

NEW ZEALAND ECONOMICS

ANZ PROPERTY FOCUS

AUGUST 2015

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A LOOK AT THE REGIONS

SUMMARY

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

THE MONTH IN REVIEW

Sales volumes, the median days to sell and annual house price inflation in July were all the strongest since 2007, with sales activity in the upper North Island strengthening. The RBNZ stated that interest rate rises would not be appropriate to dampen the Auckland market, but that speed limits to slow investor demand in Auckland will be here in November. Nationwide residential consent issuance (supply) has essentially flat-lined over the first half of this year, although the growth baton is clearly in northern hands. Record net immigration and low mortgage rates are key supports for now. Construction has flat-lined and is low relative to population needs. Household credit growth has picked up and is running ahead of household incomes.

PROPERTY GAUGES

Nationwide annual house price inflation has hit another eight year high. House prices remain stretched relative to both incomes and rents, but historically low fixed mortgage interest rates, tight dwelling supply, and high net immigration are providing upward impetus. There is a limit to how much further prices can rise given stretched affordability. Pending RBNZ and Government policy changes to cool investor demand and a softer economy are expected to help level out price movements.

ECONOMIC OVERVIEW

Momentum across the economy has slowed over the year, and we expect more of the same over the coming 12 months. The nucleus resides in lower terms of trade, flattening Christchurch activity and capacity bottlenecks in some sectors. It's a deceleration not a full-blown downturn but this critically assumes the offshore scene stabilises; our eyes are on China and global equities. The economy has a reasonable backbone. Pockets of strength exist and financial conditions are supportive, which will underpin a recovery in late 2016. Low inflation and slowing economic momentum necessitate a lower OCR (and NZD), and we expect a further 50bps of OCR cuts by next March.

MORTGAGE BORROWING STRATEGY

Carded mortgage rates continue to come down, with 1 and 2 year special rates offered by some borrowers now well below 5%, and close to multi-decade lows. With wholesale interest rate markets now fully anticipating another two 25bps OCR cuts in coming months – in line with our own forecasts – and 1 and 2 year specials now so far below other rates offered, these rates offer value. Carded floating rates remain high in relation to special rates; and with the OCR expected to remain lower for longer, we would shy away from longer terms.

FEATURE ARTICLE: REGIONAL HOUSE PRICES

We look at some of the key drivers of regional house prices, with a view to seeing whether they have common linkages and if the recent buoyancy in Auckland property prices will filter through to other regional areas. Our analysis suggests price rises in Auckland tend to lead those in the rest of the county, and should support prices in regional areas, with nearby regions already benefitting. But regional determinants matter too.

THE MONTH IN REVIEW

Sales volumes, the median days to sell and annual house price inflation in July were all the strongest since 2007, with sales activity in the upper North Island strengthening. The RBNZ stated that interest rate rises would not be appropriate to dampen the Auckland market, but that speed limits to slow investor demand in Auckland will be here in November. Nationwide residential consent issuance (supply) has essentially flat-lined over the first half of this year, although the growth baton is clearly in northern hands. Record net immigration and low mortgage rates are key supports for now. Construction has flat-lined and is low relative to population needs. Household credit growth has picked up and is running ahead of household incomes.

RBNZ'S SPENCER SPEECH – "INVESTORS ADDING TO AUCKLAND HOUSING MARKET RISK"

The speech touched on the high participation of investors in the Auckland market and the justification for the new LVR restrictions ahead of their implementation, which has been delayed until November. Following submissions, the speed limit has been raised to 5% of new lending for investors with less than a 30% deposit. The speech did acknowledge that "interest rates are also an important factor influencing the demand for and pricing of housing", but Spencer noted "it would not be appropriate to raise interest rates to dampen the Auckland housing market" at this juncture. There was a hint in Spencer's comments that RBNZ concerns are beginning to shift to other regions too, and "there have been some signs of housing demand spilling out of Auckland". Because of this, the "full removal of LVR restrictions outside of Auckland could be delayed".

Tighter lending restrictions on Auckland investors from November, but no OCR increases

REINZ, HOUSE SALES – JULY

Sales volumes rose 8% sa in July, rising above 8,000 for the first time since May 2007, with annual growth in volumes strengthening to 37%. The REINZ release commented that the volume of sales had been "exceptionally strong for the middle of winter right across New Zealand". A look at the regions showed stronger year-on-year sales growth in the top half of the North Island, and Central Otago Lakes. The median 'days to sell' fell to 31 sa, its lowest level since July 2007. The REINZ House Price Index rose 1.1% sa in July (+5.2% 3m/3m), with annual house price growth reaching 14.9%. Annual house price inflation remained around 25% in Auckland and is picking up in other areas.

July sales "exceptionally strong"... median days to sell falling ... prices firming

STATISTICS NZ, BUILDING CONSENTS – JUNE

The number of residential dwelling consents fell 4.1% in June. Housing consent issuance (which does not include multi-dwellings consents) fell 0.4% sa, but this followed a 2.5% sa rise in May, continuing the see-saw pattern of late. Annual residential issuance in the June 2015 year slowed to 25,140 consents (25,237 in May), ending the sequence of rising annual issuance. The regional breakdowns showed annual issuance in Auckland (8,300) at a 10-year high, while Canterbury has flat-lined at around 7,000 consents per annum.

As dwelling construction flat-lines

STATISTICS NZ, EXTERNAL MIGRATION – JULY

There was a record net inflow of 5,750 migrants (sa) in July, above the average net inflow of around 5,000 over the prior six months. PLT arrival numbers rose 7.6% (+0.4% 3m/3m), while PLT departures fell 2.2% (-1.5% 3m/3m sa). On a three-month annualised basis, the net inflow is running at a 63K pace, and a new all-time high of 59,639 persons was once again recorded on an annual basis. The rise in net PLT immigration largely reflects higher numbers of student arrivals from India and China, but also the turnaround in flows across the Tasman, with a net gain of 200 migrants in July (sa), a 20-year high.

With another record high for annual net immigration

RBNZ, HOUSEHOLD CREDIT GROWTH – JUNE

The value of mortgage lending to households rose 0.6% sa in June (+5.6% y/y). Annualised 3m/3m growth rose to 6.7%, the highest since May 2008.

Mortgage lending and approvals are picking up

RBNZ, MORTGAGE APPROVALS – MID-AUGUST

Approval values are 26% higher than this time last year, while the number of approved mortgages is around 9% higher than a year ago.

PROPERTY GAUGES

Nationwide annual house price inflation has hit another eight year high. House prices remain stretched relative to both incomes and rents, but historically low fixed mortgage interest rates, tight dwelling supply, and high net immigration are providing upward impetus. There is a limit to how much further prices can rise given stretched affordability. Pending RBNZ and Government policy changes to cool investor demand and a softer economy are expected to help level out price movements.

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 existing mortgage payments.

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 both 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, UK and Australia in recognition of the important role that global factors are playing in NZ'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.

