

Housing in an ageing Australia: Nest and nest egg?

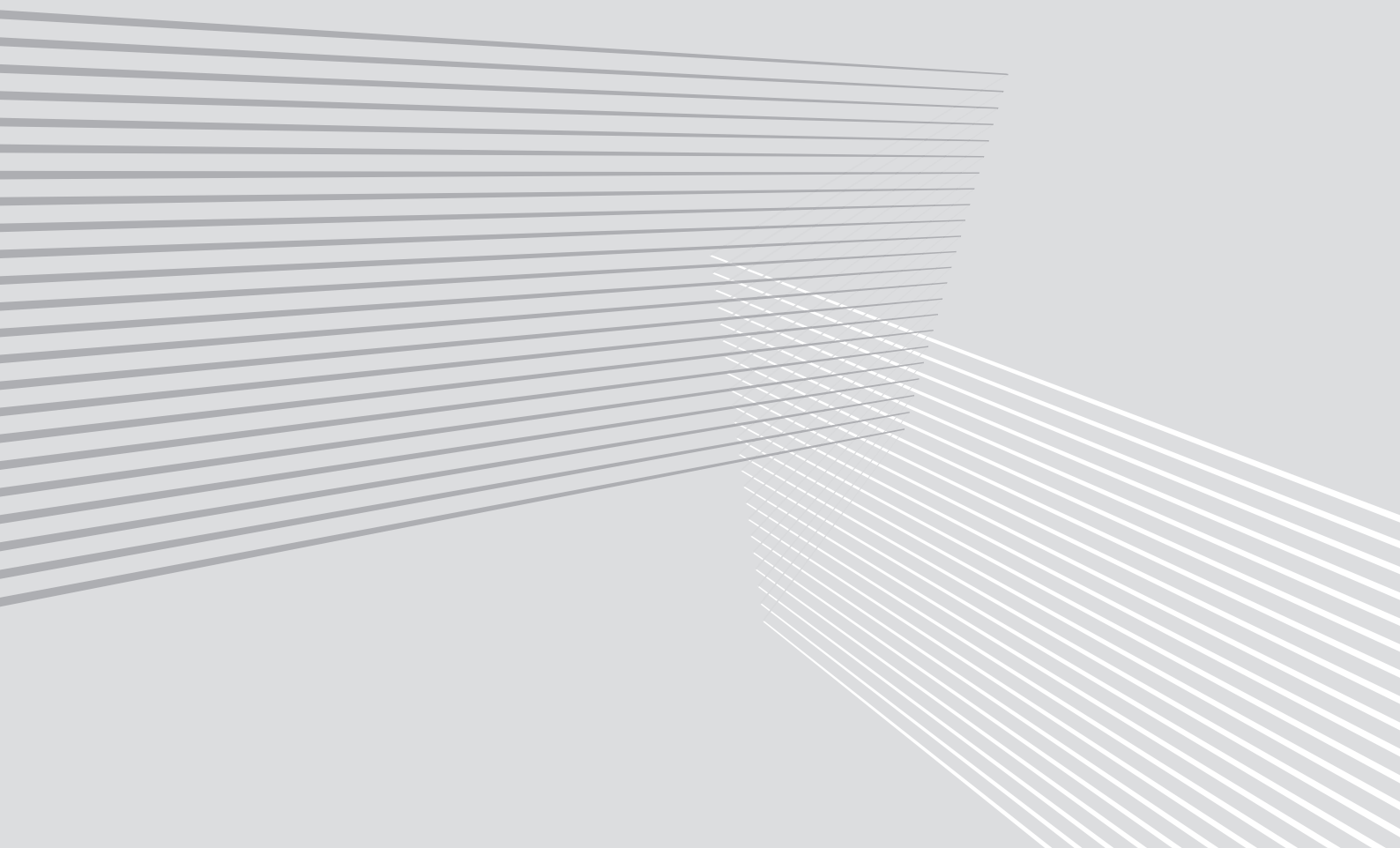


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Summary of brief

Homeownership serves multiple purposes over the lifecycle: It acts as a home as well as a store of wealth to guarantee financial security in retirement. Its lack in old age compromises security of both tenure and finances. Much has been written about housing and homeownership. Here we apply the prism of population ageing, leveraging CEPAR's expertise to bring new insights to the topic.

Yes, homeownership appears to be in decline: Depending on the measure, total homeownership in Australia currently ranges 59% to 70%. Across all measures, homeownership is down 3-4 percentage points in the last two decades. Drops are led by young households of all incomes and middle-aged households with low incomes.

Yes, much of the decline may be due to declining affordability: Over the past 20 years, house prices grew faster than household incomes. Common explanations point to cyclical as well as structural factors. These include: (1) a surge in rental demand from new migrants (3.7m since 2000); (2) lower cost and greater allocation of credit to investors, supported by tax rules (via negative gearing and capital discounts); and (3) a supply lag (of about ten years between peak increase in demand and peak increase in supply, up from 3-5 years in the past).

Higher prices and lower borrowing costs have changed the dynamic: Across the income and house price distributions, deposit hurdles increased while borrowing costs decreased (in the past two decades, years to save for a hypothetical deposit for households with income in the second quintile buying a house in the second quintile of prices increased from 4 to 6 years, but repayments were down from 44% to 36% of income). A low initial saving hurdle in the past meant that house purchases functioned as a commitment device to save. It is less available now.

But declines in homeownership must be seen in a wider demographic context: The median age of first buying a house decreased in the 1960s-70s as homeownership became widespread. It has since increased by 9 years from 1981 (from age 24 to 33). But deferral in homeownership accompanies delays in all other major life events over the last half-century. These include a delay in the median age of getting a first job (2 years), finishing education (5 years), having a child (7 years), getting married (8 years), and dying (12 years). Deferring their first home purchase by 9 years would still probably see younger generations enjoy homeownership longer than their parents.

Indefinite deferral of home purchase has consequences: Lifetime homeownership rates will decline if some people defer indefinitely. Banks may be reluctant to lend past a certain age given retirement ages are increasing more slowly (by 3 years over the past 50). Greater shares may retire with debt (36% of homeowners do so now). Some receive help for home deposits from parents (but higher gifts go to those with higher income). Modelling suggests that there is no imminent *wall* or *wave* of bequests in sight and that bequest recipients are getting older.

Demographic change may make things easier: In the short-term, demand for housing is expected to remain strong, so supply declines are concerning. Over the long term, base projections see a shallow deceleration in growth of demand, but the range of possible outcomes is wide. Also, cross-country variation in house prices and demographic change suggest that population ageing could weigh prices downwards.

In the meantime, the retirement income system is failing renters: The continued exclusion of the home from the means test, undifferentiated Age Pension payments, and rent assistance levels that are pegged to the wrong index, results in a wide financial gap between renters and owners. The system review reporting in 2020 is an opportunity to narrow this gap. While super is important for young, low-income households, we are yet to understand how much it constrains their investment in housing. The two are complements. Super is more liquid in retirement while housing investment can be leveraged and therefore results in greater wealth accumulations when prices are rising.

Older renters continue to experience significant vulnerability: Often-quoted figures that old-age poverty in Australia is high, are inaccurate. But new estimates, that take account of housing, suggest that older Australian renters have among the highest relative poverty rates in the OECD. They also have greater rental affordability stress than other age groups. While increases in measured homelessness among older women were due to greater numbers in this age group rather than higher incidence, their increased use of homelessness services was disproportionate.

Summary of featured CEPAR research

Income and house prices: Modelling shows that an extra dollar of income increases house prices in NSW by more than a dollar and that price sensitivity increased with proximity to Sydney (Box 1).

Deferral of homeownership: Research found little indication that homeownership fell for Generation X. Later rates of marriage were a key driver of homeownership delay (Box 2). Analysis of trade-offs between renting and buying shows that initially renters do tend to consume more than owners, but that this reverses (Box 4).

Migration and housing: Recent and temporary migrants tend to rent apartments (about 75% of long-term temporary arrivals rent). Increases in migration are likely to therefore overstate homeownership declines (Box 3).

Demography and house prices: Higher house prices were observed in countries and periods where shares of prime-age workers were higher. An estimated 7% of the increase in real house prices in Australia between 1970 and 2015 was due to changes in age structure. Projections suggest a reversal in the future (Box 5).

Housing bubbles and macroeconomic risks: Studying the bursting of the US housing bubble shows that a key contagion channel was the reappraisal of risk rather than the wealth effect on homeowner balance sheets (Box 6).

Supply response: NSW regions have higher housing supply responses than Sydney but are still relatively low given fewer land constraints. Councils appear inhibited by State rules (Box 7).

Treatment of assets in the means test: It's possible to combine Age Pension means tests by having them separate but applied consistently. Exempting the home in the test is shown to inhibit downsizing, but effect is small (Box 8).

House purchase triggers re-evaluation of retirement finances: Super contribution behaviour changes around the time of taking out a mortgage. Owner-occupier mortgagors appear to increase super contributions while investors rebalance toward property. Buying a house also increases interactions with super (Box 9).

Wealth accumulation in an ageing society: Ageing alongside greater Age Pension means testing can result in greater private asset accumulations and lower pension spending, driven by longer-lived high-income groups (Box 10).

Downsizing: People over 55 downsized: (1) because the house was too big; (2) to be closer to family; (3) for lifestyle; (4) because the yard was too big; and (5) to alleviate financial stress. Older people were less likely to regret their decision of moving to a smaller place compared to those who downsized at younger ages (Box 11). Half of older women are choosing to age in place, but many live alone. Changes are often due to health concerns (Box 19).

Retirement products: A reverse mortgage on a CBD house is riskier and should attract a higher risk premium. Lump-sum reverse mortgages are more profitable and less risky to providers than income stream products, explaining why the former dominates most markets (Box 12). Explaining reverse mortgages well can raise interest in them (Box 13). The more wealth is in one's home, the more optimal it is to annuitise the remaining wealth since home equity acts as a form of precautionary savings to cover healthcare expenditure and as a bequest (Box 14).

Bequests: Property made up 70% of assets of those dying aged 65-84. Research confirms that bequests are being delayed as life expectancy increases (Box 15). Pensioners hold on to assets rather than spending them to maximise pension income (Box 16).

Adapting housing and neighbourhoods: Research shows that housing stock is ill-equipped to meet older people's needs with respect to safety and accessibility measures (Box 17). Key modifications would prevent falls at home if discharges from hospital involved an occupational therapist home visit; simple exercises also help (Box 18). Mental health and venturing beyond the home (e.g., by being able to drive) were positively correlated (Box 20).

Who can expect financial hardship in old age, and for how long? Single older women with low education who rented their home could expect to live 7.7 years of retirement in financial hardship (e.g. unable to heat the home, missing meals, or pawning items). Hardship *expectancy* for women with similar characteristics but who owned their home was half that (Box 21). Older renters are likely to have less family support and more depression (Box 22).

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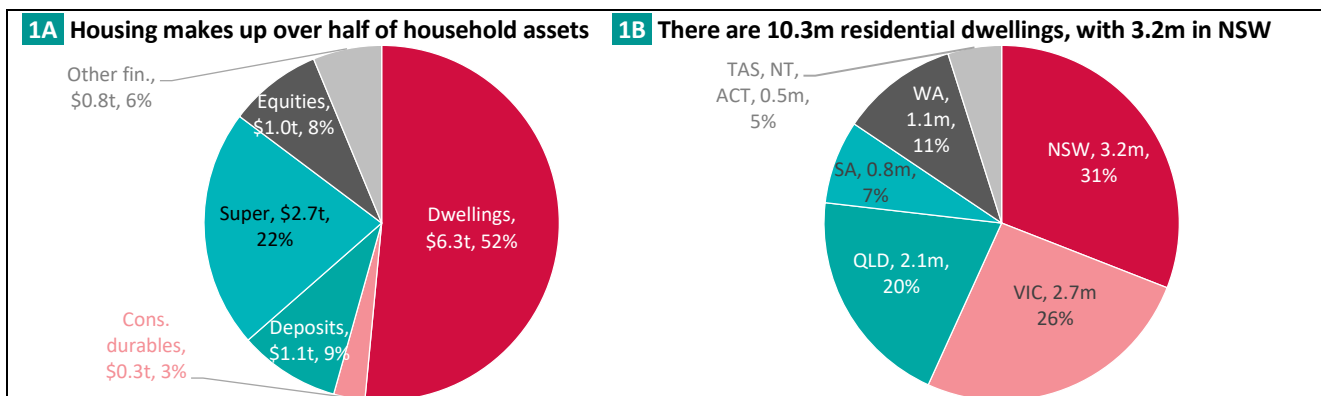
Introduction

In Australia, the topic of housing occupies many a newspaper column, barbeque conversation, and research report. Just over half (or \$6.3t) of Australian household wealth is stored in housing, distributed across 10.3m residential dwellings, which are among the most expensive in the world (Demographia 2018; AFR 2019). The family home not only fulfils everyday needs as a shelter and a place for family and social relations but can also act as a store of value and guarantee financial security in retirement – it is both *nest* and *nest egg*. Yet the same cannot be said about those who rent their home in retirement. For them, security of tenure and finances is often lacking.

Housing outcomes therefore affect financial and personal health and wellbeing over the lifecycle. And as lifespans increase and Australia’s population ages it is important to continue to examine the interactions between demography and housing. This research brief explores the current state and projected future of such interactions, marrying policy developments with the latest data and research, particularly from CEPAR researchers. The brief complements previous CEPAR research briefs, including a series on retirement incomes in Australia and on aged care in Australia. In fact, homeownership is often considered as another pillar of the retirement income system, in addition to the Age Pension, and mandatory and voluntary superannuation. Much has been written about housing, so the aim here is to apply CEPAR’s expertise in demographic change to bring new insights to this complex topic.

This brief is in three parts. It first tackles the dynamics of the *housing purchase in working life*, describing the patterns of housing tenure across generations, demographic and market dynamics, the likely future effects of demography on housing demand, and the policies that can affect home purchase outcomes, particularly taxes. In part two, the brief considers *housing consumption in old age*, discussing the retirement income context, the value and distribution of housing wealth, the preference of older people for remaining in their community, and how older people bequeath or can make better use of the equity in their home in retirement. Finally, part three tackles *housing lack in old age*, describing the implications and vulnerabilities that arise from renting in retirement. Overall, the brief provides a broad stocktake of research that touches on many different areas of housing-related policy.

This account comes in the context of other reviews. The *Senate Select Committee on Housing Affordability in Australia* reported in 2008 and found that affordability was at a record low, setting the groundwork for the *National Affordable Housing Agreement* to improve housing outcomes (see Section 3.5). The *House of Representatives Enquiry into Homeownership* concluded in 2016 that challenges were isolated to Sydney and Melbourne and that the main form of intervention should be to boost supply – a role for state governments – and that banking oversight was preferred over tax changes to control excessive investor activity – a role for the prudential regulator. The Productivity Commission released a 2015 report on the housing decisions of older Australians, which identified policy gaps such as on equity release products (see Section 2.4). Other notable reports include those produced by CEDA (2017) which looks at trends; Grattan, who reviewed housing taxes and housing affordability (Daley and Wood 2016; Daley and Coates 2018a); and AHURI, including Ong et al. (2019), who produced sophisticated future projections of tenure and demand for transfer payments. Finally, the Commonwealth is expected to take account of housing in a new review of the retirement income system.



Note: 1A is for June 2019; 2B is for 2016 and includes about 1m unoccupied dwellings. Source: Authors’ analysis of RBA and ABS data.

Part 1: Housing purchase in working age

1.1 Homeownership trends

Homeownership rates in Australia have gone through three distinct phases. An initial increase in the post-war years, a broadly stable level between 1970 and 2000, and a decline over the last two decades (Figure 2A).

Estimates of homeownership differ – even within this report, which draws a wide net to take in varied research based on different methodologies. Still, for an informed discussion on the topic, it's worth getting to grips with and testing assumptions about: (1) who is counted; (2) whose tenure is observed; and (3) the data sources.

Homeownership rates can be based on counting either households or persons (adults or all persons) and whether we measure ownership at household level (i.e., the owner lives there) or person level (i.e., the person or partner own the home). Counting households with tenure at the household level is most common but can obscure changes in homeownership if the household composition changes. For example, if more young adults live with their parents who own the house, homeownership would go up, all else equal. It could thus understate recent declines in total homeownership. Similarly, counting the proportion of persons who live in houses by their household tenure may mislead. The better measure is the proportion of people who legally own the property in which they live (i.e., counting persons according to person tenure, not household head's tenure).

The Census has the largest sample and historic scope, but the information collected is limited, infrequently collected, and comes with a long lag. It only records tenure at the household level, so it is not possible to estimate the share of people who are owners (but see McDonald 2019 for an alternative approach using Census data). The other sources of data are the Survey of Income and Housing (SIH) that dates from the 80s, and the Household, Income and Labour Dynamics in Australia (HILDA) Survey, since 2001. Though smaller in sample size, these sources provide more information about households and ownership status and are more frequently undertaken (SIH is bi-annual; HILDA is annual but collects legal tenure information every four years).

As shown in Figure 2A, each permutation results in different rates of homeownership, with results ranging from 59% to 70%. Nonetheless, taken together, it becomes very clear that the last two decades have seen drops in homeownership tenure no matter how it is defined and measured, of between three and four percentage points.

Homeownership by age and income

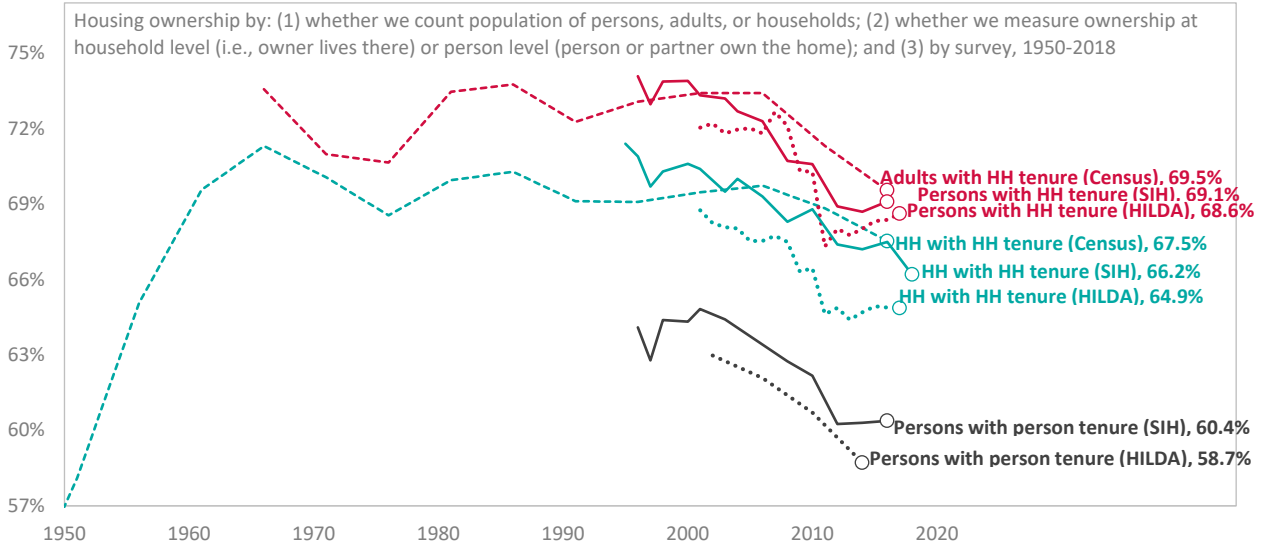
Ownership drops were led by younger generations for the last two decades as illustrated in Figure 2B across different measures using a consistent data source (SIH). Ownership over the period fell by as much as 9 percentage points for the 30-34 age group. Drops are greater since 2003: 17 percentage points for ages 25-29 (drops since 1981, not shown here, are greater still; see Yates 2017, Ong 2017, Daley and Coates 2018). To a lesser extent, it appears older age groups are beginning to be affected too. Any permanent declines in a cohort's homeownership rate will take a long time to appear among the oldest ages. Those who are aged 65 and over are likely to have bought their house before any major shifts in homeownership rates started. If trends continue, more people will retire without a home (Ong et al. 2019; Daley and Coates 2018b). In the meantime, longer life expectancies and lower fertility mean that older cohorts are affecting the population-wide homeownership rate in an upward direction.

On a methodological point, it's noteworthy that measuring ownership of households by age of household head is a good approximation of counting actual owners. This is because the calculation excludes younger people living with their parents and therefore unlikely to be counted as household head.

The data is broken down further in Figure 2C, showing trends by age *and* income, in thirds of the population-wide distribution (a simplification from common quintile splits). It shows that ownership declined across all income groups at younger ages. But declines among middle-age low-income individuals are stark compared to middle- and high-income people of the same age. It exposes a widening gap between those on high and low incomes by ages 45 to 60.

HOW HAS HOMEOWNERSHIP CHANGED?

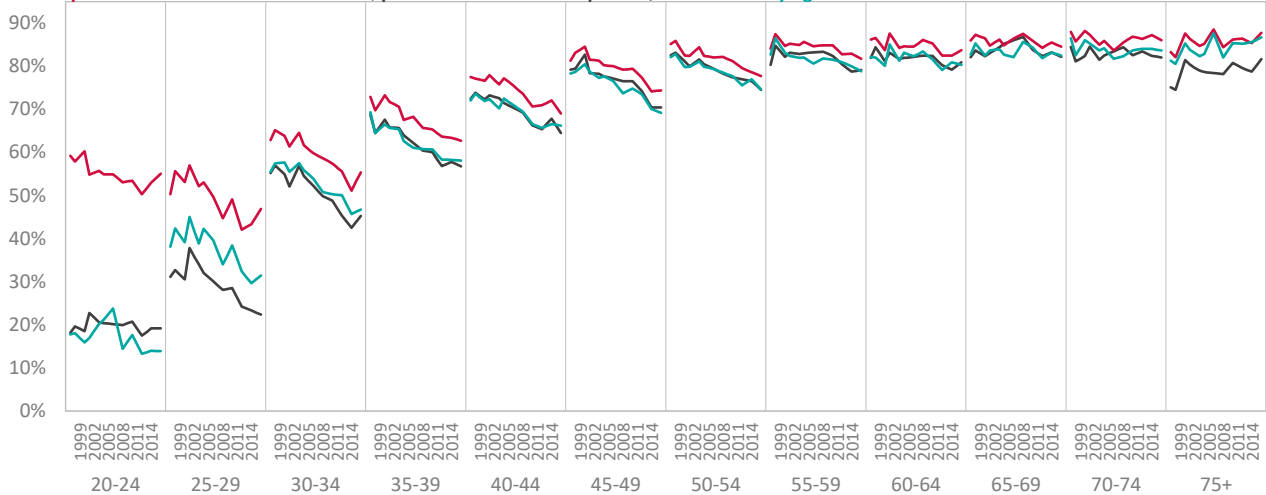
2A There are many ways of measuring homeownership, but by every measure ownership is down since early-2000s



2B Declines have been greatest at younger ages: Down as much as 13pp for ages 35-39 over last 20 years

Proportion of homeowners in age group (SIH-based), 1997-2016, by measure:

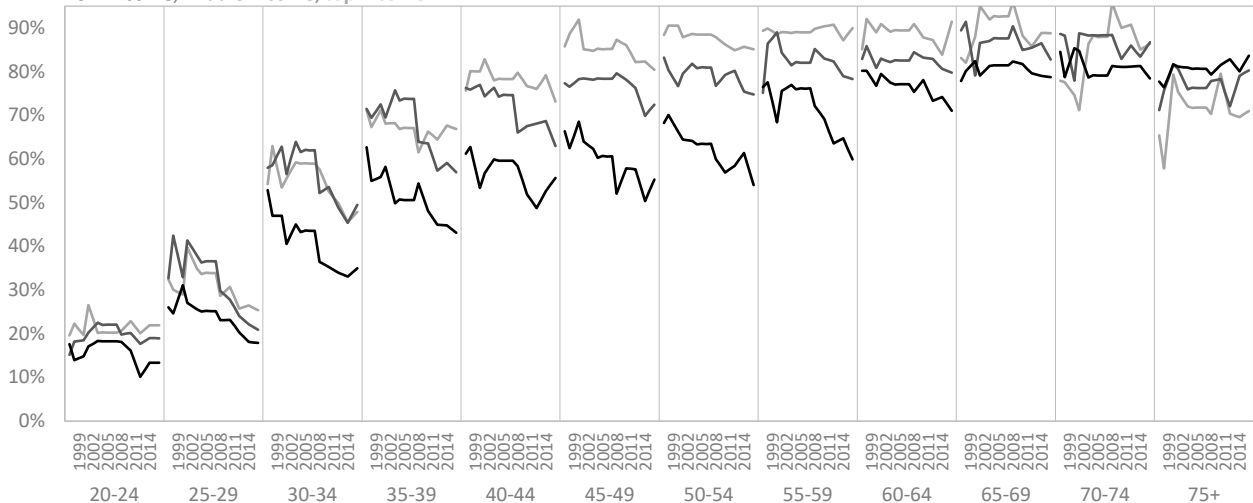
persons with tenure of household, persons with tenure of person, households by age of hh head with tenure of household



2C There are distribution differences – declines are more pronounced among young, low income groups

Proportion of homeowners (SIH-based counting persons with tenure of person), 1997-2016, by position in income distribution:

low income, middle income, top income



Note: HH denotes household. Person level tenure is effectively income unit tenure (i.e., for minors, the person tenure is their parents' tenure). Household tenure tends to overstate the share of owners because non-owners are either counted as owners in the case of 'counting persons' or 'counting adults' or are omitted altogether in the case of 'counting households'. Ownership of investment property is excluded from analysis (renter investors make up less than 2% of people). Income groups are based on thirds of population-wide distribution of equivalised household income (not within age group). Pp denotes percentage point. Source: Authors' analysis based on ABS Census, ABS SIH, and HILDA.

Drivers of decline in homeownership

Various, well-rehearsed explanations for the decline in homeownership trend have been offered (McDonald 2003; Yates 2011; Yates 2015; RBA 2015; Yates 2016). These can be grouped into: (1) unaffordability due to high house prices; (2) growing inequalities (both via market income and the simultaneous rise in lone person and double income households); (3) housing stock drivers (e.g., housing supply that doesn't suit couples without children who rent instead); (4) structural renting and changes in preferences (based on preferences for current consumption or changes in lifestyles; e.g., with labour markets becoming more fluid, requiring greater mobility, or with relationships more likely to break down and lone households becoming more common. These are more likely captured at point of observation while not necessarily affecting lifetime house acquisition); (5) fluctuations in population shares of migrants, since recent and temporary migrants tend to rent; and (6) other demographic drivers (e.g., just a deferral of purchase by young versus reweighing of population toward older people who have higher ownership rates).

Two of these drivers are described in more detail next. One that is probably the most commonly cited reason: that house prices, driven by market trends, have become unaffordable; and one that is less commonly considered: that trends reflect demographically driven deferral of home purchase. An additional, seldom quoted driver, tackled in Section 2.1, could be the evolution of the retirement income system reforms over the last 30 years, whereby a generation subject to mandatory super savings has chosen or been forced to delay investing in housing.

1.2 Housing market trends – explaining house price appreciation and its impact

As shown in Figure 3A, the backdrop to declining homeownership rates has been a series of cyclical booms in house prices. In the last two decades, the house price index has roughly doubled in real terms, even after adjusting for improvements in the quality of housing stock and despite some market corrections (e.g., around the Global Financial Crisis and more recently). Between 1970 and the peak in 2017 real house prices quadrupled.

By contrast, the cost of building a house remained flat and net disposable household income per capita increased at an enviable but a far lower rate of 27% in real terms (Figure 3A). Price growth has exceeded household income despite a boost in incomes from more female earners, and even if one compares price and incomes by city (Fox and Finlay, 2012). The decoupling of price from income is a key hurdle for those saving up for a home deposit which now requires a greater number of years of savings (Simon and Stone 2017).

Such price increases came in a line of housing cyclical booms and busts in Australia since the 1950s (Stapledon 2012). House price appreciation across developed countries, particularly in bigger, coastal, geographically constrained, high-amenity cities, has been typical in recent decades (Andrews 2010; Stapledon 2017). In Australia Sydney and Melbourne led the recent boom (as well as price declines since a peak in 2017; Figure 3B).

As with any market, the price of housing is determined by drivers that affect the underlying supply and demand (see for example: Otto 2007; Hatzvi and Otto, 2008; McLaughlin 2012; Carrington 2019). Here four commonly identified drivers are summarised: (1) population; (2) credit; (3) supply response; and (4) income.

Population

Firstly, as with delayed homeownership itself, changes in population factors have played a key role. Between 2000 and 2019, Australia's population grew by over six million: an average annual growth rate of 1.5% (Figure 3C) – above the 1.2% average over the previous two decades and three times the OECD average (UN 2019).

Just over 40% of this population change over the 20 years to 2019 was based on the natural increase of births minus deaths. The rest, about 3.7m, was due directly to an unexpected surge in inward migration which was moderating what was to be a rapid period of population ageing (note that migrants also affect the natural increases since they have children; see also Chomik 2015 about revisions to official population projections). In fact, the demographic outcome was that there were two ten-year age groups that saw the greatest gains: groups aged 20-29 (newly arrived migrants) and 60-69 (newly retiring baby boomers), each gaining about a million people.

The increase in the number of people, especially among younger households, would naturally drive demand for houses. But recent and temporary migrants tend to rent (see Box 3). Indeed, temporary migrants make up about 17% of Australian residents aged 20-29, and this increased over time. So, a key transmission channel between population growth and house prices in Australia may act via the rental market (Saunders and Tulip 2019). The influx saw greater competition for rentals, with vacancy rates more than halving from a high of 4.2% in 2002 to a low of 1.7% by 2007 (it has moderated since). In large part this was due to demand for locations close to inner city jobs and inadequate transport infrastructure from outer areas (Yates 2011). Rents consequently rose, sending a price signal that housing demand was exceeding supply, especially in the migrant hotspot of Sydney (Figure 3D). This may have been enough impetus for buyer demand given the right credit conditions. The rental channel may also explain why there were lags between changes in population, house prices, and supply responses.

Credit

The second major driver of demand was the deregulation of banking which allowed more people to access credit and a low-inflation-low-interest environment that reduced its cost (Ellis 2005, 2006; Figure 3E). That is, an expectation of lower long-term interest rates could push prices up even in the absence of rental price changes. Indeed, as has been the case in other advanced economies with similar credit conditions, housing credit in Australia has more than tripled since 2000 (Figure 3F). But the distribution of credit was uneven. Owner-occupiers lost share to investors who were attracted by future rental and capital gains and first home buyers lost share to up-graders with greater borrowing capacity (each ratio has recovered slightly by mid 2019; Figure 3G).

Australian tax arrangements (explained further in Section 1.5) may interact with investor sentiment and play a procyclical role rather than dampening the business cycle. Even as rents were going up, gross rental yields – a function of rent and price – were flat or declining (Figure 3H; some cities saw increases in yields on units between mid- and late-2000s, but still well below pre-2000 levels). The ever lower rental yields didn't deter investors with access to cheap credit and expectations of capital gains – an outcome partly facilitated by the tax system and loose monetary policy.

That is, investment costs in excess of rental income can offset other forms of assessable income, including earnings (known as *negative gearing*), attracting non-institutional investors who speculate on capital gains. Institutional investors, of which there are few in Australia, may be more likely to focus on rental yields (Milligan et al. 2015). Capital gains in turn attract a 50% discount if the investment is held at least a year (a shorter period than in countries with more stable housing markets such as Germany). The policy (introduced in 1999) might also favour short-term investment since realising a gain later means greater taxes on illusory inflation gains. Empirical evidence suggests that any such tax advantages are capitalised into housing prices (Andrews 2010).

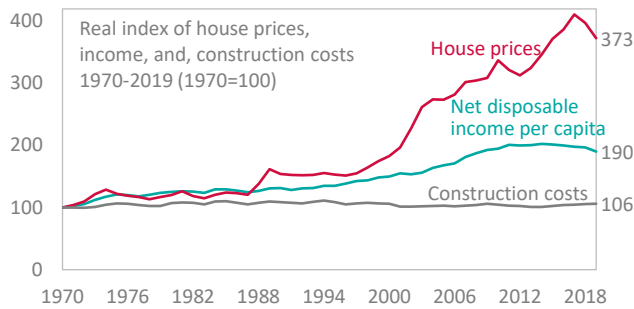
Supply

The third commonly cited driver is housing supply, or rather, its delayed response. Much housing investment has been from non-institutional, small-holder investors, which results in the bidding up of prices of existing properties rather than building new ones. Some extra investment demand also came from foreign buyers (FIRB 2019). But it wasn't until about 2014 that construction commencements took off (Figure 3I) – almost a decade after both population and prices first surged (See Box 7 on estimated supply responses in NSW). OECD analysis, based on data up to 2009, suggests that the price responsiveness of supply in Australia is in the middle of the pack, behind North American and Scandinavian countries (Sánchez and Johansson 2011).

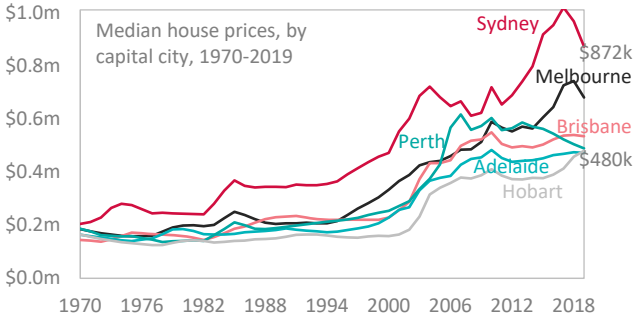
The most obvious reason for a muted supply response is that land is in fixed supply (so it absorbs much of the excess returns from higher prices) and the release of greenfield land has been limited. But there are other possible explanations, including: (1) planning system impediments (e.g., uncertainty or delays with approvals); (2) provision of infrastructure (e.g., absence, delays, or levy costs of utilities or lagging transport infrastructure); (3) land ownership and geographical constraints (e.g., fragmented fringe land ownership, national parks, waterways, particularly in Sydney); and (4) Public attitudes to infill development (e.g., affecting the planning process and legal costs of challenges; Hsieh et al. 2012).

