ANZ RESEARCH

NEW ZEALAND ECONOMICS
ANZ PROPERTY FOCUS

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INSIDE

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CRYSTAL BALL GAZING

SUMMARY

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

THE MONTH IN REVIEW

Governor Wheeler has effectively ruled out OCR hikes to counter housing market strength, but the RBNZ has acknowledged they are very mindful of housing excesses and are now also watching some regional housing markets more closely. October sales figures, however, showed that regulatory changes intended to slow investor demand are impacting, with a regionally broad-based fall in sales activity and lower annual house price inflation. The hope is that such measures will provide more time for the lift in dwelling supply to deliver greater balance to the Auckland market in particular, but with net immigration inflows still booming, this is a moving target. Credit growth has followed the housing market and households are re-leveraging off already high debt levels.

PROPERTY GAUGES

House prices and sales fell in October, coinciding with the October introduction of government measures to slow investor demand. House prices in Auckland look stretched relative to both incomes and rents, with support to prices provided by lower fixed mortgage interest rates, tight dwelling supply, and booming net immigration. Other regions look well placed to outperform our largest city in terms of price growth from here.

ECONOMIC OVERVIEW

Momentum across the economy slowed over the first half of the year, but the economy is far from weak. Challenges posed by low dairy export prices, peaking earthquake rebuild activity, capacity bottlenecks in some sectors and some deterioration in structural metrics are being offset by supportive financial conditions and strength in construction, non-dairy agriculture, tourism, and housing outside of Auckland. The risk profile still has a modestly negative skew (courtesy of risks around the global scene and commodity prices), but we can now see some upside domestic growth risks too. The timelier indicators suggest the economy performed better in the second half of this year than the first. We expect 2.5% growth in 2015; that’s respectable.

MORTGAGE BORROWING STRATEGY

This month saw a period of stability in rates, with only modest moves in some special fixed mortgage interest rates. Special rates for one and two-year tenors are at (or close to) multi-decade lows. Borrowers could choose to spread fixed terms across both tenors to stagger roll-overs, although if we had to choose one, we have a mild preference for the two-year rate which offers greater certainty. With no OCR rises on the horizon, longer-term rates – while historically low – don’t offer the same value, although they do provide certainty.

FEATURE ARTICLE: OUR CHANGING POPULATION

Our analysis suggests that demographic changes will result in a slowing in labour force growth, even allowing for a continued shift higher in workforce participation. All else equal this is likely to knock about half a percentage point off annual labour force growth from next decade onwards. Differences in regional growth rates are likely to persist, and some regions will be looking at population falls within a few decades. This will have implications for planning future infrastructure provision. Population ageing is not a phenomenon that’s specific to New Zealand. Technological and population trends are hard to predict and migration flows between New Zealand and the rest of the world are large and variable.

THE MONTH IN REVIEW

Governor Wheeler has effectively ruled out OCR hikes to counter housing market strength, but the RBNZ has acknowledged they are very mindful of housing excesses and are now also watching some regional housing markets more closely given spill-over from Auckland into surrounding areas. October sales figures, however, showed the regulatory changes intended to slow investor demand are impacting, with a regionally broad-based fall in sales activity and lower annual house price inflation. The hope is that such measures will provide more time for the lift in dwelling supply to deliver greater balance to the Auckland market in particular, but with net immigration inflows still booming, this is a moving target. Credit growth has followed the housing market and households are re-leveraging off already high debt levels.

RBNZ FINANCIAL STABILITY REPORT

Regional house prices now on the RBNZ watch list

The financial system was again noted to be "sound and operating effectively", but with the obvious risks with regard to Auckland housing, dairy and the global scene all again noted. However, for the first time the RBNZ acknowledged that it is now watching some regional housing markets closely. This is interesting in the context of the recent loosening in LVR restrictions in non-Auckland markets, with the strength in Auckland apparently spilling over. While for now regulatory changes don't appear to be pending, it suggests to us that the RBNZ would quite quickly re-tighten lending restrictions if these regional pressures were to intensify.

REINZ, HOUSE SALES – OCTOBER

As policy changes to slow investor demand bite

Sales volumes fell 6.6% sa from "exceptionally strong" September quarter levels, with annual growth in sales volumes dropping to 18.6%, the slowest since February. The plunge in sales is almost certainly linked to the October introduction of new government measures to slow investor demand, with earlier strength attributed to buyers rushing in prior to the regulation changes. The REINZ Stratified House Price Index fell 4.2% sa in October (+3.8% 3m/3m), the first monthly decline in 14 months, while annual house price inflation slowed to 14% y/y, the first moderation in eight months. The sharp cooling in annual sales growth and house price inflation was regionally broad-based, with a notable deceleration evident in Auckland, but with continued outperformance from regional North Island centres.

STATISTICS NZ, BUILDING CONSENTS – SEPTEMBER

The supply side is stepping up despite monthly volatility

The 5.7% m/m fall in residential dwelling consent numbers followed a 5.3% m/m August drop (sa). However, over the quarter as a whole, issuance was up a strong 12.1% q/q on the back of the sharp lift seen in July (particularly in Auckland). The drop in September issuance was due to a fall in the volatile multi-dwelling component, with issuance for houses up 1.5% m/m (+11.7% q/q). The trend remains positive in Auckland, as well as in other North Island regions, while Canterbury issuance looks as though it has plateaued.

STATISTICS NZ, EXTERNAL MIGRATION – OCTOBER

Net immigration inflows are speeding up, not slowing

There was a record net inflow of 6,210 PLT migrants (sa) in October, with the annual inflow hitting a record high of 62,500 persons. Not only this, but the average inflow is still accelerating, with the net inflow running at a record 69,300 person annualised pace.

RBNZ, HOUSEHOLD CREDIT GROWTH – SEPTEMBER

Mortgage lending strong; approvals picking up

The value of mortgage lending to households rose 0.7% sa in September, with annual growth (+6.8% y/y) at a seven-year high.

