





## HOUSING-BUILDING-CONSTRUCTION MARKETS FORUM

## State of Markets: Summary

June 2015

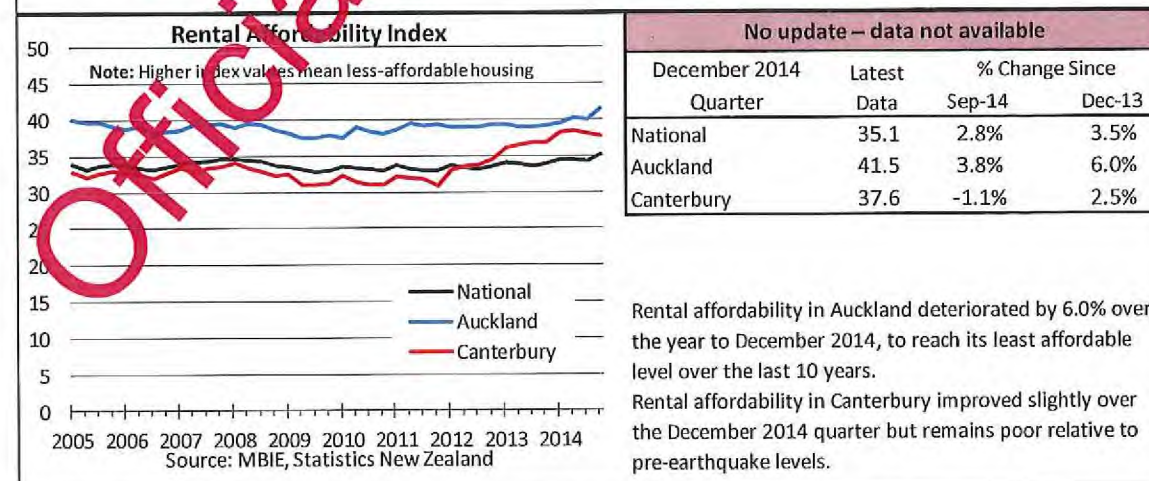
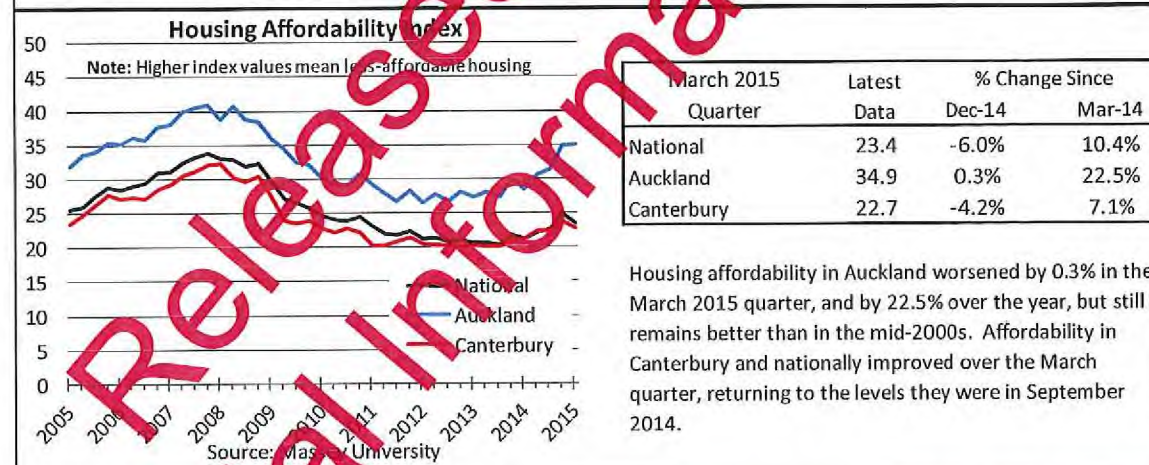
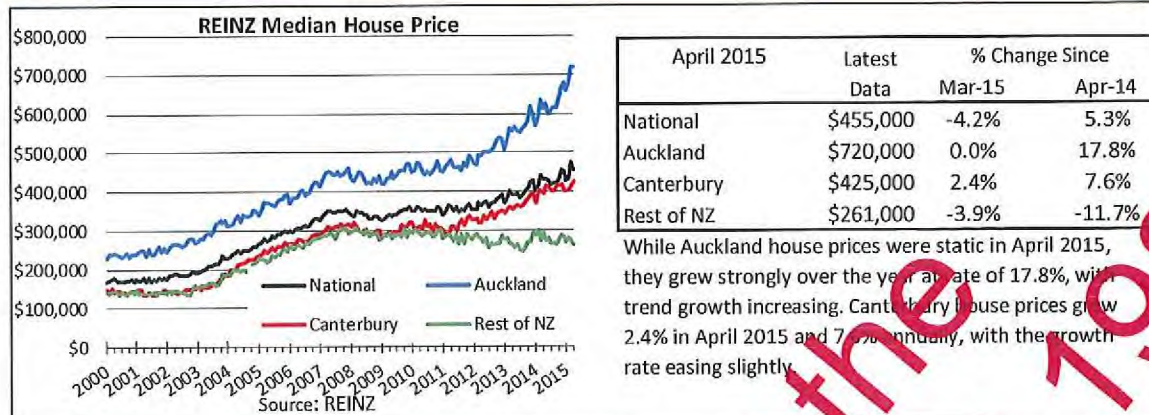
	Change	Key points	Possible discussion points
Sales volume and prices		<ul style="list-style-type: none"> <li>Sales volumes continue to trend up from the mid-2014 trough, but remain low compared to pre-GFC levels.</li> <li>Stock of houses available for sale is around historic lows, led by ongoing shortages in Auckland. Listings have picked up but by less than sales.</li> <li>Discounting the April data point, price growth has picked up further since the March <i>Forum</i>, driven almost exclusively by Auckland.</li> <li>Ex-Auckland regions are seeing much more modest house price inflation, with some flat or falling.</li> </ul>	<ul style="list-style-type: none"> <li>Factors behind historically low stock of houses available for sale in a variety of regions.</li> <li>Expected effect on demand and prices of recent changes to LVR and tax rules.</li> </ul>
Housing demand		<ul style="list-style-type: none"> <li>Net immigration increased further to new record levels in April, and is adding to demand in Auckland. Impact across the rest of the country is less clear.</li> <li>Short to medium term fixed mortgage interest rates have fallen further since the last <i>Forum</i>. Mortgage rates remain near historic lows.</li> <li>Some early indications of net growth in housing credit.</li> <li>Demand pressures still high in Auckland with more variable demand pressures elsewhere.</li> </ul>	<ul style="list-style-type: none"> <li>Future direction of <i>Forum</i> work re: cross-agency housing policy initiatives for reducing house price pressures in Auckland.</li> <li>Is there a risk of housing demand "contagion" spreading from Auckland to other nearby urban areas?</li> </ul>
Housing supply		<ul style="list-style-type: none"> <li>Residential construction investment growth continues to increase. Moderating consent growth points to slower gains in residential investment growth ahead.</li> <li>Nationally consent volumes are flattening, with growth in Auckland offset by moderation in Canterbury.</li> <li>Construction cost inflation has remained relatively contained, albeit with a general uptrend recently.</li> <li>Dwelling supply shortfall in Auckland has increased marginally since the last <i>Forum</i>, but in Christchurch remains on track to be eliminated by mid-2017.</li> </ul>	<p>s 9(2)(g)(i)</p>
Rental market		<ul style="list-style-type: none"> <li>NZ rental affordability continues to deteriorate mildly, driven by growth in Auckland rents in particular.</li> <li>Annual growth in Christchurch rents has been declining since mid-2014, in line with the narrowing housing supply shortfall in the region.</li> <li>Multiple property owner (MPO) share of Auckland sales trending up since mid-2014.</li> </ul>	<ul style="list-style-type: none"> <li>Investor participation/role in housing provision, especially new housing supply.</li> </ul>
Outlook		<p><i>Housing:</i> Regional differences remain a key feature of the market. Expect average NZ house price inflation to approach 10% p.a. in 2015, led by Auckland continuing to grow at 10-15%.</p> <p>Auckland housing valuations stretched but no real signs that the market is cooling.</p> <p><i>Rental:</i> The Auckland market is showing signs of rental under-supply generally. Christchurch rents remain high, but the trend now appears downward in the region.</p>	<ul style="list-style-type: none"> <li>Upside / downside scenarios to house price forecasts.</li> </ul>

# HOUSING-BUILDING-CONSTRUCTION MARKETS FORUM

## State of Markets: Key Indicators Dashboard

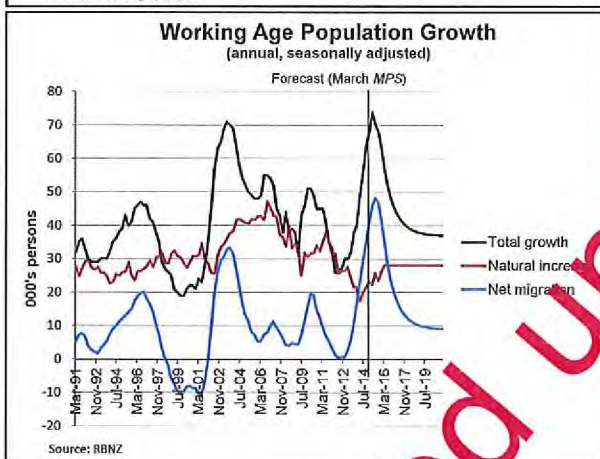
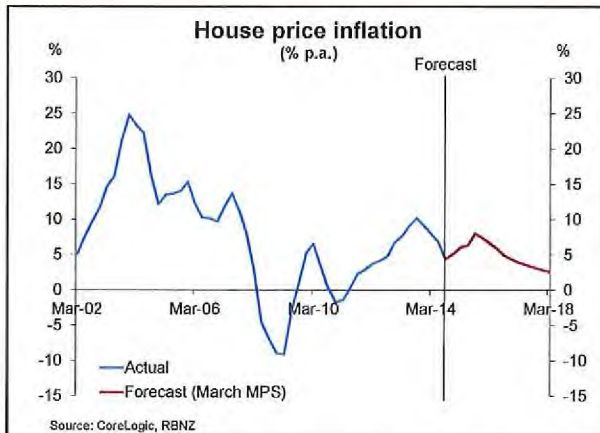
June 2015

### PRICES



# State of Markets: Key Indicators Dashboard ctd

## DEMAND



Near term house price inflation expectations have been revised up further since the last *Forum*. National house price inflation is expected to re-accelerate over 2015 towards its post-GFC peak of over 10% p.a., driven by strengthening house price inflation in Auckland. Sustained supply shortages in Auckland, strong immigration and low interest rates are expected to see house price inflation pressures ease only gradually over coming years.

Net permanent and long term migration flows have continued to surprise on the upside since the last *Forum*, with annual inflows now approaching 60k persons p.a. The pass through of migration to house prices remains a key area of house-price forecast uncertainty (as discussed in past *Forums*).

Short to medium term mortgage interest rates have continued to fall since the last *Forum*. Mortgage rates have dropped as markets have moved to price in the OCR cuts from the RBNZ by March 2016. Expectations of the start of an easing cycle have been built on factors such as a weakening dairy payout outlook, subdued inflation measures, and a wind-down in the Canterbury rebuild. Recent falls in fixed mortgage rates build on drops earlier in 2015 following falls in global interest rates. If realised, market expectations would imply that mortgage rates will become increasingly stimulatory over the coming year, with levels dropping further below their long run (20 year) average for an extended period.

