Westpac Institutional Bank

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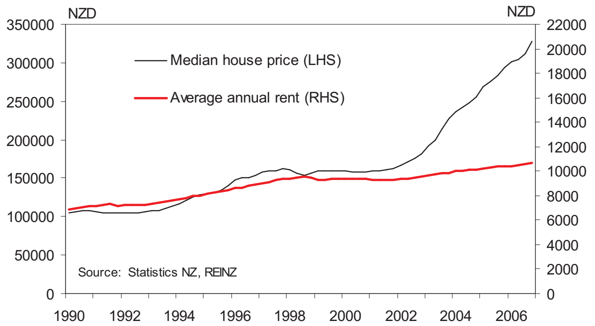
Rent apart

Why rents have barely risen when house prices have doubled

- **High house prices and subdued rents have pushed rental yields to historic lows.**
- **Lower rental yields can be explained by lower mortgage rates and the higher top marginal tax rate, compared to the 1990s.**
- **The rental property market is not overvalued or in a bubble.**

House prices have become a hot topic of conversation in recent years. By contrast, rents hardly get a mention. The thing is, rents have been very subdued, barely keeping pace with inflation and falling as a proportion of the average wage. That is astounding when you consider that the past five years has seen a doubling of house prices, a huge influx of migrants, and strong growth in the population of 20-somethings. In this article we explain the "puzzle" of supercharged house prices and subdued rents, from both the landlords' perspective and the tenants' perspective.

Figure 1: House prices and average rents
(Rents adusted to remove the direct impact of changes to Housing New Zealand's rental policies)



The landlords' perspective

Over the past five years house prices have doubled, but rents have increased just 14%. This means there has been a dramatic fall in the yield on rental property (defined as annual rent divided by house price). This fall in rental yields has been cited as evidence that the rental housing market must be out of equilibrium, and that a house price bubble may have developed. We beg to differ. The fall in rental yields is perfectly explainable by two important factors – since the 1990s, mortgage rates have fallen and the top marginal tax rate has risen.

To explain the importance of these two factors, we need to go back to basics and think like a landlord. The return on a rental property equals the rent plus the expected capital gain, less expenses. Mortgage interest is normally a landlord's main expense. A fall in mortgage interest reduces a landlord's expenses, allowing him/her to accept a lower rental yield while still receiving an adequate return. Hence rental yields fall when mortgage rates fall.

Tax is also an important factor in the rental equation. Landlords typically make a loss on rental properties once mortgage interest and other expenses are taken into account. This loss can be written off against wage or salary income, reducing the landlord's overall taxable income. Landlords can claim a tax rebate on these losses from a rental property *at their marginal tax rate*. When it comes time to sell, the landlord pockets the capital gains tax-free. If the landlord's marginal tax rate increases, the tax rebate increases. Higher marginal tax rates amplify the tax breaks associated with owning a rental property, allowing landlords to accept lower rental yields.[1]

An increase in marginal tax rates is exactly what has happened since 1999. When the top marginal tax rate increased from 33% to 39%, those earning the highest

[1] Not all landlords are on the marginal tax rate of 39%, and not all landlords have a mortgage. But the price of rental property, and therefore the rental yield, should reflect what the house is worth to the highest bidder – the person who can extract the greatest benefit from owning the property, including tax benefits.

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incomes had more incentive to get into rental property. And far more people today are affected by the 39% tax rate than were affected in 1999. An increasing number of people have an incentive to avoid the 39% tax rate by getting into rental property. (Next week we will release a bulletin estimating the impact of tax rates on property prices).

The table below shows an example to illustrate the importance of tax rates and interest rates to landlords. Consider a landlord who purchases a rental property for $120,000, investing $20,000 and borrowing the remaining $100,000. Column 1 approximates the mortgage rates, rental yields, and tax rates that prevailed in 1996. The hypothetical landlord incurs a pre-tax loss of $9,000. However, at a marginal tax rate of 33%, s/he is able to claim a tax rebate, meaning the after-tax loss is $6,030. With expected capital gains of $7,000 p.a., the landlord expects a total return of $970, or almost 5% on the $20,000 invested.

