Estimates of the Impact on the Housing Market of Not Allowing Deductions for Depreciation on Investor Housing

Summary:

- This note addresses the question: what impact on rents, house prices, quantities of housing and owner-occupancy rates might follow if those owning investor housing were no longer able to claim depreciation as a tax deduction?
- The analysis is based on an integrated model of the rental and owner-occupied housing sector (see: http://www.treasury.govt.nz/publications/research-policy/wp/2009/09-05/)
- The key finding is that any changes in rents and house prices are likely to be modest.
- The annual foregone tax revenue per rental property from allowing deductibility for depreciation is estimated at $855 in 2006). If the average rent is $300 per week and this amount were added directly to rents, the increase would be about 5.5%. However this is an absolute upper bound as it assumes (unrealistically) that no adjustments would take place in the housing market following the change in deductibility of depreciation.
- The model allows for a full set of adjustments in the housing market capturing the supply response to changes in house prices, the demand for rental property from tenants and the supply of rentals by investors.
- Using the best estimates of the likely values of the underlying parameters of the model, rents would be expected to rise in the medium term by about 1%.
- House prices could fall by about 0.3%.
- In all cases the results are shown with upper and lower bounds. In the most extreme case, using the largest estimate of the supply elasticity of rental properties, rents would rise 3.3% in the long run.
- The model compares the position with and without deductibility for depreciation. It does not trace out the time path as the housing market adjusts – ie it is a comparative static rather than a dynamic model.
- Any increase in rents raises the costs of renting relative to ownership. This is further accentuated by any tendency for house prices to rise. As a consequence the owner-occupancy rate would rise. In the medium term this could involve up to an additional 10,000 households moving into owner-occupancy.
- The results are intended to be indicative of the possible magnitudes. Details of the analysis and the assumptions are set out below. No allowance is made for reductions in the potential revenue take where properties are sold at a loss. If this option were adopted it would further reduce the present estimates.
- The results presented here are calibrated to 2006. This allows Census data on tenure to be used. Providing that the depreciated book value of rental houses and housing prices have moved approximately proportionately, it is not expected the results for 2010 would change significantly.

Summary: Impacts on the Housing Market based in the Medium Term

	Lower estimate	Base case	Upper estimate
% change in rents	0.6	1.0	2.7
% change in house prices	-2.8	-0.3	0.0
% change in quantity of rental units	-6.3	-2.4	-1.3
% change in quantity of total housing	-0.5	-0.2	-0.1
Resulting owner-occupancy rate (relative to base of 70%)	70.4	70.7	71.8

Note: the upper and lower bounds correspond to the most extreme values used for the underlying elasticity estimates.

Summary: Impacts on the Housing Market based in the Medium Term

REVISED ESTIMATES using a total loss of revenue in 2006 of $218m rather than $327m from allowing deductions for depreciation on rental housing.

See : 1773813 v2

	Lower estimate	Base case	Upper estimate
% change in rents	0.2	0.7	2.2
% change in house prices	-1.9	-0.2	0.0
% change in quantity of rental units	-4.5	-1.6	-0.9
% change in quantity of total housing	-0.4	-0.1	0.0
Resulting owner-occupancy rate (relative to base of 70%)	70.2	70.4	71.2

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Specialist Support

This section computes the effect on the housing market of not allowing deductions for depreciation.
It estimates the effect on house prices, rents, quantity of rental units and the total quantity of property together with the owner occupancy rate.
Results are computed for a range of assumptions about the underlying elasticities.
The analysis has been set up to easily allow different assumptions about other parameters to be tested.

The approach is based on the estimates in Coleman and Scobie
A Simple Model of Housing Rental and Ownership with Policy Simulations WP 09/05.
This model allows for policy simulations and incorporates both the rental and owner occupied sectors, with interactions between them
The relevant base case is an increase in the tax concessions to landlords Case B, Table 3.
That was based on an increase - in this case we are interested in a decrease resulting from removing the ability to deduct depreciation.

We calibrate this new policy with reference to the existing Case B.
This involves estimating an adjustment factor.

