us that such successes are being outweighed by wider forces.

To be fair, the picture is less bad when eyed over a number of years, although it is still soft. Since 2009, labour productivity in the measured sector has experienced annual average growth of 0.7%. It has effectively been flat for the past three years. That compares with an annual average growth rate of 1.3% between 2001 and 2008. Low inflation and weak productivity has suppressed wage growth.

Perhaps part of the issue is that there is still an inherent bias to shove all our eggs in the housing basket. New Zealand is less bad than it was, but housing still dominates the household balance sheet and that chews up critical savings that could be used productively elsewhere, for example to increase the available pool of funds for the expansion of new, high-productivity businesses. The total stock of housing lending in February (at over \$200bn) was effectively twice the size of lending to the business sector.

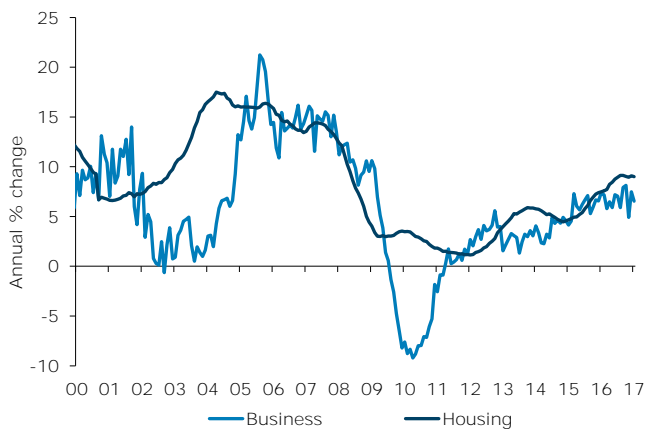
Under-investment in areas such as roading and housing are legacy issues that carry a sting in their tail for productivity – and we're talking about decades of underinvestment here. That's being corrected somewhat now, but that productivity payoff is miles down the track. In Auckland particularly, workers will continue to find it difficult or simply too costly to be where the best employment opportunities are.

CHIEF ECONOMIST CORNER: PRODUCTIVITY PUZZLE

The economy is transitioning and resources don't shift instantaneously, so there is an implicit cost to carry. It's the same when businesses re-orientate. A borrow-and-spend economy is being replaced by a more balanced one (though some behaviours of old have returned of late). That re-orientation is not easy when the NZD is not playing ball and is skewing the playing field away from exporters.

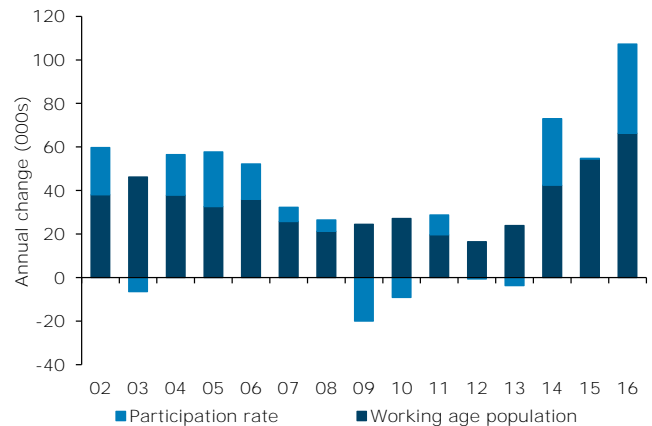
The phenomenal growth in the labour supply in recent years will certainly have played a role suppressing productivity too. As each new worker is drawn into the workforce (be that a new migrant, someone previously unemployed, or a person entering or re-entering the labour force), one would expect that their marginal productivity is lower than a worker who has been employed for some time. The labour force has grown by a strong 13% since the end of 2012 through a combination of working age population growth (net migration) and a rising participation rate (which now sits at all-time highs).

FIGURE 3: HOUSING VS BUSINESS SECTOR CREDIT GROWTH



Source: ANZ, RBNZ

FIGURE 4: BREAKING DOWN THE CHANGE IN THE LABOUR FORCE



Source: ANZ, Statistics NZ

It's hard for an economy to absorb the sheer scale of new migrants arriving at present, particularly with question marks over their mix of skills relative to skills demand.

The economy, as a collective, has chosen to work 'more' over the past few years, with labour input (effectively the total number of hours paid) up close to 11% since March 2011. That reflects not only more people working, but people working more. Average weekly paid hours lifted to 38.7 hours in Q4, which is the highest since 1995. It has meant that the ratio of capital to labour – a key determinant of labour productivity – has effectively been flat since 2011. Getting people into the labour force is fundamentally a good thing, but **it's** a short-term win if it comes at the expense of productivity.

Firms' decisions partly reflect relative price changes. Whether to invest a marginal dollar in labour or capital will ultimately come down to the relative price between the two. So it is really of no surprise that a flat capital-to-labour ratio since 2011 coincides with effectively no change in the relative price of capital to labour over that same period.

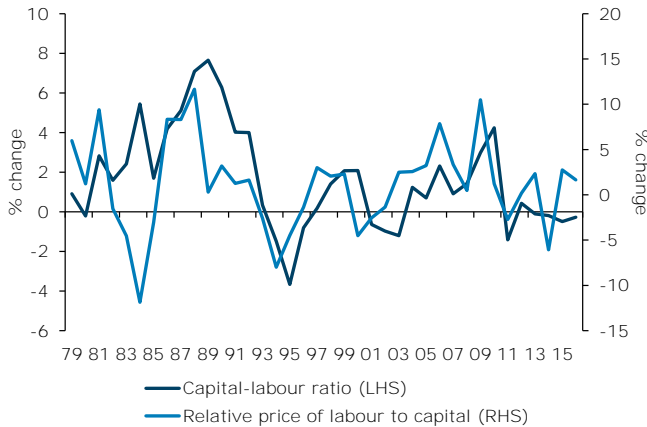
That's still cold comfort because with the NZD high, capital investment has been relatively cheap. It's just that the cost of labour has been relatively cheap too.

The challenges of supply-side shocks also need to be acknowledged. The natural disasters the country has been dealing with, from the 2010/11 Canterbury earthquakes right up to the latest earthquake in Kaikoura, while temporary, do impact on the efficient allocation of resources. They wiped out or displaced capital stock. People's lives and businesses have been disrupted. We've rebuilt and worked our way around them, but there has been an efficiency loss / cost.

It's somewhat puzzling why such natural disasters have not been acknowledged as major factors suppressing productivity. The Christchurch earthquake was a \$50 billion hit to the national balance sheet and capital stock. Whilst impossible to quantify, common sense says the impact will have been non-trivial. Then the Kaikoura quake occurred. The drive from Christchurch to Picton is now two hours longer. Some major infrastructure (i.e. a couple of ports) is not fully operational. Logistical functions continue to be disrupted.