Column 2 illustrates the effect of a change in the marginal tax rate to 39%, holding everything else unchanged. The tax rebate on the $9,000 loss is larger. Therefore the after-tax loss is smaller, and the return on equity increases to $1,510 or 7.6%. Finally, column 3 illustrates the effect of lower mortgage payments, which results in lower expenses and an even greater return. There are no changes to the gross rental yield in these examples, but the after-tax net returns can vary hugely according to tax rates and interest rates.

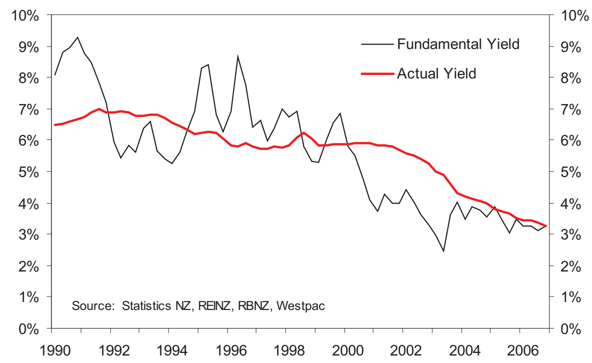
Return on a $120,000 rental property with $100,000 mortgage

	Tax = 33%, Interest = 11%	Tax = 39%, Interest = 11%	Tax = 39%, Interest = 8%
Annual Rent	$7,000	$7,000	$7,000
Mortgage interest	$11,000	$11,000	$8,000
Expenses	$5,000	$5,000	$5,000
Pre-tax loss	**$9,000**	**$9,000**	**$6,000**
Tax rebate	$2,970	$3,510	$2,340
After tax loss	**$6,030**	**$5,490**	**$3,660**
Expected capital gain	$7,000	$7,000	$7,000
Expected return	**$970**	**$1,510**	**$3,340**
Rate of return	**4.9%**	**7.6%**	**16.7%**

The after-tax returns from rental properties increased dramatically when mortgage rates fell and the top marginal tax rate increased. It is no surprise, then, that landlords began to leap at any opportunity to get into the rental market. The price of rental property was bid up very aggressively. And with so many landlords keen to let property out in order to claim a tax rebate, rents remained relatively low. Higher prices and subdued rents implied lower gross rental yields.

Based on interest rates and tax rates, we can calculate a "fundamental yield" over history.[2] This is the rental yield that landlords would require to realise an acceptable return. The fundamental yield depends on long-run mortgage rates, expenses, tax rates and expected capital gains, and varies over time. The fundamental yield fell dramatically in the early part of this decade, due to lower interest rates and the higher marginal tax rate. Actual yields have been playing catch-up ever since. In other words, rental yields needed to fall, and have only recently fallen "enough". The inescapable conclusion here is that despite all the price rises, despite all the exhortations from the cental bank, and despite all the nay-saying, rental property is not overvalued at all.

Figure 2: Fundamental vs actual yields



Certainly, the residential property market is not inflated by "unrealistic expectations of future capital gains". We have calculated that the average landlord needs a 6% p.a. long-run capital gain in order to cover the cash-

