STRATEGIC RISK ANALYSIS LIMITED

Your business risk management partner

RODNEY'S RAVINGS take an open-minded and at times irreverent look at topical economic issues. Unlike our pay-to-view reports, that are for the eyes of subscribers only, the **RAVINGS** are free and you may forward them to other people. You can signup to the **RAVINGS** and **Property Insights** reports, and for notification about forthcoming **Property Research** reports on our website – http://www.sra.co.nz/lists/.

RODNEY'S RAVINGS

Auckland and national housing market prospects

EXECUTIVE SUMMARY

If your business or investments are impacted by the Auckland or national housing markets, be it by what goes on in the existing house market, residential building or the section market, you should want to know the answers to some, if not all of the following questions.

- Why are some housing market cycles brief affairs, while others are sustained and strong?
- How can we tell if a boom or a bust is lurking around the corner?
- Why are the cycles in the Auckland housing market so highly correlated with national cycles?
- Why are Auckland house prices currently outperforming the national market while Auckland residential building is significantly underperforming, and will this situation continue?
- How do changes in the OCR impact on the housing market, and what game will the RBNZ?
- Why does Auckland and national population growth vary so much and how can we tell when population growth will next have a major impact on the housing market?
- Are the much talked about housing affordability and financial crisis issues really important and how are they likely to impact on the housing market in the future?
- How do economic cycles impact on the housing market and where is the economy heading?
- Is it a good time to invest in existing or new housing?

This Raving provides insight into some of these questions. If you want comprehensive insights you should attend one of the inexpensive housing market workshops we will be running in Auckland (see http://www.sra.co.nz/pdf/HousingWorkshops.pdf for info on the first two housing workshops we will be running in Auckland). This is part of the **Economic Literacy Programme** we launched on Monday (see http://www.sra.co.nz/workshops.html for info on all the workshops we currently have scheduled).

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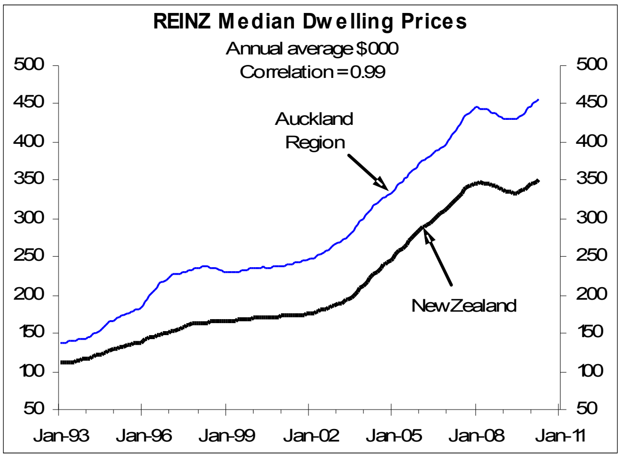
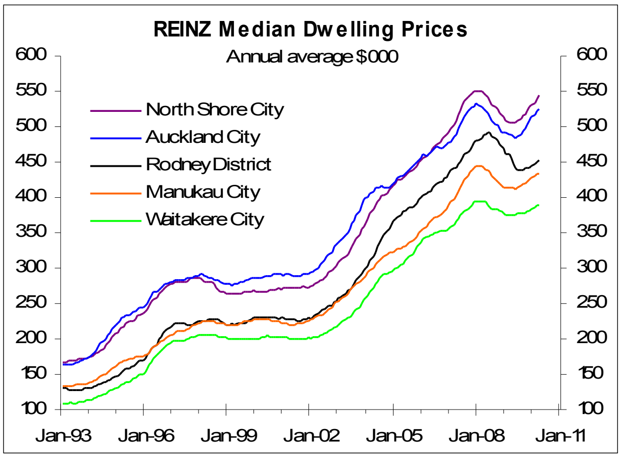
Putting the Auckland existing housing market in perspective

