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**Home Ownership as a (Crumbling) Fourth Pillar of  
Social Insurance in Australia**

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## **Home ownership as a (crumbling) fourth pillar of social insurance in Australia**

### **Abstract**

This paper examines the potential that asset based welfare has to protect households from poverty after retirement by focusing specifically on the role of home ownership in maintaining average living standards and preventing poverty among older Australians. Incomes and housing costs are compared between Australia and six other nations (Canada, UK, USA, Italy, Finland and Sweden) and the likely future trends in Australia examined.

Though asset-based welfare has the potential to ease the fiscal constraints faced by the state, it may well lead to poorer social insurance outcomes for households with limited saving capacity over their lifetime. Access to home ownership tends to be more limited than access to the labour market and fluctuations in asset prices can lead to arbitrary shifting of wealth between generations. Social insurance programs can be more readily designed with explicit distributional objectives.

By international standards, the older population in Australia has a low average income and a high income poverty rate. However, unlike most other rich nations, more than 80 per cent of people over retirement age in Australia own their own home. After taking account of their lower housing costs, their average living standard and after housing poverty rate is similar to that in the other countries. Nonetheless, the Australian model means that those who miss out on home ownership are multiply disadvantaged and projections suggest that this group will grow in size in the coming decades.

### **Acknowledgements**

We would like to thank Peter Saunders and seminar participants at the University of New South Wales for comments on an earlier version of this paper.

# **Home ownership as a (crumbling) fourth pillar of social insurance in Australia**

## **Introduction**

Like many Western economies, Australia has an ageing population. In 2006, people aged 65 years and over made up 13 per cent of its population. By 2051 this proportion is projected to double. This puts Australia behind the trends in Western Europe and ahead of those in Northern America.<sup>1</sup>

In addressing the question of how to maintain post-retirement living standards, Australia is seen as being at the forefront of shifts to an explicit asset based policy (Sherraden, 2005, p7), having initiated a move away from an unfunded retirement income system to a universal, funded system in the early 1990s in response to the pressures of an ageing population. This move supplemented the considerable implicit asset based policies based on home ownership. These policies have been in place for some considerable time and have contributed to what is now a mature home ownership sector (which stabilised at a 70 per cent home ownership rate almost 50 years ago). The outcomes currently observed for Australia therefore might be used to foreshadow future outcomes in countries where shifts to explicit asset based welfare have only just been set in motion and where implicit asset based welfare through home ownership has yet to reach maturity.

Though asset-based welfare has the potential to ease the fiscal constraints faced by the state, it may well lead to poorer social insurance outcomes for households with limited saving capacity over their lifetime. Access to home ownership and to voluntary savings schemes is more limited than access to the labour market and fluctuations in asset prices can lead to arbitrary shifting of wealth between generations. Social insurance programs can be more readily designed with explicit distributional objectives.

The purpose of this paper is to empirically examine the implications of the Australian asset welfare model for the current generation of retirees compared to those in other OECD countries, and to consider the implications for future generations of Australian retirees.

In most OECD countries, income poverty rates for those aged over 65 fell slightly in the decade from the mid 1990s. In Australia, however, sizable increases were recorded with the result that, by the mid-2000s, Australia had a poverty rate amongst people of retirement age that was the fourth highest of the OECD countries and more than double the OECD average (OECD, 2008, pp137-140). This paper focuses specifically on the role played by housing wealth in Australia's retirement income system. It shows that Australia's retirement income system has meant that, after housing is taken into account, income poverty is reduced considerably for most households with the result that Australia's relative international performance reverts to being amongst the best (when compared with countries for which comparable measures could be obtained) rather than the worst. However, it also points to systematic and disturbing exceptions to this generalisation.

The paper uses evidence from household surveys to highlight the inequities that have emerged in Australia as a result of past policies which relied on a basic flat rate pension and asset based welfare in the form of publicly supported but privately provided home ownership. This raises significant concerns about the capacity of the current retirement income system (which adds publicly supported but privately provided superannuation to

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<sup>1</sup> Demographic data for Australia can be found in ABS (2006, 2007). Demographic data for Western Europe and Northern America can be found in the US Census Bureau's International Data Base, Table 094 (<http://www.census.gov/ipc/www/idb/tables.html>).

the past mix) to provide an adequate standard of living for a relatively small, but nonetheless significant, proportion of the population. The evidence presented therefore raises concerns about the equity implications of any further moves to a reliance on asset based welfare. The results for Australia are compared and contrasted with those from a range of OECD countries to provide an insight on what the future might hold for countries that have begun to follow the example set by Australia.

### **Australia's approach to retirement income**

In many respects, Australia is well placed to meet the challenges of an ageing population, having set in place (in 1992) the framework for a comprehensive superannuation scheme, completing what is described as a "three-pillar" approach to retirement income. The three pillars comprise: a publicly provided means tested age pension; mandatory private superannuation saving; and voluntary saving. This approach to a retirement income policy has evolved over time and, in Treasury's words, "these pillars were not established on a systematic basis as part of a grand design. Rather, each pillar emerged and evolved separately" (Treasury, 2001).<sup>2</sup> The key characteristics and evolution of each of these pillars are described below. In principle, the age pension provides a safety net to retirement income, consistent with the traditional role of the welfare state. The second two pillars are described by Sherraden (2005, p7) as illustrative of Australia's transformation away from a social entitlement approach to welfare provision towards an enabling state approach where public support is used to encourage private responsibility (Gilbert and Gilbert, 1989).<sup>3</sup> They represent a formal move in Australia towards an asset based approach to welfare.

#### *The flat rate pension*

The non-contributory Commonwealth funded flat rate age pension was introduced in 1909. It is payable to men at 65 and, currently, to women born before 1935 at 60 (but this is increasing gradually to 65 for women born after 1949). The pension, funded from general revenue, is both income and asset tested with the test that results in the lower rate being applied. Details on basic pension rates and on the income and asset tests as at June 2008 are provided in the Appendix.

The full-rate pension for a single person is set relative to a benchmark of 25 per cent of male total average weekly earnings (AWE). Age pensioners in the private rental market are eligible for a rent assistance supplement and owner-occupied housing is fully exempt from the assets test. In 2008, about 55 per cent of people of pension age received a full pension. Around 25 per cent received a part pension (Rothman, 2007, p16).

#### *Compulsory superannuation*

The second pillar, a mandatory occupational superannuation scheme, the Superannuation Guarantee Scheme, was introduced in 1992 although tax advantaged superannuation was widely available as a fringe benefit to white collar workers before 1992. Since the introduction of the universal mandated scheme, employers have been required to make

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<sup>2</sup> Details on the historical development of this retirement income system can be found in this 2001 Treasury paper on the history of the Australian retirement income system since Federation. Parts of this section rely heavily on the material in that paper.

<sup>3</sup> An overview of the Australia welfare state prior to the 1992 changes can be found in Saunders (1994). Arguments for a move towards an enabling state in Australia can be found in Botsman and Latham (2001).

superannuation contributions on behalf of their employees. This has had the effect of increasing superannuation coverage from 51 per cent in 1993 (ABS, 1995) to 98 per cent of non-casual employees a decade later<sup>4</sup> (Australian Government, 2004b). One of the effects of this change has been "a switch to reliance on defined contribution rather than defined benefit payouts. This, in turn, has meant that individuals, rather than superannuation fund sponsors, bear the investment risks associated with saving for retirement." (Bateman, 2006, p2)

Currently employers must pay a minimum of 9 per cent of employee's ordinary time earnings into a complying super fund or retirement savings account selected either by the employer or employee. Additional Government co-contributions are made for lower income earners. Saving through this compulsory superannuation scheme receives significant tax concessions. These are relatively complex and have changed considerably over time, with a dramatic overhaul and simplification occurring in 2007.<sup>5</sup> In general, compulsory contributions are made as before tax contributions by the employee, are tax deductible to the payer (employer or self-employed person) and taxed at a rate of 15 per cent as taxable income of complying superannuation funds and retirement saving accounts. Benefits taken as a lump sum or a non-indexed pension from such funds are tax free for those aged 60 or over.

#### *Voluntary saving*

The third pillar in Australia's retirement income system is voluntary saving, described by Treasury (Australian Government, 2004b) as saving both within and outside of superannuation. Such additional saving is supported by tax concessions for voluntary contributions, via tax advantaged retirement savings accounts, through capital gains tax relief for those who invest the proceeds from the sale of their business into superannuation and, more generally, through capital gains tax rules that exempt 50 per cent of gains on assets held for a year or more from income taxation. As claimed in the policy statement issued by the (then) Treasurer, "this measure recognises that more Australian households are investing in assets such as shares, and encourages such investments" (Australian Government, 2004b, 15). It supplements the tax advantaged voluntary saving that currently occurs through home ownership.

