Tax and house prices

How changes to the tax system would impact New Zealand house prices

- The Tax Working Group is investigating changes to the tax system.
- This bulletin provides estimates of how tax changes would affect house prices, using our Investment Value of Housing model.
- Introducing a 10% capital gains tax would reduce house prices by 10.9% relative to the counterfactual. Other key estimates are summarised below.
- This does not necessarily mean house prices would immediately drop 10.9% - it could mean a long period of stagnation while the fundamentals catch up.

	Impact on house prices	Impact on home ownership
Capital gains tax 10%	-10.9%	Higher
Property tax 0.5%	-10.5%	Higher
Land tax 1%	-9.5%	Higher
Deemed rate of return	-19.5%	Higher
Ringfencing	0% to -6%	Higher
Top rate of income tax reduced to 30%	-2.8%	Higher

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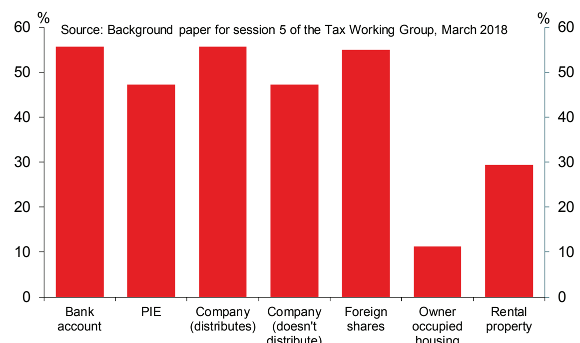
The Tax Working Group (TWG) is investigating whether changes to the tax system will affect house prices. The answer is a definite “yes”. Property prices in New Zealand are profoundly affected by the tax system. It follows that changing the tax system would change property prices. It would also change the rate of home ownership. In this bulletin we estimate how various new taxes might affect house prices and rents using our Investment Value of Housing model. We also discuss how these tax changes might affect the rate of home ownership.

The tax system and property investment

In New Zealand, property is more lightly taxed than other forms of investment. Treasury and the IRD estimate that property investors pay 29.4% of their after-inflation returns in tax, whereas bank depositors and owners of dividend-paying shares pay 55.7%.

Figure 1: Treasury / IRD estimates of marginal effective tax rate on real return from various types of saving



This is mainly because income from investments is taxed, whereas capital gains are tax free. Bank deposits yield only income, and are therefore taxed heavily. By contrast, property investments return little in the way of taxable net income and more in the way of capital gain, which is tax free.

The kicker is the fact that expenses, including mortgage interest, are tax deductible. This feature of the tax system is especially useful for property investors, who find it easier to borrow against their investments than other businesses. Landlords' debt loadings can be so high that their expenses outweigh their rental income, meaning they can declare zero or negative taxable income. Meanwhile, they can collect tax-free capital gains.

Naturally, this has made property investment incredibly popular. And that popularity has been one factor pushing house prices higher. The tax advantages of property investment have been factored into the price of property.

Another quirk of New Zealand's tax system is that property investors enjoy more favourable tax treatment than heavily indebted owner occupiers (first homebuyers). Property investors enjoy tax deductions for mortgage interest and property maintenance, whereas owner occupiers do not.[1] This boosts the amount property investors are willing to pay for property. Consequently, fewer aspiring owner occupiers are willing or able to outbid aspiring investors to secure a dwelling. Not surprisingly, after the tax rules granting landlords this advantage were introduced in the early-1990s, New Zealand's home ownership rate fell.

If the tax system has affected the price of property and the rate of home ownership in New Zealand, it stands to reason that further changes to the tax system could once again alter both.

The investment value of housing

This bulletin uses our Investment Value of Housing model to estimate the impact that various tax changes would have on house prices and rents. The model estimates the value of an average New Zealand house to a rational investor, based on the net present value of the rent that the property could generate less the expenses. The Investment Value of Housing model is sensitive to inflation, interest rates, and the tax system, and gives excellent signals as to what might happen to house prices when one of these factors change. For example, from 2014 to 2017 mortgage rates fell sharply. The Investment Value of Housing model correctly predicts that this was a period of strong house price growth.

