

# Melbourne Centre for Financial Studies

## Academic Research Grant

### The Impact of Tax Provisions on the Probability of Investment in Residential Real Estate by Private Investors

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#### 1. Abstract:

We propose to examine the impact of the Australian Tax Code on the decision by individuals to invest in income producing residential property.

Although the taxation regime with respect to this form of investment is not unique to Australia, relatively few countries permit full negative gearing for tax purposes. This has a significant effect on the decision to invest in these assets. The proposed project builds on our previous work (Brown *et al.* 2007). In our earlier study, we investigated the investor characteristics and investment parameters underlying the investment. Using logistic regression, we showed that wealth-related factors are the dominant factors driving these investments. Our results are consistent with standard financial models of wealth allocation. We also showed that life-cycle factors, such as marriage and children, are relatively unimportant. Tax effects were not included in the study because the cross-sectional methodology used in the study did not allow us to adequately identify the effects of tax changes.

#### 2. Background and Aims of Project:

Private suppliers of rental housing are important to the housing market in Australia and also in the US. In Australia, the private rental market provided housing for approximately 20% of Australian households in 1995-96 (Australian Bureau of Statistics Cat. 8711.0).

Most of the rental units occupied by renter households are conventional two - and - three bedroom single family homes. Individual/household investor-landlords are the primary suppliers of this rental housing, providing housing for approximately 60% of renter households (Australian Bureau of Statistics Cat. 8711.0, 1995).<sup>1</sup> Shröder (2001) reports a similar situation in the US, where households supply approximately 75% of rental housing. Thus, the actions of private residential income property investors can have a great effect on the structure of the housing market in these economies. Through their investments, they have a direct effect on the size and structure of the rental sector. They also have an indirect effect on the ownership sector, *via* the tenure choices of households, by influencing the benefit of owning relative to renting. Issues related to taxation are therefore important to investors and to policy makers.

#### 3. Methodology:

We propose to extend our previous work to examine tax effects. To explain how we incorporate tax effects, we first need to describe the data. The primary data for the study consists of ten cross sectional surveys – the Survey of Income and Housing – from the Australian Bureau of Statistics drawn approximately every two years since 1980. Each survey is drawn independently and the ABS rules for using these data prohibit any type of cross-survey matching. The best we can do is to study the impact of taxation on selected groups

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<sup>1</sup> The remaining 40% is provided by government, non-profit institutions, employers and corporations.

of individuals. This gives us a cross section, time series model with  $G \times T$  observations, where  $G$  is the number of cross sections and  $T$  is the number of time periods. We divide the data into ten groups of respondents based on their estimated permanent income decile. There are eight surveys. Therefore, the full sample is 80 observations. It is worth noting that the income tax system has a cross sectional impact because of its progressivity and a time series impact because the tax rates and schedule have changed over time.

For each group, we estimate the tax shield from owning income property by simulating their income tax with and without an income property investment. For households that hold income property, this means calculating the difference in income tax they would pay holding income property relative to holding a benchmark portfolio of financial assets. For households that do not hold income property, we calculate the difference in income tax by reversing the calculation by taking their financial wealth and reallocating it to income property. We then calculate the aggregate probability of holding income property for each of the ten groups and regress this on the averages of the explanatory variables. The basic regression equation is:

$$p_{gt} = a_0 + a_1 \times TaxShield_{gt} + \sum_{j=2}^J a_j x_{jgt} + e_{gt} \quad g = 1, \mathbf{K}, 10; t = 1, \mathbf{K}, 10$$

The significance of  $a_1$  measures whether the tax shield has an effect on the probability of holding this investment. The  $x$  variables are other factors affecting the probability of holding income property. Following our earlier publication, these will include permanent and transitory income measures of access to financial and housing capital. Where data are available, we will investigate tax issues associated with capital gains and depreciation allowances.

#### 4. Data:

We will use data from Consumer Income and Expenditure Surveys by the Australian Bureau of Statistics. The surveys were conducted in 1990, 1994-95, 1996-97, 1997-98, 1999-2000, 2000-01, 2002-03 and 2003-04. The sample period covered by these surveys traces a full property cycle from recession in 1990 through the “property price bubble” in 2001 and into the bottom of another property cycle in 2004. By using data from the full property cycle we are able to look at both the long run and short run effects.