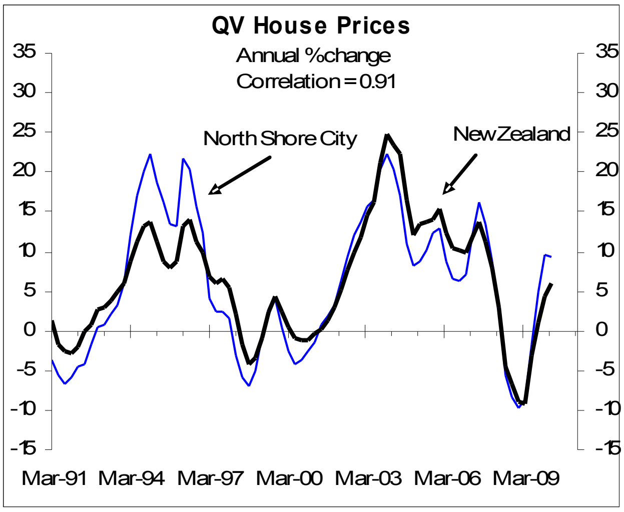
House prices in the Auckland region are highly correlated with national house prices (left chart), while prices in the region's cities and districts are also highly correlated (right chart). In all cases prices rose significantly between 1993 and 1997, drifted sideways between 1997 and 2002, rose sharply between 2003 and 2007, fell in 2008 and rose over the last year. There have been differences in how much prices increased or fell, but the similarities are much more evident than the differences.

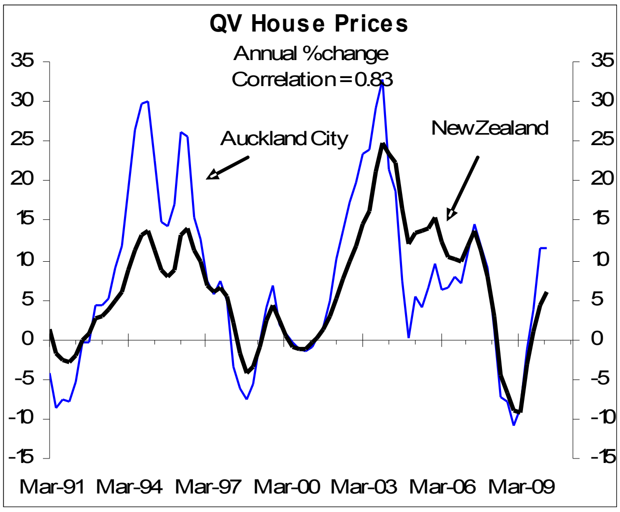
The left chart shows a correlation between Auckland region (Auckland) and national median house prices of 0.99. A correlation is a mathematical measurement of the extent to which two things move together, although it doesn't test whether one causes the other. The maximum positive correlation is 1.0, which is recorded when two things have an extremely strong tendency to be above average at the same time and below average at the same time. The maximum negative correlation is -1.0, which occurs when one thing is always well above average when the other is well below average and vice-versa. A correlation of 0.99 is clearly high, but any two things that generally increase over time will have a high positive correlation even if there is no underlying relationship between them.