RENTAL GROWTH. We look at growth in the median market rent as an indication of whether it is a better time to buy versus rent, and how rental yields are shaping up for the property investor.

Indicator	Level	Direction for prices	Comment
Affordability	Chasing your tail	↔/↓	Prices are still going up and affordability is worsening – but with regional differences. The rubber band looks taut.
Serviceability/ indebtedness	Hard work	↔/↓	Lower mortgage interest rates are helping, but debt servicing to income is going up. Another rubber band at play.
Interest rates / RBNZ	Drifting down	↔	Further cuts to variable and fixed rates will help support borrowing. LVR changes should slow Auckland investor demand.
Migration	Record	↔/↑	Another record annual high.
Supply-demand balance	Akld vs Rest of NZ	↔/↑	Still a shortage, with regional dimensions. Most regions have a surfeit of supply; Auckland shortages are growing.
Consents and house sales	Low, High	↔/↑	Sales firming. Nationwide consent issuance flat-lining, but picking up in Auckland.
Liquidity	Firming	↔/↑	Credit is increasing as a share of (decelerating) nominal GDP. Housing credit growth is picking up.
Globalisation	In synch	↔	Major cities booming, other centres not so much.
Housing supply	Low	↔/↑	Inventory to sales falling in most regions, including Auckland.
Median rent	Yield drop	↓	Annual increases in rents are still below house prices.
On balance	Topyy	↔	Initial momentum, but will be looking for signs of a policy impact on sentiment.

PROPERTY GAUGES

FIGURE 1: HOUSING AFFORDABILITY

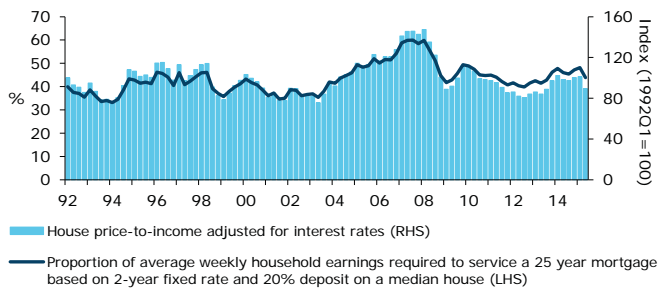


FIGURE 2: SERVICEABILITY AND INDEBTEDNESS

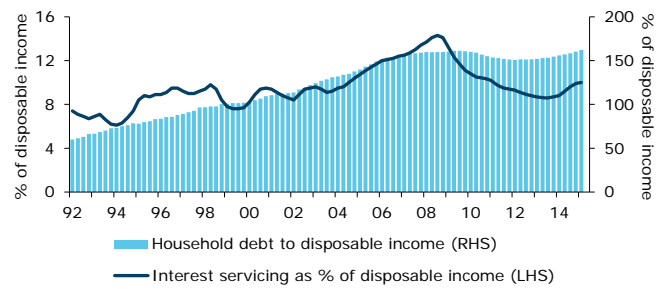


FIGURE 3: NEW CUSTOMER AVERAGE RESIDENTIAL MORTGAGE RATE (<80% LVR)