#### *Overview of the three pillar approach*

This three pillar approach is consistent with that suggested by the World Bank in its 1994 report on *Averting the Old Age Crisis* (World Bank, 1994) and Australia's then emerging three pillar system was seen in a favourable light in that report as serving to offset the decline in savings expected as the population ages. Much has been made of this presumption of World Bank endorsement.<sup>6</sup> Since then, Australia has since been described by the World Bank as having a "mature pension system in terms of coverage and benefit levels" (Holzman and Hinze, 2005, p45) based on it having a fully funded and sizable second or third pillar.

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<sup>4</sup> Coverage is 72 per cent for casual employees.

<sup>5</sup> Details of the changes made in 2007 can be found in a Parliamentary Library Research Paper (Nielson, 2007). Details of current taxation arrangements regarding superannuation arrangements can be found on the Tax Office website at <http://www.ato.gov.au/super/default.asp>. Similar concessions apply to superannuation contributions made by the self-employed.

<sup>6</sup> For example, the Senate Select Committee (2002, para 2.3) quoted Treasury as reporting World Bank endorsement of Australia's general approach to the provision of retirement incomes. This report of endorsement was repeated in 2004 in the Treasurer's policy paper on retirement income (Australian Government, 2004b).

However, concern has been expressed about the extent to which this approach to retirement income will generate an adequate standard of living for those who remain reliant on the safety net first pillar of this retirement income system: the Age Pension. Illustrative expressions of concern can be found in Neilson (2006), in the report of the Senate Select Committee on Superannuation (2002, part II) and, recently, in the report of the Senate Standing Committee on Community Affairs Inquiry into the Cost of Living Pressures on Older Australians (2008: paras 3.55-3.66). The possibility that a large part of the standard of living in retirement "may be derived from sources that are not formally defined as pensions, such as homeownership, interfamily transfers, and personal savings accounts" has led the World Bank to add a fourth pillar covering these contributory sources to its original three pillar classification (Holzman and Hinze, 2005, p83).

Modelling undertaken by Treasury on the future adequacy of retirement incomes in Australia suggests replacement rates will increase from around 60-70 per cent in 2008 to 80-90 per cent in 50 years time when the three pillar system is fully mature (for example, Rothman, 2007 and Rothman and Bingham, 2004).<sup>7</sup> Although this modelling is sophisticated in terms of taking into account differences in employment histories, retirement ages and varying superannuation coverage by cohort and gender, it has two main weaknesses. In the first place, "it focuses on the *maintenance* of income rather than its *adequacy* as such. Particularly for those with few resources, adequacy must be judged not so much relative to *past* incomes, but in terms of the ability to meet *current* needs." (Saunders, Patulny and Lee, 2004, p1) In the second place, it aggregates outcomes for those with significant levels of superannuation and other forms of wealth with outcomes for those whose levels of accumulated mandated and voluntary saving are low enough to mean they are reliant on a full or top-up old-age pension when they retire.<sup>8</sup>

For such households, there is considerable evidence that suggests that the question of whether their retirement income is adequate depends on their housing costs. These, in turn, are driven primarily by their housing tenure.

#### *Australia's fourth pillar: home ownership*

Australia's housing tenure system is dominated by market provided housing. With 70 per cent in owner-occupation and 25 per cent in private rental, 95 per cent of housing is owned privately. The social rental housing sector, operating outside of the market, accounts for less than 5 per cent of the housing stock. Housing costs, therefore, are dominated by the market.

Although the role of housing has not been recognised formally in official documents on retirement income policy in Australia, the importance of housing wealth as a cornerstone of retirement income was recognised both by analysts and Treasury long before the introduction of mandatory superannuation (see, for example, Castles, 1997, p34 and Treasury, 2002, p3). In large part, the associated reduction in housing costs in older age associated with widespread home-ownership explains why it is possible for the base rate

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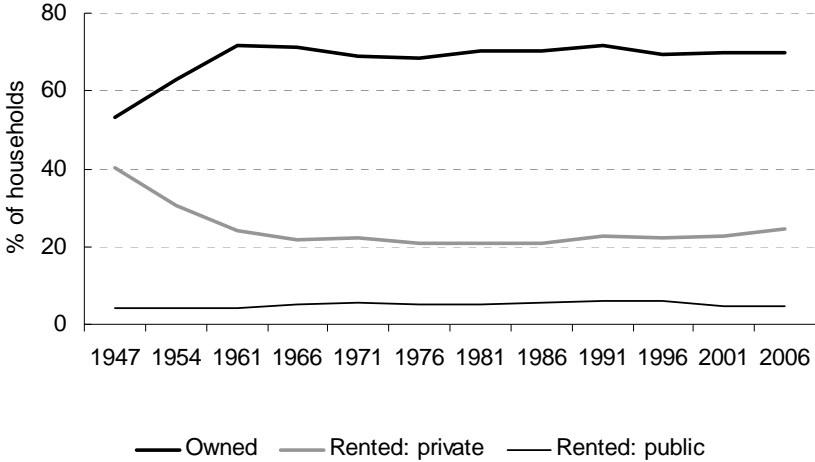
<sup>7</sup> "Replacement rates are defined as ratios of a person's income or spending power after retirement to that before retirement. The proposition underlying the replacement rate concept is that a person's standard of living in retirement should be a reasonable proportion of his or her standard of living during working life" (Rothman, p3) Treasury prefer use of an expenditure rather than income definition to allow for the drawdown of capital during retirement.

<sup>8</sup> Top up arrangements ensure that no worker who has made compulsory superannuation contributions receives a retirement income that is less than he or she would have received had they received a full old age pension.

for the age pension to be set as low as 25 per cent of average weekly earnings. It does not explain why the family home is exempt from the assets test.

Australia had a home ownership rate of almost 50 per cent in the early 1900s when the age pension was introduced (ABS, 2001, p304). This increased to its current rate of 70 per cent by 1960 and the aggregate home ownership rate has remained at this rate since then. The maturity of the home ownership sector in Australia is evident from high home ownership rates amongst older households and from the fact the 2006 rate of home ownership of 82 per cent for older households had been achieved by the early 1990s, well before the superannuation initiatives described above were introduced (Yates et al, 2008). Of the older home owners in 2006, 77 per cent owned their homes outright (that is, with no mortgage).

**Figure 1: Housing tenure in Australia: 1947-2006**



Source: from 1961, special request tabulations from Census data; prior to 1961, Social Indicators Australia 1992. ABS Catalogue 4101.0. Public-private split for 1947 rental data estimated. Residual 'Other tenure type' not charted.

This rate of home ownership amongst households in the 65+ age group is the highest of the OECD countries covered by the Luxembourg Income and Wealth Studies. Whiteford and Kennedy (1995, p77) give supporting data for the mid 1980s and Bradbury (2008, p39) does so for the late 1990s and early 2000s. These high levels of owner-occupied housing have been supported intermittently by direct deposit assistance to first home buyers and constantly by tax expenditures.<sup>9</sup>

Both Kemeny (1977) and Castles (1998) have argued there is a trade-off between home ownership and welfare, although their original analyses can be interpreted as differing in their assessment of the direction of causation. Kemeny (2005, p62) suggested that, where public retirement pensions are low, households are forced to make private provision for their old age. Castles (1998, 17), on the other hand, suggested that it is possible that high

<sup>9</sup> As in most countries, neither capital gains on owner-occupied property nor imputed income are taxed (although the benefit of this latter subsidy is less than in some countries because mortgage interest costs, except for a short period, have not been deductible). Owner-occupied housing is also exempt from state based land taxes that apply to all other property and first home buyers are generally exempt from state based stamp duties associated with home purchase.



levels of home ownership have diminished the need for high pensions.<sup>10</sup> Similar ideas have discussed more recently in countries such as the UK where home ownership is becoming more prevalent (Malpass 2008, p17).

In broad terms, the support provided to the welfare state by housing arises because of the lower housing expenditure needs of those who are outright owners. A given level of retirement income support, therefore, is more likely to be adequate to meet non-housing needs after housing costs are taken into account.

However, those who miss out on home ownership are excluded from this trade off. Moreover, subsidies for home owners allow them to increase their demand for housing and, in light of the supply constraints inherent in housing markets, contribute to upward pressures on dwelling prices.<sup>11</sup> These upward pressures on housing prices have contributed both to the high housing wealth enjoyed by existing owners and to increased access constraints for potential first home buyers. They have also contributed to the high housing costs that have left many older households who have not been able to access home ownership in after housing poverty, with inadequate resources to meet their non-housing needs once their housing needs have been taken into account.

There is a considerable evidence base that those who benefit most from this home ownership asset based welfare are also those who are most advantaged in other respects. Green and Malpezzi (2003) provide an accessible overview of this evidence and suggest that the key findings of the wide variety of tenure choice models are 'remarkably robust'. All other things being equal, home ownership increases with income and age and the higher probability of home ownership for higher income households can be attributed to the greater tax advantages (and hence lower user costs) they derive from home ownership and to the lower liquidity constraints they face.