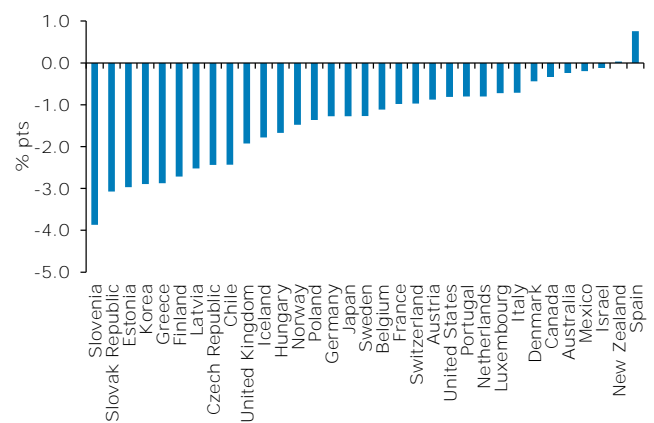
CHIEF ECONOMIST CORNER: PRODUCTIVITY PUZZLE

FIGURE 5: CHANGE IN CAPITAL-LABOUR RATIO AND RELATIVE FACTOR PRICES



Source: ANZ, Statistics NZ

FIGURE 6: CHANGE IN LABOUR PRODUCTIVITY GROWTH (2009-2015 AVG LESS 1990-2008 AVG)



Source: ANZ, OECD

But weak labour productivity growth is an issue far from unique to New Zealand. It has been a global phenomenon, with the average annual labour productivity growth across the G7 of just 0.8% between 2009 and 2015, which is less than half the average seen between 1990 and 2008. This soft trend is one of the more perplexing and debated issues right now considering it comes at a time when technology is apparently advancing at an exponential pace.

In fact, the softer trend has actually been far less pronounced in New Zealand than elsewhere. On a GDP versus hours worked basis (using OECD data), average labour productivity growth between 2009 and 2015 in New Zealand is actually broadly similar to the average between 1990 and 2008. That is a vastly different story to the rest of the OECD – productivity growth has weakened in every country with the exception of Spain and Ireland (although for the latter, changes in the measurement of GDP make this misleading).

So it effectively means that New Zealand is a case of being 'less bad'. Of course the overall level of productivity matters as well (in fact it matters a lot), and New Zealand hasn't – and still doesn't – stack up so well on that front. It is one of the reasons our GDP per capita sits in the bottom half of the OECD. And being less bad in a relative comparison to a prior period doesn't hide the fact New Zealand has still underperformed in an absolute sense.

The direction of productivity growth from here takes on critical importance. A continuation of weakness would be a harbinger of an end to the economic expansion; complacency ends good times. Weak productivity raises unit labour costs and puts pressure on inflation. For real wage rises to be sustainable, productivity needs to lift.

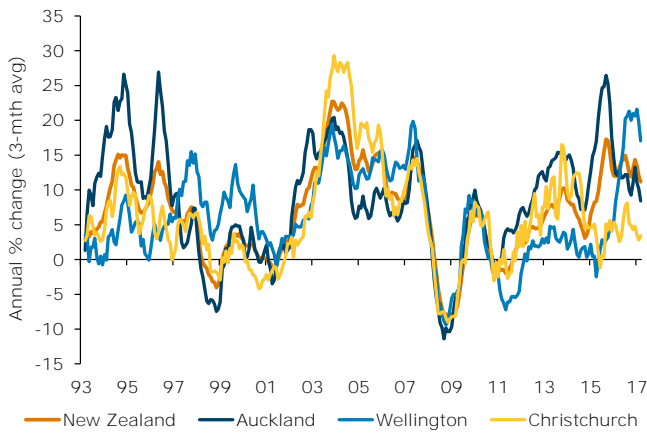
Improving productivity growth is easier said than done. The levers are not always so obvious. One of the greatest productivity elixirs was the invention of spectacles; that shows just how subtle big drivers of change can be. And it isn't as simple as saying that everything that increases measured productivity is desirable. For example, we would get a great boost by going back to five-day-a-week shopping. We'd reschedule our busy lives and still purchase what we needed to, and it'd save the retail sector a bundle in wage costs. Sometimes the choices we make as a society (such as demanding convenience) come with an implicit cost.

When it comes to increasing productivity New Zealand seems to be pushing the right buttons (infrastructure, education, better public services) and we rank well across numerous surveys in regard to ease of doing business etc. **But there are issues of scale** (we are small), **the tyranny of distance, economic structure** (still primarily a commodity exporter and not a value-added one), and **legacy issues** to deal with such as **a poor savings and investment culture**.

You don't overcome these challenges and play catch-up by thinking inside the square; you need to be outside it. The status quo just doesn't cut it. Fostering a big shift in ideas, methods and being a lot more creative is the real challenge for New Zealand. For housing to be more affordable, productivity enhancement needs to be part of the debate, and lift, so incomes can too in a sustainable fashion.

THE PROPERTY MARKET IN PICTURES

FIGURE 1. REGIONAL HOUSE PRICES

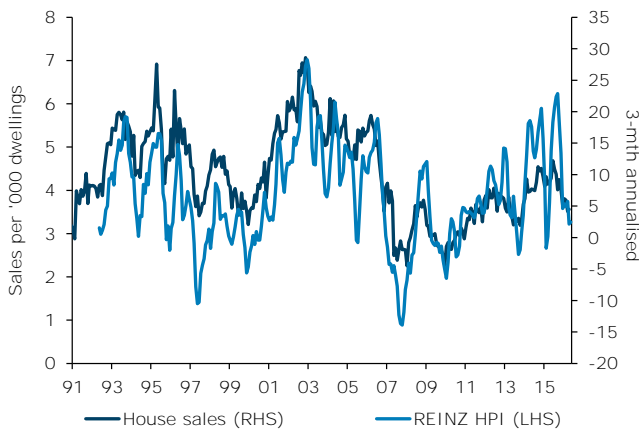


Source: ANZ, REINZ

According to the REINZ stratified measure, nationwide house prices bounced back 2.2% in March on top of a 0.8% lift in February (sa).

Wellington prices fell 1.3% but all other regions rose. While the numbers can be volatile, especially around the turn of the year, it seems clear that momentum in price growth has broadly slowed, though it is now stabilising. On a 3-month annualised basis, nationwide prices are running at 2.5%, which is up from 2.1% in February but down from over 23% over mid-2016. Auckland prices are running at -9% on the same measure. The North Island outside of Auckland and Wellington is outperforming, with annualised 3-month growth of 11.4%.

FIGURE 2. REINZ HOUSE PRICES AND SALES



Source: ANZ, REINZ

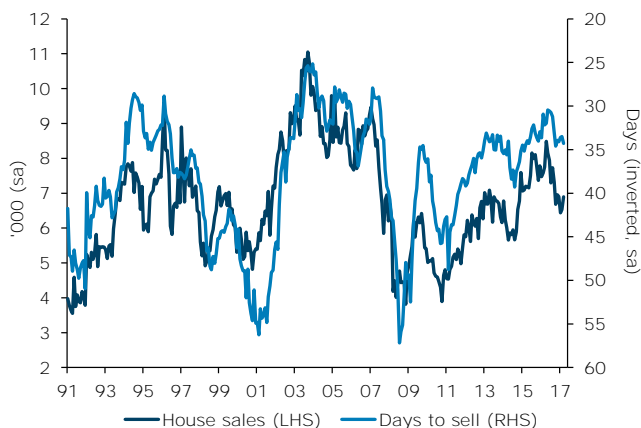
Sales volumes and prices tend to be closely correlated, although tight dwelling supply can complicate the relationship.

