1 March 2004

Inquiry into First Home Ownership
Productivity Commission
LB2 Collins Street East
Melbourne, Victoria 8003

By email: housing@pc.gov.au

Dear Sir/ Madam

Subject: Inquiry into 1st home ownership

As Australia's largest professional body, with over 100,000 members, CPA Australia welcomes the opportunity to contribute to the Productivity Commission's inquiry to evaluate the affordability and availability of housing for first home buyers.

As leaders in finance accounting and business advice our interest in this review arises as a consequence of our ongoing commitment to ensuring that, amongst other things, government policy contributes to creating and maintaining an economic environment that maximises economic efficiency and makes Australia a better place to live, work, save and invest.

Enclosed is a copy of a discussion paper commissioned by CPA Australia's Taxation Centre of Excellence to consider the of impact taxation provisions on housing with special reference to the effects of income and capital gains tax provisions. It also makes some references to other taxes where possible. The short period of time has limited the body of work we have been able to undertake on this issue. However, we hope that both the discussion paper, and our comments below, make a positive contribution to the outcome of the Inquiry.

The key findings of the discussion paper are:

a) although the income and capital gains tax provisions are not housing specific, they nevertheless have a particularly large impact on the housing sector and especially on house and unit prices
b) based on plausible assumptions about housing prices, rents and costs, the discussion paper shows that the concessions inherent in the current income tax provisions increase both house and unit prices by at least 5 to 10 per cent, and possibly by considerably more, depending on the alternative policy regime selected
c) these price increases tend to distort the use of resources with too little capital devoted to more productive activities and too many resources devoted to housing and to related tax minimisation activities

d) the paper indicates the kind of issues involved in assessing the costs of these distortions but a detailed assessment of the efficiency costs is beyond the scope of the paper.
e) there would be advantages in tax provisions that provide tax relief for real rather than nominal income losses and that tax real income and capital gains. However, more work on this and other tax scenarios is required.
f) it is acknowledged that the Productivity Commission cannot be expected to resolve these issues fully within the terms of its brief and the time available to it. However, given the evidence in this paper and the arguments in other submissions to the Commission, it would seem appropriate that the Productivity Commission recommend more explicitly and more strongly the need for further examination of the issues relating to income and capital gains tax provisions.

We also make the following two points that are not addressed in this discussion paper. CPA Australia considers that the best solution for limiting the incidence of negative gearing of income producing assets and the arbitrage issue of CGT discount and deductions on revenue account is systemic. That is, lower personal tax rates would reduce the attractiveness of, amongst other things, negative gearing. Secondly, quarantining of negative gearing is in some ways feasible. But to implement such a measure would be an ad hoc response, and difficult and inappropriate to apply in a retrospective manner.

We trust this may be of use in the Productivity Commission review. If you have any questions regarding the above, please do not hesitate to contact me on 03 9606 9701 or via email – paul.drum@cpaaustralia.com.au.

Yours sincerely

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Housing and Taxation

A discussion paper on some effects of taxation provisions on housing with special reference to the effects of income and capital gains tax provisions

CPA Australia

March 2004

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Important Disclaimer

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List of Acronyms And Abbreviations

CGT	Capital gains tax
MITR	Marginal income tax rate
PC	Productivity Commission
RBA	Reserve Bank of Australia
REIA	Real Estate Institute of Australia
VG	Valuer General

Executive Summary

1. This paper assesses some aspects of the effects of taxation provisions on house and unit prices and their economic implications with special reference to general income and capital gains tax provisions and some references to other taxes.

2. In its submission to the *Inquiry into First Home Ownership*, the Reserve Bank (2003) argued that, along with changing monetary conditions, the provisions for income and capital gains taxes and related arrangements could explain much of the recent movement in house prices. It recommended that the Productivity Commission examine these issues.

3. Several other submissions to the Commission made similar points and recommendations, including submissions by the NSW and Victorian governments, the Australian Council of Social Service, and the Australian Consumers Association.

4. In its Draft Report, the Productivity Commission acknowledged that the interaction of negative gearing, capital gains provisions and high marginal income tax rates have encouraged investment demand, but it concluded that these provisions are not housing specific and should be assessed in a broader context.

5. This discussion paper contends that although the income and capital gains tax provisions are not housing specific, they nevertheless have a particularly large impact on the housing sector and especially on house and unit prices, which this paper quantifies. On plausible assumptions about housing prices, rents and costs, the paper shows that the concessions inherent in the current income tax provisions increase house and unit prices by at least 5 to 10 per cent, and possibly by considerably more, depending on the alternative policy regime selected.

6. These price increases tend to distort the use of resources with too little capital devoted to more productive activities and too many resources devoted to housing and to related tax minimisation activities. The paper indicates the kind of issues involved in assessing the costs of these distortions but a detailed assessment of the efficiency costs is beyond the scope of this paper.

7. This paper contends that there would be advantages in tax provisions that provide tax relief for real rather than nominal income losses and that tax real income and capital gains. However, more work on this and other tax scenarios, including lower marginal income tax rates, is required.

8. This paper acknowledges that the Productivity Commission cannot be expected to resolve these issues fully within the terms of its brief and the time available to it. However, given the evidence in this paper and the arguments in other submissions to the Commission, it would seem appropriate that the Productivity Commission recommend more explicitly and more strongly the need for further examination of the issues relating to income and capital gains tax provisions.

1 Introduction: Scope of Paper

9. In its Submission to the Productivity Commission Inquiry into First Home Ownership, the Reserve Bank of Australia (RBA, 2003) argued that rising house prices were due principally to more accessible housing finance and increasing investor demand. The Bank noted that for every new dollar lent for housing purposes, around 40 cents goes to investors, which is much higher than has been previously experienced. In the view of the Bank, the favourable taxation treatment of investments in residential property, combined with the high marginal tax rates experienced by many income earners, is a major factor in investor demand. This investor demand raises the sale prices of rented property directly and the prices of owner-occupied property indirectly.

10. Moreover, the Bank observed (page 5) that 'The fact is … resources and finance are being disproportionately channelled into this area (geared property investment)'.

11. These concerns led the Bank to conclude (page six) that 'the following areas appear worthy of further study by the Productivity Commission:

- The ability to negatively gear an investment property when there is little prospect of the property being cash-flow positive for many years.
- The benefit that investors receive by virtue of the fact that when property depreciation allowances are clawed back through the capital gains tax, the rate of the tax is lower than the rate that applied when depreciation was allowed in the first place.
- The general treatment of property depreciation, including the ability to claim depreciation on loss-making investments.'