WHICH MARKET TRENDS DRIVE HOUSE PRICE GROWTH?

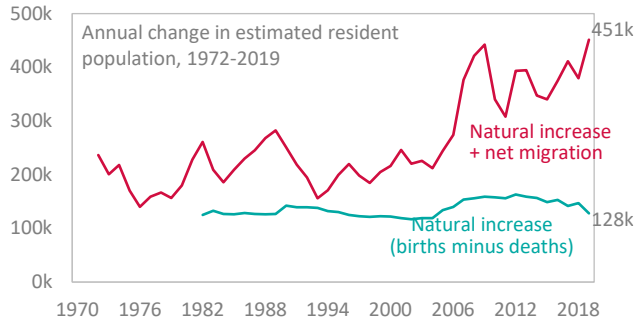
3A For two decades, house prices grew faster than income



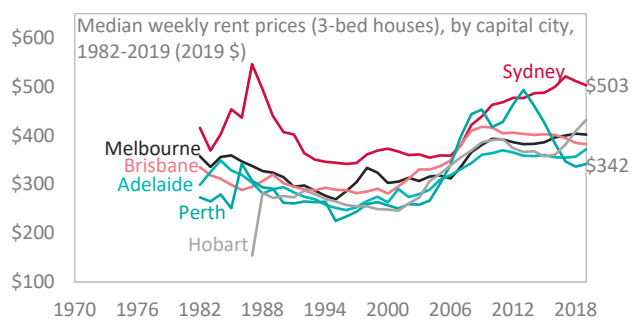
3B The price rise was often led by the Sydney market



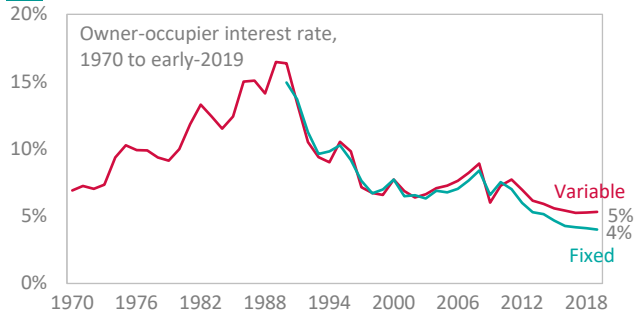
3C One driver was a rise in immigration and population



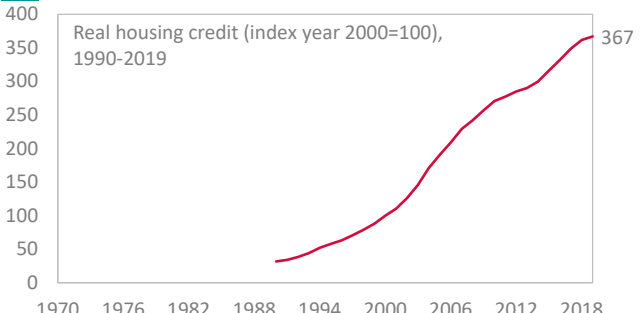
3D This pushed rents higher, especially in Sydney



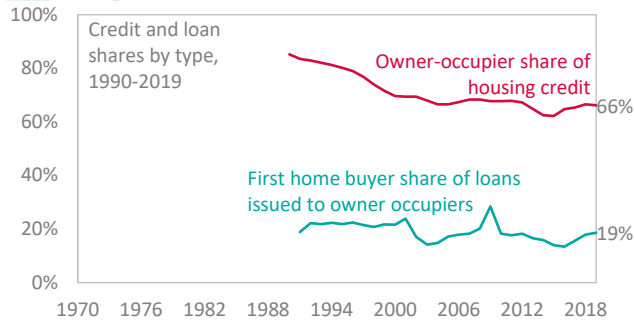
3E A second driver was cheaper, deregulated borrowing



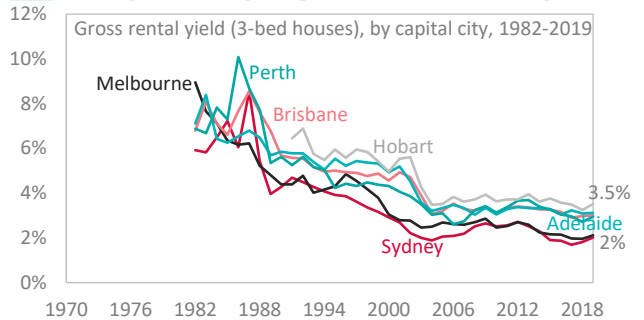
3F ...which resulted in a housing credit boom



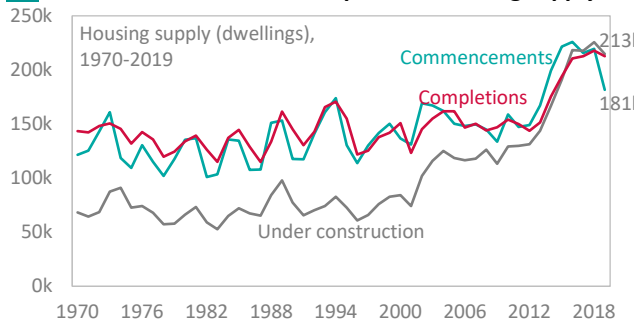
3G Though more credit went to investors...



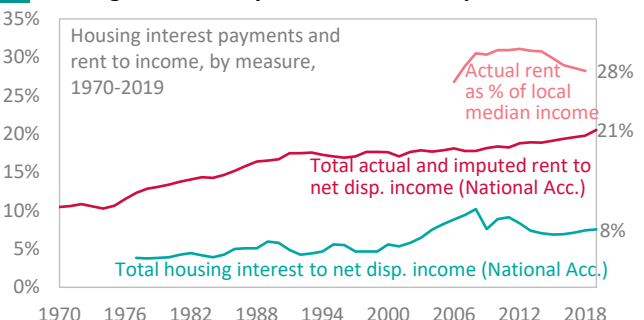
3H ...who pursued capital gain rather than rental yield



3I A third driver was a slow response in housing supply



3J Housing now takes up more income, despite moderation



Note: All figures are annualised. 2019 figures not full year (e.g., housing supply data are based on first two quarters of 2019). Gross rental yields may be understated since these are based on all median house prices not median rental house prices, which tend to be lower value. Imputed rent is included in 3J since owning is analogous to investing money elsewhere and renting instead. Source: Authors' analysis based on RBA, ABS, CoreLogic (2019), and REIA data.

Income

As noted, house prices have increased faster than incomes. Overall, the result of market trends has been that the value of housing consumption in Australia is taking up more income than ever before (Figure 3J). But more income is also being poured into housing. Based on National Accounts aggregates, about 21% of net household disposable income is allocated to housing consumption, a figure that ticked up even as rents and valuations declined. Mortgage repayments of about 8% of net disposable income are above the 5% average pre-2000, though below 2008 highs. Higher incomes are capitalised into prices, as may be expected, but another argument could be that housing is somehow different, and that in a rich, ageing society, much like healthcare, housing will simply attract a greater share of the income pie (see Jaaskela and Windsor 2011 on superior goods; also see Box 1 on income elasticity of house prices in NSW).

To understand the potential impact of house prices on affordability, it's worth also looking at how the distribution of house prices and purchase costs interact with the distribution of income. For *whom* are prices and costs unaffordable?

There are two key parts to this: being able to afford the deposit and being able to afford the mortgage repayments. Deposit affordability is a function of incomes, the rate of savings from that income, the rates of return on those savings, and finally house prices, which dictate the size of the deposit for a given loan-to-value ratio (taxes also add a cost: see Section 1.5). Repayment affordability depends on income available to repay the mortgage, the value of the purchased home and loan, and the mortgage rate on that loan. Each has changed over time.

To generalise, since house prices have increased and mortgage rates (as well as returns on saving) have decreased, it has become harder to save for a deposit but easier to service a mortgage. This is illustrated in Figure 4A-4D by looking at the distribution of income of young households against the distribution of all house values and the prevailing interest rates.

It shows that the bottom quintile has to a large extent been locked out of homeownership in the past. In 1996, they needed to save 5.3 years for a hypothetical 20% deposit for a house in the bottom quintile and over seven years for houses in the next quintile.

Households in the second quintile from the bottom could save for a deposit for between 3 and 5.2 years to purchase houses priced in the bottom to the middle quintile of houses. By 2016, the years it took to save for a deposit increased to between 4 and 7.9 years. In fact, the middle quintile now faces a higher deposit hurdle than the second quintile did twenty years ago.

Yet the opposite trend appears with respect to mortgage costs. In the 1990s, homeowners in the middle quintile wanting to pay less than 30% of their gross income on mortgage repayments had a choice of just 20% of houses. By 2016, they could access 40% of houses and stay below this benchmark. The second quintile had no option but pay more than 30% in income in the past, now they can but only by buying the cheapest 20% of houses.

The analysis is illustrative – it ignores the spatial dimension and that cheaper homes may be far from jobs and amenities and lacking in transport links. And it ignores the stress testing employed by lenders which will inhibit the amounts loaned. There may also be some self-sorting of young people buying cheaper houses (e.g., second quintile households by income buying houses in first quintile of prices). But it demonstrates the point that a key hurdle with high house prices is saving up the deposit while mortgage costs are declining despite price rises, for now (see Figures 36E-F on actual mortgage stress trends, which indeed show declines among mortgagors).

The changed dynamic is significant. Based on behavioural finance and pension literature (Thaler and Benartzi 2004), we know that the arrangement of a cheaper deposit but more expensive repayments in the past would have meant that buying a house operated as a pre-commitment device to save, overcoming behavioural bias for current consumption. Now, the higher initial savings hurdle means locking in future home equity savings has become harder.

HOW DO THE HURDLES TO HOMEOWNERSHIP COMPARE OVER TIME?

4A In the past, it took fewer years to save for a deposit

Years to save for hypothetical deposit 1996

		1996 distribution of house prices				
		Low	Q2	Q3	Q4	High
1996 household income, age 25-45	Low	5.3	7.3	8.8	10.7	15.9
	Q2	3.0	4.3	5.2	6.5	10.4
	Q3	2.3	3.3	4.0	5.1	8.3
	Q4	1.8	2.5	3.1	4.0	6.7
	High	1.2	1.7	2.1	2.7	4.7

4B Recently, this has become a greater hurdle

Years to save for hypothetical deposit 2016

		2016 distribution of house prices				
		Low	Q2	Q3	Q4	High
2016 household income, age 25-45	Low	7.3	11.1	14.0	18.8	33.6
	Q2	4.0	6.2	7.9	10.8	20.1
	Q3	2.9	4.5	5.8	8.0	15.2
	Q4	2.2	3.5	4.5	6.2	11.8
	High	1.4	2.1	2.7	3.8	7.3

4C But high rates in the past meant servicing was costly

Hypothetical Mortgage as % of net income 1996

		1996 distribution of house prices				
		Bottom	Q2	Q3	Q4	Top
1996 household income, age 25-45	Low	63%	94%	119%	156%	290%
	Q2	30%	44%	56%	74%	137%
	Q3	21%	31%	39%	51%	95%
	Q4	15%	22%	28%	37%	69%
	High	9%	13%	17%	22%	41%

4D Mortgage costs are now lower despite price hikes

Hypothetical mortgage as % of net income 2016

		2016 distribution of house prices				
		Low	Q2	Q3	Q4	High
2016 household income, age 25-45	Low	46%	72%	93%	130%	260%
	Q2	23%	36%	46%	64%	128%
	Q3	16%	25%	32%	45%	90%
	Q4	12%	18%	24%	33%	66%
	High	6%	10%	13%	18%	36%

Note: Analysis is illustrative only. House price distribution is based on values of all owner-occupied houses in given year in the ABS SIH. Income is for households aged 25-45 in the same survey. Years to save for a 20% deposit is based on saving 20% of net income, which attracts an interest rate of 7.5% in 1996 and 1.5% in 2016, based on cash rate. Note that loan-to-value ratios were commonly higher in the past. Mortgage rates on 80% of house value are assumed to be 10% in 1996 and 5% in 2016 based on RBA data and apply to a 30-year mortgage. Source: Authors' analysis based on ABS and RBA data.

Box 1 CEPAR research spotlight The relationship between income and house prices

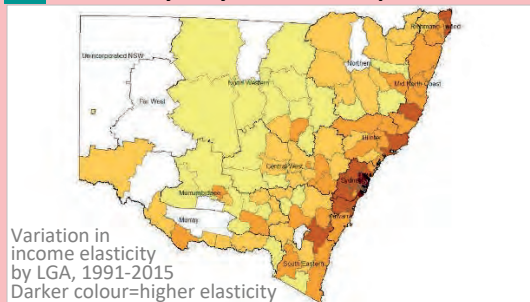
Higher incomes often lead households to spend more on bigger, higher quality, better located, and more expensive houses. Economists describe this relationship as the *income elasticity of demand*. So, what is the magnitude of the relationship and does it differ by location and time?

In Liu (2019), former CEPAR Research Fellow Xiangling Liu analysed data from 144 Local Government Areas in New South Wales between 1991 and 2015. Using statistical methods such as *multi-factor panel data modelling* and *cointegration analysis*, she found that the income elasticity of house prices across the state (which she uses as a proxy for income elasticity of housing demand) was 1.07.

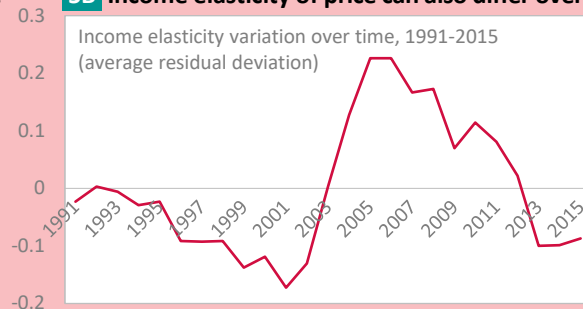
She also tested for causality and found that the transmission was from real incomes to real house prices. The finding suggests that a dollar of extra income increases house prices by more than a dollar (though simultaneously declining interest rates could also cause this effect). Furthermore, prices are more sensitive to income in and around Sydney and less so in more remote areas (Figure 5A). Testing whether there were some unexplained but common shocks across NSW reveals that prices did at times shift together, but there was also some evidence of the presence of shocks led by Sydney that rippled out to nearby areas.

Finally, a cross-sectional analysis suggested that there were cyclical deviations from the equilibrium level of elasticity of 1.07, but these were found to revert to the long run relationship.

5A Prices in Sydney are more responsive to income



5B Income elasticity of price can also differ over time



Source: Liu 2019

1.3 Demographic trends: Living longer, leaving it longer

The increasing price tag of houses is the most cited reason for declining homeownership. But could demographic forces play a role? It's plausible that the same demographic shifts that have led to longer lives and the ageing of the population also act to delay the typical age at which people are ready to purchase a home. If so, then perhaps homeownership rates of younger cohorts now may yet reach the rates seen among older cohorts as the younger cohorts age.

The idea is not new (see Box 2). But data from the last half-century can help us stand back and see the broader demographic context in which to view changes in housing tenure.

Newly extracted data presented in chart 6, tracks the age at which half of the Australian population in a given year attained specific milestones, for years 1966 to 2016. It shows that over this period the envelope within which we live our lives – the median age at death – has extended by 12 years from 70 to 82.

Longer median lives are, in turn, associated with longer adolescence and later ages of leaving studies and starting work. For example, the median age of starting any work was 16 in 1966, but 18 in 2016; and the age of starting full time employment increased from age 16 to age 25 over the same period. Also, as is well documented (e.g., ABS 1994), the typical age at which women first become mothers increased by eight years over the last fifty years. Marriage, which is associated with new household formation (see Box 2) increased by 4 years, to age 31.

The potential delay in house purchase sits in this context. In fact, house purchases were made later in life in the 1960s (age 27), compared to the 1970s (age 24), before homeownership become more widespread. The typical age at which people become homeowners has since shifted by 9 years, from 24 to 33. The typical age of paying off the mortgage has also been deferred, from age 52 to age 62. While the typical age at which Australians leave the labour force has surged by four years just since 2001, to age 64, the rate of increase has not matched changes in other life events. In fact, it may need to increase further to accommodate later home purchases and delayed mortgage repayments.

The age at which the majority of the population start living alone – either through divorce, separation, widowhood, or never having been married – increased by 10 years to age 83 (ages higher than median age at death indicate that the event affects the majority of the *remaining* age group). Incidentally, divorce rates have declined since the 80s (based on ABS Cat 3307.0) but they can reverse homeownership status – nearly a quarter of divorces result in homeownership loss (based on HILDA; also see Wood et al. 2013 and Asher et al. 2017). Finally, while age of disability hardly changed, entry into care is taking place later (age 85 in 2016, up 3 years since 1996); for many people not at all (given lower median age at death).

The pattern is also apparent based on the average change per year (Figure 6B). For example, looking at changes since 1981 (when homeownership rates first started declining) the annual delay in house purchase of 13 weeks per year is only slightly higher than the delay in entering full time work and marriage (10 weeks per year) and less than the average annual increase in median life at death (15 weeks per year).

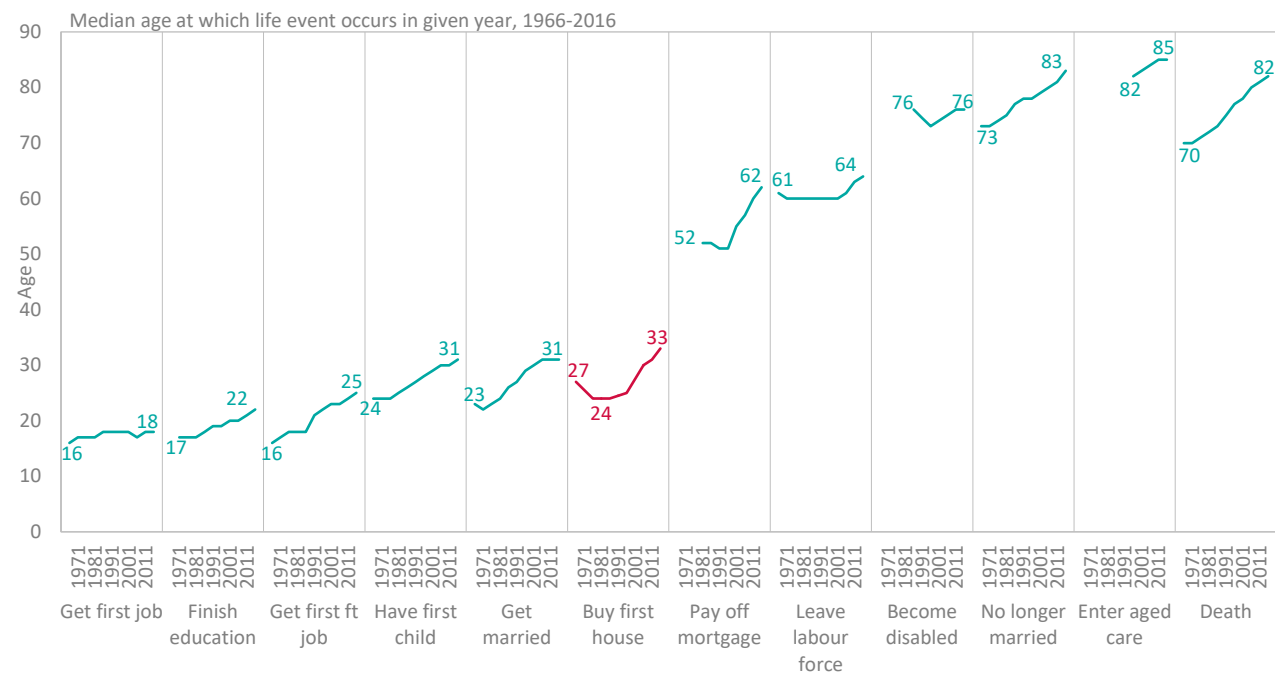
It's worth noting that this exercise is based on *period* rather than *cohort* measures. That means that each event is based on what is taking place in a given year for each age group in that year and may not apply over an actual lifetime. For example, the 34-year-old age group that attained majority homeowner status in 2016 will likely experience deaths at a later age than the observed median age of death of 82 in 2016. As such, rapid increases in age of events over time will overestimate the rate of events that tend to take place in earlier stages of life and underestimate those that take place later in life. This implies that even a 9-year delay to homeownership could still see younger generations enjoying homeowner status for longer than older generations did.

The other important caveat is that while the analysis captures the median, it omits the evident outcome that an increasing minority, mostly low-income individuals, never attain homeownership (as noted earlier). Many obviously also don't follow the same lifecycle patterns of household formation described by the median. Future analysis will break down the extent to which different socioeconomic groups have experienced similar delays.

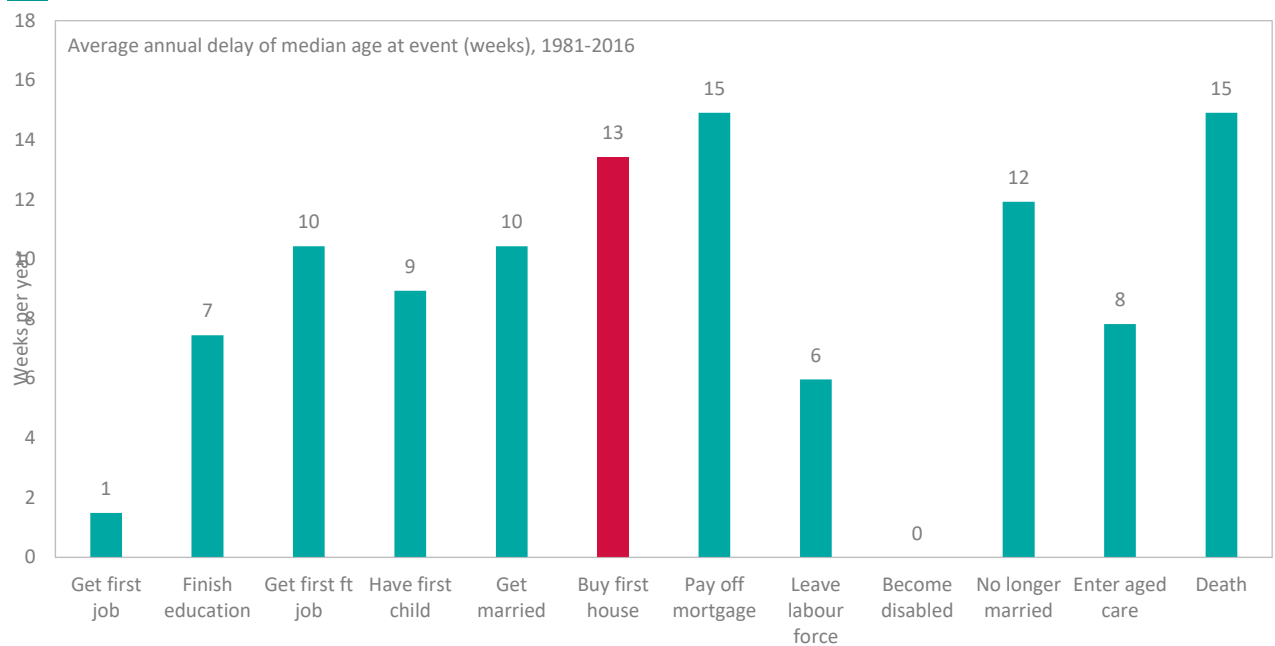
Other important questions remain. For example, to what extent will deferral result in catch up over the full lifecycle given the large falls in homeownership at younger ages and the already apparent falls among ages nearing age 65? This is still an open question. Deferring too long could lock people out of the housing market by inhibiting access to mortgages that commonly last for 25-30 years, even if they intend to work to later ages. If trends continue, they will indeed work much longer than past generations. Existing projections are pessimistic about catch up (Ong et al. 2019; Daley and Coates 2018b), but seen against the wider demographic context, homeownership decline at younger ages does not appear out of the ordinary.

WHAT IS THE DEMOGRAPHIC CONTEXT FOR DEALYED AGE OF FIRST HOME PURCHASE?

6A Deferred entry into homeownership is in line with deferral of other life events over the last 50 years



6B Life expectancy is increasing faster than the age of buying one's home



Note: The median age here is a period measure and represents the age at which over 50% of a population in a given year attain a given event. Age of house purchase and outright ownership based on ages of household head and household ownership tenure; age of having a child based on female population; other measures based on persons. 'No longer married' category is based on legal marital status so may be understated. Outright ownership, disability, and aged care data are since 1981, 1988, and 1996, respectively. Source: Authors' analysis based on ABS Census, customised ABS data, ABS SIH, and customised AIHW data.

Box 2 CEPAR research spotlight Homeownership deferral among Generation X

Whether homeownership declines are a matter of unaffordability over the lifecycle or comprise demographically determined delays in house purchase is not a new debate. If the latter effect dominates, then the implication is that policy responses can be more measured. The answer is not simple, since there is evidence of both effects.

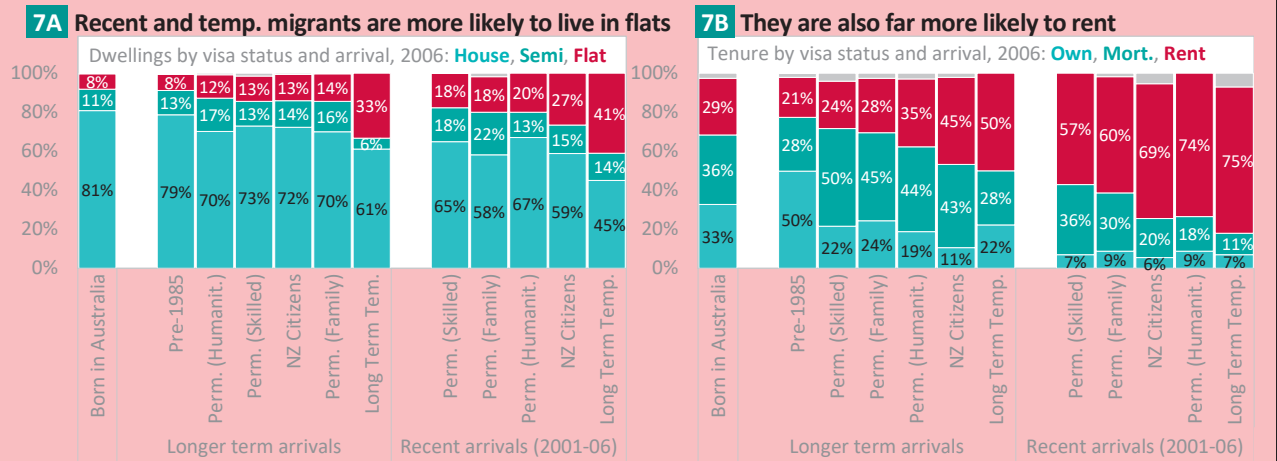
CEPAR Chief Investigator Peter McDonald has looked extensively at delays in marriage and childbearing patterns (McDonald 1994) and pioneered the modelling of household formation now used by the Australian Bureau of Statistics to project household numbers which requires a decomposition of such time trends (McDonald and Kippen, 1998). He also made use of such techniques to look at housing. For example, in Baxter and McDonald (2004), he showed how tenure evolved for the Generation X cohort. Once other characteristics were considered, there was little indication that homeownership fell for those born up to 1974. In fact, this generation were more likely to be homeowners than earlier cohorts, especially men.

The research also found that the biggest factor associated with homeownership was formal marriage, but that controlling for marriage, the likelihood of homeownership decreased as the number of children increased, perhaps because home purchase is delayed with more children. The analysis presaged the idea that increasing shares of the population who never marry could lead to falls in homeownership (but that fewer children could see it increase). Most importantly, trends for those who were in their 30s in the 1990s showed that delayed household formation was a key factor determining homeownership, implying the potential of a catch up over the lifecycle.

Box 3 CEPAR research spotlight Migration and housing: More flats, more renting

Australia has always had a large inward flow of migrants who have continually influenced the country’s housing landscape. Over the last decade migrants have had a particularly strong effect on population growth in Sydney, Melbourne, and Perth. But even short-term migrants can affect the housing market and skew the cross-sectional statistics that purportedly describe the typical Australian resident. For instance, overseas migrants are much younger than existing residents – over 40% of inward migrants are in their 20s (ABS Cat. 3101.0).

CEPAR’s Chief Investigator Peter McDonald is Australia’s leading demographic expert on migration. In a paper with Associate Professor Jeromey Temple and other colleagues, he conducted a scoping study of housing needs of migrants and how they compared to the local population (Khoo et al. 2012). They found that migrants are more likely to live in larger, often multiple-family households; temporary migrants are more likely to live in flats and be renters (Figures 7A-B), which could overstate declines in homeownership at times of high migration); and permanent migrants with longer duration of residence were highly likely to own houses. Of recent arrivals, those from New Zealand and skilled migrants were more likely to pay higher rents than family and humanitarian permanent migrants. Yet, perhaps unsurprisingly, skilled migrants were less likely to report affordability stress. Migrants were also more likely to move to a new house (usually for work), creating greater churn in the housing market than might otherwise occur.



Note: Grey bars denote 'other'. Source: Khoo et al. 2012.

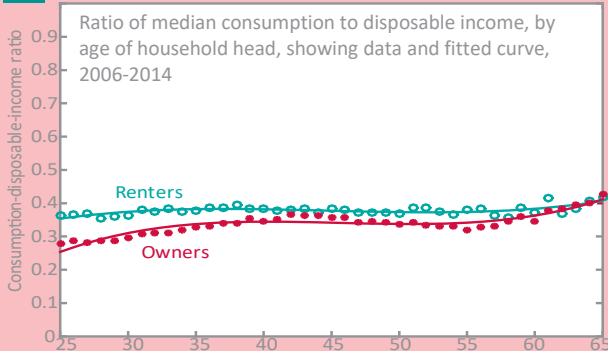
Box 4 **CEPAR research spotlight** **At what age should you buy a house? Weighing up the risks**

There is a natural trade-off between buying and renting. While renters can afford to spend more money in their day-to-day life, owners may need to sacrifice some current consumption to benefit from greater housing wealth in retirement. But the decision is complicated by various risks over the lifecycle that affect this choice. For a start, the purchase decision depends on various labour market risks over one's career that affect the ability to save for a deposit and secure a mortgage. Even after a purchase, owners run the risk of seeing their wealth eroded when house prices fall or when they want to run down some of their house equity. On the flip side, those that keep renting face risks of being evicted (see section 3.3), seeing their rents rise, and falling into poverty (see section 3.2).

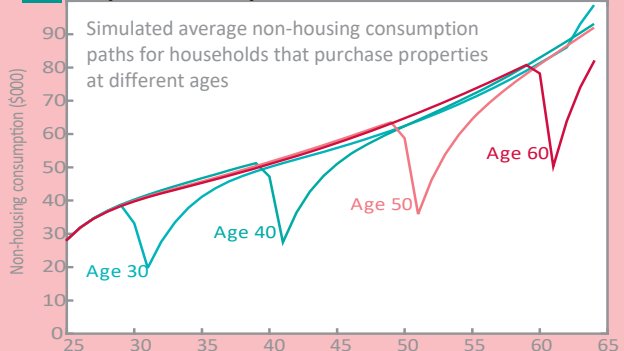
CEPAR Senior Research Associate, Mengyi Xu, undertook a project to weigh up these risks and analysed the impact of purchasing an owner-occupied home at different ages. In Xu (2017), she constructed a multi-period model of consumption and investment decisions that are subject to labour market, asset-price, and rent-price risks based on Australian settings. The model also uses consumption and asset allocation decisions based on observed data (from Household, Income and Labour Dynamics in Australia survey, HILDA), which reflect an average Australian's decisions in his/her age group and housing tenure. She found, for example, that renters tend to have greater levels of consumption than owners, as could be expected (Figure 8A). This appears to lead them to not only miss out on building up housing equity but, to a small extent, lower accumulation of financial assets (i.e., lower investment in shares). And the difference of participation in the share market between renters and owners increases with age.

Simulations are used to shed light on such dynamics. When households first purchase a house, they experience large falls in non-house consumption, which lasts about a decade (Figure 8B). Yet by the time they get to retirement, their wealth is simulated to be considerably larger (Figure 8C) despite super becoming the dominant asset. The analysis also looked at impacts on risk-adjusted utility (*certainty equivalent consumption*). On the one hand, the model suggests that purchasing earlier lowers lifetime utility from consumption while deferring to age 50 allows people to enjoy the benefits of becoming a homeowner at a lower cost. On the other, if people care about wealth at retirement, then purchasing early is preferred (Figure 8D). These conclusions hold despite varying levels of wealth, income, and rent, and tax treatment of different assets.

