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AGEING-IN-PLACE

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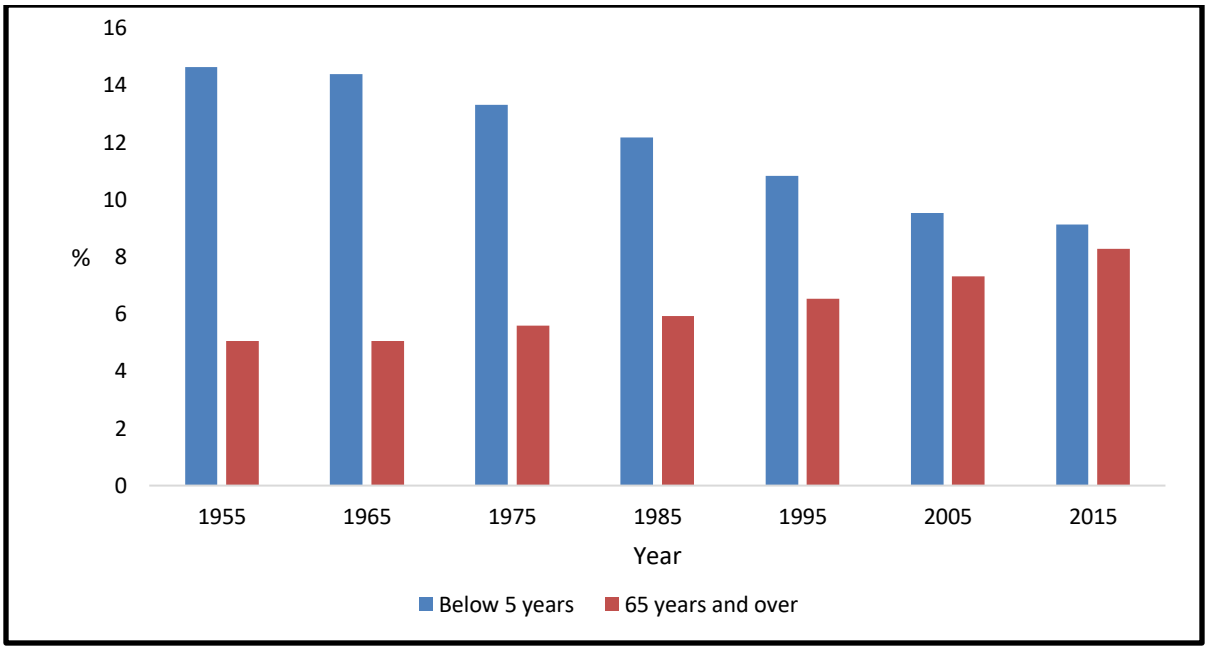
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Introduction

In Australia, like similar nation states, a combination of falling fertility rates and increased longevity is reshaping the demographic landscape—the number of older adults is increasing and the old are getting older. These changes have occurred first in high-income countries, but all nations are affected with the old estimated to outnumber the young within the next 40-60 years (Bloom *et al*., 2011). Indeed, people over the age of 65 years will soon outnumber children under the age 5 years (Figure 1). From 2000 to 2020 the number of Australians aged over 65 years has increased from 2.3 million (12.3 percent of the population) to 4.1 million (15.9 percent of the population) while the median age[1] has increased from 35 to 37 years (Australian Bureau of Statistics, 2021).

Figure 1: Young children and older people as a percentage of the global population

[1] The age at which half the population is older and half is younger



Source: United Nations Department of Economic and Social Affairs, Population Division, *World Population Prospects. The 2017 Revision,* United Nations, 2017.

Similar trends have been reported in Europe, North America and East Asia (Eurostat, 2021; Statisics Canada, 2021a; The World Bank, 2019; United States Census Bureau, 2021). An ongoing concern is the economic consequence of an ageing society which is characterized by an increased demand for social services but a falling tax base (Australian Productivity Commission, 2005; Bloom *et al*., 2010; McPake & Mahal, 2017; Pakulski, 2016). These tensions have led governments and policy makers to examine more cost-effective ways to deliver social services. Conversely, as the expectation is that they will live longer, older people worry whether they will have sufficient funds to meet the cost of retirement and future care needs (Bai, 2019; Brünner & Andersen, 2018; Choi & DiNitto, 2018; Litwin & Meir, 2013; Sass, 2018). A strategy that addresses both sets of needs and an approach which has been adopted by many governments and endorsed by most older people is ageing-in-place (Sixsmith & Sixsmith, 2008). This chapter will examine ageing-in-place and its affordance. The first section will examine the strengths and

weaknesses of ageing-in-place and the factors affecting ageing-in-place including: mortgage debt, renting, own home versus institutionalized living, community living and social housing, attachment-to-place, homeownership and building design. The second section will examine financial wellbeing and ageing-in-place with a specific focus on equity release products aimed at improving liquidity, their level of acceptance by older Australians and safeguards or the lack thereof.