RBNZ, MORTGAGE APPROVALS – MID-NOVEMBER

Approval values and numbers are 28% and 15% higher than this time last year respectively, and are now picking up after cooling in recent months.

PROPERTY GAUGES

House prices and sales fell in October, coinciding with the October introduction of government measures intended to slow investor demand. House prices in Auckland look stretched relative to both incomes and rents, but support to prices is being provided by lower fixed mortgage interest rates, tight dwelling supply, and booming high net immigration. Other regions look well placed to outperform our largest city in terms of price growth from here.

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	↔/↓	Houses remain unaffordable, but with regional differences. The rubber band looks taut for Auckland, less so in other regions.
Serviceability/ indebtedness	Hard work	↔/↓	Lower mortgage interest rates are helping, but debt servicing to income is going up.
Interest rates / RBNZ	Drifting down	↔/↑	Recent cuts in variable and fixed rates will help support borrowing. LVR changes should slow Auckland investor demand.
Migration	Record	↔/↑	Another annual record high.
Supply-demand balance	Akld vs Rest of NZ	↔/↑	Auckland shortages are growing but the majority of the rest of the country has a surfeit of supply.
Consents and house sales	Catching up	↔/↑	Amidst monthly volatility, consents are trending up, but more houses are needed in Auckland.
Liquidity	Firming	↔/↑	Credit is rising faster than incomes. That means households are re-leveraging from elevated levels – this can't be sustained.
Globalisation	In synch	↔	Major cities booming, other centres not so much.
Housing supply	Low	↔/↑	Inventory-to-sales low in most regions, including Auckland.
Median rent	Yield drop	↓	Increases in rents being outpaced by house price gains.
On balance	**Toppy**	↔	**Continued momentum, but looking for signs of a policy impact on sentiment.**

PROPERTY GAUGES

FIGURE 1: HOUSING AFFORDABILITY

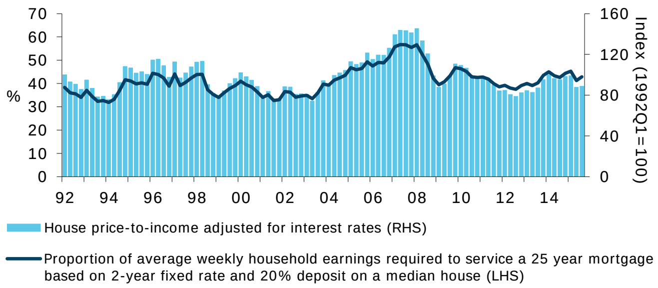


FIGURE 2: SERVICEABILITY AND INDEBTEDNESS

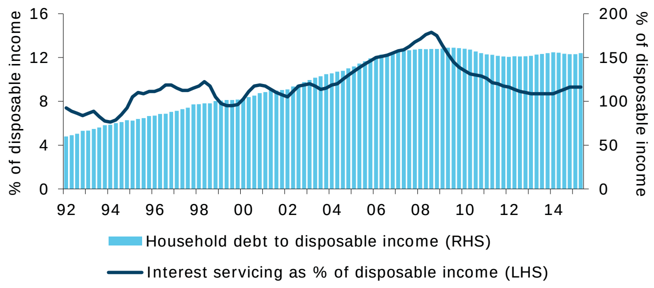


FIGURE 3: NEW CUSTOMER AVERAGE RESIDENTIAL MORTGAGE RATE (<80% LVR)