Seasonally adjusted sales lifted 6.0% m/m in March, completing its bounce-back from a 6.7% fall in January.

House sales have fallen in seven of the past 12 months. This weakness is broad-based. Auckland sales volumes are down around quarter versus their April-2016 peak, while ex-Auckland volumes are down 16% over the same period.

The softer trend in sales activity suggests that the recent moderation in house price growth will continue. That said, sales did increase over the past two months (seasonally adjusted) in both Auckland and the rest of the country.

FIGURE 3. SALES AND MEDIAN DAYS TO SELL



Source: ANZ, REINZ

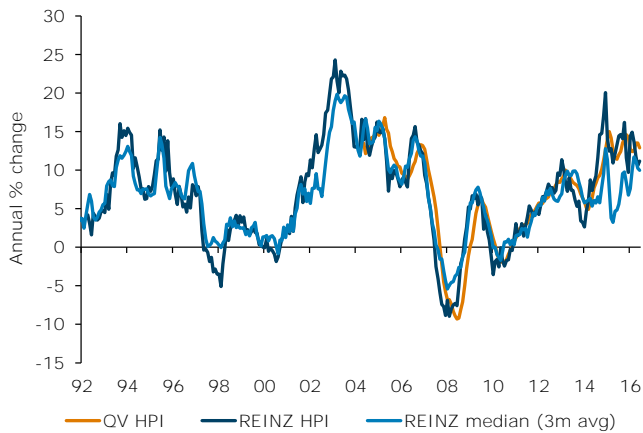
How long it takes to sell a house is also an indicator of the strength of the market, encompassing both demand and supply-side considerations. Larger cities tend to see houses sell more quickly, but deviations in a region from its average provide an indicator of the heat in a market at any given time.

Nationally, the median time to sell a house increased from 33.5 to 34.3 days (sa) in March. This is well up from its mid-2016 lows of close to 30 days.

The median time to sell a property is below historical averages in every region except Auckland (36.5 days, versus a long-run average of 34.5) and Canterbury (36 days, versus a long-run average of 35.5 days).

THE PROPERTY MARKET IN PICTURES

FIGURE 4. REINZ AND QV HOUSE PRICES

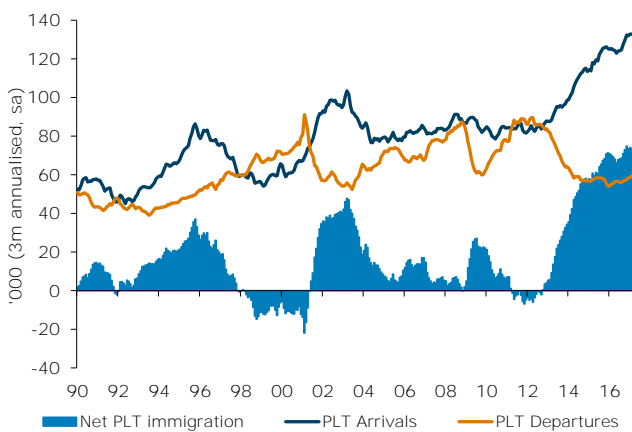


Source: ANZ, REINZ, QVNZ

There are three key measures of house prices in New Zealand: the median and stratified house price 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, with the REINZ median typically more volatile as it is sensitive to the composition of sales taking place.

The REINZ median sale price lifted 1.8% in March and is up 10.2% y/y. This is a little lower than the REINZ stratified measure (11.2% y/y) and the QVNZ measure of price growth (12.9% y/y), with the latter two measures adjusting for changes in the quality of houses sold.

FIGURE 5. NET PLT IMMIGRATION



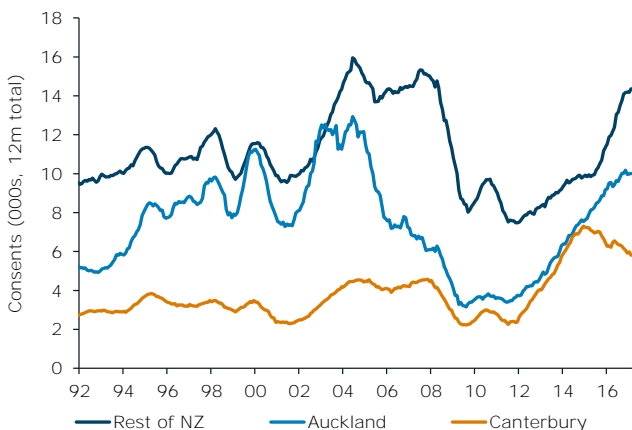
Source: ANZ, Statistics NZ

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

On a three-month annualised basis, net permanent and long-term migration was close to 74k in March, which is near all-time highs and over 1½% of the resident population. More arrivals and fewer departures have both contributed to this large net inflow, although over the past 12 months or so, the former has been the dominant factor.

Migration inflows are expected to remain strong. **New Zealand's current strong labour market (particularly relative to Australia, by far the most relevant comparator) will allure people home.** In a world of fractured international politics (Brexit, US political uncertainty), there'll be no shortage of people with a desire to move to New Zealand.

FIGURE 6. RESIDENTIAL CONSENTS



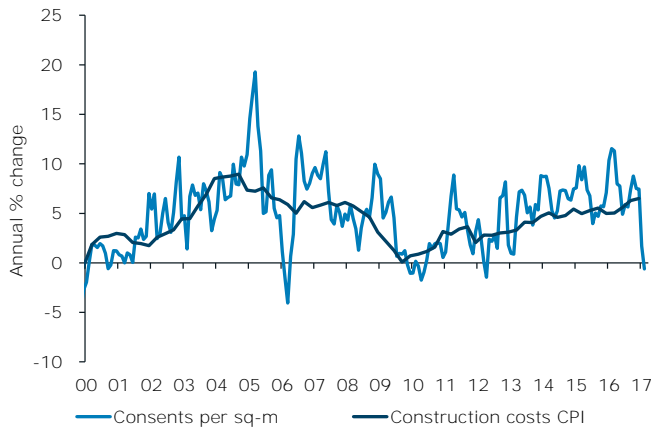
Source: ANZ, Statistics NZ

Seasonally adjusted dwelling consent issuance lifted 14.0% m/m in February on top of a 2.1% lift in January as the data continues to recover from large falls in both November and December. The volatility has been driven by apartments, which have bounced back 36% in the past two months, largely reversing December's fall. Consents for 'houses' jumped 14% in February, but have fallen in four of the past six months.

But despite the bounce in today's data, issuance is still off its highs. In seasonally adjusted terms, the number of consents is down 8% nationally from its mid-2016 peak. Canterbury is recording trend growth of -5.1% m/m at present (unsurprising, given the gradual winding down of the earthquake rebuild), while Auckland, Waikato and Wellington are recording monthly trend growth of -2.6%, -2.5% and -3.7% respectively.