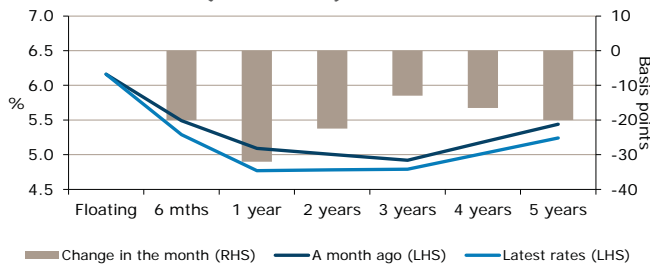


FIGURE 4: NET MIGRATION

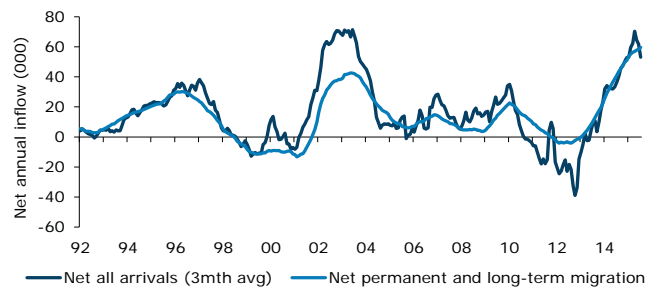


FIGURE 5: HOUSING SUPPLY-DEMAND BALANCE

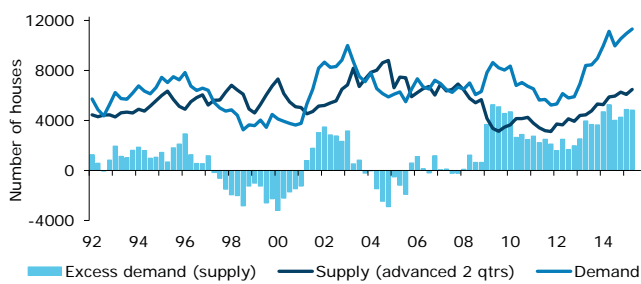


FIGURE 6: BUILDING CONSENTS AND HOUSE SALES



FIGURE 7: LIQUIDITY AND HOUSE PRICES

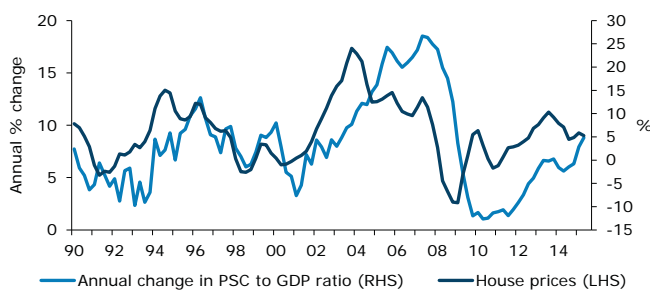


FIGURE 8: HOUSE PRICE INFLATION COMPARISON

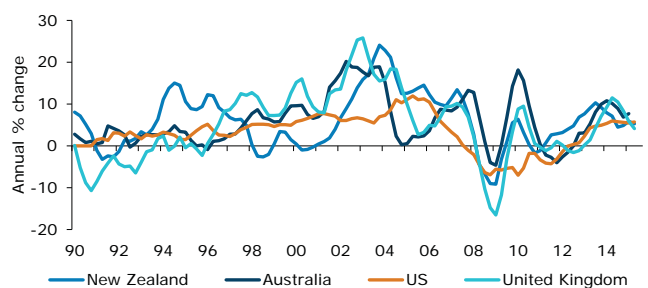


FIGURE 9: HOUSING SUPPLY

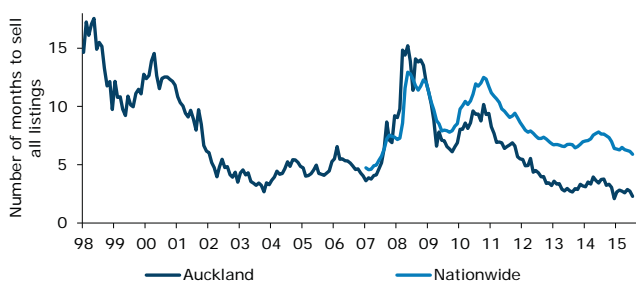
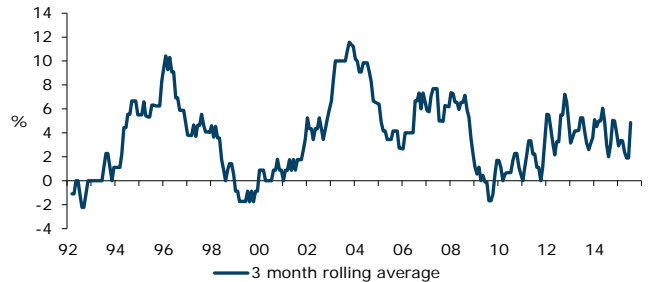


FIGURE 10: MEDIAN RENTAL, ANNUAL GROWTH



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



ECONOMIC OVERVIEW

SUMMARY

Momentum across the economy has slowed over the year, and we expect more of the same over the coming 12 months. The nucleus resides in lower terms of trade, flattening Christchurch activity and capacity bottlenecks in some sectors. It's a deceleration not a full-blown downturn but this critically assumes the offshore scene stabilises; our eyes are on China and global equities. The economy has a reasonable backbone. Pockets of strength exist and financial conditions are supportive, which will underpin a recovery in late 2016. Low inflation and slowing economic momentum necessitate a lower OCR (and NZD), and we expect a further 50bps of OCR cuts by next March.

GIVING BACK

The risk profile for the economy has shifted more to the downside of late and we can now see more obvious signs of waning momentum in some forward indicators including business confidence and coincidence indicators such as our *Truckometer*. Activity across pro-cyclical parts of the economy, such as residential construction, has levelled out. It's not all one-way traffic, but a trend of moderation across the economy is clear.

Key near-term economic risks and challenges are well known and include:

- **Low global dairy prices and a hit to New Zealand's terms of trade.** Global dairy prices are increasing again, but are still around 40% lower than they were back in March. We have removed the downside risk to our 2015/16 milk price forecast, moving back to a \$3.75-\$4.00/kg MS range (with Fonterra's \$3.85/kg MS forecast looking achievable), but it is still well below breakeven for most dairy farmers (\$5.50-6/kg/MS), delivering a massive hit to rural incomes. We still expect a significant fall in our terms of trade (down 20% from its peak). That hits nationwide purchasing power hard, and represents close to a 3% hit to GDP growth (all else being equal) over the coming two years.
- **The Canterbury rebuild has peaked**, providing less impetus to growth.
- **Deteriorating structural metrics.** Household and agricultural debt to income are rising, the current account is deteriorating, household saving is falling and Auckland house prices are surging; that's a potent mix and an area of growing vulnerability. Or put another way, the economy is back to borrowing and spending its way to growth; that's not sustainable.
- **The obvious global risks.** The trajectory for China remains uncertain. Widespread falls in commodity prices are disconcerting and are likely to keep global inflation low. Equity markets are in precipitous decline, with concerns over the fallout to the wider global economy. Growth in Europe is anaemic and while moderate growth is underway in the US and the labour market is strengthening, signs of inflation remain absent.

The economy is also decelerating for more positive reasons in some pockets, namely construction where resourcing (think finding staff) is a clear limiting problem. As an economy moves beyond recovery (high growth off a low base), growth naturally levels off.

Key support pillars remain across the economy. Net PLT migration inflows are strong and exporters outside of dairying are generally performing well (e.g. tourism, pipfruit). Construction sector activity has yet to peak relative to GDP. There is still a mountain of infrastructure investment to do and more houses are needed in Auckland. Fiscal policy has scope to shift to an expansionary stance if required (and we have been promoting the need for such a shift).

We expect the rest of 2015 to see sluggish growth but for forward momentum to be maintained. Similar sluggishness is to be expected in early 2016 as well. **Momentum is expected to lift again as 2016 progresses** as the lagged impact of lower interest rates and a lower NZD work through.

Whilst it's tempting to jump on the "glass half empty" band-wagon we are still constructive on the broad trend for growth in the medium term. A well-rounded microeconomic policy platform and our optimism regarding Asia in the medium term are constructive building blocks. New Zealand ranks highly internationally across numerous areas. However there is no denying the skew with regard to near-term risks; they point lower.

Inflation is low. The reasons why inflation is low are more than just the impact of lagged NZD strength and lower commodity prices, with annual core inflation at just 1.3% and annual non-tradable inflation at a 14-year low. Low inflation and a softer growth outlook should see the RBNZ fully reverse the 100bps of hikes delivered over 2014 by early next year.

The NZD is expected to keep adjusting lower, though not across all currency pairs. The NZD/USD is expected to ease but the NZD/AUD and NZD/EUR should remain elevated.

MORTGAGE BORROWING STRATEGY

SUMMARY

Carded mortgage rates continue to come down, with 1 and 2 year special rates offered by some borrowers now well below 5%, and close to multi-decade lows. With wholesale interest rate markets now fully anticipating another two 25bps OCR cuts in coming months – in line with our own forecasts – and 1 and 2 year specials now so far below other rates offered, these rates offer value. Carded floating rates remain high in relation to special rates; and with the OCR expected to remain lower for longer, we would shy away from longer terms.

OUR VIEW

Mortgage interest rates have fallen sharply since June, taking bellwethers like the 1 and 2 year fixed rates (which tend to be desirable terms given the balance they provide between flexibility and certainty) back towards all-time lows. Lower wholesale rates are one driver but there is aggressive competition too. Rates below 5% are available for terms ranging from 6 months to as long as 3 years.

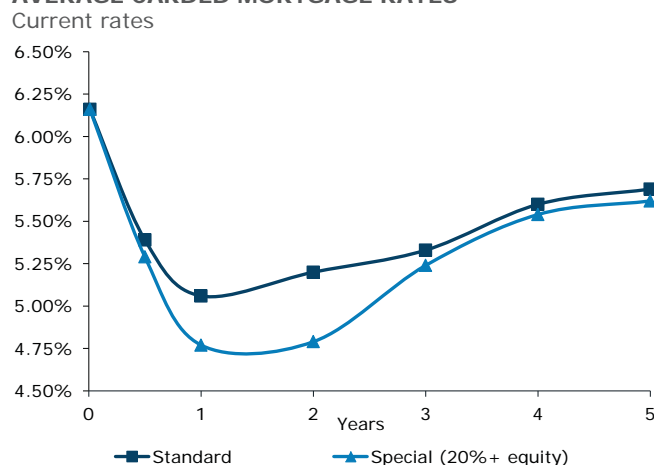
At face value, with 1 and 2 year special rates well below both the carded floating rate and rates applicable for much longer terms, they certainly look attractive at face value. The question is; with the OCR headed lower, will they get cheaper still? In our view, they could, but this is more of a risk than our central scenario. As the Reserve Bank has warned, we'd need to see the economy fall into recession in order to see a really aggressive easing cycle. While such a scenario can't be ruled out, and there will always be pessimists, we prefer to focus on the many positives, with the lower NZD bringing relief to the wider export sector (the tourism sector is an obvious bright spot), and with lower interest rates supporting interest-rate sensitive pockets of the economy.