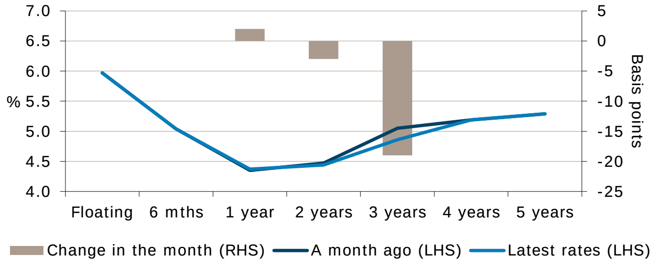


FIGURE 4: NET MIGRATION

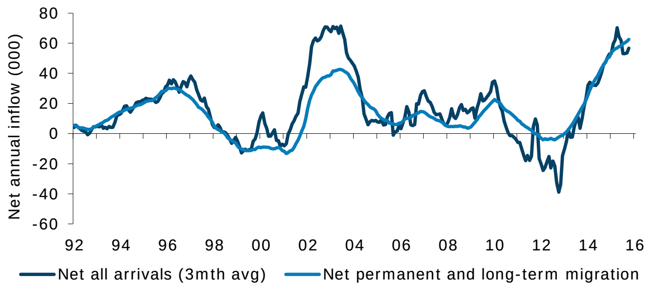


FIGURE 5: HOUSING SUPPLY-DEMAND BALANCE

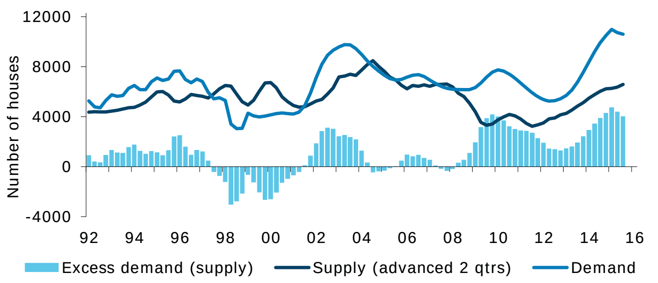


FIGURE 6: BUILDING CONSENTS AND HOUSE SALES

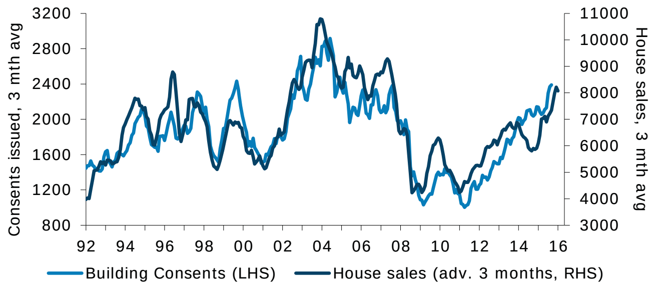


FIGURE 7: LIQUIDITY AND HOUSE PRICES

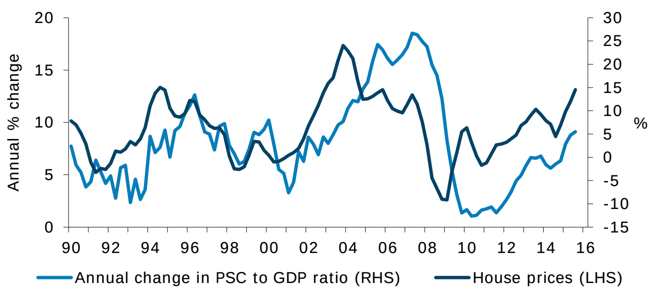


FIGURE 8: HOUSE PRICE INFLATION COMPARISON

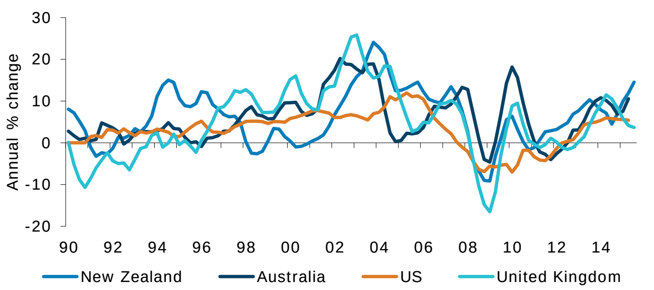


FIGURE 9: HOUSING SUPPLY

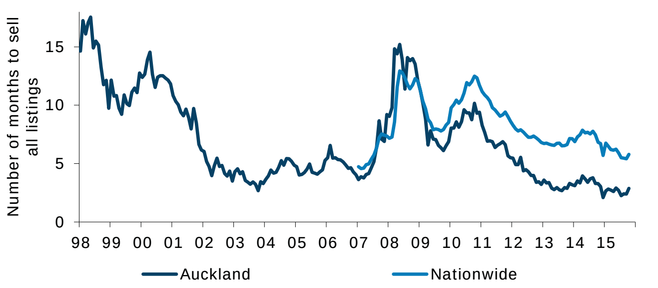
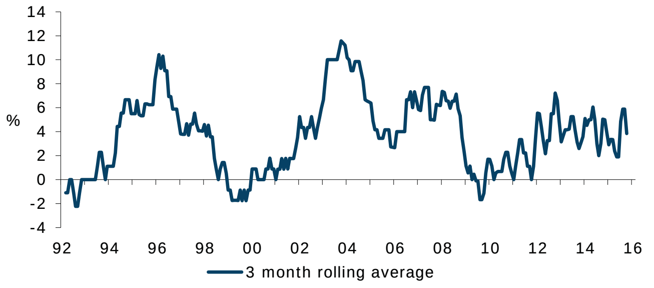


FIGURE 10: MEDIAN RENTAL, ANNUAL GROWTH



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 slowed over the first half of the year, but the economy is far from weak. Challenges posed by low dairy export prices, peaking earthquake rebuild activity, capacity bottlenecks in some sectors and some deterioration in structural metrics are being offset by supportive financial conditions and strength in construction, non-dairy agriculture, tourism, and housing outside of Auckland. The risk profile still has a modestly negative skew (courtesy of risks around the global scene and commodity prices), but we can now see some upside domestic growth risks too. The timelier indicators suggest the economy performed better in the second half of this year than the first. We expect 2.5% growth in 2015; that's respectable.

GIVING BACK

Real GDP growth is sitting around 2%. That's sub-trend (which we put around 2.75%), but far from weak.

Leading indicators have stabilised or improved, suggesting a "trough" has been reached. Confidence has lifted sharply off lows; firms' own activity expectations and our Truckometer have started to lift.

The nucleus of recovery stems from:

- **Buoyancy in key sectors.** Key pro-cyclical components are lifting again. The forward construction pipeline looks strong, regional house prices are moving up, tourism inflows are buoyant and migration inflows are at record highs. Sentiment in the services sector, which constitutes the bulk of the economy, remains firm.
- **Accommodative financial conditions** due to the lower NZD and OCR.
- **An economy that has better microeconomic foundations and resilience.** We continue to place considerable importance on microeconomic facets that whilst are hard to quantify, add to the economy's economic muscle.
- **Some natural "bounce" from overcooked negativity which became extreme around mid-year.** New Zealand's reliance on the dairy sector and the associated hit from low prices was massively overstated.

Some clear challenges remain in the form of:

- **Still-low dairy prices.** Prices are well below the marginal cost of production and an abundance of global supply remains. We have pencilled in a likely 15% peak-to-trough fall in the goods terms of trade – enough to knock 2.5% off GDP over the subsequent two years. Dairy farm values are expected to fall by 20%.
- **The Christchurch city rebuild looks to have peaked, and will now start to detract from growth despite a decent pipeline of work.** This will create issues locally, but we are more neutral on the economy-wide impact as construction sector activity across the country has yet to peak. Auckland, for instance, has a gargantuan amount of construction activity to get through.
- **Deteriorating structural metrics/high house prices**, which have us watchful. The household savings rate has turned negative and credit growth is outstripping income growth. Borrow-and-spend is back in vogue.
- **We are wary of the downstream implications of the Fed lifting rates**, which appears imminent. Asia has leveraged heavily in recent years and is reliant on USD funding; weaker emerging market currencies, a higher USD and higher US rates are a potent mix. Asset markets will be sensitive to changes in the cost of capital (even minor in nature). A tug-of-war remains between liquidity (cheap money) and weak growth.
- A seemingly certain El Nino event, though the impacts on New Zealand production are not entirely predictable.

