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The Real Housing Market Story

Chapter Three

How to assess whether housing is a good investment option

In this, the third chapter of **The Real Housing Market Story** booklet being written in instalments I present the investment valuation framework we have developed for assessing whether housing offers good, bad or indifferent investment prospects. The framework is also relevant to people deciding whether to buy or rent and to financiers trying to assess whether housing will provide good, bad or indifferent security.

An investment valuation is very different to the market valuations done by valuers (see page 6). A market valuation indicates what a property could reasonably be expected to sell for in the current market. An investment valuation indicates whether housing in general or housing in a particular area is likely to deliver good, bad or indifferent returns to investors over the medium to longer term.

Textbook-style learning is slow and tedious, so I explain our investment valuation approach in the context of real New Zealand examples. Rather than focus on abstract theories and concepts, I discuss our investment valuation approach in the context of how investors, would-be home owners and others respond to the financial incentives they face. The responses to these incentives are critical in determining the outcomes for house and section prices, and the level of residential building. A parallel issue is housing affordability, so I also look at the part it plays in driving the behaviour of would-be owner-occupiers.

We will be using the investment valuation framework in the forthcoming property research reports on selected areas of the country, starting with a report on the Queenstown Area.

In the first chapter of **The Real Housing Market Story** booklet I looked at the importance of real or inflation-adjusted house prices and shed light on the question of whether it is time in the market or market timing that matters most (see <http://www.sra.co.nz/pdf/RealHousingChapterOne.pdf>). In the second chapter I showed how house and section prices behave after a speculative boom of the sort New Zealand experienced between 2002 and 2007 (see <http://sra.co.nz/pdf/RealHousingChapterTwo.pdf>).

Why am I writing this booklet? Despite housing being the single largest component of household wealth there is a lack of quality analysis of housing market prospects both nationally and at the district and suburb levels. Producing **The Real Housing Market Story** booklet is our first step in filling this void. Providing quality, affordable reports on selected areas of the country is the second step.



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Some old rules of thumb no longer apply

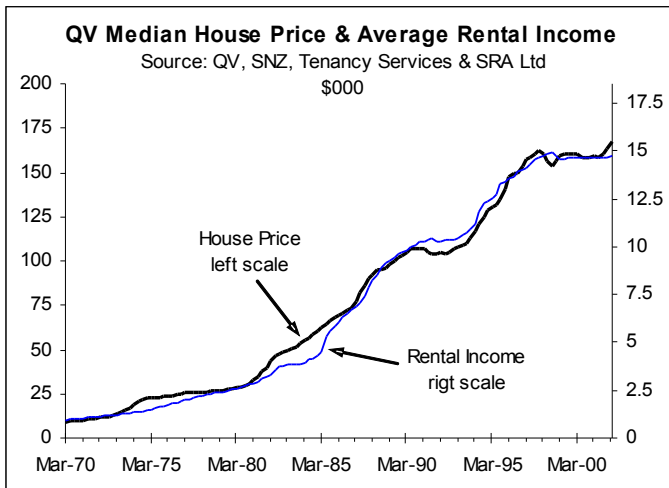
The national average house price fell 10% between the peak in the December quarter of 2007 and the trough in the March quarter of 2009 based on the QV House Price Index, which is formulated in such a way that it accurately measures the national average house price. This was the largest fall on record, but did it mean investors should have started buying? In response to the economic recession in 2008, that was partly caused by the international financial crisis, the average mortgage interest rate charged by the major banks fell from a peak of 9.9% in April 2008 to a trough of 6.5% in May 2009. Should investors have interpreted this large fall in interest rates as a signal to start buying again?

The challenge facing investors, people deciding whether to buy or rent and financiers trying to set lending criteria is that the housing market is not experiencing one of the “normal” cycles experienced between the late-1970s and the early-2000s. The current cycle has been different to normal cycles since around 2005 and I am confident it will remain different for the next 5-10 years. This means some of the rules of thumb developed by investors and others based on their experiences between the late-1970s and early-2000s are no longer reliable.

What hasn't changed is the framework that should be used for assessing whether housing offers a good investment opportunity, a good option relative to renting or a good risk for financiers. This framework is what we call the “investment valuation” approach. It is founded on a combination of the investment valuation measures used in the share market and behavioural economic analysis (i.e. the analysis of how people respond to the financial incentives they face, with their responses being critical in determining house and section prices, and the level of residential building). Importantly, I explained the framework in plain English so it can be understood by laypeople.