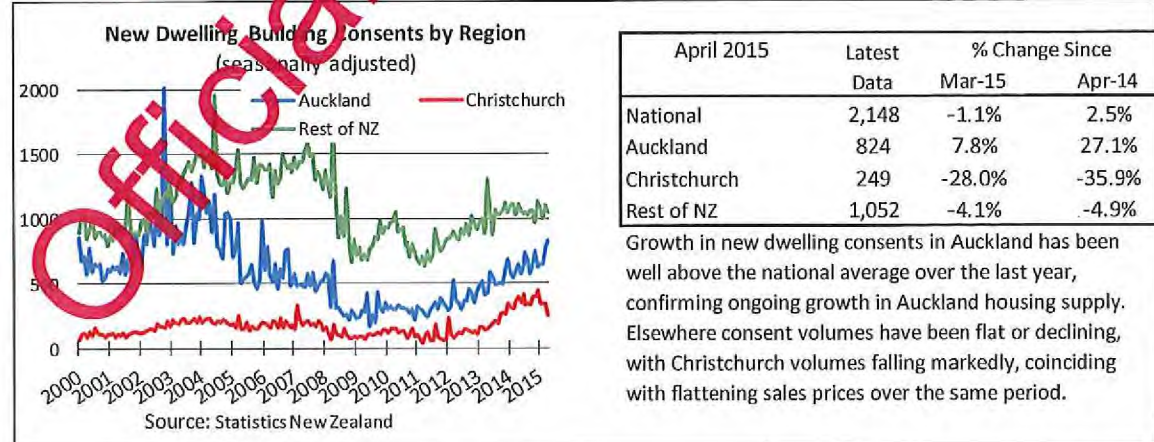
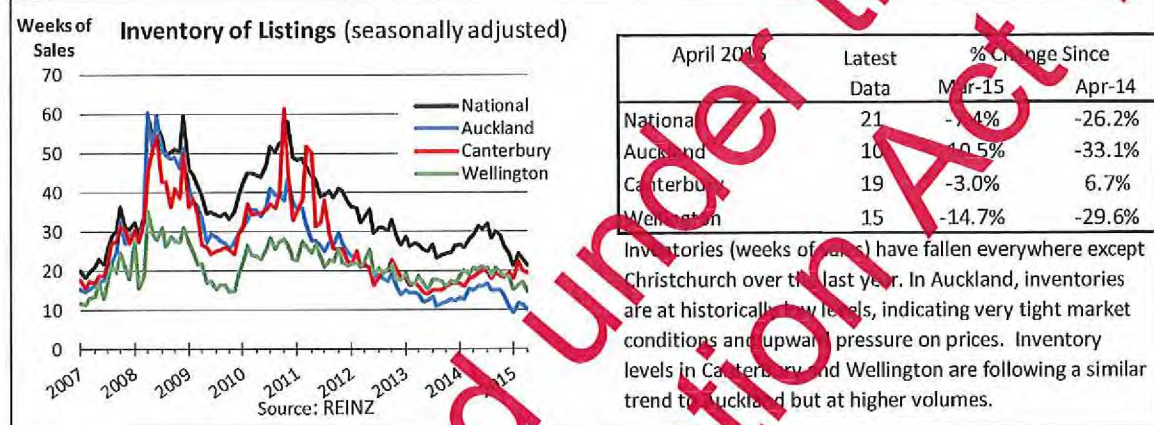
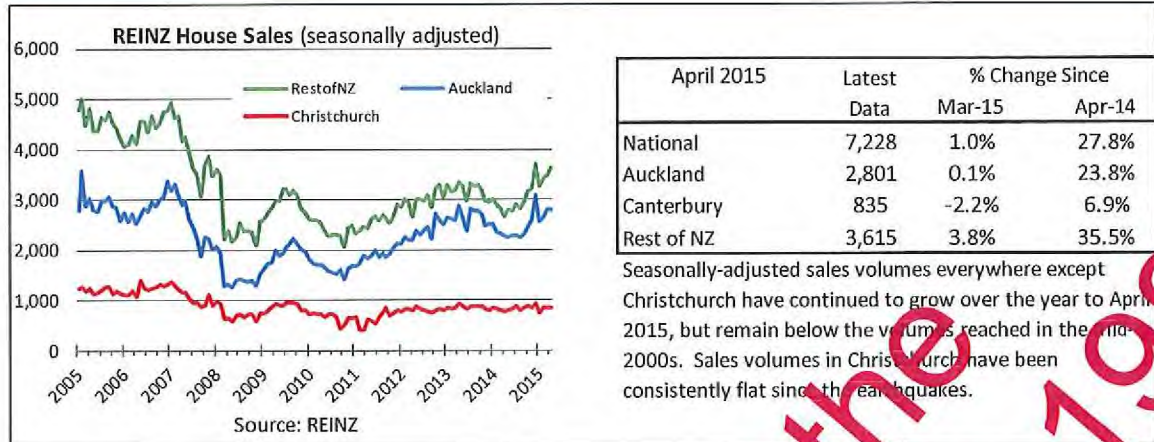
The recent rise in house price inflation has also been mirrored in house sales and housing credit. This rebound is consistent with rising activity in 'upstream' housing activity indicators such as mortgage approvals. A variety of housing market activity metrics are close to post-GFC peaks, measured as a percent of GDP.

Two key housing policy measures – capital gains tax enforcement and tighter Auckland investor LVR restrictions – have been announced since the last *Forum*. These policies are expected to have a modest impact on house price inflation.

The RBNZ estimates that Auckland investor LVR restrictions will reduce Auckland house price inflation by between 2-4 percentage points in their first year of operation, with a diminishing impact thereafter. If realised, this impact would be similar in scale to the initial LVR restrictions. The separate loosening in ex-Auckland LVR restrictions are expected to boost ex-Auckland house price inflation by one percentage point over the first year of operation.

# State of Markets: Key Indicators Dashboard ctd

## SUPPLY



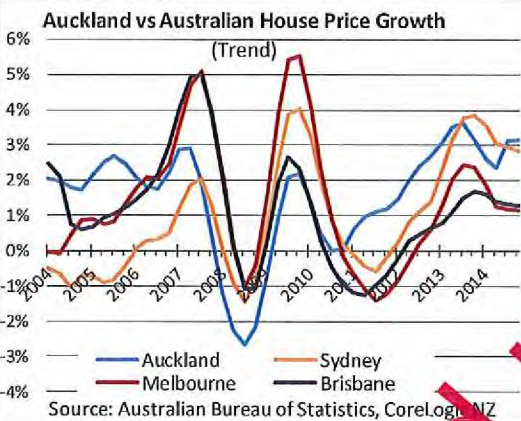
# State of Markets: Key Indicators Dashboard ctd

## SUPPLY



March 2015	% Change Since Mar-14
CPI (Housing & Household Utilities)	3.0%
PPI (Construction)	2.9%
CGPI (Residential)	5.0%

Residential construction costs are broadly tracking other housing-related cost indicators. Over the last year, however, residential CGPI inflation has continued to grow in contrast to flat to falling housing-related CPI. While not dramatic, this is indicating some pressure on residential construction capacity.



December 2014 Quarter	% Change Since*	
	Sep-14	Dec-13
Auckland	4.2%	7.8%
Sydney	3.4%	12.2%
Melbourne	1.3%	4.5%
Brisbane	1.4%	5.3%

While house price growth in Auckland has decoupled from the rest of New Zealand, it is following a similar pattern to that observed in the three largest Australian cities, notably in Sydney. This is consistent with at least some of the factors driving Auckland house prices being common across large cities in Australasia.

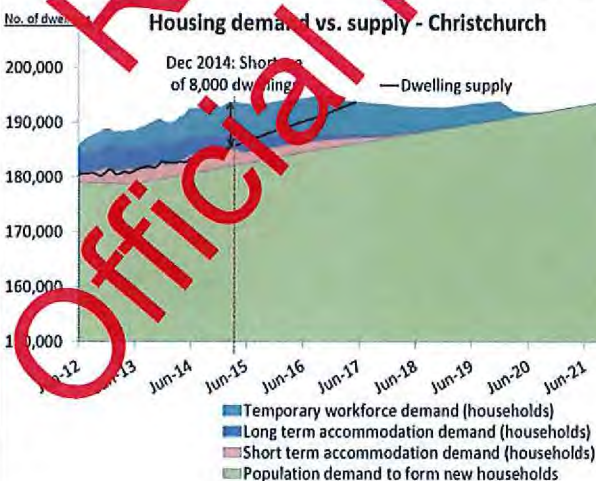
\* Change in actual values



March 2015 Quarter	Jun-15 (est.)	% Change Since Mar-14
Demand	15,328	23.6%
New dwellings	7,367	20.4%
Net supply	-24,912	47.0%

Auckland's housing shortfall is estimated to be around 25,000 houses by the end of June, marginally worse (by around 600 dwellings) than the estimate at the last *Forum*. This continues to assume an occupancy rate of 2.89 persons per household.

This indicates that current increases in supply are still not keeping up with demand growth.



Around 12,000 dwellings were destroyed in the quakes.

By December 2014, the shortfall was 8,000 dwellings, taking into account both temporary workers and additional accommodation needs.

Currently (June 2015) the shortfall is estimated to be 7,000.

The shortfall in dwelling supply is currently anticipated to be eliminated by June 2017, approx. 2 months earlier than forecast at the last *Forum*.