We're siding more with the positive side of the ledger, expecting better growth over the year ahead. It won't be stellar, but reasonable. Unemployment will settle around 6%.

Speculation of a pending recession is wide of the mark. While we can see plenty of candidates to cause such an outcome, particularly a turn in the global (read China) scene, the RBNZ has plenty of scope to keep cutting the OCR, the NZD would adjust lower and fiscal policy could turn expansionary.

Asset price inflation is rife but general inflation (including wage inflation) is dormant. That's making life difficult for all central banks. Low (and lower) interest rates are supporting the former but it's not resulting in a pick-up in the latter.

So while we expect better times across the economy in general, the lack of inflation still leaves the bias for short-term interest rate skewed lower.

MORTGAGE BORROWING STRATEGY

SUMMARY

This month saw a period of stability in rates, with only modest moves in some special fixed mortgage interest rates. Special rates for one and two-year tenors are at (or close to) multi-decade lows. Borrowers could choose to spread fixed terms across both tenors to stagger roll-overs, although if we had to choose one, we have a mild preference for the two-year rate which offers greater certainty. With no OCR rises on the horizon, longer-term rates – while historically low – don't offer the same value, although they do provide certainty.

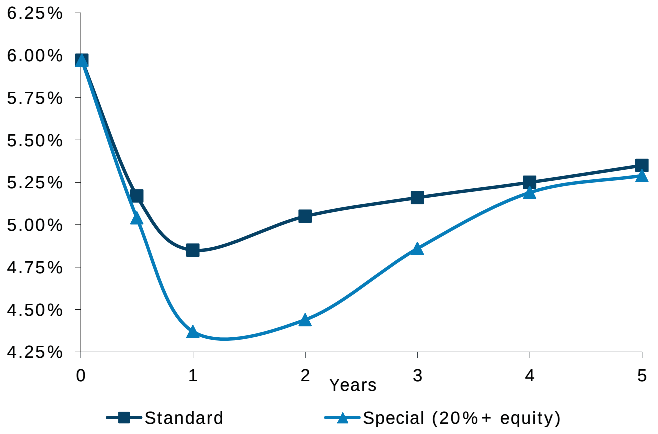
OUR VIEW

Fixed mortgage rates were mostly unchanged this month, with modest moves in some special fixed rates by some lenders and a lower three-year rate introduced by one of the big four Australasian banks. **Variable rates have matched the 75bps fall in the OCR since June**, and falls of 50-100bps on average for special rates, with the larger falls in the one to two-year fixed tenors. Standard rates have fallen 40-80bps on average since the start of June, with the largest falls seen in one-year rates. The accompanying chart shows that **the lowest rates on offer are the one-year term for both standard and "special" rates**, which are approximately 160bps and 110bps below the variable rate.

With market expectations implying at least one further OCR cut by early next year, the question is; how much of this is currently factored into current mortgage rates on offer, and what would it take for fixed rates to move lower still? **Our view is that domestic developments do not warrant a near-term OCR cut, but adverse global events and low inflation concerns will likely see the OCR touch 2.5% early next year**, with the risk profile tilted to a lower OCR than that. If this does eventuate, there is the possibility that shorter-term rates could move even lower.

So what should borrowers do? **This will depend on individual circumstances**, but our breakeven analysis is useful in comparing various options. **For those able to access specials, choosing between one and two-year terms (top table) looks to be something of a "coin toss",** although with OCR moves skewed to the downside, there is potential for one-year rates to come in below 4.51% in a year's time. However, with not much between the one and two-year rates, borrowers could choose to spread fixed terms across both tenors to stagger rollovers. **Because of the additional certainty afforded, we have a mild preference for locking in a greater portion for two-years.** Locking in for terms longer than 2 years would provide more certainty, but borrowers would be paying for the privilege. For standard rates, the one-year fixed rate looks preferable, given it would have to rise from around 4.85% to around 5.25% to make it more attractive to fix for two years. With the OCR not set to go up any time soon, this seems unlikely.

AVERAGE CARDED MORTGAGE RATES^
Current rates



Special Mortgage Rates		Breakevens for 20%+ equity borrowers			
Term	**Current**	**in 6mths**	**in 1yr**	**in 18mths**	**in 2 yrs**
Floating	5.97%				
6 months	5.04%	3.70%	4.52%	4.62%	5.35%
1 year	4.37%	4.09%	4.51%	5.02%	5.70%
2 years	4.44%	4.55%	5.11%	5.49%	5.94%
3 years	4.86%	5.02%	5.46%	5.66%	5.86%
4 years	5.19%	5.27%	5.52%		
5 years	5.29%	#Average of "big four" banks			

Standard Mortgage Rates		Breakevens for standard mortgage rates*			
Term	**Current**	**in 6mths**	**in 1yr**	**in 18mths**	**in 2 yrs**
Floating	5.97%				
6 months	5.17%	4.53%	5.15%	5.35%	5.33%
1 year	4.85%	4.84%	5.25%	5.34%	5.38%
2 years	5.05%	5.09%	5.32%	5.40%	5.45%
3 years	5.16%	5.21%	5.38%	5.48%	5.55%
4 years	5.25%	5.32%	5.48%		
5 years	5.35%	*may be subject to a low equity fee			

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

FEATURE ARTICLE: OUR CHANGING POPULATION

SUMMARY

In part one in a series of two articles we examine trends and the outlook for both nationwide and regional population and the supply of labour, with next month's article highlighting what these population trends will mean for housing provision.