Introducing the Investment Valuation approach

Over the last 30 years I having observed booms and busts in agricultural markets (e.g. deer, angora goats, ostriches and angora rabbits), share markets, the commercial property market (especially pre and post the 1987 share market crash) and most recently in the housing, section and coastal property markets. Every time a sizeable group of investors commit the same cardinal sin. They focus too much on capital gains and are sometimes encouraged by dubious tax reasoning. This group lose sight of the fact that ultimately the price of the thing they invest in must have a meaningful relativity to the income stream it generates (e.g. mohair in the case of angora goats and the net rental income in the case of housing).

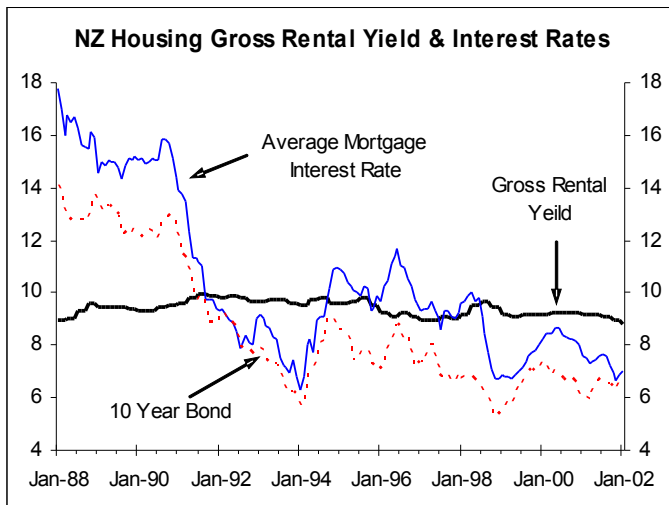


The chart shows the relativity between the national average house price (black line, left scale) and the national average annual gross rental income (blue line, right scale) between the March quarter of 1970 and the March quarter of 2002. At times house prices got ahead of where they should have been based on the rental income, like in the mid 1970s and the first half of the 1980s, while house prices lagged behind rents a bit in the first half of the 1990s. Various factors caused these periods of over and underperformance of house prices relative to rents, but over a period of more than 30 years they have moved roughly in proportion. It is the associated rental yield that investors should focus on most.

The rental yield is much more than just a measure of rental income – either gross or net – as a % of the price or value of the property. It is the most important measure of investment value because it is also an indicator of potential future capital gains. Abstracting for the moment from the impact of interest rates and net migration/population on housing demand (these primary cyclical drivers of housing demand will be covered in the next chapter), the level of the rental yield plays a significant part in driving the behaviour that in turn drives house prices. Simplistically, if rental yields are high investors will buy more houses, which will drive up property prices relative to rents and in so doing drive down rental yields. Equally, if rental yields are low investors will be discouraged, which will have a negative impact on house prices and help boost



rental yields to more attractive levels. However, this rational behaviour gets sidetracked from time to time, especially when the primary drivers of housing demand create conditions conducive to acts of mass stupidity of the sort observed between 2005 and 2007. But ultimately this behaviour ensures the link between house prices and rents remains intact over the medium to longer term.



Prior to the 2002 to 2007 housing boom, during which the national average house price increased 108%, the national average gross rental yield on housing was around 9% (black line). This was based on a national average house price of \$163,000 and an average annual gross rental income of \$14,600.

The national average gross rental yield was relatively stable between 1988 and 2002, ranging between 8.8% and 10%. But what is important is the level of the rental yield relative to interest rates. It is no coincidence that at the start of the 2002-07 boom in prices the gross rental yield was well above both the average mortgage interest rate (blue line) and the 10-year bond or government stock yield (dashed red line).

In January 2002 this measure of value gave the thumbs up to investors, as it had been doing to various degrees since the second half of 1998.

It is no coincidence that the relativity between the rental yield and average mortgage interest rate had similarly given the thumbs up in 1993, after which the national average house price increased 47% before it reached the peak in late 1997. By contrast, in the late 1980s the average mortgage interest rate was well above the gross rental yield, so it should be no surprise that the national average house price increased only 10% between late-1988 and mid-1992, which was a 3% fall in real or inflation-adjusted terms.

The relativity between the rental yield and mortgage interest rates is relevant to investors from a cashflow perspective (i.e. rental income versus interest costs), but it also provides a signal of potential capital gains. The relativity between the rental yield and mortgage interest rate is a critical driver of the behaviour of investors (i.e. buy more or less, or in some circumstances sell). And when the incentives faced by investors line up with those faced by would-be home owners, as discussed below, the potential returns signalled by this critical investment valuation measure get realised.