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## HOUSING-BUILDING-CONSTRUCTION MARKETS FORUM

## State of Markets: Summary

September 2015

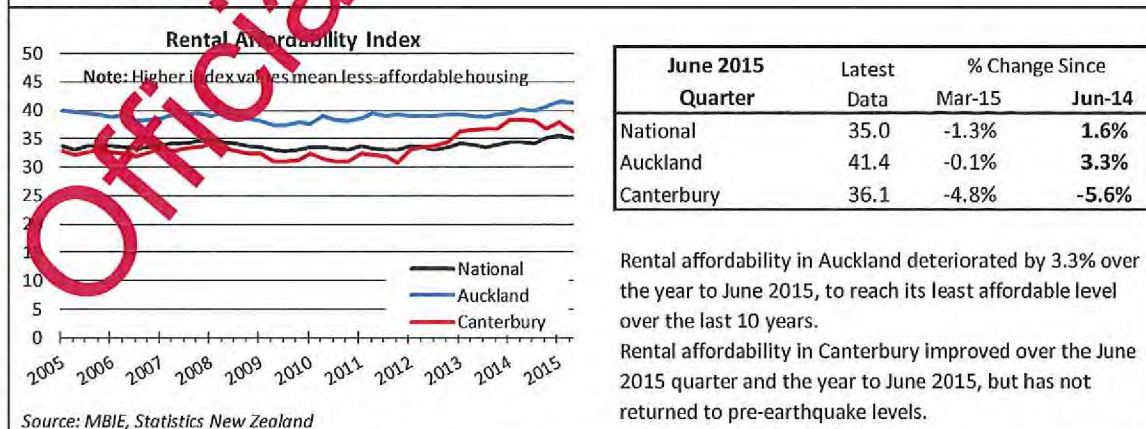
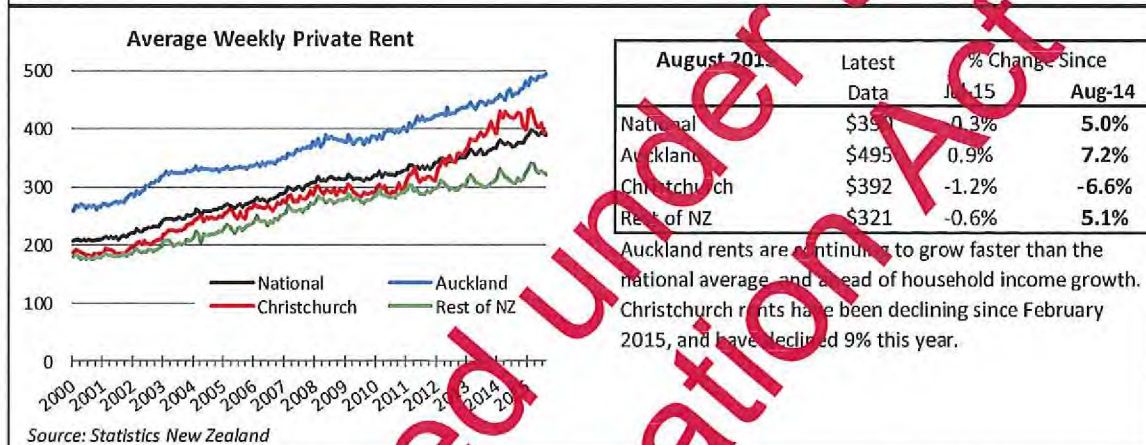
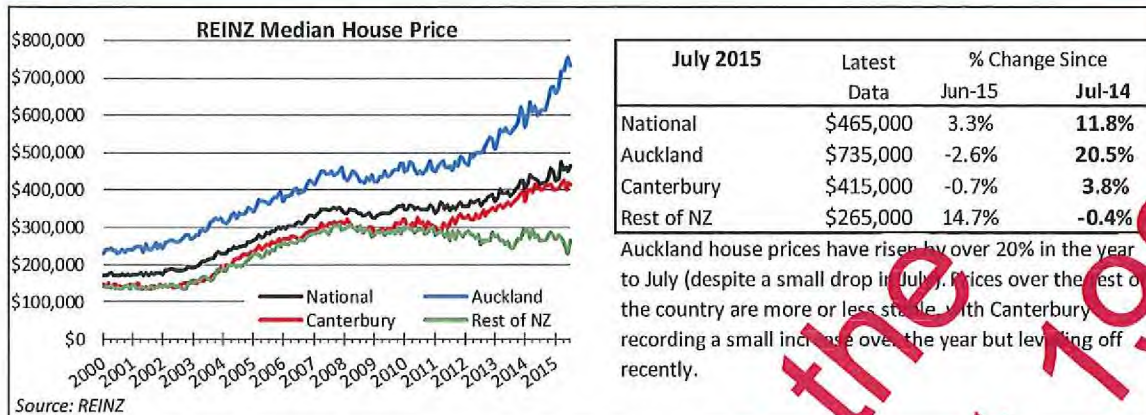
	Change	Key points	Possible discussion points
Sales volume and prices		<ul style="list-style-type: none"> <li>Sales volumes growing strongly, early signs that Auckland strength is spilling over to neighbouring areas.</li> <li>Auckland again the key driver of strengthening national house price inflation since the last <i>Forum</i>.</li> <li>Sales volumes remain well below pre-GFC levels despite recent growth across a variety of regions.</li> <li>Markets in some ex-Auckland regions are starting to tighten, particularly in the upper North Island regions adjoining Auckland.</li> </ul>	<ul style="list-style-type: none"> <li>Investor activity post-LVR/tax change announcements.</li> <li>Housing stock sales turnover in Auckland/New Zealand.</li> </ul>
Housing demand		<ul style="list-style-type: none"> <li>Net immigration increased further to a fresh record in July, adding to demand in Auckland. Impact across the rest of the country is less clear.</li> <li>Short term to medium term fixed mortgage interest rates have continued to fall since the last <i>Forum</i>. Mortgage rates are around historic lows across a variety of mortgage terms (1-5 years).</li> <li>Gross and net housing credit has been trending up since late 2014, now returning to pre-GFC levels.</li> <li>Demand pressures outside the upper North Island are much more moderate.</li> </ul>	<ul style="list-style-type: none"> <li>Degree/speed of housing demand 'contagion' from Auckland to other areas.</li> <li>Risk of credit-fuelled price growth in Auckland.</li> <li>Impact on demand and prices of historically low interest rates, taking new LVR controls into account.</li> </ul>
Housing supply		<ul style="list-style-type: none"> <li>Residential construction consents continue to ramp up towards pre-GFC levels as the rise in Auckland more than offsets a moderation in Canterbury.</li> <li>Momentum in Auckland residential construction activity continues to rise towards a peak in 2018 (176% growth since 2013). The Christchurch residential rebuild has begun to wind down.</li> <li>Construction cost inflation remains relatively contained and steady overall.</li> <li>Auckland's dwelling supply shortfall is at a historic high, and is expected to remain high through 2016. Christchurch's shortfall remains on track to be eliminated by early to mid-2017.</li> </ul>	<ul style="list-style-type: none"> <li>Housing supply responsiveness in Auckland vs. Christchurch.</li> <li>Apartment consents rising but still well below mid-2000s levels.</li> <li>s 9(2)(g)(i)</li> </ul>
Rental market		<ul style="list-style-type: none"> <li>Rental affordability continues to deteriorate in Auckland, and is now at its lowest level in over 10 years. Elsewhere it is largely static.</li> <li>Christchurch rents continue to decline as supply improves, but affordability is still below pre-quake levels.</li> <li>Purchase affordability continues to decline nationally, led by Auckland. Canterbury affordability is improving.</li> </ul>	<ul style="list-style-type: none"> <li>Housing affordability in Auckland – medium term implications should mortgage rates 'normalise'.</li> <li>Broadening in affordability declines from owner-occupied housing to rental markets.</li> </ul>
Outlook		<p><i>Housing:</i> Expect NZ house price inflation to exceed 10% p.a. in the second half of 2015, driven by supply shortfalls in Auckland.</p> <p><i>Rental:</i> The Auckland market is tight but high levels of investor activity are containing rent increases. The Christchurch rental market is easing.</p>	<ul style="list-style-type: none"> <li>Upside / downside scenarios to house price forecasts.</li> </ul>

# HOUSING-BUILDING-CONSTRUCTION MARKETS FORUM

## State of Markets: Key Indicators Dashboard

September 2015

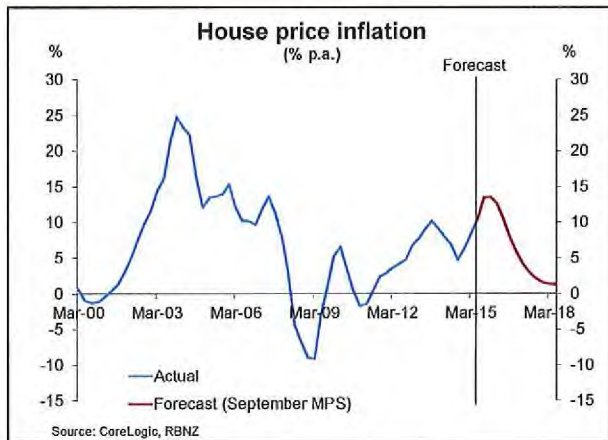
### PRICES





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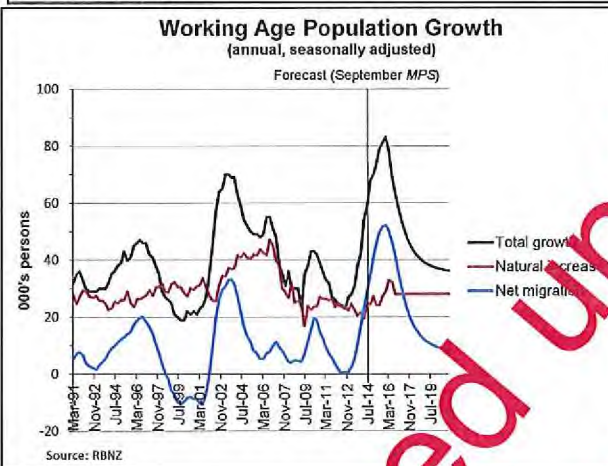
## DEMAND



Near term house price inflation expectations have been revised up again since the last *Forum*.

National house price inflation is expected to accelerate further over the remainder of 2015 towards 15% p.a., driven by strengthening house price inflation in Auckland. Sustained supply shortages in Auckland, strong immigration and low interest rates are expected to see house price inflation pressures ease only gradually over coming years.

Net permanent and long term migration flows have continued to surprise on the upside since the last *Forum*. Migration is expected to drive total population growth in excess of 80k p.a. by the end of 2015 – the highest rate in over 20 years. The pass through of migration to house prices remains a key area of house-price forecast uncertainty (as discussed in past *Forums*).



Mortgage interest rates have continued to fall in recent months across a variety of mortgage terms (from 1 year to 5 year fixed). Mortgage rates have dropped since the last *Forum* as markets have front-loaded expectations for RBNZ easing. An additional 50bp of OCR cuts are expected by year-end vs. that anticipated at the time of the last *Forum*. Floating mortgage rates are not expected to return back up to their current (already record low) levels until the end of 2018 according to market pricing. Sustained weakness in dairy prices and renewed global growth concerns have been key factors behind the pull-back in the New Zealand interest rate outlook.



Housing market activity has continued to strengthen since the last *Forum*, and is now tracking up towards pre-GFC levels. This strengthening has been seen across both leading and lagging housing market indicators (e.g. mortgage approvals and net housing credit respectively).

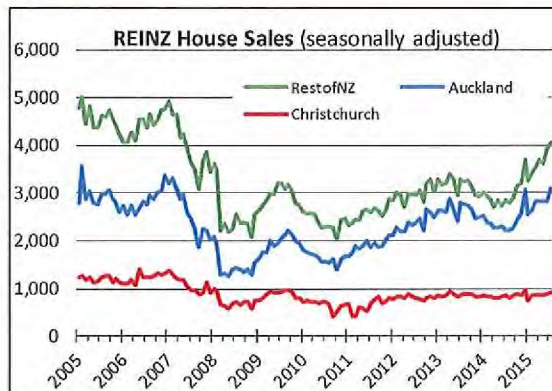
Two key housing policy measures – capital gains tax enforcement and tighter Auckland investor LVR restrictions – are scheduled for implementation over the next month or two. The investor share of sales has moderated only very marginally across most regions (including Auckland) in the run-up to the implementation of these policies. There is evidence suggesting that some investor activity has been re-orienting towards regions nearby Auckland recently. This evidence is in line with rising sales and price momentum seen in such areas (for example, Waikato, Bay of Plenty) over recent months.



See the supplementary analysis of investor Corelogic data for further details.

## State of Markets: Key Indicators Dashboard ctd

### SUPPLY



Source: REINZ

July 2015	Latest Data	% Change Since	
		Jun-15	Jul-14
National	8,072	5.9%	36.3%
Auckland	3,102	9.8%	39.2%
Canterbury	915	3.5%	8.0%
Rest of NZ	4,052	3.2%	42.5%

Volumes of house sales are increasing substantially throughout New Zealand except in Canterbury, and are now at levels not seen since the 1980s. Canterbury sales are mostly stable, showing marginal growth only.



Source: REINZ

August 2015	Latest Data	% Change Since	
		Jul-15	Aug-14
National	17	-4%	-40.7%
Auckland	9	0.3%	-37.4%
Canterbury	18	-3.7%	-1.6%
Wellington	12	-2.9%	-37.1%

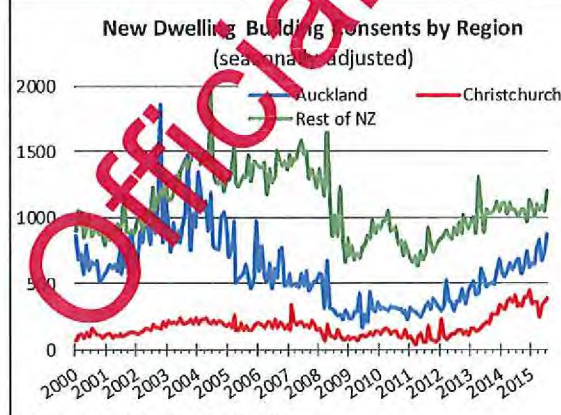
Inventories (weeks of sales) have fallen substantially everywhere over the last year except in Canterbury. In Auckland, inventories are at historically low levels, indicating very tight market conditions and upward pressure on prices. In Canterbury, inventories are relatively stable, indicating an easing of market conditions.



Source: Statistics New Zealand

July 2015	Latest Data	% Change Since	
		Jun-15	Jul-14
Total		14.0%	21.5%
Houses		7.0%	12.1%
Apartments		189.6%	109.3%
Retirement villages		-55.8%	-67.7%
Others		22.5%	94.0%

New dwelling consent volumes grew substantially over 2011-14, driven by the Canterbury rebuild and the general upturn in residential building. Over 2015, growth has eased as the Canterbury residential rebuild has tapered off. Consents for non-traditional dwellings (apartments, flats, townhouses, units, etc.) have doubled over the year.



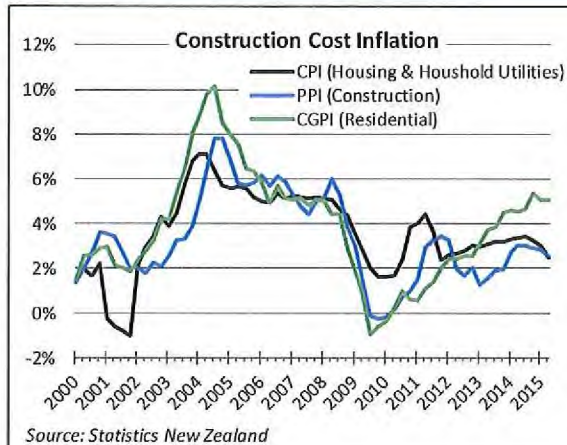
Source: Statistics New Zealand

July 2015	Latest Data	% Change Since	
		Jun-15	Jul-14
National	2,493	14.0%	21.5%
Auckland	874	18.5%	28.1%
Christchurch	380	7.2%	17.7%
Rest of NZ	1,195	13.9%	17.8%

In Auckland, the number of new dwellings consented was up 29% in the year to July – consents for July reached their highest level in 10 years. Elsewhere consent volumes have remained largely static over the last year (notwithstanding an uptick in July).