The model is calibrated to a median house in New Zealand, currently worth $560,000, being rented out for $464 per week and financed over the long term at a mortgage interest rate of 5.25%. It is a model of fair value and takes no account of pre-existing undervaluation or overvaluation in the market. One key uncertainty is how rents would respond to tax reform for landlords. We have made the simple assumption that one-third of the adjustment to a tax change would come about via higher rents, and two-thirds of the adjustment would come about via lower house prices.[2] If rents in fact adjusted by less, the adjustment in house prices will be larger than we have estimated. Finally, in this bulletin we estimate the change in long-run fair value that could result from tax changes. The analysis in this bulletin has nothing to say about how long such an adjustment might take to play out. A 10% drop in fair value might play out as a sudden drop in prices, or as a long period of price stagnation while the fundamentals catch up – the model does not tell us which is more likely.

Possible tax changes and their impact on house values

1. Capital gains tax, 10%

Impact on house prices:	-10.9%
Impact on rents	+5.5%
Effect on rate of home ownership	Higher

The TWG is considering the possibility of a capital gains tax that would exempt the family home, but would apply to other properties including rentals. This extra expense would decrease the amount an investor could pay for a property while still realising a profit. With fewer landlords, rents would rise. And with investors willing to pay less for a property, more auctions/tenders would be won by aspiring first homebuyers and the rate of home ownership would rise.

2. Property tax, 0.5%

Impact on house prices	-10.5%
Impact on rents	+5.2%
Effect on rate of home ownership	Higher

A property tax would be calculated as a percentage of the value of the property, including the land and the house – equivalent to the "capital value" used to determine rates in much of New Zealand. The property tax would be an extra expense for property investors, reducing the price they would be willing to pay for any given house.

We have assumed that owner occupiers would be exempt from the property tax. If so, then landlords' overall tax advantage relative to leveraged owner occupiers would diminish, and home ownership would rise.

3. Land tax, 1%

Impact on house prices	-9.5%
Impact on rents	+4.8%
Effect on rate of home ownership	Higher

Unlike property tax, a land tax would be levied only on the value of unimproved land on which a dwelling is located. Again, we have assumed that owner occupiers are exempt.

[1] First homebuyers do have one advantage. Landlords pay tax on rental income, whereas leveraged owner occupiers do not. However, this is a smaller advantage than the deducibility advantage enjoyed by landlords. Consequently, the overall tax treatment is better for landlords than it is for leveraged owner occupiers.

[2] We have consistently used this assumption since we developed the Investment Value of Housing model in 2007. It was based on an observation that about two-thirds of the variation in rental yields was caused by variation in house prices, and about one third of the variation was caused by variation in rents.

In our modelling, a 1% land tax has roughly the same impact on house prices as a 0.5% property tax. This is because our calculations are based the average house, for which about half the value is in the land.

In reality, properties for which land makes up a greater proportion of the value, such as houses with large sections, would experience a greater percentage decline in price, while apartments would experience a smaller percentage decline. Also, Auckland prices would probably fall further than prices elsewhere in New Zealand. This is because land makes up a greater proportion of the value of Auckland properties than in other regions.

4. Deemed rate of return, 5%

Impact on house prices	-19.5%
Impact on rents	+9.6%
Effect on rate of home ownership	Higher

For property investors, rental income would not be taxed, and expenses (including interest) would not be tax deductible. Instead, the IRD would assume that investors are earning a 5% return on the equity in their rental properties. Income tax would be levied on that deemed return.

How the deemed rate of return tax would impact house prices depends on the details, but our estimate is valid under two plausible scenarios:

- The same deemed rate of return tax is applied to all net wealth.
- A deemed rate of return tax is applied only to investment property, and the rate is high enough to make property tax disadvantaged relative to other investments.

In either scenario, the effect of the deemed rate of return tax would be to completely remove the tax advantages property investors have over owner occupiers and over other forms of investment. This would reduce the value of property to investors by approximately 19%, and would lead to a higher rate of home ownership.

5. Ringfencing

Impact on house prices	0% to -6%
Impact on rents	Up
Effect on rate of home ownership	Higher

From April 1 next year, the Government is planning to phase out landlords' ability to use losses on rental properties to offset tax liabilities from other sources. Instead, landlords will receive tax credits that can only be used to offset future tax on their property portfolio – rental property tax credits will be "ringfenced". It is not possible to estimate the impact of ringfencing on house prices using the investment value approach, but it is possible to put sensible bounds around it.