12. As the Productivity Commission (PC, 2003, page 73) noted, other submissions to the Commission made similar points and recommendations, including submissions by the NSW and Victorian governments, the Australian Council of Social Service, and the Australian Consumers Association.

13. Several media articles have also expressed concern about the role of tax-privileged rental investments. In an article on the Australian Financial Review (21-22 February 2004), David Bassanese observed that investor demand has been growing at an annual rate of 23 per cent since 1996. According to Bassanese, 'Australia now has twice as many landlords among its tax payers as North America and six times as many as the United Kingdom, on a per capita basis. And it's the product of incredibly generous tax benefits…The great tax lurk of recent years … has dashed the dreams of first home owners as investors led the stampede into an already crowded market'.

14. In its Draft Report, the Productivity Commission acknowledges (PC, 2003, pages x and xxi) that the interaction of negative gearing, capital gains provisions and high marginal tax rates have encouraged investment demand. And on page 89, the PC acknowledged that there could be merit in a broad review of tax arrangements, including the interaction between:

- The provisions for the deductibility of expenses, especially deprecation;

- Negative gearing provisions;
- The capital gains tax system; and
- The general income tax structure

15. However, the PC argued that these tax provisions are not confined to housing and concluded (page 55) that these provisions need to be assessed in a broader context.

16. It is true that the income and capital gains tax provisions are general and not housing specific. However, as will be seen, the way in which the provisions work and the special characteristics of the housing sector are such that the distortions appear to be significantly larger in the housing sector than in other sectors.

17. In this note, I examine these issues in a little more detail. In particular I make some preliminary estimates of the size of the tax concessions to rental investors and the impact on house (or unit) prices. In previous discussions, there has been little attempt to quantify the impacts of concessions in the rental investment market, unlike in the owner-occupied market where Yates (2003), the PC (2003) and others have estimated the size of the tax concessions.

18. I also discuss the efficiency costs of the tax concessions in the investor and owner-occupier markets. This is a complex area and the discussion here is only indicative of the issues.

19. Although the main focus of this note is on the effects of the income and capital gains tax provisions, the note also discusses in passing some other issues in the relationship between housing and taxation, including the effects of stamp duties on house prices and welfare.

20. In Section 2, I discuss some issues of data and analysis, with a focus on real prices in the unit (apartment) market, which is the standard vehicle for investors. The section presents some information on movements in unit prices compared with house prices and discusses how asset prices such as house prices are set and how taxes generally affect these prices.

21. It may be noted here that, following the Terms of Reference for the Inquiry, the Commission (2003) discusses in some detail efficiency issues associated with land development. However the PC pays relatively little attention to the price and supply of units or to the efficient substitution of capital for land, which could be a significant contributor to lower housing costs.

22. Section 3 describes current income and capital gains tax provisions for investors and owner occupiers and outlines alternative policies. I then estimate the tax benefits to investors of the present tax arrangements compared with these alternatives, based on simulations of various housing and economic scenarios, and summarise estimates of tax concessions for owner occupiers. Estimates of the value of the tax concessions to investors and homeowners are also presented.

23. Section 4 discusses some economic implications of the relationships between tax provision and house prices. The paper contends that the property price increases divert capital and labour skills and time into a sector with a relatively low pre-tax rate of return.

24. There are four appendices. Appendix A provides some house and unit price data. Appendix B provides a summary of the main general and specific tax provisions that affect housing along with some comments on the implications. General tax provisions are usually Australian government taxes that are not special to housing. Specific tax provisions are usually state-based provisions for housing. Appendix C provides the spreadsheets on which the main findings of the paper are based. Appendix D is the Terms of Reference for the Inquiry into First Home Ownership.

2 Methods: Data and Analysis

25. As devotees of Sherlock Holmes will recall, the critical clue in the *Hound of the Baskervilles* was that the dog did not bark. Holmes was immediately able to infer that the criminal was someone well known to the dog.

26. An unusual and unexpected feature of the housing price boom since 1995 has been that unit prices have apparently increased as fast as house prices. Drawing on reported sales by their members, the Real Estate Institute of Australia estimates that unit prices rose at higher rates than house prices in Perth and Canberra, at similar rates as house prices in Sydney and Melbourne, and by slightly slower rates than house prices in Brisbane and Adelaide. See Appendix A.

27. Data from valuer-generals' offices in Victoria, NSW and South Australia provide small differences. Victorian VG data suggest that unit prices in Melbourne rose by more than house prices. On the other hand, NSW VG data suggest house prices rose by more than unit prices in Sydney and SA VG data indicate that house prices rose significantly more than unit prices in Adelaide.

28. Nevertheless, overall, unit prices increased more closely with house prices than they traditionally did and more closely than would be expected. Between the mid-1970s and 1988 house prices rose much more than unit prices in the three cities for which data are available, namely Sydney, Melbourne and Adelaide (Applied Economics, 1991; Appendix A).

29. Housing has three main components—undeveloped land, land development components, and building. Often the first two components are lumped together as the land component. Given that the amount of raw land is fixed and that capital can be reproduced, when house prices rise faster than general prices, the land value component of housing would be expected to rise faster than the building component.

30. Consistent with this view, the Productivity Commission (2003, page 6) reports that, 'most of the change in house prices reflects changes in the value of the land (component of housing).' The Housing Industry Association (2003, page 14) also reports that the share of land in housing has doubled between 1976-77 and 2002.

31. Because units have a much lower land to building ratio, unit prices would be expected to rise by significantly less than house prices. Another important reason why unit prices usually rise more slowly than do house prices is that expenditure on alterations and additions is much greater on houses than on units and probably accounts for at least half a per cent of house price increases each year.[1]

[1] For many purposes we would like to estimate constant quality house and unit prices indices. The Reserve Bank (2003) notes that some of the appreciation in unit prices may be due to the increase in CBD properties. A cursory examination of expenditures on alterations and additions in recent years suggests that real price increases for houses have been at least half a per cent per annum lower than nominal increases.

32. The unexpected phenomenon of unit prices rising with house prices requires an explanation. The unit market is to a large extent an investor market. In Australia over 50 per cent of all units are rented, whereas only 15 per cent of houses are rented. Moreover most rented houses have been owner-occupied and are rented while the owners are absent in some other location. Few houses are purchased for the prime intention of renting.

33. As has been noted, investor demand has been a major determinant of rising unit prices in recent years, with recent demand by investors unprecedented. These rising unit prices will in turn have affected house prices.

