BUILDING BAROMETER

Contents of the reports

The monthly **Building Barometer** reports contain a rigorous, informative and accurate assessment of prospects for residential building and the section market. Each report has the following contents:

- An assessment of the year-ahead outlook for national new dwelling consents based on our unique leading indicator analysis framework and a comprehensive assessment of what drives residential building (e.g. interest rates, net external migration, housing affordability etc), and an assessment of the outlook for rebuilding in Canterbury.
- An overview assessment of the outlook for interest rates, the primary driver of housing cycles.
- An assessment of the outlook for net external migration, which drives cycles in population growth.
- Forecasts for new dwelling consents over the next eight quarters, with a breakdown between apartments and non-apartments and between Canterbury and the rest of the country.
- An assessment of the outlook for residential alterations and additions, including Canterbury repairs.
- An assessment of prospects for the national section market, including some regional information.
- A brief assessment of prospects for apartment building.
- Insights into what is happening to average new house sizes.
- An overview assessment of prospects for non-residential building, including some information on prospects for different building types and the impact of rebuilding in Canterbury.
- Regional leading indicator charts that provide some insight into which regions might perform better or worse than the national market. And tables containing historical data on consents.

This introductory report doesn't give away all the trade secrets of why we can consistently provide clients with advance warnings of upturns and downturns in residential building, although it does explain why our unique approach is superior (see page 6). The report is primarily focused on reviewing our excellent track record since the first **Building Barometer** report was released in December 2006.

If you are interested in becoming a client of the pay-to-view **Building Barometer** reports and want to know more about why the framework we have developed works so well please contact me. I am happy to walk would-be clients through a report in detail so they can better appreciate why we can consistently provide advance warnings of upturn and downturns in residential building, and much more. In many cases your competitors will already be taking advantage of these valuable insights.

Getting it right is what matters most and the unique forecasting framework we have developed has a track record of doing just that. Of course, forecasting the future is not an exact science, so even armed with the best forecasting framework in the world – which ours is - we will not always get it exactly right. Who knows when "nuclear bombs" might start falling on Chicken Licken's head. However, if special events like the financial crisis or changes in property tax arise we are quick to incorporate them into the analysis.

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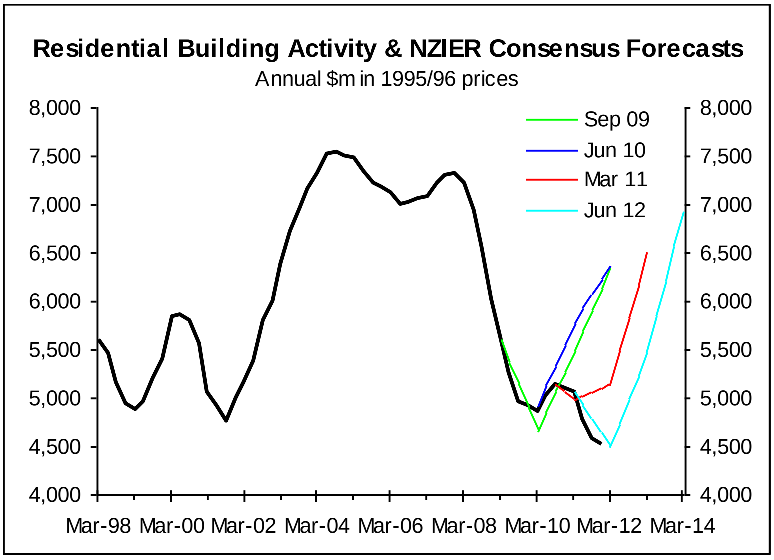
Getting it right is of upmost importance

We pride ourselves in getting it right. As outlined on pages 3-6, we have an excellent track record of providing clients of the **Building Barometer** reports with advance warnings of upturns and downturns in residential building activity. Our assessment of year-ahead prospects is sufficiently accurate that our clients can use it as an input into operational decisions with a good degree of confidence. This fits with our aim of being a "business risk management partner" to our clients.

This is in stark contrast to the often dismal insights provided by the economic forecasters. For a general review of the forecasting track record of the economic forecasters, including a review of the predictions for residential building activity, visit http://www.sra.co.nz/pdf/ForecastAccuracyAug11.pdf. This annual review shows that for the likes of residential building there are times when none of the forecasters get even close to the mark. For example, none of the forecasters surveyed by NZIER predicted the 2011 downturn.