The relativity between the rental yield and the 10-year bond or government stock yield is relevant in assessing how housing stacks up relative to a low risk investment option. The 10-year bond yield reflects the "risk free" return available to people investing in government stock. The financial crisis has changed thinking about the risk of investing in governments, but in the NZ context this approach is still valid.

Housing is more risky than investment money with the government, meaning housing should on average supply a moderately to significantly higher total return (i.e. capital gains/losses plus net rental income) than government stock to compensate investors for the greater risk. If the rental yield is above the bond yield, as it was between 1992 and 2002, and especially in the early-1990s and again from the second half of 1997 until 2002, house prices don't have to increase much for the total return from housing to beat the low risk investment option offered by government bonds. By contrast, when the 10-year bond yield was well above the rental yield in the late-1980s people were much better off investing in low risk government bonds than buying houses as investments. I was managing my parents' investment money at this stage and it was invested 100% in government stock.

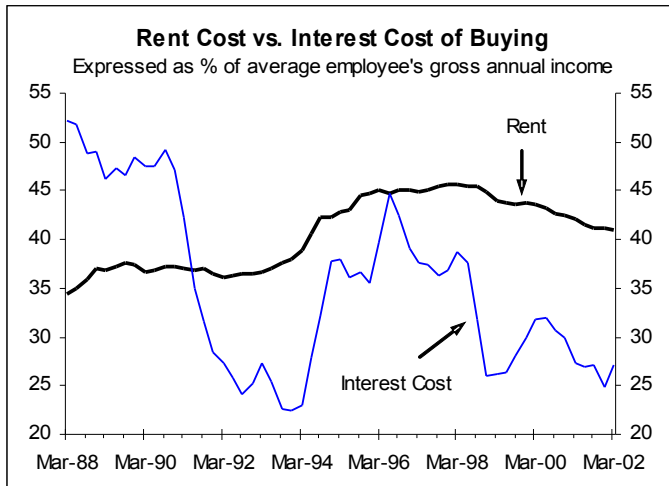
The gap between the gross rental yield and the 10-year bond yield is also important in the context of the impact it has on behaviour, in the same way the relativity between the rental yield and mortgage interest rates impacts on behaviour. If bond yields and yields on fixed interest investments more generally are high relative to rental yields some investors will shift from housing to fixed interest investments. This contributes to the poor performance of housing as an investment. Equally, if rental yields are sufficiently above bond yields it will encourage more people to invest in housing, which helps drive up house prices.

But a quality investment valuation approach is only part of what is required to assess when to buy or sell, when to buy or rent, and when to tighten or ease lending criteria. History is full of examples of investments



with good valuations that performed poorly until the value was eventually realised years later and of investments with bad valuations that delivering great returns until the bubble inevitably burst. This is where our unique, tried-and-true framework for assessing the near-term outlook for house and section prices comes in. The **Housing Prospects** reports we supply to clients eleven months a year provide both an investment valuation assessment and a marketing timing assessment. The reports focus on the national housing market but also provide insights for 24 cities/districts (see <http://sra.co.nz/housing.html> or contact me if you want to discuss signing up for them). In the next chapter I will show how combining investment valuation measures with our market timing and demand-supply balance analysis provides a powerful tool for investors, people choosing between buying and renting, and for financiers assessing security risks.

The behaviour of would-be home owners



The more I do property research the more evidence I see that people respond to the financial or economic incentive they are presented with. When presented with low interest costs relative to rental income, investors will buy more houses, which will play a part in driving up prices. But equally important is the behaviour of people choosing between renting and buying, or between living with Mum & Dad and buying or renting. The relativities between house prices, rents and interest rates are critical in driving this behaviour, while income levels, income growth prospects and job security also play a part. The chart shows the financial incentive faced by people deciding whether to buy or rent.

The black/thick line shows the per cent of the average employee's annual gross income required to rent the average rental property for a year. At the beginning of 2002 it cost the average employee 41% of his/her annual gross income to rent the average rental property for a year. The most relevant measure is the combined income of all the people living in the dwelling, but this will vary from property to property, so I use the average employee's income as a basis for comparison because it is less complicated and it delivers the same results.

The blue/thin line in the chart above shows the per cent of the average employee's gross annual income required to pay the interest bill on borrowing 80% to buy the average dwelling based on the average mortgage interest rate that applied at the time. For example, at the beginning of 2002 the average dwelling cost around \$167,000, the average mortgage interest rate was 7.3% and the average employee's gross annual income was \$36,000. This meant that to buy the average dwelling using 80% debt cost the average employee 27% of his/her annual gross income to pay the interest on the loan.