# State of Markets: Key Indicators Dashboard ctd

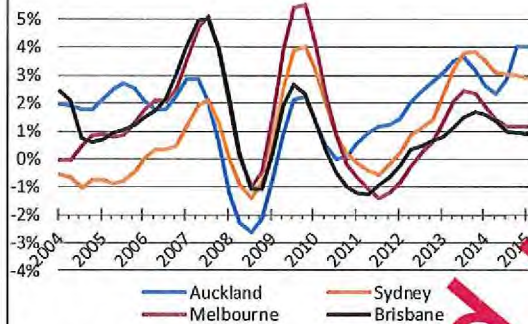
## SUPPLY



June 2015	% Change Since Jun-14
CPI (Housing & Household Utilities)	2.5%
PPI (Construction)	2.6%
CGPI (Residential)	5.0%

Residential construction costs are broadly tracking other housing-related cost indicators. Over the last year, however, residential CGPI inflation has continued to increase in contrast to flat to falling housing-related CPI growth. While not definitive, this is indicating some pressure on residential construction capacity.

**Auckland vs Australian House Price Growth (Trend)**



March 2015 Quarter	% Change Since*	
	Dec-14	Mar-14
Auckland	6%	13.9%
Sydney	3.1%	13.1%
Melbourne	1.1%	4.7%
Brisbane	-0.1%	3.9%

While house price in Auckland has decoupled from the rest of New Zealand, it is continuing to follow trend growth in the three largest Australian cities, and notably Sydney. In all four Australian cities, house price growth has eased in the March quarter.

\* Change in actual values

**Housing demand vs. supply – Auckland (annual to June)**



June 2015 Quarter	Jun-15 (est.)	% change since Jun-14
Est. demand	13,749	18.3%
New dwellings	7,367	20.3%
Est. net supply	-22,554	39.5%

Auckland's housing shortfall remains at historic high levels (est. additional 22,000 dwellings needed). This is expected to persist through 2016, but with supply increasing and migration forecast to ease, it may start to decline from 2017. Current projections are that the shortfall will remain substantial over the next 5 years.

**Housing demand vs. supply - Christchurch**



Around 12,000 dwellings were destroyed in the quakes.

By March 2015, the shortfall was around 8,000 dwellings, taking into account both temporary workers and additional accommodation needs.

Currently (June 2015) the shortfall is estimated to be 7,600.

The shortfall in dwelling supply is currently anticipated to be eliminated by April 2017, approx. 1 month earlier than forecast at the last *Forum*.

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December 2015

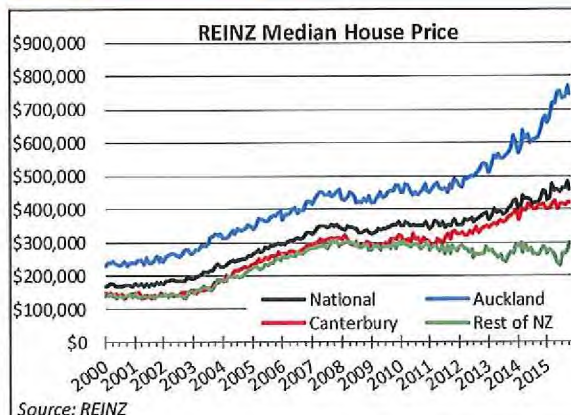
	Change	Key points	Possible discussion points
Sales volume and prices	 	<ul style="list-style-type: none"> <li>National house price growth has increased to 17% p.a. – driven by Auckland – and has been increasingly volatile as tax and LVR restrictions have come into force. Not yet clear if the most recent easing in Auckland price growth marks a turning point.</li> <li>Sales volumes have eased recently, notably in Auckland, but annual growth is still positive. Volumes remain below pre-GFC levels.</li> <li>Price growth ex-Auckland is also trending up, but remains relatively moderate. Continuing signs of Auckland price growth spill-over into adjoining regions.</li> </ul>	<ul style="list-style-type: none"> <li><b>Price measures: Median vs. stratified prices – implications and risks</b></li> <li>Recent drop in Auckland demand (sales volumes and price growth down, inventory up) s 9(2)(g)(i)</li> </ul>
Housing demand	 	<ul style="list-style-type: none"> <li>Net permanent and long term migration is tracking over 60k persons p.a. – the fastest total population growth in New Zealand in over 20 years.</li> <li>Short term to medium term fixed mortgage interest rates remain at historic lows across a variety of mortgage terms (1-5 years).</li> <li>Mortgage approvals and net housing credit have continued to rise to post-GFC highs.</li> <li>Inventory levels have increased recently in Auckland but continue to tighten elsewhere.</li> <li>Overall, while demand pressures have eased recently, they remain high and continue to broaden across NZ.</li> </ul>	<ul style="list-style-type: none"> <li>Immigration outlook – when and how fast will it decline?</li> <li>Outlook for growth in mortgage approvals and net credit in light of LVR and tax changes</li> </ul>
Housing supply	   	<ul style="list-style-type: none"> <li>Auckland new dwelling consent volumes continue to grow at 30% p.a. towards pre-GFC levels. Christchurch consent volumes are decreasing. Elsewhere volume growth is steady at around 1% p.a.</li> <li>Construction cost inflation remains relatively contained and steady overall. Construction labour cost growth also remains contained at 2.1% p.a.</li> </ul> <p>Auckland demand-supply imbalance remains high as supply (consent volume) is tracking slightly below forecast. Christchurch imbalance remains on track to be eliminated by early to mid-2017.</p>	<ul style="list-style-type: none"> <li>s 9(2)(g)(i)</li> <li>Changes in Auckland supply/demand forecast, including international comparison of household size</li> </ul>
Rents and affordability	  	<ul style="list-style-type: none"> <li>Rents in Auckland continue to grow ahead of household incomes, with affordability continuing to deteriorate (lowest level in over 10 years).</li> <li>Christchurch rents continue to decline as the supply shortfall narrows, with affordability improving to close to pre-quake levels.</li> <li>Purchase affordability improved slightly (first time in 2 years) due to easing price growth and low interest rates.</li> </ul>	<ul style="list-style-type: none"> <li>Implications for rental market if investor activity in Auckland remains subdued for an extended period.</li> </ul>
Outlook		<p><i>Housing:</i> Expect house price inflation to ease gradually towards 10% p.a. over coming quarters, but continue to be held up demand/supply pressures in Auckland.</p> <p><i>Rental:</i> The Auckland market remains tight, affordable-end may tighten further. Expect Christchurch rents to continue to decline and return to long-run trend growth.</p>	<ul style="list-style-type: none"> <li>Upside / downside risks to house price forecasts.</li> </ul>

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## State of Markets: Key Indicators Dashboard

December 2015

### PRICES

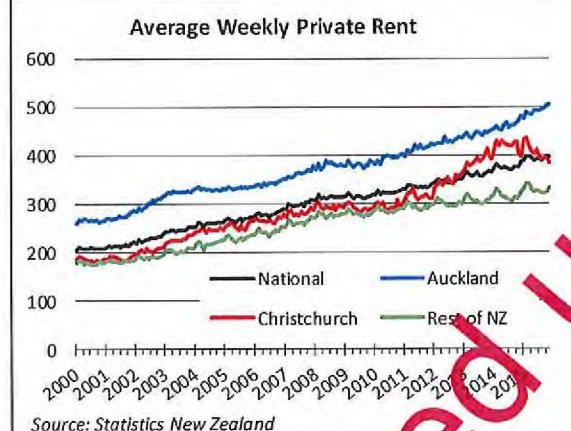


Ref: "New Zealand house price measures" – Annex

October 2015	Latest	% Change Since	
	Data	Sep-15	Oct-14
National	\$460,000	-5.1%	7.0%
Auckland	\$748,250	-3.0%	16.8%
Canterbury	\$420,000	0.0%	1.9%
Rest of NZ	\$299,000	6.5%	8.4%

**Median prices:** Auckland growth has eased by 4% p.a. since the last *Forum*, giving 5% lower growth nationally.

**Stratified prices:** National price growth is running at 1.7% p.a. (seasonally-adjusted 3-month moving average) notwithstanding a sharp (5%) drop in October. Auckland prices continue to grow ahead of other areas.



November 2015	Latest	% Change Since	
	Data	Oct-15	Nov-14
National	\$395	0.0%	6.3%
Auckland	\$506	0.6%	7.7%
Christchurch	\$384	-2.6%	-5.0%
Rest of NZ	\$333	2.3%	6.3%

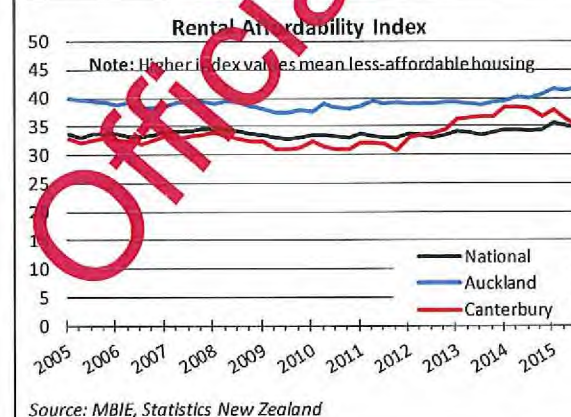
Auckland rents continue to grow at 6-8% p.a., slightly faster than elsewhere and ahead of household income growth.

Christchurch rents have now fallen by 11% over this year to date, and are now slightly below the national average.



September 2015	Latest	% Change Since	
	Quarter	Data	Jun-15
National	24.1	-2.4%	6.6%
Auckland	36.6	-4.9%	16.9%
Canterbury	22	-0.5%	-1.3%

Purchase affordability has improved slightly everywhere since the last *Forum*, due to falling interest rates, easing price growth and modest wage growth. Affordability in Auckland remains slightly better than pre-GFC levels, but elsewhere is significantly better. Christchurch is now only slightly less affordable than before the earthquakes.



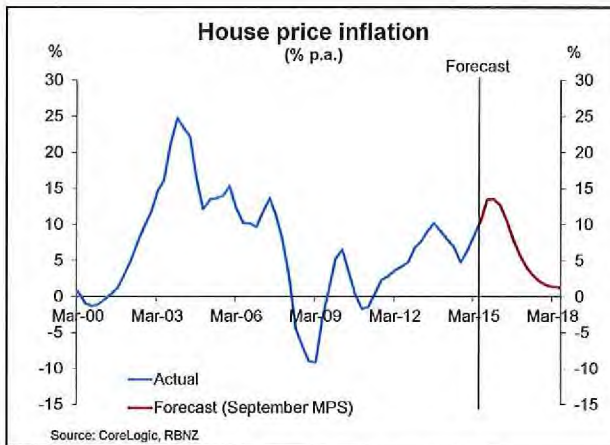
September 2015	Latest	% Change Since	
	Quarter	Data	Jun-15
National	34.8	-0.5%	1.9%
Auckland	41.7	0.8%	4.5%
Canterbury	34.9	-3.5%	-8.2%

Rental affordability in Auckland has continued to worsen, and is at its least affordable level over the last 10 years. Rental affordability in Canterbury has continued to improve sharply, and is now close to pre-earthquake levels.

Official Information Act 1982

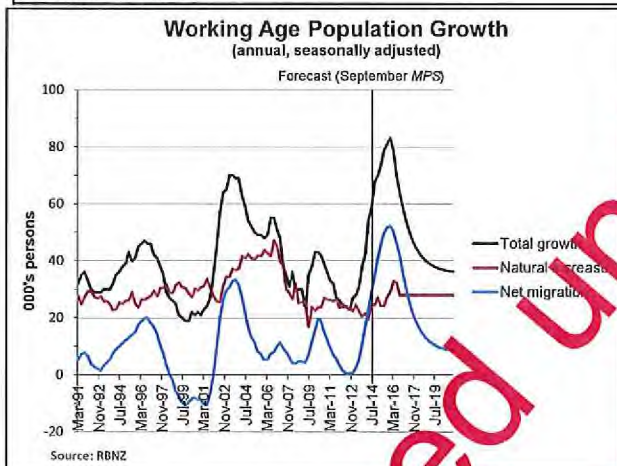
# State of Markets: Key Indicators Dashboard ctd

## DEMAND



Stratified house price data indicates that national house price inflation has increased since the last *Forum*. National house price inflation is now above September MPS forecasts, at over 17% p.a. National house price inflation eased slightly in October, led by near term softening in Auckland.

While some near term indicators (see below) seem to be weakening, sustained supply shortages in Auckland, strong immigration and low interest rates suggest house price inflation pressures will ease only gradually over coming years.