Every quarter NZIER survey the economic forecasters to find out what they are predicting for residential building activity and a range of economic indictors over the subsequent two March years. NZIER surveys the bank economists, the Reserve Bank, Treasury and its own forecasters. The average predictions of the forecasters are called the Consensus Forecasts. If you want to view the Consensus Forecasts use the following link to NZIER's website - http://nzier.org.nz/publications.



The coloured lines in the chart show the results of four of these surveys, with the surveys conducted in the months labelled in the chart. The measure of residential building activity shown in the chart – the black line – is produced by Statistics New Zealand. It measures total spending on residential building based on 1995/96 prices (i.e. new dwellings, alterations and additions). 1995/96 prices are used so it only measures the impact of changes in the volume of building activity rather than changes in building costs.

In September 2009 the economic forecasters were on average predicting that the level of spending on residential building would increase to almost $6.5b over the subsequent two years, as they also predicted in June 2010. History has shown that these predictions were wildly optimistic with spending on residential building subsequently falling to $4.5b. In 2009 and 2010 the economic forecasters were consistently way too optimistic about residential building prospects and none of them predicted the fall in building activity that occurred in 2011.

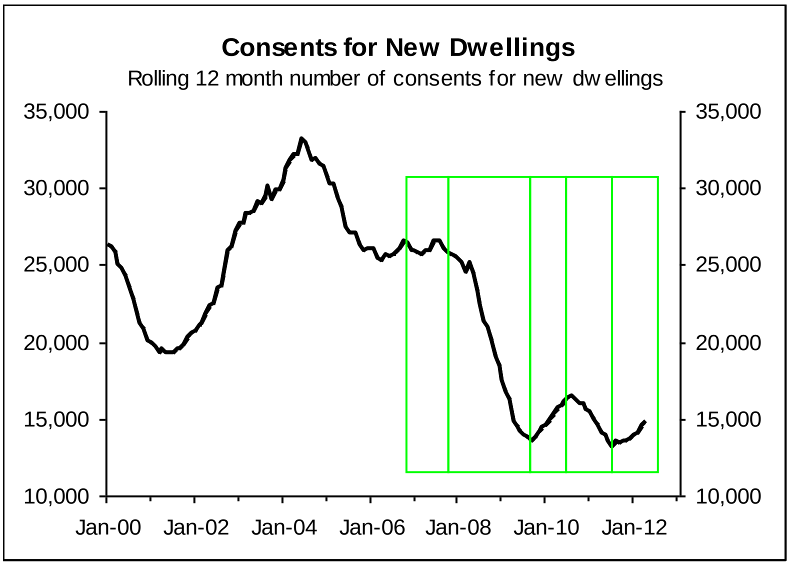
The September 2010 and February 2011 earthquakes hugely boosted the outlook for residential building, albeit that continued quakes have delayed the rebuilding. But when the forecasters were surveyed in March 2011 they were still predicting that spending on residential building would increase to around $6.5b. Most recently they have got a bit more optimistic, which is justified given the recent fall in mortgage interest rates (see the June 2012 predictions).

The earthquakes materially boosted the outlook for residential building, but the economic forecasters didn't raise their predictions much. The earthquakes overcame the problem of their predictions for residential building being hugely too optimistic before the quakes, but none of them acknowledged this.

The economic forecasters often don't even predict the direction of residential building activity accurately, which is the first prerequisite to providing useful insights for firms impacted by residential building. By contract, we not only get the direction right but we can generally also provide good insights into the likely strength of upturns and downturns. This is why a wide range of building firms and firms that supply goods and services to the residential building market pay for our sharply-priced, monthly **Building Barometer** reports. For information about the cost of these reports please contact me.

We have consistently provided advance warnings of upturns and downturns

Since the first **Building Barometer** report was released in December 2006 there have been five distinct phases of behaviour in the rolling 12 month number of consents for new dwellings, as shown in the chart:



- Sideways drift in 2007.
- A massive fall from late 2007 until the second half of 2009.
- A rebound from late 2009 until mid 2010.
- A fall from mid 2010 to mid 2011.
- An upturn that only started in earnest in early 2012.