Protagonists of asset based welfare recognise these constraints. For example, Beverly et al. (2008, p vi) provide three reasons why low-income individuals and families frequently do not participate in existing asset-based mechanisms. "First, this population is less likely to own homes, investments, or retirement accounts, where most asset-based policies are targeted. Second, with little or no federal income tax liability, the low-income have little or no tax incentives, or other incentives, for asset accumulation. Third, asset limits in means-tested transfer policies have the potential to discourage saving by the low-income population. In many respects, this population does not have access to the same structures and incentives for asset accumulation."

### **Housing and retirement living standards**

The importance of housing for retirement living standards has long been recognised in research and policy debate in Australia, as elsewhere. When measuring poverty, for example, a commonly used approach has been to calculate poverty before and after

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<sup>10</sup> Castles acknowledges Jones (1990, p181) as the source of this argument.

<sup>11</sup> DiPasquale and Wheaton (1994) provide a formal analysis of housing market dynamics and the future of housing prices that explicitly takes into account the fixity of land. In such a model the long run cost of supplying housing increases as demand increases. Tsatsaronis and Zhu (2004) point to the role of the availability and cost of land, the cost of construction and investments in improving the quality of the housing stock as key long run determinants. Meen (2002) provides estimates of house prices in the US and UK which explain differences in the rate of house price growth in each country by differences in their respective supply elasticities and, in particular, shows that supply restrictions add to pressures on dwelling prices. This is supported by evidence from Green et al (2005) who show that estimates of supply elasticities vary substantially from place to place but are relatively inelastic in metropolitan areas (which means that house prices will rise with increased demand).

housing. Households are poor on a 'before housing' basis when their disposable income is below the poverty line for their family type. They are poor on an 'after housing' basis if their disposable income minus housing costs is below an appropriate after-housing poverty line.

In Australia, this measure was brought to prominence by the 1975 Inquiry into Poverty in Australia (the Henderson report). The Inquiry reported there were "more people below the poverty line before housing costs than after housing costs, mostly because of the high rate of home ownership among the aged" (Commission of Inquiry into Poverty, 1975: p158). Amongst older households, 24 per cent were very poor before their housing costs were taken into account. After housing costs, less than 8 per cent were very poor.<sup>12</sup> One key result from the Henderson report was that the proportion of households in poverty before housing was taken into account was relatively similar for older outright owners and private renters (being, respectively, 27 and 29 per cent). After housing costs were taken into account, however, the proportion of older outright owners below the poverty line dropped to 5 per cent after housing whereas, for private renters, it was still 26 per cent (Commission of Inquiry into Poverty, 1975: p240).

Since this seminal work was undertaken, similar results have been generated for subsequent periods (for example, Bradbury et al., 1986; King, 1998). More recent results both for Australia and for a number of OECD countries are presented below. These results continue to highlight the large impact of home ownership on after housing poverty.

#### *Measurement issues*

There are a number of ways in which the impact of housing costs on the standard of living after retirement might be taken into account. The use of income before and after housing costs as in the Henderson report was one of the first methods employed. Income less housing costs ('after-housing' income) shows the amount of income available for the consumption of non-housing goods and services. For people who are purchasing their home, however, housing costs have both a current consumption and a saving component. The interest component of the loan represents the amount that they must pay in order to live in the dwelling while maintaining their wealth. The principal repayment represents the extent to which they are saving by increasing their net dwelling wealth and can be regarded as reflecting future, not current, consumption. Thus, an alternative approach to measuring non-housing living standards is to examine income less current housing costs only. That is, not to deduct repayments of principal. Deduction of all housing costs provides a simpler indicator of non-housing consumption but, as data for some countries are available only for current housing costs, both measures are employed in the results reported below.

Both of these approaches, however, focus on the income available for non-housing consumption and ignore the (non-cash) benefits derived from housing consumption. A way of addressing this is to add net imputed rent to the income of home owners.<sup>13</sup> This approach has been employed in a number of studies that have focussed on the impact of owner-occupied housing on income inequality. In their cross country comparisons of income inequality, for example, both Whiteford and Kennedy (1995) and Frick and Grabka (2003) found distinct differences in inequality within and between countries depending on whether imputed rent was included or excluded from the definition of income. These

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<sup>12</sup> Details on the Henderson poverty line and an overview of its strengths and weaknesses can be found in Saunders (1994: pp245-260).

<sup>13</sup> Net imputed rent is the rent that owner-occupiers could obtain from their house if they were to rent it to themselves net of the costs of earning that income.

differences arise primarily because of distinct differences in home ownership rates, particularly among the low-income elderly. By adjusting for net imputed rent, these studies take housing costs into account for owner-occupiers. However, they do not provide information on income after housing costs for all households, the focus of this paper.

Estimates of income after housing were generated for all three measures outlined above but only the after housing cost measures are reported in this paper. The imputed rent measures are not reported to avoid having to cover many of the associated conceptual measurement issues. An overview of these issues can be found in Yates (1994). Some results with the imputed rent measure can be found in Bradbury (2008). These results reinforce the key conclusions reported here.

### *Cross national comparisons*

The approach used here is similar to that taken by Ritakallio (2003) in his comparison of welfare state outcomes in Australia and Finland. Ritakallio showed that the poverty gap between households in Australia and Finland was considerably reduced once housing costs were taken into account. This paper provides a check on the robustness of that result by extending the comparison to a wider range of countries, by using data from a decade on and by using a different poverty line definition. It compares the living standards of all and older households in Australia with those in three other English-speaking nations (Canada, the UK and the USA), with two Nordic countries (Sweden and Finland) and with Italy. The Australian data comes from the Australian Bureau of Statistics 2003-04 Survey of Income and Housing Costs. Data for the other countries are for a slightly earlier period and come from their national data collections via the Luxembourg Wealth Study. The Appendix provides more details.

The choice of countries was dictated by availability of comparable data. Those considered vary significantly in their demographic composition, pension systems and home ownership rates as can be seen from the characteristics summarised in Table 1. The average household size in Australia of 2.5 persons per household is 8 per cent above the 2.3 average for the 7 countries considered, an important difference when economies of scale are to be taken into account (as done below). However, the 1.8 average for older households in Australia is only marginally above the average for older households across the other 6 countries. Here, ‘older households’ are defined as households where there are one or more people aged 65 or older. Although Australia’s population is ageing, the proportion of older households in Australia is considerably lower than in Italy or the UK.

**Table 1 Countries and characteristics**

Country	Sample size (households)	Mean people per household	Propn with at least one person aged 65+	Mean people per household in older households	Home ownership rate	
					All households	Older households
Australia	11,361	2.5	0.23	1.8	70	84
Canada	15,930	2.4	0.22	2.0	60	70
UK	7,705	2.3	0.32	1.6	71	66
USA (PSID)	7,272	2.4	0.20	1.7	64	79
Italy	8,010	2.6	0.38	2.1	69	75
Finland	3,893	2.2	0.24	1.6	64	73
Sweden	17,954	2.0	0.26	1.4	53	53

Source: Australia, Australian Bureau of Statistics Household Expenditure Survey, 2003-04. Results derived from ABS Basic CURF data. All other countries, Luxembourg Wealth Study, 2008.

Overall, 70 per cent of Australian households own their houses. This is at the upper end of the international experience, but both the UK and Italy currently (but not historically) have similar proportions of home owners. Among older households, however, Australia is more distinctive, with home ownership rates of 84 per cent in 2003-04, reflecting the maturity of its home ownership sector. The second highest rate, in the USA, is 5 percentage points lower and the third almost 10 percentage points lower. In Sweden little more than a half of older households own their home.

Table 2 shows the medians for four different living standard indicators. The top panel shows medians for the whole population, the middle panel for the older population and the bottom panel the ratio of these. Column 1 shows the median household disposable income in each country (in annual national currency units). Column 2 shows the median for equivalent disposable income.<sup>14</sup> The income after housing costs results in columns 3 and 4 are calculated by deducting housing costs from household income and then applying the same equivalence scale to the result.<sup>15</sup> The results in column 3 include repayments of principal; those in column 4 exclude them.

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<sup>14</sup> In this paper, income is equivalised to take into account the greater needs of larger households by dividing by the square root of household size. This approximates a wide range of other equivalence scales in common use (Buhmann et al, 1988).

<sup>15</sup> Use of the same equivalence scale to adjust income both before and after housing costs is not ideal as housing has greater economies of scale than most other goods (eg both a single and a couple need a single bedroom), and so the equivalence scale for the after-housing measures in particular should be larger (ie closer to a per-capita scale). Nonetheless, since any resulting biases are likely to be similar in each country, ignoring them is not so serious for cross-national comparisons.