Key conclusions include:

- Current population growth may be the highest in a decade courtesy of strong net migration, but population ageing and lower fertility rates are expected to drive a slowdown in population growth.
- Population projections depend on a whole range of factors – different assumptions regarding net immigration, fertility and mortality can cumulate to sizeable variability in forecasts over time. A plausible range is that the resident population could reach 5 million as early as 2022 or as late as 2036.
- Under 'reasonable' assumptions we will see a geographically widespread deceleration in population growth, likely to slow in the next 30 years to about one third of current rates. Some regions' population will shrink.
- Population ageing is likely to see the labour force participation rate decline by 2 to 3 percentage points over the next 10 years and 4 to 5 percentage points over the next 20 years.[1]
- This, plus lower population growth, will result in labour force growth that's around half a percentage point lower per year than current rates – even allowing for a continued shift higher in workforce participation amongst older cohorts. Less availability of workers will mean slower growth across the economy and incomes. Higher labour productivity growth could provide an offset, but there is little in the way of historical experience to suggest this is a given.

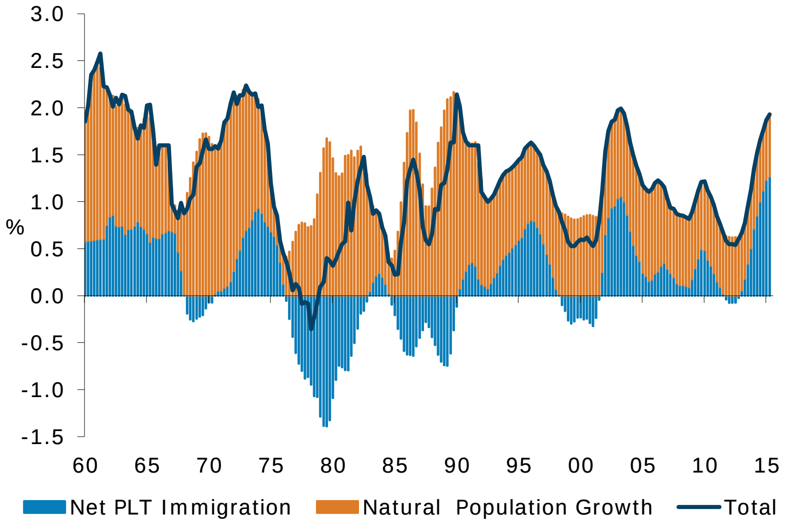
This analysis is a snapshot; the future is uncertain and population trends and technological change may evolve very differently than we expect. Nevertheless, it is useful for highlighting some of the big picture issues.

WHERE HAVE WE BEEN?

The resident New Zealand population is currently around 4.63 million persons according to Statistics New Zealand's population clock. It increased by roughly 1 million persons over the last decade.

Courtesy of record net PLT immigration, annual population growth is currently hovering around 2%, the highest in more than a decade. This masks an underlying slowdown in natural population growth that has been occurring since the last of the baby-boomers were born in the early 1960s. **Annual population growth has averaged about 1.0% per annum over the last decade and about 1.2% over the last 50 or so years, in contrast to the 2%+ rates in the 1950s and early 1960s.**

FIGURE 1. RESIDENT POPULATION GROWTH



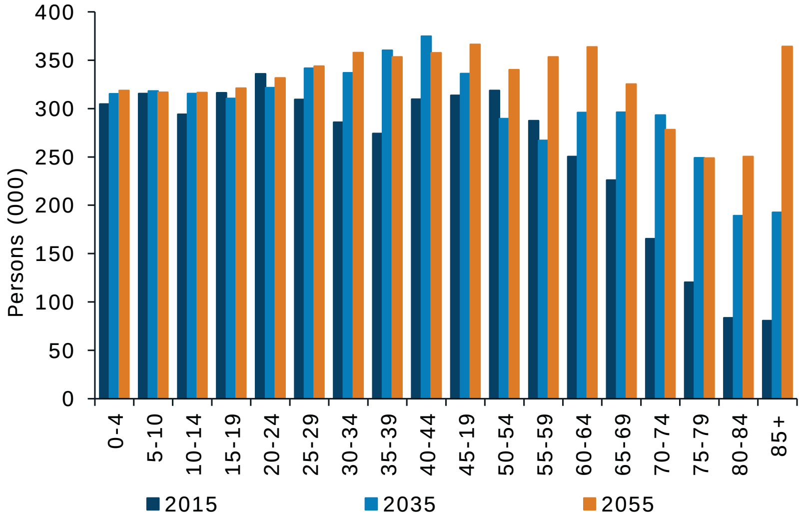
Source: ANZ, CoreLogic, Statistics NZ

[1] The population of working age in New Zealand is defined as those 15 or older, with no upper age limit.

FEATURE ARTICLE: OUR CHANGING POPULATION

Fewer births are due partly to a trend decline in fertility since the early 1960s from above 3.5 to around 2 children per woman of childbearing age today. **But it is also partly the consequence of population dynamics**: the baby-boomer generation and most of their offspring are currently either side of child-bearing age. The decline in births, plus the fact that the 1 million baby-boomer New Zealanders are now aged between 50 and 70, have seen the median age of the population increase from around 32.8 in the mid 1990s, to 35.6 in 2006 and around 37.5 years in the 2013 Census. It is on track to approach 43 years by 2043.