This isn't completely comparing apples with apples, but it is close enough. At the start of 2002, as had been the case most of the period since the second half of 1998 and again in 1992-94, there was a large financial incentive to buy rather than rent. People responded to this incentive, which played a part in driving up the number of house sales and house prices. However, to get an accurate gauge on the near-term outlook for house prices this behaviour needs to be considered alongside what the other drivers of housing demand are doing, as we do in the **Housing Prospects** reports.

But it is not just about people switching from renting to owning, which in itself doesn't change the relativity between the number of people and the number of dwellings. Faced with the financial incentive of interest costs being low relative to rental costs and low in absolute terms, more young people/couples leave home to buy houses and people will move from higher density rental or shared housing situations to lower density ownership situations. The result is demand to own houses growing significantly faster than population growth, reflected in a falling number of people per house.

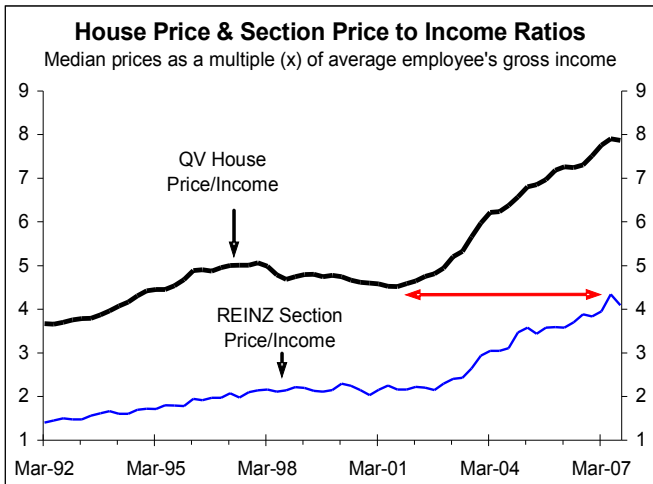
The opposite incentive existed in the late-1980s and early-1990s, with interest costs associated with buying being well above rental costs and high in absolute terms. This adverse financial incentive will have played a significant part in the poor performance of real house prices over this period. I can remember a TV document in around 1992 about young people staying at home longer or moving back home.

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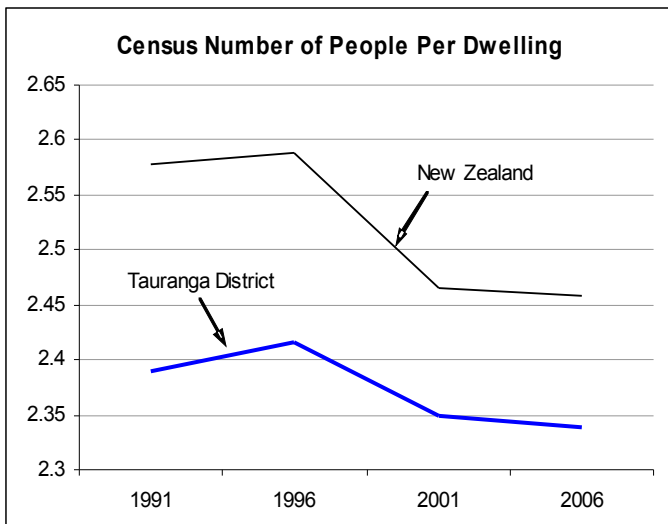
The incentives faced by would-be home owners shown in the chart above are similar to the financial incentives faced by investors, with both working in the same direction in terms of the impact on housing demand and house prices. At the same time investors have the incentive to buy more houses, would-be home owners have the incentive to buy, so it should be no surprise that house prices surge when the stars line up. However, it is a different story when both have a financial incentive to steer clear from buying houses, although, as discussed in Chapter Two, house prices don't behave symmetrically because of the somewhat unique behaviour of vendors.

Housing affordability and how people behave



In the short-term there is not a close link between house prices and incomes, but in the medium to longer term house prices can't go up indefinitely in isolation from what happens to the incomes of the people who will buy or rent them. This was another factor that many investors lost sight of during the speculative bubble in house prices in the 2005 to 2007 period. This was most notable in some provincial apartment markets. Whakatane was a case in point, with some investors fronting up to buy \$700,000 penthouse apartments that could probably be only rented for around \$350 per week (i.e. around a 2.6% gross rental yield). This shows an important link between rental yield and affordability (i.e. the level of house prices relative to incomes).