**Table 2 Median incomes**

Country	Disposable income	Equivalent	Equivalent disposable income...	
		disposable income	minus current housing costs	minus current housing costs and principal repayments
	1	2	3	4
All households				
Australia	50,300	28,200	25,100	23,500
Canada	44,000	25,500	19,900	-
UK	19,300	11,300	-	9,800
USA	45,000	26,800	-	22,500
Italy	22,600	12,800	-	7,800
Finland	26,600	15,400	14,400	-
Sweden	285,000	173,500	139,900	-
Older households				
Australia	27,700	19,500	18,800	18,700
Canada	36,700	23,800	19,200	-
UK	11,900	9,300	-	8,400
USA	35,800	24,800	-	22,300
Italy	19,000	11,900	-	7,800
Finland	17,200	12,500	12,100	-
Sweden	180,600	137,000	103,400	-
Ratio (older households/ all households)				
Australia	0.55	0.69	0.75	0.80
Canada	0.83	0.93	0.96	
UK	0.62	0.82		0.86
USA	0.80	0.93		0.99
Italy	0.84	0.93		1.00
Finland	0.65	0.81	0.84	
Sweden	0.63	0.79	0.74	

Note: Incomes are annual household incomes expressed in national currency units. Finland currency is in 1999 Euros. In this and subsequent tables, the medians are the median household income of individuals (ie each household is weighted by the number of persons in it).

Source: as for Table 1.

Australia is the only country for which both measures including and excluding mortgage principal repayments as part of housing costs can be calculated. As can be seen in Table 2, including or excluding them makes relatively little difference to the median income over all households because mortgage principal repayments are only a small fraction of total income. This is particularly true for older households. A similar result is likely to hold in the other countries.

The bottom panel of Table 2 compares the situation of the median person living in an 'older household' with the overall median. These numbers show the drop in living standards associated with retirement. They act as a proxy for the replacement rate

discussed at the start of this paper. The absolute numbers are not particularly meaningful as they reflect the particular equivalence scale used. However, the comparisons across countries provide insight into the central role of housing-based welfare in Australia vis a vis other countries.

Columns 1 and 2 clearly illustrate the fragility of the first three pillars of Australia's retirement income system. The median household income of older Australian households is only around 55 per cent of the median for all households. In the UK, Finland and Sweden this ratio is around 62 to 65 per cent, while in the Canada, the UK and Italy it is over 80 per cent. Once the smaller households of the elderly are taken into account in the second column, the difference between the older and the overall population diminishes, but the cross-national patterns remain much the same.

In columns 3 and 4 after deducting housing costs from income (and, therefore, focussing on income available for non-housing consumption), the replacement ratios generally increase (as a result of the lower housing costs faced by older households). The income available to the average Australian in retirement relative to all households is now considerably closer to that found in the other countries, although still less than most. The exception is Sweden, where low home ownership rates lead to relatively higher housing costs among older households.

In summary, Table 2 shows that, for the average person, measures of economic wellbeing that take account of housing costs indicate a more favourable relative outcome for older households in all countries (compared to measures based on disposable income alone). In Australia, a mature home ownership sector means that this 'catch up' is particularly substantial. High rates of outright home ownership and associated low housing costs contribute substantially to allowing the average Australian older person to maintain the living standards they had when they were younger.

These data also suggest that similar results hold for Canada, the USA and Italy, all countries where home ownership rates have been high for a relatively long period of time and where, therefore, outright home ownership rates amongst older households are relatively high.

#### *Outcomes for non-home owners compared with home owners*

An important focus of this paper is on the extent to which these conclusions are affected once tenure is explicitly taken into account. This recognises that not all households are home-owners when they retire. Table 3 presents the key results. The first two panels show the medians of the various income measures for older households who are home-owners and for those who are not. Non-home owners include those in private rental, public rental, and rent-free accommodation.<sup>16</sup>

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<sup>16</sup> Home ownership is defined in terms of owner-occupation. People who own a dwelling, but do not live in it, are included as non-home owners.

**Table 3 Median incomes in older households, by home ownership**

Country	Disposable income	Equivalent disposable income	Equivalent disposable income... minus current housing costs		Ratio of col 3 or 4 to col 2
	1	2	3	4	5
Home owner households					
Australia	29,500	20,400	20,000	19,800	0.98
Canada	40,700	25,700	21,600	-	0.84
UK	13,600	10,100	-	9,900	0.98
USA	38,000	26,300	-	24,300	0.92
Italy	19,900	12,500	-	8,200	0.66
Finland	18,900	13,200	13,200	-	1.00
Sweden	210,100	152,700	122,600	-	0.80
Non-home owner households					
Australia	20,500	16,000	12,200	12,200	0.76
Canada	25,800	18,300	13,200	13,200	0.72
UK	9,400	8,000	5,800	5,800	0.73
USA	17,700	14,200	9,900	9,900	0.70
Italy	14,600	10,600	5,800	5,800	0.55
Finland	11,000	9,200	7,100	7,100	0.77
Sweden	129,200	115,600	74,500	74,500	0.64
Ratio (non-home owner / home owner)					
Australia	0.69	0.79	0.61	0.62	
Canada	0.63	0.71	0.61		
UK	0.69	0.79		0.59	
USA	0.46	0.54		0.41	
Italy	0.73	0.84		0.70	
Finland	0.58	0.70	0.54		
Sweden	0.62	0.76	0.61		

Note: For non-home owners, the income measure is the same in columns 3 and 4. Home owner data in column 5 for Australia is based on column 3 data. The ratio for column 4 data is 0.97.

Source: As for Table 1

The data in the first two columns in the top two panels show that, in all countries, non-home owners have less disposable and less equivalent disposable income than home-owners. The bottom panel of the table shows their relative positions. The USA stands out as having a particularly large income gap between home owners and non-home owners. This positive correlation between higher disposable income and home ownership is likely to reflect a positive correlation between lifetime income and wealth accumulation patterns. This is returned to below.

Before housing costs are taken into account, Australian non-home owners tend to have median incomes that are closer to those of home-owners than is the case in most of the countries reported in Table 3 (79 per cent for equivalent disposable income). This is partly

due to the cash housing benefits paid to non-home owners in the private rental sector (which houses almost two thirds of older households who are not home owners in Australia). Once housing costs are taken into account, however, the gap between home owners and non-owners tends to increase. Though non-owners in Australia fare relatively well in terms of disposable incomes compared with other countries, when housing costs are taken into account their relativity with home owners is similar to that in other countries.

### *Living standards for the most disadvantaged*

The final data to be presented in this section allows for an examination of the living standards of the most disadvantaged. This is undertaken in two parts: this sub-section compares poverty outcomes for all households with and without the impact of housing costs with the same outcomes for older households; the following subsection compares poverty outcomes for older households disaggregated by tenure.

Table 4 shows the proportions of the overall and older population with household incomes below 50 per cent of the medians for the full population in each country (as shown in the first panel of Table 2). For convenience, these results are referred to these as ‘poverty rates’ though there is no objective reason to argue that 50 per cent of the median represents an accepted poverty threshold.<sup>17</sup> However, when based upon equivalent disposable income, this is commonly used as a cross-nationally comparable measure of relative poverty. Overall, the results in the top panel of Table 4 show that, of the countries covered by this study, Australia as a whole has a level of ‘poverty’ based on equivalent disposable income that places it in the middle of that in the countries included. Its poverty rate of 14.1 per cent is higher than that in the Nordic countries, lower than in the USA, and similar to the remaining countries. These rankings also apply at a 60 per cent threshold (not shown here).

Among older households, however, of all the countries covered, Australia’s poverty rate of 19.9 per cent is the highest.<sup>18</sup> Only the poverty rate of 18.7 per cent for older households in the USA is similar. Except for the UK rate, all the other countries have an income poverty rate below 11 per cent amongst older households. The income poverty rate for older households in Canada is particularly low reflecting the generous pension floor in Canada (OECD, 2001).

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<sup>17</sup> This approach differs from that used in earlier research. The Henderson report (Commission of Inquiry into Poverty, 1975) used a poverty line for after housing poverty based on a relatively arbitrary equivalence scale that averaged housing costs for owners and non-owners. Ritakallio (2003) deducted the average equivalent rent of renters from a disposable income poverty line to arrive at an after housing poverty line. The approach used here more directly addresses the question of how many people have non-housing consumption levels that are well below that of the average household.

<sup>18</sup> Using a higher 60 per cent poverty benchmark, the poverty rate for older households in Australia is nearly 40 per cent, and even more of an outlier than with the lower poverty benchmark.