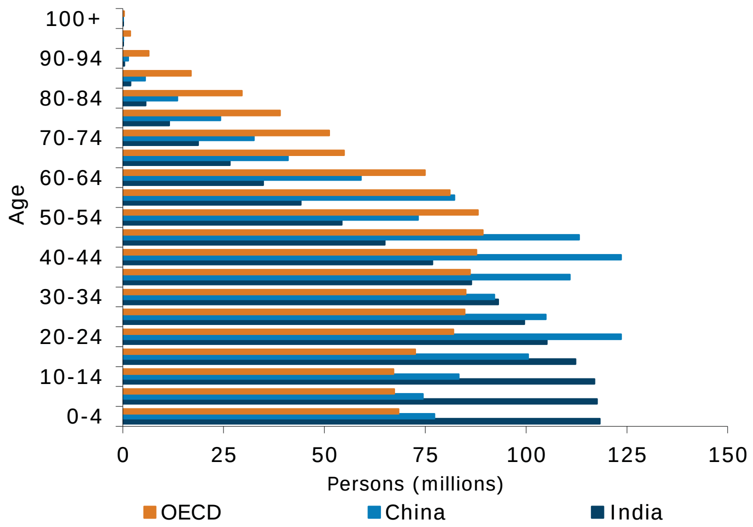
FIGURE 2. NZ RESIDENT POPULATION



Source: ANZ, Statistics NZ

New Zealand is not alone in this trend, with declining fertility rates the key driver behind population ageing in many other countries. There are currently roughly as many people aged under 15 as there are aged over 65 in the OECD. By 2050 there will be about 70% more over-65s than under-15s. Those aged over 75 are likely to double as a share of the population by 2050, to around 15%. Nor are these shifts isolated to the OECD. In China, persons aged under 15 currently outnumber those aged over 65 by about two to one. By 2030 there will more over-65s than under-15s and by 2050 the over-65s will constitute more than one quarter of the population and will outnumber the under-15s by two to one. As such, China's population is set to peak in a decade or so and then gently decline. In India, the under-15s outnumber the over-65s by around five to one; by 2030 this is expected to fall under three to one and by 2050 closer to one to one, with the over-65s constituting 15% of the population.

FIGURE 3. POPULATION PYRAMIDS



Source: ANZ, US Census Bureau

FEATURE ARTICLE: OUR CHANGING POPULATION

LOOKING AHEAD

According to the latest baseline demographic projections, the resident New Zealand population is projected to reach 5 million persons by 2025 and 6 million by 2060. Forecasting is as much art as science and **population projections depend on a whole range of assumptions** about net immigration, fertility and mortality. Different assumptions cumulate to sizeable impacts over time – a plausible range is that the resident population could reach the 5 million mark as early as 2022 or as late as 2036.

As the charts above show, shifts are afoot in the population age structure both here and abroad. While these changes are gradual, they will have widespread implications for both the demand and supply sides of the economy. Adding to challenges facing policymakers, businesses and households is the fact that these changes will not be uniform across regions. It gets even trickier when looking at regional population growth, given the likelihood of internal migration between the regions. Auckland's population could hit 2 million any time from about 2028 to 2043. Similarly, the population in the rest of the country could plausibly be anywhere from 3.3 to 3.6 million persons in 30 years' time.

REGIONAL POPULATION PROJECTIONS

The key issue for housing and infrastructure provision is how quickly the future population grows, and the extent of variation between regions. The table below summarises projected growth rates for the regions. **It shows a geographically widespread deceleration in population growth, which is expected to slow in the next 30 years to about one third of the growth currently apparent.** Population levels are likely to peak and subsequently decline in a number of areas over the next few decades, including Southland, Gisborne, Manawatu/Whanganui, Hawke's Bay and the West Coast. Population growth in Auckland is expected to slow, but still be around double that of the rest of the country. Auckland constitutes around one third of the resident population at present, but is likely to account for more than 60% of population growth in the next 30 or so years.

A caveat needs to be made here, however. Such projections tend to be linear straight-line extrapolations and on the face of it would see Auckland outperforming all others indefinitely. But at some point market forces would come into play. Becoming bigger brings growing pains; infrastructure, productivity and housing affordability. You can't stretch the rubber band indefinitely without expecting resources to respond to the relative pricing signals. The issue, however, is that such responses tend to take a very long time to play out.

TABLE 1. POPULATION PROJECTIONS

Resident population	Persons (2013 Census)	Average annual growth rates by year					
		2013-18	2018-23	2023-28	2029-34	2034-39	2039-44
Northland	164,700	0.8	0.5	0.4	0.3	0.1	0.0
Auckland	1,493,200	2.1	1.5	1.4	1.3	1.1	1.0
Waikato	424,600	1.2	0.8	0.7	0.6	0.5	0.4
BOP	279,700	0.8	0.7	0.6	0.5	0.4	0.3
Gisborne	47,000	0.3	0.2	0.1	0.0	-0.2	-0.2
Hawke's Bay	158,000	0.6	0.3	0.2	0.0	-0.1	-0.2
Taranaki	113,600	0.9	0.5	0.5	0.4	0.3	0.2
Manawatu/Whanganui	231,200	0.3	0.2	0.1	0.0	-0.1	-0.2
Wellington	466,300	0.8	0.5	0.4	0.3	0.2	0.1
Nelson/Marlborough	142,200	0.8	0.5	0.4	0.2	0.1	0.0
West Coast	33,000	0.5	0.1	0.1	-0.1	-0.2	-0.3
Canterbury	562,900	1.7	0.9	0.8	0.7	0.6	0.5
Otago	208,800	0.9	0.5	0.5	0.4	0.3	0.2
Southland	96,000	0.5	0.1	0.1	-0.1	-0.2	-0.2
New Zealand	**4,442,100**	**1.3**	**0.9**	**0.8**	**0.7**	**0.6**	**0.5**

Source: ANZ, Statistics NZ

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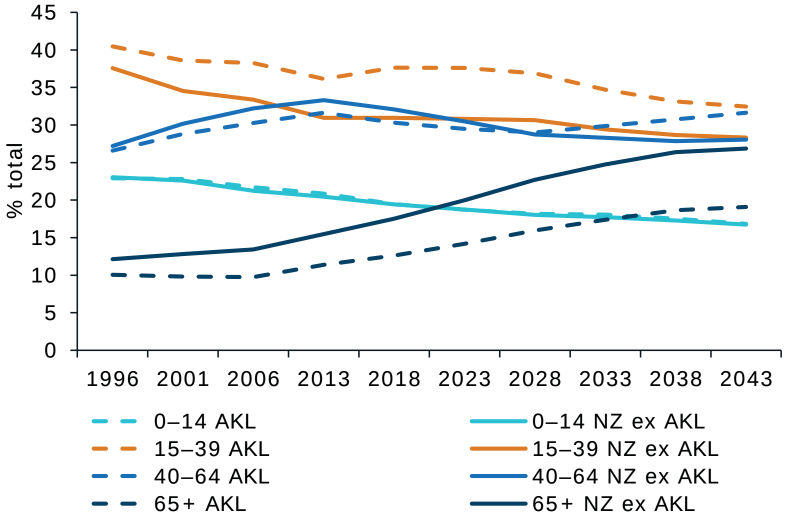
Combined with the slowdown in overall population growth has been an ageing in the population structure, with **growth in the population aged 15-64 expected to be about half that of the overall population over the next 30 or so years.** Accordingly, the proportion of the population aged 65 and over is expected to increase from around 14% of the population in 2013 to around one quarter by 2043 and 27% by 2065. The over 85s are expected to quadruple as a share of the population. While these trends will be broadly similar across the country, there are regional elements, with the Auckland region experiencing a less marked climb in the share of over 65s than the rest of the county (see Figure 4).