We provided clients with advance warnings in each instance. However, in the case of the collapse in 2008-09 we didn't initially predict that there would be such a large fall. We did correctly assess that the housing market bubble would burst in NZ, as evidenced by the **Housing Hell** report we made public in August 2007. That report focused on the existing housing market, but it also made reference to the risk of "collapsing residential building activity" (see http://sra.co.nz/pdf/housinghell.pdf). But we didn't predict that the financial crisis would arrive in 2008, with it adding to the scale of the fall in residential building because it resulted in banks tightening lending criteria, especially for people wanting to buy apartments and sections, but also for developers and spec builders.

Phase One – The sideways drift in 2007

In the December 2006 report we predicted that the rolling 12 month number of consents for new dwellings would drift sideways at between 25,800 and 26,627 during calendar 2007, which was close to the mark. But even in December 2006 we were warning clients to prepare for a fall in 2008, although at that stage we didn't anticipate how large the fall would be. The relevant comments from the December 2006 report were:

"Our views on the outlook for mortgage interest rates and net migration, and our assessment of other relevant drivers leads us to expect moderate downside in the annual number of consents for new dwellings starting in late-2007 and flowing into 2008."

Phase Two – The collapse in 2008 and 2009

We didn't initially pick the scale of the fall in residential building activity in this period, but we did provide lots of advance warning that there would be a "large" fall and well before things got really bad we warned clients to prepare for a "worst case scenario".

In the August 2007 Building Barometer report we wrote the following:

"Consents have finally experienced the rebound we have been waiting for over the past several months, aided by strong apartment consents in June. However, this brings us closer to the point when the rise in mortgage interest rates and lower net migration take a large bite out of building activity."

But as well as focusing on what the primary drivers implied for the outlook for residential building we also focused on the key issue of the day that at this time was excessive spec building, as demonstrated by the following extract from the August 2007 report:

"Excessive spec building in some pockets of the market, most notably but not only the Auckland apartment market, and massive new subdivision activity in some urban and coastal/resort markets have contributed to consent numbers continuing to run high relative to net migration/population growth. We expect population growth to run somewhat below average for at least the next year, which implies a risk that the excessive

building will come home to roost and play a part in depressing consent numbers on top of the negative impact of higher interest rates and lower net migration."

Prior to the initial fall we did signal that there could be a "large" fall, but what transpired is best described as colossal rather than large. But as the fall unfolded we continued to provide advance warning that things would get even worse. For example, in the June 2008 report we wrote:

"The residential building market still has to run the gauntlet of the increase in mortgage interest rates associated with the US banking crisis. However, the average fixed mortgage interest rates was relatively stable at 9.1-9.2% between June and October 2007, so it is possible that the six month average number of consents will stabilise for a few months before the wheels fall off in the second half of the year."

We spent much of 2008 warning clients to prepare for a "worst case scenario" even though we didn't appreciate how bad things would get. For example, the following is the first paragraph from the May 2008 report:

"The proverbial appears to be in the process of hitting the fan big-time. If you haven't already dusted off your worst-case-scenario strategies in response to the warning we issued last month that things could get significantly worse than our "pessimistic" forecasts it is definitely time to do so."

Phase Three – The short-lived upturn in 2009-10

In 2008 many considered our views overly pessimistic, but reality delivered the Mother-of-worst-case scenarios. But as well as warning about significant near-term downside risk we also started to provide advance warning of a potential recovery in 2009. For example, in the June 2008 report we wrote:

"The recent nudge lower in mortgage interest rates should bring some relief to consents early next year."

The rolling annual number of consents didn't start to improve until the 2009 December quarter, but the monthly numbers started to improve in the 2009 June quarter. The "nudge" lower in interest rates turned into a tumble once the scale of the fallout from the financial crisis became apparent and this was part of the basis for us providing clients with an advance warning that there would be a recovery in 2009. In the December 2008 report we wrote:

"The escalation of the financial crisis has exacerbated and prolonged the downturn in residential building, and delayed the recovery, but we haven't given up hope of an upturn starting in 2009."