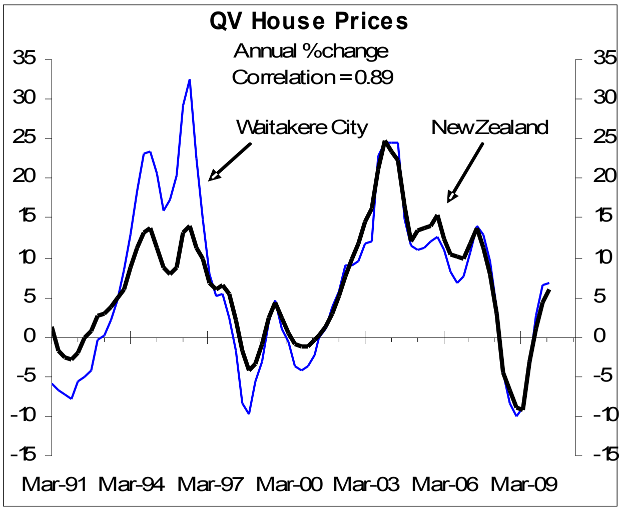


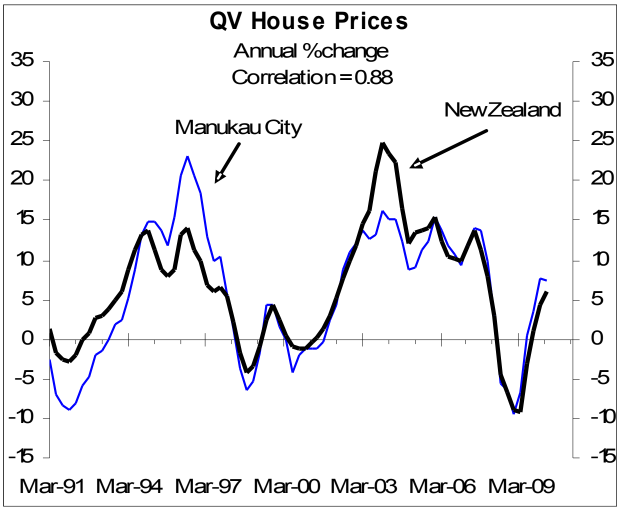
Looking at the annual % change in house prices is more useful in assessing the extent to which cycles are correlated. The left chart below shows that annual house price inflation in North Shore City has had a 0.91 correlation with national house price inflation, while the right chart shows that annual house price inflation in Auckland City has had a 0.83 correlation with national house price inflation. A useful way of interpreting correlations is to consider them like old-style school grades, with a correlation of 0.5-0.6 being like a C pass, 0.91 being like an A+ and 0.83 being like an A. House price inflation in North Shore City and Auckland City can vary in magnitude from national house price inflation, but the timing of the cycles are highly correlated, which points to similar things driving them all.

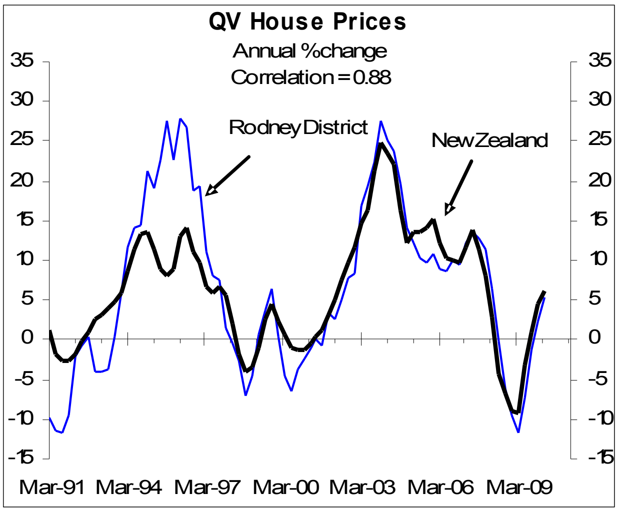


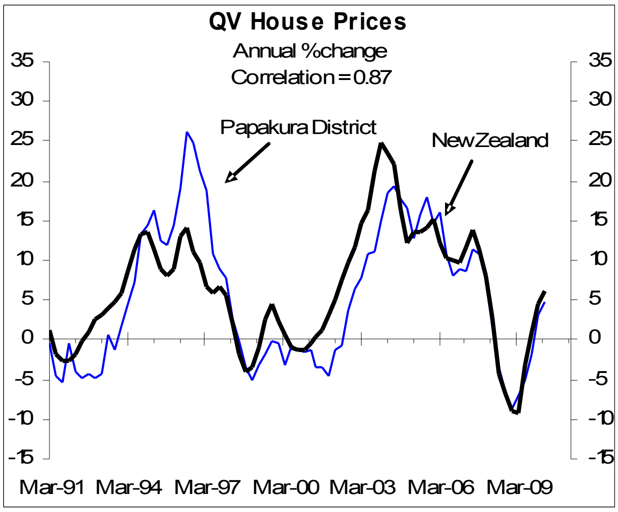


Annual house price inflation in Waitakere City (left chart), Manukau City (right chart), Rodney District (2nd left chart) and Papakura District (2nd right chart) are all highly correlation with national house price inflation. Again, house price inflation in the local markets can be stronger than nationally in some cycles and weaker in others, but in general house prices rise in Auckland's cities/districts at approximately the same time they rise nationally, and they fall in these cities/districts at around the same time they fall nationally. This implies that a framework for assessing the outlook for national house prices, like the unique framework we have developed, can be equally applied to assessing when the Auckland housing market will experience booms and busts.