THE PROPERTY MARKET IN PICTURES

FIGURE 7. CONSTRUCTION COST INFLATION



Source: ANZ, Statistics NZ

On a three-month average basis, **the value of residential consents per square metre actually fell 0.6% y/y in February.** This continues a surprisingly sharp fall in growth from the close to 9% rates seen over the latter part of 2016. This may indicate that construction cost inflation is finally starting to wane, but we suspect it is primarily compositional. Given the extreme volatility in this cost measure we will await further data before drawing any conclusions. Costs per square metre in Auckland (especially in the multi-dwelling space) have lifted especially strongly of late, and our internal anecdotes continue to highlight that capacity pressures in the construction sector are intense, with a severe shortage of labour.

FIGURE 8. NEW MORTGAGE LENDING AND HOUSING CREDIT



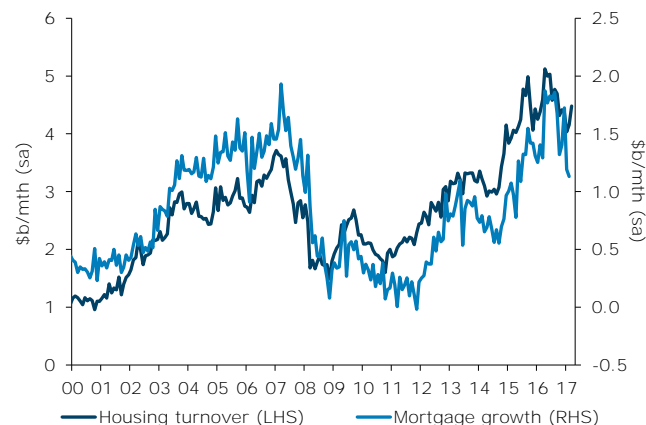
Source: ANZ, RBNZ

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

New mortgage lending softened further in February. We estimate that in seasonally adjusted terms, new lending fell 2.1% m/m to \$5.0bn, which follows a 9.7% m/m fall in January, and is the lowest amount since November 2014. The data mirrors the fall in the value of housing turnover.

Softer new lending was reasonably broad-based. Whereas previously the slowing was largely an investor story (and new investor lending is currently down 35% y/y), the growth in lending to first home buyers and other owner occupiers has also cooled of late too, with the former flat y/y, and the latter down 4.5% y/y.

FIGURE 9. HOUSE TURNOVER AND MORTGAGE GROWTH



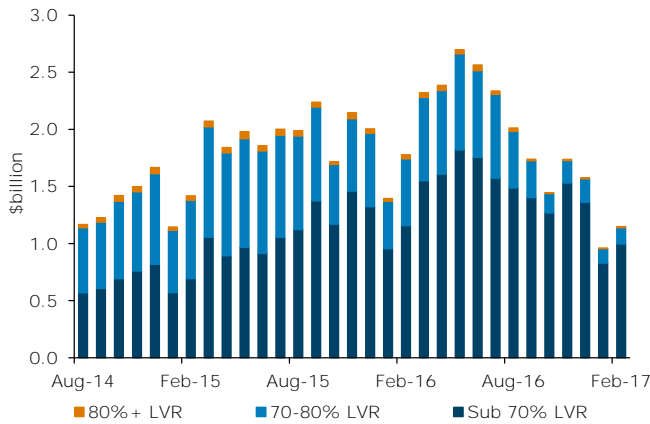
Source: ANZ, REINZ, RBNZ

Growth in the overall stock of mortgages has continued to cool, after a period of strong growth. For the second consecutive month, total housing credit rose 0.5% m/m in February, with a 3-month annualised pace of growth easing to 7.5%, the softest since mid-2015 and well down from the 10% pace recorded in August 2016.

The latest tightening of the high-LVR lending restrictions – together with increased credit rationing by banks – appear to be having a marked impact on both house sales and credit availability. Add in recent modest increases in mortgage rates (and widespread expectations of more to come), and we expect to see mortgage lending growth remain at this more moderate pace over the coming months.

THE PROPERTY MARKET IN PICTURES

FIGURE 10. INVESTOR LENDING BY LVR

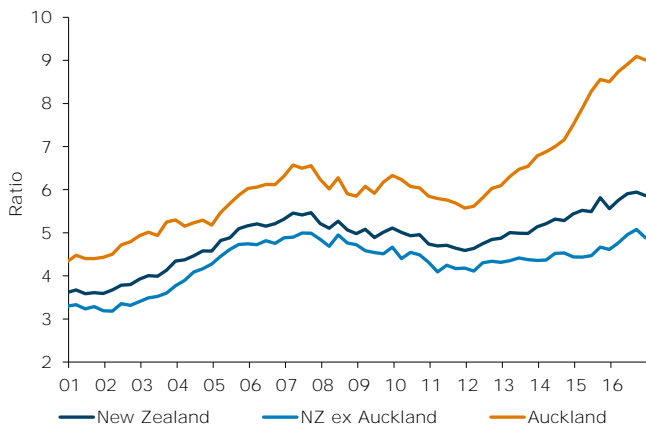


Source: ANZ, RBNZ

New lending to investors is well off its mid-2016 peak, down 35% y/y in February. Its share of overall new lending, at 26%, is well down from a peak of 38% in June 2016. This is no doubt related to the latest round of RBNZ LVR restrictions, which officially came into force on 1 October 2016 but influenced lending decisions in the months prior.

Related to this, a larger share of new lending is on less-risky terms. As a share of total investor lending, lending done with LVRs in excess of 70% made up just 13% of the total in February, down from 33% in July and over 50% in mid-2015.

FIGURE 11. REGIONAL HOUSE PRICES TO INCOME



Source: ANZ, REINZ, Statistics NZ

One standard measure of housing affordability is the ratio of average house prices to incomes. It is a common 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 sits just below 6, which is slightly above the previous highs recorded prior to the GFC. However, there is a stark regional divide. We estimate the average house price to income in Auckland has now risen to around 9 times, suggesting a severely unaffordable market. Elsewhere, the ratio is around 5 times, which is back where it peaked prior to the financial crisis.

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 34% at the moment.

However, once again there are stark regional differences, with the average mortgage payment to income in Auckland around 51% for new purchasers. That is 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

Housing market momentum is moderating, notably in Auckland, as the combination of higher mortgage rates, LVR restrictions, stretched affordability and tighter credit criteria impact. A tug-of-war continues between a fundamental mismatch between supply (building consents are falling) and demand (net migration is still strong) which points up for prices, and broader “conditions” including affordability and rising interest rates, which say down. The failure of rents to kick on leaves us biased against the thesis that shortages will rekindle market momentum in a strong fashion. It’s a factor, just not the key one at present. We view prospects for higher interest rates as a key factor restraining the market and we’re not expecting another surge in house prices for a while.

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	Stretched	↔/↓	Low interest rates meant house prices lifted faster than incomes but interest rates are now gradually rising.
Serviceability/ indebtedness	Deteriorating	↔/↓	More debt and higher interest rates is not a great combination.
Interest rates / RBNZ	Rising	↓	We are in a rising interest rate environment. The pace is glacial but the turning point is past.
Migration	Extreme	↔/↑	Pressure on Government to reduce it but levers are not easy to pull when a lot of the net inflow is New Zealanders returning or staying.
Supply-demand balance	Demand > Supply	↔/↑	Demand is outstripping supply and the latter looks to be slowing.
Consents and house sales	Shortage	↔/↑	Not enough builders to lift supply materially.
Liquidity	Fewer loans	↓	LVR restrictions are biting and banks are curtailing supply of credit, particularly at the riskier end.
Globalisation	Mixed bag	↔	Auckland (9 times income) no longer looks cheap in a global comparison but the rest of NZ still does (5 times). So the regions are now outperforming Auckland.
Housing supply	Behind the 8-ball	↔/↑	Less credit + higher construction costs + no labour = less supply.
House prices to rents	Mismatch	↔/↓	Rents not keeping pace with house prices.
On balance	Flat-lining	↔	Higher interest rates and less easily available credit have taken the wind out of the market.