With market expectations now fully incorporating our expectation that the OCR will settle at 2.5% in 2016, we see validity in fixing for 1 or 2 years, with the choice between them decided by one's desire for certainty. While looking at global financial gyrations we see some risk that the OCR does go below 2.5% (which would bring about even lower 1 and 2 year mortgage rates), with little separating the 1 year rate and the 2 year rate, and the 2 year rate offering more certainty, we have a mild preference for the latter. Because we don't envisage the OCR going up for some time, we also see validity in spreading fixed terms across the 1 and 2 year so as to stagger rollovers.

Our breakeven analysis for special carded rates (top table) certainly bears out the value evident in the 1 and 2 year terms, as they imply that 6 month and 1 year rates need to fall in the future in order to make waiting more attractive. For example, you'd only pick the 6 month rate over the 1 year if you thought the 6 month rate had scope to move from 5.29% to 4.25% over the next 6 months, which seems extreme.

^ Sourced from interest.co.nz

AVERAGE CARDED MORTGAGE RATES[^]



Average Mortgage Rates*		Breakevens for 20%+ equity borrowers			
Term	Current	in 6mths	in 1yr	in 18mths	in 2 yrs
Floating	6.16%				
6 months	5.29%	4.25%	4.80%	4.82%	5.92%
1 year	4.77%	4.53%	4.81%	5.37%	6.14%
2 years	4.79%	4.95%	5.48%	5.85%	6.29%
3 years	5.24%	5.41%	5.80%	5.98%	6.17%
4 years	5.54%	5.62%	5.83%		
5 years	5.62%	*Average of "big four" banks			

Low-Equity Rates		Breakevens for standard mortgage rates*			
Term	Current	in 6mths	in 1yr	in 18mths	in 2 yrs
Floating	6.16%				
6 months	5.39%	4.73%	5.27%	5.41%	5.53%
1 year	5.06%	5.00%	5.34%	5.47%	5.59%
2 years	5.20%	5.23%	5.47%	5.72%	6.00%
3 years	5.33%	5.48%	5.78%	5.90%	6.02%
4 years	5.60%	5.68%	5.85%		
5 years	5.69%	*may be subject to a low equity fee			

FEATURE ARTICLE: REGIONAL HOUSE PRICES

SUMMARY

We look at some of the key drivers of regional house prices, with a view to seeing whether they have common linkages and if the recent buoyancy in Auckland property prices will filter through to other regional areas.

Key conclusions include:

- Auckland house prices have tended to outperform the national average, but there is a cycle; Auckland can underperform too. We appear to be entering such a stage.
- House price movements tend to be geographically clustered, consistent with the “ripple effect” taking place, where increases (or falls) in one region tend to spread to nearby regions. The direction of causality appears to run from higher-priced to lower-priced areas.
- Prices in Auckland are more responsive to movements in economic activity than other regions. There is a perception that prices in Auckland are more influenced by offshore events, but the local factors matter too.
- A positive link between net PLT immigration and house prices exists. Increases in net immigration tend to flow through more quickly to Auckland house prices than to other regions.
- There is generally a negative relationship between mortgage interest rates, residential construction activity and house prices, although there are regional contrasts.

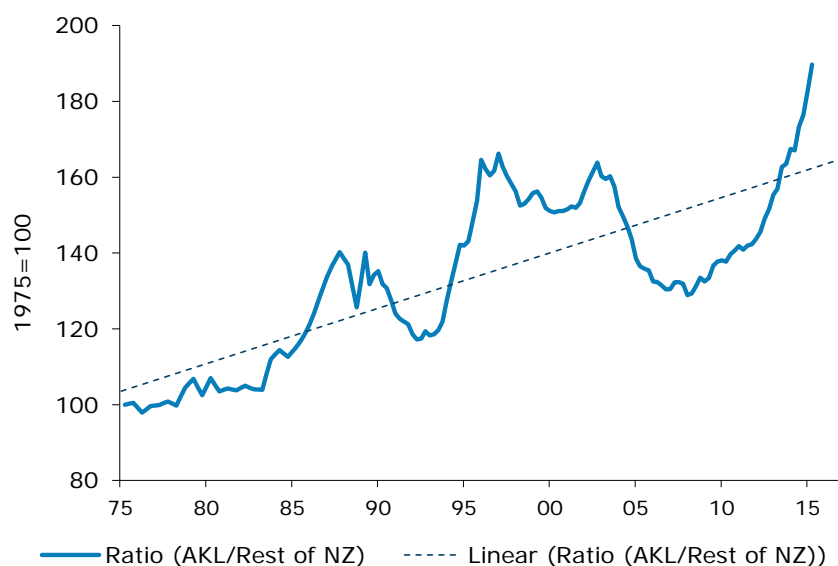
Our analysis suggests price rises in Auckland tend to lead those in the rest of the country, and should support prices in regional areas, with nearby regions already benefitting. But regional determinants matter too.

AUCKLAND HOUSE PRICES IN A NATIONAL CONTEXT

In last month’s feature article we outlined some of the issues involved in runaway Auckland house prices. This price strength poses both financial stability and inflation risks, and a number of policy measures have been put in place to try to slow the market and prevent a large crunch further down the track. At the same time, persistently low inflation and a weaker growth outlook have seen the OCR cut by 50bps, and we expect a further 50bps of cuts by early next year. Mortgage interest rates are falling and are likely to fall further.

What then are the implications of this backdrop for regional prices? Can history tell us anything about their determinants and in which regions house prices tend to lead others (if any)? The ratio of Auckland house prices to the rest of the country shows an upward trend (see figure 1), with annual nominal house price growth averaging 9% in Auckland since the mid-1970s versus around 7% for the rest of the country. This is likely (in part) to reflect Auckland’s stronger population growth and geography. In the early 1990s, the median Auckland dwelling price was about 30% higher than the median nationwide dwelling price; now it is about two-thirds above the nationwide median. A similar trend is evident for Auckland residential section prices, which are now around 85% higher than the nationwide median.