Ringfencing will not affect investors who have positive cashflow. The higher the leverage over an individual property, the greater the impact of ringfencing will be. For an investor running a property portfolio with 65% debt and 35% equity in perpetuity, we estimate that ringfencing will reduce the value of the investment by 6%. This seems like a sensible upper bound for the possible impact of ring fencing on house prices, but the actual impact could be smaller.

After ringfencing comes in, we would expect to see fewer highly-leveraged property investors seeking to buy. This would allow less-leveraged property investors to win auctions/tenders more frequently. However, we do not know how far prices would have to fall before the less-leveraged buyers enter the market.

6. Top rate of income tax reduced from 33% to 30%

Impact on house prices	-2.8%
Impact on rents	+1.6%
Effect on rate of home ownership	Higher

The size of the tax advantage of investing in property depends on the gap between the rates of capital gains tax and income tax. That gap can be closed in two ways – by reducing the rate of income tax, or by increasing the rate of capital gains tax. In the past, we have pointed out that increasing the top rate of income tax to 39% in 2000 enhanced the tax incentive for investing in property, and probably contributed to the increase in house prices between then and 2005. Reducing the top rate of income tax back to 33% in 2010 probably contributed to the fall in house prices that occurred that year.

Appendix: Model details

The calculations in this bulletin use our Investment Value of Housing model.[3] This values a property for a 100% leveraged investor (the marginal buyer), using the net present value method. Equilibrium between rents and house prices requires that the benefit of owning a rental property (rent and capital gain after taxes) must equal the cost of owning a rental property (interest, maintenance, and property taxes after tax deductions, plus compensation for risk):

$$R(1-t^1) + P(\pi^e + g)(1-t^2) = P(i)(1-t^1 + (f)(1-t^1) + P(l)(1-t^1) + P(\alpha)$$

Definitions are outlined in Table 1 on the following page, along with the assumed values. The equation above can be solved for price to give the Investment Value of Housing:

$$P = \frac{(R-f)(1-t^1)}{(i+t^3)(1-t^1) - (\pi^e+g)(1-t^2) + \alpha}$$

[3] The Investment Value of Housing model is based on the User Cost of Housing used by, for example, Poterba, J (1992), "*Taxation and housing: old questions, new answers*", American Economic Review, 82, 2, pp 237-242. We first adapted the model to better reflect the New Zealand's tax system for our 2007 Bulletin *"Bubble Schmubble"*. Further background on the Investment Value model and on the tax system and house prices in New Zealand can be accessed in our bulletins *"House Values: Shifting Foundations"* (2007), "*Tax and House Prices*" (2009), and "House prices: Further to Fall", (2010). A similar model is used by Hargreaves (2008) *"The tax system and housing demand in New Zealand"*, RBNZ Discussion Paper DP 2008/06.

Table 1

Symbol	Variable	Value in base Case	Reason
P	Price	$560,000	Approximate value of median house in New Zealand, April 2018. Source: REINZ.
R	Annual rent	$23,200	Mean rent on 3-bedroom house is $464. Assume 50 weeks rent on average. Source: MBIE.
f	Cost of maintaining the property	$10,932	Property management fee 8.5% of gross rent. Source: Quinovic. Rates, maintenance, insurance and depreciation assumed to be 1.6% of property's initial value.
i	Interest rate	5.25%	Approximately equal to average new customer 3-year fixed mortgage rate in May 2018. Shorter-term rates are currently lower, but are widely expected to rise – using a longer term rate gives a better sense of expected future mortgage rates. Source: RBNZ.
π^e	Long-run expected rate of inflation	2%	RBNZ target.
g	Expected long-run sustainable rate of real capital gain	1.5%	Approximately equal to average rate of real house price inflation between 1970 and 2000.
α	Risk premium	1.45%	Calibrated to force investor value equal to $560,000.
t^1	Marginal rate of income tax	33%	
t^2	Rate of capital gains tax		Set to 10% for capital gains tax scenario.
t^3	Rate of property tax		Set to 0.5% for property tax scenario.

The impact of tax changes on P were determined by varying t^1, t^2, or t^3, and simultaneously assuming that the percentage change in R is equal half of the percentage change in P. The deemed rate of return scenario involved setting $t^1 = t^2 = t^3 = 0$. The land tax scenario required a slightly different formula, details available from the author on request.

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