34. Although houses are purchased mainly by owner occupiers, the housing market (for houses and units) is essentially an asset market as distinct from than a goods market. Established house and unit prices are a function of net rents after tax (gross actual or imputed rents net of taxes and subsidies and other costs) and the after-tax returns on other assets. Of course gross rents are themselves a function of the demand and supply of houses and units. Thus

$$P_h = f(GR_h, C_h, TS_h, R_{nh}, TS_{nh}) \quad (1)$$

where P is asset price, GR is gross rent, C is costs, TS is tax and subsidy provisions, R is rate of return, and the subscripts h and nh stand for housing and non-housing assets respectively. If house and unit prices are modelled separately, each set of prices will be influenced by the return in the other housing sector as well as by returns on non-housing assets.

35. For established houses and units, subsidies for owner-occupiers and investors increase the net rent and so increase the prices they are willing to pay for the assets. Conversely taxes increase the costs borne by homeowners or investors, reduce the rate of return on houses and units, and thus reduce asset prices.

36. For example, as the Reserve Bank (2003) notes, ‘Stamp duty has probably had a mildly depressing effect on prices as it reduces the amount that a household with a given borrowing capacity can bid for a house’. Of course the gross cost to the household rises because the stamp duty more than offsets the small fall in house prices.

37. The actual impacts of taxes and subsidies depend on the precise nature of the taxes and subsidies compared with some realistic alternative. Some scenarios are modelled in the next section.

38. On the other hand, the prices of new houses are set by the prices of comparable established houses. At any point in time, new houses constitute only 2-3 per cent of the housing stock and the supply of new houses has a small impact on house prices.

39. Thus the analysis for new houses is different from that for established houses. Subsidies and taxes specifically for new houses or for related inputs have little effect on new house prices. The gross price that a purchaser is willing to pay for a new house depends on the value of that house relative to other houses. Taxes levied on that house or on inputs to that house do not change this gross price. As shown in Abelson (1999), the taxes are borne by the factors of production, especially by the raw land component. The taxes are shifted to

the purchaser only if there is a resulting significant reduction in the supply of new houses (which is rare).

40. It follows that in analysing the effects of taxes it is important to distinguish between the market for all housing (including established and new housing) and the market for new housing alone. The issue of the GST and housing exemplifies this. The Productivity Commission (2003, page 70) states that because the GST is a broadly based tax it will be 'borne by buyers rather than by sellers'. However, the GST is not broadly based in the housing sector. It applies only to new houses and to expenditure on alterations and additions. In this case the GST is borne mainly by land owners in the case of new houses and by house owners as producers in the case of alterations and additions.

3 Some Effects of General Tax Provisions on House Prices

Current tax provisions

41. As the Productivity Commission (2003) and the Reserve Bank (2003) show, housing investors and owner occupiers in Australia receive relatively favourable tax treatment compared with other countries. The following summarises some of the favourable aspects.[2]

42. The favourable tax treatment **for investors** in Australia relates mainly to the treatment of negative gearing, capital gains tax, and depreciation particularly in the context of high marginal income tax rates.

43. Negative gearing relates to housing related deductions in excess of rental income that can be set against any other source of income. In Australia there are no restrictions on the applications of negative gearing on income-producing investments. There is full interest deductibility for investment on any income-producing asset, as there has been for a long time apart from a short period from 1985 to 1987.

44. Negative gearing is especially attractive to income earners with marginal income tax rates of over 40 per cent. The Reserve Bank (2003, page 40) reports that over 20 per cent of full-time wage and salary earners have a gross wage exceeding the threshold ($62,501) that attracts a marginal tax rate of 48.5 per cent.

45. Turning to capital gains, individuals pay tax on half the nominal capital gains for assets held for more than a year. The capital gains tax (CGT) is payable when assets are sold. In effect, individuals pay capital gains tax at half the rate at which they pay income tax. Fifty per cent of the net capital gain is added to income in the year of realisation and taxed at the applicable income tax rate. The CGT cost base is reduced to the extent that depreciation (building write-off) has been allowed for.

46. The government changed the CGT to its present 50 per cent on nominal gains away from a 100 per cent tax on real income (after-inflation) gains in September 1999. This change increases the attraction of investing in housing when the real element of house price rises exceeds the nominal element (when inflation is low and real house price increases are high), but not when the nominal element of house price increases exceeds the real element.[3]

47. Although the new CGT provisions may not benefit investors, its transparent tax advantage compared to tax of normal income may well have attracted investors. But in either case the investor receives significant tax benefits compared with tax regimes that are neutral with respect to income and capital gains. This is brought out by the treatment of depreciation.

[2] The summary draws on the Reserve Bank (2003) and the Productivity Commission (2003), which provide fuller descriptions in some cases.

[3] A house price increase is made up of a general nominal component (n) and a real component (r), where r can be positive or negative. Under a real tax regime, the tax paid in the dollar is t.r, where t is the marginal income tax rate. Under the present concessionary regime, the tax paid is 0.5t(n+r). The current concessionary provision benefits the investor compared with the earlier provision when r > n, but not when n > r.

48. Australian depreciation rates on structures for new buildings and on fittings for all buildings appear to be in the middle of international practice (RBA, 2003, page 44). However, the treatment of depreciation is more generous when linked to unrestricted negative gearing and to concessionary CGT. These two features mean that the income benefits from depreciation claimed as a deduction for income tax purposes are greater than the payments made for capital gains. This arises because the tax rate on the gains from the depreciated base is half the marginal income tax rate. In effect, only 50 per cent of the capital gain is subject to tax whereas the whole amount of the depreciation has been deducted.

49. The relationship between tax provisions is important. Negative gearing is popular mainly because of high marginal personal income tax and the capital gain tax concession. Investors obtain a tax benefit at their marginal income tax rate for losses while capital gains are taxed at half the marginal tax rate. Also, a point that has been discussed less, investors gain because capital gains tax is deferred until the gain is realised.

50. The two principal tax concessions for **owner occupiers** in Australia are the non-taxation of imputed rents and the exemption from CGT on their principal residence. Imputed rent is the rent that owner occupiers would pay to themselves if they rented their own houses at market rates. Both concessions make home ownership attractive relative to renting, where tax is paid on both rents and on capital gains, albeit at a concessionary rate in the latter case. On the other hand, owner occupiers cannot claim tax deductions for housing expenses including mortgage interest costs.

51. Similar tax concessions to home owners exist in many other countries, but not all have quite the extent of the concessions (see Productivity Commission, 2003, page 66).

Effects of alternative tax provisions

52. To test the effects of the current tax provisions, we establish two house types, a set of economic variables, and various alternative tax provisions. These assumptions are shown in Table 1 (see p.11).

53. The housing variables for the two house types include the purchase prices ($250,000 and $350,000), the value of the building component and fittings, stamp duty based on NSW figures, loans assumed to be high relative to property value, and rents. Further cost data can be found in the following spreadsheets.