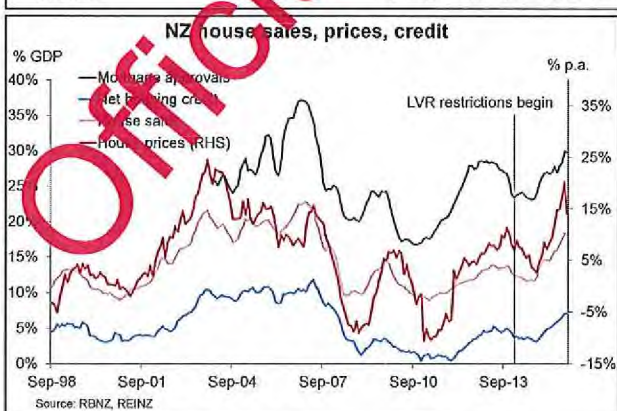
Net permanent and long term migration flows have continued to surprise on the upside since the last *Forum*. Net permanent and long term migration is currently tracking over 60k persons, with New Zealand seeing the fastest total population growth in over 20 years. The pass through of migration to house prices remains a key area of house-price forecast uncertainty (as discussed in past *Forums*).

Mortgage interest rates have continued to fall in recent months across a variety of mortgage terms (from 1 year to 5 year fixed). Mortgage rates have dropped since the last *Forum* as analysts look to the possibility of an extended Official Cash Rate easing cycle into 2016. Subdued inflation pressure and strength in the NZD have been some of the key drivers of these expectations. Floating mortgage rates are not expected to return to their current (already record low sub-6% p.a.) levels until Q3 2017 according to market pricing.



Housing market activity strengthened immediately following the last *Forum*, but has showed some signs of near term moderation in most recent data – particularly in Auckland.

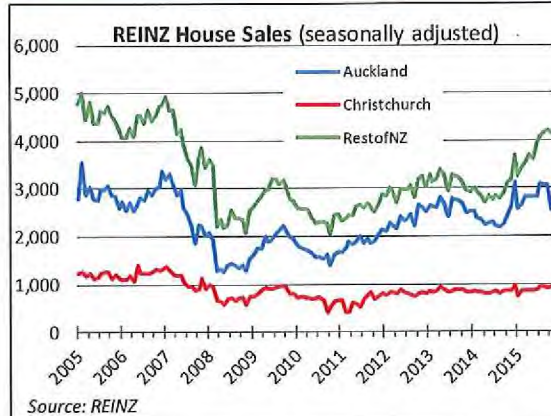
Two key housing policy measures – capital gains tax enforcement and tighter Auckland investor LVR restrictions were implemented over October and November. The high-LVR share of investor mortgage lending has dropped around 20 percent points since investor restrictions were announced in May, suggesting banks have been tightening lending criteria ahead of new LVR rules in November.



Preliminary data suggests that Auckland sales activity has begun to moderate in response to the new restrictions, and with it regional price pressure. Ex-Auckland sales activity trended up in the run-up to the loosening of ex-Auckland LVR speed limits, but has levelled off in most recent data. Price pressure has been trending up outside of Auckland (particularly the Upper North Island), as the inventory of available listings has shrunk.

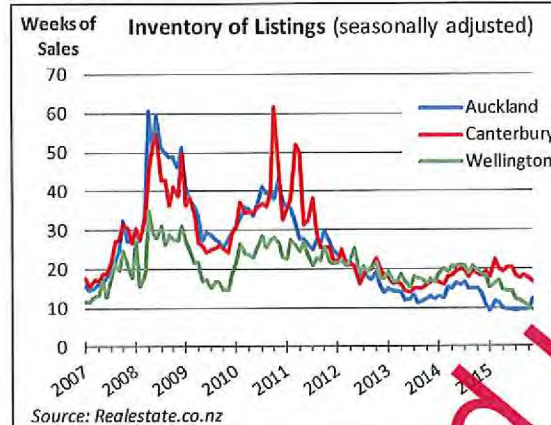
# State of Markets: Key Indicators Dashboard ctd

## SUPPLY



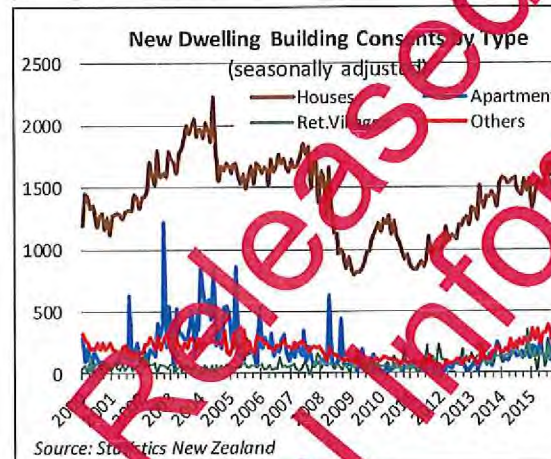
October 2015	Latest	% Change Since	
	Data	Sep-15	Oct-14
National	7,776	-5.3%	19.8%
Auckland	2,555	-16.5%	4.6%
Canterbury	931	2.1%	8.3%
Rest of NZ	4,164	-1.5%	33.1%

House sales volumes have eased everywhere except in Canterbury since the last *Forum* – markedly so in Auckland, pointing to an easing in market conditions there. Canterbury sales remain largely stable, showing marginal growth only over the year. Elsewhere, sales volumes have held up.



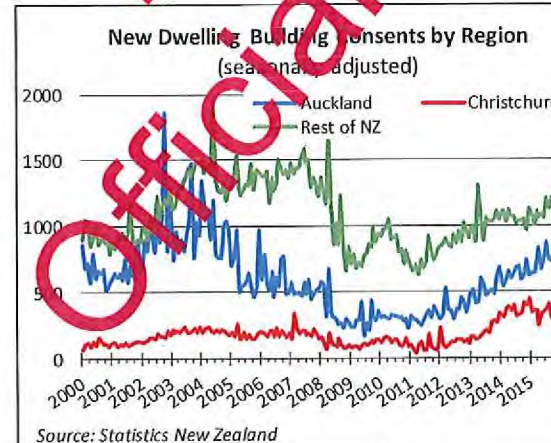
November 2015	Latest	% Change Since	
	Data	Oct-15	Nov-14
National	17	4%	-36.4%
Auckland	12	25.1%	-11.6%
Canterbury	17	-4.3%	-9.2%
Wellington	10	-4.6%	-48.6%

Inventories (weeks of sales) declined everywhere over the last year, but increased sharply in Auckland in November consistent with an easing in market demand. Conversely, inventories in Canterbury and Wellington continue to decline, with Wellington reaching a historic low of 9.6 weeks in November.



October 2015	% Change Since	
	Sep-15	Oct-14
Total	1.2%	9.7%
Houses	-4.8%	3.5%
Apartments	42.4%	85.1%
Retirement villages	65.3%	67.9%
Others	-16.2%	-18.3%

Overall, new dwelling consent volumes have continued to grow, but growth in all types except retirement villages has eased back since the last *Forum*. Apartment growth (mainly Auckland) remains strong but is still coming off a near-zero base in 2012.



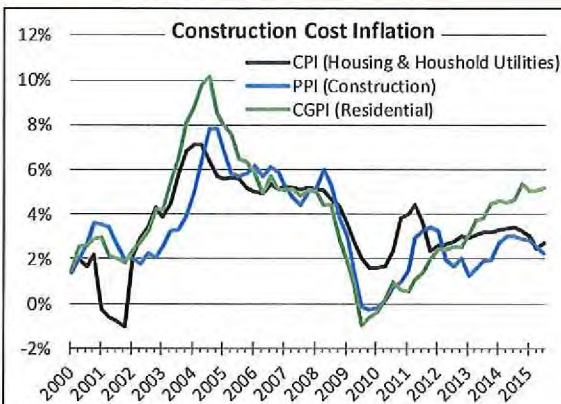
October 2015	Latest	% Change Since	
	Data	Sep-15	Oct-14
National	2,273	1.2%	9.7%
Auckland	839	14.4%	34.2%
Christchurch	264	-12.4%	-37.0%
Rest of NZ	1,193	-1.5%	14.3%

Trend growth in new dwelling consents in Auckland is continuing at around 30% p.a., with volumes at their highest level since 2006. Christchurch consents have tapered off significantly since the peak in December 2014, signalling a wind-down in residential rebuild activities.



# State of Markets: Key Indicators Dashboard ctd

## SUPPLY

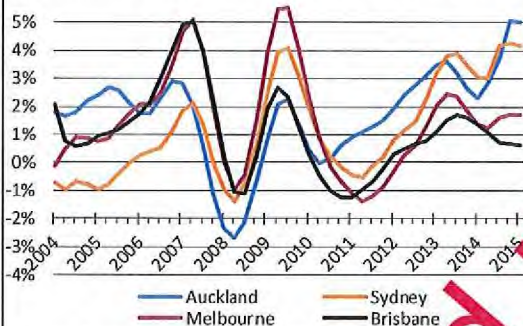


Source: Statistics New Zealand

September 2015	% Change Since Sep-14
CPI (Housing & Household Utilities)	2.7%
PPI (Construction)	2.3%
CGPI (Residential)	5.2%

Construction cost inflation (blue line) and housing-related CPI (black line) have remained broadly steady. However, residential CGPI has been trending up since mid-2009 suggesting growing pressure on residential construction capacity. This has not yet flowed over to construction labour costs which have grown at 2.1% p.a. (year to June) marginally ahead of 1.5% for all industries.

### Auckland vs Australian House Price Growth (Trend)



Source: Australian Bureau of Statistics, CoreLogic NZ

June 2015 Quarter	% Change Since* Mar-15	Jun-14
Auckland	1.5%	17.0%
Sydney	8.9%	18.9%
Melbourne	4.2%	7.8%
Brisbane	0.9%	2.9%

House price growth in Auckland is continuing to broadly follow trend growth in the three largest Australian cities, and notably Sydney. In both Sydney and Auckland, house price growth has eased in the June quarter.

\* Change in actual values

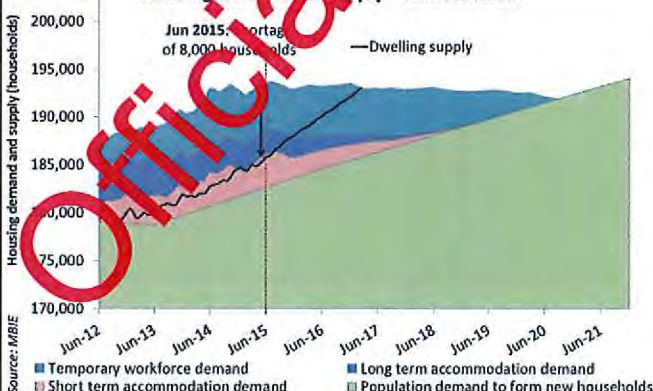
### Demand vs supply in Auckland (annual to June)



September 2015 Quarter	Jun-16 (est.)	% change since Jun-15
Est. demand	13,253	-18.0%
New dwellings	9,091	23.4%
Est. net supply	30,207	16.0%

Auckland's housing shortfall remains at historic high levels (est. additional 26,000 dwellings needed). This is expected to increase in 2016 as supply growth remains below demand growth. With increasing supply and easing migration, it may start to reduce in 2018 (one year later than previously estimated).

### Housing demand vs supply – Christchurch



Around 12,000 dwellings were destroyed in the quakes.