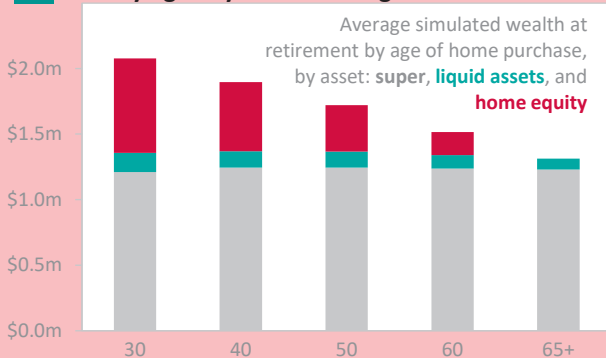
8A Renters tend to consume more than owners initially



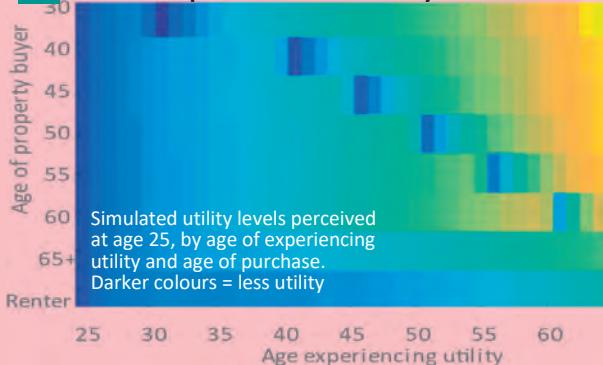
8B Drops in consumption also evident in simulation



8C But buying early can result in greater wealth



8D The sweet spot is to defer disutility but not too much

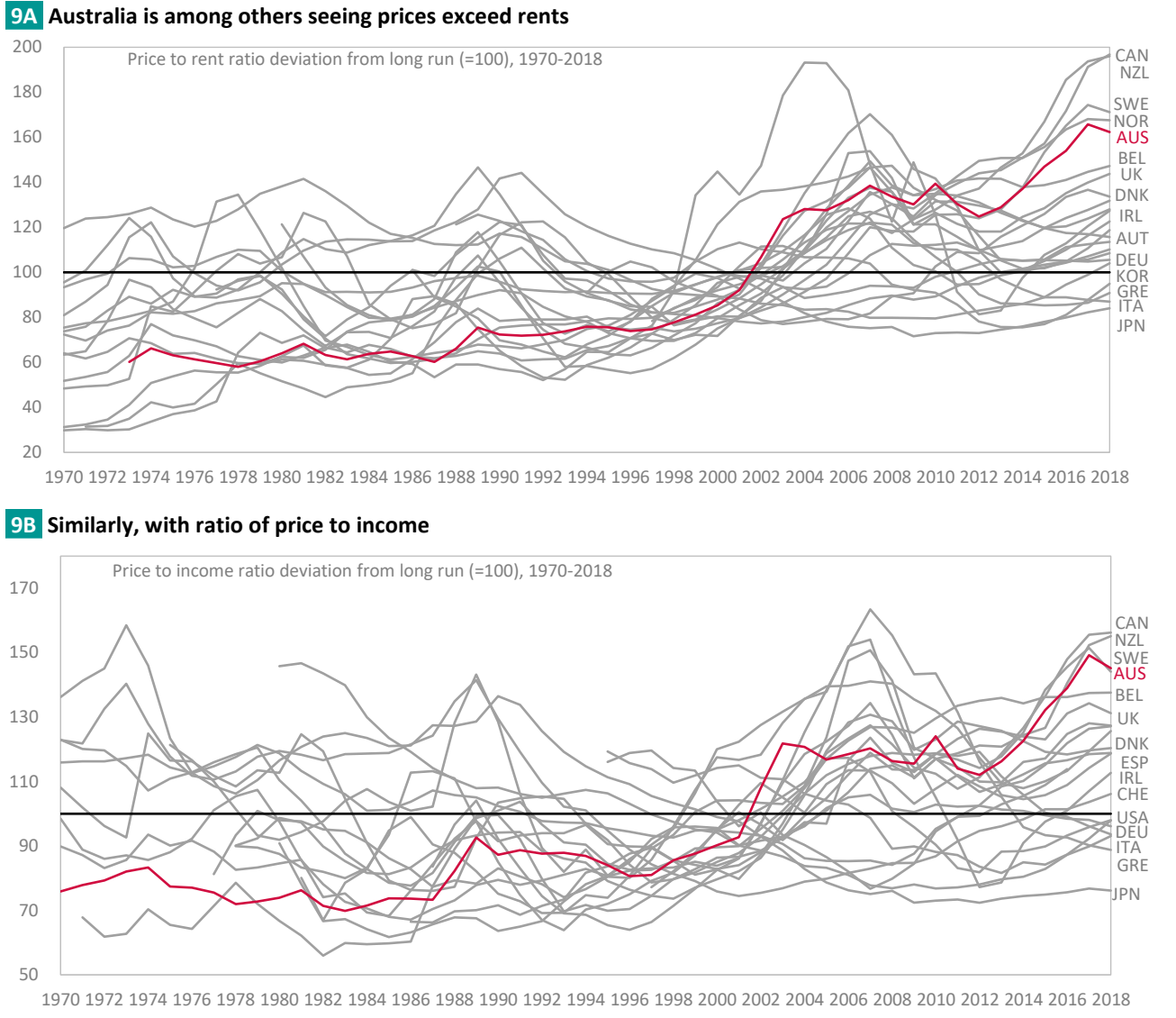


Source: Xu (2017)

1.4 International trends

Australia is not alone in experiencing house price appreciation (see Box 5). A helpful way to make cross-country comparisons is to look at how each country’s prices have deviated from their long-term *prices-to-rents* and *prices-to-incomes* ratios. These are shown in Figures 9A-B. It confirms the previously noted relationship: that Australia’s house prices appear high relative to long-run ratios. The increase has been greater than in most countries, but less than in Canada, New Zealand, Sweden, and Norway, and just above the UK and Belgium.

CROSS-COUNTRY HOUSE PRICE TRENDS?



Note: Not all country names are indicated. Source: Authors’ analysis based on OECD data

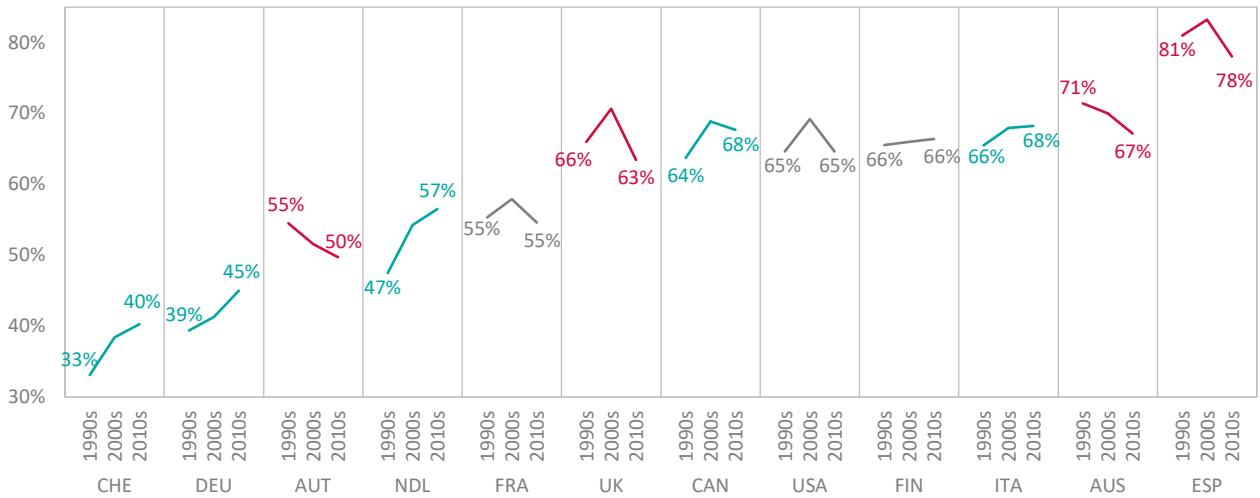
Total homeownership rates have not declined everywhere. Switzerland, Germany, the Netherlands, Canada, and Italy saw rates increase (Figure 10A). Australian declines were on par with those in Austria, UK, and Spain. An analysis by age confirms that older Australians tend to have high ownership rates compared to other countries (Figure 10B; though not shown, former communist countries tend to have the highest rates).

Change over time suggests that declines in homeownership among younger people in Australia is not unusual (Figure 10C). Declines among young people in the UK and Spain were greater than in Australia. Italy and Germany, where prices hardly budged, mirrored changes at younger ages seen in Australia. It’s worth noting that some countries where total ownership rose experienced a simultaneous decline in homeownership rates among young people. This can be explained by population ageing. Older people, who have higher rates of homeownership, are making up a greater share of the population, more than offsetting declines at younger ages (see also Andrews and Caldera Sanchez 2011).

CROSS COUNTRY HOMEOWNERSHIP TRENDS

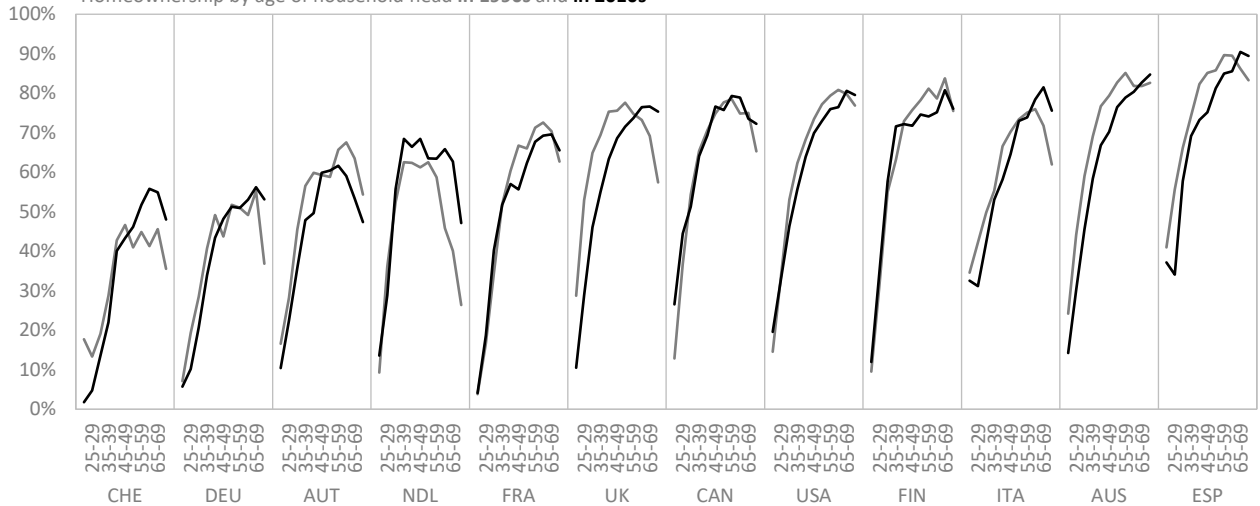
10A Total homeownership rates have not declined everywhere. In fact, many countries have seen rates increase

Total homeownership rates (counting households by household tenure), selected countries, 1990s-2010s



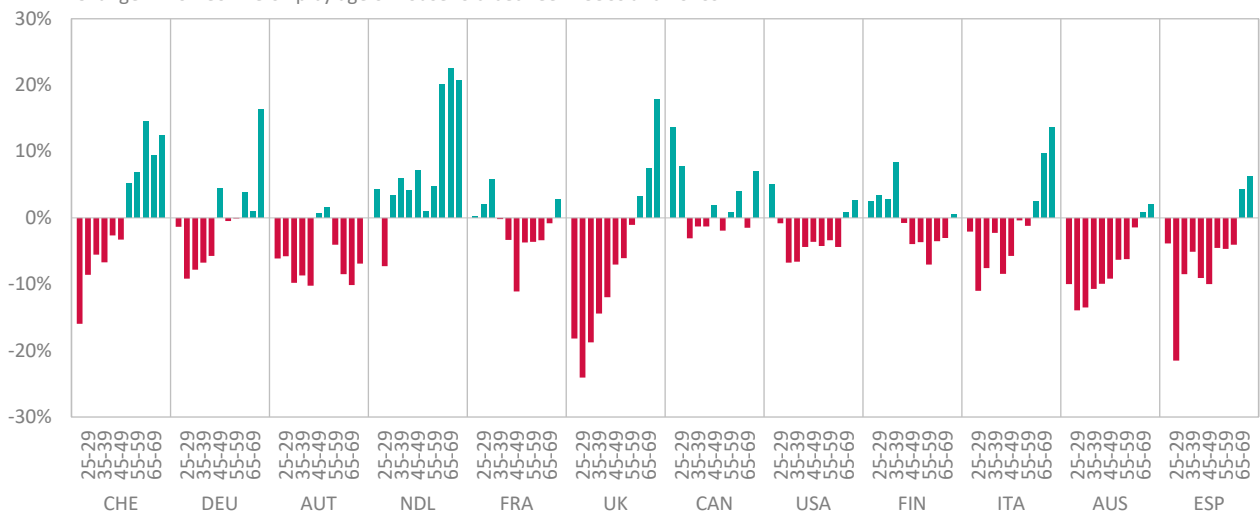
10B At present, older Australians tend to have high homeownership rates compared to those in other countries

Homeownership by age of household head in 1990s and in 2010s



10C Declines in homeownership among younger age groups can also be observed in other countries

Change in homeownership by age of household between 1990s and 2010s



Note: Years may differ within the decade, but mostly relate to middle of each decade (e.g., 2010s Australian data is for 2014-15). Source: Authors' analysis of data from Luxembourg Income Study.

Box 5 **CEPAR research spotlight** **Cross-country evidence on demography and house prices**

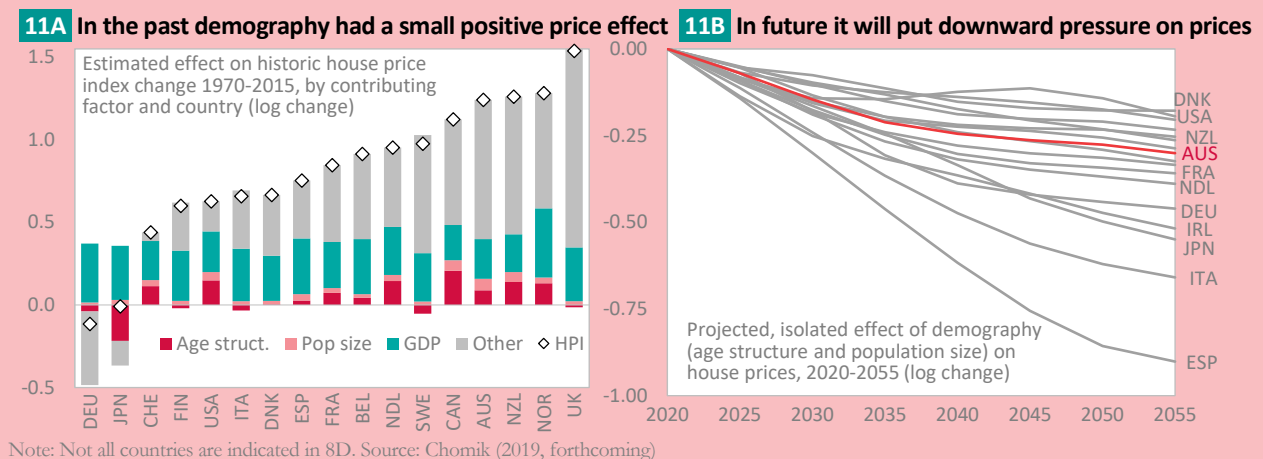
According to the lifecycle theory of savings, people tend to maintain a similar level of consumption over their life and to do so they build up assets in youth and middle-age and spend them in old age. It implies that the aggregate level of savings will be affected by the underlying demography: more people in their prime or longer anticipated retirements should see a greater level of savings.

The expectation is that a similar pattern should be observed with housing, in which people build up equity in working life that is then draw down in retirement or late age when needing long-term care (either by selling, downsizing, or via equity release products, see Section 2.4). If true even to a small extent, then population ageing will affect the patterns of property investment and prices.

In a forthcoming paper, CEPAR Senior Research Fellow Rafal Chomik is looking at how population age structures have historically affected house price growth and the influence that future demography might have. Over the past 50 years (1970-2018) house prices have grown faster in some countries and in varying cycles. Demographic change has also not been uniform. Such heterogeneity can be exploited to measure empirically how age distributions relate to house prices.

Preliminary findings suggest that countries and periods with high proportions of prime-age workers were associated with higher house prices, presumably due to higher demand for houses; conversely shifts to older populations were associated with downward pressure on prices, though presence of older people had a lesser effect. About 7% of the growth in the Australian real house price index between 1970 and 2015 could be attributed to changes in the age structure (Figure 11A). The analysis suggests that the largest share of unexplained house price increases were in countries where prices increased the most.

Population ageing does not necessarily mean future declines in real house prices given that these are also affected by other factors, including economic growth and supply responses. Indeed, past predictions of an ‘asset meltdown’ due to ageing have hardly taken place. But if historic relationships bear out in future, demographic change in OECD countries, including in Australia, could put some downward pressure on house prices (Figure 11B).



1.5 Policy trends affecting tenure in the private market

As described, homeownership declines relate to a complex set of interactions that include demographic change, cyclical factors, and structural issues in the demand and supply dynamics. Policymakers wishing to facilitate homeownership and access to housing more broadly have a menu of options (Figure 12). These include measures that support the purchase on the demand side or encourage housing provision on the supply side (in rows). Policy instruments can also be divided into taxes, subsidies, and regulations (in columns).

12 Australian governments use some of the available levers to tackle housing access & affordability in private market

	Tax	Subsidy	Regulation
Demand	1.1 Mortgage interest tax deductible 1.2 Owner-occupiers can claim depreciation 1.3 Preferential tax for home-savings plans 1.4 Rent payments tax deductible 1.5 Tax credits for low-income tenants 1.6 Transfer tax discount for first home/low inc. 1.7 Tax relief on workplace savings schemes 1.8 Property tax relief for low-incomes 1.9 Exemption from transfer tax for new homes	2.1 Housing allowance 2.2 Subsidies to savings for house purchase (interest subsidies or one-off grants) 2.3 Mortgage relief or subsidised mortgages 2.4 Mortgage insurance subsidies 2.4 First home buyers grants 2.5 Low-inc. buyer grant (not tied to saving) 2.6 Right-to-buy/discounts for public housing 2.7 Improvement grants for low-incomes	3.1 Government assigns housing to low-income households 3.2 Prudential regulations favour first homes 3.3 Early release of retirement saving in case of mortgage over-indebtedness
Supply	Income tax 4.1 Social housing provider tax exemption 4.2 Tax relief on investment in construction of affordable housing for rent or sale 4.3 Depreciation for rental units 4.4 Landlords offset rental inc. against expenses 4.5 Landlords offset rental loss against other inc. 4.6 Lower tax rate for landlords' capital gains 4.7 Tax relief for securities for affordable hsg. 4.8 Concession for housing-finance institutions 4.9 Concession for employer housing provision 4.10 Concessions for downsizing Land/property tax 4.11 Tax of empty land to encourage building 4.12 Tax of empty property to encourage use 4.13 Discount or abatement for build/renov. 4.14 Higher taxes on foreign buyers Sales tax 4.15 Reduced rate on conversions, new build 4.16 Housing associations pay lower sales tax	5.1 Build/renov grants for affordable housing 5.2 Loan subsidies for affordable housing 5.3 Subsidise provision of affordable housing 5.4 Grants to bring empty homes back to use 5.5 Guarantees for housing association loans 5.6 Guarantees of rent or mortgage payments from low-income households	6.1 Require developers to include certain percentage of affordable housing 6.2 Rent control 6.3 Require employers to provide housing 6.4 Prohibit change of rental to owner-occup. 6.5 Restrict foreign ownership 6.6 Land release programs 6.6 Planning and development policy

Note: Highlights denote main measures used in Australia. In some cases these relate to State support (e.g., mortgage relief in Qld, or first home grants). Other policies indirectly affect access and affordability to housing. These include fiscal and monetary policy, and policy related to infrastructure, public transport, retirement assets testing, town planning, and migration. Effectiveness of some measures listed may be poor or counterproductive (e.g., if arrangements subsidise over-investment in existing properties and lower supply for first home buyers. Source: Adapted from Yates and Milligan 2012 and Holmans et al. 2002.

In choosing policy instruments, caution may be advisable. Promoting homeownership at all costs can backfire. For example, policies that increased homeownership in the US, with low levels of regulation and no-recourse loan arrangements, saw all gains more than offset by market turbulence, but not before precipitating a global financial crisis (see Box 6 on contagion during the GFC). Also, rapidly changing labour markets and a need for flexibility may mean high homeownership may not necessarily be the ideal model, even though access and affordability would remain important regardless of tenure.

As acknowledged by the Australian Prime Minister himself, there is no 'silver bullet' in addressing housing access (Morrison 2017). Indeed, policies introduced so far have had mixed success. For example, while first home buyer grants or access to superannuation savings are popular and more important in Australia than other OECD countries (OECD 2016), they are small scale and poorly targeted (with differences by state). Increasing them in the absence of a supply response, is inflationary and transfers funds to existing asset owners. A similar case can be made about tax concessions to those that downsize. And subsidies for affordable housing developers have been shown to be poorly designed in the past (Daley et al. 2019).

In addition to intervening in the private market, government can act to provide housing itself via the social sector (i.e., provision would be effectively a fourth column in Figure 12). It is here where most housing policy attention has focused (see detailed discussion in Part 3).

Only recently has there been some headway toward setting housing supply targets and new housing finance arrangements to build affordable housing. But successive reviews and commentators continue to call for greater action with a multi-pronged approach that brings in policies across different portfolios (e.g., transport, urban planning, retirement income system) and across all tiers of governments (see summary of past reviews and

proposed reforms in Yates 2017). Working with states on planning and zoning is likely to be of greatest benefit when it comes to supply, as is recently being attempted (see also Box 7 on evidence of supply responses).

One particularly vexed area of policy is how tax affects the demand and supply of housing in the private market. This is touched on next.

Tax support for housing

Taxes affect house-buying and investment decisions as well as the propensity and timing of sale. It is the main form of public support for the mainstream, private housing sector and involves tax arrangements for owner-occupied properties, investments, and transactions.

Firstly, the owner-occupied principal residence is purchased with after-tax income (i.e., mortgage interest payments are not deductible). The imputed benefits that flow from it are therefore exempt from personal income tax, as are the capital gains. The tax treatment of owner-occupied housing is therefore crudely analogous to superannuation taxation in that it is taxed in the early part of the lifecycle but not later (i.e., in line with an expenditure tax approach). Such taxation is welcome because it minimises distortions between the price of consumption in working life and its price in retirement.

Secondly, residential property investments are treated under personal income tax like any other investment. Interest payments on debt used to purchase the asset are deductible, income derived from the asset (rent) is taxable under the personal income tax, and the capital gain on the property (held for a qualifying period) is taxed under capital gains tax. Because the capital gains tax is paid only on realisation, and is therefore lumpy, attracting higher marginal rates than would be the case under an accrual system, and because the nominal (not the real) gain is taxable, a discount is applied to the capital gains tax rate.

The discount is at 50%. Reducing the rate has merit in an era of low inflation. For example, a move to 40%, as proposed in Henry et al. (2009), could be contemplated. It would be better to do this to all assets incrementally, rather than grandfather existing arrangements. The latter course of action essentially protects people who have their affairs settled (for example, retirees) while penalising new entrants. It would introduce an undesirable element of intergenerational inequity. If this action were taken, the tax advantage of negative gearing would be reduced.

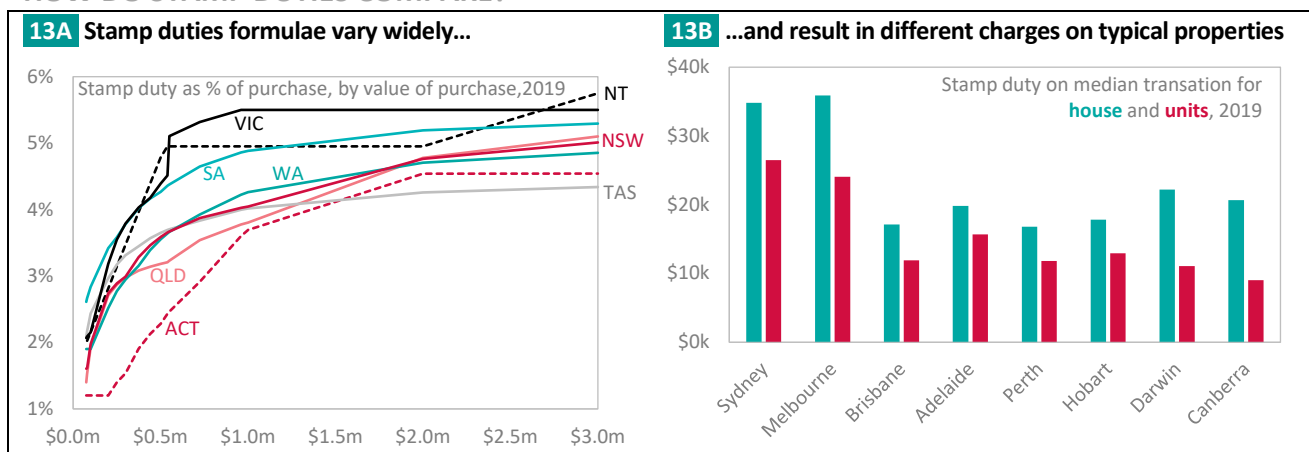
The existing tax treatment provides a tax advantage to a negative gearing strategy, which applies to all investments, not just property. That is, all allowable costs of earning income can be set against all taxable income (made use of by 1.3m taxpayers with an average rental loss of \$9,000, in 2016-17; ATO 2019). Again, there have been calls to limit negative gearing, or at least for it to be based on investment that leads to new properties. Some countries have limited such offsets (e.g., US and Canada), while others do not generally permit cross-income-stream deductions (e.g., the UK, Germany, and the Netherlands). Some argue that abolishing negative gearing could lower house prices by between 4 and 15% and raise billions in revenue (AFR 2016; Daley and Wood 2016), while others have argued that it would further complicate the income tax system (Henry et al. 2009).

Finally, all property is subject to stamp duty, which is a transactions tax. Such taxes are economically inefficient because they negatively distort behaviour. They limit mobility (and therefore also economic gains from a flexible labour market) and (along with the Age Pension means test; see Section 2.1) inhibit downsizing. Furthermore, stamp duties exacerbate the fact that saving up for a deposit is a key hurdle to homeownership (see Section 1.2).

Yet states rely heavily on these taxes, to the tune of \$100b in 2017-18. They make up about a quarter of revenue in NSW and Victoria; through to 10-13% in NT and ACT, the latter of which is phasing out the tax and abolished it altogether for first-home buyers. Formulae differ, with some more progressive than others, and result in varying levels of charges on typical sales (Figures 13A-B). Recent changes mean that first home buyers in Victoria and NSW and pensioners in Victoria, ACT, and the NT, can be exempt or receive a small concession on properties below a certain value.

Reforming stamp duty is commonly at the top of tax reform priorities (Henry et al. 2009). An alternative to stamp duty is land tax, a more efficient form of tax, already in place at a low level, but exempting owner-occupiers. Existing land taxes on investment properties are such that the tax base is calculated on the total investment property value, which deters investment in multiple properties on the same land. A comprehensively reformed land tax, applying to all land, including owner-occupied, could be introduced as property is transferred, rather than all at once, which would help reduce the budget stress that such a tax substitution would imply.

HOW DO STAMP DUTIES COMPARE?



Note: Stamp duties may not apply to first home buyers in some states. Typical costs based on state and territory medians in March 2019. Source: Authors analysis based on different sources and ABS data.

Box 6 CEPAR research spotlight Housing bubbles and macroeconomic risks

The United States stands as an example of how policies that seek to increase homeownership can backfire. US policies and circumstances that encouraged homeownership through lax regulation, including widespread no-recourse loan arrangements, are often linked to the subprime mortgage crisis that precipitated wider economic contagion with global implications, affecting capital and trade flows.

This is an area of research in which CEPAR Chief Investigator Warwick McKibbin has considerable experience. He developed a multi-country, multi-sector model, known as *G-cubed*, in which countries are linked to each other through flows of trade and capital. The model can also capture the spillovers of fiscal and monetary policy.

For example, McKibbin and Stoeckel (2009) modelled the effects of the Global Financial Crisis. The simulations revealed that the bursting of the US housing bubble saw not only a sharp reallocation of capital but also the *reappraisal* of risk globally, which then resulted in drops not only in household wealth and consumption globally, but also investment.

Indeed, some of the adverse trade effects from the US downturn would have been offset by the global reallocation of capital were it not for the reappraisal of risk. Without this reappraisal, Chinese investment may have increased and the world economy could have avoided recession.

The eventual economic impact of such a crisis depends on whether changes in risk perceptions are expected to be permanent or temporary. Permanent changes can lead to deleveraging, where businesses divest and households discount future labour incomes, which further reduces investment and consumption. The implication is that declines in the housing market can most affect the real economy via changes to sentiment, which can be contagious, rather than simply via the wealth channel, which affects homeowner balance sheets.

Future research is expected to yield insights that incorporate demographic features across the countries modelled in *G-cubed*, which will help answer questions about trade, investment, and asset prices across regions.

Box 7 CEPAR research spotlight Supply response: Comparing Sydney with regional areas

While cities are often the focus of housing analyses, regional areas are less studied. Yet regional areas in Australia aren't immune to price appreciation.

For example, between 2001 and 2005, Local Government Areas (LGAs) in regional NSW surged 66% in real terms on average; and 65 of 101 areas saw a rise of at least 30%.

Could it be due to a low or slow supply response? Such areas should be less subject to space constraints common in metropolitan locations, so supply should be less of an issue.

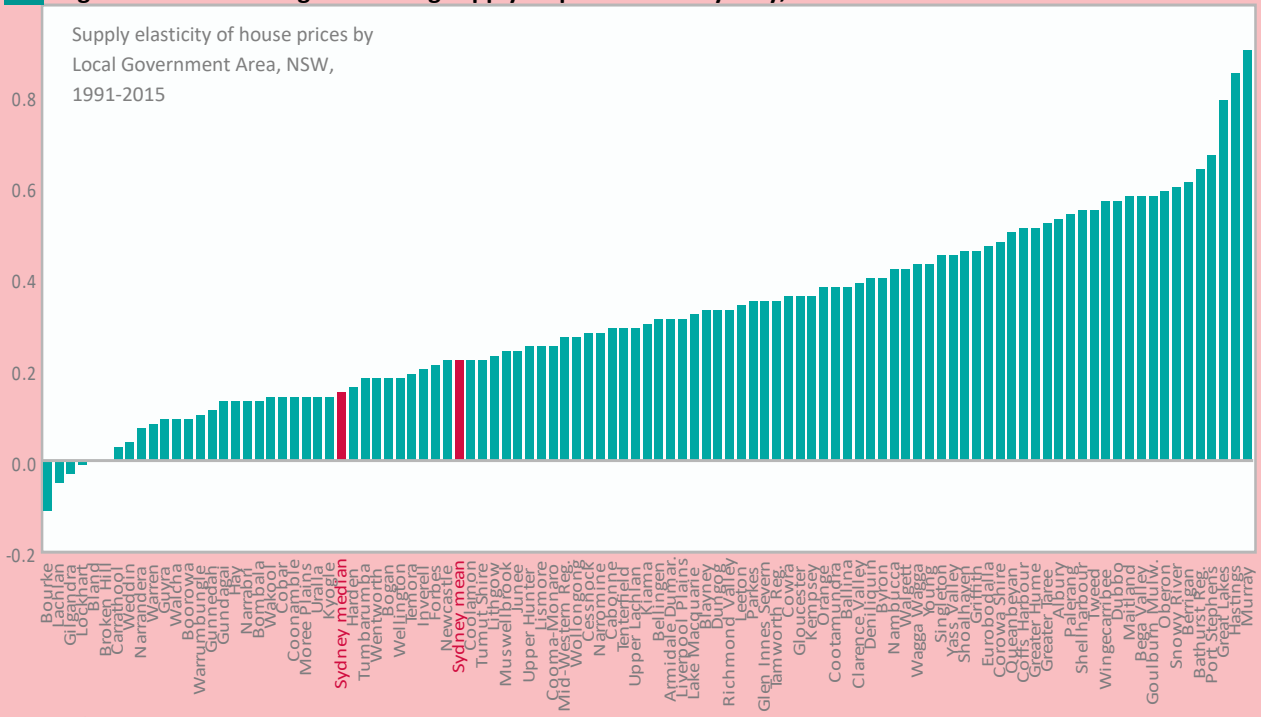
Former CEPAR Research Fellow Xiangling Liu looked at this in more detail. In Liu and Otto (2014), she estimated the supply responsiveness to house prices – the *elasticity* – across regional LGAs. She found that the elasticity was only 0.32 (or 0.25 if only occupied dwellings are analysed). That means that a one unit increase in price tends to lead to a third of a unit increase in supply.

While the supply elasticity for regional areas was larger than for Sydney, the difference was surprisingly small. And no area had a response rate of one for one, suggesting that houses across NSW are supply inelastic. The authors note that this contrasts with studies in the US, where the best performing regional areas did better than their best performing NSW counterparts. Murray, Hastings, and Great Lakes (now MidCoast Council) did best, but with elasticities below 0.90.

The small difference between Sydney and regional areas implies that common, state-wide factors play a role. Is it something that the State Government is doing, not individual councils?

State Government controls planning legislation and regional development strategies, while councils have autonomy to develop and implement local plans and control zoning for new houses. But the low supply response across the state suggests councils are inhibited by planning and zoning regulations at state level.

14 Regional areas have higher housing supply responses than Sydney, but these are still low across NSW



Source: Liu 2019

1.6 Where to next? Projecting housing demand

To what extent is supply meeting the demand for housing, and what does the future look like? Various attempts have been made to answer this question. For example, the National Housing Supply Council, which operated between 2008 and 2013, produced projections of housing supply and demand and the resulting gap (e.g., in NHSC 2011, this was done through to 2030). McDonald and Temple (2008) produced projections between 2006 to 2021 at a regional level and for different dwelling types. They found that the highest projected demand for dwellings would be in South East Queensland and that demand for flats in non-capital-city areas was expected to accelerate. Kohler and Merve (2015) estimated the extent to which supply has matched underlying demand but didn't extend this to a projection. Rowley et al. (2017) recently projected a subset of overall housing demand, through to 2025, by looking at housing need of households 'unable to access market provided housing or requiring some form of housing assistance in the private rental market to avoid a position of rental stress'. Based on this, Yates (2017) notes that affordable housing need is equivalent to 20,000 units per year.