54. The economic variables include the borrowing rate, a general inflation rate and a marginally higher real unit value appreciation, the top marginal income tax rate including Medicare levy, and a discount rate for calculating net present values. The depreciation rates are the approximate current average rates for structures and fittings.

55. The table also shows five capital gains tax options (including the current base case) and four negative gearing options (including the current case). These options are not comprehensive. Other options may be found in Reserve Bank (2003) or Productivity Commission (2003).

56. Finally the table shows the two policy variations (scenarios) that are tested. These include a top marginal income tax rate of 40 per cent and two alternative combinations of capital gains taxes and negative gearing.

57. **Policy Scenario One** includes negative gearing option (NG) 1 with CGT option 2. NG 1 allows deductions only for real interest costs (not for the nominal interest component) and all other costs. CGT 2 is a tax on only real gains relative to the fully written down asset. This is an economically consistent and rational scenario in which investors obtain income tax relief only on real losses and pay taxes only on real gains.

58. Suppose that an individual borrows $100 at a rate of 7 per cent to finance a $100 asset and that the inflation rate of 3 per cent. Over a year, the borrower pays $7 in interest but experiences a capital gain of $3, resulting in a net cost of $4. Under scenario 1, the borrower is allowed to deduct the real cost of her loan. Consistent with this, because the nominal capital gain has been offset against the nominal interest cost, the CGT should apply only to the real capital gain.

59. **Policy Scenario** T**wo** allows for a 100 per cent CGT on nominal gains and quarantines losses so that they can be allowed (carried forward) against positive property income as it occurs (which is the UK model). As will be seen, this would impose substantial costs on rental investors compared with the present provisions.

Table 1 Housing, Economic and Policy Data

Housing variables	**Type 1**	**Type 2**	
Purchase price	350000	250000	
Building component	130000	110000	
Value of fittings	40000	30000	
Stamp duty (NSW rate)	11240	6740	
Size of loan (interest only)	325000	225000	
Unit rent per week	300	225	
Rent weeks p.a.	50	50	
Economic / policy variables	**Base case**	**Alternatives**	
Borrowing rate (%)	7.00		
General inflation rate	1.025		
Unit price inflation rate	1.030		
Real unit value appreciation	1.005		
Marginal income tax rate	0.485	0.40	
Discount rate for NPV	5.00		
Depreciation rate: fittings (avr.)	0.10	straight line depreciation	
Depreciation rate: new structure	0.025	straight line depreciation	
Depreciation rate: old structure	0.00		
Capital gains tax (base case)	0.5 * MITR on nominal capital gain from written down asset		
Capital gains tax (option 1)	1.0 * MITR on nominal capital gain from written down asset		
Capital gains tax (option 2)	1.0 * MITR on real capital gain from written down asset		
Capital gains tax (option 3)	1.0 * MTR on nominal capital gains from purchase price (including stamp duty)		
Capital gains tax (option 4)	1.0 * MITR on gain on depreciation + 0.5 * MITR on extra gain (Canada model)		
Negative gearing (base case)	Allowed fully on all nominal losses against any income		
Negative gearing (option 1)	Allowed only on real interest costs and other expenses against any income		
Negative gearing (option 2)	Not allowed; losses carried forward against future property income (UK model)		
Negative gearing (option 3)	Allow negative gearing excluding depreciation expenses (Canada model)		
Policy Scenario Tests for Policy Packages			
Scenario One	MITR = 0.40; no depreciation of structure; CGT option 2; NG option 1.		
Scenario Two	MITR = 0.40; no depreciation of structure; CGT option 1; NG option 2.		

Note: MITR is marginal income tax rate.

60. Many other house types, economic variables, and scenarios could be devised and tested quite easily (given more time). However, the selected ones are reasonably typical and provide plausible results.

61. The tables in Appendix C show the details and results of the analyses. Table C.1 shows the current case along with Policy Scenarios 1 and 2 for house type one. Table C.2 shows similar tables for house type two. Table 2 below provides the summary results.

62. The following is a brief description of how the model in Appendix C works. Note that the rental investor is assumed to own the property for 10 years and to sell it in year 11. All prices allow for the estimated rate of inflation. Each spreadsheet has four main components.

63. Component 1 estimates the net income of the rental investor before tax. This comprises estimated rents less council and water rates, maintenance costs, and interest costs. As shown, on the assumptions here used (notably high gearing with an interest only loan) interest payments are four times the sum of all other costs. Note that this model does not include land tax which quite often applies to rental investors.

64. The second component of the spreadsheet provides estimates of net annual income after tax. This allows for the benefits of tax deductions with respect to operating losses (negative gearing given the marginal income tax assumptions), and straight line deductions for depreciation of fittings (but not for the pre-existing structures).

65. The third component shows the financial flows of the estimated capital transactions to the investor after tax. The first row in each model shows the payments made by the investor (excluding the amount borrowed). The bottom row shows the revenue received by the investor less the repayment of the loan principal and the estimated capital gains tax.

66. The final row in each spreadsheet shows the total income of the investor, positive or negative, inclusive of income and capital components over the effective 11 years.

67. The analysis is based on the estimated net present values (using a 5 per cent discount rate) and internal rates of return of each total income stream to the rental investor.

68. As shown in Table 2, under current tax provisions, investors would receive about an estimated 7 per cent rate of return after tax on both types of houses. With Policy Scenario One, the after tax rates of return fall to about 3 per cent. With Policy Scenario Two, the rates of return become negative.

Table 2 Summary of Results

House type	Internal rates of return after tax			Benefits of current tax provisions relative to:		Benefits of current provisions as % of house prices	
	Current	PS 1	PS2	PS1	PS2	PS1	PS2
House type one	7.1%	3.2%	-5.4%	$21, 815	$71,330	6.2	20.4
House type two	7.0%	2.9%	-4.5%	$19,070	$53,268	7.6	21.3

69. Table 2 also shows the benefits of the current tax provisions relative to the two policy scenarios. Relative to Policy Scenario One, the estimated benefits of the current provisions are about $22,000 on a $350,000 unit and $19,000 on a $250,000 unit, which is equivalent to 6.2 and 7.6 per cent of the unit prices respectively.[4] The benefits of the current tax provisions relative to Policy Scenario Two are some three times greater than they are relative to Scenario One.

70. Sensitivity tests, not shown in the tables, reveal that approximately four-fifths of the savings to investors relate to the income tax provisions for negative gearing and CGT and one fifth are due to the high marginal income tax rate. If the marginal income tax rate in Policy Scenario One were 48.5 per cent, the savings would fall to $16,717 for house type one and to $15,740 for house type two.