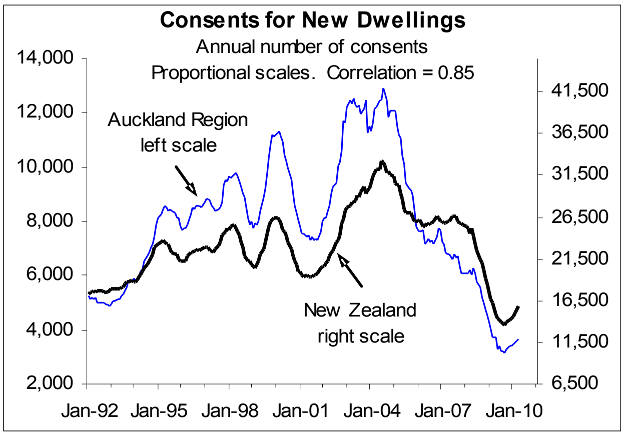


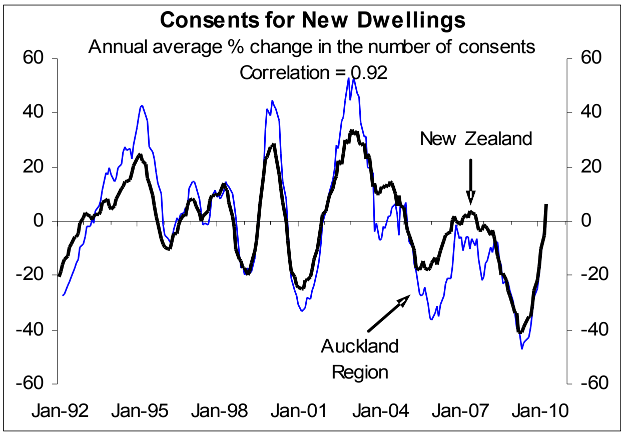




Putting Auckland residential building cycles in perspective

The left chart below shows that in the decade to 2005 the level of house building in Auckland significantly outperformed the national level, while since 2007 the Auckland market has been significantly underperforming. However, the cycles in Auckland and national residential building consents are highly correlated. The right chart below shows the annual average % change in the number of consents for new dwellings for Auckland and nationally, with a correlation of 0.92. Yes, Auckland can significantly outperform and underperform, but the timing of the cycles are highly correlated. Equally, both the local and the national residential building markets are prone to strong cyclical behaviour. This means the unique and tried-and-true framework we have developed for assessing prospects for the national residential building market can be used to assess the timing of Auckland residential building cycles. This framework is presented in the housing workshops we are running in Auckland in June and July that have a focus on the Auckland and national markets and should be essential tools for all firms impacted by the Auckland or national housing markets.

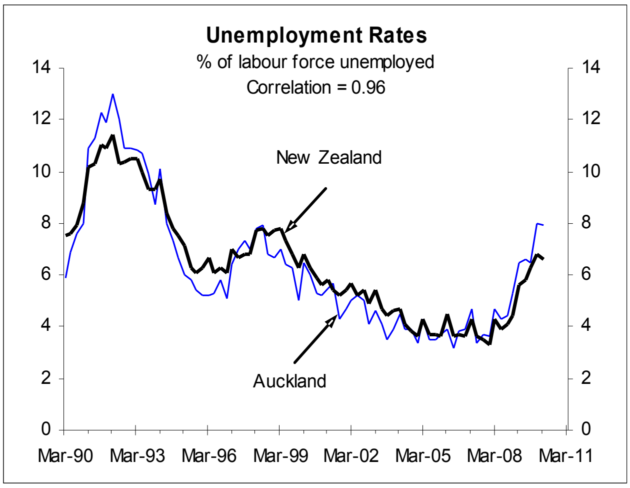




Housing cycles don't happen by chance

What drives the cycles? The housing workshops will show the primary roles interest rates and net migration/population growth play in driving housing cycles in the Auckland region and nationally (click on http://www.sra.co.nz/pdf/HousingWorkshops.pdf for information on the first two housing workshops to be held in Auckland). This makes sense in the context of mortgage interest rates being set nationally, but also reflects a high correlation between population growth in Auckland and nationally. If significantly more or less people leave NZ for higher-paid jobs in Australia, they will leave in roughly equal proportions from Auckland as from the rest of the country. If there is a significant change in the number of people immigrating it will impact roughly the same on Auckland as nationally. There have been times when Auckland gained a disproportionately large share of immigrants, which partly explains larger house price increases in Auckland in the mid-1990s, but even then the timing of changes in Auckland house prices largely coincided with national movements.

Housing affordability is a much more important issue now than has been the case historically and it is having a significant impact on the level of housing demand, especially because of the tightening of lending criteria by banks in the wake of the international financial crisis. Affordability is a challenge or problem all over the country, so this issue will be impacting on Auckland much as it is impacting nationally, although there are reasons to believe it is somewhat worse in the Auckland region, as reflected in the underperformance of residential building in Auckland. The workshops will show why housing affordability is a major issue and will look at how the affordability problem is likely to impact on house sales, house prices and residential building in the future.