FIGURE 1. AUCKLAND HOUSE PRICES RELATIVE TO THE REST OF NZ



Source: ANZ, Statistics NZ

FEATURE ARTICLE: REGIONAL HOUSE PRICES

The chart above shows that prices tend to cycle – both up and down – around this upward trend. The mid 1990s housing boom was more concentrated in Auckland, whereas the 2003/07 boom was more acute in other regional areas. **Auckland house prices sometimes underperform the rest of the nation. That tells us that market forces still work. You can't have unfettered rises in one region or yields driven lower without investments starting to look attractive elsewhere.** Eventually capital and people are attracted to places or regions that offer better valuations and yields.

A clear upward trend is noticeable of late courtesy of the recent strength in Auckland prices, and this ratio is now well above its longer-term trend. **If this relationship holds, it suggests Auckland house prices are due for a fall relative to other regional areas.** That doesn't mean Auckland house prices need to fall; they simply need to underperform. Anecdotally, prices in nearby regions are already picking up as the "ripple effect" of higher Auckland house prices spread, with the proposed modifications to the LVR criteria (via increasing investor deposit requirements to 30% for Auckland purchases) likely to further underpin the relative attractiveness of nearby regions. But valuation metrics will also be at play. With rental yields in Auckland sitting just above 3%, money is invariably attracted to higher-yielding alternatives. There may always be a gap between Auckland and the rest of New Zealand yield-wise (on the back of better expected capital gain in Auckland). However, that gap has boundaries and a stretch point. We appear to be hitting that point at present, just as we did in 2003.

A LOOK AT THE REGIONS

Table 1 shows the results of statistical tests for 'Granger causality' for quarterly house price movements between regional areas, using quarterly median REINZ house price data since 1992. It shows whether prices in one region have historically tended to lead movements in another, and vice versa. The results shouldn't be seen as definitive, and it is important to note that this definition of "causality" relates purely to timing, rather than true causality. But they are informative nonetheless. The lower the numbers in the table, the more statistically significant the lead provided by house price movements in one region on house prices on another region is.

TABLE 1. DIRECTION OF CAUSALITY													
Granger-Causality tests (1992Q1-2015Q2). Figures in bold show statistical significance at the 5% level. 1992Q1-2015Q2.													
	Lagged impact on house price												
	NL	AK	WB	HB	TK	WM	WG	NM	CT	CO	OT	SL	NZ
NL		0.52	0.82	0.30	0.65	0.87	0.37	0.43	0.53	0.71	0.32	0.99	0.75
AK	0.44		0.20	0.44	0.86	0.05	0.03	0.06	0.00	0.91	0.83	0.19	0.37
WB	0.00	0.98		0.06	0.02	0.02	0.00	0.85	0.03	0.43	0.41	0.09	0.04
HB	0.01	0.00	0.03		0.02	0.02	0.12	0.76	0.05	0.46	0.35	0.64	0.03
TK	0.01	0.01	0.16	0.07		0.05	0.01	0.16	0.63	0.17	0.36	0.16	0.00
WM	0.07	0.36	0.13	0.33	0.15		0.36	0.29	0.10	0.23	0.12	0.07	0.54
WG	0.03	0.36	0.04	0.53	0.53	0.00		0.07	0.21	0.88	0.08	0.29	0.78
NM	0.99	0.28	0.22	0.05	0.70	0.55	0.10		0.06	0.42	0.00	0.01	0.44
CT	0.00	0.44	0.08	0.06	0.00	0.15	0.30	0.38		0.57	0.00	0.28	0.05
CO	0.60	0.35	0.80	0.32	0.36	0.15	0.44	0.02	0.55		0.09	0.73	0.57
OT	0.07	0.39	0.31	0.09	0.00	0.06	0.42	0.02	0.02	0.35		0.07	0.12
SL	0.06	0.06	0.33	0.15	0.37	0.20	0.08	0.33	0.41	0.20	0.15		0.07
NZ	0.02	0.11	0.03	0.14	0.16	0.02	0.66	0.20	0.00	0.63	0.01	0.43	
Median Price 2015Q2 \$000													
	323	763	350	287	303	229	395	350	420	520	256	206	448

NL = Northland, AK= Auckland, WB = Waikato/BOP, HB = Hawke's Bay/Gisborne, TK = Taranaki, WM = Whanganui/Manawatu, WG = Wellington, NM = Nelson/Marlborough, CT = Canterbury/West Coast, CO = Central Otago, OT = Otago, SL = Southland

Source: ANZ, REINZ

FEATURE ARTICLE: REGIONAL HOUSE PRICES

The table suggests house price movements tend to be geographically clustered, consistent with the “ripple effect” taking place, where increases (or falls) in one region appearing to spread to nearby regions. However, this does not hold for all regions, given the different drivers in each regional economy. Perhaps surprisingly, this evidence suggests that movements in Auckland prices do not appear to lead prices in nearby regions, but they do tend to lead movements in Wellington and Canterbury prices. Current anecdotal evidence runs counter to this.

It was interesting to note that our analysis suggests house price movements in Taranaki and Hawke’s Bay have tended to lead those in Auckland. This could be the case, but it is also possible that the median house price measures we are using are not providing a representative measure of underlying house price movements given that they will be affected by the composition of sales. For example, investment properties are typically cheaper than owner-occupier properties, and an increase in sales for the former could push down the regional median price and distort the results.

We repeat the analysis using regional REINZ House Price Index data, which provides a cleaner measure of underlying house price movements. This data is only available for five broad regional areas, namely Auckland (AKL), Wellington (WG), the Rest of North Island (ONI), Christchurch (CH), and the Rest of South Island (OSI). Results are summarised in Table 2. It shows that **movements in Auckland prices tend to lead movements in prices in the Rest of the North Island, Christchurch and Wellington (to a lesser extent). It also confirms there is no statistical link from movements in house prices in other regions back to Auckland prices.** The direction of causality is two-way for price movements in Christchurch and the Rest of the South Island. Price movements in Wellington tend to lead those in Christchurch and not the other way around. Price movements in the rest of the South Island tend to lead those in the rest of the North Island.

TABLE 2. DIRECTION OF CAUSALITY

Granger-Causality tests. Figures in **bold** show statistically significant at 5% level

Change in region	Lagged impact on house price				
	Auckland	Other North Island	Wellington	Christchurch	Other South Island
Auckland		0.00	0.03	0.01	0.56
Other North Island	0.54		0.09	0.00	0.06
Wellington	0.23	0.30		0.01	0.04
Christchurch	0.14	0.12	0.30		0.01
Other South Island	0.88	0.00	0.02	0.00	

Source: ANZ, REINZ

Extending this analysis and looking at the relationships between house price movements in the broad regional areas and potential determinants, including mortgage interest rates, regional residential consent issuance, net PLT immigration into the region and regional economic activity (we use the ANZ Regional Trends data) reveals the following:

- **There is no clear link between house price movements and changes in regional economic activity.** We find, however, that changes in economic activity for Auckland and Christchurch tend to lead movements in house prices in these regions.
- **Movements in regional consent issuance tend to be contemporaneous with movements in nationwide house prices.** Viewing the relationships by region indicates that house price movements in Auckland tend to lead movements in Auckland residential consents, whereas movements in consent issuance tend to lead movements in house prices in Christchurch and Wellington.
- **The strongest link between net PLT immigration flows and house price movements is in Auckland,** with little evidence that net PLT immigration leads house price movements in other regions.
- **The lagged level of mortgage interest rates has the strongest negative link with Auckland house price movements,** followed by the Rest of South Island and Wellington. Movements in nationwide house prices tend to lead changes in mortgage interest rates, with the strongest link from Auckland and Christchurch house price movements.