PROPERTY GAUGES

FIGURE 1: HOUSING AFFORDABILITY

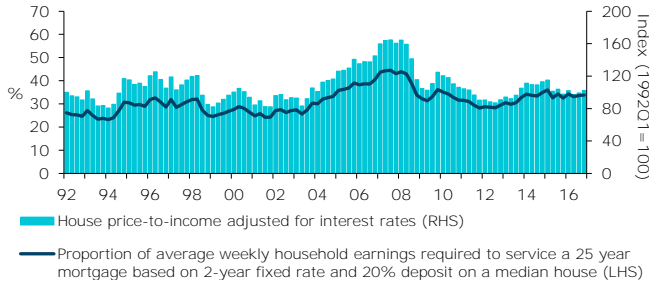


FIGURE 2: SERVICEABILITY AND INDEBTEDNESS

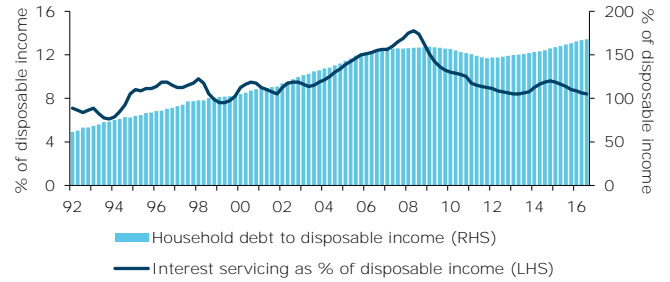


FIGURE 3: NEW CUSTOMER AVERAGE RESIDENTIAL MORTGAGE RATE (<80% LVR)

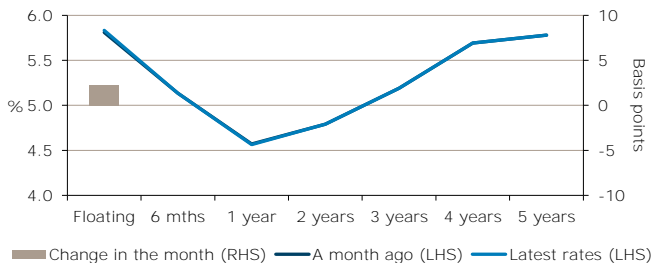


FIGURE 4: NET MIGRATION



FIGURE 5: HOUSING SUPPLY-DEMAND BALANCE

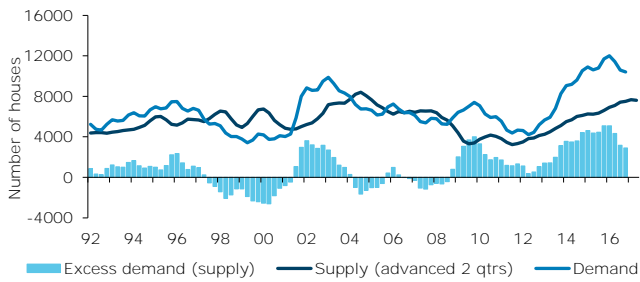


FIGURE 6: BUILDING CONSENTS AND HOUSE SALES



FIGURE 7: LIQUIDITY AND HOUSE PRICES

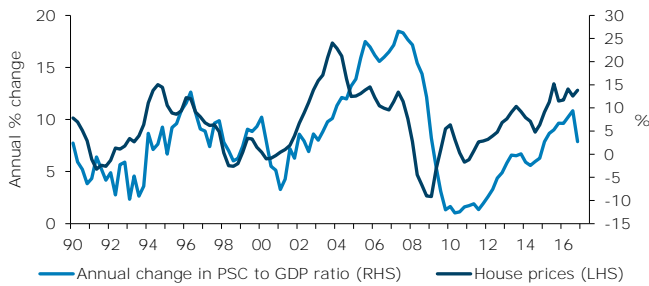


FIGURE 8: HOUSE PRICE INFLATION COMPARISON

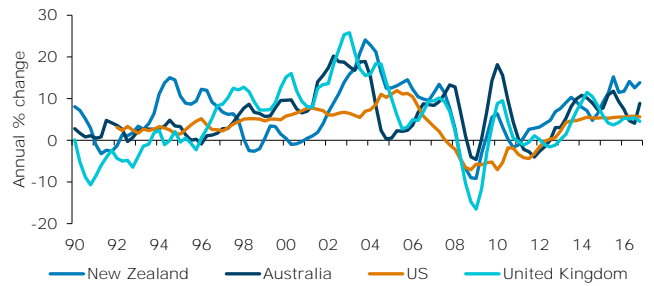


FIGURE 9: HOUSING SUPPLY

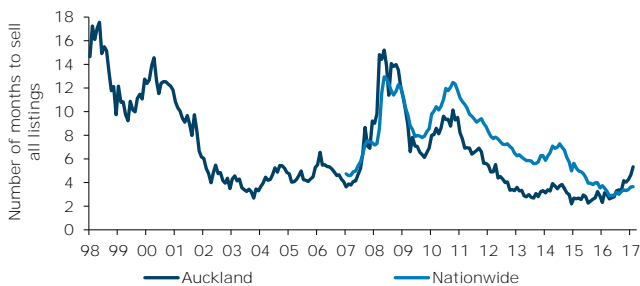


FIGURE 10: MEDIAN RENTAL, ANNUAL GROWTH



Source: ANZ, Statistics NZ, REINZ, RBNZ, QVNZ, Nationwide, Bloomberg, Barfoot & Thompson, Department of Building and Housing.



ECONOMIC OVERVIEW

SUMMARY

The economy is still recording decent momentum, supported by what are now reasonably familiar forces. Late-cycle behaviours are apparent, but unlike historical experience, we do not believe the economy has the same degree of imbalances at this point in the cycle that would typically result in boom/bust type cycle. There are tensions across the economy though, with tighter credit and financial conditions a challenge for the likes of housing supply and a headwind for growth. The next move in the OCR will be upwards, but time remains on the RBNZ side.

OUR VIEW

The economy is recording solid growth. While momentum did slow over late 2016, it is recovering in 2017. We estimate growth has eased from a 3.5-4% mid-2016 pace to 3-3.5% now (a bounce from Q4's 2.7%). The economy continues to be supported by strong migration, construction activity, tourism, broad-based commodity price support and favourable policy settings. Headwinds from low dairy prices are lingering but fading.