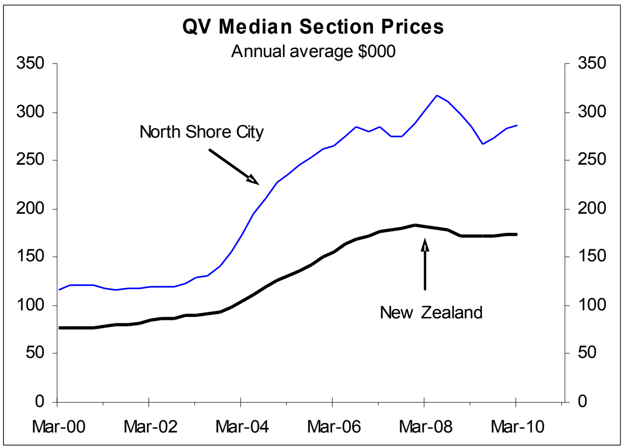
There have been periods when the Auckland region's economy and job market have performed stronger and weaker than nationally, but there have been more similarities than differences. The chart shows that the cycles in the Auckland and national job markets have been highly correlated. The housing workshops will look at the relationship between housing market cycles and economic cycles, which is particularly relevant at the moment because the housing affordability problem is driving a wedge between housing market prospects and economic growth prospects. This means specialist housing market analysis rather than general economic analysis will be critical in assessing housing prospects.

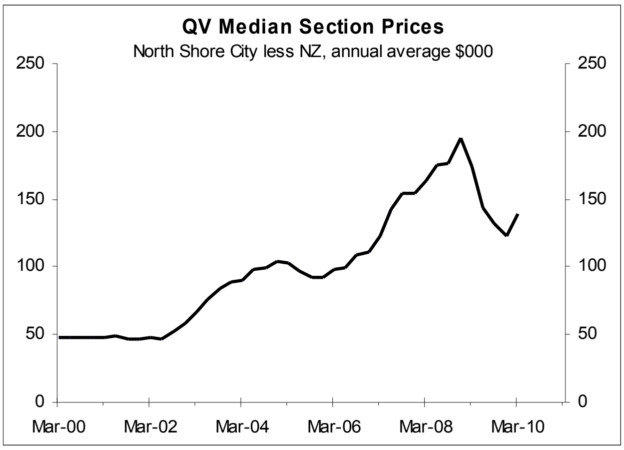
The link between existing houses, residential building and the section market

Why is the Auckland region outperforming on the house price front but underperforming on the residential building front? At a superficial level, the answer is straight forward. The demand-supply balance is more favourable in the Auckland existing house market than nationally and less favourable in the Auckland new housing market than nationally, but how can this be the case?

The link between the existing housing market on the one hand and the residential building and section markets on the other hand is the choice people have between buying an existing house and buying a section and building a new house. The relativity between existing house prices and the cost of buying sections and building houses will impact on demand for existing versus new houses. In our assessment the single most important issue in this context is the "smart growth" policies vigorously pursued by the councils in the Auckland region that have limited increases in the supply of affordable sections (see http://www.sra.co.nz/pdf/AffordableHousing.pdf for a more detailed discussion).

Anyone vaguely familiar with economics will know that limiting supply will increase prices. To quantify this issue, the left chart shows the QV median section prices for North Shore City and New Zealand. Prior to the housing boom starting in 2003 the median North Shore section cost $50,000 more than the median national section (the right chart shows the difference between North Shore and NZ median section prices). At the peak of the boom the median North Shore section cost $200,000 more than the median NZ section, and even now the gap is still almost $150,000. This magnitude difference in section prices will drive people away. To put it in perspective, if someone has to borrow $150,000 more to buy a section on the North Shore, his/her annual interest cost will be $10,680 higher based on the current average mortgage interest rate charged by the major banks. This is big bickies!





If the supply of new sections is constrained too much, as is the case in the North Shore, not only will section prices increase but existing house prices will also increase. This is because an existing house is built on a section and the implicit price of that section will change roughly in line with changes in section prices. A lack of supply of affordable sections in Auckland is helping local existing house prices outperform relative to the national average. However, high section prices make new housing less attractive/affordable, which is why Auckland residential building activity can underperform at the same time existing house prices are outperforming. However, this is only part of the story.

Not only do relative prices have an impact on whether people buy an existing house versus a new house, some people also migrate around the country in response to relative house/section prices. By limiting section supply increases the Auckland councils have played a major part in making Auckland housing unaffordable to a larger % of the population, which will weigh down future population growth. A response is already evident with Auckland house building underperforming and house building in some parts of the country where section prices are affordably outperforming (e.g. New Plymouth and Napier).