Our views on the timing and scale of the potential upturn firmed up during the early part of 2009 and reflecting this in the March 2009 report we wrote:

"The housing upturn has been delayed by the credit crunch and could well be watered down when in comes relative to the huge upturn that would normally occur on the back of the massive interest rate cuts, but a significant upturn should still start in the second half of the year."

But in addition to assessing the likely impact of interest rates and net migration on residential building prospects we also assessed the likely impact of other key issues, as reflected in the following comments in the March 2009 report:

"With housing being the most interest sensitive industry in town it should be at the forefront of the upturn, although until section prices fall more and builders' costs are trimmed the upturn in housing demand is likely to be focused more on existing houses than on sections/new houses."

Unaffordable new housing has been a major issue mainly because of the speculative bubble in section prices between 2003 and 2007, and the lack of downside since. The much too optimistic predictions for residential building activity by the economic forecasters in the period before the Canterbury earthquakes shown on page 2 reflect ignorance of the massive negative impact unaffordable new housing would have on the level of residential building activity. By contrast we have focused on this issue, which is partly why the outlook for section prices is considered in some detail in the **Building Barometer** reports.

Phase Four – The "unexpected" 2010-11 downturn

In the second half of 2009 we started to warn clients about the risk of a downturn after the relatively brief upturn in 2009. In the December 2009 report we wrote:

"A strong upturn in non-apartment or standalone dwelling consents is underway. However, as the recovery is starting to materialise early warning signs are emerging about the next cyclical fall in residential building consents."

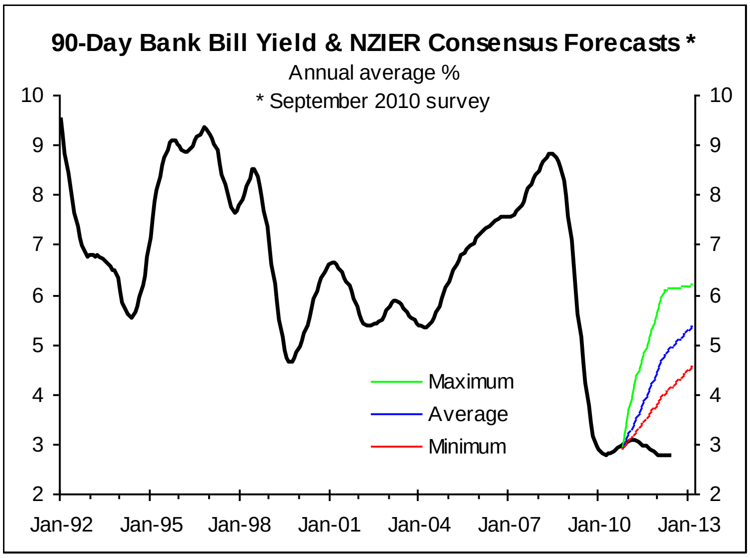
In the December 2009 report we predicted a 17% fall in the number of consents for non-apartment new dwellings in the 2011 calendar year, which compared to the 15% fall that eventuated. We have consistently provided advance warnings of upturns and downturns, although we aren't always this accurate in terms of picking the magnitude of the upturns and downturns. Having correctly predicted that there would be a significant fall in residential building activity when all of the other forecasters were predicting increases and some large increases, our reputation and the number of firms that subscribe to the **Building Barometer** reports have both grown.

This was a case of making a prediction that some of our clients didn't want to know about. Understandably, after having experienced such a tuff time for the last two years some clients didn't want to know that a downturn would arrive so early. I regularly present at client functions and during this period I was asked on two occasions to tone down my "negative" views so as not to upset the audiences. One has to be a bit flexible in these circumstances, but I didn't sway from providing the warning that downside risk should be taken seriously. This is because we rate getting it right and providing clients with the best available insights as more important than making friends in the short-term.

The 2010-11 downturn was a great example of the superiority of both our leading indicator forecasting framework and our ability to pick what will happen to interest rates. During this period Governor Bollard was initially adamant that he wouldn't start hiking the OCR until late 2010, but we correctly picked that hikes would be delivered earlier. He hiked in both June and July of 2010. And the earlier than generally expected increase in interest rates was an important ingredient in our assessment that a downturn would occur in 2010-11.