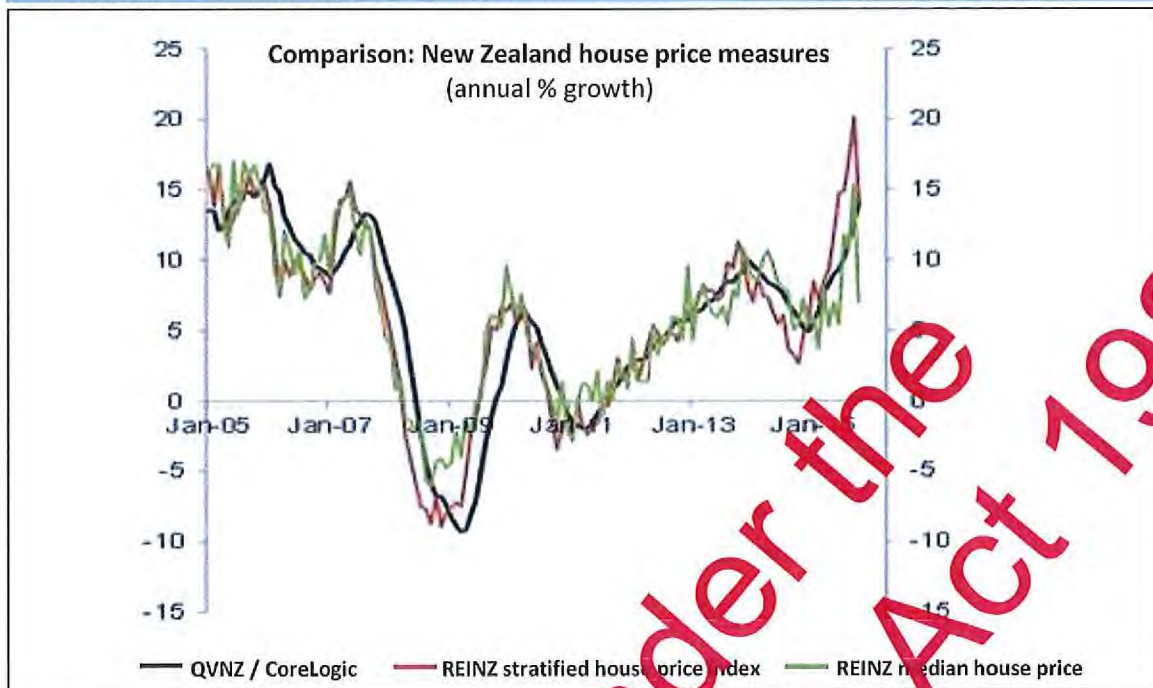
By June 2015, the shortfall was around 8,000 dwellings, taking into account both temporary workers and additional accommodation needs.

Currently (December 2015) the shortfall is estimated to be 5,100.

The shortfall in dwelling supply is currently anticipated to be eliminated by March 2017, approx. 1 month earlier than forecast at the last Forum.

## State of Markets: Key Indicators Dashboard ctd

### ANNEX: NEW ZEALAND HOUSE PRICE MEASURES



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## HOUSING-BUILDING-CONSTRUCTION MARKETS FORUM

## STATE OF MARKETS: SUMMARY

MARCH 2016

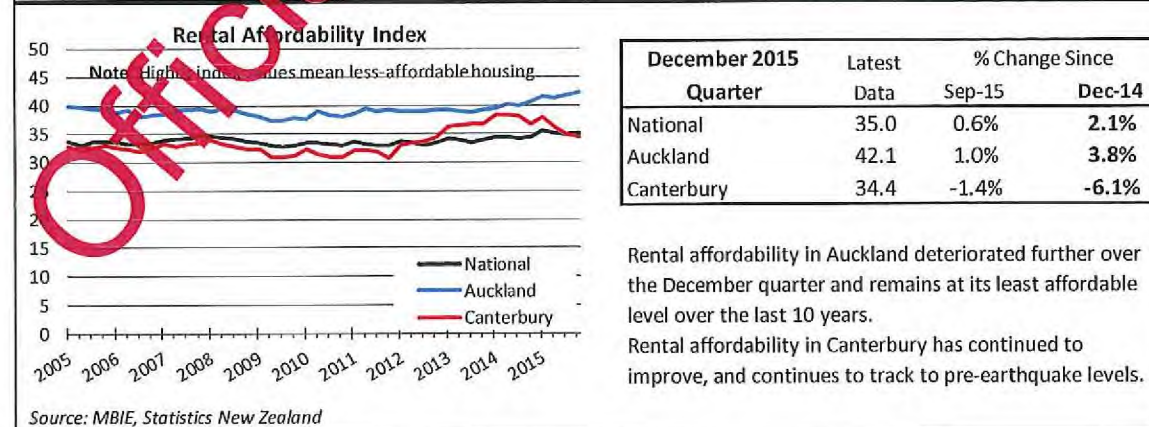
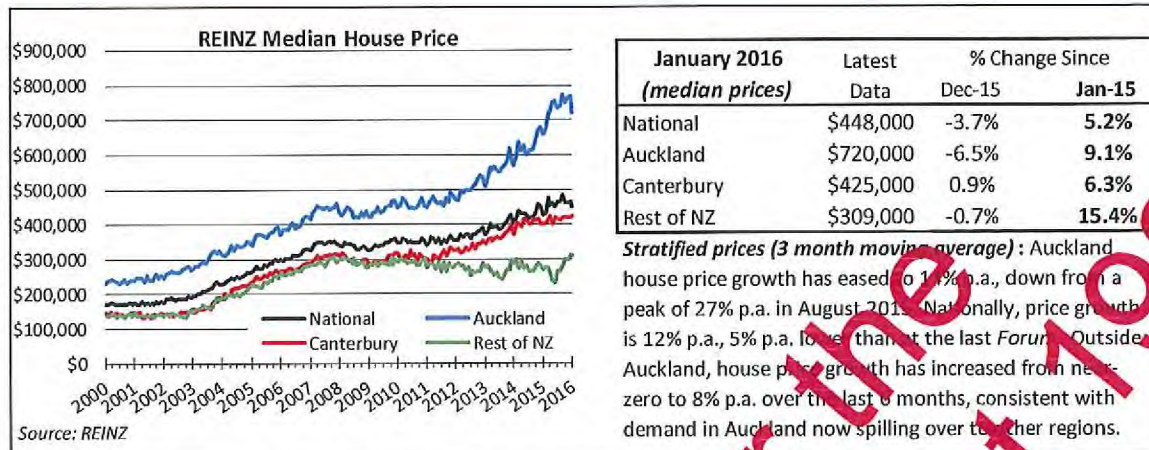
	Change	Key points	Possible discussion points
Sales volume and prices	<p>VOLUME</p> <p>↓</p> <p>↑</p> <p>PRICES</p>	<ul style="list-style-type: none"> <li>Sales volumes have fallen in Auckland and to a lesser extent in the Upper North Island (Waikato/BOP). Activity in other areas is trending up but rate of growth has slowed.</li> <li>Inventory of listings are at or close to historic low levels, particularly in Wellington.</li> <li>House price growth in Auckland has continued to ease since the last <i>Forum</i>, but has increased in some areas outside Auckland. The combined effect is a drop of 5% p.a. in national price growth to 12% p.a. (REINZ stratified 3 mth m.a.).</li> </ul>	<p>s 9(2)(g)(f)</p>
Housing demand	<p>AKL DEMAND</p> <p>↑</p> <p>EX-AKL DEMAND</p> <p>↑</p>	<ul style="list-style-type: none"> <li>Net permanent and long term migration continues to surprise on the upside – currently above 65k persons p.a. and largely driven by trans-Tasman flows. Growth in migration is still expected to ease but more slowly than at the last <i>Forum</i>.</li> <li>Mortgage interest rates have dropped since the last <i>Forum</i> following the latest OCR cut by the RBNZ in December. Likely to remain low.</li> <li>While market activity in Auckland appears to have eased, the fundamentals remain supportive of on-going demand.</li> <li>Outside Auckland, demand growth has been mixed over recent months. Regions adjoining Auckland have showed some near term moderation in growth while the rest of NZ has generally continued to strengthen. The low supply of listings is keeping pressure on prices in most regions nationwide.</li> </ul>	<ul style="list-style-type: none"> <li>Impacts of LVR changes – separate paper provided.</li> <li>What are the drivers of a fall in net migration? Are we expecting these to happen in the near term?</li> </ul>
Housing supply	<p>↑</p> <p>VOLUME</p> <p>↔</p> <p>COSTS</p> <p>↑</p> <p>AKL SHORTAGE</p> <p>↓</p> <p>CHCH SHORTAGE</p>	<ul style="list-style-type: none"> <li>Auckland new dwelling consent volumes continue to grow, but the growth rate is easing. Christchurch consent volumes continue to decrease back to (and below) pre-earthquake levels. Elsewhere volumes are continuing to grow steadily.</li> <li>Construction cost inflation has fallen suggesting pressure on residential construction capacity is perhaps easing, though there may be regional variation.</li> <li>While supply in Auckland is increasing, demand based on population growth remains higher leading to further increases the calculated demand-supply imbalance. Christchurch imbalance remains on track to be eliminated by early to mid-2017.</li> </ul>	
Rents and affordability	<p>↑</p> <p>AKL RENTS</p> <p>↓</p> <p>CHC RENTS</p> <p>↑</p> <p>AFFORDABILITY</p>	<ul style="list-style-type: none"> <li>Auckland rents continue to grow marginally faster than elsewhere but with signs of annual growth slowing. Rental listings appear to be higher than same time last year.</li> <li>The overall pattern of Christchurch rents is a return towards trend growth.</li> <li>Purchase affordability has continued to improve since the last <i>Forum</i> due to easing price growth and low interest rates.</li> </ul>	<ul style="list-style-type: none"> <li>Listings in Wellington, Waikato and BoP appear to be very low compared to previous years. s 9(2)(g)(f)</li> </ul>
Outlook		<p><i>Housing:</i> Expect Auckland house price inflation to ease slightly further in the first half of 2016, but continue to be held up demand/supply pressures in Auckland. Expect some momentum in house price inflation outside Auckland. The combination projected to lead to national house price inflation to around 10% p.a.</p> <p><i>Rental:</i> The Auckland market data suggests slight easing in rental pressure with slower growth in rents and a higher stock of listings. Expect Christchurch rents to return to long-run trend growth path.</p>	

# HOUSING-BUILDING-CONSTRUCTION MARKETS FORUM

## State of Markets: Key Indicators Dashboard

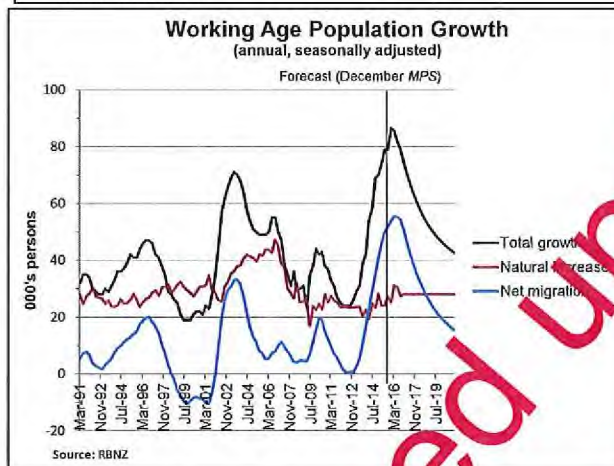
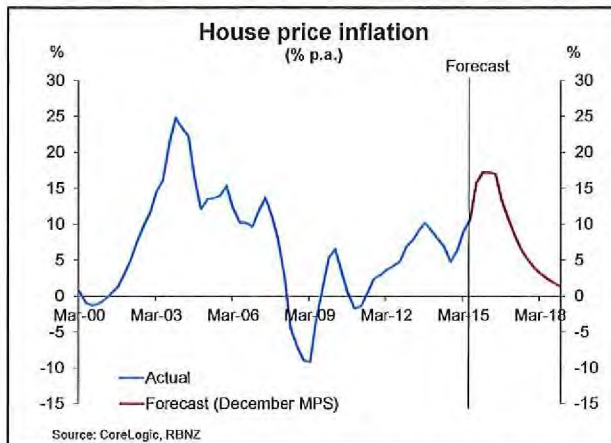
March 2016

### PRICES



# State of Markets: Key Indicators Dashboard ctd

## DEMAND



National house price inflation has slowed since the last *Forum*, largely reflecting an Auckland slowdown. The REINZ stratified index is currently growing at 11.9% p.a. (s.a., on a 3 month m.a. basis). Recent price growth presents downside risk to current forecasts. However, REINZ national house price inflation has been very volatile in the months around the introduction of new LVR/IRD restrictions. RBNZ forecasts are based off official (lagged) house price data from CoreLogic.

Some near term indicators (see below) suggest a near term slowing in price momentum in New Zealand. However, sustained supply shortages in Auckland, low listings inventories nationwide, strong immigration and low interest rates suggest house price inflation pressures will ease only gradually over coming years.

Net permanent and long term migration flows have continued to surprise on the upside since the last *Forum*. Net permanent and long term migration is currently tracking above 65k persons, with New Zealand seeing the fastest total population growth in over 20 years. The pass through of migration to house prices remains a key area of house price forecast uncertainty (as discussed in past *Forums*).