Council polices are not entirely to blame for North Shore section prices increasing significantly relative to the national average. Part of the story is the general tendency for section prices to increase more in places with higher population growth, which has been relevant in the case of the North Shore. However, with expensive section prices now playing a part in driving population away, it can't be taken for granted that North Shore City (and the Auckland region) will continue to experience above national average population growth. Tauranga's population growth has been strangled by the same policies.

Another part of the explanation for a widening gap between North Shore and NZ section prices is general price inflation. Prices in general, as measured by the consumer price index (CPI), have increased 27% since 2000. If the North Shore and national median section prices had both increased in line with prices in general between 2000 and now the gap between the median North Shore section price and the median national section price will have increased from $50,000 up to $63,500.

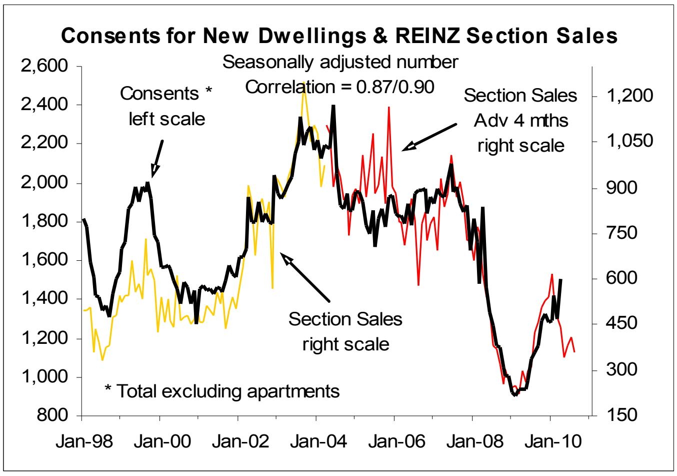
Why play Russian roulette with your livelihood or investments?

One motivation for setting up Strategic Risk Analysis Limited (your business risk management partner) was to fill the huge void in the market for quality housing analysis. Many people making decisions in the housing and residential building markets appeared to be doing little more than playing Russian roulette with their businesses and/or investments. Why is this? It is because, as the charts above show, the housing market isn't stable, but is instead subject to major cycles, while even experienced housing market operators can be blindsided by these cycles.

The workshops (and our regular pay-to-view housing reports) go a long way to filling this void. The workshops will provide detailed insights into the analytical framework we have developed for assessing housing market prospects. There are three main strengths to the framework: (1) it is founded on an in-depth understanding of what actually drives housing cycles; (2) it uses leading indictor analysis to both assess the outlook for the drivers and to fine-tune our calls on the near-term outlook for house sales, house prices, residential building consents, section sales and section prices; and (3) it can be explained in layman's language and is simple to understand.

The leading indicator analysis is founded on how people behave (i.e. what prompts people to make decisions relevant to the housing market and the time lags involved in implementing these decisions). The leading indicator analysis can show how house sales, section sales and residential building consents are linked from a different perspective than discussed above.

In the workshops we teach people, among many other things, how the stimulus from changes in interest rates and net migration filter through the housing market. This is where the leading indicator analysis component of the framework is most powerful. For example, there are different time lags between interest rates and net migration changing and these changes filtering through to house sales, house prices, section sales, section prices and residential building consents. We use the different time lags to help fine-tune our near-term predictions, with the chart below being an example of this.



We have leading indictors of what will happen to the number of section sales, while section sales are in turn a useful leading indicator of what will happen to the number of consents for new dwellings. Since the introduction of more detailed new consenting procedures in the mid-2000s temporarily broke-down and changed the relationship between section sales and the number of consents for new dwellings, section sales have provided valuable insights into what will happen to consents over the next four months. This is reflected in the chart by the red section sales line being advanced or shifted to the right by four months, with a fall in the number of section sales since late last year currently ringing warning bells.

The basis of the relationship in the chart is straight forward. People generally buy a section before they apply for a building consent. In the modern era of greater bureaucracy and banks putting section buyers through higher hoops than existing house buyers, consents on average occur four months after the section sale, although there is a hint that the lag time may now be even longer than four months. We make use of these sorts of leading indicators to provide quality insights into housing market prospects, with the full set of relevant leading indicators presented in the housing workshops.