FIGURE 4. SHARES OF REGIONAL POPULATION BY AGE GROUP



Source: ANZ, Statistics NZ

IMPACTS ON LABOUR SUPPLY

There are three key elements to supply-side growth in the economy:

- Inputs of labour
- The level of the capital stock
- How capital and labour are combined (commonly referred to as total or multi-factor productivity)

Labour inputs can be decomposed into changes in the working age population and the proportion that enters the labour force. These simple equations treat labour inputs as uniform – we are dealing with human beings, so this is clearly not the case, with productivity of more established workers typically higher than new entrants. We put this consideration to one side for now.

Figure 5 compares the labour force participation rate (the proportion of persons aged over 15 who are in the labour force) alongside the population share aged 15-64. We are past the sweet spot for the 15-64 population share, as more and more of the baby boomer generation start to turn 65. This suggests demographic factors will be progressively more influential, as growth in the population aged 15-64 slows relative to overall population growth (itself slowing). This trend is expected to continue for the next 20 years or so.

Although demographic factors are a key determinant, other influences are also important. As Figure 5 shows, the labour force participation rate (defined as the number of persons in the labour force relative to the number of persons aged over 15) has been more cyclical. The weaker employment backdrop in the late 1980s coincided with a falling off in workforce participation, but since the early 1990s this ratio has tended to trend up, with the stronger labour market attracting more people into the workforce, give or take the odd wobble. At present the participation rate is close to record highs, which has largely been driven by rising workforce participation, particularly for the older age cohorts, as well as policy changes around benefit eligibility.

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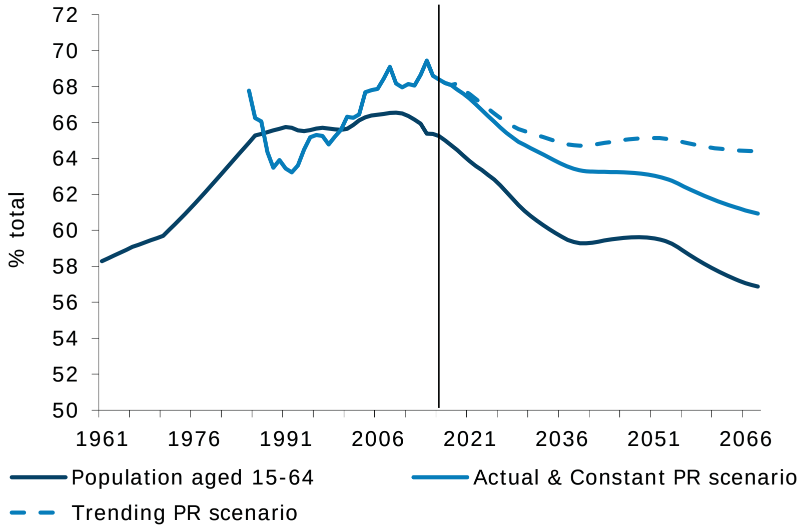
Given these opposing influences it will be useful to see which force wins and whether labour force growth will slow. We introduce two scenarios:

- A constant PR scenario = participation rates for the age cohorts are expected to hold at current levels.
- A trending PR scenario = a continuation of recent trends for individual participation rates.

Even if we assume work force participation for the older aged cohorts continues to trend up – which is sensible in light of increased life expectancy, balance sheet considerations, increasing labour market flexibility and the increasing casualisation of the labour force – **demographic considerations are likely to dominate, meaning aggregate labour force participation will be lower. Indeed, our estimates suggest that labour force participation rate is likely to decline by 2 to 3 percentage points over the next 10 years and 4 to 5 percentage points over the next 20.**

FIGURE 5. LABOUR FORCE PARTICIPATION & POPULATION



Source: ANZ, Statistics NZ

Table 2 summarises the respective annual growth rates. We are likely to remain in the 'sweet spot' for labour force growth over the next few years. However, from the end of this decade, growth in the labour force is likely to fall below that of (slowing) growth in the resident population, even assuming participation gains for the older age cohorts continue. As Table 2 suggests, growth in the labour force looks set to approximately halve from later this decade.

TABLE 2

Growth rates	2006-13	2013-18	2018-23	2023-28	2029-34	2034-39	2039-44
Population							
Total	1.2	1.3	0.9	0.8	0.7	0.6	0.5
Population aged 15-65	0.9	1.1	0.4	0.3	0.2	0.3	0.5
Labour Force							
Labour force – constant PR	1.2	1.2	0.6	0.5	0.5	0.5	0.6
Labour force – trending PR	1.2	1.2	0.7	0.6	0.6	0.6	0.7

Source: ANZ, Statistics NZ

What are the implications for supply-side capacity in the economy? All else equal, lower labour force growth will knock about half a percentage point off annual trend output growth from next decade – from high 2s to the low 2s. There will be far-reaching fiscal implications. A more slowly growing workforce could also impact on income distribution, unless offset by higher incomes from alternative sources.

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Would slower employment growth be countered by stronger labour productivity, given older workers are more experienced, and given increasing capital intensity within the economy? Our statistical analysis suggests aggregate productivity growth may in the past have been influenced by changes in the population age structure.[2] At best, however, the shift in the employment mix to a progressively older age population will add to aggregate labour productivity growth only at the margin.