With the economy into its eighth year of economic expansion, a key challenge is managing late-cycle behaviours. New Zealand has tended to run in a 10-year business cycle and head into self-inflicted downturns prior to major global events. Finding skilled staff is difficult. Capacity pressures are building. Construction costs have ballooned. Productivity has deteriorated and housing-related excesses have grown, with leverage rising. Historically, in such circumstances the current account deficit has blown out and a housing boom, in conjunction with a consumption boom, has tended to contribute to rising inflation, leading to rapid lifts in interest rates. So far, this hasn't happened, but we can't be complacent.

This business cycle is looking different from the historical experience on six levels:

- We have a housing / investment boom but have not seen a consumption equivalent; that's helping to keep inflation at bay (along with other factors).
- We have a shortage of housing as opposed to an excess supply; we still can't build enough.
- We don't have a sizeable shadow banking sector in operation.
- The RBNZ has brought macro-prudential tools to the table, helping curtail housing excesses.
- Banks are actively re-pricing risk and rationing credit late in the cycle.
- Productivity growth is not that weak if natural disasters (i.e. Christchurch) are taken into account.

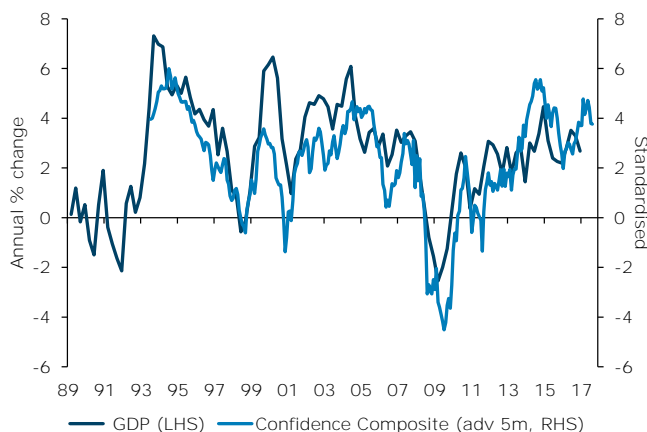
Such forces naturally lead to tension across the economy. The housing market has slowed – quite suddenly. Less credit will accentuate housing imbalances and will put pressure on the economy to generate more domestic savings to fund its investment needs. Saving for tomorrow means less growth today. However, less growth today means firmer prospects tomorrow with prospects for a less-volatile business cycle, which adds to business certainty and confidence.

The next move in the OCR will be a hike, though time is still on the RBNZ's side.

We continue to have concerns over the global economy, which we view as the major economic risk.

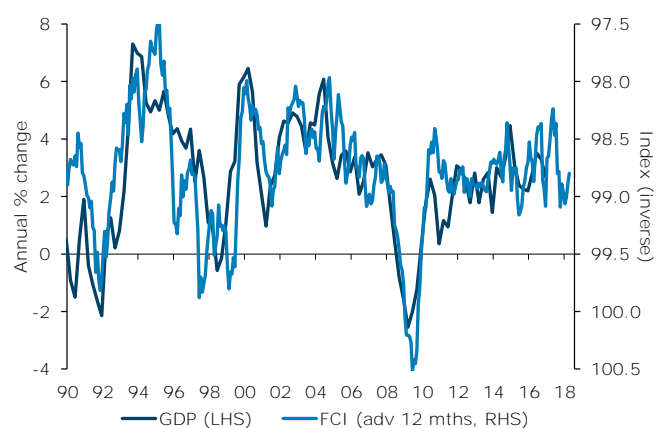
Productivity is weak. Interest rates need to move up. Demographics are now a headwind. Leverage is high. Policy platforms are poor. The geopolitical situation is fragile. It all adds up to a slow growth rut with lots of volatility.

FIGURE 1. GDP VS CONFIDENCE COMPOSITE



Source: ANZ, Roy Morgan, Statistics NZ

FIGURE 2. GDP VS FINANCIAL CONDITIONS INDEX



Source: ANZ, Statistics NZ, Bloomberg

MORTGAGE BORROWING STRATEGY

SUMMARY

Mortgage rates remain virtually unchanged compared with last month. This is thanks largely to the fact that wholesale interest rates have held steady over that period, having edged up in late 2016 before stabilising of late. The mortgage curve remains tick-shaped, as has been the case for some time now, with the 1 year rate the “low point” on the curve. Intensifying competition for deposits does risk another leg up in mortgage rates given the importance of deposits as a source of funds, but this now looks to be factored into the term structure. As such, in our view, 1 year remains the sweet spot for borrowers. However, longer terms do offer more certainty.

OUR VIEW

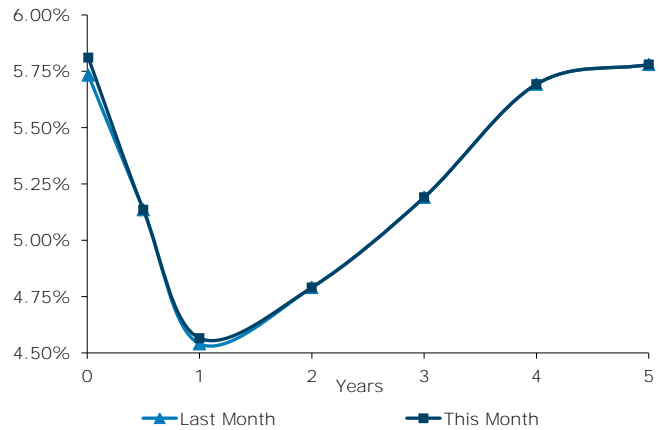
Mortgage interest rates have barely changed over the past month, reflecting a period of stability for wholesale rates and early signs of a cooling off in credit growth. The mortgage curve remains tick-shaped, with **the 1 year rate marking the low point**.

We believe the 1 year remains the sweet spot on the curve. While partly a reflection of the fact that it’s the cheapest rate, it’s also a reflection of our judgement on the future given what’s built into the term structure of interest rates, and where they are headed. That is, after all, more important over the long term. Simply **choosing the cheapest option all the time is the easiest on cashflow initially, but it may not be the best option over the long run.** However, on this occasion it looks to be.

At the moment we see limited benefit in paying a premium to fix for longer. This is because the term structure is building in a more rapid rise in mortgage rates than we expect, implying that it is likely to be cheaper to go for back-to-back 1 year fixes than a single 2 year fix. As an example, if one chose to fix for 2 years at 4.79%, by forgoing the option of fixing for 1 year at 4.57%, mathematically that implies that you expect the 1 year rate to be above 5.02% in one year’s time. That could happen, but we believe it’s a line call.