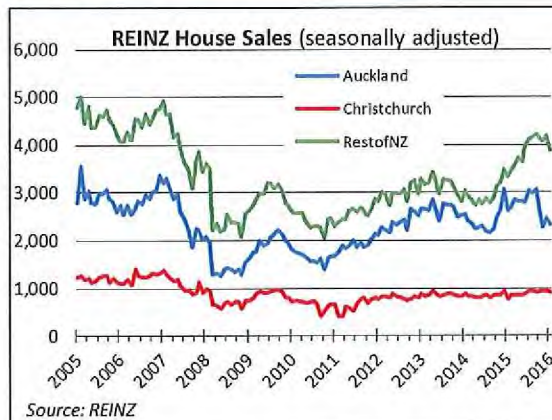
Mortgage interest rates have continued to fall in recent months across a variety of mortgage tenors. Mortgage rates have dropped since the last *Forum* following the latest OCR cut by the RBNZ in December. Market analysts are looking to further easing in 2016 on subdued domestic and global inflation pressure, coupled with a slowing New Zealand growth outlook. Floating mortgage rates are not expected to return to their current (already record low sub-6% p.a.) levels until Q1 2018 according to market pricing (Q3 2017 at the last *Forum*).

Housing market activity has weakened following the last *Forum*, led by Auckland. The most recent slowing in activity ex-Auckland has yet to feed through into reduced price pressure. The recent turnaround likely reflects a range of influences at the end of 2015 including revised LVR restrictions, new IRD rules, equity market turmoil in China, and a clampdown on Chinese capital-control avoidance.

The major banks are already meeting all three new LVR speed limits, based on preliminary (partial) data to January. Investors have retained a key role in Auckland post revised LVR/IRD restrictions, with their overall sales share little changed between Q3 and Q4. Recent sales slowdowns in Auckland and ex-Auckland have been broad based across buyer types, with relatively static sales shares across both regions. For more preliminary analysis of LVR effectiveness post-restrictions, see the attached discussion note.

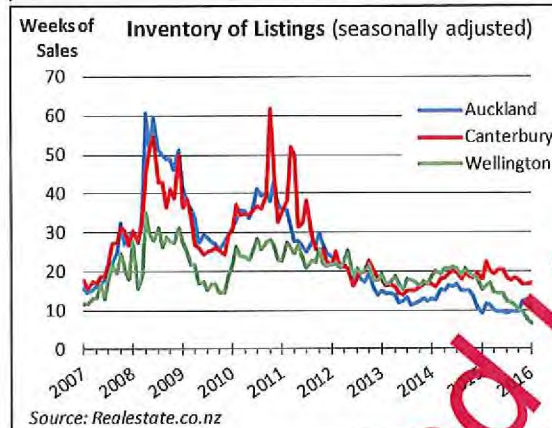
# State of Markets: Key Indicators Dashboard ctd

## SUPPLY



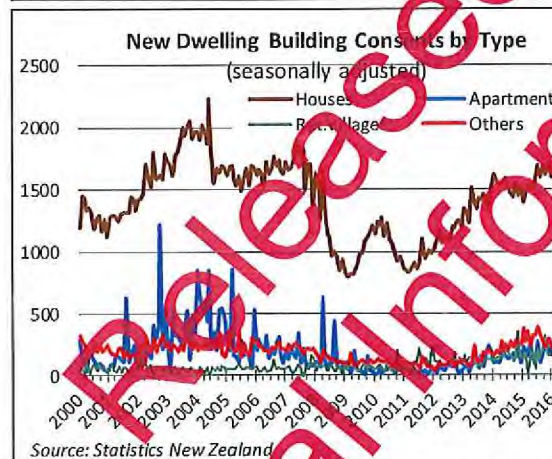
January 2016	Latest Data	% Change Since	
		Dec-15	Jan-15
National	7,144	-7.2%	5.9%
Auckland	2,320	-6.4%	-12.2%
Canterbury	892	-4.4%	15.9%
Rest of NZ	3,884	-7.3%	16.3%

Sales volumes have decreased everywhere since the last *Forum*. In Auckland, sales volumes are now lower than they were a year ago, and well below historic (mid-2000s) highs. This is consistent with Auckland demand starting to shift to other regions, notwithstanding an overall easing of demand.



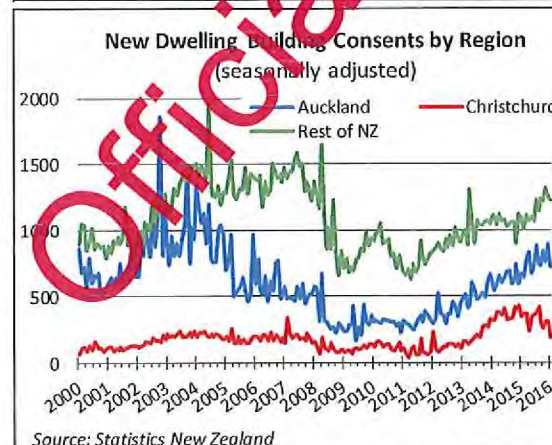
January 2016	Latest Data	% Change Since	
		Dec-15	Jan-15
National	15	-10.4%	-31.3%
Auckland	10	-17.7%	9.8%
Canterbury	17	0.6%	-6.3%
Wellington	7	-10.3%	-56.5%

Listings everywhere are close to or at historic lows, with Wellington particularly low at 6.6 weeks. Together with declining sales volumes, this points to very low levels of stock turnover and upward pressure on prices.



January 2016	Latest Data	% Change Since	
		Dec-15	Jan-15
Total		-15.2%	-0.8%
Houses		-6.5%	14.6%
Apartments		-38.6%	-27.0%
Retirement villages		-4.5%	5.9%
Others		-23.0%	-39.2%

Consents for standalone houses continued to grow over 2015, and are now close to pre-GFC levels. The trend for other consent types – while still positive – is slowing. To the extent that these other consent types relate primarily to Auckland, this may be linked to uncertainty among developers/builders regarding the current cycle.



January 2016	Latest Data	% Change Since	
		Dec-15	Jan-15
National	2,043	-15.2%	-0.8%
Auckland	721	-18.9%	7.0%
Christchurch	183	-40.8%	-47.2%
Rest of NZ	1,223	-2.6%	12.4%

Consent volumes outside Christchurch continue to grow, while Christchurch volumes are down by nearly 50% on a year ago and returning to pre-earthquake levels. Auckland consent growth has eased, falling behind forecast and below demand (see 'Demand vs. supply – Auckland').

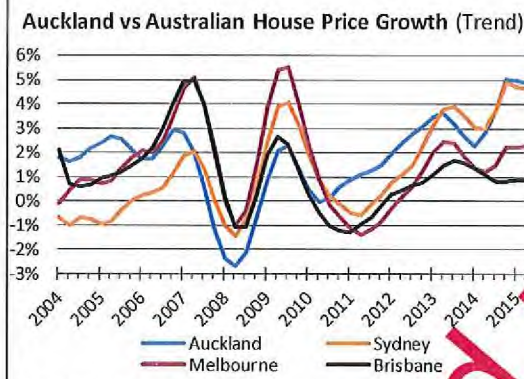
# State of Markets: Key Indicators Dashboard ctd

## SUPPLY



December 2015	% Change Since Dec-14
CPI (Housing & Household Utilities)	2.8%
PPI (Construction)	2.1%
CGPI (Residential)	4.5%

Housing-related CPI (black line) increased in the December quarter reflecting higher prices for rent, newly built houses and local authority rates. Construction cost inflation (blue line) and residential CGPI (green line) eased over 2015, suggesting that pressure on residential construction capacity is, if anything, easing.



September 2015 Quarter	% Change Since Jun-15	% Change Since Sep-14
Auckland	0.7%	22.6%
Sydney	3.1%	19.9%
Melbourne	2.2%	9.1%
Brisbane	1.3%	3.8%

Trend house price growth in Auckland continues to broadly follow the pattern of the three largest Australian cities, and notably Sydney. In both Sydney and Auckland, house price growth eased over the September quarter.



December 2015 Quarter	Est. to Jun-16	% change since Jun-15
Add. demand (12 months)	16,048	0.54%
Add. supply (12 months)	8,973	21.80%
Supply-demand (12 months)	-7,075	-17.68%
Total shortfall	-32,912	27.38%

New supply in Auckland is forecast to increase by 22% over the year. Nevertheless, supply is still currently running short of demand by around 7,000 dwellings p.a. The overall shortfall is now estimated at around 32,000 dwellings (increase of 2,000 dwellings since the last Forum).



December 2015	Est. to Jun-16	% change since Jun-15
Add. demand (12 months)	462	n/a
Add. supply (12 months)	4,416	38.48%
Supply-demand (12 months)	3,954	11.41%
Total shortfall	-2,777	-58.74%

Demand in Christchurch is largely static while new supply is forecast to increase to over 4,000 dwellings per year. The overall shortfall is continuing to decrease, and remains forecast to be eliminated by May-17 (slightly later than at the last Forum.)












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# HOUSING-BUILDING-CONSTRUCTION MARKETS FORUM

## State of Markets: Summary

June 2016

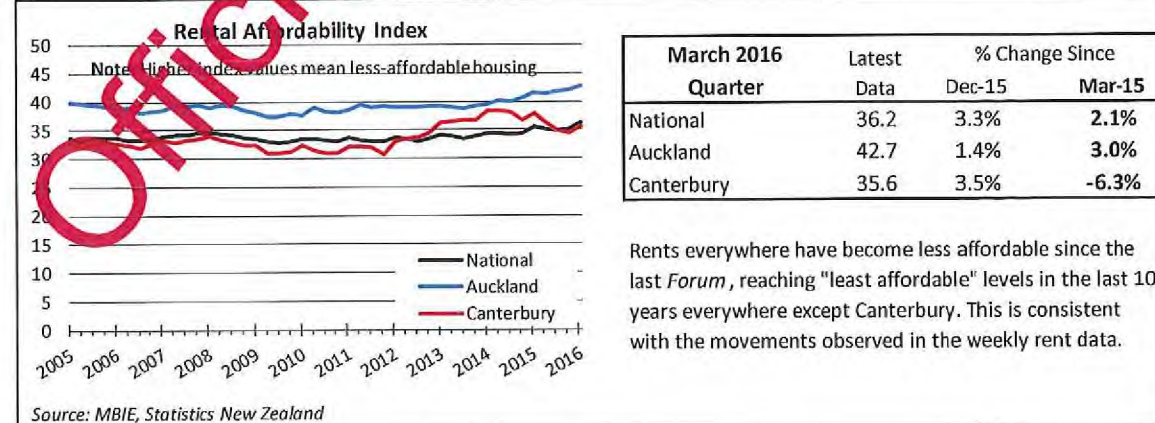
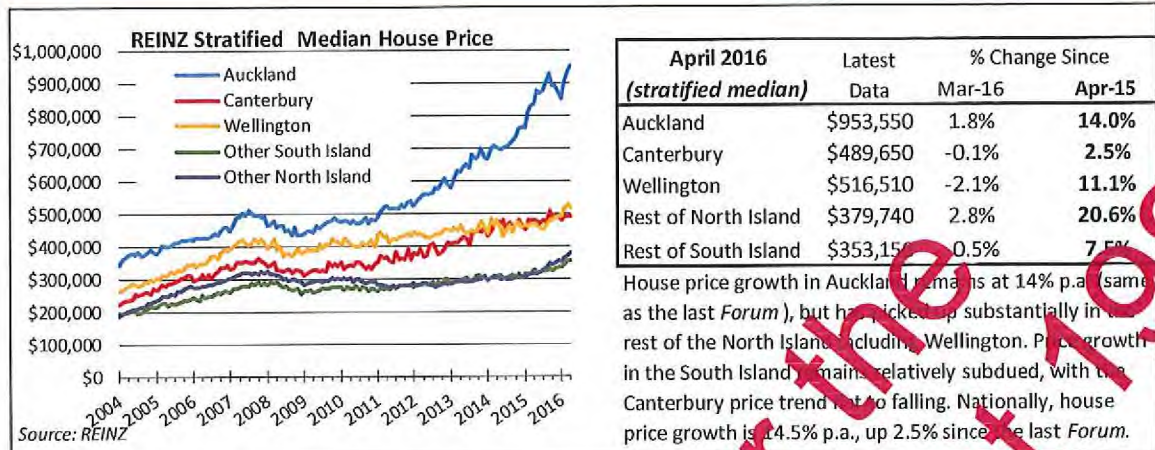
	Change	Key points	Possible discussion points
Sales volume and prices	 	<ul style="list-style-type: none"> <li>Sales volumes have started to rebound strongly across the country after a short-lived decline around the time of new LVR restrictions and tax changes.</li> <li>Price pressures started to re-accelerate from about late Q1 after a brief hiatus following housing-related policy changes.</li> <li>Price pressures are re-emerging in Auckland. Other regions are increasingly adding to national price pressure.</li> </ul>	<ul style="list-style-type: none"> <li>Emerging oversupply in Australian apartment markets.</li> <li>Increasing divergence between housing markets in Auckland and Australasian cities?</li> <li>Why are inventory levels so low?</li> </ul>
Housing demand	 	<ul style="list-style-type: none"> <li>Net permanent and long term migration is tracking up towards 70k persons p.a. – the fastest total population growth in New Zealand in over 20 years.</li> <li>Mortgage interest rates remain close to historic lows across a variety of mortgage terms, with potential for further declines ahead. Low interest rates are a key factor underpinning housing affordability.</li> <li>Net housing credit growth is at its highest level since 2008, despite strong repayment activity from existing home owners.</li> <li>Investor participation in the market has started to re-accelerate post restrictions. Investor sales shares are approaching 50% in Auckland and 40% Ex-Auckland.</li> </ul>	<p>§ 9(2)(g)(i)</p>
Housing supply	   	<ul style="list-style-type: none"> <li>The uptrend in Auckland new dwelling consent volumes looks to be slowing, reflecting in part a tapering in new apartment consents. Consents in the region remain short of current demand.</li> <li>The supply of houses to the market for sale (inventory levels) – are at historic lows nationally. With sales volumes increasing, this is likely to add to upward pressures on prices.</li> <li>Construction cost inflation remains relatively contained, although labour cost growth is the fastest of the major industry groups.</li> </ul>	<ul style="list-style-type: none"> <li>The Auckland demand-supply shortfall is now forecast to persist longer than expected, beyond 2030.</li> <li>By contrast the Christchurch demand supply shortfall is now set to be eliminated earlier than expected, in Q1 2017.</li> <li>Outlook for Auckland high-intensity construction.</li> </ul>
Rents and affordability	  	<ul style="list-style-type: none"> <li>Rental affordability has declined across most of the country. Rents are now the least affordable in a decade everywhere except Canterbury.</li> <li>Christchurch rents continue to decline as the supply shortfall narrows, with affordability improving to close to pre-quake levels.</li> <li>Purchase affordability has improved, reflecting the 2015 pause in price pressure and low interest rates.</li> </ul>	<ul style="list-style-type: none"> <li>Implications of broadening investor activity vs. declining rental affordability nationwide.</li> <li>Sustainability of apparent very low rental yields in some areas.</li> </ul>
Outlook		<p><i>Housing:</i> Expect house price inflation to remain at or above 10% p.a. until mid-2017. House price inflation then gradually moderates on rising supply, moderating migration and binding affordability.</p> <p><i>Rental:</i> The Auckland market remains tight, affordable-end may tighten further. Expect Christchurch rents to continue to decline and return to long-run trend growth.</p>	<ul style="list-style-type: none"> <li>Upside / downside risks to house price forecasts.</li> </ul>