71. It should also be noted that these estimates ignore tax evasion practices (inadvertent or otherwise). Informal practices in the rental sector doubtless lead to under-declaration of income, excessive declaration of expenses, wrong attribution of expenses, and under-declaration of capital gains. High marginal income tax rates provide an incentive towards such behaviour. However, we have not examined whether these practices would be more or less encouraged by the various tax policy scenarios.

The owner occupier sector

72. As noted above, there are two main general tax concessions in the owner occupier sector, namely the non-taxation of imputed rental income and the CGT exemption for the family home. Also most homes are exempt from land taxes although rates, which are a form of land tax, are the basis for local government finance.

73. The Productivity Commission (2003, page 84) estimates that tax concessions for owner occupiers total $25 billion per annum, comprised as follows:

- non-taxation of imputed rental income is worth about $8 billion
- the CGT exemption for the family home is worth about $10 billion
- exemptions from land taxes are worth a further $7 billion.

74. Using a 5 per cent discount rate, the **capital value** of these concessions is $500 billion. Excluding land tax concessions, the capital value of the concessions is about $360 billion.

75. There are currently 7.1 million residential dwellings in Australia, of which about 4.4 million are owner occupied. Allowing an average value of $325,000, the total capital value of owner occupied stock would be $1400 billion. Thus the capital value of the imputed rent and CGT concessions equals some 25 per cent of the value of the housing stock.

[4] These concessions may not translate fully into increases in house prices – see discussion in Section 4.

4 General Tax Provisions, Housing and Resource Allocation

76. Taxes and tax concessions have two main effects. They change the distribution of income and they alter the allocation of resources.

77. The size of a tax concession depends on the point of comparison, which may itself be an arbitrary point. However the analysis of general tax provisions in this paper suggests that the size of the tax concessions in relation to both rental and owner occupied housing is substantial.

78. These tax concessions may **not** translate fully into increased house prices. They would do so only if the supply of housing is completely inelastic (it does not respond to house price increases). However, in Australian cities the *number* of new dwellings is not very responsive to house prices. This is partly because the number is determined by government regulation. Also, new dwellings are not very responsive to higher prices of established housing because the profits from urban development are in any case often substantial (albeit that they accrue mainly to the landowner). Thus **most** of the general income tax concessions may be expected to translate into higher house prices.

79. The beneficiaries of the general income tax concessions / house price increases are existing owners of housing property. On the other hand, once house prices reflect the tax concessions, new home owners and new rental investors do not benefit from the embedded subsidy.

80. If tax concessions have little impact on the number of dwellings, the impact of the concessions on first home owners and renters depends on the **relativities** of the tax concessions. If the tax concessions are proportionately greater for home owners than for rental investors, renters pay higher rents as home owners occupy more of the available stock. However, it appears that recently rental investors have purchased a greater proportion of the housing stock and that rents have not increased at anywhere near the rate of prices.

81. Although the change in the CGT in late 1999 did not necessarily advantage rental investors (see footnote 3), it did assist when real returns exceeded nominal returns and it was apparently widely perceived as a benefit to investors. Also, tax concessions can become more valuable as circumstances change (in particular if more people are paying high marginal income tax rates) even if the concessions themselves do not change. Thus recent movements in the housing markets have disadvantaged first home buyers and advantaged renters.

82. If price increases do not induce any change in resource use, price increases are purely a distributional issue between, in this case, taxpayers, existing home owners and rental investors, new home owners and renters.

83. The issue of tax concessions has a major additional dimension when the concessions affect the allocation of resources. As the Productivity Commission (2003, page 87-88)

remarks: 'the real policy issue is whether tax treatment encourages efficient or excessive investment in housing or in other asset types'.

84. It is sometimes argued that, unlike specific tax provisions for land and housing, general income tax concessions to rental housing investors are also available to investors in equities and in other forms of property and so do not distort investment relativities. However, for many investors, residential property is the only or at least the most convenient vehicle for access to these tax concessions. They can borrow against this kind of asset but not against others. The asset is less volatile than equities. Also the housing vehicle provides maximum control to investors who do not want someone else to manage their funds (for a fee).

85. Efficient allocation of capital requires that the gross pre-tax rates of return be equal. However investors allocate capital to maximise post-tax rates of return and so aim to equalise the post-tax return on various investments. The discrepancy between taxes on income and on capital gain is such that, to equalise after-tax returns, there can be major discrepancies in the gross (pre-tax) returns of asset classes that face differential tax provisions. When investors invest in assets with a gross return of say 6 per cent instead of assets with a gross return of say 8 per cent, there is a loss of return to the community.

86. Although general income tax concessions appear to have a limited effect on the number of dwellings, they almost certainly affect the size and quality of land and dwellings. Between 1985 and 2002, the average size of new buildings rose by 40 per cent: from 162 m^2 to 228 m^2. Between 1996 and 2002, expenditures on alterations and additions rose from $10 billion to $18 billion, which was some 2.5 per cent of GDP. Indeed by 2002 expenditure on alterations and additions was similar to expenditure on new housing.

87. The Industry Commission (1991) estimated that every dollar transferred from other investment to housing costs $0.30. This appears to be a high figure and it may be based on a closed economy assumption. The costs should be lower if there is an elastic supply of funds to local industry. The matter requires more examination.

88. Tax distortions can also lead to inefficient use of labour. People become landlords not because they want to manage property or are good at it, but because they want to reduce tax. A great deal of labour is devoted inefficiently to minimising tax rather than to producing services that will enhance consumption.

89. There are numerous options for reforming the general tax system, as well as housing specific taxes such as stamp duty. Some options are noted in Table 1. These options should be evaluated against a criterion of welfare maximisation for the whole population rather than simply the interests of first home owners alone. The options also need to be assessed with respect to all economic sectors and therefore to be sector neutral.

90. Of the two policy scenarios examined in this paper, the first one appears more attractive. This policy taxes real gains and provides tax concessions for real losses. Taxation of nominal gains and concessions for nominal losses are unfair and inefficient. On the other hand, quarantining losses against income from specific income sources, as required in our second policy scenario, would have substantial and unclear implications for a range of business arrangements.

91. However, this paper does not attempt to evaluate the various policy options. The purpose of this paper is rather to indicate that current general tax provisions do have significant implications for house prices and most likely also for resource allocation. The view of this paper is these issues require further examination.

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Appendix A Some House and Unit Prices

Table A.1 Median House and Unit Prices 1976-88

City	Dwelling type	1976	1988	Percentage increase 1976-88	
				Nominal	Real
Sydney	Houses	36,800	174,300	373	72
	Units	28,400	118,400	316	51
Melbourne	Houses	32,875	109,000	221	17
	Units	29,625	85,000	186	4
Adelaide	Houses	28,400	80,400	183	3
	Units	27,500	67,000	143	-12

Source: Applied Economics and Travers Morgan, 1991.