[2] Technical notes: the rental market will be in equilibrium if rental income plus expected capital gains are greater than mortgage interest and expenses, after allowing for tax. Or

$$\text{Rent}(1-t) + \text{Price}^*\pi^e = \text{Price}(i+f)(1-t),$$

where t is the marginal tax rate, π^e is the long run expected rate of capital gain on property, i is the mortgage interest rate, and f is other costs. Rearranging, the fundamental yield is given by:

$$\text{Rent/Price} = (i+f) - \pi^e/(1-t)$$

Quarterly data was used. The tax rate is the highest marginal rate of income tax. Mortgage rates are five-year rates sourced from the RBNZ from 1998 and the longest available carded rate at Westpac before that (floating until 1995, 3-year until 1996, 5-year post-1996). Maintenance costs are set at 5.25%. Price is the quarterly average of REINZ median house prices. Rents are calculated from the 1995/1996 household expenditure survey and rentals from the CPI, with an adjustment to remove the impact of changes to Housing New Zealand's rental policies. And π^e is 3.3% plus expected inflation. Expected inflation is an equally weighted average of 2-year-ahead inflation expectations (RBNZ Marketscope Survey) and the rate of inflation over the previous 3 years. Note that f includes the notional risk premium on housing, which in reality should not be tax deductible and should probably vary over time. However, tinkering around the edges by treating a portion of costs as non-tax-deductible does not change the overall conclusion that NZ's fundamental rental yield has fallen dramatically since the 1990s.

flow losses being incurred each year. Six percent is high, but not extreme. Since 1970, the true average rate of house price increase has been 3.3% plus inflation.

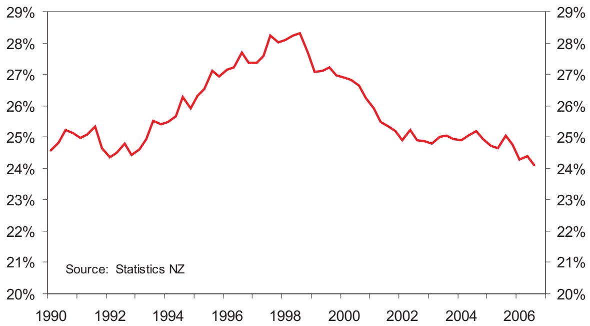
Prices adjust faster than rents

Econometric analysis confirmed the theoretical relationship between rents and house prices, with mortgage rates and taxes playing important roles. The analysis also showed that prices tend to adjust much faster than rents when the fundamentals change. Thus, when long-term interest rates fell and tax rates rose, it was house prices that rose sharply. Rents did not fall. Future changes in the fundamentals will have a bigger impact on prices, and only a small impact on rents.

The tenants' perspective

Tenants have been relatively insulated from house price increases in recent years. Rents have fallen as a proportion of wages, meaning that renting is probably more affordable than it was a decade ago. The tax system is effectively subsidising landlords, and the subsidy is partially passed on to tenants in the form of low rents. Distortions in the tax system make it sensible for high-income individuals to purchase rental property and rent it out to lower-income individuals, with both parties gaining at the expense of the taxman.

Figure 3: Average rent as % of average wage
(Rents adusted to remove the direct impact of changes to Housing New Zealand's rental policies)



Implications for housing affordability

Home ownership has become much less affordable in recent years, especially for low and middle income first home buyers. House prices have been bid up to reflect the tax break that high-income people can get from owning a rental. If a low or middle income person aspires to own their own home, they must first outbid a high-income person who is chasing a tax break. It is little wonder, then, that rates of home ownership are falling.

The outlook for rents, rental yields, and the price of rental property

Rental yields have been falling for a long time, brought about by rising prices and subdued rents. Based on current fundamentals, rental yields have reached their floor and rental property is fully valued. House price inflation for rentals is likely to be much more moderate in coming years. And with landlords no longer enjoying such outsized capital gains, rents could rise slightly faster than they have in recent years.

That prediction is based on current fundamentals. But the fundamentals around rental properties could change. One risk is that long-term mortgage rates rise, which would put downward pressure on property prices. But the biggest risk is a drop in the top marginal tax rate, as this would suddenly reduce the tax benefits of owning a rental property. If the top tax rate fell to 33%, then the "fundamental yield" would rise by a full percentage point. A rise in the fundamental yield spells a drop in prices. We will provide more detail on the *extent* of price declines that could result from changes to interest rates or tax rates in next week's bulletin.

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