Some states also produce their own projections. For example, the NSW Government produces five-year forecasts of housing supply based on the existing pipeline of development and recent zoning decisions (NSW Department of Planning and Environment 2019). In the latest report, it notes that Sydney's population is expected to grow by over around 1.7m people by 2036, resulting in a need for around 725,000 additional homes. It optimistically expects completions in Greater Sydney in the next five years to be higher than the last five years.

Here we update such attempts, showing the underlying demand for housing driven by demographic factors and the supply of dwellings net of demolitions. The underlying demand for housing is a function of the historic and projected estimated residential population (ERP), demand for second homes, and household size (which may be endogenous in the short term but is assumed to follow long-term trends). Supply is based on new dwelling completions net of demolitions. Projections are anchored to official population and household projections by the ABS but allow for a wider set of scenarios (ABS household projections are only based on the medium population estimate; see further assumptions in note to Figure 15).

The results are presented in Figures 15A-C. A visual inspection suggests that in the past, the pattern of dwelling supply responded to the peaks and troughs of annual demand – oscillating around an average of about 120,000 dwelling units – with a 3- to 5-year lag.

This dynamic changed in the mid-2000s. A sharp increase in demand, that first started in 2004, saw demand considerably exceed supply for a decade, driving the now familiar price increases. Not until 2014 did annual supply exceed annual demand. Similarly, the peak increase in underlying demand was in 2008, for about 190,000 dwellings, while the eventual building boom reached its peak of 190,000 net new dwellings ten years later.

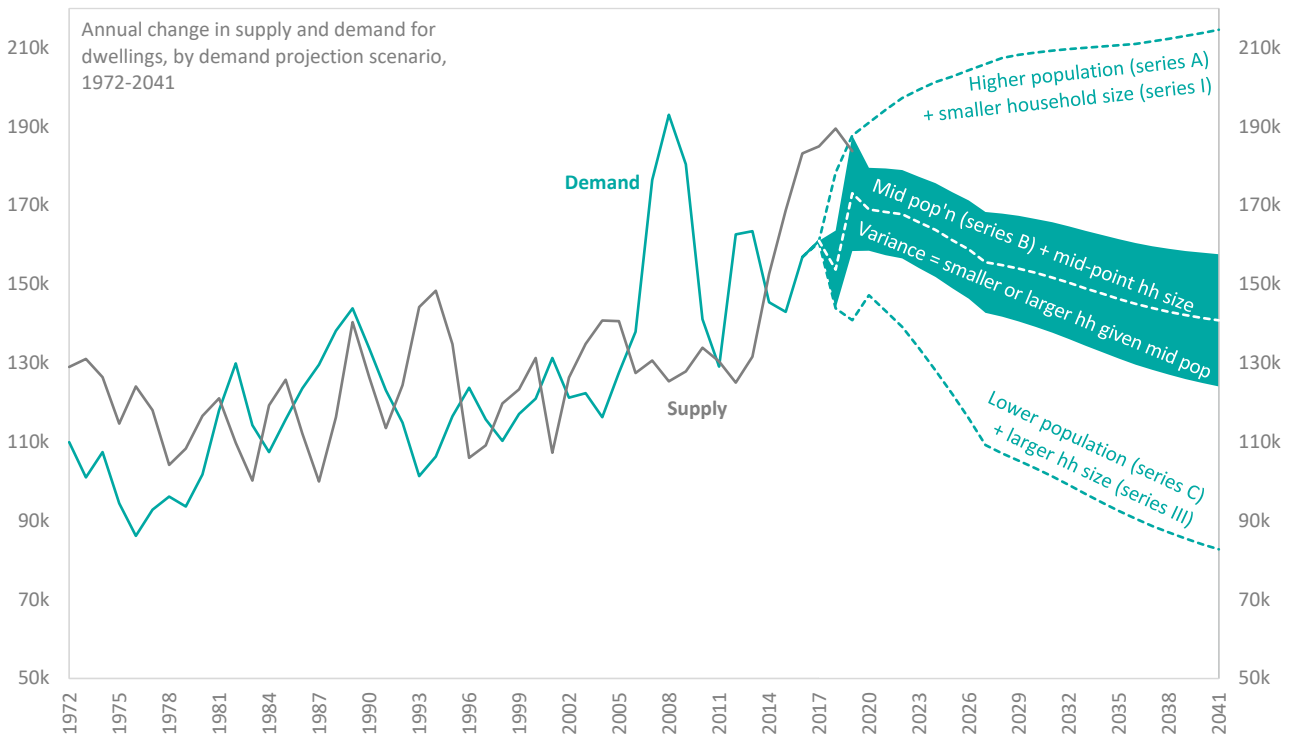
The projection implies some continuation of higher demand in the short term, but a deceleration in annual demand in the long-term. The main driver is a slightly slower rate of population growth in future than experienced in the late 2000s and household size ratio that remains broadly stable.

This would differ significantly if assumptions about fertility, migration, and life expectancy are high (denoted as population series A) or low (denoted as population series C). Actual underlying demand will in turn be affected by how that population arranges itself in terms of households. That is, whether households will continue to become smaller as they have since the 1970s (denoted as household series I, which sees household to ERP ratio declining from 2.63 now to 2.57 in 2041) or if the reversals seen in the 2000s will see household size increase (denoted as household series III and a 2041 ratio of 2.69). Consequently, there is a wide range of possible outcomes. Projected average annual demand for new houses through to 2041 ranges between 123,000 and 238,000 per year, with a baseline of 176,000 (see Figure 15B).

The recent deceleration of supply growth is concerning. As shown in Figure 15C, if supply were to return to its 20-year average (including recent boom) of only 170,000 units per year, the cumulative gap between supply and demand since the year 2000, which had started to narrow, would open again, possibly pushing house prices up further.

HOW WILL DEMOGRAPHY AFFECT FUTURE DEMAND?

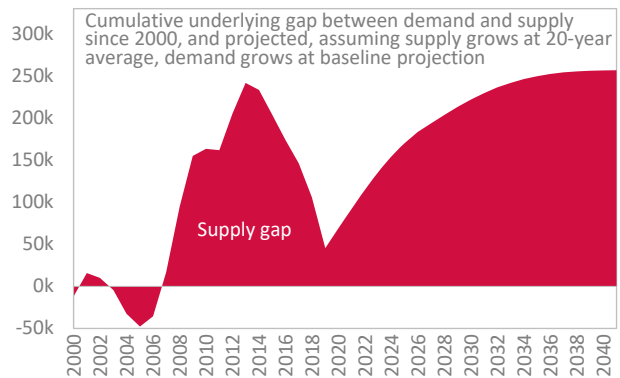
15A Main demographic projections imply a short term increase, long-term decline in annual demand, but range is wide



15B Assumptions vary around the baseline (in green)

	Pop A	Pop B	Pop C
ERP 2041	36m	34m	32m
Number of households in private dwellings in 2041			
HH I	14.0m	13.2m	12.5m
HH II	13.9m	13.0m	12.3m
HH III	13.4m	12.6m	11.9m
Projected total demand for new (gross) dwellings, 2020-2041			
HH I	5.24m	4.86m	4.49m
HH II	4.22m	3.87m	3.52m
HH III	3.37m	3.04m	2.71m
Projected annual demand for new (gross) dwellings, 2020-2041			
HH I	238,000	221,000	204,000
HH II	192,000	176,000	160,000
HH III	153,000	138,000	123,000

15C Historic supply growth will not satisfy baseline demand



Note: Demand comprises the number of new underlying households plus demand for second homes. To remove the effect of short term movements in household size due to economic conditions rather than demographic demand, the number of new underlying households is estimated by first smoothing the long-run change in the relationship between the number of households and the estimated resident population (average household size), and then applying this smoothly changing ratio to annual changes in the estimated resident population. Demand for second homes is based on trends in rate of unoccupied homes and the assumption that one quarter of these are second homes, an assumption in turn based on 1986 Census analysis (remaining unoccupied homes are assumed to be temporarily unoccupied). Projection scenarios comprise population series A, B, and C, which are respectively based on high, medium, and low fertility, migration, and life expectancy assumptions; and households formation series I, II, and III, which are respectively based on living arrangement patterns that are continuing, slightly affected by 2001-2016 trends, or changed based on 2001-2016 trends. The baseline projection effectively replicates ABS household projections, which are based on series B population projections. This is extended for alternative population scenarios (series A and C). Supply is estimated based on completions and the long-term realisation rate (i.e., net of demolitions). The realisation rate is assumed to be 87% based on analysis of historic stock and completions data. Demand for new dwellings in 15B is gross dwelling demand which will be needed before taking out demolitions and 2nd homes. Source: Authors' analysis based on ABS data.

PART 2: Housing consumption in old age

Whereas Part 1 looked at the dynamics of acquiring an owner-occupied home in working life, Part 2 documents how homeowners make use of wealth stored in their home – the *nest egg* – and how they consume housing services – the *nest*. We first look at how homeownership interacts with the retirement income system and other savings and how it affects inequality and bequests. This is followed by an account of people’s housing options and preferences in old age.

2.1 The fourth pillar of the retirement income system

Homeownership is often referred to as the fourth pillar of the retirement income system, in addition to the Age Pension, and mandatory and voluntary superannuation. Indeed, the system is premised on the assumption that people will own their home outright and can get by with an otherwise modest Age Pension. The absence of homeownership – as discussed in detail in Part 3 – is associated with greater vulnerability and poverty in retirement.

How well is the fourth pillar functioning?

Australia is not unusual in encouraging homeownership as part of retirement savings (Doling and Ronald 2010; Bradbury 2013). But to function successfully requires meeting some conditions, including that: (1) excessive shares of people don’t indefinitely defer the purchase of a house; (2) volatility of housing markets doesn’t introduce excessive timing risk that disadvantages some generations; (3) it’s not subject to costly inefficiencies (e.g., stamp duties, or asset bubble externalities); (4) it doesn’t result in excessive debt in retirement; (5) it interacts adequately with other retirement income system pillars; and (6) the illiquidity of property doesn’t pose problems, such as overconsumption of housing in old age or unintended bequests.

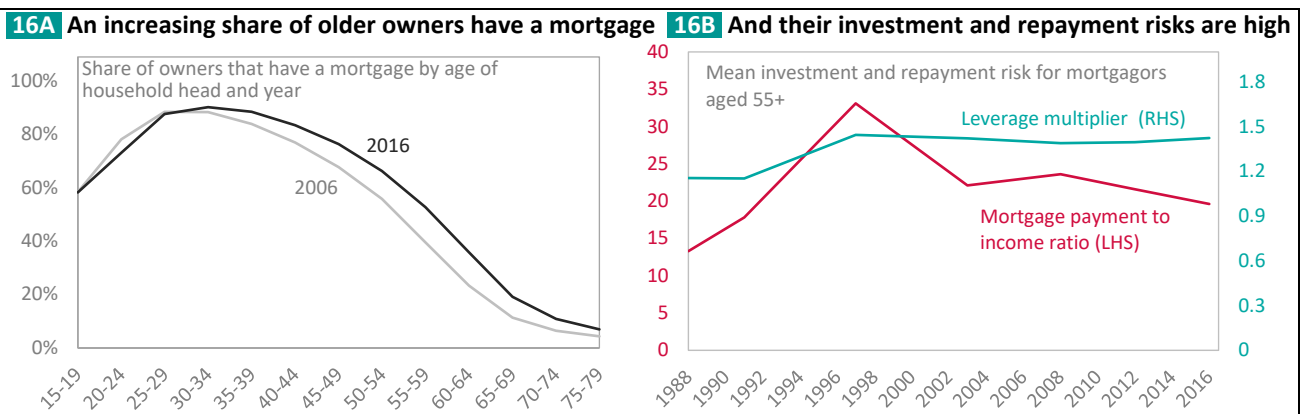
As discussed in Part 1, the homeownership pillar may be failing on the first three conditions. These failures will mean that other parts of the system will need to pick up some slack (i.e., Commonwealth Rent Assistance or a reformed Age Pension). What about indebtedness, interactions with other pillars, and liquidity?

Retiring with debt

Not only are fewer people reaching old age without the support of homeownership as a fourth pillar of retirement, but greater shares of older owners are retiring with mortgage debt. In 2016, about 36% of homeownership households still had a mortgage at the point of retirement (age 60-64), up from 23% a decade earlier (Figure 16A).

Recent analysis of older mortgagors suggests that many face considerable investment and repayment risks (Ong et al. 2019). For example, mortgagors aged 55+ had an investment risk such that a 10% decline in house prices in 2016 would see their housing equity reduce by 14% – above the 11% reduction from an equivalent decline in 1988. And since their mortgage-debt-to-income ratios have tripled from about 70% to 210% between 1988 and 2016, older mortgagor’s repayments have climbed as a proportion of income, despite lower mortgage rates (Figure 16B).

HOW DO OLDER MORTGAGORS FARE?



Source: Chomik et al. 2018c; Ong et al. 2019.

It's likely that highly leveraged people also have high incomes and wealth. For those able to ride out the potential increases in interest rates, leveraged investment can make financial sense. Low costs of borrowing may mean it's beneficial to repay mortgages over a longer period and, for example, remain exposed to equities through tax-advantaged super. That is, investment risk works in both directions. Leveraged investments see higher gains when house prices rise (i.e., the bank owns an absolute share rather than a proportional share, so all price increases accrue to the owner). Based on the above calculations, a 10% increase in house prices sees equity rise by 14%. Such a strategy is generally not available with investments in superannuation.

Still, excessive debt can be risky for older people, who have higher health expenditure risks and who have an exhausted capacity to work. Between 2006 and 2016, nearly 8% of older mortgagors said they were unable to pay bills on time, compared to about 3% of outright owners (Ong et al. 2019). Such challenges can be exacerbated by non-financial shocks, such as family breakdown.

Interaction with the Age Pension

Housing, like other voluntary forms of saving, can improve standards of living in retirement. But the interaction of owner-occupied housing with the Age Pension is unlike with any other assets. It is exempt from the Age Pension's assets test, even though the payment is designed to be needs-based. This means that the system advantages homeowners at the expense of renters, who receive the same level of full Age Pension (plus an often-insubstantial level of rental assistance; see Section 3.5). As a concession, renters can hold more of other assets before the pension is withdrawn. But this only helps 4% of them. About 93% of renters aged 65+ in 2016 had non-home assets below the renter thresholds, and 89% had assets under the owner thresholds.

Including the home in the assets test, at least above a certain high threshold, is probably also one of two policies that would do most to incentivise people to downsize (along with stamp duty; see Rees and McCallum 2017). It would reduce the asset-test-induced frictions in housing sales and distortions between housing and other assets (see Box 8) and potentially release bigger but underutilised houses into the private market if adequate alternatives existed. In general, greater means testing has been shown to be economically efficient. For example, higher tapers on the Age Pension could pay off in terms of greater work and savings effort by richer households (see Box 10).

A small proportion of the primary residence is already included in assets testing for subsidised aged care (see Section 2.5). A shift in policy could be facilitated by the recently expanded *Pension Loan Scheme*, which would allow pensioners to live in their home and receive the pension while releasing some equity, some of which would be claimed back from their or their partner's estate (similarly to a reverse mortgage; see Section 2.4).

Many have called for change (e.g., Henry et al. 2009; PC 2013, 2015; Denniss and Swann 2014; Daley et al. 2013). But so far, including the home in the assets test has proved unpopular. Its consideration is within the terms of reference of the current retirement income system review, but Government has expressed its opposition to changing the assets test.

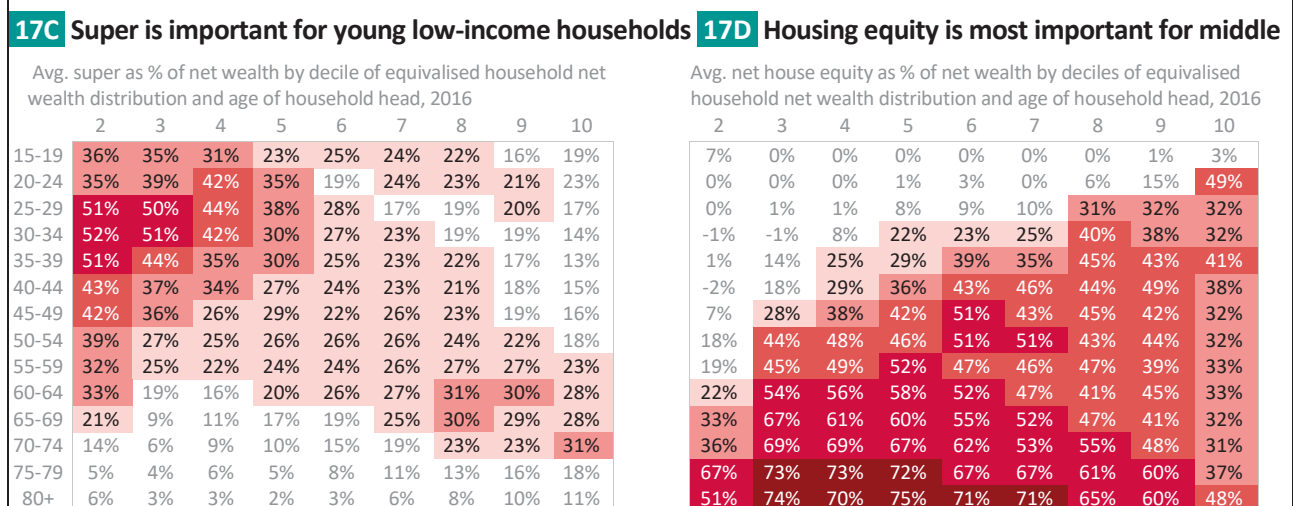
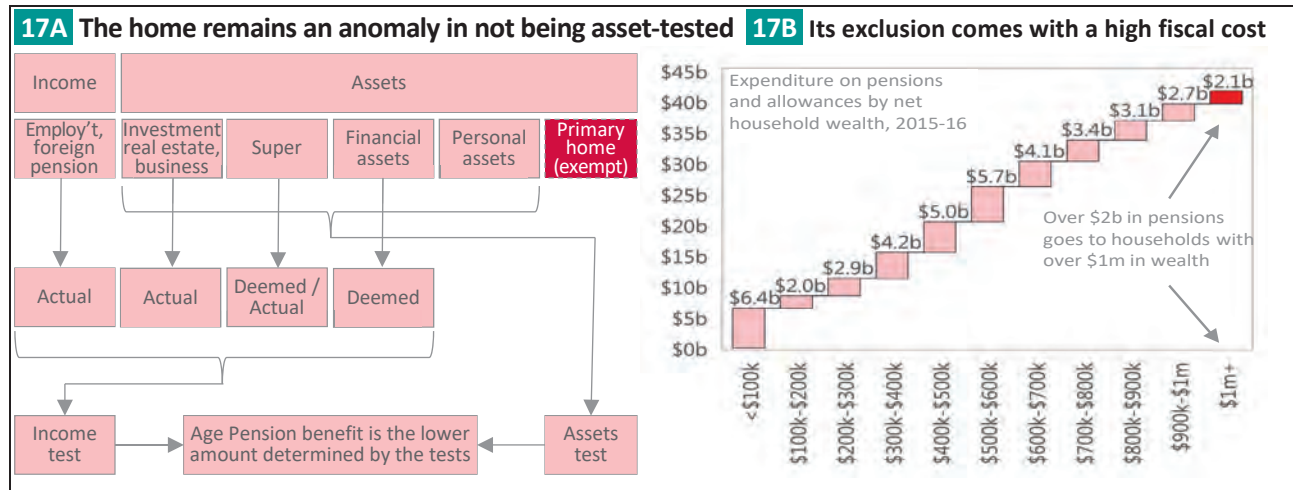
Yet, in a world where the divide between renters and owners is increasing, funding pension or rent assistance increases for renters could be the imperative needed for action. As shown in Figure 17B asset testing all net wealth, including the family home above some high threshold, would allow the Government to claw back much of the \$2b or about 5% of the pension budget per year that is paid to households with total assets of over \$1m, depending on how such an assets test would be designed. Again, this claw-back would not necessarily reduce their pension. Instead it could result in a claim on the sale of the family home after death.

Interaction with superannuation

Since both super and housing act as stores of wealth, they may be substitutes. If so, the introduction of mandated super in 1992 may have crowded out housing investment, either early on in life, or indefinitely, but robust evidence of this is scant. Super is indeed the largest asset for younger, poorer households while home equity is important for middle-income households (Figures 17C-D). Super accumulations may also explain why more people are reaching retirement with mortgage debt – they can and often do use superannuation lump sums to pay off the house (ABS

Cat. 6238.0). In future, they may use super to purchase a home. Some evidence suggests that house purchase decisions are associated with a re-evaluation of retirement finances and greater engagement with super (Box 9). Interestingly, this research suggests that for owner-occupiers, buying a home is associated with greater likelihood of contributing to super – that is, super and owner-occupied housing may in fact be complements for some groups.

HOW DOES HOUSING INTERACT WITH OTHER RETIREMENT PILLARS?



Note: First deciles, who are mostly in debt, are excluded in 17C-D. Source: Chomik et al. (2018c) and authors' analysis of ABS data

Box 8 CEPAR research spotlight Treatment of assets in the means test

It's well established that the exclusion of the family home means renters and owners with the same net worth could be treated differently. CEPAR's Rafal Chomik and John Piggott (2016) identify other features in the assets test that may require attention. For example, financial assets are counted in the test according to their value and in the income test according to deemed income. So, in the income test (which is more likely to be binding), \$1,000 of shares is assessed to yield \$17.50 regardless if the stock is making money, reducing the pension by \$8.25; yet \$1,000 of non-income-producing land has no effect on the pension received. Such inconsistencies informed the recommendation of the Henry review (Henry et al. 2009) to combine the asset and income tests into a single comprehensive test. Chomik and Piggott suggest that (1) the same results could be achieved by retaining separate tests and applying each more consistently; but that (2) the test as recommended by Henry would be flawed since it would ignore the capacity of individuals to spend capital to finance their consumption.

CEPAR Associate Investigator Renuka Sane and John Piggott (2011) analysed how the assets test inhibits mobility and downsizing between 2001 and 2006. They found that pensioners exhibited greater mobility but less downsizing than non-pensioners, perhaps because they would lose some or all of their pension. Amongst pensioners, those with assets lower than the permissible cut-offs had a lower probability of moving but a higher probability of downsizing. The increase in house prices since 2006 could mean that the scale of this effect would now be greater.

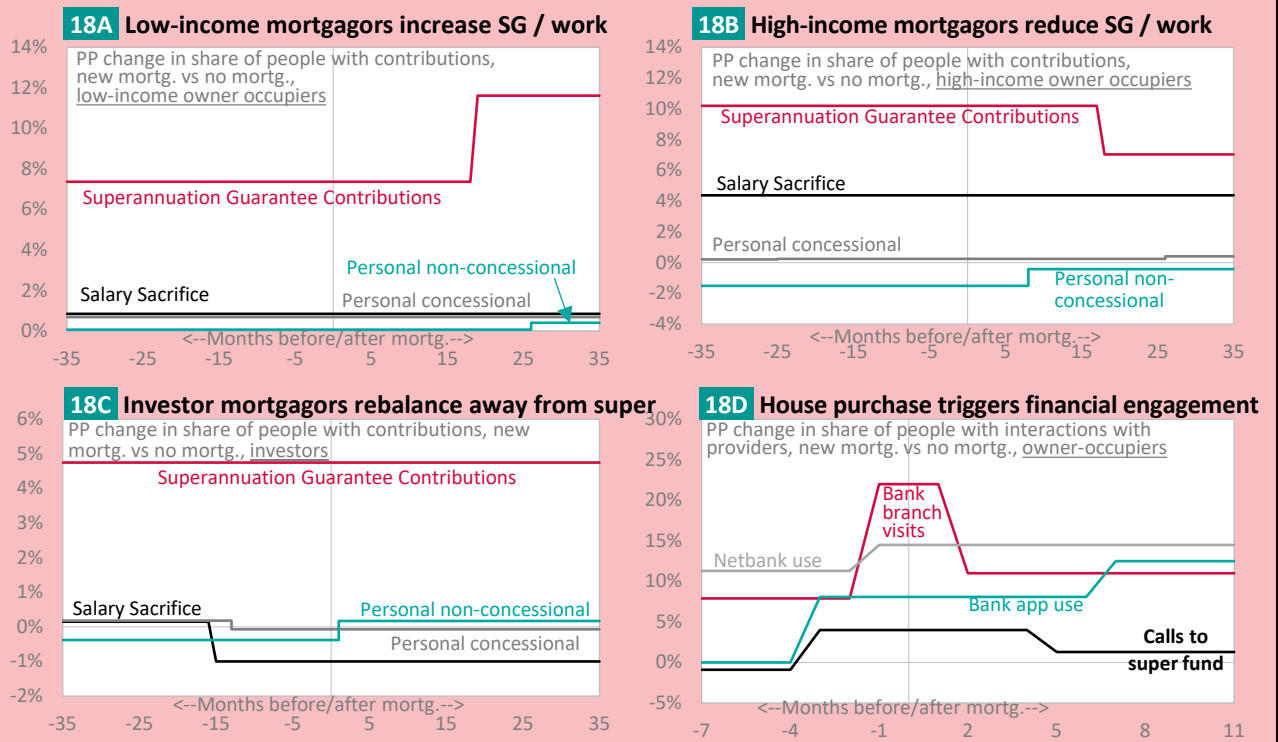
Box 9 CEPAR research spotlight How buying a house triggers a re-evaluation of retirement finances

The set-and-forget nature of super means that most people aren't engaged with their super until retirement. But to what extent is buying a house associated with changes in the way people interact with their superannuation? Do they change their super contributions? And interact more with financial service providers?

Such questions were recently investigated by CEPAR Chief Investigator Hazel Bateman and Associate Investigators Susan Thorp and Christine Eckert along with industry colleagues. They analysed a unique dataset of over 1,000 Colonial First State super fund members who took out a residential mortgage from the Commonwealth Bank in 2014 and compared their superannuation engagement to a matched sample of super fund members who didn't take out a mortgage over the same period.

They found significant differences in super contribution behaviour between fund members who did and didn't take out a mortgage. The differences were most evident between owner-occupier mortgagors and investment mortgagors and between those on low and high incomes. For example, owner-occupier mortgagors were more likely to increase Superannuation Guarantee (SG) contributions prior to mortgage start than the control group. Since these are mandatory and related to labour force participation, it suggests that owner-occupiers are more likely to work to save for a deposit and that this is maintained post-mortgage. Splitting these by income shows that low-income super-fund members increase work effort after the mortgage while those on high incomes appear to have more flexibility to reduce their work effort (Figures 18A-B). However, there was no change in SG behaviour by investors. What is perhaps more interesting is changes in personal contributions and salary sacrifice, which are voluntary and require effort to change. Though the changes were small, the share of owner-occupiers making personal concessional contributions increased post-mortgage start (driven by high-income earners) while they declined pre-mortgage for investors (Figure 18C). Declines in the share of investors making salary sacrifice contributions pre-mortgage are even larger. The implication is that unlike owner-occupiers who build up super after a home purchase, investors appear to be re-weighting their portfolios towards real estate and away from super.

Finally, the research provides insights on the extent and timing of interactions between new mortgagors and their financial services providers (Figure 18D). They find that buying a house triggers considerable engagement of super fund members. This tends to commence at around three months prior to the mortgage start, first with greater use of the bank app and calls to their super fund. Then comes a large increase in bank branch visits and net banking, followed by continued increases in use of the bank app.



Source: Bateman et al. 2019

Box 10 CEPAR research spotlight The accumulation of wealth in an ageing society

How does demographic change and the structure of the tax-transfer system incentivise us to save? Longer lives may lead us to save more for retirement while alternative tax arrangements may compel us to save in tax-advantaged assets (e.g., Australian shares with franked dividends or superannuation with its lower taxes). But the means test of the Australian Age Pension also has a bearing.

Modelling the inherent incentive structures of the retirement income system and its impact into the future is a complex exercise. CEPAR's expertise in the field has been sought out by the Government and international organisations, including the Australian Treasury and the US Social Security Administration. The work is spearheaded by CEPAR Senior Research Fellow George Kudrna, Associate Investigator Chung Tran, and Chief Investigator Alan Woodland.

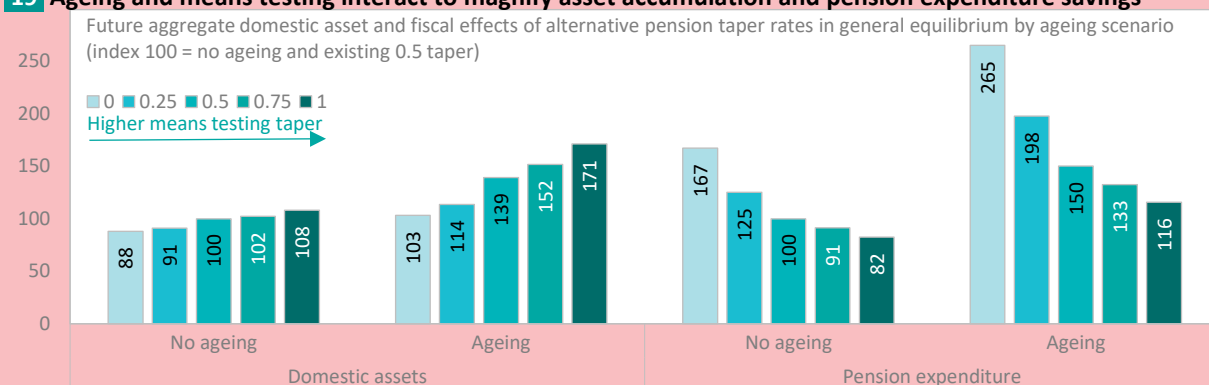
In a recent paper (Kudrna et al. 2018), the team looked at the effects of demography and the pension means test on savings, budgets, and other economic outcomes. While they don't model the differential treatment of housing, the aggregate results are informative about overall accumulation of wealth in an ageing society.

The modelling is based on the idea that anticipated increases in longevity will induce individuals to work and save more. In fact, the ageing scenario results in about 40% more domestic assets in the Australian economy than if there was no demographic change (Figure 19).

The interesting result is how this ageing effect on savings interacts with the means test. Ageing with greater means testing results in greater private asset accumulations. Also, ageing accentuates the budget saving function of means testing. That is, strong means testing can incentivise richer households to work more since lower pension spending drives lower taxes (Kudrna 2016), but a key driver behind the interaction with ageing here relates to differences in life expectancy. If population ageing takes place through greater life expectancies of those with higher skills and earnings (as it has recently), the age-eligible population is likely to be wealthier than in the absence of demographic change and therefore will be less likely to receive the pension. Thus, means testing keeps the pension sustainable and ensures that more is available for those less well-off. Still, the result may be tempered if the family home remains outside of the means test – if rich people put money in the home, then pension savings would be lower.

In future the team will look at how differences in taxes between Germany and Australia can affect savings.

19 Ageing and means testing interact to magnify asset accumulation and pension expenditure savings



Source: Kudrna et al. 2018

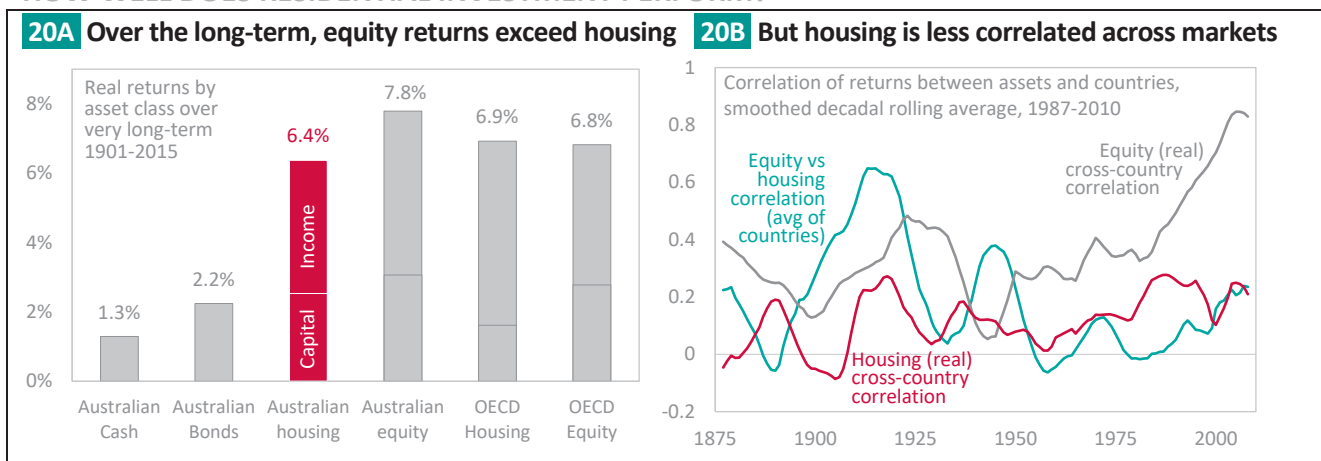
2.2 Housing within the retirement asset portfolio

Homeownership has been a good source of investment for many, although the cycle of booms and busts, which tend to be longer than the business cycle, can affect outcomes depending on timing of entry and exit. Recent cycles should be seen in context. Over the last one hundred years or so, residential real estate returns have been about 6.4% in real terms per annum. Most of the returns were based on the derived income (Jordà et al. 2019; see also Stapledon 2012; Figure 20A). This is less than returns on Australian equities or returns on housing and equities in

other countries. Yet a particular advantage of property as an investment is its lower volatility and synchronicity with the business cycle – not only does real estate have low correlations with equity but it is also less correlated across countries. It suggests that holding property assets can diversify an investment portfolio and lower volatility, which is more important at older ages (Figure 20B).