**Table 4 Proportion below 50% of the population median**

	Equivalent disposable income	Equivalent disposable income.. minus current housing costs	minus current housing costs and principal repayments
	2	3	4
All households			
Australia	14.1	16.1	15.9
Canada	13.2	18.4	.
UK	13.3	.	16.6
USA	17.0	.	20.0
Italy	12.9	.	22.0
Finland	6.3	12.0	.
Sweden	7.0	15.1	.
Older households			
Australia	19.9	17.2	13.5
Canada	4.8	11.3	.
UK	15.1	.	17.0
USA	18.7	.	21.1
Italy	10.8	.	18.7
Finland	10.6	15.1	.
Sweden	7.1	27.1	.

Notes: Column numbering matches that in earlier tables.

Source: As for Table 1

When housing costs are taken into account, however, the outcomes are quite different. Columns 3 and 4 in Table 4 show these changes. Rather than being the highest (as was the case with an equivalent disposable income measure), the poverty rate for older households in Australia once housing costs are taken into account is now lower than all countries other than Finland and Canada.

#### *Poverty rates amongst older home owners and non-home owners*

Table 5 disaggregates the poverty outcomes for older households in the lower panel of Table 4 into outcomes for home owners and for non-home owners. The results in column 2 show that, as with the results for all households discussed above, poverty rates amongst older home owners are higher in Australia than in all other countries. The poverty rate amongst older home owners is 17.4 per cent in Australia which is double the average across the other six countries excluding Australia.

After taking account of housing costs, however, the results in columns 3 and 4 show that poverty rates among older home owners in Australia decrease considerably to the point where they are lower than in most countries and higher only than in Canada and Finland.<sup>19</sup> The considerable reduction in poverty rates for older home owners in Australia arises because all but a small proportion own their homes outright – that is, with no mortgage and hence no associated mortgage costs.

<sup>19</sup> The Swedish result is rather puzzling. It suggests that some older Swedish home owners have very substantial housing interest payments or other current housing costs.

The changing poverty rates across the rows of Tables 4 and 5 reflects both the housing costs of the low-income population, as well as the housing costs of the average household. For example, in the first row of Table 5, the after housing poverty rate is lower in column 4 than in column 3, even though the latter deducts a more comprehensive measure of housing costs. This arises because the median after housing measure (and hence the poverty line) also drops between these two measures (first row of Table 2).

On all standard of living measures, older non-home owners fare very poorly in all countries relative to older home owners – and more so in Australia than in most. Older non-home owners have higher before housing poverty rates than do owners (as can be seen by comparing the results in column 2 in the top panel with those in column 2 in the bottom panel in Table 5). On this measure, poverty rates amongst older households who do not own their own home peak at 35.7 per cent in Australia and 47.3 per cent in the USA and, for many of the 7 countries considered here, are more than twice as high as before housing poverty rates for older home-owners.

After housing costs are taken into account, poverty rates amongst older non-home owners are even higher. These results are shown in columns 3 and 4 in Table 5. In Australia, the USA, Finland and Sweden about a half of older non-home-owners have income after housing costs of less than 50 per cent of the national median. In the other countries (particularly Canada) they fare somewhat better. In all countries, however, the after housing poverty rates for older households who do not own their own home are a significant multiple of those for older households who do own their own home.

**Table 5 Older households: Proportion below 50% of median, by home ownership**

Country	Equivalent disposable income	Equivalent disposable income..	
		minus current housing costs	minus current housing costs and principal repayments
	2	3	4
Home-owner households			
Australia	17.4	11.7	8.3
Canada	3.4	6.5	.
UK	14.0	.	10.6
USA	13.1	.	14.1
Italy	9.5	.	15.2
Finland	7.0	4.9	.
Sweden	5.4	14.2	.
Non-home owner households			
Australia	35.7	51.4	46.4
Canada	9.3	26.3	.
UK	17.8	.	32.8
USA	47.3	.	56.5
Italy	15.1	.	31.0
Finland	23.3	52.1	.
Sweden	9.6	45.6	.

Note: For non-home owners, the after housing income measure is the same in columns 3 and 4. Differences in poverty rates arise because the medians for all households (and hence the 50 per cent of median) ‘poverty lines’ differ between these columns (as shown in the top panel of Table 2).

Source: As for Table 1

## **Crumbling foundations**

The results presented above highlight the impact of housing costs on living standards and income poverty rates both for all households and for older households. They reinforce the need for housing tenure to be taken into account in any examination of retirement living standards. In home owning nations, as incomes decline in retirement years so, too, do housing costs. As a result, after housing replacement incomes are considerably higher than before housing replacement incomes. This holds in all of the countries considered.

This section returns to a specific focus on Australia in order to raise some questions about the future for retirement incomes in countries that are moving towards the asset based welfare system that is already well established in Australia. For Australia, the results in the previous section suggest that the majority of older Australians have been well served by a retirement income system built on its explicit asset based policy to welfare embodied in its four pillar approach to retirement income. Though Australia has high rates of income poverty among the older population, a mature home ownership sector and high rates of outright home ownership mean that, on an after housing basis, poverty rates are among the lowest in rich nations.

There are, however, a number of signs that suggest that the foundations of Australia's asset based welfare system might be crumbling. These raise questions about the role of home ownership as a key fourth pillar in a retirement income policy.

### *Disparity in housing costs between older owners and non-home owners*

In all countries and on all standard of living measures covered in the previous section, older non-home owners fare very poorly compared with older home owners. Older non-home owners have higher before housing poverty rates than do owners – and, as indicated above, more so in Australia than in most other countries. This provides a first sign that the foundations of Australia's asset based welfare system are wobbling.<sup>20</sup> The extent to which housing in Australia is privately provided explains much of the disparity in housing costs between older households. The vast majority of older households in Australia are home owners who are protected from rising housing costs by home ownership and, particularly, by outright home ownership. Housing costs for non-home owners, however, are dominated by rents in the private rental market. The existence of rent assistance to eligible private renter households does help to ameliorate the impact of high housing costs but, as shown above, it is often inadequate to protect households from after housing poverty.<sup>21</sup> The social housing sector, which traditionally has protected older households from rising housing costs in retirement, is small and declining.

Figure 2 highlights the extent to which outcomes for older non-home owners are likely to be influenced by their past economic circumstances. At every stage in their life-cycle, households who become home owners have higher equivalent disposable incomes than those who do not become home owners. These higher incomes make it easier for them to sustain housing costs that, compared with the costs of not being a home owner, are marginally higher in the early stages of their life-cycles when they first enter home ownership. As they become established home owners, however, housing costs for older households decline. Housing costs for non home owner households, on the other hand,

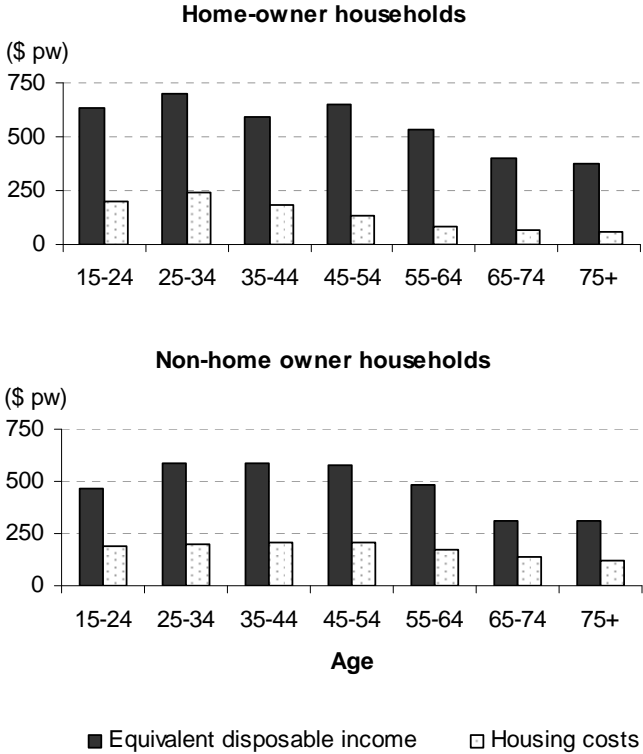
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<sup>20</sup> This imagery owes its origins to Torgersen (1987) who saw housing as a wobbly pillar of the welfare state because of its capital intensive nature and its reliance on private provision. See, also Kemeny (2001) and Malpass (2008).

<sup>21</sup> Only households in receipt of social security payments are eligible for rent assistance. See the Appendix for more details.

tend to remain relatively stable with age. (Figures 2 and 3 rely on cross-sectional data to draw conclusions about changes over time, and so these patterns should be considered illustrative only. Figure 4 below takes cohort effects into account).

**Figure 2: Equivalent disposable income and housing costs by age and tenure, 2003-2004: Australia**



Source: Australian Bureau of Statistics Household Expenditure Survey, 2003-04. Results derived from ABS Basic CURF data.