Phase Five – The 2012 upturn

Just as we correctly picked that OCR hikes would be delivered earlier in 2010 than most forecasters, including the Reserve Bank, we were way ahead of the other forecasters in suggesting that the next move in the OCR in 2011 would be down rather than up. We first flirted with the idea of OCR cuts in the August 2010 economic report (see http://www.sra.co.nz/index.php/interesting-times for info on these reports). This was before the first major earthquake in Canterbury in September 2010 and at the time the Reserve Bank and the economic forecasters surveyed by NZIER were predicting large interest rate increases.



The blue line in the adjacent chart shows that in September 2010, when we were flirting with the idea that the next move in the OCR would be down, the economic forecasters were on average predicting a large increase in the 90-day bank bill yield over the subsequent two years (see the blue line). The 90-day bank bill yield is the only interest rate the Reserve Bank forecasts, but it moves closely in line with the OCR so the 90-day bank bill yield predictions can be used as proxies for OCR forecasts.

The red line shows the lowest of any of the predictions by the forecasters and the green line shows the maximum predictions. All of the economic forecasters, including the Reserve Bank, were predicting large increases in interest rates when the residential building and economic growth outlooks justified considering OCR cuts.

The Reserve Bank partly attributed the 0.5% OCR cut it delivered in March 2011 to the earthquakes, but the fall in residential building activity in 2009-10 had contributed to much weaker economic growth than the Reserve Bank had expected, with this being a key justification for the OCR cut.

Residential building and the housing market more generally play a major part in driving economic cycles (see http://sra.co.nz/pdf/PivotalHousing.pdf for a discussion of the pivotal role of housing in economic upturns and downturns). In addition to providing accurate insights into the outlook for residential building we have also consistently provided advance warnings of upturns and downturns in house prices in the **Housing Prospects** reports. Use the following link to access information on these reports and a review of our forecasting track record - http://www.sra.co.nz/index.php/housing-prospects.

Being able to forecast both residential building and house prices with a good degree of accuracy means we are also much better placed than the Reserve Bank and economic forecasters more generally to forecast economic growth and interest rates. However, while we flirted with the idea of OCR cuts in August 2010 we backed off predicting cuts until just before the devastating earthquake in February 2011 because Governor Bollard was dogmatic in warning that OCR hikes were coming. But at least we correctly advised clients that the negative risk to residential building associated with the large interest rate increases predicted by all the economic forecasters should be ignored. And we provided plenty of advance warning about the upturn in residential building consents in 2012. In the second half of 2011, well before the upturn in residential building consents arrived in the first half of 2012, we were predicting a reasonably significant cyclical upturn for 2012 excluding the boost from rebuilding in Canterbury.

In more recent reports we have also focused on the mechanisms that will solve the affordability hurdle to new housing demand. We have been explaining why there is the potential for an “organic” recovery on top of the upturn that will be driven by the fall in mortgage interest rates between mid 2011 and mid 2012.

Brief insights into our unique forecasting framework

Having early in my career been involved in building economic forecasting models at the Reserve Bank I have first hand experience of how the models are used and abused. Effectively the forecasters plug in the assumptions that they know will generate the forecasts they want to see (i.e. preconceptions and wishful thinking rule). Having early in my career seen firsthand the major shortcomings of the traditional approaches to economic forecasting I have spent the last 25 years developing a unique forecasting framework that is based on how people actually behave. This dovetails nicely with how our clients view the world (i.e. from a practical, hands-on perspective). The forecasting approach also uses leading indicators that confirm whether people are behaving in line with what I expect. This is why I have been able to give advance warnings of every upturn and downturn in residential building activity – and every upturn and downturn in house prices - since we started operation in late 2006. By contrast, the economic forecasters generally don’t tell you about upturns and downturns until after they are well underway.

The following are the things we focus on, with these being the critical considerations that the economic forecasters are too often ignorant of:

- How people respond to changes in mortgage interest rates and how long it takes for changes in interest rates to impact on residential building.
- What drives net external migration and how long it takes for changes in migration to impact on residential building.
- How changes in housing affordability impact on the number of people per existing dwelling, which has a major impact on the amount of new housing required to accommodate population growth.
- How special factors impact, like the excess level of spec building before the crash in 2008, the property tax changes in 2010 and the financial crisis.
- Which of the main drivers of residential building are most powerful and which will dominate if the drivers are at odds (e.g. if interest rates fall and population growth slows because net migration turns negative, which will dominate?).