In theory, renting and investing should be financially equivalent to investing in owner-occupied property. But, homeownership can be more financially attractive because of access to: (1) leverage (banks don't usually lend such funds at low rates to be invested at higher return in, say, equities); (2) unique tax advantages (no capital gains or imputed income tax for owner occupied houses); (3) transfers (e.g., age pension means test); and (4) a pre-commitment device (households are likely to change their savings behaviour prior, during, and following the acquisition of a home).

HOW WELL DOES RESIDENTIAL INVESTMENT PERFORM?



Note: 20A includes earlier years for some countries. Source: Jordà et al. (2019)

Housing wealth by age

Here we look at the role that housing plays in the wealth portfolio of different age groups in Australia and how this has changed over the last decade.

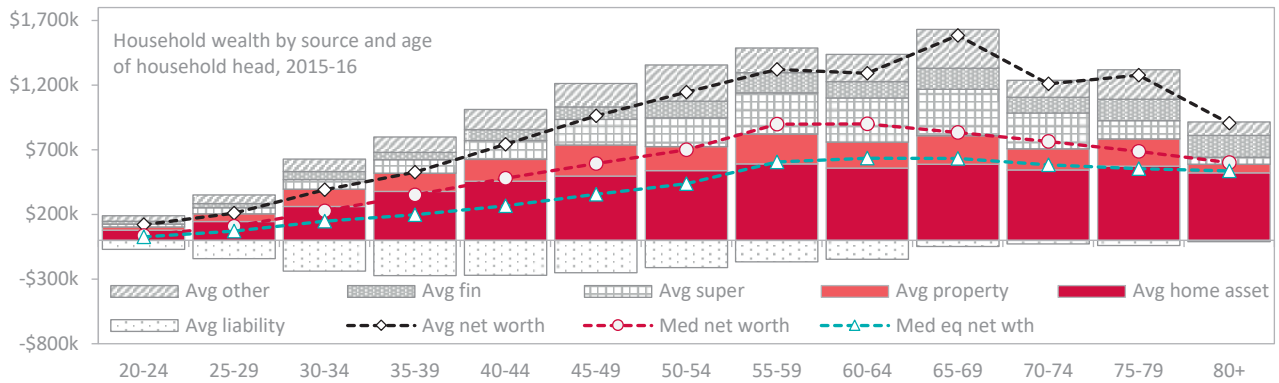
Wealth is typically accumulated until the point of leaving the workforce, at which point it is slowly decumulated to at least part-finance retirement (Figure 21A). Net wealth peaks by age 69 (though the median appears steady for longer). The unadjusted average peaked at about \$1.6m in 2016, while the median adjusted for household size, peaked at about \$630,000. The key asset for most households at their peak wealth is their home, followed by superannuation. Median wealth is below average wealth across all ages, which reflects wealth inequality. This gap tends to be higher than the gaps in income or consumption and widens with age because small differences in income can compound into large differences in wealth over time, because assets grow faster than economy-wide incomes, especially housing in recent years, and at older ages people benefit more from bequests (see Section 2.6).

The overall average wealth in the family home (regardless of tenure) was about \$600,000 among older households, who on average also own about \$200,000 of investment property.

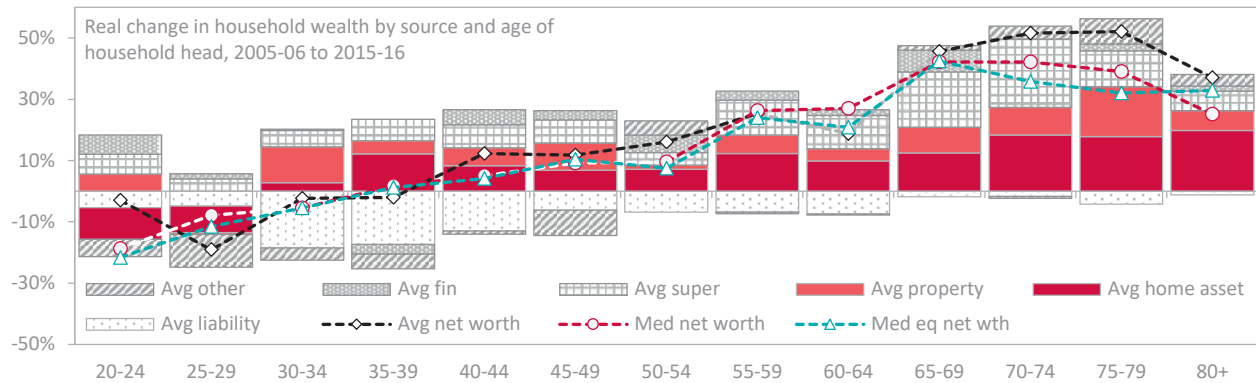
How have things changed? Over the decade to 2016, super assets increased significantly for all age groups, though owner-occupied housing and investment property had the largest increase if combined – an increase of about a third for those in the 75-79 age group (Figure 21B). Notably, there has been a decline in home equity among age groups in their 20s and an increase in debt for all ages, particularly among those in their 30s and 40s. The overall result has been a decline in average net worth among the young and a large increase among the old.

WHAT ROLE DOES HOUSING PLAY IN THE WEALTH OF DIFFERENT AGE GROUPS?

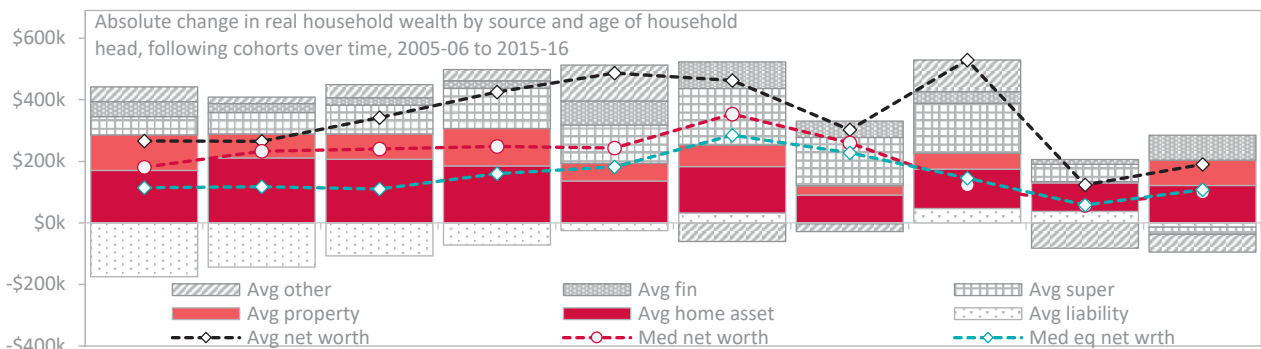
21A Wealth in 2016: Wealth typically peaks in late 50s, with home as main asset. Lower median indicates inequality



21B Change by age group (%): Family home plus investment property saw largest combined growth at older ages

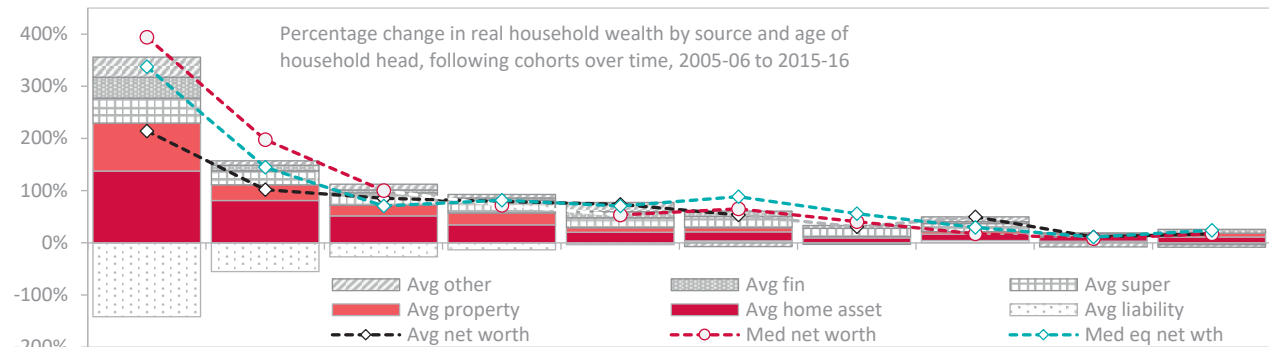


21C Change by pseudo-cohort (\$): Changes in wealth are more equal. Younger cohorts acquire property as they age



Age in 2006: 20-24 25-29 30-34 35-39 40-44 45-49 50-54 55-59 60-64 65-69
 Age in 2016: 30-34 35-39 40-44 45-49 55-54 55-59 60-64 65-69 70-74 75-79

21D Change by pseudo-cohort (%): Younger cohorts gained proportionally more over given low starting base



Age in 2006: 20-24 25-29 30-34 35-39 40-44 45-49 50-54 55-59 60-64 65-69
 Age in 2016: 30-34 35-39 40-44 45-49 55-54 55-59 60-64 65-69 70-74 75-79

Note: Unit of analysis is household; age is household head; 2016 dollars. Source: Reproduced from Chomik et al. 2018 and based on ABS (2018).

Looking at changes in wealth of cohorts over a ten-year period (Figure 21C) reveals that increases are surprisingly equal for different age cohorts, since these are driven by both house price changes and ten years of new savings. Housing wealth gains were greater among younger age groups and matched by increases in debt, but the median increase in net wealth experienced by those who were 20-24 in 2005-06 is similar to that of those who were 45-49, as well as the cohorts in between. Surprisingly, the positive average increases for older cohorts indicate that they continue to save in old age (the lack of spending of assets is also confirmed in data for pensioners, see Box 16). Yet if the appreciation in housing wealth is excluded, older households do see declines in wealth on average, mostly driven by declines in 'other assets' and the adjustment for household size.

In proportional terms, the growth of wealth was highest among younger cohorts since they saw gains from a smaller base (Figure 21D). Percentage changes at older ages have been small.

The averages within age groups shown here conceal very different experiences across the wealth and income distribution. So it's worth also pausing to see how housing is affecting inequality.

2.3 Housing and inequality

Income inequality in Australia is above OECD average but long-term increases have stabilised and even saw a small reversal (ABS 2019, Cat 6523.0; ACOSS 2018). Wealth inequality, by contrast, is high and increasing.

Those worried about inequality are often more concerned about the role of the accumulation and distribution of assets and how wealth inequalities are perpetuated via dynastic inheritance and how these exceed the growth in income, rather than shorter-term income inequality outcomes (Piketty 2014). Housing, like other forms of capital, plays a role (Maclennan and Miao 2017). That is, wealth inequality can be exacerbated if ownership becomes concentrated and long-term returns on housing grow faster than incomes. This pattern of concentration is implicit in the description of recent housing market trends in Australia in Section 1.2, whereby investors who displaced first-home buyers by bidding up prices were already owner-occupiers.

But wealth has a lifecycle dimension. The young will naturally have less of it than the old, who have accumulated assets over a longer period. And a society with expanding lifespans may also be one where the wealth profiles of the young and old are further apart (or where longer lives can lead to more dispersion in each cohort).

One way to abstract from demographic change – and avoid the common trope of pitting generations against each other – is to look at wealth inequality *within* age groups. Some results for 2016 are presented in Figure 22A using the Gini measure of inequality, which ranges from 0 for full equality to 1 for full inequality. Doing so shows that net household wealth inequality (adjusted for household size) is higher among younger ages (e.g., Gini of 0.67 for ages 35-39 in 2016) and lower among older ages (0.55 for ages 75-79 in the same year).

The figures are driven by housing, which is the largest household asset and reveals the same descending pattern with age. The declining pattern may be explained by the fact that as more people in each successively older age group buy a house, the dispersion of housing wealth within the age group declines (an age effect). In this way, borrowing to invest in housing has been an equalising force in Australia in the past (also elsewhere; Kuhn et al., 2017, Kaas et al 2015). But it may also be that younger people today are experiencing housing inequality that is higher than was the case in the past (a cohort effect). It could be that more people bought in the past, not just the wealthy. To understand that, take super wealth, which displays the opposite pattern: inequality of super increases with age. This is partly because super compounds inequalities in the labour market as the cohort ages (an age effect) and partly because only some people among older age groups had any super (a cohort effect).

How have these patterns changed over time? Recent increases in total net wealth inequality are mirrored by increases in inequality in the distribution of housing assets (Figure 22B). For example, as the net wealth Gini increased from 0.64 to 0.68 between 2004 and 2016, the Gini for net housing wealth increased from 0.58 to 0.62. At the same time the population-wide inequality of financial wealth and investment property wealth, which is very high, declined slightly (with investment property, this is contrary to expectation).

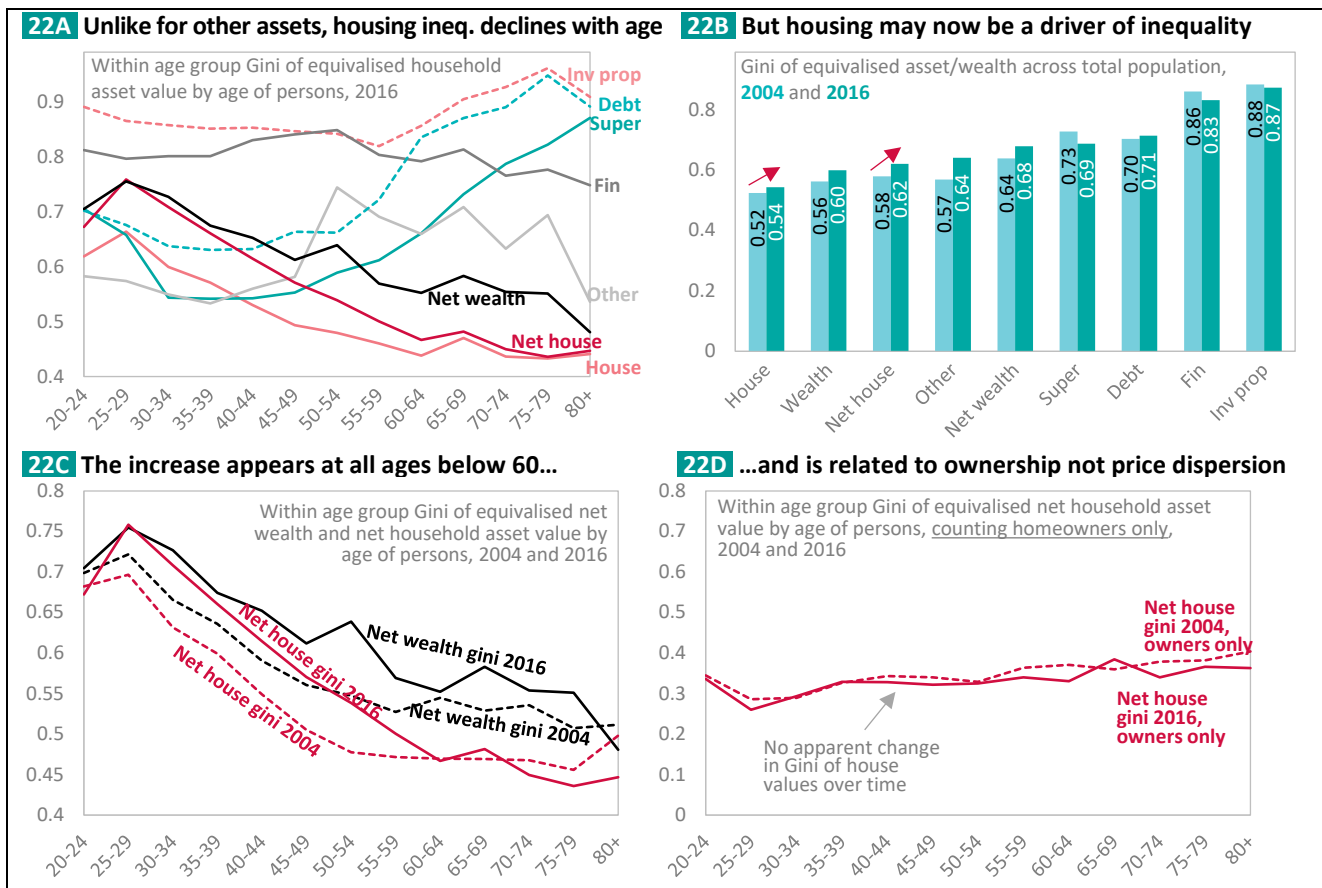
Comparing the age profiles of inequality over time suggests that demographic change is not the main driver. That is, wealth inequality has increased within every age group (except for ages 85+; Figure 22C). And the pattern is replicated by an increase in inequality in net housing wealth within each age group below 60 of about 6 points.

Is this, in turn, driven by an inequality of house prices or inequality in homeownership rates of houses? Looking at the change in Gini for net housing wealth of homeowners shows that the driver is a change in access to homeownership rather than a dispersion of house prices (Figure 22D). In fact, the distribution in housing values of owner-occupied dwellings narrowed between 2004 and 2016, from a Gini of 0.36 to 0.35.

Based on this analysis, it's possible to say that the ability for less wealthy households to use the housing market to accumulate wealth has been blunted. Previously, the minority had super while the majority had housing. Perhaps this pattern is being reversed. While super may offset the decline in housing wealth, the lack of leverage in super may instead leave credit-constrained households behind and increase inequality. More research is needed to test such relationships.

Like other forms of wealth, housing can perpetuate inequality via bequests, which are discussed in Section 2.6. The next section looks at how people that have housing wealth make better use of it.

HOW ARE ASSETS DISTRIBUTED?



Note: Gini calculated at person level of population within age group, each of whom is assigned the equalised asset or wealth level of the household. Note different scales of charts. Source: Authors' analysis based on ABS SIH.

2.4 Housing equity withdrawal

A third of Australian baby boomers expect to use all their assets before they die (Olsberg and Winters, 2005). For those that have their wealth locked up in the family home, making use of its equity is a challenge. Some may sell and downsize, but the decision is daunting (see Box 11) and can be constrained by availability of alternative housing and costs of moving (Judd et al. 2014). Often equity withdrawal takes place as a result of adverse events (Jefferson et al. 2017; Rees and McCallum 2017).

The majority of older homeowners report wanting to age in place (ibid). One option is to stay in the family home but sell the equity via a *reverse mortgage* product. These are essentially loans against the value of a home, where repayment is deferred until the borrower (or their dependents) pass away and the home is sold.

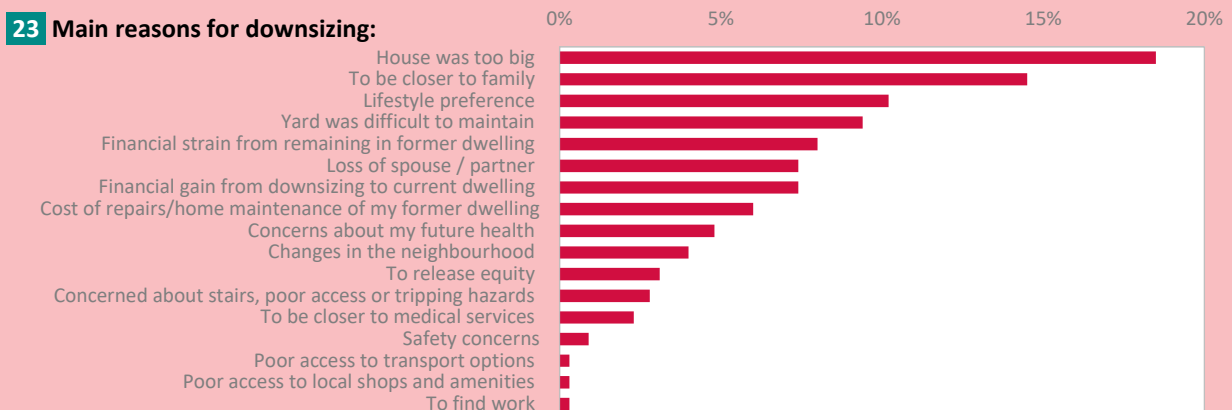
Box 11 CEPAR research spotlight The psychology of downsizing

What drives people to downsize and what can we learn from the experience of those that took the plunge? In Earl et al. (2019), CEPAR Chief Investigator Hazel Bateman and Associate Investigator Joanne Earl (and a colleague) investigated these questions using insights from psychology. The authors surveyed people over age 55 who downsized in the preceding five years. The top five reasons for downsizing were that: (1) the house was too big; (2) the move enabled closer proximity to family; (3) it was a lifestyle preference; (4) the yard was too hard to manage; and (5) to alleviate financial stress (Figure 23). The survey found that the majority were satisfied with the move. Less than one in five said that they experienced regret about moving to a smaller residence.

The team then used psychological profiling to gain insights about why people responded the way they did. For example, one psychological theory (known as *Selection, Optimisation, Compensation*), is that older age people focus on fewer, more important goals and optimise resources to achieve them. The related literature suggests that as people age, they focus more on big decisions, and getting these right and less on the day-to-day hassles. It implies that they also have fewer regrets. And this is what the authors find among downsizers: Older people were less likely to regret their decision compared to those who downsized at younger ages.

Another method was to distinguish between how different people perceive events over time, using what is known as the *Time Perspective* model. The idea is that there are five broad personality types: people who are: (1) *past positive* – who focus on ‘the good old days’; (2) *past negative* – who believe that negative events in the past dominate their lives; (3) *present hedonistic* – who pursue pleasure and live in the moment; (4) *present fatalistic* – who feel that they can’t change their lives and that it doesn’t pay to plan; and (5) *future-oriented* – who make plans which they believe can change their lives.

They found that lower levels of satisfaction with downsizing typically aligned with those classified as having a *past negative* time perspective. This group also had lower levels of life satisfaction, higher levels of stress, and less positive reflections on past events. The study suggests that the impact of relocation on psychological wellbeing can impact certain high-risk older people to a more negative extent than others. But understanding the experience of others may help future downsizers to better prepare.



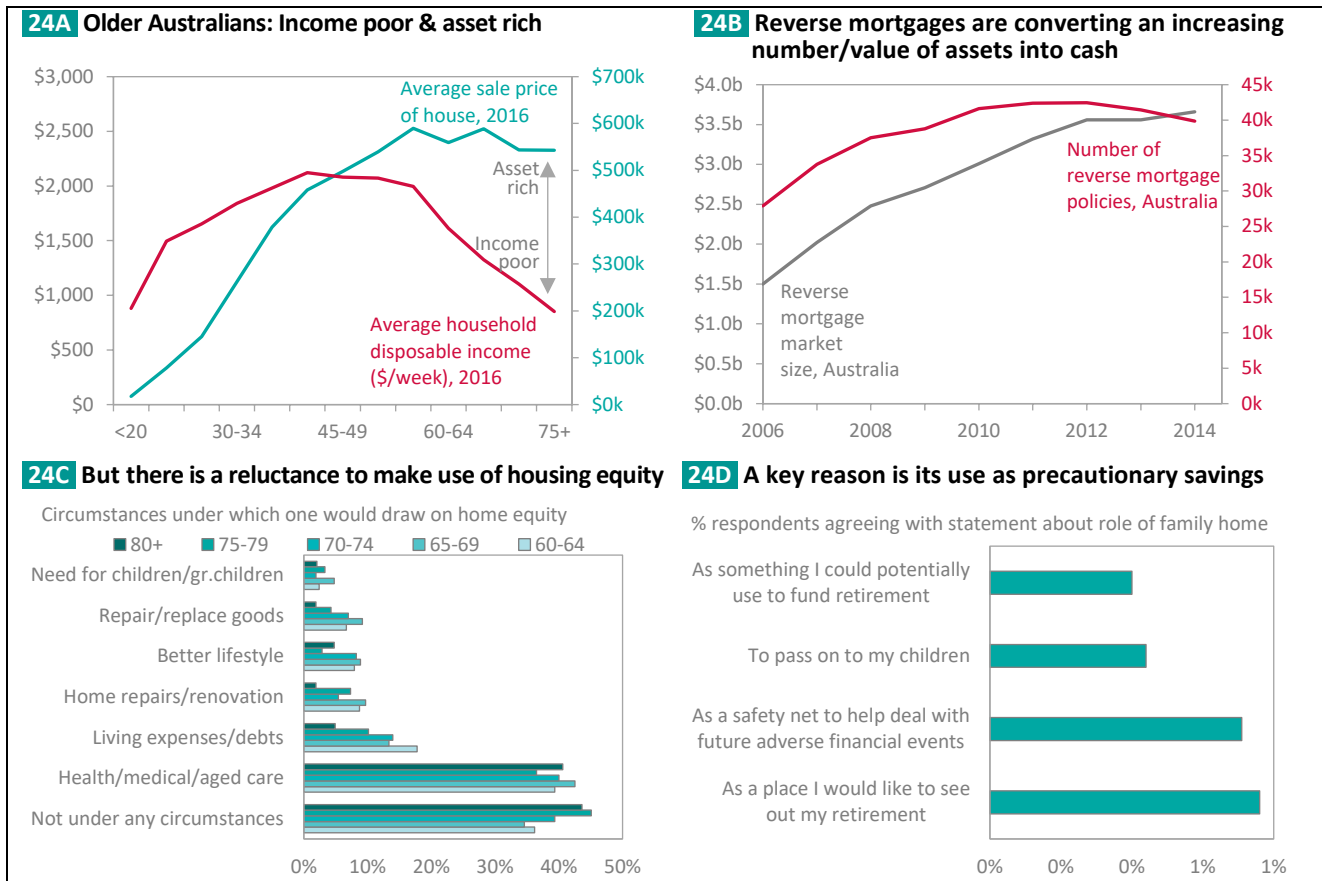
Source: Earl et al. (2019)

Reverse mortgage products, which are not wildly different from existing mortgage arrangements that allow for equity withdrawal before a home loan is paid off, could be useful to the average older Australian, who tends to be asset-rich and income-poor (Figure 24A). Unlike downsizing to a smaller property, a reverse mortgage is less likely to result in a loss of the Age Pension (due to having too much money in the bank) and doesn’t require selling and moving out of one’s home. And analysis suggests that the product is more useful than home reversion options (Box 12).

Yet reverse mortgages represent a niche market. Designing such products is complex (see Boxes 12-13) and supply may also be inhibited by worries about reputational damage. The size of the market has grown (Figure 24B) but still only accounted for \$3.7b of the \$1.4t mortgage market in 2014 (Deloitte 2015). It is likely to grow in future – not only from outright owners but also from those with mortgages wanting to pay down debt in retirement.

The lack of demand may include reasons such as: (1) precautionary saving motives, to self-insure against spending shocks (e.g., health and aged care); (2) bequest motives; (3) high insurance costs (e.g., interest on loans is typically 1.5-2% higher than the market rate for a regular home loan); (4) worries about losing the home which outweigh the existing safety nets (there are maximum loan restrictions and a floor on the debt obligations); and (5) lack of trust in providers.

WHAT IS THE SCALE AND SCOPE OF THE REVERSE MORTGAGE MARKET?



Sources: Based on ABS data, Deloitte (2015), and PC (2015).

The desire to use home equity to self-fund aged care above a basic, publicly subsidised standard and respond to health shocks tends to be the biggest reason why people are reluctant to access home equity, whether by downsizing or via reverse mortgages.

The Productivity Commission (2015) asked individuals about circumstances when they would draw down on their home (Figures 24C-D). Almost half claimed they wouldn't do so under any circumstances whatsoever. About 40% said they would for health and aged care needs, and 15% would draw down for other necessary living expenses. Only 8% would do so for a better lifestyle. The hesitation is not isolated to Australia and appears in various markets (Rouwendal 2009). CEPAR research suggests that the way that reverse mortgage products are explained makes a difference (see Box 13). One advantage of holding on to the home is because it can act as *both* self-insurance and a bequest (see Box 14).

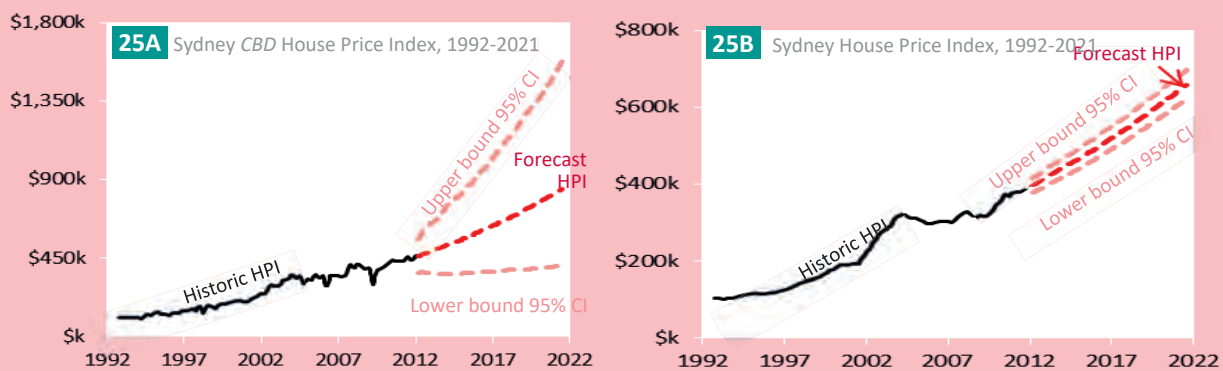
In the 2018-19 Budget, Government announced measures to encourage individuals to draw down their home equity by expanding the Pension Loan Scheme. The scheme, which previously allowed part-pension recipients and some individuals who received no pension to top up their pension to the maximum rate, has been extended to those already receiving the maximum rate (over a million of full-rate pensioners own their home) and self-funded retirees that

receive no pension. They can increase their income by up to half of the full pension rate. But the 5.25% interest rate charged on the loan is high even if it needs to cover provider risks (see Box 12) – it has been fixed since 1997 and is above rates available in the private market. There is little justification not to make it variable and competitive.

Box 12 **CEPAR research spotlight** **Reverse mortgages: Providers’ point of view**

Designing reverse mortgage products requires understanding what will happen to the value of a loan and the home equity that repays the loan. These are subject to different risks. For providers, if the house value grows too slowly or declines then the sale can earn less than the loan cost. Providers normally can’t ask for more money – reverse mortgages act as a guarantee that a customer will not fall into debt due to the contract. But how can providers distinguish between houses when drawing up contracts?

CEPAR’s Michael Sherris, Adam Shao, and Katja Hanewald tried to answer this question. In Shao et al. (2018) they constructed house price indices based on a large data set of Sydney property transactions between 1971 and 2011, which includes characteristics such as location, age, and size. This allowed them to estimate the likely evolution of prices by type of house (Figures 25A-B).



Source: Shao et al. (2018).

In Shao et al. (2012), they evaluated providers’ house price risks in practice. For example, all else being equal, a reverse mortgage based on a CBD house has a higher risk and should be charged at a higher risk premium than a contract elsewhere. In Shao et al. (2015) they combined house price risk with longevity risk and analysed the impact of non-mortality related causes of reverse mortgage termination, including entry into long-term care, prepayment and refinancing. Their results suggest that risk factors associated with a property’s characteristics, such as the land area, should be used in the pricing and risk analysis of such loans.

The other side of the equation is the loan value, which varies with interest rates and how long the customer lives. With former CEPAR Graduate Student, Daniel Cho (Cho et al. 2015), the CEPAR team estimated how different economic scenarios affect pricing and profits. They found lump-sum reverse mortgages are more profitable and less risky to providers than income stream products, explaining why the former dominates most markets.

Michael Sherris, Katja Hanewald, and Associate Investigator Daniel Alai (Alai et al. 2014) also looked at provider risks but included home reversion contracts. These were found to be poorly priced in Australia, in favour of providers. They recommended regulation and education to ensure better risk sharing.

CEPAR is continuing its research in this area. For example, forthcoming work by CEPAR Honours Student, Michelle Royters, will develop a *continuous-time valuation framework* for home equity release products in Australia. This will allow an easy way to compare reverse mortgage products and assist in devising dynamic hedging strategies for managing the related risks. It will simultaneously take account of interest rates, house prices, and mortality rates in continuous time. This will assist in the evaluation of these products from both the regulator and the provider perspective.

Box 13 CEPAR research spotlight **Reverse mortgages: Consumers' point of view**

While designing products requires managing various risks by the providers (see Box 12), it's worth also understanding the financial risks and rewards from the consumers perspective. CEPAR's Adam Shao, Katja Hanewald, and Michael Sherris showed that the highest welfare benefits in retirement come from combining a reverse mortgage with long-term care insurance because of strong complementary effects between them (Shao et al. 2017). Hanewald, Sherris, and a colleague (2016) found that consumers benefit from both home reversion contracts and reverse mortgages, but gain more from the latter when longevity, house price, interest rates and aged care risks are considered.

CEPAR's Katja Hanewald, Hazel Bateman, Hanming Fang, and Shang Wu (Hanewald et al. 2019) surveyed older Chinese homeowners and their adult children to gauge interest in reverse mortgage products in the country. Almost 90% of older homeowners were interested in reverse mortgages with a similar percentage of adult children stating that they would recommend such a product to their parents. Clearly explaining product features had a positive effect on interest. The primary reasons for interest from the older homeowners were more comfortable living in retirement and the ability to pay for better medical treatment and aged care services. Adult children identified different reasons, suggesting that the purchase of a reverse mortgage should involve both generations. The main reasons given by those who rejected the products were a bequest motive and a belief that the product was too complex.