Disparate outcomes in housing costs by tenure might not be problematic if there were offsetting differences in the composition and distribution of wealth held by home owner and non-home owner households and if, as a result, relatively higher housing costs for non-home owners reflected their decision to hold wealth in the form of non-housing rather than housing assets. However, as shown in Figure 2, their lower household incomes at every age suggest this is unlikely.

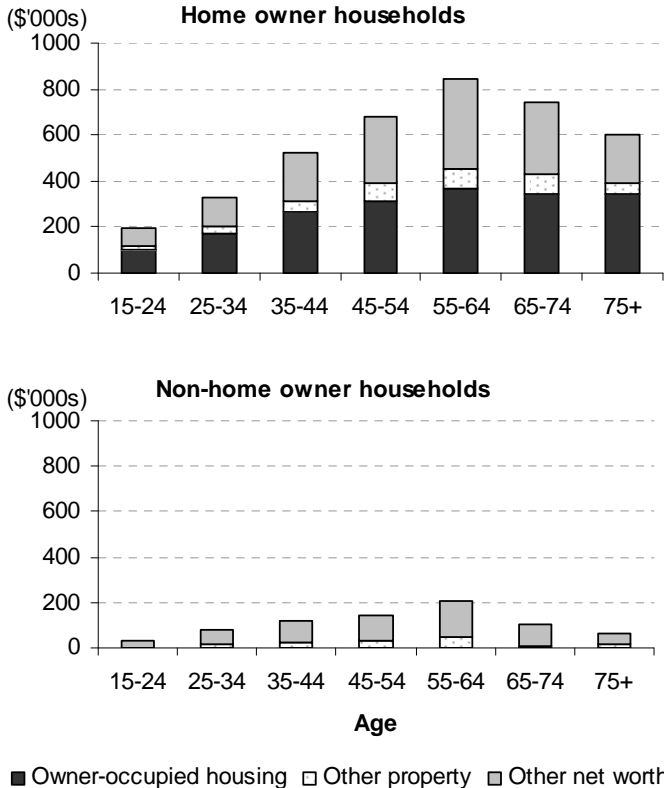
*Disparity in wealth holdings between older owners and non-home owners*

The wealth data illustrated in Figure 3 below confirm this. Owner-occupier households in Australia own not just all of the wealth tied up in owner-occupied housing; they own most of the wealth in other forms of housing and most of the non-housing wealth.<sup>22</sup> Net housing

<sup>22</sup> This life-cycle pattern of net worth by age shows the same pattern as illustrated for median net worth holdings by age generated from the LWS data base for a select range of OECD countries (OECD, 2008, Figure 10.1). Unfortunately, the comparative data in the OECD publication are not disaggregated by tenure but the fact that the contribution made to the total by the household's principal residence ownership is in excess of 50 per cent in each of the countries covered suggests that the patterns of wealth holdings are likely to be similar to that illustrated here for Australia.

wealth accounts for 55 per cent of total net worth; superannuation assets account for almost a third of non-housing net worth.<sup>23</sup>

**Figure 3: Household net worth by age and tenure, 2003-2004: Australia**



Source: Australian Bureau of Statistics Household Expenditure Survey, 2003-04. Results derived from ABS Basic CURF data.

The differences in income and wealth between owners and renters, shown to hold for each age group in Figure 3 and not just for those in the older age groups, provide a second sign that the foundations of a retirement income system built on the earliest form of asset based welfare are crumbling, or at least wobbling.

*Declining home ownership amongst the young*

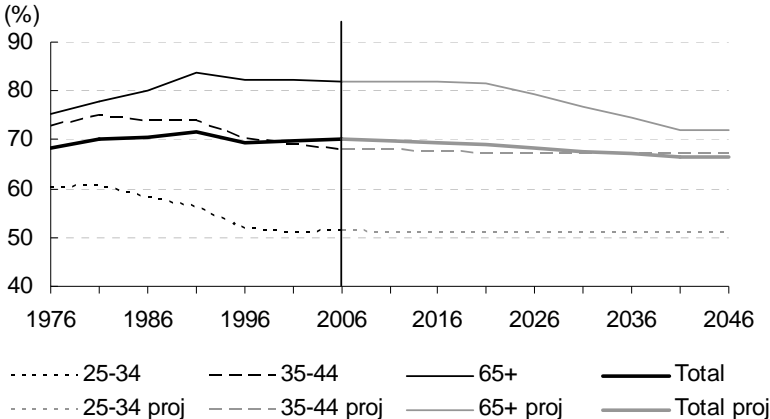
The pressures on the housing market that have contributed to the high housing costs faced by private renters, and particularly by older private renters, are of particular concern in light of current trends in housing markets. A combination of social change (that has resulted in deferral of marriage and children) and structural decline in housing affordability has contributed to a dramatic decline in home ownership rates among younger Australian households since the mid 1970s. This decline provides a third sign that raises concerns about the foundations of Australia's asset based welfare system.

It raises important questions about the future housing attainment of younger cohorts. While some may be delaying home ownership by choice, it seems unlikely that many will be able to buy for the first time after reaching 40 years of age. Any delay in home buying, or the inability to ever do so, imposes increased pressure on the rental sectors and, given the decline in social rental housing, this pressure falls heavily on the private rental market.

<sup>23</sup> ABS Cat No 6554.0 Household Wealth and Wealth Distribution, Australia, 2003-04, Table 20.

Figure 4 below shows the observed decline in home ownership since the mid 1970s amongst households with a reference person younger than 45 years old and the projected decline in home ownership rates by 2046 amongst those with a reference person aged 65 years or more as these younger cohorts age.<sup>24</sup> It shows that in two generations time, the current constraints on access to home ownership are projected to be reflected in lower home ownership rates amongst retired households. It highlights the relatively slow rate at which housing systems change. As shown in Figure 1, home ownership rates in Australia stabilised at their current rate of 70 per cent by 1960. As shown in Figure 4, home ownership rates for the 65+ year old age group reached at their current rate of around 82 per cent only in the 1980s as the generation who became home owners in the 1950s aged. As the post 1980s generations age, home ownership rates amongst the 65+ year old age group are projected to fall by about 10 percentage points.

**Figure 4: Actual and projected home ownership rates by age, 1976-2046: Australia**



Source: Data for 1976 to 2006 from special request tabulations from Census data; projections from Yates et al (2008),

Yates et al (2008) examine the implications of these trends in home ownership rates for housing costs faced by older households over the next 40 years. Their projections suggest there will be a disproportionate increase in the number of older households with relatively high levels of housing costs because more will be renting and/or more will be still paying off their mortgage (because of delayed entry into the housing market). These projections suggest that the protection that the Australian retirement income system has received in the past from widespread home ownership amongst older households - the fourth pillar in Australia's retirement income system - will be reduced considerably in the future.

In other words, the market dynamics associated with individual wealth accumulation are likely to sow their own seeds of destruction. Increasing housing wealth increases housing demand for those who are already home owners and adds to the price pressures that restrict access to housing for those who are yet to become home owners.

<sup>24</sup> The tenure projections were based on the assumption that long term (1971-2001) trends in house prices and household incomes would continue (from their pre-bubble 2001 level) and that the incremental increase in home ownership rates as households age would be the same in the future as it had been in the past. This is based on the conservative assumption that access to housing in the future is no worse than it was prior to 2001. More detail about these assumptions can be found in Yates et al (2008).

### *Inadequacy of compulsory superannuation for lower income households*

A final sign that the foundations of Australia's asset based welfare system might be crumbling, can be seen in the projections of the outcomes for the compulsory superannuation component, the second pillar of Australia's approach to retirement income and an explicit component of its asset based welfare.

As a result of the introduction of the mandated superannuation scheme, over the next 50 years the proportion of people of pension age on a full pension (the first pillar) is projected to fall from its current level of around 55 per cent to less than 40 per cent but the proportion on a part pension is projected to increase by an equivalent amount from 25 per cent to over 40 per cent (Rothman, 2007, p16). For the 15 per cent of the pension age population who switch from reliance on a full to a part pension, the part pension will top up their income from superannuation to a level above what it would have been had they relied solely on the age pension. For the 40 per cent of the pension age population who remain on a full pension, however, any compulsory superannuation contributions made throughout their working lives will have only a small effect on their retirement incomes. The net worth data illustrated in Figure 3 shows that the households with too few superannuation assets to generate an income that will reduce their reliance on the old-age pension as their primary source of retirement income are likely to be the same households who have no housing assets to take the pressure off the demands made on their retirement income. It is these households who contribute to Australia having one of the highest income poverty rates amongst the elderly observed in OECD countries.

### **Conclusions**

Superimposing a three pillar approach to retirement income in Australia onto an already existing foundation of widespread home ownership has meant that the vast majority of households have been well served in their retirement once housing costs are built into measures of retirement living standards. However, in Australia, the strong home ownership fourth pillar has been associated with a much more fragile 'first pillar' of minimum income support in retirement. Those who miss out on home ownership are thus multiply disadvantaged. They have to rely upon a weaker first pillar, they tend to have less superannuation and other savings, and they face a housing market where extensive subsidies for private ownership have driven up prices.