Table A.2 Median House and Unit Prices 1995-2003

City	Source	Dwelling type	1995	2003	Percentage increase 1976-88	
					Nominal	Real
Sydney	REIA	House	200,700	448,000	123	85
		Unit	154,300	348,400	125	86
	NSW VG	House	196,750	442,300	124	85
		Unit	173,600	356,300	105	69
Melbourne	REIA	House	144,500	343,000	137	96
		Unit	113,600	274,100	141	99
	Vic. VG	House	129,000	278,000	155	107
		Unit	115,000	263,250	189	138
Adelaide	REIA	House	111,500	209,100	87	55
		Unit	93,000	158,000	70	40
	SA VG	House	111,500	225,000	102	67
		Unit	94,100	159,700	70	40
Brisbane	REIA	House	134,000	290,000	116	78
		Unit	107,400	196,000	83	51
Perth	REIA	House	126,800	206,500	63	35
		Unit	87,100	158,000	81	50
Canberra	REIA	House	155,600	293,700	89	56
		Unit	122,500	253,500	107	71

Appendix B General and Specific Taxes on Housing

Table B.1 lists the main taxes and subsidies relating to housing. Some of these taxes and subsidies are general and apply to non-housing as well as housing. Others taxes and subsidies apply mainly or only in the housing sector. As noted, this paper focuses on marginal income tax rates, negative gearing, capital gains and depreciation.

Table B.1 Summary of the main general and special tax provisions for housing

Tax or subsidy	Likely impact on house prices	Comments
General taxation provisions		
High marginal income tax rates for individuals	Encourages house ownership and investment and increases house prices	Especially in relation to no tax on imputed rent, negative gearing, and concessional CGT
Capital gains tax	Exemptions for home owners and concessions for investors increase housing prices	Interaction with negative gearing and depreciation significant
Negative gearing	Increases house prices	Interacts with depreciation, income tax and capital gains tax Applies also to non-housing sectors Treasury does not count this as a tax expenditure
GST on land development, new buildings, and renovations	Usually reduces land prices rather than change house prices.	Main impact on price of land for new houses
Depreciation allowances	May increase house prices	A general issue across all sectors
Payroll taxes	Requires examination	See HIA (2003) page 60 for rates
Mainly land and housing taxes and subsidies		
Infrastructure subsidies	Increase raw land values.	Applied traditionally
First home owner grants	Increase housing demand.	Subsidies for house purchase
Home owner interest deductions	This subsidy would increase house prices	Done in US – not in Australia
Rental subsidies		
Non-taxation of imputed rents	Subsidy increases house prices	Treasury does not count this as a tax expenditure Land tax a possible proxy.
Land taxes on land holdings	Annual land tax would reduce demand for housing and house prices	Local land taxes exist (as quasi service charges) and as pure land taxes
Infrastructure development charges	Generally reduce land prices rather than increase house prices	Levied by state and local governments
Stamp duty on sales (transfers) of land and housing	Stamp duties reduce house prices to vendor and are a de facto land tax	Stamp duties on commercial properties and other items are due for review in 2005. To leave stamp duties on residential property would be distortionary

Appendix C Analysis of Taxation Arrangements for Investor Housing

See Tables C.1 and C.2 in the accompanying Excel File

Appendix D Terms of Reference

Inquiry on First Home Ownership

The following terms of reference were received by the Commission on 4 August 2003.

PRODUCTIVITY COMMISSION ACT 1998

I, PETER COSTELLO, Treasurer, pursuant to Parts 2 and 3 of the Productivity Commission Act 1998, request that the Productivity Commission undertake an inquiry to evaluate the affordability and availability of housing for first home buyers.

Recognising that home ownership is very highly valued by families and individuals, and is central to social and family stability, for the purposes of this evaluation the Commission should:

- Identify and analyse all components of the cost and price of housing, including new and existing housing for those endeavouring to become first home owners;
- Identify mechanisms to improve the efficiency of the supply of housing and associated infrastructure; and
- Identify any impediments to first home ownership, and assess the feasibility and implications of reducing or removing such impediments.

Particular attention should be given to the following matters as they affect the cost and availability of residential land and housing in both metropolitan and rural areas:

a. the identification, release and development of land and the provision of basic related infrastructure;

b. the efficiency and transparency of different planning and approval processes for residential land;

c. the efficiency and transparency of taxes, levies and charges imposed at all stages of the housing supply chain;

d. the efficiency, structure and role of the land development industry and its relationship with the dwelling construction industry and how this may be affected by government regulations;

e. the effect of standards, specifications, approval and title requirements on costs and choice in new dwelling construction; and

f. the operation of the total housing market, with specific reference to the availability of a range of public and private housing types, the demand for housing, and the efficiency of use of the existing residential housing stock.

The inquiry will also identify and examine mechanisms available to improve the ability of households, particularly low income households, to benefit from owner-occupied housing. This will include an assessment of rent and direct ownership subsidies, loan guarantees and shared equity initiatives.

In undertaking the inquiry, the Commission is to invite public submissions, consult with key interest groups and affected parties, issue a draft report, and produce a final report of its findings by 31 March 2004.

PETER COSTELLO

Analysis of Taxation Arrangements for Investor Housing: Table C.1

Housing Type Case One: Existing Unit - Base Case Tax Arrangements

	Income receipts and payments before tax								Tax effects on net income				Capital expenditures / receipts					Total	Saving relative to	
Year	Rent	Council	Water	Insurance	Maintenance Strata	Maintenance Unit	Total cost	Interest	Net inc. before tax	Depreciation claims Structure	Depreciation claims Fittings	Stamp benefit	Net inc after tax	Purchase and sale	Stamp duty	Other fees	Capital gains tax	income after tax	Scenario One	Scenario Two
1	15000	500	300	300	2400	1000	4500	22750	-12250	0	4000	2248	-3278	-25000	-11240	-2000		-39518	4822	8972
2	15375	513	308	308	2460	1025	4613	22750	-11988	0	4000	2248	-3143					-3143	4800	8844
3	15759	525	315	315	2522	1051	4728	22750	-11718	0	4000	2248	-3005					-3005	4777	8714
4	16153	538	323	323	2585	1077	4846	22750	-11443	0	4000	2248	-2863					-2863	4754	8580
5	16557	552	331	331	2649	1104	4967	22750	-11160	0	4000	2248	-2717					-2717	4730	8443
6	16971	566	339	339	2715	1131	5091	22750	-10870	0	4000		-3658					-3658	4514	7212
7	17395	580	348	348	2783	1160	5219	22750	-10573	0	4000		-3505					-3505	4489	7068
8	17830	594	357	357	2853	1189	5349	22750	-10269	0	4000		-3348					-3348	4463	6920
9	18276	609	366	366	2924	1218	5483	22750	-9957	0	4000		-3188					-3188	4436	6769
10	18733	624	375	375	2997	1249	5620	22750	-9637	0	4000		-3023					-3023	4409	6614
														145371			-26464	118907	-23979	17188
NPV after tax @ 5%		$10,557																		
IRR after tax		7.1%																$10,557	$21,815	$71,330