CEPAR Director John Piggott has looked at how reverse mortgages could help reduce the demand for public spending and mitigate the demand for aged care in Japan. In Mitchell and Piggott (2004) he notes that policy measures to encourage such products could include exempting them from various taxes to make them more attractive. The paper also finds that housing market reforms to enhance information flows could help, particularly with respect to new and existing housing trades.

2.5 Housing to pay for aged care

Those who hold on to their home equity to pay for future aged care provision are doing so to purchase care that is over and above what is available through the public system.

Even though aged care in Australia is primarily funded by the Commonwealth Government (see Chomik and Townley 2019 for a summary) individuals can be asked to contribute – and they often do this by selling assets, such as the family home.

That is, publicly supported residential care places are allocated based on annual quotas and care need assessments. Some of these costs are then clawed back through a means-tested care fee and means-tested accommodation fees. These include an assets test where up to about \$170,000 of the family home is counted (unless it is inhabited by the person's partner, carer, or dependents). The precedent of means testing the home provides an opportunity to claw back more from those who have greater assets to fund aged care quality improvements and better respond to demand as the population ages (including via a Pension Loan Scheme model: see previous Section). After all, a key challenge for the sector is high costs, underpaid staff, and limited funding (Chomik, R. and M. MacLennan 2014a, 2014b).

Many underappreciate the presence of the aged care safety net when deciding about their precautionary savings. They also often don't realise that they needn't pay for care with a bond. Those assessed to have enough means to pay more of their care and accommodation fees, or those wishing to pay for a higher level of accommodation and service, can pay either via a deposit (e.g., if they sell their home) or a payment stream (e.g., if they rent out their house), or a combination of the two.

Recent reforms that mandated the choice between regular payment and deposit in paying for aged care accommodation, has seen a gradual shift to the regular payment option, a pattern exacerbated by falling house prices. Still, the residential aged care industry held about \$27.5b worth of deposits in 2018 and 45% of non-supported residents paid via deposit (ACFA 2019).

Box 14 CEPAR research spotlight Housing as a form of insurance: Analysing the risks

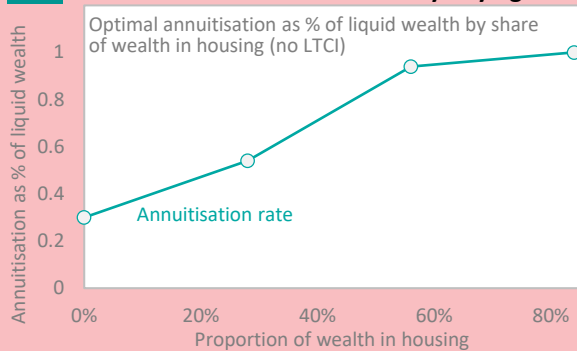
Health shocks in later life are significant and increase with age. Many people expect to use their home to pay for aged care beyond what is available from the public health and aged care system.

Among studies looking at optimal consumption and portfolio choice at retirement, few consider the role of home equity. CEPAR Senior Research Associate Mengyi Xu has sought to explore how the presence of home equity affects the choices to purchase an annuity (in the absence of long-term care insurance). She does this by comparing individual demand for annuities with and without home equity in the household portfolios.

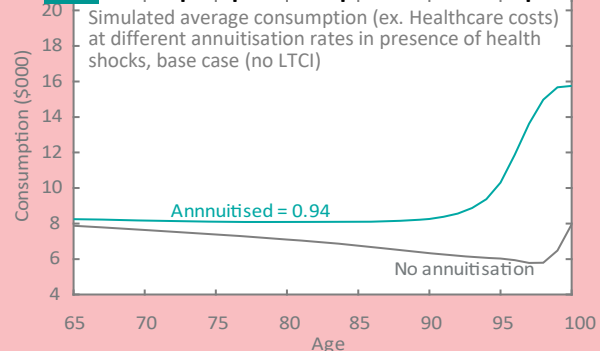
Her estimates suggest that the more of one's wealth is in one's home, the more optimal it is to annuitise remaining liquid wealth, assuming an absence of long-term care insurance (Figure 26A). The result is driven by the fact that home equity acts as a form of precautionary savings to cover healthcare expenditure and also as a bequest. Since the home has this dual function, it overcomes the bequest motive that often inhibits people from buying annuities but still allows people to dip into its equity to fund out-of-pocket health expenditures. Indeed, in the model she finds that the combination of annuity and home sale can, on average, cover the health shock, bequest motive, and raise consumption if needed (Figure 26B).

At the same time, Xu finds that given retirees tend to liquidate housing wealth in the event of moving to a long-term care facility, home equity tends to crowd out demand for long-term care insurance (LTCI). Perhaps unsurprisingly such a market is absent in Australia, where most older people own their homes and can access a universal, publicly funded long-term care safety net.

26A Homeowners can be better off by buying annuities



26B House plus product optimises consumption



Note: Assumes no availability of long-term care insurance. Source: Xu 2017.

2.6 Housing bequests and other transfers

The wealth accumulated by older Australians will at some point be passed on. Population ageing implies that the age at which people receive bequests will increase. There is some evidence of this. In 2001-03 the largest average bequests were received by those aged 45-49, whereas the largest bequests in 2015-17 were received by those aged 55-59. The reverse is true of gifts, which are substantially smaller but are being received by people at younger ages. Age Pension rules may inhibit the practice since large transfers may still be counted as an assessable asset even after being gifted.

The family home, unlike financial wealth, is more likely to be bequeathed since it is illiquid, its equity is more difficult to consume, and it continues to provide utility through old age (Yang 2009). Recent research suggests that of the \$70b in assets at age of death in Australia in 2010, \$42b was in property (Box 15).

To what extent does control of housing wealth interact with the size of different cohorts and expected life expectancies? For example, baby boomers, who comprise of a particularly large cohort born between 1946 and 1966, held 44% of owner-occupied housing assets in 2016. The previous generation, which was smaller, only held 34% of owner-occupied housing wealth at the same age in 1996. The differential would be larger still if investment property were included. The oldest baby boomers are already over the age of 70. Based on cohort life expectancies (AGA 2012; projected cohort life expectancy in 2020), they can expect to live another 13 to 18 years on average.

The youngest boomers aged in their mid-50s (born in 1966) have over 30 to 34 years of cohort life expectancy to go. The longer life expectancies are delaying the receipt of bequests (see Box 15).

A basic projection to gauge scale of future property bequests can be done by: (1) using the distribution of houses in the 2014 HILDA survey but adjusted to house values in 2019 (assumed conservatively to grow only with inflation in future); and (2) estimating the timing of bequests of these houses based on cohort life expectancies of singles and couples, differentiated by income (since rich people live longer on average).

The results of the simple exercise are presented in Figures 27A-B. The numbers suggest that the supposed ‘wave’ or ‘wall’ of inheritance is in fact far into the future. Much of this is down to long life expectancies.

The calculations suggest that while the numbers of bequeathed houses may increase over the short term, reaching an average of about 80,000 per year in the next ten years (reaching a cumulative number of 1m by 2033), the increase in total annual value is expected to be gradual. (Note that in terms of reducing demand and adding to supply, such numbers are already incorporated in the net population and housing figures presented in Section 1.3.)

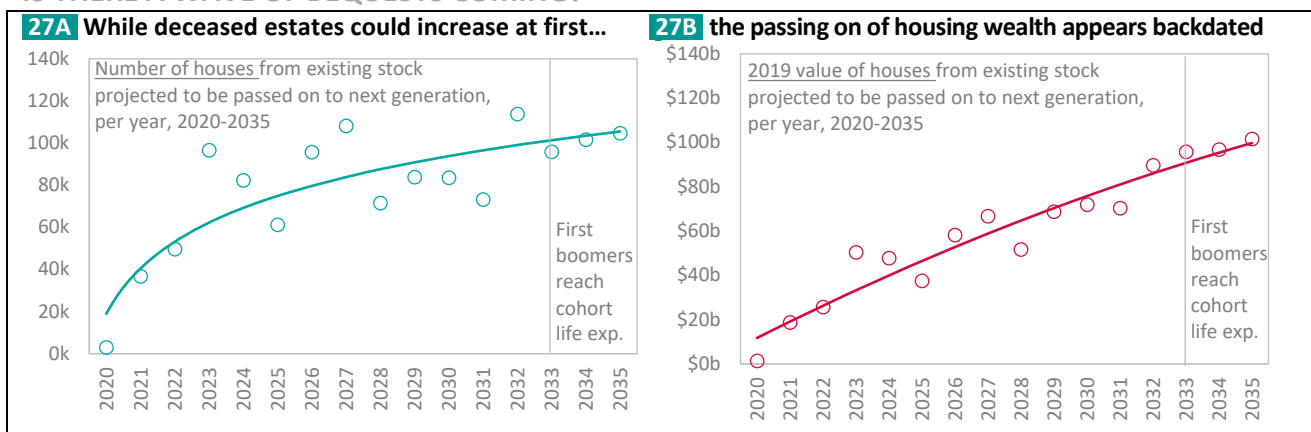
Another question concerns *who* receives bequests and gifts. Transfers during life and after death can entrench inequality if high-income people have high-income parents and receive higher-value bequests and gifts.

In the period 2002 to 2014, people in the top half of the income distribution received gifts and bequests that were 40% higher on average than those in the bottom half. The contrast is sharper in terms of net worth. The top half by wealth received three times more transfers on average than the less wealthy half (Authors’ analysis of HILDA data).

This is echoed by more sophisticated analysis by Barrett et al. (2015). They found that renters are less likely to receive transfers compared to those who already own a home, helping the latter from falling out of homeownership. Also, transfers were found to double the rate of becoming a homeowner when received by a household that previously rented, and indeed that the value of the purchased home was greater (rather than reducing the size of the mortgage). Finally, they confirm that intergenerational transfers between 2002 and 2010 have tended to increase inequality, in part facilitated via housing assets.

The absence of wealth, inheritance, or estate taxes (since the 1970s) and the status of owner-occupied housing in the Australian tax and transfer system, means that policymakers have fewer tools to tackle intergenerational inequality. Interestingly, superannuation, the wealth accumulation tool that has come to partly replace housing is subject to a 15% tax when it is passed to non-dependents (though not if disbursed before death). Perhaps the growing inequality of housing may be the impetus needed to reconsider some form of inheritance tax, which may not only address inequality but also be one of the most efficient forms of taxation (Henry et al. 2009).

IS THERE A WAVE OF BEQUESTS COMING?



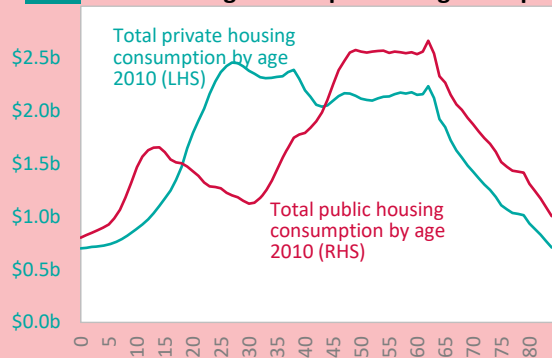
Note: The projection is based on 2014 HILDA based distribution of houses among people of different ages but values have been scaled to 2019 house values. The households were aged to 2019 and the demographic characteristics were combined with cohort life expectancy in 2020. The house is deemed to be passed on when the last member of the couple is expected to pass away. Life expectancies are adjusted to take account of richer households living longer than poorer households. The projection is based on the passing on of existing stock of houses and doesn't account for any new houses that are acquired and passed on. Analysis excludes moves to residential care or any downsizing. Source: Authors' analysis based on HILDA, ABS 6416.0, AGA 2012, Clarke and Leigh 2011.

Box 15 **CEPAR research spotlight** **Housing consumption by age and economy-wide bequest modelling**

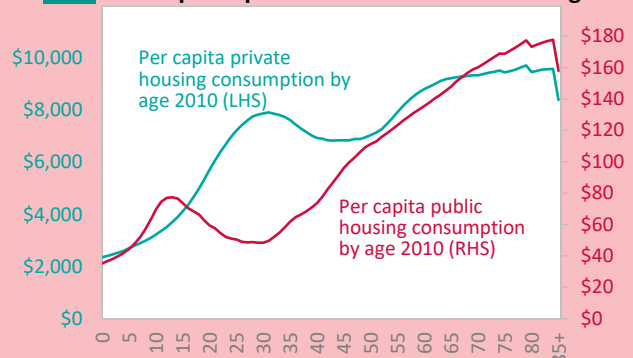
CEPAR Chief Investigator Peter McDonald, Associate Professor Jeromey Temple, and PhD student James Mahmud Rice are at the forefront of a global research effort to understand resources available to different generations. The field is known as National Transfer Accounts (NTA), and the methodology allows them to ascribe all consumption, production, and resource transfers to the average person aged 8, 48, or 68.

For example, it can help us understand what housing consumption looks like by age. In Rice et al. (2014), they find that private housing consumption (which includes rent, other housing services, and imputed benefit of owning) is highest for people in their 20s (Figure 28A). By contrast, public housing spend – which is the in-kind rental subsidy received by those living in public housing – tends to primarily go to people in their 50s, which may reflect legacy schemes. Some of this is due to the size of each age group. The per capita figures increase until one reaches their late 80s (except where some of the housing is shared with children). Such NTA data lends itself to projections based on demographic scenarios. For example, if 2010 had the older structure expected in 2030, public housing consumption (or spending) would be about 4% higher, all else equal.

28A Total housing consumption is higher in prime age



28B But on per capita basis it increases to late ages



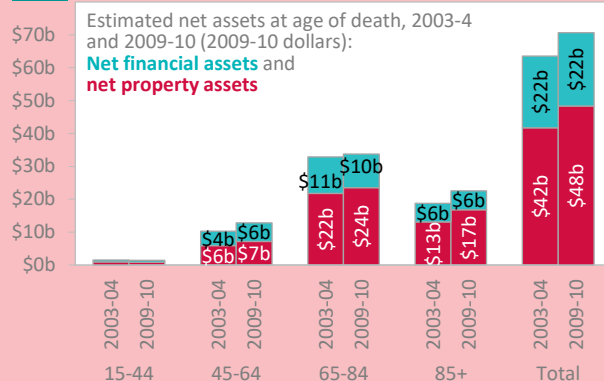
Note: Support such as Commonwealth Rent Assistance is counted within private housing consumption Source: Rice et al. 2014

In Temple et al. (2017), the team extend the NTA methodology to answer questions about inheritance and transfers before death (*inter vivos*). It's the first study to do so systematically across the entire economy.

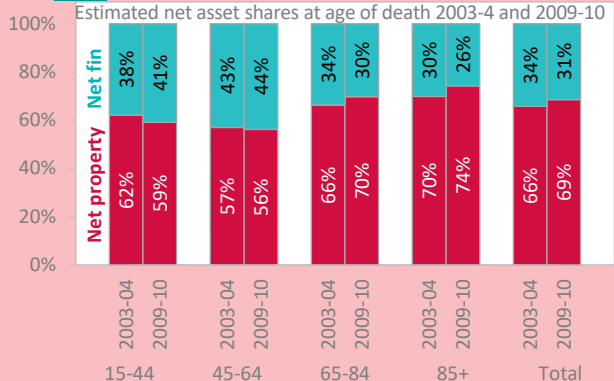
They found that assets available at age of death are large, about \$70b in 2010 (Figure 29A), up about 11% in real terms since 2004 (following declines in the Global Financial Crisis). Over two thirds of these are in the form of property, or nearly \$50b. The share of deceased assets in property has been increasing with age at death and over time (Figure 29B). For example, property made up 70% of assets for those dying aged 65-84 and 74% for those dying aged 85+.

The team also confirmed the notion that changes in life expectancy mean that people are receiving inheritances much later than they did in the past. For example, had Australians experienced the same rates of death in 2010 as they did in 1971, an additional \$76b would have been made available from persons aged 40 to 84.

29A Assets at age of death are significant



29B Housing makes up an increasing % of bequests



Source: Temple et al. 2017

Box 16 CEPAR research spotlight Bequest patterns of Age Pensioners

It's not just the family home that is passed on at death. Many older Australians also hold on to their financial assets for as long as possible, often out of uncertainty about future financial shocks.

Such savings behaviour takes place despite many of them facing the Age Pension means test, which some claim is too aggressive when it comes to assets.

Research by CEPAR Associate Investigators Susan Thorp, Shang Wu, and Ramona Meyricke (with Anthony Asher) showed that rather than running down assets to access higher Age Pension payments, pensioners generally maintain their assessable asset balances and appear to 'under-consume' in their later years (Asher et al. 2017).

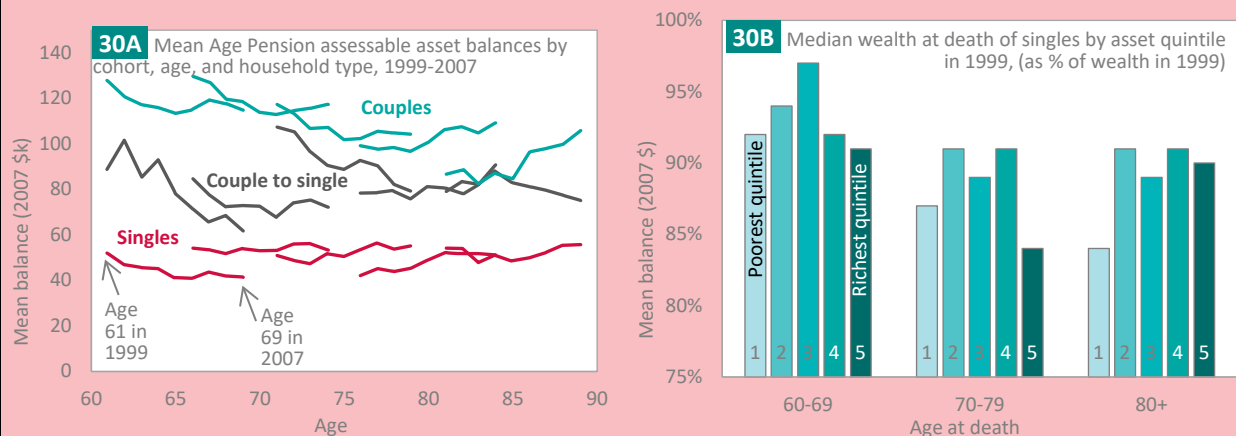
The analysis was based on Age Pension administrative data that tracked the assets and incomes of full and part age pensioners between 1999 and 2007 (i.e., a population less well off than average). They found that over eight years, most pensioner households drew down little of their financial assets (median drawdown was 10% over eight years) and many left possibly unintended bequests.

The results suggest that on average, younger and wealthier households spend some of their financial wealth, but many households see their financial assets grow, particularly couples and homeowners (Figure 30A). Housing assets are usually preserved until very old ages unless a partner dies or moves into residential care, suggesting an element of downsizing or selling assets to fund residential care.

Interestingly, the data shows that consumption among pensioners is low when compared to the Association of Superannuation Funds of Australia benchmarks for a 'modest' and 'comfortable' retirement, even among the wealthier households in the sample (see Chomik et al. 2018a).

One reason may indeed be precautionary saving. Pensioners may be self-insuring for investment shocks (e.g., stock market losses that affect their future income) and expenditure shocks (e.g., health and aged care related costs). But the outcome of low spending profiles is that a large share of pensioner households leave bequests. Of those that passed away, the median pensioner was able to bequeath wealth equivalent to 90% of the assets recorded at first observation (Figure 30B). Only around 10% of single-person households in the sample exhausted 90% of the initial assets over the eight years.

So, rather than rapidly drawing down their assets to maximise their Age Pension income, Australian pensioners appear to 'under-consume', holding on to assets, and even building a buffer, well into their later years. These findings are instrumental in the debate about greater asset testing. It may be rational, since many risks are uninsurable, but perhaps if households had more income certainty (e.g., insurance against investment and longevity risk in super) and ability to respond to health shocks they would be willing to consume more of their assets.



Source: Asher et al. (2017).

2.7 Alternative ways to consume housing

So far, much of the discussion has been about how people use the *nest egg* that is the family home. What about the ways of making use of the *nest* – the type of home where they choose to live and age?

Living in one’s own home is by far the main way in which Australians consume housing. In 2016, only about 12% of those aged 65 were renting. This consisted of 8% renting in the private market and 4% residing in social housing (of which 3% were in public housing and 1% in community housing). About 6.5% of older people were in retirement villages (which fall under different tenures, from owned to rented). About 3.5% are in residential aged care (ABS Census 2016). The majority wish to live in middle and outer suburbs of capital cities (35%) and small regional towns (20%; James et al. 2019). A set of options, with their related features, is summarised in Figure 31. In principle, many of the available housing options apply to both those who reach old age owning a house and those that don’t. The more restricted choices of the latter are ameliorated via government programs (e.g., Commonwealth Rent Assistance, Age Pension means testing, and subsidised care).

31 Each housing option comes with different advantages and disadvantages						
	Homeowners	Private rental	Social housing	Mobile home communities	Retirement villages	Residential aged care
Services	Home based aged care	Home based aged care	Home based aged care	Basic services; can access home care	Varies by village, some offer other services; can access home care	Ongoing care
Home modifications	Yes, may require strata agreement	Yes, but requires landlord agreement	No – done by housing provider	Yes	Depending on retirement village	Not applicable
Legal tenure	Own land and dwelling	Lease dwelling	Lease dwelling	Mostly own dwelling and lease land	Long-term license, but contract terms can be complex	Not applicable
Security of tenure	High	Low – can be evicted without grounds	High – often lifetime	Low – can be evicted without grounds in some jurisdictions	High	High
Regulation	Supply of care controlled by Cwlth	Varies by jurisdiction	Funded (and often provided) by States	Varies by jurisdiction	Varies by jurisdiction	Supply controlled by Commonwealth
Fee structure	Imputed rent	Market rent	Rent – fixed proportion of income	Purchase price of home + ongoing fees (some also pay at departure)	Ongoing fees + refundable lump sum at entry + departure lump sum	Subsidised ongoing fees. Can choose to pay refundable lump sum for accommodation
Interaction with tax/transfer system	Home exempt from the Age Pension assets test. Only part of the value included in residential aged care assets test	Age pensioners eligible for rent assistance	Rents are subsidised	Age pensioners eligible for rent assistance. Dwelling exempt from Age Pension assets test	Mostly ineligible for rent assistance. Entry contribution exempt from Age Pension assets test	Means testing determines fees. Value of principal residence included up to a cap

Note: Rent assistance refers to Commonwealth Rent Assistance. Source: Adapted from PC (2015).

Private housing arrangements

There were over 10m private residential dwellings in Australia by the end of 2019 (ABS Cat. 6416). Based on Census data, over a million were unoccupied. Roughly a third of private occupied dwellings are rented (32%), a third are owned outright (33%), and a third are owned with a mortgage (35%).

The typical Australian dwelling is home to two people (33%), with single-person dwellings being second most popular (25%). The most common number of bedrooms is three (42%), followed by four-bedroom dwellings (27%).

Owned dwellings tend to be larger and, as expected, older people live in bigger houses with more bedrooms. For example, over one fifth of people aged 50 to 75 had three or more spare bedrooms. On the one hand, it may mean that they are overconsuming housing at the expense of other spending and could benefit from downsizing, on the other, it gives them more flexibility to host their families and friends.

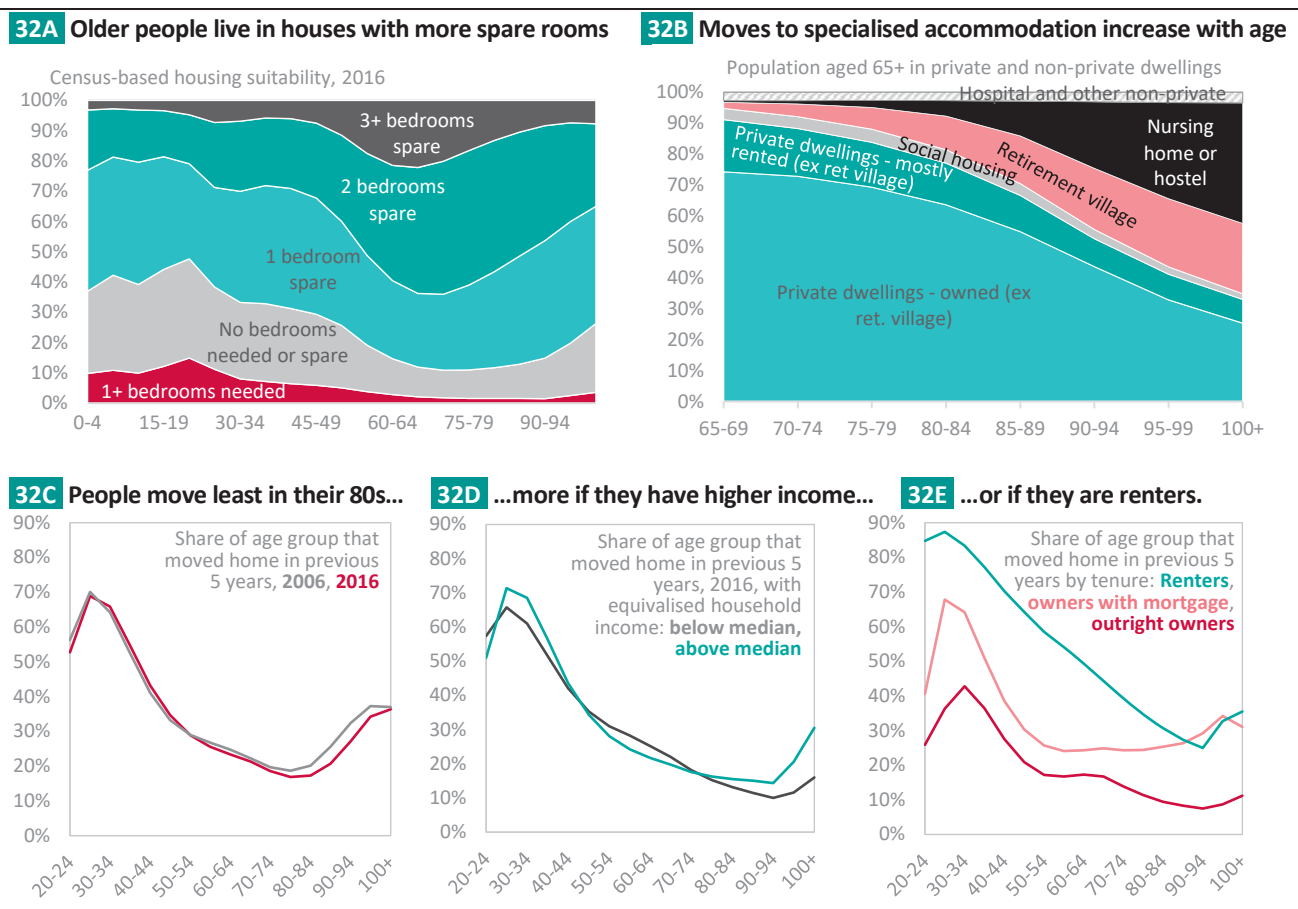
Moving house

Private dwellings remain the main form of accommodation up until about age 95. After this nursing homes (including aged hostel-type accommodation) become the norm (Figure 32B). To be able to continue to live independently may require adapting the house, but there is evidence the housing stock is lacking (see Box 17).

Not only do older people tend to remain in the private housing sector, they rarely change address unless perhaps compelled to do so at the most mature ages. While about 70% of 25-year-olds moved to a new house in the five years to 2016, only about 20% of 85-year-olds did (Figure 32C) – a pattern that is common in all countries and over time (Sánchez and Andrews 2011).

The rate of movements tends to increase again after people reach the age of 80, in line with the propensity to need care. But such movements are taking place less and less over time. About five percentage points fewer people in their 80s moved in 2016 compared to 2006. This is in line with delays in health problems that would lead them to move out of necessity. Housing transactions data point to the length of homeownership continuing to extend across the whole housing market at a rate that is above what would be expected based on compositional drivers from more older people in the population. Duration of tenure rose from an average of just under five years in 1992 to just over 11 in 2019. Units, which tend to be held about a year and a half less, also saw length of tenure increase (CoreLogic 2019). People with incomes above the median and renters were more likely to move in late age, though probably for different reasons (Figure 32D-E). International evidence shows the preference for ageing in place grows with age and that the preference is greater among those less affluent (Costa-Font et al., 2009). The data suggests that this preference may be more limited for renters.

WHAT DO 'HOUSING SUITABILITY' AND MOVING PATTERNS LOOK LIKE BY AGE?



Note: Private dwellings – mostly rented (ex. retirement village) category includes other tenure types and non-stated. Source: Authors' analysis of ABS Census

Box 17 CEPAR research spotlight **Adapting housing to ageing needs**

Many older people in Australia may wish to age in place, but it may not always be possible. Findings from a recent Australian study, led by CEPAR Associate Investigator Julie Byles, indicate that the family home may be poorly equipped to cope with our changing physical needs as we age (Byles et al. 2011, 2014, 2019).

The Housing and Independent Living Study (HAIL) is an Australian based study which assessed the home and neighbourhood environments of 202 community-dwelling men and women aged 75-79 years. The study provides an important snapshot of whether current housing stock in Australia is equipped to meet the needs of older people. The survey also provides insights on whether there is a mismatch between what older people want from their homes and what they physically need from their housing later in life.

Participants were surveyed about their current and expected needs, and physically assessed to understand their functional capacity and mobility. The study defined *supportive* living environments to include those that offered: (1) accessibility (an ability to move around without hindrance from physical barriers and availability of transport options and accessible distance to services); (2) usability (ability to perform daily activities within their environment); walkability (the degree of friendliness of an area to walk in); and (3) safety (hazard free). Participants were assessed using the *Late Life Function and Disability Instrument*, a tool used to assess a person's *function* (the ability to do a discrete task or activity) and *disability* (ability to perform a socially defined task). The physical environment of the home was also assessed during a home visit, to see if it met the needs of the resident.

The findings from the HAIL survey indicate that many homes do not meet the needs of older residents and do not conform to objective safety and accessibility measures. Importantly, the study findings indicate that while participants generally rated their homes as suitable and acceptable, in many cases the homes did not comply with multiple features of the Australian Standard (AS 4299). This is the general planning and design guideline for ensuring houses can accommodate varying degrees of physical ability and accessibility (Byles et al. 2011).

According to findings of the HAIL study, many homes in Australia failed to meet objective safety standards, with bathrooms in particular identified as a high-risk area for accidents (eg. trip hazards and slips). In the 202 home environments assessed as part of this study, 80% did not have basic safety items like a shower grab rail and 77% did not have non-slip surfaces on the floor (Byles et al. 2014). The very real challenges created by increased frailty, poorer mobility and disability mean the changes to homes are not optional but necessary in order to maintain good health and wellbeing as we age.

In future, the interaction of population ageing and climate change may bring yet another set of challenges. A paper by CEPAR Associate Investigator Ramona Meyricke and Senior Research Fellow Rafal Chomik assessed evidence on the age gradient in heatwave mortality and found that the health of older people is materially affected by extreme heat. This is significant because over the next 20 to 40 years, all capital cities in Australia are forecast to experience a tripling in heatwave days. Excess mortality from heat is expected to double for all ages and at least quadruple for over-65s (even with no demographic change). Older people are more at risk from extreme heat because of reduced thirst and sweat responses, lower cardiac fitness and higher prevalence of chronic conditions. The work suggests that improving building standards and the thermal efficiency of buildings, particularly in northern parts of Australia, could help reduce risks to the health of older people (Meyricke and Chomik 2019).

Ageing in place

The alternative to moving home to access specialist services is to adapt services and amenities so that people can remain in their home and neighbourhood. The concept is referred to as *ageing in place*. It is facilitated by the fact that homeownership effectively comes with insurance against rental risks (see Section 3.3 on renter perspectives). Enabling ageing in place will depend on a range of adaptations, including adapting homes (e.g., ensuring building code rules are appropriate and applied; see Box 17), neighbourhoods (e.g., transport; see Box 20), behaviours (e.g., exercise and occupational therapist interventions to prevent injury; see Box 18), and services.

Probably the greatest contributor to people's ability to age in place is access to care services. Most care to the elderly is provided informally by friends and family. But an increasing proportion comes from publicly-funded care and support services provided in the home rather than in institutional settings. Not only is this usually preferred by those receiving care, it is also often cheaper, especially for mild-to-moderate care needs (see more in Chomik and MacLennan 2014a and 2014b; and Chomik and Townley 2019). Government is looking to expand home care further, but the bottleneck may prove to be in a limited aged care workforce.

Box 18 CEPAR research spotlight **Preventing falls at home**

One in three people aged 65 and over fall at least once a year. The most serious consequence of a fall is a hip fracture. Such fractures occur most commonly in the private home (48% of hip fracture hospitalisations in 2016) while undertaking an everyday activity (35% were due to slipping, tripping or stumbling; AIHW 2018).

CEPAR Chief Investigator, Bob Cumming, has spent much of his career researching ways of preventing falls in older people. Evidence suggests that addressing some key modifications at home is a good start. These can include loose rugs and electrical cords, which have long been known to increase the risk.

In 1999, Cumming et al. published the first study evaluating the effectiveness of home modifications. He studied people discharged from hospital and found that a home visit by an occupational therapist, with subsequent home modifications, if required, could reduce fall risk by 40 per cent. This is further supported in meta-analysis conducted by CEPAR Associate Investigator Lindy Clemson (Clemson et al. 2008; Gillespie et al. 2012).

Unfortunately, most discharged older patients still do not get an occupational therapist home visit. There is no evidence that simply giving older people a home safety checklist and expecting them to arrange their own modifications prevents falls. Clemson similarly found that better discharge planning from hospital can help. In Shepperd et al. (2013) she suggests that a discharge plan tailored to older patients could bring about reductions in hospital length of stay and readmission rates.