# HOUSING-BUILDING-CONSTRUCTION MARKETS FORUM

## State of Markets: Key Indicators Dashboard

June 2016

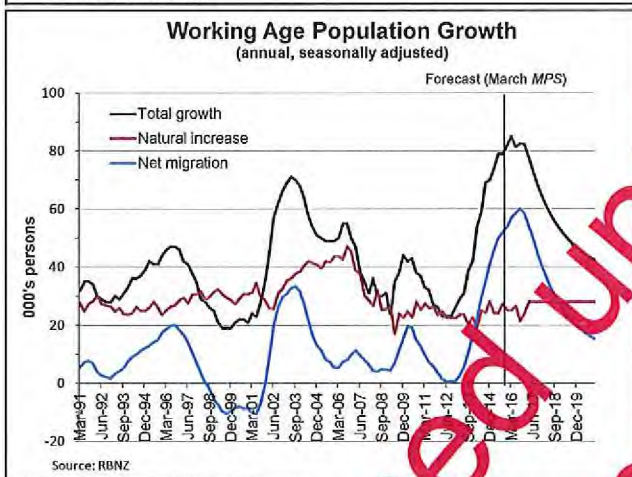
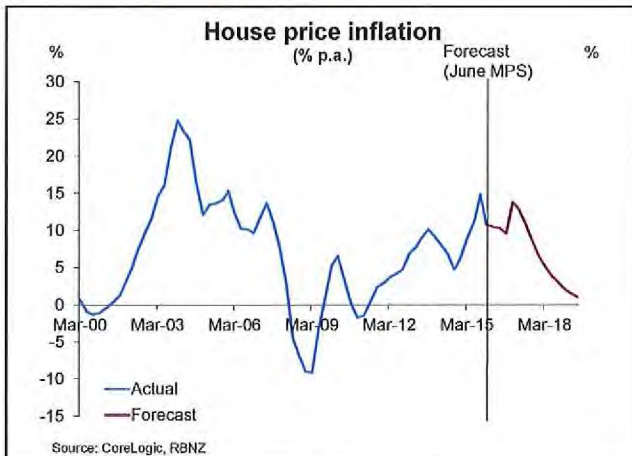
### PRICES



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# State of Markets: Key Indicators Dashboard ctd

## DEMAND



National house price inflation has strengthened and broadened since the last *Forum*. Price pressures are re-emerging in Auckland after a pause immediately following the introduction of revised LVRs and tax changes late last year. Price pressures continue to trend up outside Auckland, still led by the Upper North but now also increasingly other regions. Ex-Auckland available listings have dropped sharply since the start of 2015, and are now approaching levels of strength (relative to sales) as seen in Auckland. Sales activity has simply picked up nationwide, including a sharp rebound in Auckland. Housing credit growth is at its highest level since 2008, despite strong rates of principal repayment.

The rise in price inflation, sales activity and listings shortages reflects the combined impact of rapid housing demand growth and constrained supply. Increased demand has been driven by record net immigration, low mortgage interest rates and increased investor participation. Renewed momentum in the housing market presents upside risks to current forecasts. RBNZ forecasts are based off official (lagged) house price data from CoreLogic.

Net permanent and long term migration flows have continued to surprise on the upside since the last *Forum*. Net permanent and long term migration is now approaching 70k persons, with New Zealand seeing the fastest total population growth in over 20 years. The pass through of migration to house prices remains a key area of house-price forecast uncertainty (as discussed in past *Forums*).

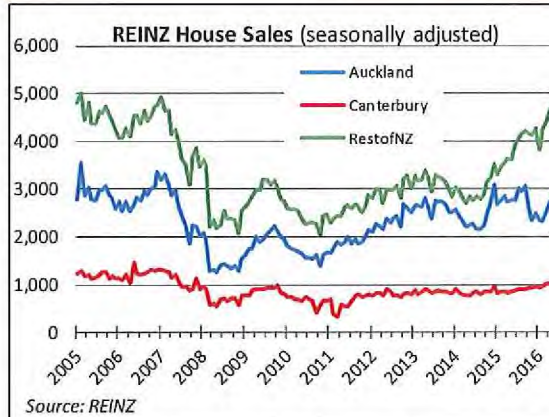
Mortgage interest rates are close to record lows across a variety of mortgage terms. Current market pricing is consistent with a small amount of further monetary policy loosening by the RBNZ over the remainder of 2016.

Investor participation is starting to reaccelerate nationwide despite the tighter investor LVR requirements in Auckland since November 2015. Investor sales shares have increased sharply in recent months to over 40% in both Auckland and ex-Auckland. These shares are higher than seen in the run-up to original LVR restrictions in 2013.

The major banks continue to meet all three new LVR speed limits. The largest, and most enduring, impact of LVR restrictions has been to strengthen bank balance sheets to severe housing market shocks. The changes to the LVR restrictions were also expected to have a modest, temporary impact on house price inflation, sales and housing credit. Preliminary modelling suggests that LVRs had a modest, transitory impact on house price inflation in Auckland similar in scale to that seen under original restrictions (circa 2-4 ppt).

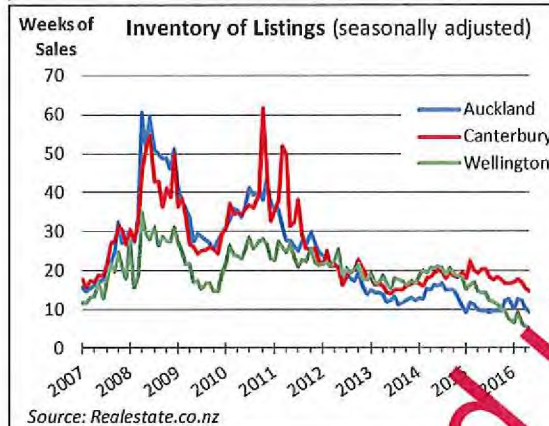
## State of Markets: Key Indicators Dashboard ctd

### SUPPLY



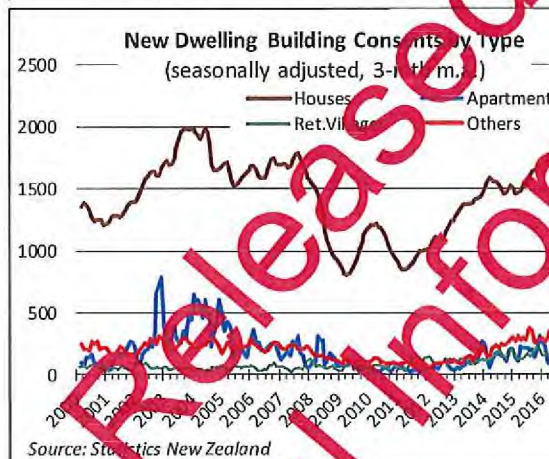
April 2016	Latest	% Change Since	
	Data	Mar-16	Apr-15
National	8,460	7.1%	17.2%
Auckland	2,743	9.1%	0.1%
Canterbury	1,027	0.3%	23.9%
Rest of NZ	4,686	6.4%	28.7%

Sales volumes have rebounded since the drop noted at the last *Forum*, notably outside Auckland. Sales volumes in Auckland remain below historic levels, but elsewhere are returning to levels not seen since the mid 2000s.



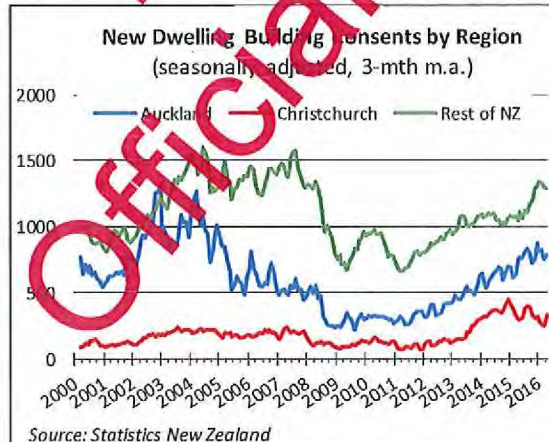
May 2016	Latest	% Change Since	
	Data	Apr-16	May-15
National	12	-13.1%	-40.5%
Auckland	9	-10.0%	-3.7%
Canterbury	15	-3.3%	-27.4%
Wellington	5	-9.2%	-64.4%

Listings everywhere have declined further since the last *Forum*, and are now at their lowest levels in 10 years. Wellington is exceptionally low with an inventory of 5.1 weeks of sales. At these levels, it is unlikely that increases in sales volume can be maintained, suggesting that further downward pressure on prices is likely.



April 2016	Latest Data	% Change Since	
		Mar-16	Apr-15
Total	2,410	2.9%	13.5%
Houses	1,773	3.4%	19.6%
Apartments	87	-19.7%	-61.5%
Retirement villages	181	17.3%	71.7%
Others	338	12.4%	22.5%

Consents for standalone houses continue to grow strongly towards pre-GFC levels. Growth in apartment consents has tapered off, with levels well down compared to a year ago. Other dwelling types continue to show growth.



April 2016	Latest	% Change Since	
	Data	Mar-16	Apr-15
National	2,410	2.9%	13.5%
Auckland	779	3.8%	4.3%
Christchurch	325	33.8%	9.3%
Rest of NZ	1,291	-0.5%	23.2%

Consent volumes continue to trend upwards nationally, with stronger growth showing outside Auckland and Christchurch ("rest of NZ"). Auckland volume growth is steady in absolute terms but still short of current demand. Christchurch consent volumes - while recovering in March - are still gradually easing overall.

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## SUPPLY