Housing Type One: Existing Unit - Scenario One Tax Arrangements

	Income receipts and payments before tax								Tax effects on net income				Capital expenditures / receipts					Total
Year	Rent	Council	Water	Insurance	Maintenance Strata	Maintenance Unit	Total cost	Interest	Net inc. before tax	Depreciation benefits Structure	Depreciation benefits Fittings	Stamp benefit	Net inc after tax	Purchase and sale	Stamp duty	Other fees	Capital gains tax	income after tax
1	15000	500	300	300	2400	1000	4500	22750	-12250	0	4000	2248	-8101	-25000	-11240			-44341
2	15375	513	308	308	2460	1025	4613	22750	-11988	0	4000	2248	-7943					-7943
3	15759	525	315	315	2522	1051	4728	22750	-11718	0	4000	2248	-7782					-7782
4	16153	538	323	323	2585	1077	4846	22750	-11443	0	4000	2248	-7616					-7616
5	16557	552	331	331	2649	1104	4967	22750	-11160	0	4000	2248	-7447					-7447
6	16971	566	339	339	2715	1131	5091	22750	-10870	0	4000		-8172					-8172
7	17395	580	348	348	2783	1160	5219	22750	-10573	0	4000		-7994					-7994
8	17830	594	357	357	2853	1189	5349	22750	-10269	0	4000		-7811					-7811
9	18276	609	366	366	2924	1218	5483	22750	-9957	0	4000		-7624					-7624
10	18733	624	375	375	2997	1249	5620	22750	-9637	0	4000		-7432					-7432
														145371			-2485	142886
NPV after tax @ 5%		-$11,258																
IRR after tax		3.2%																

Housing Case One: Existing Unit - Scenario Two Tax Arrangements

	Income receipts and payments before tax								Tax effects on net income				Capital expenditures / receipts					Total
Year	Rent	Council	Water	Insurance	Maintenance Strata	Maintenance Unit	Total cost	Interest	Net inc. before tax	Depreciation benefits Structure	Depreciation benefits Fittings	Stamp benefit	Net inc after tax	Purchase and sale	Stamp duty	Other fees	Capital gains tax	income after tax
1	15000	500	300	300	2400	1000	4500	22750	-12250	0	4000	2248	-12250	-25000	-11240			-48490
2	15375	513	308	308	2460	1025	4613	22750	-11988	0	4000	2248	-11988					-11988
3	15759	525	315	315	2522	1051	4728	22750	-11718	0	4000	2248	-11718					-11718
4	16153	538	323	323	2585	1077	4846	22750	-11443	0	4000	2248	-11443					-11443
5	16557	552	331	331	2649	1104	4967	22750	-11160	0	4000	2248	-11160					-11160
6	16971	566	339	339	2715	1131	5091	22750	-10870	0	4000		-10870					-10870
7	17395	580	348	348	2783	1160	5219	22750	-10573	0	4000		-10573					-10573
8	17830	594	357	357	2853	1189	5349	22750	-10269	0	4000		-10269					-10269
9	18276	609	366	366	2924	1218	5483	22750	-9957	0	4000		-9957					-9957
10	18733	624	375	375	2997	1249	5620	22750	-9637	0	4000		-9637					-9637
														145371			-43652	101718
NPV after tax @ 5%		-$60,773																
IRR after tax		-5.4%																

Housing variables	**Type 1**	**Type 2**	**Type 3**
Purchase price	350000	250000	500000
Building component	130000	110000	170000
Value of fittings	40000	30000	60000
Stamp duty (NSW rate)	11240	6740	17990
Size of loan (interest only)	325000	225000	450000
Unit rent per week	300	225	400
Rent weeks p.a.	50	50	50

Economic / policy variables	**Base case**	**Other assumptions**	
Borrowing rate (%)	7.00	6.00	8.00
General inflation rate	1.025	1.00	1.05
Unit price inflation rate	1.030	1.00	1.05
Real unit value appreciation	1.005		
Marginal income tax rate	0.485	0.40	0.35
Discount rate for NPV	5.00	7.00	3.00
Depreciation rate: fittings (avr.)	0.10	0.00	straight line depreciation
Depreciation rate: new structure	0.025	0.00	straight line depreciation
Depreciation rate: old structure	0.00		

Capital gains tax (base case)	0.5 * MITR on nominal capital gain from written down asset
Capital gains tax (option 1)	1.0 * MITR on nominal capital gain from written down asset
Capital gains tax (option 2)	1.0 * MITR on real capital gain from written down asset
Capital gains tax (option 3)	1.0 * MTR on nominal capital gains from purchase price (including stamp duty)
Capital gains tax (option 4)	1.0 * MITR on gain on depreciation + 0.5 * MITR on further gain (Canada model)
Negative gearing (base case)	Allowed fully on all nominal losses against any income
Negative gearing (option 1)	Allowed only on real interest costs and other expenses against any income
Negative gearing (option 2)	Not allowed; losses carried forward against future property income (UK model)
Negative gearing (option 3)	Allow negative gearing excluding depreciation expenses (Canada model)

Sensitivity Tests for Economic Assumptions

Tests for variations in settings for borrowing rates, loan amounts, inflation rates, marginal tax rates, depreciation rates.

Scenario Tests for Policy Packages

Scenario One	MITR = 0.40; no depreciation of structure; CGT option 2; NG option 1.
Scenario Two	MITR = 0.40; no depreciation of structure; CGT option 1; NG option 2.