These numbers are not set in stone. Net immigration flows could be considerably stronger (or weaker) than implied by the baseline figures, which assume a 10,000 net PLT increase per annum. Birth and mortality rates could also evolve significantly differently, given their multitude of determinants.

TYING IT TOGETHER

Our analysis suggests that demographic changes will result in a slowing in labour force growth, even allowing for a continued shift higher in workforce participation. All else equal this is likely to knock about half a percentage point off annual labour force growth from next decade onwards. It also suggests that while slower labour force growth could herald more (labour-saving) investment and contribute to capital deepening, there is no clear evidence pointing to a pending lift in productivity growth.

Slowing nationwide population growth will have implications for planning for future demand and infrastructure provision. The impacts are likely to be felt throughout the regions, with a regionally broad-based slowing in population growth. Differences in growth rates are likely to persist, and some regions will be looking at population falls within a few decades. The focus will shift from enhancing capacity to maintaining the existing capital stock. The capital stock will need to adapt to reflect the changing population backdrop – fewer schools but more hospitals, and smaller houses.

Population ageing is not a phenomenon that's specific to New Zealand. Technological and population trends are hard to predict and migration flows between New Zealand and the rest of the world are large and variable.

In a follow-up article we will examine what these demographic changes mean for the supply and demand for housing, for New Zealand and regional areas. Regional facets will be important, but the upshot is that by virtue of smaller household sizes, the slowing in population growth will not necessarily translate into slower rates of household formation. Nevertheless, the types of dwellings being constructed will need to take into account the needs and preferences of a changing household structure.

[2] Results from a linear regression of changes in labour productivity (HLFS hours worked measure) to changes in total investment, lagged GDP and employment growth as well as the total employment shares for those aged under 30, those aged 30 to 49, and those aged over 50. Model coefficients were of the theoretically correct signs. Model coefficients suggest that a 1 percentage point increase in the share of employees aged 30-49 raises annual labour productivity growth by 0.4 percentage points, whereas a 1% increase in the employment share of the under 30s reduces productivity growth by 0.3%. A similarly sized coefficient was obtained for workers aged over 50 (i.e. -0.03), although the coefficient was not statistically significant. Results are available on request. The impact of the change in composition is to add slightly to labour productivity at the margin (about 0.02 percentage points per annum over the next 20-30 years).

KEY FORECASTS

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

	Mortgage Rate (%)													
Mortgage Size ($'000)	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 October 2015 (based on REINZ data)

	House prices (ann % change)	3mth % change	No of sales (sa)	Mthly % chg	Avg days to sell (sa)	Comment
Northland	15.8	6.9	249	-7%	55	Days to sell up, sales volumes at 5 month low.
Auckland	17.2	1.7	2,520	-20%	32	Prices plateauing, sales volumes at a 2015 low.
Waikato/BOP/Gisborne	11.2	6.3	1,541	-8%	38	Volumes +54% y/y, days to sell at four-month high.
Hawke's Bay	2.4	3.4	287	+10%	41	Days to sell at 5-year low, volumes +47% y/y.
Taranaki	3.6	3.0	312	+1%	38	Prices firming, days to sell at 6 year low.
Manawatu/Whanganui	10.0	2.2	171	-9%	29	Volumes +10% y/y, days to sell a decade low.
Wellington	5.1	3.3	770	-1%	34	Days to sell at 2-year low, sales volumes +15% y/y.
Nelson/Marlborough	8.0	5.1	272	+6%	37	Days to sell at 4-year high, volumes +4% 3m/3m.
Canterbury/Westland	2.3	1.4	949	+2%	32	Sales volumes +6%3m/3m, prices +1.4% 33m/3m.
Central Otago Lakes	-5.8	-4.4	170	+14%	35	Prices -4.4% 3m/3m, days to sell at record low.
Otago	11.7	4.3	277	-5%	31	Days to sell at 8-year low, volumes +12% 3m/3m.
Southland	8.9	-2.7	172	+7%	42	Sales volumes +13% 3m/3m, days to sell at 4-month high.
NEW ZEALAND	7.2	3.2	7,729	-7%	34	Days to sell at 6-month high, median price at 4-month low.

Key forecasts

	Actual			Forecast						
Economic indicators	Mar-15	Jun-15	Sep-15	Dec-15	Mar-16	Jun-16	Sep-16	Dec-16	Mar-17	Jun-17
GDP (Ann Avg % Chg)	3.2	3.0	2.6(f)	2.1	2.0	1.9	2.0	2.2	2.4	2.6
CPI Inflation (%)	0.3	0.4	0.4	0.4	1.1	1.0	1.2	1.6	1.7	1.7
Unemployment Rate (%)	5.8	5.8	5.9	6.0	6.2	6.3	6.2	6.2	6.1	5.9
	Actual			Forecast (end month)						
Interest rates (carded)	Sep-15	Oct-15	Latest	Dec-15	Mar-16	Jun-16	Sep-16	Dec-16	Mar-17	Jun-17
Official Cash Rate	2.75	2.75	2.75	2.75	2.50	2.50	2.50	2.50	2.75	3.25
90-Day Bank Bill Rate	2.8	3.0	2.9	2.9	2.6	2.6	2.7	2.7	3.1	3.4
Floating Mortgage Rate	6.0	6.0	6.0	6.0	5.7	5.7	5.7	5.7	6.0	6.5
1-Yr Fixed Mortgage Rate	5.1	4.9	4.7	4.7	4.7	5.0	5.2	5.2	5.7	5.9
2-Yr Fixed Mortgage Rate	5.3	5.1	4.9	4.9	4.7	5.1	5.2	5.4	5.8	5.9
5-Yr Fixed Mortgage Rate	5.8	5.8	5.6	5.5	5.3	5.4	5.5	5.5	5.6	5.7

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