At the start of the 2002 to 2007 boom in house prices the average house cost the average employee around 4.5x his/her annual gross income (i.e. the average price of \$167,000 compared to the average annual gross income of \$36,000). This represented affordable housing. At the same time the average section cost 2.2x the average employee's annual gross income (i.e. \$80,000 for a section versus the \$36,000 average income). This represented an affordable price for sections. At the peak of the boom in 2007 the average house cost 8x income while the average section cost almost as much in income terms as a house with section attached cost in 2002. It should therefore be no wonder that in recent times the level of demand for housing – both existing and new houses - has been well below even the average level that existed prior to 2002. People have been presented with a major incentive to economise on housing.



Impact of Changing Number of People Per Dwelling

Tauranga City	
People/dwelling	Fewer Dwellings
2.33	0
2.35	-420
2.37	-833
2.39	-1239
New Zealand	
People/dwelling	Fewer Dwellings
2.46	0
2.48	-13,769
2.50	-27,317
2.52	-40,650

It only takes a small increase in the number of people per house to result in a significant reduction in the number of houses required to house the population, which translates into a large fall in demand for new housing. At the national level there were 2.46 people per dwelling at the 2006 Census (based on the total number of dwellings that includes holiday homes). If we are in the process of seeing the number of people



per dwelling increase from 2.46 to 2.5 it means we need 27,317 less new houses than would be the case otherwise. But if the number of people per house is in the process of increasing to 2.52 we will need 40,650 less dwellings than previously. The chart and table above also show how the numbers stack up in Tauranga City, which is shown to provide an example of the same behaviour at the provincial level.

There are various means by which people can economise on housing in response to it being unaffordable, while this process will work in the opposite direction if/when housing becomes affordable again. This relates to young people/couples living at home longer or moving back home, as discussed above. It relates to people with spare rooms taking in tenants to help pay the mortgage or rent. It relates to more multi-family housing, with people converting garages and the like to living quarters or putting small, mobile homes on a property to house the kids or the in-laws. It is happening with retired people who have been hit by finance company failures and are having to move in with the kids or with each other.

This behaviour was noted in the First National quarterly residential property management survey reported in the media on 1 November, with GM John Stewart reported to observe that "We still hear tales of younger tenants and couples heading back to parent's homes, or several couples moving together to share larger homes." Source: http://www.landlords.co.nz/read-article.php?article_id=3852.

The examples above shows why it is possible that moves by people to economise on housing could result in the number of consents for new dwellings running well below the level normally associated with the current levels of interest rates and population growth. This is a dynamic that the economic forecasters are not incorporating into their predictions for residential building, which is why they have been way too optimistic in recent times. By contrast, we incorporate how people respond to housing affordability in our monthly **Building Barometer** reports, which provide the best available insights into the near-term outlook for residential building (see <http://sra.co.nz/building.html> for info on these or contact me if you want to discuss signing up for them). We also take affordability and the behaviour it drives into account in assessing the outlook for existing housing demand and house prices in the **Housing Prospects** reports. It goes hand in hand with assessing the investment valuation measures.

Market Valuations versus Investment Valuations

When a valuer is engaged by someone looking to buy or sell a property, possibly to keep the bank manager happy, the valuer supplies a "market valuation". A market valuation, if done well, will provide exactly what it is supposed to deliver (i.e. an assessment of what the property will likely sell for in the current market). See the following link to the QV website - <http://www.qv.co.nz/valuations/valuationtypes/> - for a description of market valuations in the NZ context, with QV offering an E-Valuer service for people wanting a quick and cheap "online estimate of market value". Capital Values (CVs), Rateable Values (RVs) and the old Government Valuations are akin to market valuations, albeit at times they are not very accurate market valuations.

A key input into a market valuation is often recent sales of similar properties in the neighbourhood or in comparable locations. This means that when prices are either surging or tumbling valuers can find themselves dancing on quicksand. Valuers provide a useful service, but it is important that people realise what a market valuation does and doesn't represent.

In my experience some people expect valuers to tell them whether the property is good or bad value from an investment perspective, which is completely different from what valuers are generally engaged to do. Experienced valuers may be able to offer useful insights into whether a property offers good or bad value from an investment perspective based mainly on experience from past cycles and knowledge of the local market. But, as discussed above, we are in a situation where past cycles potentially offer poor insight into future cycles, so even many experienced valuers will currently lack a rigorous benchmark against which to assess the value of a property from an investment perspective. This is where our investment valuation framework fits in.