Rising wholesale rates are a perennial risk to mortgage rates, but they have tended to fall of late, having followed US bond yields lower during the most recent period of heightened geopolitical risks and softening US economic data. **Conversely, if we were to see a rise in retail term deposit rates, we would likely see a rise in mortgage rates–** such is the importance of term deposits as a source of bank funding. **However, we believe these risks are adequately built into the term structure.** Having said that, **it’s not always about cost. Certainty matters, as does “rollover risk”** (i.e. the risk that you have to make another difficult and calculated decision when your existing fixed rate rolls off). One obvious way to avoid this is to split your mortgage into two or three separate tranches, and to roll each tranche separately. **With some banks offering 18 month specials, it may be worthwhile considering splitting your mortgage into three loans; fix a third for 6 months, a third for a year and a third for 18 months, and roll each for a year upon maturity.** That way, **at any point in time you’ll always have at least a year of certainty up your sleeve,** and if the curve remains tick-shaped (as it has been for a long time), **you’re likely to always be paying a competitive rate.**

CARDER SPECIAL MORTGAGE RATES^



Special Mortgage Rates		Breakevens for 20%+ equity borrowers			
Term	Current	in 6mths	in 1yr	in 18mths	in 2 yrs
Floating	5.83%				
6 months	5.14%	4.00%	4.90%	5.13%	5.79%
1 year	4.57%	4.45%	5.02%	5.46%	5.99%
2 years	4.79%	4.95%	5.50%	6.01%	6.60%
3 years	5.19%	5.49%	6.07%	6.27%	6.44%
4 years	5.69%	5.81%	6.08%		
5 years	5.78%	# 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	5.83%				
6 months	5.24%	4.75%	5.67%	5.22%	5.90%
1 year	4.99%	5.21%	5.44%	5.56%	6.04%
2 years	5.22%	5.38%	5.74%	5.96%	6.37%
3 years	5.49%	5.71%	6.06%	6.22%	6.49%
4 years	5.79%	5.97%	6.23%		
5 years	5.98%	*may be subject to a low equity fee			

^ 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 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
Mortgage Size (\$'000)	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 March 2017 (based on REINZ data)

	House prices (ann % chg)	3mth % chg	No of sales (sa)	Mthly % chg	Avg days to sell (sa)
Northland	26.9	4.7	267	-1%	35
Auckland	8.4	-0.7	2,372	+5%	37
Waikato/BOP/Gisborne	17.4	2.5	1,236	+9%	39
Hawke's Bay	24.5	6.8	255	+21%	31
Manawatu-Whanganui	16.4	3.4	383	+18%	33
Taranaki	17.1	0.0	189	-13%	41
Wellington	14.1	2.6	860	+12%	29
Nelson-Marlborough	12.6	3.3	260	+7%	32
Canterbury/Westland	3.5	0.2	1,008	+6%	36
Central Otago Lakes	-2.1	4.0	161	+13%	40
Otago	14.4	4.4	276	+9%	22
Southland	7.0	-4.6	205	+8%	33
NEW ZEALAND	10.2	1.4	7,319	+6%	34

Key forecasts

Economic indicators	Actual			Forecasts						
	Jun-16	Sep-16	Dec-16	Mar-17	Jun-17	Sep-17	Dec-17	Mar-18	Jun-18	Sep-18
GDP (Ann Avg % Chg)	2.7	3.0	3.1	3.1	3.0	3.0	3.1	3.0	2.9	2.6
CPI Inflation (Annual % Chg)	0.4	0.4	1.3	2.2(a)	2.0	2.2	2.0	1.7	2.0	2.1
Unemployment Rate (%)	5.0	4.9	5.2	5.0	4.8	4.7	4.7	4.6	4.5	4.5
Interest rates (RBNZ)	Jun-16	Sep-16	Dec-16	Mar-17	Jun-17	Sep-17	Dec-17	Mar-18	Jun-18	Sep-18
Official Cash Rate	2.25	2.00	1.75	1.75	1.75	1.75	1.75	1.75	2.00	2.25
90-Day Bank Bill Rate	2.4	2.2	2.0	2.0	2.0	2.0	2.0	2.1	2.3	2.5
Floating Mortgage Rate	5.7	5.6	5.7	5.8	5.8	5.8	5.8	5.8	6.0	6.3
1-Yr Fixed Mortgage Rate	4.9	4.9	4.9	5.0	5.0	5.1	5.1	5.2	5.3	5.4
2-Yr Fixed Mortgage Rate	5.1	5.1	5.1	5.2	5.4	5.4	5.5	5.6	5.7	5.8
5-Yr Fixed Mortgage Rate	5.6	5.6	5.9	6.1	6.4	6.5	6.6	6.6	6.7	6.8

Source: ANZ, Statistics NZ, RBNZ

IMPORTANT NOTICE

The distribution of this document or streaming of this video broadcast (as applicable, "publication") may be restricted by law in certain jurisdictions. Persons who receive this publication must inform themselves about and observe all relevant restrictions.

1. Disclaimer for all jurisdictions, where content is authored by ANZ Research:

Except if otherwise specified in section 2 below, this document is issued and distributed in your country/region by Australia and New Zealand Banking Group Limited (ABN11 005 357 522) ("ANZ"), on the basis that it is only for the information of the specified recipient or permitted user of the relevant website (collectively, "recipient"). This document is confidential and may not be reproduced, distributed or published by any recipient for any purpose. It is general information and has been prepared without taking into account the objectives, financial situation or needs of any person. Nothing in this document is intended to be an offer to sell, or a solicitation of an offer to buy, any product, security, instrument or investment, to effect any transaction or to conclude any legal act of any kind. If, despite the foregoing, any services or products referred to in this document are deemed to be offered in the jurisdiction in which this document is received or accessed, no such service or product is intended for nor available to persons resident in that jurisdiction if it would be contradictory to local law or regulation. Such local laws, regulations and other limitations always apply with non-exclusive jurisdiction of local courts. Certain financial products may be subject to mandatory clearing, regulatory reporting and/or other related obligations. These obligations may vary by jurisdiction and be subject to frequent amendment. Before making an investment decision, recipients should seek independent financial, legal, tax and other relevant advice having regard to their particular circumstances.

The views and recommendations expressed in this publication are the author's. They are based on information known by the author and on sources which the author believes to be reliable, but may involve material elements of subjective judgement and analysis. Unless specifically stated otherwise: they are current on the date of this publication and are subject to change without notice; and, all price information is indicative only. Any of the views and recommendations which comprise estimates, forecasts or other projections, are subject to significant uncertainties and contingencies that cannot reasonably be anticipated. On this basis, such views and recommendations may not always be achieved or prove to be correct. Indications of past performance in this publication will not necessarily be repeated in the future. No representation is being made that any investment will or is likely to achieve profits or losses similar to those achieved in the past, or that significant losses will be avoided. Additionally, this publication may contain 'forward looking statements'. Actual events or results or actual performance may differ materially from those reflected or contemplated in such forward looking statements. All investments entail a risk and may result in both profits and losses. Foreign currency rates of exchange may adversely affect the value, price or income of any products or services described in this publication. The products and services described in this publication are not suitable for all investors, and transacting in these products or services may be considered risky. ANZ and its related bodies corporate and affiliates, and the officers, employees, contractors and agents of each of them (including the author) ("Affiliates"), do not make any representation as to the accuracy, completeness or currency of the views or recommendations expressed in this publication. Neither ANZ nor its Affiliates accept any responsibility to inform you of any matter that subsequently comes to their notice, which may affect the accuracy, completeness or currency of the information in this publication. Except as required by law, and only to the extent so required: neither ANZ nor its Affiliates warrant or guarantee the performance of any of the products or services described in this publication or any return on any associated investment; and, ANZ and its Affiliates expressly disclaim 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 publication.

If this publication has been distributed by electronic transmission, such as e-mail, then such transmission cannot be guaranteed to be secure or error-free as information could be intercepted, corrupted, lost, destroyed, arrive late or incomplete, or contain viruses. ANZ and its Affiliates do not accept any Liability as a result of electronic transmission of this publication.