Ageing-in-Place

Definitions vary, but ageing-in-place is typically understood to mean living in the community (usually in the current dwelling unit), with some level of independence (assisted by home modifications, assistive technology, and/or appropriate support services), rather than in institutionalized care (e.g. residential aged care or nursing home care) (Bigonnesse & Chaudhury, 2020; Pani-Harreman *et al*., 2020). Underpinning this model is the expectation that the limitations of ageing can be addressed by adapting the immediate environment to physical need. Not surprisingly, governments have enacted ageing-in-place schemes that have primarily focused on meeting the physical needs of seniors so that they can continue to live in their own home. In Australia, ageing-in-place has been funded through two overlapping schemes. First, the 'Commonwealth Home Support Program (HSP)', which subsidizes entry-level services to help people remain independent at home and in the community and is intended for seniors requiring only a few services. This can range from providing meals, personal care, health and specialized support services through to gardening, home maintenance, assistive technologies and transportation services (Australian Government Department of Health, 2021a). Second, the 'My Aged Care' program which depending on frailty provides a tiered range of 'Home Care Packages (HCP)' and is intended for seniors who have complex or extensive care needs. HCPs can be used to fund services to keep older people well and independent (e.g. personal care, nursing services etc), safe at home (e.g.

cleaning, home maintenance and modifications, assistive technologies, etc) and connected to the community (e.g. transport, social support services, etc) (Australian Goverment Department of Health, 2021b). As of 30 June 2020, 142,000 older Australians were receiving home care (HCP) and 840,000 were receiving home support (HSP) (Australian Institute Health and Welfare, 2021a). An indirect outcome of these policies is that housing and the home have become important vehicles for service delivery in older Australians.

Ageing-in-Place and Psychosocial Well-being

In Australia, the 'place' in ageing-in-place is predominately an owner-occupied, free-standing dwelling and typically a freehold property. International and Australian findings indicate that ageing-in-place and especially if it involves a longstanding family home is associated with several positives including: emotional wellbeing, social connectedness, identity, meaningful activity, and neighborhood reciprocity (Byles *et al*., 2014; de Jonge *et al*., 2011; Mackenzie *et al*., 2015; Sixsmith & Sixsmith, 2008). It is also held to afford maximum autonomy and privacy, sustain self-identity, act as a warehouse of memories and provide attachment-to-place (Stones & Gullifer, 2016). Finally, survey findings indicate that ageing-in-place has strong community appeal and is viewed positively by most policy makers (Faulkner, 2017). In sum, if the expectation is a healthy old age with access to a high standard of domiciliary care and the accompanying benefits of well-being, autonomy and social participation, then ageing-in-place is viewed as a positive by most seniors alongside most policymakers and governments (Fernãndez-Carro, 2016).

Ageing-in-Place and Cost-Effectiveness

The cost-effectiveness of ageing-in-place programs remains to be fully established. Although evidence is limited, ageing-in-place is also thought to cost less than other age care options. Recent interim findings from the Australian Royal Commission into Aged Care Quality and Safety suggest that the average cost for in-home care was Aus$15.5k compared to residential aged care at AUS$66.5K (AHURI Brief, 2019). Australian government estimates indicate that 190 000 senior Australians received government residential care funding in 2020 (permanent and respite) while a further 50 000 were self-funded (Australian Government Department of Health, 2021a; Australian Government Department of Health, 2021c). Moreover in 2019-20, the Australian Government spent AUS$13.6 billion on residential aged care compared to AUS$3.7 billion on HCPs and AUS$2.8 billion on HSPs (Australian Government Department of Health, 2021a; Australian Government Department of Health, 2021c). Similar advantages of ageing-in-place compared to other options are reported elsewhere. It is reported to cost less compared to hospitalization and specialized housing in Singapore (Addae-Dapaah & Wong, 2001; Matchar *et al*., 2018) and nursing home care in the US (Marek *et al*., 2012).

A particular challenge when evaluating the cost-effectiveness of ageing-in-place is the limited evidence that home care necessarily delays long-term residential aged care placements (Duan-Porter *et al*., 2020). The cost-effectiveness of program administration has also been questioned. The Australian ageing-in-place program (i.e. My Aged Care) has also been criticized as cumbersome, poorly integrated with other services and difficult to navigate especially if recipients have complex needs or limited access to technology (Russell *et al*., 2020).