Cumming has also been involved in studies showing that Tai Chi and other exercise programs aimed at improving balance can prevent falls (Voukelatos et al., 2007, Sherrington, 2008). However, many older people are unwilling to join a formal exercise program. In Clemson et al. (2012), Cumming and Clemson demonstrated that incorporation of exercise into daily life can reduce falls risk. Examples of exercises include standing on one leg while washing the dishes and placing the washing basket on a lower level, rather than in a trolley, and squatting down and then up to take clothes from basket to clothesline.

Retirement villages

For homeowners, choosing to move to a retirement village represents an increasingly popular way to downsize (Judd et al 2014). Some advantages include: (1) scope for independent living, but smaller than a standard home; (2) purpose-built facilities designed for older residents (a minimum age of 55 typically applies); (3) access to health and care services; (4) affordability (on average, 64% of the price of a median two bedroom home, and cheaper still compared to inner city postcodes); and (5) social and community amenities and activities alongside high occupancy rates (in the order of 89% nationally; Property Council 2019).

But the option may come with risks and disadvantages. Service agreements vary and tenure contracts can be complex (Towart 2013). Strata title, company share, unit trust arrangements, and leaseholds are all in use in the sector. Timing entry into a retirement village is difficult given health uncertainties, as is gauging the actual costs, given varying capital gains and exit fees. It provides complex puzzles for actuaries, let alone older members of the public (Zhang et al. 2017). Some have criticised the operating practices and lack of transparency of contracts and fees. In NSW, this led to an inquiry that proposed improvements to contract fairness, dispute resolution, and transparency (Greiner 2017).

There is evidence that older women who downsized by moving to a retirement village (or residential aged care) typically did so because they had health or lifestyle concerns. As it becomes a more prevalent housing option for many older Australians, the retirement village market deserves both research and policy attention.

Box 19 CEPAR research spotlight **Housing pathways of older women**

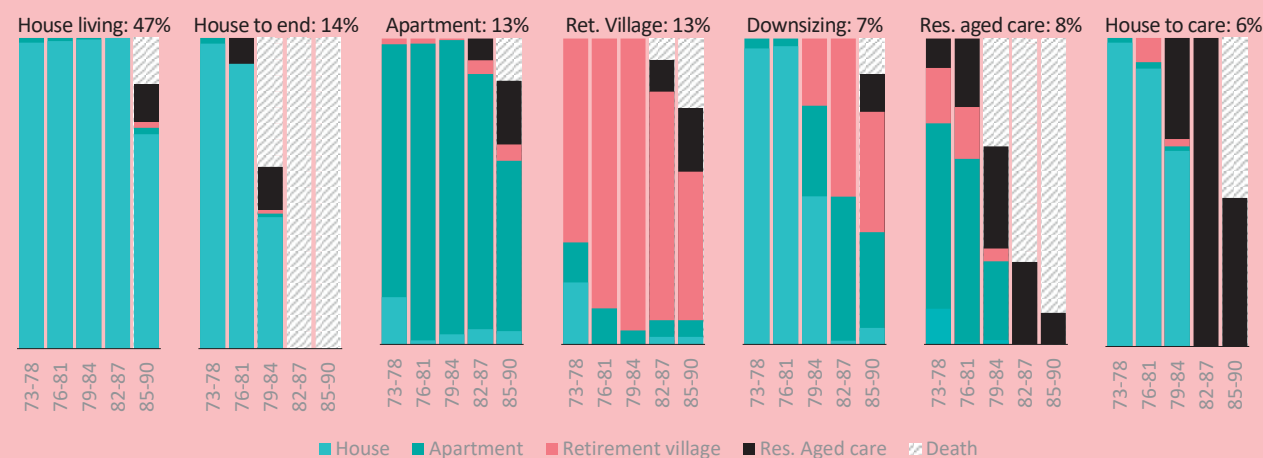
The housing experiences of older women can vary greatly. Recent research led by CEPAR Associate Investigator Julie Byles sheds much light on this. Using data from the *Australian Longitudinal Study of Women's Health*, the *Australian Death Index*, and administrative records for residential care, Byles et al. (2018) mapped the housing pathways of older women in Australia. The linked data tracked about 10,000 women, initially aged 70 to 75, for twelve years. Participants answered questions about their housing situation and various demographic and health variables at three-yearly intervals.

The research team used statistical techniques to identify several typical housing pathways (*latent class analysis*). The approach demonstrated that while people exhibit an established preference for a certain type of housing, needs and preferences can change with age.

They found seven distinct and mutually exclusive housing pathways, or *classes* (Figure 33). Four had very stable patterns of housing because their situation did not change over the study period: the *status quo* of living in a house (47%); living in a house until death (14%); living in an apartment (13%); and living in a retirement village (13%). One class showed a pattern of downsizing by moving from a house to a retirement village (7%). Two classes were characterized as having transitional pathways: swapping an apartment for a unit in a retirement village, and then moving again but into residential aged care until death (8%); and moving from a house directly into residential aged care (6%).

While the findings indicate that almost half of all older women are choosing to age in place, many are living alone. For older women who do decide to leave the family home, health and demographic factors play the deciding role. Women who downsized (by moving to a retirement village or residential aged care) typically did so because they had a health or lifestyle concern. For example, those belonging to the house-to-residential-care class were more likely to live in regional areas (in towns like Tamworth or Bendigo) and have poorer physical health (including a limited ability to undertake basic activities like climbing stairs). Although the relatively small number of women downsizing might reflect a lack of appropriate housing alternatives, it might also suggest a determination and adaptability amongst women to modify their environments so that the family home can continue to meet their changing needs as they age.

33 Typical housing pathways among older women



Note: Retirement village includes self-care unit. Residential aged care refers to permanent care. Source: Byles et al. 2016

Box 20 CEPAR research spotlight Age-friendly cities and neighbourhoods

Understanding how older people use their homes and navigate their neighbourhoods can help us design more age-friendly cities. The pursuit of such goals was spearheaded globally by John Beard, who is a Professorial Fellow at CEPAR and former Director of the World Health Organisation's Department of Ageing and Life Course. Beard launched a network of age-friendly cities, which includes a global database of age-friendly practices so that communities can exchange information about how best to adapt structures and services to better meet the needs of ageing populations and help them age in place.

The journey to an age-friendly city involves a systematic program of planning, adopting an action plan, monitoring outcomes, and analysing results. Twenty-eight Australian cities or communities have joined the program, many are in Melbourne and all are in southern states; none are in the Northern Territory or Queensland, though the state government in the latter does have policies in place in line with WHO principles.

Forthcoming work by CEPAR Senior Research Fellow Rafal Chomik (with others) will look at age-friendly city policies in practice and how demographic change relates to local services (e.g., transport and care).

34 The 28 WHO Age-friendly cities in Australia are isolated to the southern states



CEPAR Associate Investigator, Julie Byles, has looked at how older people relate to their local environment. In Byles et al. (2015) she focused on interactions between mental health, social interactions, mobility, and the residential environment – or what can be referred to as *life space*. The notion recognises that older people need to be able to navigate their environments freely and safely and that interventions that overcome mobility or disability issues are needed to expand their life space beyond the confines of the home.

As part of the study, 200 people aged in their late 70s completed a questionnaire on regular activities in their daily life. Participants in the study were given a *Maximum Life Space* score that measured their degree of mobility and a *Health-Related Quality of Life Profile* to measure psychological health. Life space measures tracked movements within the home (e.g. flow between bedroom and living room), frequency of movement to the perimeter of the home (e.g. to the yard, garage, or mail box) and beyond (to the local shops or the doctor).

The study found that mental health and life space were positively correlated. Results from the study indicate that about half the participants had left their immediate suburb but not their city during the period of observation. Just over one third (36%) had left the metropolitan area, and about 16% had not left their neighbourhood at all. Older women were identified by the study as being at particular risk of social isolation. Older men, overall, had greater life space. Participants who could drive had the best life space of all. The greater tendency for women to engage in caring activities, and the fact that fewer older women in this age group could drive were found to be contributing factors in the smaller 'life space' felt by women living at home as they age.

PART 3: Housing lack in old age

A significant minority of Australians reach retirement with no housing equity. As noted earlier, the 2016 Census indicates that about 12% of people of aged 65+ were renting, with 8% renting in the private market. There is also a small but concerning proportion who fall in and out of ownership over the lifecycle – about 7% over the decade to 2010 (Wood et al., 2013). A lack of homeownership can in the extreme case result in a lack of housing altogether: About 20,000 people aged 55+ were homeless in 2016 (as described further in Section 3.2).

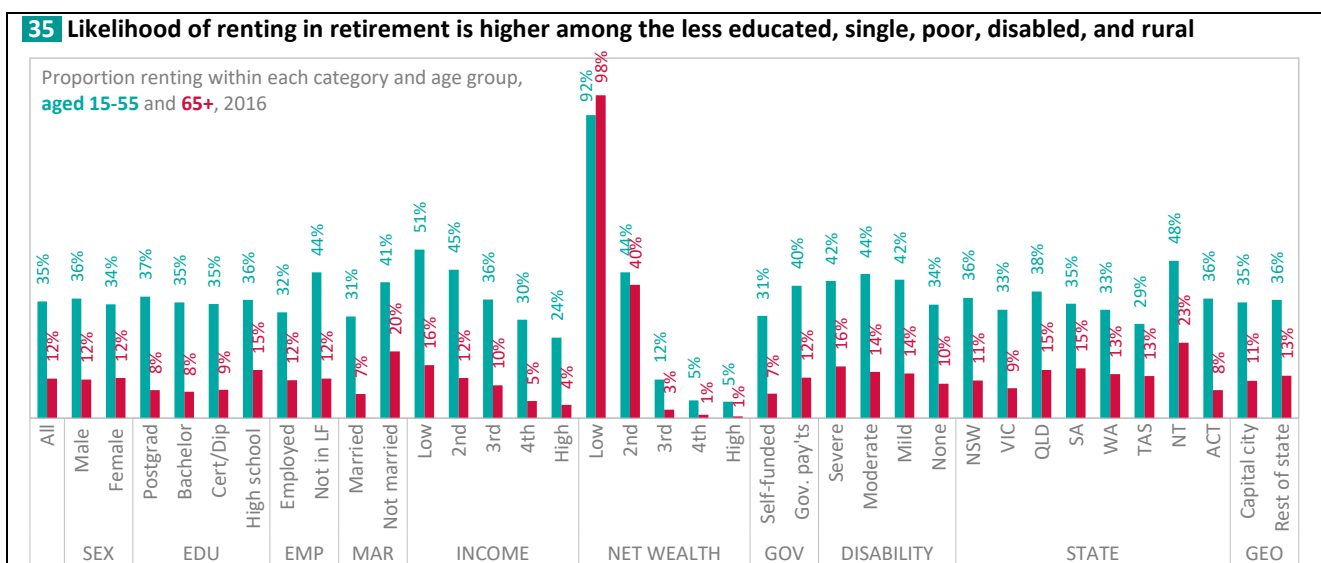
Here we document how those who don't own a home by the time they retire are likely to experience greater risks of poverty, financial stress, and housing insecurity, and the policy interventions that may help. If the share of retired renters grows, as trends suggest, so will the pressure on governments to respond with various forms of support. The data is newly derived but the narrative reinforces past research that the existing safety net programs, including those available to older Australians through the retirement income system, are failing renters.

3.1 Who are older renters?

There are some common characteristics of older renters or pathways that may lead them to renting at later ages. These include lower socioeconomic characteristics and less stable and insecure employment and household structure over the lifecycle.

While women are less likely than men to be renters at younger ages, after age 65 they have a slightly higher rate of renting (12.2%) compared to older men (11.7%). More pronounced differences appear by level of education, marital status, income and wealth, disability, and location (Figure 35). For example, only 7% of older people who are married rent in retirement. Singles are nearly three times more likely to be renting in retirement (at 20%). And only 4% those with income in the top quintile rent, compared to 20% of those in the bottom quintile.

Since the house one owns usually makes up the majority of ones wealth, renting among those with more wealth is extremely low, at 1% for those aged 65+ in the top net wealth quintile. By comparison, 98% of older people in the bottom quintile rent. This can be expected almost by definition, yet this is not what is assumed in the parameters set in the retirement income system. It highlights the empty provision that the Age Pension asset means test offers to non-homeowners, whereby they can own more non-home assets before losing pension income, but they hardly have any such assets.



Note: The numbers represent shares of persons by their household's tenure. This means share of renters may be underestimated among younger age groups since some may live in a dwelling that is owned by another person also living there. Numbers are rounded to nearest percent. High school category includes people with below high school qualifications. Bachelor category includes postgraduate diploma. Both income and wealth relate to household resources adjusted for household size and quintiles relate to the distribution of persons within age group. Government payments based on receipt of any government payments in the household. Disability relates to core activity limitation. Source: Authors' analysis of ABS 2016 SIH data.

Another characteristic relevant in an ageing population is that people with disabilities and core activity limitations who need care are more likely to rent (16% among those with severe activity limitations). This could mean that they are unable to make necessary home modifications and remain independent, which would in turn increase demand for residential care.

Dynamics over time are also changing the snapshot of typical renters as increasing shares of Australians enter retirement not having bought a house or experience pathways out of homeownership due to still having a mortgage in retirement or divorcing in late age (Beer et al. 2011).

In turn, this would exacerbate gender wealth gaps in retirement. Such gaps may be acceptable in a society where everyone forms part of a couple and where working and saving decisions are joint and retirement resources are pooled. But 17% of Australians are entering their 60s living alone (up from 14% in the 1980s; single women also tend to have lower wealth, including lower superannuation balances than single men or members of a couple of either gender (Chomik et al. 2018c). Furthermore, nearly a quarter of divorces result in homeownership loss (authors' analysis based on HILDA 2001-2017).

3.2 Housing vulnerability

There is a widening vulnerability gap between those that own in retirement and those that don't. A lack of homeownership is associated with various vulnerabilities including financial stress, poverty, inadequate housing, or housing insecurity in the form of uncertain tenure and, at worst, homelessness.

Housing affordability stress

For many, housing costs are less affordable than they were in the past, and those on low-incomes have seen greater relative increases than those on high-incomes (36A-B). A common benchmark to gauge housing affordability stress is when a household pays more than 30% of its income in housing costs. Based on this measure, about 870,000 renter and 320,000 owner households, which represent 1.8m and 780,000 people, respectively, experienced housing stress in Australia in 2016 (Authors' analysis of ABS data, excluding nil or negative income households).

But some may choose to spend more on housing than others, so another way of measuring housing affordability stress is to estimate the figures for households that spend more than 30% of their income on housing *and* have low incomes (i.e., in the bottom 40% by household income, adjusted for household size). On this measure, about 750,000 renter and 280,000 owner households, which represent 1.6m and 680,000 people, respectively, experienced housing stress in 2016. The result is perhaps unsurprising: nearly 90% of people experiencing housing affordability stress consist of those with low incomes.

Compared to other age groups, older renters are at greatest risk of housing affordability stress. In 2016, about 44% of renters aged 65-74 spent more than 30% of their income on rent, the highest rate of all age groups and the highest level over time (Figure 36C). In fact, the rate is about twice as high as it is for renters aged 25-34 (23%) and it has increased dramatically since 1996 (when it was 19% for the older age group). The pattern is the same when restricting the measure to those that also have low incomes (Figure 36D), with 37% of renters aged 65-74 experiencing affordability issues.

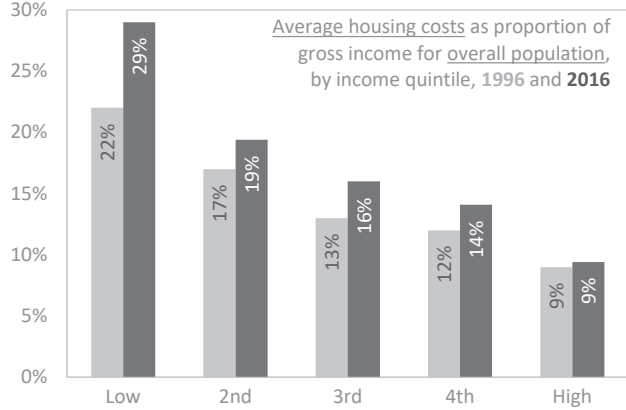
By contrast, few owners have excessive housing costs. Indeed, the pattern is reversed: younger people are more likely to experience housing unaffordability and this rate has generally declined over time (Figures 36E-F). Small increases in housing cost stress at older ages are the result of greater shares of older people paying off their mortgage later (see section 2.1).

Part of the reason behind this pattern is that the Age Pension is the same for owners and renters. Yet a couple on the Age Pension wishing to rent could afford only 3.2% of properties on the market and keep their rental costs below 30% of income (Anglicare 2019).

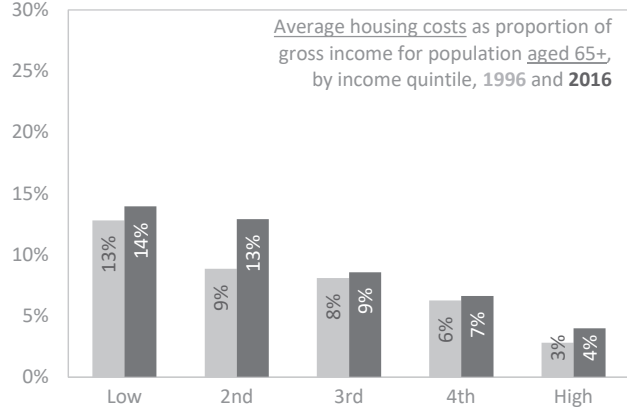
Finally, location matters. Sydney and Perth are less affordable than Hobart and Adelaide (Figure 36G-H).

HOW AFFORDABLE IS HOUSING BY INCOME, AGE, AND LOCATION?

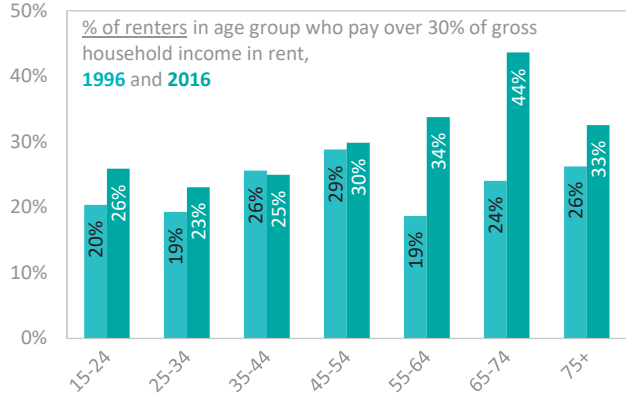
36A Average housing costs have increased more at the bottom



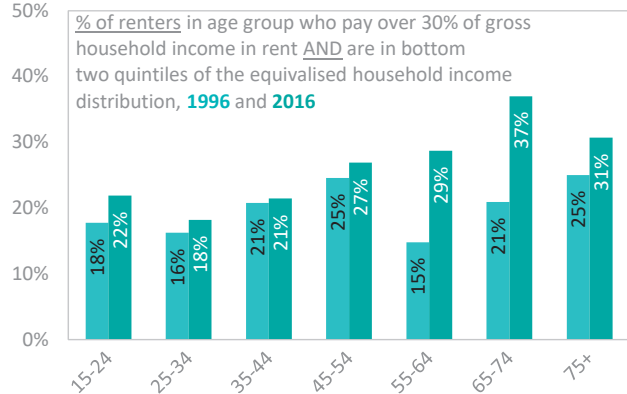
36B This is also the case among older people



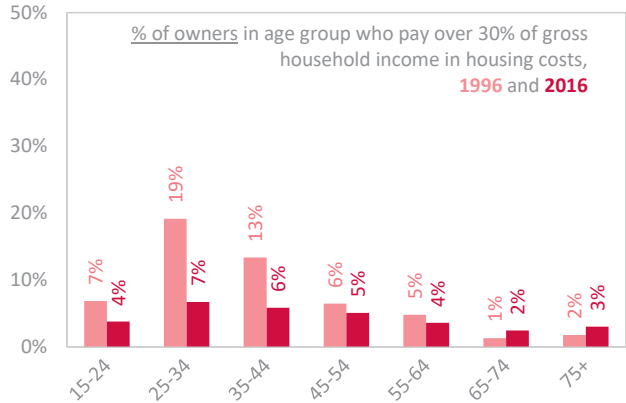
36C Older renters face high and increasing affordability stress



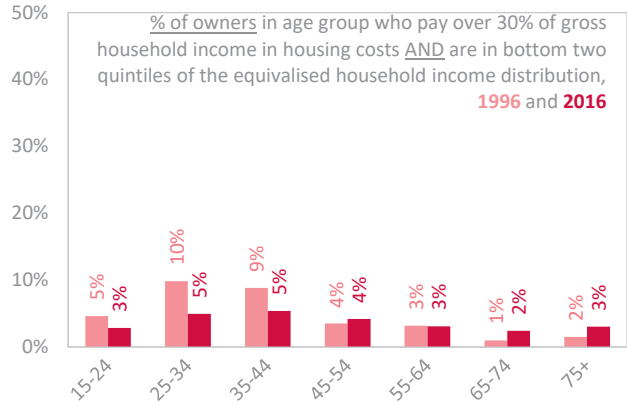
36D The numbers suggest most have low income



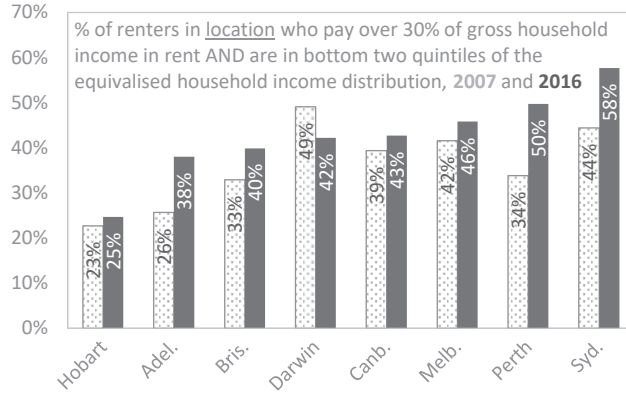
36E By contrast, owners have lower rates of housing stress



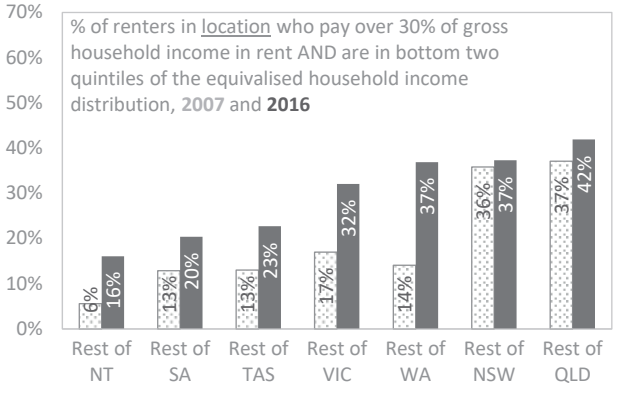
36F Those that do are young and have low incomes



36G Rental stress is highest in Sydney and Perth



36H In regional areas, Qld has higher rental stress



Note: Counting households and age of household head where necessary. Calculation of quintiles is on equivalised basis. Quintiles in 36B are for older population of households only. Source: Authors' analysis of ABS data

Poverty

Common measures of poverty rates (e.g., from the OECD) focus solely on cash income, and ignore whether individuals own their home. A better measure involves either deducting housing costs from income or adding the value of imputed rent (the estimated market rent of an owner-occupied home). Since many older people tend to own their homes outright, old-age poverty rates that are unadjusted for housing appear higher than the actual standards of living would imply (see Chomik et al. 2018b for a detailed discussion).

For example, the 2016 OECD measure of old age poverty declines from 24% when housing is excluded to 10% when it is included (14% if measuring after housing costs). Compared to other countries, this method also brings Australia's poverty rates to the level of the OECD average, debunking the idea that Australia has higher old age poverty rates than other developed countries.

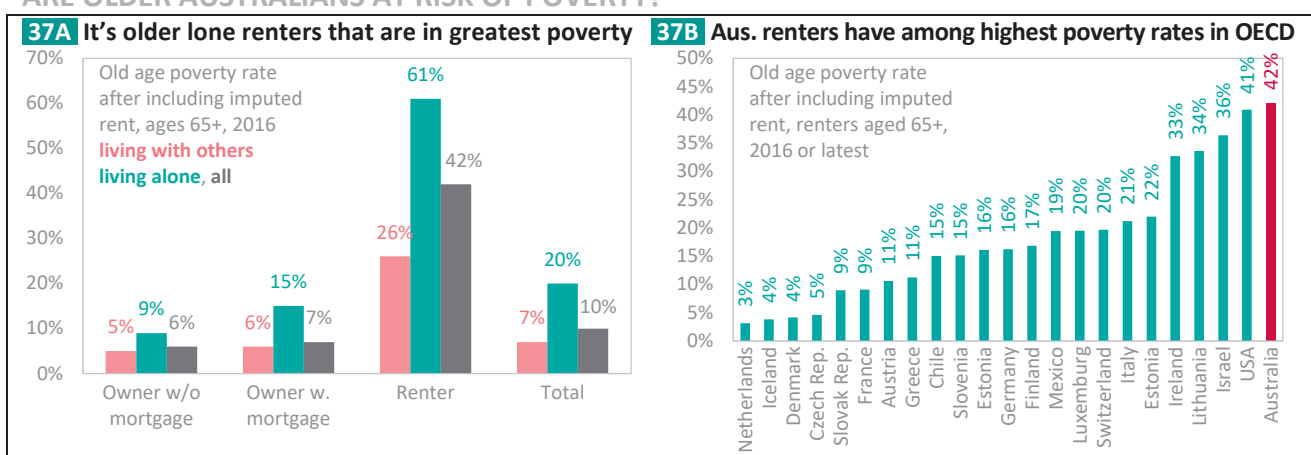
The positive story does not extend to renters (Figure 37A). When housing is included in the analysis, it reveals that 42% are in poverty after imputed rent (50% after housing costs). If we drill down to look at only older renters who live alone, we see that increase to 61% (or 70% after housing cost). The finding has been replicated over the years with little policy response (e.g., Chomik et al. 2018b; Saunders and Wong 2011; Yates and Bradbury 2010; Commission of Inquiry into Poverty 1975; Henderson et al 1970).

Single renters made up 5% of the population of over 65 and about 18% of the Age Pensioner population. But the majority of single renters are women, which is why female older renters have higher rates of poverty (44%, compared to 39% for men). Chomik et al. (2018b) looked at what that level of poverty can mean in practice. They found that a quarter of pensioners who rented alone in 2016 spent on average less than \$6 on food per day.

The nature of the Australian housing market and flaws in design of the retirement income system when it comes to renters mean that Australian renters have among the highest rates of relative poverty in the OECD once imputed rent is taken into account in the calculation (Figure 37B).

The response needs to come via either differential rates of the Age Pension or a boost in the Commonwealth Rent Assistance (see also Harmer 2009). Chomik et al. suggest that a 40% increase in the Rent Assistance targeted at older renters would reduce poverty from 42% to 31% at a cost of \$380m. Lone renters would see even greater drops in poverty by up to 19%. Similar proposals have been made by others (e.g., Daley et al. 2019 and KPMG 2019)

ARE OLDER AUSTRALIANS AT RISK OF POVERTY?



Note: Poverty rate is the proportion of people aged 65+ who have equivalised disposable household income (plus imputed rent) below 50% of population-wide median. Based on OECD countries with available data. Source: Authors' calculation based on Luxemburg Income Study and ABS SIH data

Box 21 CEPAR research spotlight

Who can expect financial hardship in old age, and for how long?

Cross-sectional data can tell us that lack of homeownership is associated with worse financial outcomes, but these may be episodic. It's also not immediately clear whether homeowners, who tend to live longer, eventually still experience the same number of years of financial hardship as shorter-lived renters. Longitudinal data can help in answering these questions by tracking people over the course of retirement.

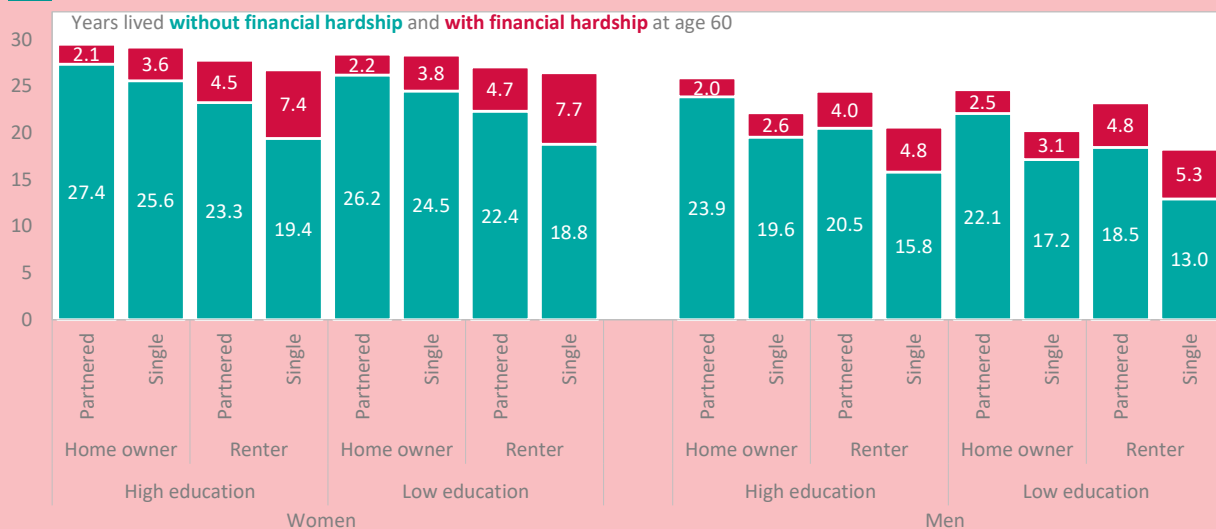
CEPAR Senior Research Fellow Kim Kiely, along with Chief Investigator Kaarin Anstey and Associate Investigator Carol Jagger, used the HILDA Survey, which has been linked to mortality records, to examine both life expectancies and what they call hardship expectancies. That is, the number of years that people with different characteristics are likely to experience financial hardship.

Hardship was based on whether people were unable to meet the essentials of life due to a shortage of money (e.g. being unable to heat the home, missing meals, being unable to pay utility bills, pawning items, and seeking help from family or community groups). They estimated these by housing tenure, marital status, and education, for Australians aged 60.

The results show clear differences by gender and housing tenure. For example, among single older women with a low education, those who rented not only lived two years less than those who owned their home, but also lived 4 more years in financial hardship (7.7 in total) – twice as many as owners.

Partnered, highly educated, homeowners aged 60 had the longest life expectancy (about 30 years) and had among the fewest number of years of financial hardship over their life (about 2 years). By contrast low-educated, single men aged 60, who rented their home, had the lowest life expectancy of 18 years, and just over five of those years were in financial hardship.

38 Single women who rent can expect 7+ years of financial hardship in old age



Note: Methodology is based on common approaches to estimating healthy life expectancy. Source: Kiely et al. (forthcoming)

The research not only makes use of health expectancy methodology in a novel way but brings a new perspective and insights to understand financial vulnerability in late life. It highlights that against the context of demographic change, renters may find themselves with a longer life in financial stress.

In future, the team plans to examine different cohorts to learn how life and hardship expectancies have been evolving over time, and link this with wider research questions on the social determinants of health (see Box 22).

Homelessness

Homelessness is one of the most extreme outcomes of disadvantage. Its impact on older people is unique and severe. Indeed, older Australians are a national priority homelessness cohort within the *National Housing and Homelessness Agreement* – a State and Commonwealth Government framework to improve housing outcomes.

Yet defining and measuring homelessness is difficult. Many jurisdictions around the world only count those who are visibly homeless in the streets or living in supported accommodation for the homeless. By contrast, the main, census-based Australian data source is informed by the idea that homelessness is about the absence of a *home* rather than absence of a *roof*. A homeless person is therefore defined as someone who (1) lives in an inadequate dwelling; (2) has no control of and access to space for social relations; or (3) has short and not extendable or no tenure; and in addition, (4) has no financial, physical, psychological, and personal means necessary to provide access to alternatives. The latter condition ensures that the definition excludes people *choosing* to live in circumstances similar to someone who is homeless (e.g., couch-surfing while travelling).

While about 8,000 were sleeping rough in 2016, based on this broader definition, 116,000 Australians were homeless; up from 105,000 in 2001 (or an increase of 1.3% p.a.). Younger men are the most typical group to be homeless (Figure 39A). About 24,000 were aged 25-34, of which 14,000 were men.

Nonetheless, older people make up a significant number. In 2016, 19,000 were aged 55+, or about 16% of all homeless people. The rate, or incidence, of homelessness is lower among the older population (Figure 39B). For example, the rate among men aged 19-24 was 1%, whereas the rate among men aged 55-64 was half that, at 0.5%.

Of recent concern has been a large increase in homelessness among older age groups. The number of homeless women aged 55-64 increased by 74% (or 3.8% p.a.) since 2001 – the largest increase of any age group, and far more than the increase for men (Figure 39C). But to understand such trends it's important to gauge the demographic context. That is, the pattern took place at the same time as greater numbers of baby boomers were entering old age. Indeed, the change in the rate of homelessness within age groups suggests that while rates are increasing among some older cohorts, and among women, the change is not as severe as for older as it is for younger people (Figure 39D).