Analysis of Taxation Arrangements for Investor Housing: Table C.2

Housing Type Case Two: Existing Unit - Base Case Tax Arrangements

	Income receipts and payments before tax									Tax effects on net income				Capital expenditures / receipts				Total	Saving relative to	
Year	Rent	Council	Water	Insurance	Maintenance Strata	Maintenance Unit	Total cost	Interest	Net inc. before tax	Depreciation Structure	claims Fittings	Stamp benefit	Net inc after tax	Purchase and sale	Stamp duty	Other fees	Capital gains tax	income after tax	Scenario One	Scenario Two
1	11250	400	250	250	2000	800	3700	15750	-8200	0	3000	1348	-2114	-25000	-6740	-2000		-33854	7817	10586
2	11531	410	256	256	2050	820	3793	15750	-8011	0	3000	1348	-2017					-2017	3301	5994
3	11820	420	263	263	2101	841	3887	15750	-7818	0	3000	1348	-1917					-1917	3284	5900
4	12115	431	269	269	2154	862	3984	15750	-7619	0	3000	1348	-1815					-1815	3267	5804
5	12418	442	276	276	2208	883	4084	15750	-7416	0	3000	1348	-1711					-1711	3250	5706
6	12728	453	283	283	2263	905	4186	15750	-7208	0	3000		-2257					-2257	3118	4951
7	13047	464	290	290	2319	928	4291	15750	-6994	0	3000		-2147					-2147	3100	4847
8	13373	475	297	297	2377	951	4398	15750	-6775	0	3000		-2034					-2034	3081	4741
9	13707	487	305	305	2437	975	4508	15750	-6551	0	3000		-1919					-1919	3062	4632
10	14050	500	312	312	2498	999	4621	15750	-6321	0	3000		-1800					-1800	3042	4521
														110979			-19215	91764	-16925	12480
NPV after tax @ 5%		$8,161																		
IRR after tax		7.0%																$8,161	$19,070	$53,268

Housing Type Two+A46: Existing Unit - Scenario One Tax Arrangements

	Income receipts and payments before tax									Tax effects on net income				Capital expenditures / receipts				Total
Year	Rent	Council	Water	Insurance	Maintenance Strata	Maintenance Unit	Total cost	Interest	Net inc. before tax	Depreciation benefits Structure	Fittings	Stamp benefit	Net inc after tax	Purchase and sale	Stamp duty	Other fees	Capital gains tax	income after tax
1	11250	400	250	250	2000	800	3700	15750	-8200	0	3000	1348	-5431	-25000	-11240			-41671
2	11531	410	256	256	2050	820	3793	15750	-8011	0	3000	1348	-5318					-5318
3	11820	420	263	263	2101	841	3887	15750	-7818	0	3000	1348	-5201					-5201
4	12115	431	269	269	2154	862	3984	15750	-7619	0	3000	1348	-5082					-5082
5	12418	442	276	276	2208	883	4084	15750	-7416	0	3000	1348	-4961					-4961
6	12728	453	283	283	2263	905	4186	15750	-7208	0	3000		-5375					-5375
7	13047	464	290	290	2319	928	4291	15750	-6994	0	3000		-5247					-5247
8	13373	475	297	297	2377	951	4398	15750	-6775	0	3000		-5115					-5115
9	13707	487	305	305	2437	975	4508	15750	-6551	0	3000		-4981					-4981
10	14050	500	312	312	2498	999	4621	15750	-6321	0	3000		-4843					-4843
														110979			-2291	108689
NPV after tax @ 5%		-$10,908																
IRR after tax		2.9%																

Housing Case Two: Existing Unit - Scenario Two Tax Arrangements

	Income receipts and payments before tax									Tax effects on net income				Capital expenditures / receipts				Total
Year	Rent	Council	Water	Insurance	Maintenance Strata	Maintenance Unit	Total cost	Interest	Net inc. before tax	Depreciation benefits Structure	Fittings	Stamp benefit	Net inc after tax	Purchase and sale	Stamp duty	Other fees	Capital gains tax	income after tax
1	11250	400	250	250	2000	800	3700	15750	-8200	0	3000	1348	-8200	-25000	-11240			-44440
2	11531	410	256	256	2050	820	3793	15750	-8011	0	3000	1348	-8011					-8011
3	11820	420	263	263	2101	841	3887	15750	-7818	0	3000	1348	-7818					-7818
4	12115	431	269	269	2154	862	3984	15750	-7619	0	3000	1348	-7619					-7619
5	12418	442	276	276	2208	883	4084	15750	-7416	0	3000	1348	-7416					-7416
6	12728	453	283	283	2263	905	4186	15750	-7208	0	3000		-7208					-7208
7	13047	464	290	290	2319	928	4291	15750	-6994	0	3000		-6994					-6994
8	13373	475	297	297	2377	951	4398	15750	-6775	0	3000		-6775					-6775
9	13707	487	305	305	2437	975	4508	15750	-6551	0	3000		-6551					-6551
10	14050	500	312	312	2498	999	4621	15750	-6321	0	3000		-6321					-6321
														110979			-31696	79283
NPV after tax @ 5%		-$45,106																
IRR after tax		-4.5%																

Housing variables	**Type 1**	**Type 2**	**Type 3**
Purchase price	350000	250000	500000
Building component	130000	110000	170000
Value of fittings	40000	30000	60000
Stamp duty (NSW rate)	11240	6740	17990
Size of loan (interest only)	325000	225000	450000
Unit rent per week	300	225	400
Rent weeks p.a.	50	50	50

Economic / policy variables	**Base case**	**Other assumptions**	
Borrowing rate (%)	7.00	6.00	8.00
General inflation rate	1.025	1.00	1.05
Unit price inflation rate	1.030	1.00	1.05
Real unit value appreciation	1.005		
Marginal income tax rate	0.485	0.40	0.35
Discount rate for NPV	5.00	7.00	3.00
Depreciation rate: fittings (avr.)	0.10	0.00	straight line depreciation
Depreciation rate: new structure	0.025	0.00	straight line depreciation
Depreciation rate: old structure	0.00		

Capital gains tax (base case)	0.5 * MITR on nominal capital gain from written down asset
Capital gains tax (option 1)	1.0 * MITR on nominal capital gain from written down asset
Capital gains tax (option 2)	1.0 * MITR on real capital gain from written down asset
Capital gains tax (option 3)	1.0 * MTR on nominal capital gains from purchase price (including stamp duty)
Capital gains tax (option 4)	1.0 * MITR on gain on depreciation + 0.5 * MITR on further gain (Canada model)
Negative gearing (base case)	Allowed fully on all nominal losses against any income
Negative gearing (option 1)	Allowed only on real interest costs and other expenses against any income
Negative gearing (option 2)	Not allowed; losses carried forward against future property income (UK model)
Negative gearing (option 3)	Allow negative gearing excluding depreciation expenses (Canada model)

Sensitivity Tests for Economic Assumptions

Tests for variations in settings for borrowing rates, loan amounts, inflation rates, marginal tax rates, depreciation rates.

Scenario Tests for Policy Packages

Scenario One	MITR = 0.40; no depreciation of structure; CGT option 2; NG option 1.
Scenario Two	MITR = 0.40; no depreciation of structure; CGT option 1; NG option 2.