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DETERMINANTS OF NATIONWIDE HOUSE PRICES

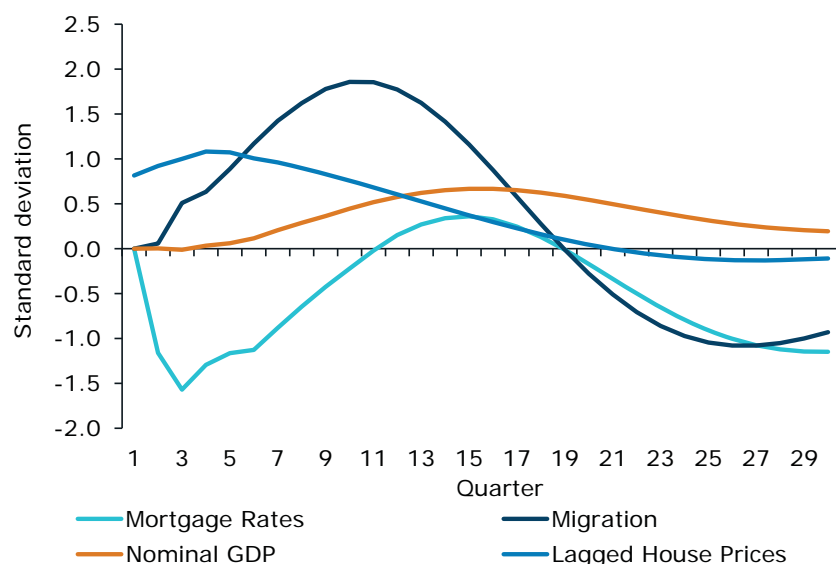
This above analysis looks at pairwise correlations and does not account for the fact that the correlation may be driven by a combination of factors. To shed more light into factors linked with house price movements we put together nationwide and a regional Vector Auto Regression (VAR) models. **These types of models can be useful in highlighting the relationships between economic variables.**¹ The nationwide model includes nationwide net PLT immigration, nominal GDP (a proxy for nationwide income), nominal mortgage interest rates, and house prices (as well as lags of all these variables). Nationwide consent issuance was also trialled, but as it caused some instability in the estimates it was not included in the final nationwide model.

The nationwide model shows relationships consistent with what one would expect. For example, increases in house prices and nominal GDP tend to be followed by higher interest rates, while higher interest rates slow nominal GDP and house prices.

Figure 2 shows the impact on nationwide house prices of one-off (1-standard deviation) "shocks" to other variables in the model. Movements in mortgage interest rates tend to feed through more quickly to house prices than do one-off changes in net PLT immigration or nominal GDP. House prices tend to have a degree of persistence, with increases following increases and falls following falls.

FIGURE 2. IMPULSE RESPONSES – IMPACT ON NATIONWIDE HOUSE PRICES

Nationwide model



Source: ANZ, REINZ, Statistics NZ

A REGIONAL PERSPECTIVE

We also develop more detailed regional VAR models, along similar lines. It includes net PLT immigration flows for five broad regional areas, regional consent issuance, regional economic activity (we use the ANZ Regional Trends measures of economic activity), regional house prices, and nationwide mortgage interest rates. It shows that higher interest rates tend to slow economic activity in all of the regions, while changes in Canterbury and Auckland economic activity tend to have a more significant interest rate impact than the other regions (which is unsurprising, given their larger size and importance to the overall economy).

The regional models capture much of the variation in regional house prices and in most other variables as well, although they do not tend to be able to "explain" movements in residential consent issuance as well as they do other variables. Of note, house prices outside of Auckland of late have been weaker than the equations would suggest, whilst Auckland house prices are higher than would be suggested by the historical relationship with nominal mortgage interest rates, regional activity, net immigration inflows, and consent activity.

¹ A Cholesky decomposition was used. The order of the VAR includes net PLT immigration, building activity (in the regional model only), economic activity, nominal mortgage interest rates and nominal house prices. The activity and house price measures are lagged.

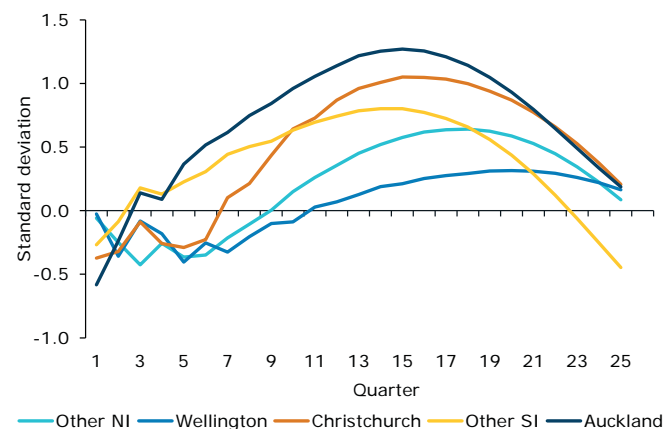
FEATURE ARTICLE: REGIONAL HOUSE PRICES

The following charts show impulse responses of the regional model, which illustrate the impact on regional house prices from “shocks” to other regional variables within the model. It shows:

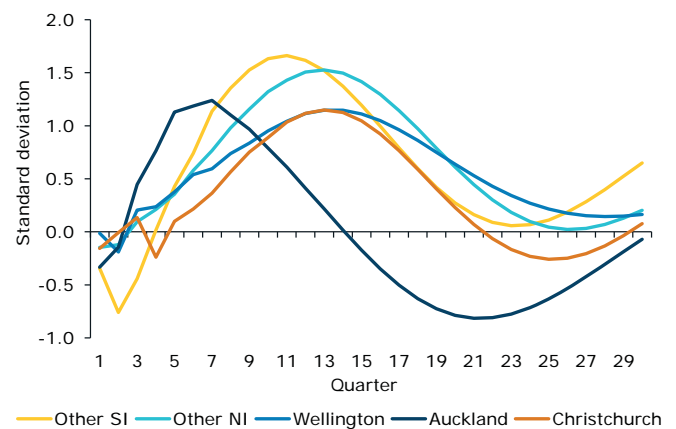
- **A positive link between economic activity and house prices.** Prices in Auckland are more responsive to movements in local economic activity than the models of other regions. **While there is a perception that prices in Auckland are more heavily influenced by what goes on offshore, clearly developments in the regional economy matter too.**
- **A positive link between net PLT immigration and house prices (few surprises here).** Increases in net immigration tend to flow through more quickly to Auckland house prices (peak effect six to seven quarters following the shock) than for other regions. What is also evident is that the migration impact washes out after about four years in Auckland. Prices in the regions are also positively related to regional net immigration flows, but lower on average than in Auckland. We are interpreting this relationship as either evidence of migration causing a ripple-type effect to areas not directly impacted, or that the linkages are due to something we have not captured in our modelling approach.
- **A generally negative relationship between residential construction activity and house prices,** although there are regional contrasts. The Christchurch response is likely to be earthquake rebuild-related, capturing a period where both consent activity and house price inflation were strengthening given the impact of the earthquakes on the dwelling stock. **Increases in Auckland residential consent issuance take slightly longer to feed through into prices than for other regions, but they tend to have a more dampening impact over longer horizons.**