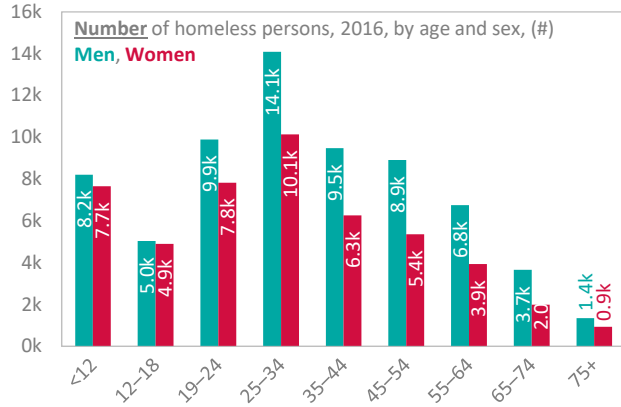
The numbers suggest that as the population ages so will the demographic profile of the homeless population. The typical homeless person will be increasingly older, with unique circumstances and needs. For instance, whereas younger people are more likely to experience homelessness in the form of severely overcrowded dwellings, older people are more likely to seek out boarding houses (Figure 39E). They may also be more likely to mask homelessness by staying with friends and family under informal and fragile arrangements.

Another factor is Indigenous status (Figure 39F). In 2016, Indigenous people were eight times more likely to be homeless than other Australians. About 3.3% of Indigenous youth were found to be homeless. While the rate among older Indigenous people was lower, it was still high – about 2.2% for those aged 55-64. In fact, this rate was 12 times higher than for older non-Indigenous Australians. While definitions of home and homelessness may differ between cultural groups (Mallett 2004), the data suggests that protections that good housing offers for good health and wellbeing is lacking for Indigenous Australians. Unsurprisingly, 'good housing for good health' is a priority in the *Close the Gap* process to close life expectancy gaps between Indigenous and non-Indigenous people.

Indigenous status on the one hand and the lack of housing affordability in the cities explain the dual nature of the geography of homelessness. Remote areas with significant Indigenous communities tend to have the highest rates of homelessness (Figure 39G). Seven out of the top ten areas by risk of homelessness were in remote, northern Australia, and three were located in inner cities. As expected, the largest numbers of homeless people were in big cities such as Sydney, across the city and western suburbs. Just two local government authorities, the cities of Sydney and Brisbane were the location of 9% of homeless Australians.

HOW DOES HOMELESSNESS BREAKDOWN BY AGE, SEX, INDIGENOUS STATUS, AND GEOGRAPHY?

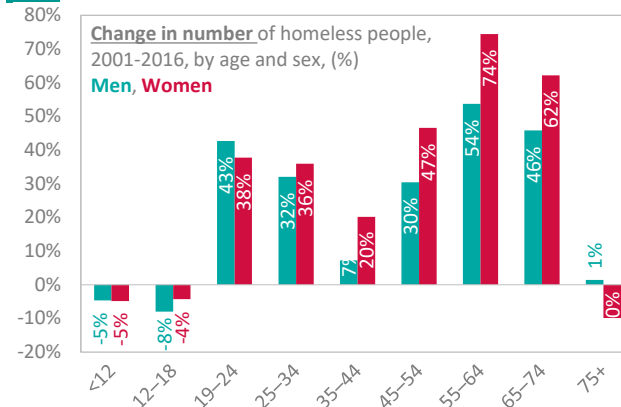
39A Most homeless people are young adults



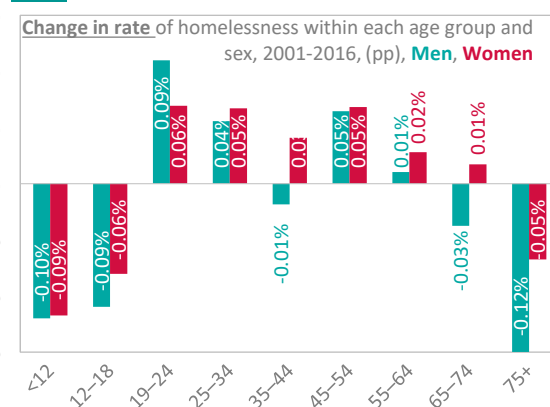
39B Their rate of homelessness is also higher



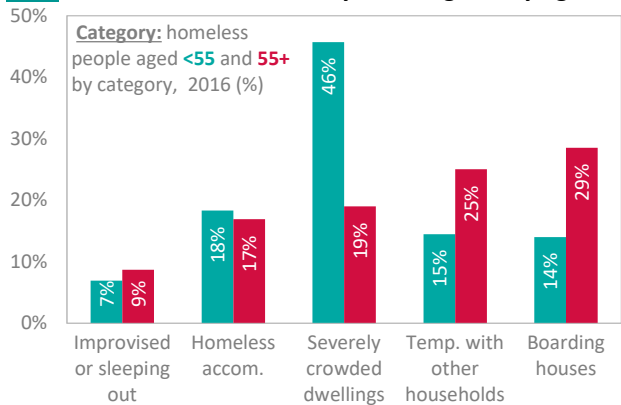
39C But older women saw the largest homelessness increase



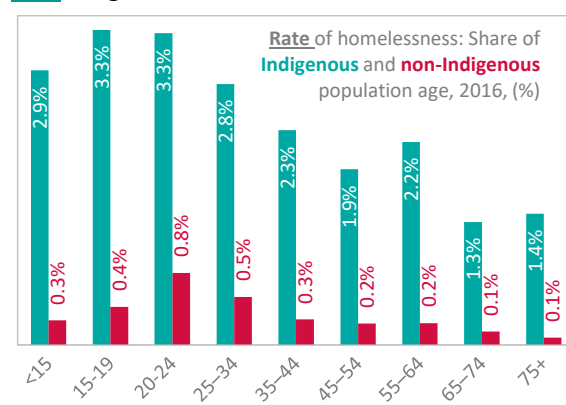
39D This is driven by population ageing not rate



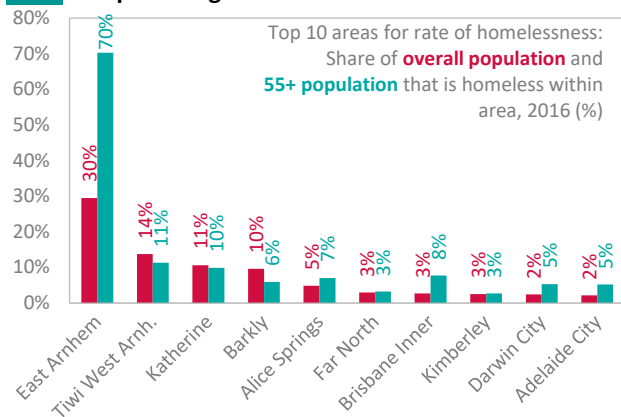
39E Older homeless are mainly boarding or staying with others



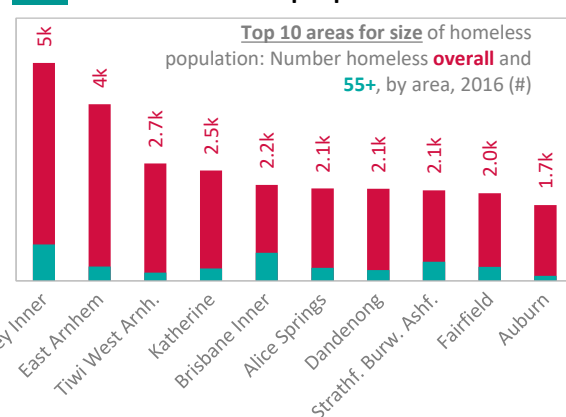
39F Indigenous status is a factor in homelessness



39G It explains higher homelessness rate in remote areas



39H But most homeless people live in cities



Note: Areas in Figures 39G-H are based on SA3 level. Source: Authors' analysis of ABS data

The pathways that lead people to homelessness are many, ranging from transition out of social housing to leaving care, prison, or detention (Conroy and Williams 2017). Demographic change is likely to affect each of these pathways. For example, CEPAR research indicates that the number of prisoners aged 65 years and over has increased by about 350% (though from a small base) over the last 16 years (Ginnivan et al. 2018).

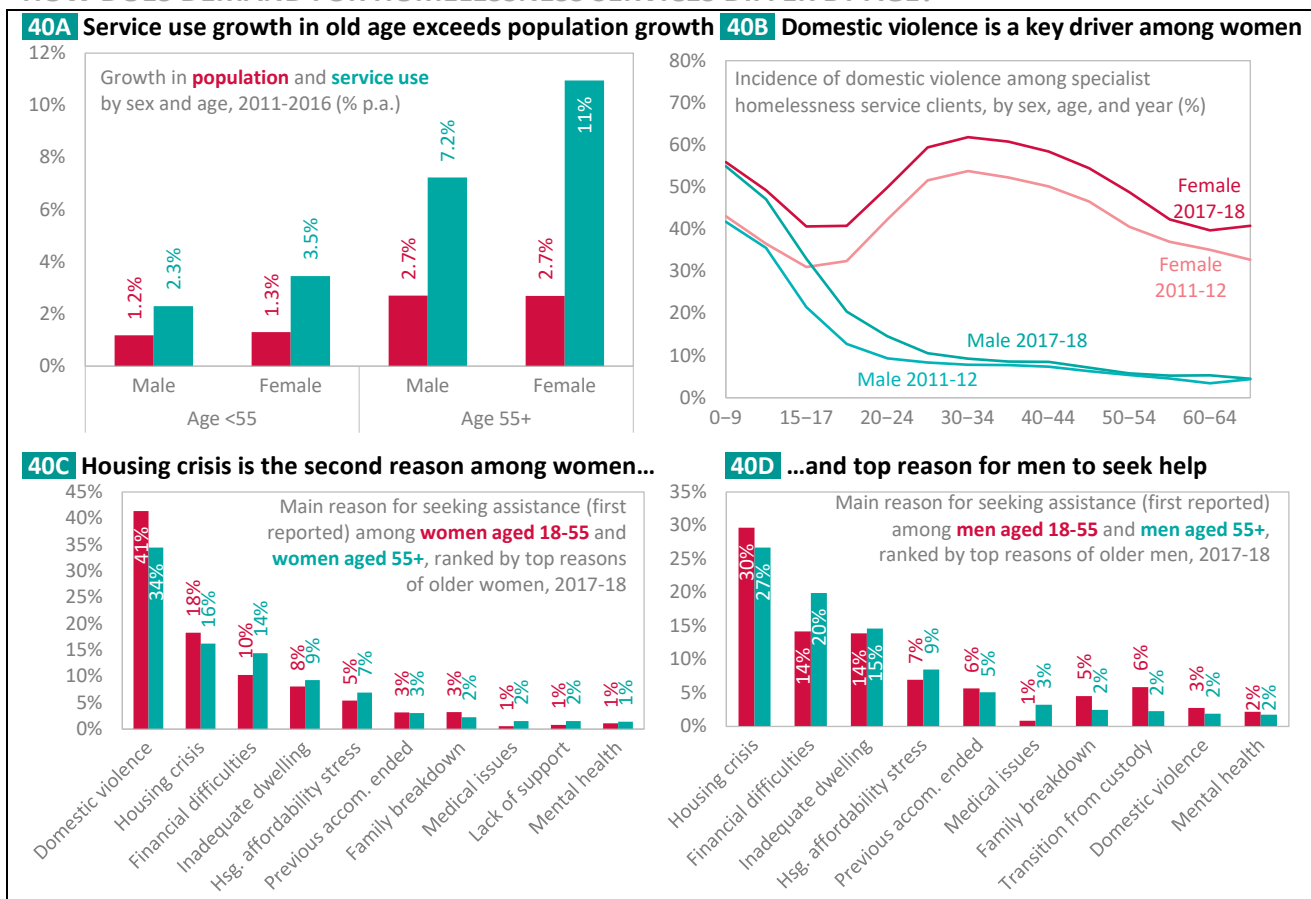
Homelessness services

A key response to homelessness has been public funding of specialist homelessness services, which operate at the coalface of homelessness (AIHW 2017). These focus on prevention and early intervention, and crisis and post crisis assistance to those experiencing homelessness or at risk of it. Demand for such services is instructive in understanding underlying homelessness patterns and risks.

About 300,000 people used these services in 2018 (based on data that avoids double counting). The data indicates that 61% of them were women and 8% were aged 55+. Growth in service use has been greatest among older age groups, particularly women. The rate of increase over the five years to 2016 was roughly 11% per year among older women, 7% among older men, and 1% for younger age groups. Unlike the growth in the census-based measure of homelessness, the increases at older ages are well above what would be expected based on demographic change (Figure 40A). The higher rate of use by women may indicate that they are more likely to seek help, that the services are effective, or that the Census undercounts homelessness status among women who are better at concealing it (see Eacott 2019 for some provider views).

In 2018, more than half of women and girls (54%) accessing homelessness services were doing so because of domestic violence. That rate is higher among younger women but does not fall below 40% at older ages; it has also increased in the last five years (Figure 40B). Other reasons for both men and women include experiencing a housing crisis, financial difficulties, and housing affordability stress (Figure 40C-D). But the services are stretched. In fact, about a third, or 50,000 people who identified a need for accommodation were not provided with services (PC 2019).

HOW DOES DEMAND FOR HOMELESSNESS SERVICES DIFFER BY AGE?



Note: Based on client counts which are designed to avoid double counting of individuals while avoiding privacy issues. Source: Authors' analysis of AIHW data

Health and wellbeing implications of housing

Poor housing outcomes are associated with poor health outcomes. In part this is because the outcomes are jointly determined by other vulnerabilities such as low income or other markers of low socioeconomic status (see Box 22). But there may be a direct link too. The WHO Housing and health guidelines suggest that housing which is ill-fitted to the needs of the occupants can create health risks (WHO 2018). Rental properties are less likely to allow modifications that aid accessibility for those who are frail or have disabilities.

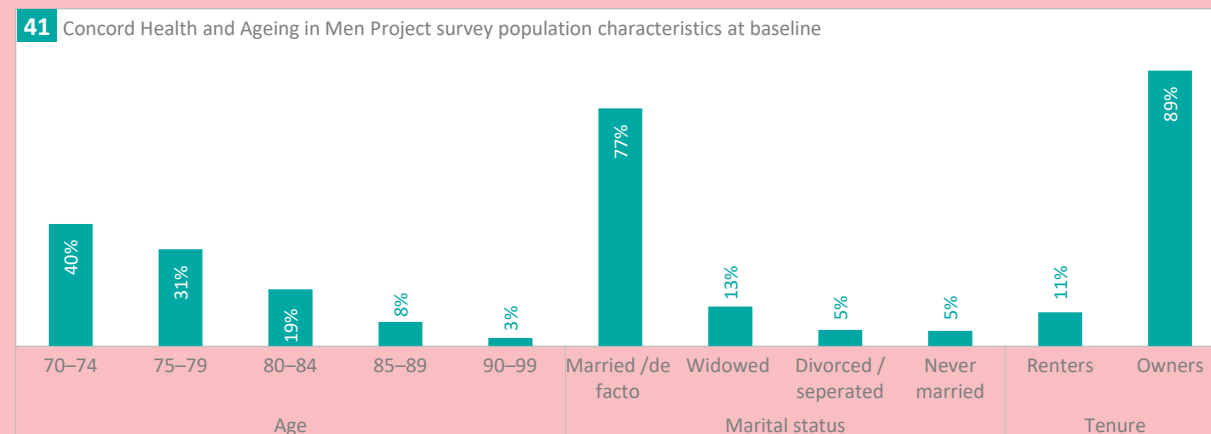
Box 22 CEPAR research spotlight **Housing tenure and healthy ageing**

In the context of rapid population ageing, better understanding of the factors involved in healthy ageing is essential. It is well established that those with low socioeconomic status, including low levels of education, income, and wealth are more likely to have poor health. But what is it that links low socioeconomic status and health, especially among older people? One possible channel could be what is referred to as psychosocial conditions. For example, those with low socioeconomic status may also experience low levels of social support and greater psychological distress.

In an ongoing project, CEPAR Research Fellow Saman Khalatbari-Soltani and Chief Investigator Robert Cumming are looking at the association between four different indicators of socioeconomic status and mortality, as well as investigating the potential mediating impact of psychosocial conditions on these associations. They are using data from the *Concord Health and Ageing in Men Project (CHAMP)*, a population-based cohort study of men aged ≥ 70 years in Sydney. The survey population consists of about 1,700 men. About 11% were renters and 89% owned their home (Figure 41).

A part of this research is to determine the association of housing tenure with structural and functional social support measures, as well as depressive symptoms. For example, an early result of this forthcoming work is that relative to owner-occupiers those in rented housing were more likely to be unmarried, to live alone, to have no family and non-family member support, to have lower social interactions and life satisfaction scores, and to have elevated depressive symptoms. Most importantly, the association between housing tenure and social support measures were independent of health-related behaviours and self-rated health. As such, these results highlight the role of housing tenure on the psychosocial conditions of older people.

Next, the team plans to analyse in more detail the impact of social support measures on the association between housing tenure and mental and physical health of older people.



Source: Supplied by Khalatbari-Soltani and Cumming

3.3 Tenure risks and ageing in place as a renter

A major channel of vulnerability revolves around renter rights. This becomes more problematic for older renters whose tenuous tenure is also their link to local social networks and informal care. For them, ageing in place is less of an option.

There are three interrelated pinch-points: (1) rental price (and bond) at the start of tenure and rental price increases during tenure; (2) length and structure of lease; and (3) termination of lease and tenure. These are summarised in Figure 42 for Australia and selected countries.

Legislation in Australian states often includes provision for termination without reason (though there are reviews in place of tenancy acts in NSW, Victoria, and Queensland). The presence of such provisions weakens the position of already vulnerable tenants or would-be tenants. It may also lead to modified behaviour, where people delay or avoid asserting their rights with respect to safety and repairs. Renter vulnerabilities also mean that they are less able to negotiate with landlords or agents with respect to bonds and other costs.

Abolishing no-grounds terminations would go a long way to reduce tenure risk. Raising awareness of rights, responsibilities, and choices in the housing market would help. As pressure grows on social housing, there is also value in forcing the private rental sector to bear more of the weight. For example, offering public subsidies to landlords that allow secure five-year leases to eligible tenants.

42 Rental market regulations can raise price and tenure risks (as highlighted)						
Country	Rent price restriction at start	Rent price increase restriction in place	Deposit	Average tenure duration	Lease duration	Grounds for termination by landlord
Australia	N	Y	1 month	2 years	Short fixed term	N**
Belgium	N	Y	-	9 years	Long fixed term	Y
Canada	N	Y	-	6-12 months	Short fixed term	Y
Germany	Y	Y	Max 3 months	-	Open-ended	Y
Ireland	Y	Y	-	4 years	Short fixed term	Y
New Zealand	N	Y	-	1.8 years	Short fixed term	N
Sweden	Y	Y	Uncommon	-	Open-ended	Y
Spain	N	Y	Min 1 month	3 years	Long-fixed term	Y
UK	N	Y	1 month	6-12 months	Short fixed term	Y*
USA	N*	N*	1-2 months	1-2 years	Short fixed term	Y**

Note: Short lease duration denotes ≤ 1 year. N* denotes mostly no regulation except a few major cities; Y* denotes no regulation except Scotland; Y** denotes no regulation except a few large cities; N** denotes that some states have made recent changes or are undertaking reviews to change regulations in favour of renters. These include a review of tenancy acts in NSW, Victoria, and Queensland. Source: AHURI 2017 and Randolph et al. (2018), Raynor et al. (2017), OECD 2016

3.4 Housing policy approaches

While there is ample evidence of housing affordability challenges affecting a greater share of older people, successful policy responses are less apparent. Approaches can vary across countries and over time. While some countries aim for comprehensive nationwide housing strategies, others seek to affect outcomes at the margins and also for those identified to be experiencing extreme housing vulnerability (e.g., chronic homelessness).

Looking at what other countries do can be instructive to help design policies in Australia (see Martin et al. 2017, for example). Approaches can be grouped into: (1) residual model; (2) social welfare model; or (3) rights-based model. While these are not mutually exclusive, systems usually lean towards one dominant form of housing policy.

Residual model – Allowing the market to operate and addressing residual vulnerabilities

In some housing policy approaches, market forces overwhelmingly shape the conditions of housing provision, while government policies tilt supply or demand at critical points (Nethercote 2018). Taxes, subsidies, and credit policies are deployed to affect the distribution of assets, in what is sometimes called an asset-based welfare. That is, lower socioeconomic families are encouraged into the housing market as investors so they might “share in the asset value appreciation usually enjoyed by the rich” (Walks 2016: Nares et al. 2001). In Australia, elements of this

approach (strong rates of homeownership) and, until recently, provision of affordable public housing, were seen as essential infrastructure, providing sustainable housing supply and economic security for families (Spiller 2018).

Social welfare model – Housing policy that tackles systemic disadvantage

In contrast, housing policy in line with a social welfare approach focuses on systemic disadvantage that creates vulnerability in the first place. In this way, housing policy can be a part of a wider welfare and social inclusion policy. For example, allocation of public housing in desirable urban areas can alter the composition of communities and foster a social integration that addresses entrenched patterns of socioeconomic disadvantage (Galster 2007; Lee & Murie 1997). Initiatives like inclusionary planning for example, seek to shift the geo-spatial balance of low-income groups and their composition using housing policy as the vehicle to achieve this (Gurran & Whitehead 2011). Such housing policies also embed interventions to ease unaffordability in a wider platform of social service activities. For example, income thresholds can be used to shape eligibility and thereby offer flexibility to scale delivery up or down as needed, and tailor related support measures. Since inadequate housing can be both cause and consequence of vulnerability, focusing on vulnerable groups by way of housing policy can break the cycle of disadvantage (Gurran et al. 2019). Housing interventions can therefore reduce inequality in the short term, but also contain social welfare expenditure in the long-term.

Rights-based model – From rationing to rights

This approach appeals to a citizen’s right to housing. The *Universal Declaration of Human Rights* identified adequate housing as part of the right to an adequate standard of living as early as 1948. The 1966 *International Covenant on Economic, Social and Cultural Rights* also asserted housing to be a basic human right. In 1992, the United Nations formally asserted that access to adequate housing should be considered a basic human right internationally. And in 2016, a UN report declared the rights to life and housing as ‘interconnected and indivisible’.

An implication of rights-based policy is social housing that is not rationed. Instead, it responds to need. For example, Scottish legislation asserts that anyone who is assessed to be unintentionally homeless has a right to settled accommodation. This shifts the social housing system away from eligibility screening and capped provision to a public obligation to provide housing to vulnerable persons based on actual need (Shelter Scotland 2019).

Putting citizen rights at the centre of housing policy means that broader measurement is required. Doing so can be akin to public health planning. In Scotland, for example, the introduction of rights-based legislation has been used to justify the need for better data on the lived experience of housing. Through the ‘Living Home Standard’, the public is asked to prioritise what is important to them in their home, reflect on and identify what they believe they should be entitled to, and consider if their current accommodation meets this standard.

France provides an enforceable right to housing through legislation informally known as the *DALO law (Droit au Logement Opposable)*. It provides legal recourse for people who have not been able to find housing, even when they meet criteria to access existing social housing. Under the law, a court can order the state to provide housing, and to pay damages which can then be used to finance social support measures.

43 Comparison of housing policy models shows that there are alternatives			
Housing policy type	Focus	How is unaffordability addressed?	Broad examples
Residual model	Market and asset focused	Residual support which rations eligibility	US, Australia
Social welfare model	Social welfare informed, system-focused	Addresses cycles of inequality and vulnerability	UK, Singapore
Rights-based model	Person-centred	Uncapped and based on need. Forward planning to minimise negative impacts of unaffordability	Spain, Scotland, France

Source: Authors’ compilation

To achieve rights-based outcomes, the UN recommends that countries develop comprehensive housing strategies. Indigenous people, homeless peoples, and ageing populations (particularly older women) have all been identified as sub-populations requiring specific housing interventions. A broad housing strategy has advantages over ad hoc policy measures. It can be holistic and long-term; helping clarify goals, and measures to achieve them, as well as the related constraints, strategic players, and responsibility across different tiers of government.

3.5 Policy addressing housing lack in old age

Section 1.5 summarised the various tax, subsidy, and regulation policy levers that affect the demand and supply of houses in the private market and therefore the *ex-ante* access to housing. For those that still fall through the cracks and experience housing affordability pressures there are also some *ex-post* levers. Indeed, such levers are what is usually referred to as housing policy and consist of: (1) demand-side rental subsidies; (2) supply-side provision of social housing; and (3) homelessness services.

An attempt to expand housing policy into a comprehensive, nation-wide housing strategy was made in Australia in 2009, with the *National Affordable Housing Agreement* (NAHA). It was an agreement between the Commonwealth and states and territories, with greater clarification of roles, and a nominally whole-of-government approach to housing affordability. The aim appeared to go beyond band aid responses for those who came to lack housing and included goals such as ensuring an ‘efficient and responsive housing market’. Less came of the latter – indeed measuring the gap between supply and underlying demand stopped with the termination of the National Housing Supply Council. But the new program of funding, alongside *National Partnership Agreement on Homelessness* (NPAH), was channelled to help states with social housing and homelessness, with a focus on at-risk populations.

The program was renewed in 2018 as the *National Housing and Homelessness Agreement* (NHHA). It involves around \$1.5b in annual funding to states, including \$125m reserved for homelessness services. Including spending by states adds up to \$5.0b for 2017-18, of which \$4.1b was spent on social housing services and \$0.9b on specialist homelessness services. A further \$4.4b is spent on Commonwealth Rent Assistance (CRA; in addition to smaller scale assistance provided by states).

The new agreement: (1) broadens coverage to include homeownership in general; (2) adopts measures that focus on progress rather targets; and (3) requires states and territories to publish housing strategies.

While there are things to welcome about the new agreement, maintaining rather than increasing the level of funding is problematic in view of the above analysis of poverty, rental stress, and homelessness among older people and population ageing trends. But it falls short of a comprehensive housing strategy that brings in tax policy to address investment patterns and income support for renters (Milligan 2018).

Rental assistance

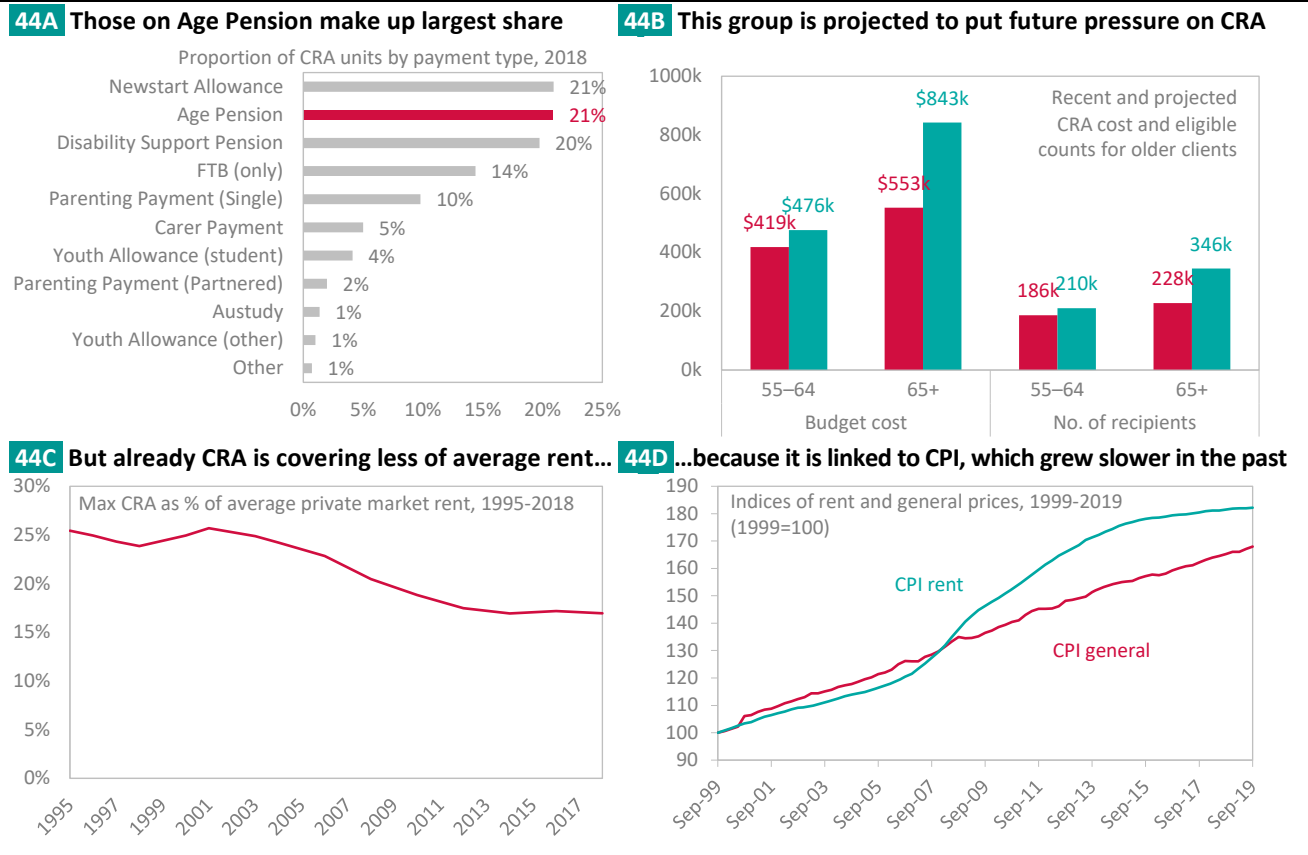
Funding provided via CRA has some impact and a large chunk goes to older people. About 21% went to those receiving an Age Pension (Figure 44A). In 2018, thanks to CRA, the rate of families with one person aged 75+ who were in housing affordability stress from 59% to 27% (PC 2019). It also reduced the proportion of those in the same target group who were in severe housing affordability stress (spending more than 50% of income), from 15.8% to 6.5%.

But as noted in Section 2.1, the payment has not kept pace with rental prices, resulting in increases levels of poverty among older renters. A key reason is that it is pegged to consumer price inflation, while rents have generally been going up at a faster rate. As a result it is covering less of rental cost (Figure 44C-D).

The challenge is that even without increasing the payment in real terms, changes in tenure and demography are expected to drive increased budget expenditures. Ong et al. (2019) project that demand for CRA will increase by 60% between 2016 and 2031 (from 414,000 to 664,000). As a result, the CRA real budget cost is predicted to increase sharply (to \$1.55b). About \$350m is expected to go to those aged 55+ (Figure 44B). Curiously, in recent

years total expenditure on CRA has declined; it did so in real terms since 2015-16, while per person expenditure has declined in real terms since 2014-15 (PC 2019).

COMMONWEALTH RENTAL ASSISTANCE TRENDS



Source: PC (2019), Ong et al. 2019, and Authors' analysis of Department of Human Resources and ABS data.

Social housing programs

Social housing programs in Australia comprise of public housing (run by state governments), State Owned and Managed Indigenous Housing (SOMIH) and community housing (run by registered community organisations such as housing associations, co-operatives, and churches).

Most social housing tenants (72%, or 565,000, in 2018) are in public housing, which is in decline due to lower public investment in the public housing stock. Declines in the number of public housing places have been somewhat offset by community housing, but there is continuing evidence of unmet demand and long waiting lists (PC 2019). According to Ong et al. (2019), unmet demand for public housing for those aged 55+ was predicted to increase by 78 per cent between 2016 and 2031 (from 200,000 to 440,000 households).

Stimulating affordable housing supply

Schemes that subsidise provision of housing at the bottom end of the market have been various and come with mixed success. The National Rental Affordability Scheme (NRAS) operated between 2008 and 2014, offering financial incentives to developers and community organisations that rent out dwellings to eligible tenants at 80% of market value rent for ten years. Eligibility was based on income thresholds (e.g., about \$50,000 for one adult).

The scheme resulted in over 36,000 new affordable rental houses of various types (Rowley et al. 2016) but has been criticised for being too complex and inefficient, resulting in an estimated \$1b of windfall gains to private developers and investors (Coates and Horder-Geraghty 2019). Some argue that the Social Housing Initiative (SHI) better helps low-income Australian households. The SHI, which involved direct construction of affordable housing was more targeted and flexible. Older people made up a quarter of assisted groups (KPMG 2012).

Various policy proposals have been proposed to stimulate the market for more affordable housing, particularly by incentivising investment from institutional investors such as superannuation funds (Milligan et al. 2015). The Commonwealth Government recently established a vehicle for such an investment – the National Housing Finance Investment Corporation (NHFIC), to offer lower cost financing for community housing providers. While generally welcomed, some argue that such a scheme will not provide enough social and affordable housing and that a needs based direct investment by government is needed (Lawson et al. 2019).

Other measures

Various other state programs support social housing via direct funding, redevelopment funding, stock transfers to community providers, or by promoting supply via urban development, supply targets (e.g., Victoria), land supply, or inclusionary zoning (e.g., 15% affordable housing in all major developments in South Australia).

Most states also run various shared equity schemes, whereby low-income purchasers are able to buy properties with a public agency and share dwelling cost and ownership. These include *HomesVic* (Victoria), *Key Start* (WA), *Shared Equity Scheme* (ACT) and *Buy Assist* (nation-wide). In future, such schemes may need to target older people better. For example, the *Older People's Shared Ownership Scheme* in the UK is a national *Help to Buy* scheme targeting low-income people aged over 55 who have never owned a home. It supports individuals to buy part of a property and pay rent on the remainder and is available via agents located across the UK.

Overall, there are positive signs of progress, but the strategy remains fragmented.

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About CEPAR

The ARC Centre of Excellence in Population Ageing Research (CEPAR) is a unique collaboration between academia, government and industry, committed to delivering solutions to one of the major economic and social challenges of the 21st century.

Funded primarily by an initial seven-year grant from the Australian Research Council (ARC), with generous support from the collaborating universities and partner organisations, the Centre was established in March 2011 to undertake high impact independent multidisciplinary research and build research capacity in the field of population ageing.

Renewed funding awarded for an additional seven-year term from 2017-2023 supports an exciting new research program which will deliver comprehensive outcomes with the potential to secure Australia's future as a well-informed nation with world-best policy and practice for an ageing demographic.

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