As do most ageing-in-place programs around the world, the Australian ageing-in-place model is based on a consumer-directed model of care—a model which prioritizes recipient choice and control over the delivery of care services (Da Roit & Le Bihan, 2010). This model assumes that recipients are able

and motivated to make informed choices, can discriminate between aged care services, can access desired services and change and modify services as desired (Hobbs, 2020; Rahja *et al*., 2021). Australian and Swedish findings suggest that many seniors struggle with or fail to make full use of entitlements are confused by processes and rely on others for deciding providers and services (Dunér & Gustafsson, 2020; Hobbs, 2020; Vamstad, 2016).

The assumption that ageing-in-place is a low-cost option, also depends on who is paying the bill. Surprisingly, the cost to an individual (or their family) for health services may be less if they live in residential aged care compared to their own home—a differential that can be attributed to the high subsidy for provided by governments for residential aged care home services. In their evaluation of the cost-effectiveness of home- compared to nursing-home based care for Taiwanese seniors following stroke, Chiu, Shyu and Chen (Chiu *et al*., 1997) report that the cost to the patient' families was lower for those treated in a nursing home compared to those who stayed at home. In a Cochrane review of the literature examining the cost-effectiveness of residential aged care versus hospital and own home care for rehabilitation services, Ward *et al*. (2003) also note that the quality of evidence was poor and evidence supporting the cost-effectiveness of service delivery for one service model over the other was inconclusive. The difficulty of evaluating the cost-effectiveness of home versus institutionalized care is a noted shortcoming in the literature (Grabowski, 2006). Nonetheless, it is likely in the coming decades that Australian seniors (and family) will have to absorb an increasing component of the cost of ageing-in-place.

Ageing-in-Place and Cultural Constraints

Implicit in the ageing-in-place model is that continuity of place can leverage the social and physical assets people have developed over a lifetime and, moreover, that this leverage is beneficial. Thus, the model prioritizes independence and continuity-of-place (Iossifova, 2020). Despites the positives associated with independence and continuity-of-place, prioritizing these values may not necessarily be in the interest of all seniors. Moreover, these values are culturally bound and although not unique they do reflect Western centric sensibilities (Kitayama *et al*., 2009). Alternate values regarding aged care are endorsed by non-western communities. For example, in collectivist cultures such as China and Singapore, ageing-in-place is assumed to mean ageing with the family (Chen, 2008), acknowledging that seniors from with Confucian backgrounds value social reciprocity and adherence to norms and traditions (Fung, 2013) and that models of shared care between family and state may be more appropriate (Zhou & Walker, 2021). Cultural norms also shape ageing-in-place practices. For example, care for the elderly in Singapore and Taiwan is commonly undertaken by live-in foreign domestic workers (Cheng, 2003; Yeoh & Huang, 2009) while in Singapore the building of elderly studio apartments has formed part of a proactive age-inclusive public housing policy (Yuen, 2019). Given increased cultural diversity, ageing-in-place models followed in many Western nations and the values they endorse will need to become more adaptable. Current approaches have been identified as problematic for non-Western migrants living in Western nations and especially in the delivery of culturally appropriate residential and community aged care (Wilson *et al*., 2021).

Ageing-in-Place when there is a Mismatch with Housing Need

An untoward consequence of ageing-in-place is that overly strong home attachment may prevent the change to more suitable housing. This can be problematic for seniors facing critical health issues such as impaired mobility and dementia. International and Australian research indicates that ageing-in-place

can adversely impact wellbeing if housing does not meet health, social or disability needs leading to an increased risk of social isolation, loneliness and poor mental health (Brown *et al*., 2017; Cantarero-Prieto *et al*., 2020; Fried, 2000; Sado *et al*., 2018; Sixsmith *et al*., 2014). Ageing-in-place is also dependent on adequate public funding with any shortfall placing a potential cost burden on families and carers (Starr & Szebehely, 2017). Finally, neighbourhoods change with time which can lead to weaker attachment-to-place and reduced social connectivity and therefore be at cross-purposes to the principles underpinning successful ageing-in-place (Clark *et al*., 2017; Sharp & Warner, 2018). Some seniors may be forced to age-in-place in a dwelling they might otherwise prefer not to because of a lack of decent and affordable housing or because they live in an unsafe neighbourhood (also known as trapped-in-place). Trapped-in-place is a noted problem in seniors who are socially disadvantaged, have poor health or live in rural and remote regions with limited housing options (Anderson *et al*., 2018; Portacolone *et al*., 2017; Strohschein, 2012).