FIGURE 3. IMPACTS ON REGIONAL HOUSE PRICES

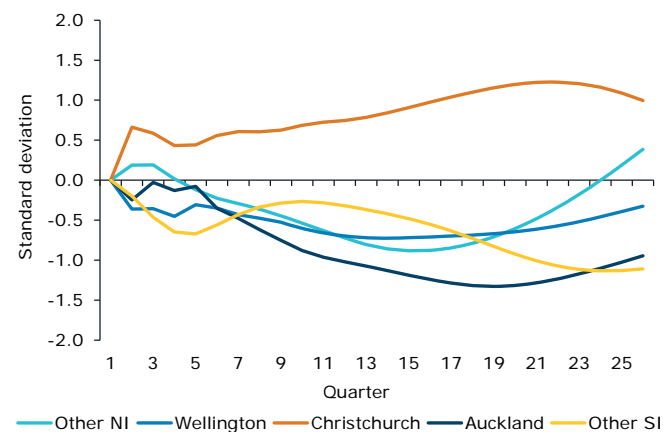
REGIONAL ACTIVITY



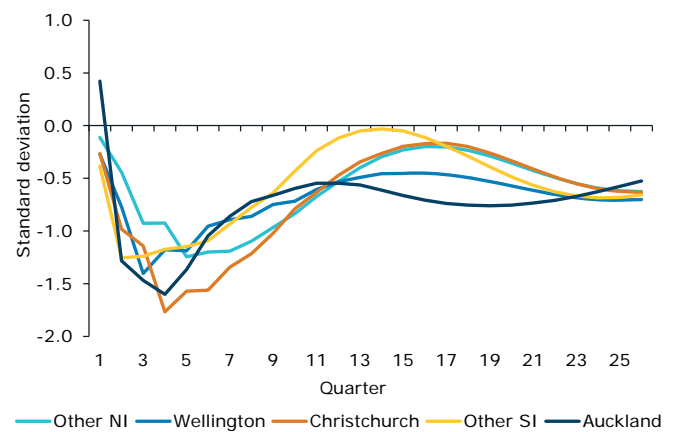
NET PLT IMMIGRATION



RESIDENTIAL CONSENTS



MORTGAGE INTEREST RATES



Source: ANZ, Statistics NZ, REINZ, RBNZ

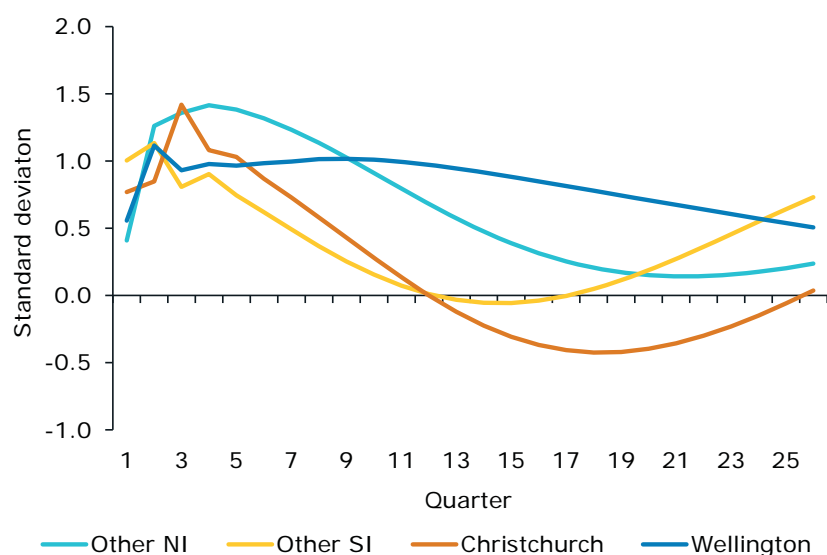
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- **A regionally broad-based negative relationship between interest rate hikes and house prices.** The peak impact from an interest rate move occurs after three to four quarters. This implies the full impact of the June RBNZ interest rate cuts will not be fully felt until early next year. In the other direction, the responses also suggest that movements in Auckland house prices have historically tended to elicit a more significant interest rate response than for other regions. No surprises there; the Reserve Bank watches them closely.

Given the recent uplift in Auckland prices, and the fact that our analysis shows that movements in Auckland prices tend to lead those elsewhere, the focus will be on the potential impact of current Auckland house price strength on prices in other regions. Simple equation estimates suggest that increasing Auckland prices will tend to permeate to the regions, with a lag of about three to six months depending on the region, but the impact is not one for one. Our regional VAR model in figure 4 shows a positive link between Auckland house prices and those in nearby regions and that this positive link is reasonably persistent. Again this relationship could be driven by factors that we have not captured in the model, such as expectations of future income growth. But it is interesting to note a more positive response of prices in other North Island areas to Auckland house prices, consistent with the geographical clustering of price movements.

FIGURE 4. IMPULSE RESPONSES – IMPACT OF AUCKLAND HOUSE PRICES

Regional model



Source: ANZ, REINZ, Statistics NZ

THE UPSHOT

An upward trend in Auckland house prices relative to the rest of the country has been evident since at least the early 1970s. Demographic projections suggest Auckland's population growth looks set to continue to outstrip the rest of the country. **Whether this will translate into the upward trend persisting will depend on the supply response and how sensitive the demand side is to market mechanisms.**

Whether Auckland is classed as an international city and prices are being driven by more global factors (including historically low global borrowing costs, and offshore demand) is a moot point. **In our minds domestic fundamentals matter and will have the final say.** At present, Auckland prices are above their long-run trend and are due for a pullback relative to other regions. The rubber band that is Auckland property valuations relative to domestic fundamentals – as well as their price in relative to prices in other regions – looks tight. Either Auckland prices fall or prices in other areas catch up, or both. Prices in nearby regions are picking up, with the proposed modifications to the RBNZ's LVR criteria (via increasing investor deposit requirements to 30% for Auckland purchases) likely to further increase their relative attractiveness.