We use charts to show how the various factors that drive new housing demand have impacted in the past, which is the starting point for assessing how they will impact on the future. This means clients can clearly see the basis for our predictions and even use our own framework to draw their own conclusions. In addition, via contact with clients and contacts around the country we can check to see if people are behaving as we expect them to. Having done this for many years I have an excellent understanding of how things work at the coal-face of the residential building market. This means I am in touch with laymen, which makes us a breed apart from the economic forecasters. This is reflected in the no-nonsense language used in the **Building Barometer** reports.

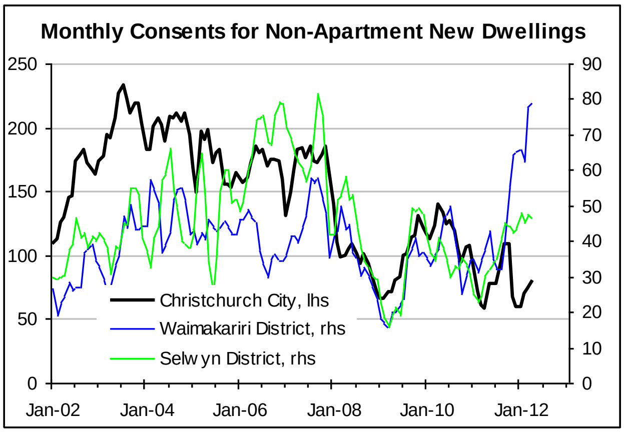
The state of the section market is of major importance

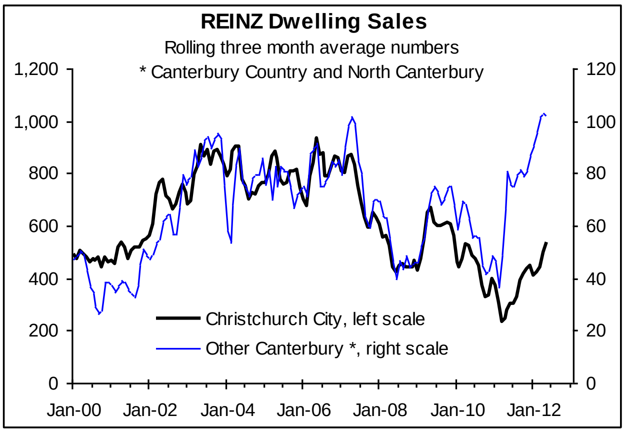
The **Building Barometer** reports contain insightful analysis of developments in and prospects for the national section market and some regional information. Among other things the reports look at what is happening and will happen to section prices relative to existing house prices, which has important implications for the competitiveness of new housing relative to existing housing. For example, if house prices fall and section prices don't fall, which occurred in 2010, it reduces demand for new housing. The section market can have some unique dynamics, like the impact financiers and councils have on subdivision development, with major implications for section prices and the affordability of new housing.