From an aggregate perspective, the high levels of home ownership mean that the numbers of older Australians missing out are currently relatively small so that after housing poverty across all older households in Australia is similar to that in other countries. There are signs, however, that the fourth pillar is crumbling. Projections suggest that home ownership is likely to decrease and hence that the proportion of older households in after housing poverty is likely to increase in the future. These people are also likely to be the same people for whom the growth in compulsory superannuation will have little impact on their retirement living standards.

## Appendix

### *The Australian Age Pension*

The pension rate for single persons is set at 25 per cent of Average Weekly earnings. For couples, the per person rate is 83 per cent of the single rate. In June 2008, the maximum pension was approximately A\$14,000 per year for a single person and A\$24,000 per year for a couple.<sup>25</sup>

In addition to their pension, age pensioners in the private rental market are eligible for rent assistance which increases as rent increases above a specified amount to a maximum payment of around A\$6,000 per year for a single person and A\$8,000 per year for a couple (Australian Government, 2008b). Subject to meeting the assets test, single persons retain eligibility for the full pension if their non pension income is less than A\$3,000 per year and retain eligibility for a part pension if non-pension income is less than A\$40,000 per year. For couples, the combined income test is less than A\$6,000 per year for full pension eligibility and less than A\$66,000 for a part pension.<sup>26</sup>

The assets test applies differentially to home owners and to renters. Apart from their family home (on which there is no value limit), single persons retain eligibility for a full pension if their (non owner-occupied housing) assets are less than A\$167,000 and for a part pension if their assets are less than A\$535,000. For owner-occupier couples, these tests are set at A\$237,000 for full pension eligibility and A\$849,000 for part pension eligibility. The respective assets tests for non-homeowners are A\$121,000 higher than those for home owners, an additional allowance which is less than one third of the Australia wide average dwelling value.

### *The Luxembourg Wealth Study Data*

Details of the Luxembourg Wealth Study and our complementary Australian data are shown in Table A.1. The Australian data is from the ABS Survey of Income and Housing Costs, which interviewed respondents between July 2003 and June 2004. For comparability with the surveys in the other countries, we use income from the previous financial year rather than current income which is also recorded in the survey.<sup>27</sup>

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<sup>25</sup> In June 2008, A\$1 = €0.60. All figures have been rounded to the nearest \$1,000.

<sup>26</sup> To ensure people with the same amount of assets are treated fairly and to encourage people to earn more income from their assets, financial assets are assumed to earn a certain amount of income, regardless of what they actually earn. If the actual income received from investment exceeds the deemed income, the extra income is not counted when assessing pension rates. Deeming rates are continually monitored and tend to be below market rates. An even lower rate applies for the first \$39,000 for singles and \$65,000 for couples.

<sup>27</sup> Again for the comparability with the other countries, we ignore the ABS financial year income flags which can be used to exclude people whose incomes have changed over the year.



**Table A.1 Countries and data**

Country	Year	Data source (all except Australia via Luxembourg Wealth Study)	Code	Income reference period	Housing cost reference period	Income inflator used to adjust for different reference periods
Australia	2003-04	ABS Household Expenditure Survey	AU03	2002-03	2003-04	1.054
Canada	1999	Survey of Financial Security	CA99	1998	mid 1999	1.065
UK	2000	British Household Panel Survey (incl ECHP supplement)	UK00	Sept 1999 - Aug 2000	Sept - Dec 2000	1.032
USA (PSID)	2001	Panel Study of Income Dynamics	USP01	2000	2001	1.021
Italy	2002	Bank of Italy Survey of Household Wealth and Income	IT02	2002	end 2002	1.015
Finland	1998	Household Wealth Survey	FI98	1998	end 1998	1.023
Sweden	2002	Statistics Sweden Wealth Survey	SE02	2002	end 2002	1.018

Generally the reference period for annual flow variables such as income is different from the stock variables such as current housing expenditures. Incomes have thus been inflated here (based on movements of nominal GDP/capita) to correspond to the same period as the housing variables. The inflator used in each country is shown in the last column.

## References

- Australian Bureau of Statistics (1994) *Household Expenditure Survey, 1993-94*, ABS Cat. No. 6531.0, ABS: Canberra.
- Australian Bureau of Statistics (1995) *Australian Social Trends, 1995*, ABS Cat. No. 4102.0, ABS: Canberra
- Australian Bureau of Statistics (2001) *Year Book Australia, 2001*, ABS Cat. No. 1301.0, ABS: Canberra
- Australian Bureau of Statistics (2006) *Population Projections, 2004 to 2101 Reissue*, ABS Cat. No. 3222.0, <http://www.abs.gov.au>. Downloaded 30<sup>th</sup> May 2008
- Australian Bureau of Statistics (2007) *Basic Community Profile (Australia)*, ABS Cat. No. 2001.0, <http://www.abs.gov.au>. Downloaded 28<sup>th</sup> August 2007
- Australian Government (2002) (IGR1) *Intergenerational Report 2002-03*, 2002-03 Budget Paper No. 5, The Treasury: Canberra. [www.treasury.gov.au/igr](http://www.treasury.gov.au/igr). Downloaded 15<sup>th</sup> May 2002
- Australian Government (2004a) *Australia's Demographic Challenges*, The Treasury: Canberra  
[http://demographics.treasury.gov.au/content/download/australias\\_demographic\\_challenges/australias\\_demographic\\_challenges.pdf](http://demographics.treasury.gov.au/content/download/australias_demographic_challenges/australias_demographic_challenges.pdf), Downloaded February 26<sup>th</sup> 2004
- Australian Government (2004b) *A more flexible and adaptable retirement income system*, The Treasury: Canberra  
[http://demographics.treasury.gov.au/content/download/flexible\\_retirement\\_income\\_system/flexible\\_retirement\\_income\\_system.pdf](http://demographics.treasury.gov.au/content/download/flexible_retirement_income_system/flexible_retirement_income_system.pdf), Downloaded February 26<sup>th</sup> 2004
- Australian Government (2007) (IGR2) *Intergenerational Report 2007*, The Treasury: Canberra. [www.treasury.gov.au/igr](http://www.treasury.gov.au/igr). Downloaded May 16<sup>th</sup> 2007
- Bradbury, B. (2008) *Asset Rich, But Income Poor: Australian Housing Wealth and Retirement in and International Context*, Social Policy Research Centre, <http://www.sprc.unsw.edu.au/reports/index.htm>
- Bradbury, B., Rossiter, C. and Vipond, J. (1986) *Poverty Before and After Housing*, Reports and Proceedings No 56, Social Policy Research Centre, University of New South Wales
- Castles, F. (2005) "The Kemeny Thesis Revisited", *Housing, Theory and Society*, 22 (2):84-86
- Castles, F. (1998) "The Really Big Trade-Off: Home Ownership and the Welfare State in the New World and the Old" *Acta Politica*, 33(1), pp. 5-19
- Castles, F. (1997) "The institutional design of the Australian Welfare State", *International Social Security Review*, 50(2):25-41
- Churi, M. and Jappelli, T. (2006), *Do the elderly reduce housing equity? An international comparison*, Luxembourg Income Study Working Paper Series, Working Paper No. 436, <http://www.lisproject.org/publications/liswps/436.pdf> Downloaded 7<sup>th</sup> July 2008