Our analysis suggests that movements in regional house prices tend to be geographically clustered, with regional spill-overs evident. The direction of causality tends to run from higher priced areas to lower priced areas, consistent with recent anecdotes of Auckland based property investors looking at lower priced areas offering higher rental yields and of Auckland homeowners cashing up and relocating to other areas.

FEATURE ARTICLE: REGIONAL HOUSE PRICES

While our analysis confirms a link between Auckland house prices and those in the rest of the country, regional influences are crucially important and will have the ultimate bearing on property values in the region.

While this is all very well to some homeowners in the regions given the boost to their balance sheets, their future housing costs will also go up. **In short, there is the risk that the problems caused by the recent escalation in Auckland house prices will be exported to other regions.** Housing affordability in the provinces could deteriorate despite lower mortgage interest rates, and more first-home buyers may miss out. The upshot could be a running down in household saving buffers.

Our work suggests a reasonably uniform response of house prices to mortgage interest rates but changes in Christchurch and Auckland house prices have tended to be more relevant for interest rate movements historically. Rather than reflecting the impact of house price rises on economic activity, **it could be that house price movements are capturing what is going on in the regional economies.** Low inflation, slowing growth momentum and more options in the policy toolkit suggest that the OCR may not be raised to counter house price movements, but the RBNZ are unlikely to completely discount the housing market from its OCR deliberations, particularly if price rises become more regionally widespread.

The regional analysis suggests increasing the supply of dwellings holds the key to putting a lid on prices. The impact on Auckland property values from increased dwelling supply is slower than for other regions but it eventually hits home. Crucially, the construction sector response should meet the regional and budgetary needs of the region and the key will be putting in place an affordable housing supply side response.

KEY FORECASTS

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

Mortgage Size (\$'000)	Mortgage Rate (%)													
	5.00	5.25	5.50	5.75	6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25
200	270	276	283	290	297	304	311	319	326	333	341	348	356	364
250	337	345	354	363	371	380	389	398	407	417	426	435	445	455
300	404	415	425	435	446	456	467	478	489	500	511	522	534	545
350	472	484	496	508	520	532	545	558	570	583	596	610	623	636
400	539	553	566	580	594	608	623	637	652	667	682	697	712	727
450	607	622	637	653	669	684	701	717	733	750	767	784	801	818
500	674	691	708	725	743	761	778	797	815	833	852	871	890	909
550	741	760	779	798	817	837	856	876	896	917	937	958	979	1,000
600	809	829	850	870	891	913	934	956	978	1,000	1,022	1,045	1,068	1,091
650	876	898	920	943	966	989	1,012	1,036	1,059	1,083	1,108	1,132	1,157	1,182
700	944	967	991	1,015	1,040	1,065	1,090	1,115	1,141	1,167	1,193	1,219	1,246	1,273
750	1,011	1,036	1,062	1,088	1,114	1,141	1,168	1,195	1,222	1,250	1,278	1,306	1,335	1,364
800	1,078	1,105	1,133	1,160	1,188	1,217	1,246	1,274	1,304	1,333	1,363	1,393	1,424	1,454
850	1,146	1,174	1,204	1,233	1,263	1,293	1,323	1,354	1,385	1,417	1,448	1,480	1,513	1,545
900	1,213	1,244	1,274	1,306	1,337	1,369	1,401	1,434	1,467	1,500	1,534	1,567	1,602	1,636
950	1,281	1,313	1,345	1,378	1,411	1,445	1,479	1,513	1,548	1,583	1,619	1,655	1,691	1,727
1000	1,348	1,382	1,416	1,451	1,486	1,521	1,557	1,593	1,630	1,667	1,704	1,742	1,780	1,818

Housing market indicators for July 2015 (based on REINZ data)

	House prices (ann % change)	3mth % change	No of sales (sa)	Mthly % change	Avg days to sell (sa)	Comment
Northland	16.3	3.7	264	+4%	51	Days to sell at 5½yr low, sales volumes at 8 year high.
Auckland	20.6	6.8	3,133	+13%	29	Volumes 40% y/y, median prices down, days to sell still low.
Waikato/BOP/Gisborne	8.3	4.7	1,521	+8%	34	Days to sell at 10yr low, volumes 78% y/y, prices firming.
Hawke's Bay	9.7	2.5	266	+14%	46	Volumes 60% y/y, days to sell at 2 year low.
Taranaki	4.1	1.2	279	-15%	50	Sales at 5m low, days to sell above average.
Manawatu/Whanganui	-5.3	-3.5	178	+10%	35	Prices down, volumes lifting, days to sell falling.
Wellington	4.0	-0.1	737	-4%	37	Volumes 12% y/y, days to sell above average.
Nelson/Marlborough	5.3	0.8	268	+4%	35	Days to sell at 21m low, volumes highest for 2015.
Canterbury/Westland	4.0	-1.5	936	+6%	32	Sales volumes 7% y/y, prices flat, days to sell down.
Central Otago Lakes	11.2	-1.4	174	+43%	45	Days to sell down, volumes 56% y/y, prices up.
Otago	9.3	2.1	232	-15%	30	Sales volumes low, days to sell at 8 year low.
Southland	15.1	6.0	164	+11%	42	Days to sell at 3m low, volumes 25%y/y, prices firming.
NEW ZEALAND	11.8	2.8	8,161	+8%	31	Sales at 8yr high, days to sell at 8yr low, prices firming.

Key forecasts

Economic indicators	Actual			Forecast						
	Dec-14	Mar-15	Jun-15	Sep-15	Dec-15	Mar-16	Jun-16	Sep-16	Dec-16	Mar-17
GDP (Ann Avg % Chg)	3.3	3.2	2.9(f)	2.5	2.0	1.8	1.8	1.9	2.1	2.3
CPI Inflation (%)	0.8	0.1	0.3	0.3	0.7	1.6	1.6	1.8	1.8	1.7
Unemployment Rate (%)	5.7	5.8	5.9	6.0	6.1	6.1	6.1	6.0	6.0	5.8
Interest rates (carded)	Actual			Forecast (end month)						
	Jun-15	Jul-15	Latest	Sep-15	Dec-15	Mar-16	Jun-16	Sep-16	Dec-16	Mar-17
Official Cash Rate	3.50	3.25	3.00	2.75	2.75	2.50	2.50	2.50	2.50	2.75
90-Day Bank Bill Rate	3.3	3.1	3.0	2.9	2.9	2.6	2.6	2.7	2.7	3.1
Floating Mortgage Rate	6.3	6.2	6.2	6.1	6.1	5.8	5.8	5.8	5.8	6.1
1-Yr Fixed Mortgage Rate	5.5	5.3	4.9	4.9	4.9	4.9	5.1	5.3	5.4	5.8
2-Yr Fixed Mortgage Rate	5.6	5.1	4.9	4.9	4.9	4.9	5.2	5.3	5.5	5.9
5-Yr Fixed Mortgage Rate	6.1	5.8	5.7	5.7	5.7	5.7	5.9	6.0	6.0	6.1

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