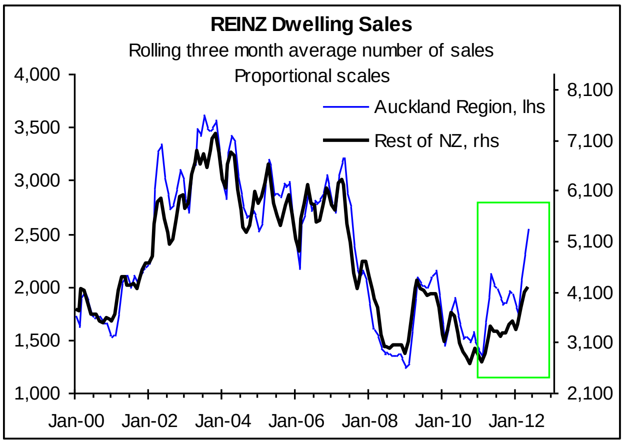
Rebuilding in Canterbury

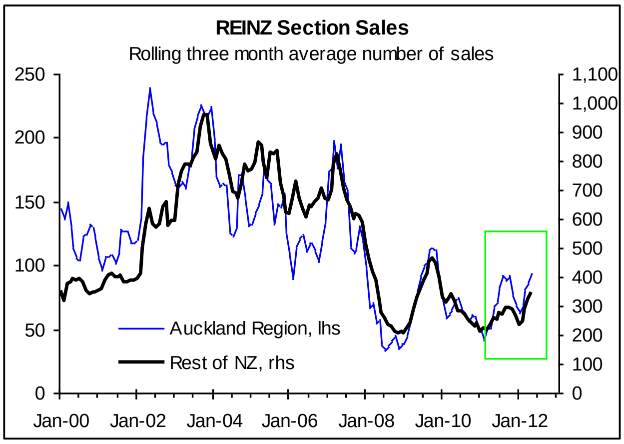
There is considerable scope for debate over how much rebuilding in Canterbury will boost the total level of residential building over the next 5-10 years and over the profile rebuilding will take. In part with help from local contacts we assess as best possible the extent to which rebuilding in Canterbury will boost national residential building activity in terms of both complete rebuilds and repairs. But just as importantly we analysis the interesting dynamics that the earthquakes have set in motion that will have both near-term and much longer term impacts, including for some other parts of the country.

The first dynamic has been the boost the earthquakes have provided to consents in the surrounding districts and especially the Waimakariri District (left chart). It is a similar story with existing dwelling sales in the areas surrounding Christchurch City (right chart). More recently, people leaving Christchurch have boosted housing demand in other parts of the South Island (e.g. Marlborough, the Queenstown Lakes District, Timaru and Ashburton). The bottom two charts show that existing dwelling sales and section sales were both boosted in the Auckland region relative to the rest of the country after the devastating February 2011 earthquake. With the aid of charts like those below that quantify the extent to which the earthquakes are impacting on housing markets outside of Christchurch and Canterbury we analysis the flow on effects.









For firms working in the building industry outside of Canterbury the rebuilding may seem of limited relevance, which is why we assess prospects for Canterbury and the rest of the country separately in the **Building Barometer** reports. But even for these firms the earthquakes will have implications because of the impact of rebuilding on competition for workers, economic growth and interest rates. The rebuilding could be the most important driver of interest rates over the next 2-3 years, assuming the international financial crisis muddles along rather than results in a global financial meltdown. Where relevant the reports comment on things like what the financial crisis means for interest rates.

One of the big picture things the earthquakes will help facilitate is a major increase in the supply of new sections, with some major subdivisions in the pipeline. The focus currently – in mid 2012 – is on people leaving Christchurch while we wait for the rebuilding to get underway in earnest and for there to be an inflow of workers. But in 2-3 years the increase in section supply could mean that Christchurch will have the most affordable sections and new housing of any major urban centre in the country. This could play a major part in rebooting Christchurch population growth. As well as offering the best insights into the outlook for residential building we also monitor big picture issues like this one that should have major real world implications down the track.

Regional leading indicator charts

The **Building Barometer** reports contain regional charts that show how consents for each region are travelling relative to the national market. For example, the left chart below shows the performance of the Waikato region relative to the national market in terms of the rolling 12 month number of consents for new dwellings. These charts are in part useful to see how much local upturns and downturns coincide with national upturns and downturns. In the case of the Waikato there is a reasonable link that means our assessment of the national outlook for residential building has significantly implications for the local outlook.

There are also charts for each region showing consents relative to existing house sales in the first instance and secondly consents relative to section sales. What happens to the numbers of existing house and section sales provide advance warning of what might happen to consents for new dwellings, although for some regions the relationships are not so close. Waikato is again used as an example in the right chart below. Upturns and downturns in the number of existing dwelling sales in the Waikato (the green/thin line) are generally followed 5-6 months later by upturns and downturns in the number of consents for new dwellings (the blue/thick line). In the chart the dwelling sales line has been advanced or shifted into the future (i.e. to the right) by five months and as a result it provides an indication of what might happen to the number of consents for new dwellings over the next five months or so. At the moment (i.e. in mid 2010) the upturn in dwelling sales over the last five months is pointing to further upside potential for consents for new dwellings over the next five months or so.