ANZ and its Affiliates may have an interest in the subject matter of this publication as follows:

- They may receive fees from customers for dealing in the products or services described in this publication, and their staff and introducers of business may share in such fees or receive a bonus that may be influenced by total sales.
- They or their customers may have or have had interests or long or short positions in the products or services described in this publication, and may at any time make purchases and/or sales in them as principal or agent.
- They may act or have acted as market-maker in products described in this publication.

ANZ and its Affiliates may rely on information barriers and other arrangements to control the flow of information contained in one or more business areas within ANZ or within its Affiliates into other business areas of ANZ or of its Affiliates. This document is published in accordance with ANZ's policies on Conflicts of Interest and Information Barriers.

Please contact your ANZ point of contact with any questions about this publication including for further information on these disclosures of interest.

2. Country/region specific information:

Australia. This publication is distributed in Australia by ANZ. ANZ holds an Australian Financial Services licence no. 234527. A copy of ANZ's Financial Services Guide is available at <http://www.anz.com/documents/AU/aboutANZ/FinancialServicesGuide.pdf> and is available upon request from your ANZ point of contact. If trading strategies or recommendations are included in this publication, they are solely for the information of 'wholesale clients' (as defined in section 761G of the Corporations Act 2001 (Cth)). Persons who receive this publication must inform themselves about and observe all relevant restrictions.

Brazil. This publication is distributed in Brazil by ANZ on a cross border basis and only following request by the recipient. No securities are being offered or sold in Brazil under this publication, and no securities have been and will not be registered with the Securities Commission – CVM.

Brunei. Japan. Kuwait. Malaysia. Switzerland. Taiwan. This publication is distributed in each of Brunei, Japan, Kuwait, Malaysia, Switzerland and Taiwan by ANZ on a cross-border basis.

Cambodia. APS222 Disclosure. The recipient acknowledges that although ANZ Royal Bank (Cambodia) Ltd. is a subsidiary of ANZ, it is a separate entity to ANZ and the obligations of ANZ Royal Bank (Cambodia) Ltd. do not constitute deposits or other liabilities of ANZ and ANZ is not required to meet the obligations of ANZ Royal Bank (Cambodia) Ltd.

European Economic Area ("EEA"): United Kingdom. ANZ in the United Kingdom is authorised by the Prudential Regulation Authority ("PRA"). 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 publication is distributed in the United Kingdom by 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 PRA and the FCA. **Germany.** This publication is distributed in Germany by the Frankfurt Branch of ANZ solely for the information of its clients. **Other EEA countries.** This publication is distributed in the EEA by ANZ Bank (Europe) Limited ("ANZBEL") which is authorised by the PRA and regulated by the FCA and the PRA in the United Kingdom, to persons who would come within the FCA definition of "eligible counterparty" or "professional client" in other countries in the EEA. This publication is distributed in those countries solely for the information of such persons upon their request. It is not intended for, and must not be distributed to, any person in those countries who would come within the FCA definition of "retail client".

Fiji. For Fiji regulatory purposes, this publication 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 publication.

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. If in doubt about the contents of this publication, you should obtain independent professional advice.

IMPORTANT NOTICE

India. This publication is distributed in India by ANZ on a cross-border basis. If this publication 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. Further copying or duplication of this publication is strictly prohibited.

Myanmar. This publication is intended to be of a general nature as part of customer service and marketing activities provided by ANZ in the course of implementing its functions as a licensed bank. This publication does not take into account your financial situation or goals and is not Securities Investment Advice (as that term is defined in the Myanmar Securities Transaction Law 2013). The contents of this publication have not been reviewed by any regulatory authority in Myanmar. If in doubt about the contents of this publication, you should obtain independent professional advice.

New Zealand. This publication 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.

Oman. This publication has been prepared by ANZ. 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 publication 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 by receiving this publication, the person or entity to whom it has been dispatched by ANZ understands, acknowledges and agrees that this publication 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 publication is intended to constitute Omani investment, legal, tax, accounting or other professional advice.

People's Republic of China ("PRC"). Recipients must comply with all applicable laws and regulations of PRC, including any prohibitions on speculative transactions and CNY/CNH arbitrage trading. If and when the material accompanying this document is distributed by Australia and New Zealand Banking Group Limited (ABN 11 005 357 522) ("ANZ") or an affiliate (other than Australia and New Zealand Bank (China) Company Limited ("ANZ C")), 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 C, the following statement and the text below is applicable: This document is distributed by ANZ C in the Mainland of the PRC.

Qatar. This publication 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 publication 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 publication 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 publication are not being, and will not be, offered, issued or sold in Qatar, and this publication 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 publication and distribution of this publication is being made in, and is subject to the laws, regulations and rules of, jurisdictions outside of Qatar and the QFC. Recipients of this publication must abide by this restriction and not distribute this publication in breach of this restriction. This publication 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 publication 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. In respect of any matters arising from, or in connection with the distribution of this publication in Singapore, contact your ANZ point of contact.

United Arab Emirates. This publication is distributed in the United Arab Emirates ("UAE") or the Dubai International Financial Centre (as applicable) by ANZ. This publication: does not, and is not intended to constitute an offer of securities anywhere in the UAE; does not constitute, and is not intended to constitute 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 United Arab Emirates, the Emirates Securities and Commodities Authority or the United Arab Emirates Ministry of Economy; does not, and is not intended to constitute an offer of securities within the meaning of the Dubai International Financial Centre Markets Law No. 12 of 2004; and, does not constitute, and is not intended to constitute, a financial promotion, as defined under the Dubai International Financial Centre Regulatory Law No. 1 of 200. ANZ DIFC Branch is regulated by the Dubai Financial Services Authority ("DFSA"). The financial products or services described in this publication 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 United Arab Emirates. ANZ Representative Office is not permitted by the Central Bank of the United Arab Emirates to provide any banking services to clients in the UAE.

United States. ANZ Securities, Inc. ("ANZSI") is a member of the Financial Industry 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). Except where this is an FX-related publication, this publication is distributed in the United States by ANZSI (a wholly owned subsidiary of ANZ), which accepts responsibility for its content. Information on any securities referred to in this publication may be obtained from ANZSI upon request. This publication 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 publication 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 publication 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 publication 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 subject company, public appearances and trading securities held by the analysts. Where this is an FX-related publication, 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 9160 Fax: +1 212 801 9163). Commodity-related products are not insured by any U.S. governmental agency, and are not guaranteed by ANZ or any of its affiliates. Transacting in these products may involve substantial risks and could result in a significant loss. You should carefully consider whether transacting in commodity-related products is suitable for you in light of your financial condition and investment objectives.

Vietnam. This publication is distributed in Vietnam by ANZ or ANZ Bank (Vietnam) Limited, a subsidiary of ANZ. Please note that the contents of this publication have not been reviewed by any regulatory authority in Vietnam. If you are in any doubt about any of the contents of this publication, you should obtain independent professional advice.

This document has been prepared by ANZ Bank New Zealand Limited, Level 10, 171 Featherston Street, Wellington 6011, New Zealand, Ph 64 4 802 2212, e-mail nzeconomics@anz.com, <http://www.anz.co.nz>