- Commission of Inquiry into Poverty (the Henderson Report) (1975) *Poverty in Australia*, First Main Report, Volume 1, Commonwealth of Australia: Canberra
- Frick, J. and Grabka, M. (2003) "Imputed Rent and Income Inequality: A Decomposition Analysis for Great Britain, West Germany and the U.S.", *Review of Income and Wealth*, 49(4):513-537
- Gabriel, M., Jacobs, K., Arthurson, K., Burke, T. with Yates, J. (2005) *Conceptualising and measuring the housing affordability problem*. AHURI National Research Venture 3: Housing Affordability for Lower Income Australians, Research Paper 1. [http://www.ahuri.edu.au/nrv/nrv3/NRV3\\_Assoc\\_docs.html](http://www.ahuri.edu.au/nrv/nrv3/NRV3_Assoc_docs.html). Downloaded 3<sup>rd</sup> August 2007
- Green, R. and Malpezzi, S. (2003) *U.S. Housing Markets and Housing Policy*, AREUEA Monograph Series No. 3, Washington D.C.: The Urban Institute Press
- Green, R., Malpezzi, S., and Mayo, S. (2005) "Metropolitan-Specific Estimates of the Price Elasticity of Supply of Housing, and Their Sources" *American Economic Review*, 95 (2): 334-339
- Holzman, R. and Hinz, R. (2005) *Old-Age Income Support in the 21st Century An International Perspective on Pension Systems and Reform*, World Bank: Washington, D.C.  
[http://siteresources.worldbank.org/INTPENSIONS/Resources/Old\\_Age\\_Income\\_Support\\_Complete.pdf](http://siteresources.worldbank.org/INTPENSIONS/Resources/Old_Age_Income_Support_Complete.pdf)
- House of Representatives Standing Committee on Health and Ageing (2005) *Future Ageing: Report on a draft report of the 40th Parliament*, Parliament House: Canberra.  
<http://www.aph.gov.au/House/committee/haa/strategies/report/fullreport.pdf>. Downloaded 15th May 2008
- Intergenerational Report (IGR) - see Australian Government
- Jones, M. (1990) *The Australian Welfare State*, Third Edition, Sydney: Allen and Unwin, cited in Castles, F. (1998)
- Kemeny, J. (2005) "'The Really Big Trade - Off' between Home Ownership and Welfare: Castles' Evaluation of the 1980 Thesis, and a Reformulation 25 Years on", *Housing, Theory and Society*, 22(2): 59 - 75
- Kemeny, J. (2001) "Comparative housing and welfare: Theorising the relationship" *Journal of Housing and the Built Environment*, 16 (1): 53-70
- Kemeny, J. (1977) "A Political Sociology of Home Ownership in Australia", *Journal of Sociology* 13 (1): 47-52
- King, A. (1998) "Income Poverty since the Early 1970s" in R. Fincher and J. Nieuwenhuysen (eds) *Australian Poverty: Then and Now*, Melbourne University Press: Melbourne
- Luxembourg Wealth Study (LWS) Database, <http://www.lisproject.org/lwstechdoc.htm> (multiple countries; October - November 2008).
- Malpass, P. (2008) "Housing and the New Welfare State: Wobbly Pillar or Cornerstone?", *Housing Studies*, 23(1): 1 - 19

- Meen, G. (2005) "Home-Ownership Sustainability: Concepts and Measurement", paper prepared for the Joseph Rowntree Foundation Inquiry: Homeownership 2010 and Beyond,  
<http://www.jrf.org.uk/knowledge/consultation/homeownershipinquiry/>
- Nielson, L. (2006) "An adequate superannuation-based retirement income?" *Parliamentary Library Research Brief*, no. 12, 2005–06  
<http://www.aph.gov.au/library/pubs/rb/2005-06/06rb12.pdf>, Downloaded 6<sup>th</sup> June 2008
- Organisation for Economic Cooperation and Development (OECD) (2008) *Growing Unequal? Income Distribution and Poverty in OECD Countries*, Directorate for Employment, Labour and Social Affairs, Paris: OECD,  
[http://www.oecd.org/document/53/0,3343,en\\_2649\\_33933\\_41460917\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/53/0,3343,en_2649_33933_41460917_1_1_1_1,00.html). Downloaded 23<sup>rd</sup> October 2008.
- Organisation for Economic Cooperation and Development (OECD) (2005) "Recent House Price Developments: The Role of Fundamentals", *OECD Economic Outlook* No.78, November, 2005  
<https://www.oecd.org/dataoecd/41/56/35756053.pdf>. Downloaded 30<sup>th</sup> March 2007
- Productivity Commission (PC) (2005) *Economic Implications of an Ageing Australia*, Research Report. <http://www.pc.gov.au/study/ageing/>. Downloaded 30<sup>th</sup> May 2005
- Saunders, P. (1994) *Welfare and Inequality: National and International Perspectives on the Australian Welfare State*, Cambridge: Cambridge University Press
- Saunders, P., Patulny, R. and Lee, A. (2004) *Updating and Extending Indicative Budget Standards for Older Australians*, prepared for the Association of Superannuation Funds Australia, SPRC Report 2/04,  
[http://www.sprc.unsw.edu.au/reports/ASFA\\_Report.pdf](http://www.sprc.unsw.edu.au/reports/ASFA_Report.pdf). Downloaded 9<sup>th</sup> June 2008
- Senate Select Committee on Superannuation (2002) *Superannuation and standards of living in retirement*, A report on the adequacy of the tax arrangements for superannuation and related policy,  
[http://www.aph.gov.au/senate/committee/superannuation\\_ctte/completed\\_inquiries/2002-04/living\\_standards/report/report.pdf](http://www.aph.gov.au/senate/committee/superannuation_ctte/completed_inquiries/2002-04/living_standards/report/report.pdf), Downloaded 30<sup>th</sup> May 2008
- Senate Standing Committee on Community Affairs (2008) *A decent quality of life*, Inquiry into the cost of living pressures on older Australians,  
[http://www.aph.gov.au/senate/committee/clac\\_ctte/older\\_austs\\_living\\_costs/report/report.pdf](http://www.aph.gov.au/senate/committee/clac_ctte/older_austs_living_costs/report/report.pdf). Downloaded 9<sup>th</sup> June 2008
- Sherraden, M. (ed) (2005) *Inclusion in the American Dream: Assets, Poverty and Public Policy*, Oxford: Oxford University Press
- Smeeding, T., Gao, Q., Saunders, P. and Wing, C. (2008) *Elder Poverty in an Ageing World: Conditions of Social Vulnerability and Low Income for Women in Rich and Middle-Income Nations*, Luxembourg Income Study Working Paper Series, Working Paper No. 497, <http://www.lisproject.org/publications/liswps/497.pdf>
- Smeeding, T., Saunders, P., Coder, J., Jenkins, S., Fritzell, J., Hagenaars, A., Hauser, R., and Wolfson, M. (1992) *Noncash Income, Living Standards, and Inequality: Evidence from the Luxembourg Income Study*, Luxembourg Income Study Working Paper Series, Working Paper No. 79

- <http://www.lisproject.org/publications/liswps/79.pdf>. Downloaded 19th January 2005.
- Torgersen, U. (1987) "Housing: The Wobbly Pillar Under the Welfare State", in Turner, B., Kemeny, J. and Lundqvist, L. (eds) *Between State and Market*, Stockholm: Almqvist and Wicksell International
- Treasury (2001) "Towards higher retirement incomes for Australians: a history of the Australian retirement income system since Federation", *Economic Roundup, Centenary Edition 2001*,  
<http://www.treasury.gov.au/documents/110/PDF/round4.pdf>. Downloaded December 1<sup>st</sup> 2001
- Treasury (2002) *Submission to the Inquiry into Superannuation and Standards of Living in Retirement*, Senate Select Committee on Superannuation.  
[http://www.aph.gov.au/Senate/committee/superannuation\\_ctte/completed\\_inquiries/2002-04/living\\_standards/submissions/sub078.doc](http://www.aph.gov.au/Senate/committee/superannuation_ctte/completed_inquiries/2002-04/living_standards/submissions/sub078.doc). Downloaded 30th May 2008.
- Tsatsaronis, K. and Zhu, H (2004) "What drives housing price dynamics: cross-country evidence", *BIS Quarterly Review*, March 2004  
[www.bis.org/publ/qtrpdf/r\\_qt0403f.pdf](http://www.bis.org/publ/qtrpdf/r_qt0403f.pdf)
- Whiteford, P. and Angenent, G. (2002) *The Australian system of social protection—an overview* (second edition), Department of Family and Community Services Policy Research paper no. 6,  
[http://www.facsia.gov.au/internet/facsinternet.nsf/vIA/occasional\\_papers/\\$file/No.6.pdf](http://www.facsia.gov.au/internet/facsinternet.nsf/vIA/occasional_papers/$file/No.6.pdf). Downloaded 19th January 2005.
- Yates, J. (2003) "The More Things Change? An Overview of Australia's Recent Home Ownership Policies." *European Journal of Housing Policy*, 3(1):1-33
- Yates, J. (1994) "Imputed Rent and Income Distribution", *Review of Income and Wealth*, 40(1):43-66
- Yates, J. and Gabriel, M. (2006) *Housing affordability in Australia*, AHURI National Research Venture 3: Housing Affordability for Lower Income Australians, Research Paper 3. [http://www.ahuri.edu.au/nrv/nrv3/NRV3\\_Assoc\\_docs.html](http://www.ahuri.edu.au/nrv/nrv3/NRV3_Assoc_docs.html). Downloaded 3<sup>rd</sup> August 2007
- Yates, J., Kendig, H. and Phillips, B. with Milligan V., and Tanton, R. (2008) *Sustaining fair shares: the Australian housing system and intergenerational sustainability*, AHURI National Research Venture 3: Housing Affordability for Lower Income Australians, Research Paper 11.  
[http://www.ahuri.edu.au/nrv/nrv3/NRV3\\_Assoc\\_docs.html](http://www.ahuri.edu.au/nrv/nrv3/NRV3_Assoc_docs.html). Downloaded 23<sup>rd</sup> February 2008