We start by calculating the amount of depreciation claimed on an average rental property

Book Value	Depreciation Claimed at 2%	Foregone tax at rate 0.285
200,000	4000	1140
150,000	3000	855
100,000	2000	570

Total number of private occupied dwellings (2006 Census)		1,471,746
Share not owned by occupants		0.331
Number of properties	No.	487,148
Some of these are owned by councils etc and do not claim depreciation, say		450,000
of which 85% claim depreciation (IRD estimate)	0.85	382,500

Total tax revenue foregone by allowing depreciation as a deduction $m

Book value	
200,000	436
150,000	327
100,000	218

The estimate provided by the Tax section for 2006 is $327m corresponding (exactly) to the middle estimate here. This value is used in the following calculations.

Total value of rental properties	(after Coleman and Grimes)	$bn	213
Implied value per property		$	437,239
Value of all housing (RBNZ 2006)			559
Implied average house price in 2006			379,821
Median sales price from REINZ in 2006			300,000

(this last value corresponds to the base value used in Coleman and Scobie for 2006 and is used here)

The base case in Coleman and Scobie assumes a 5% pre-tax return on a $300,000 house.		0.05
The base case was computed for a 10% increase from 5 to 5.15% or a 3% increase.		0.03
The base return is		$15,000
In the present case the change is $15,000 less the foregone tax of $855 or		14,145
This equates to a decrease of (%)		-5.7
The adjustment factor is therefore	(5.7/3.0)	-1.9

The following Tables are based on Coleman and Scobie and relate to Case B
In each case the estimated effects are multiplied by the adjustment factor of -1.9 to create new tables.
These tables give estimates based on a range of elasticities. The supply elasticity of housing with respect to house prices is assigned three values: 0, 0.5 and ∞. These can be interpreted as corresponding to the short, medium and long runs.

Table 1a: Estimates of the Impact on the Housing Market of Not Allowing Deductions for Depreciation on Investor Housing

	Elasticity of supply of housing with respect to price of houses	Values of the elasticity of the demand for property with respect to rents			
		-0.05	-0.1	-0.2	-0.4
% change in rents	0	0.95	0.78	0.57	0.36
	0.5	1.12	1.08	1.03	0.91
	∞	1.22	1.22	1.22	1.22
% change in house prices	0	-0.48	-0.76	-1.12	-1.46
	0.5	-0.38	-0.36	-0.34	-0.30
	∞	0.00	0.00	0.00	0.00
% change in quantity of rental units	0	-2.36	-2.32	-2.26	-2.20
	0.5	-2.34	-2.34	-2.38	-2.43
	∞	-2.43	-2.43	-2.43	-2.43
% change in quantity of total housing	0	0.00	0.00	0.00	0.00
	0.5	-0.19	-0.19	-0.17	-0.15
	∞	-0.06	-0.11	-0.25	-0.49
Resulting owner occupancy rate	0	70.70	70.70	70.68	70.65
	0.5	70.65	70.65	70.67	70.68
	∞	70.70	70.68	70.67	70.59

Table 1b: Estimates of the Impact on the Housing Market of Not

Allowing Deductions for Depreciation on Investor Housing

	Elasticity of supply of housing with respect to price of houses	Values of the elasticity of supply of rental property with respect to the real pre-tax rate of return to investors			
		0.25	0.5	1	2
% change in rents	0	0.32	0.63	0.93	1.39
	0.5	0.55	1.03	1.75	2.72
	∞	0.67	1.22	2.11	3.34
% change in house prices	0	-0.63	-1.12	-1.86	-2.77
	0.5	-0.19	-0.34	-0.59	-0.91
	∞	0.00	0.00	0.00	0.00
% change in quantity of rental units	0	-1.25	-2.26	-3.74	-5.57
	0.5	-1.29	-2.38	-4.07	-6.33
	∞	-1.31	-2.43	-4.22	-6.71
% change in quantity of total housing	0	0.00	0.00	0.00	0.00
	0.5	-0.10	-0.17	-0.29	-0.46
	∞	-0.13	-0.25	-0.42	-0.67
Resulting owner occupancy rate	0	70.36	70.68	71.12	71.67
	0.5	70.36	70.67	71.14	71.77
	∞	70.36	70.65	71.14	71.81