Ageing-in-Place and Financial Feasibility

The financial feasibility of ageing-in-place policies has been questioned for some senior cohorts. An especially vulnerable group are the poor. The definition of poverty is contested making estimations difficult but the poverty rate in senior Australians is thought to vary between 8% - 23% (Coates & Chen, 2019; OECD, 2017). Poverty is associated with precarious housing. A noted development in the past decade is the increasing number of senior Australians who no longer have the resources to become owner-occupiers and thus rely on private rental and government housing for their housing needs. A limitation pointing to long-term structural problems in the housing sector (Colic-Peisker *et al*., 2015; Maalsen *et al*., 2020; Morris, 2018). This has implications for ageing-in-place policies which assume that there is a place and that the 'place' remains stable. The subpopulation currently experiencing the fastest

growth in unstable housing and homelessness in Australia are seniors (Pawson *et al*., 2018). Among the factors contributing to the increase in senior homelessness is inadequate welfare payments, low rent affordability and lack of social housing and a particularly vulnerable group are older women who often lack financial reserves and are thus more exposed to housing instability (Broomhill *et al*., 2021; Faulkner & Lester, 2020; Muir *et al*., 2020; Pawson *et al*., 2018; Sila & Dugain, 2019; Sutherland, 2020). Poverty and its impact on ageing-in-place have been noted elsewhere in the world. A survey of older Belgians and found that 34% did not have enough income to meet needs and especially older women, older tenants and those with high care needs (2020).

Ageing-in-Place and Household Debt

A contributing factor to the uncertainty of the financial feasibility of ageing-in-place is household debt. Household debt in most developed nations has grown substantially in the past decades including Australia (Bolibok, 2020; Ebrahimi, 2020; Kearns *et al*., 2020b; Kolios, 2020; Lowe, 2017). For example, household debt in 50 - 80 year old Americans between 2003-2015 increased by 59 percent (Brown *et al*., 2020) while in Australia the debt-to-income ratio from 2003 - 2016 has more than doubled in 55 - 64 year olds (Loukoianova *et al*., 2019). In Australian seniors, home mortgages account for the largest component of debt (Ong *et al*., 2021). Indeed, an increasing number of Australians seniors are now carrying a mortgage debt into retirement (Wilkins *et al*., 2015) with Ong *et al*. (2019) predicting that 14 percent of older Australians by 2031 will have a mortgage debt on their home.

Taking on mortgage debt in later life is associated with several benefits such as improved house values, comfort and suitability and, concomitantly, wellbeing (Vanhove-Meriaux *et al*., 2018). However, in seniors it is also associated with reduced resilience to external shocks, food insecurity, delay in

retirement, poor mental and physical health and income poverty (Butrica & Karamcheva, 2020; Fafard St-Germain & Tarasuk, 2020; Hiilamo & Grundy, 2020; Kearns *et al*., 2020a; Loibl *et al*., 2020; Lovering, 2014; Marshall *et al*., 2021; Ong *et al*., 2021; Song *et al*., 2020). It is anticipated that the projected increase in mortgage debt will place increased financial pressure on Australian retirees especially those dependent on fixed income pensions. It will also require a revision of retirement income policies and housing assistance programs and until such revisions are in place, the capacity of an increasing proportion of senior Australians to successful age-in-place will be under challenge (Beer *et al*., 2011; Colic-Peisker *et al*., 2015; Ong *et al*., 2019).

Ageing and Residential Aged Care

For a sizeable minority of older Australians, ageing-in-place occurs in residential aged care. Despite limitations, residential aged care has several positive including greater security, opportunity for social connection and activity, help with daily tasks, benefits of living in an age friendly environment and 24-hour access to professional care (Boyle, 2005; Pettersson & Wijk, 2020; Sanford *et al*., 2015). It is estimated that 20 percent of the Australian population aged over 80 years, and 6 percent of those aged over 65 years were in residential aged care in 2020 with 190,000 in permanent or respite care and a further 3500 in transition care (Australian Instute of Health and Welfare, 2021a; Australian Instute of Health and Welfare, 2021ab; Dyer *et al*., 2020). In general, the number of residents in aged care in Australia are higher than those reported elsewhere with residential aged care rates ranging from 1.7 percent in the European Union to 4.5 percent (and 2.0 percent in assisted living facilities) in the US but comparable to those reported in Canada (Australian Institute of Health and Welfare, 2021b; Dyer *et al*., 2020; Harris-Kojetin *et al*., 2016; International Longevity Centre, 2016 ; Statistics Canada, 2021b;).

Trend analyses indicates that residential aged care rates in Australia are declining while dependency levels are higher and, concomitantly, residency periods are shortening (Andrews-Hall *et al*., 2007; Gibson, 2020a; Khadka *et al*., 2019). These trends have led to a downward revision of the likely number of beds needed in the future (Gibson, 2020b). Lower institutionalization rates and longer periods of independent living also characterize residential aged care in Europe (Fernández-Carro & Evandrou, 2014) and the US (Young *et al*., 2015). Conversely and despite the strong ethos for family to care for older parents, countries such as Korea and Japan have seen a growth in residential aged care, nonetheless, these nations are starting from a much lower baseline and the percentage of older people in residential aged care remains substantially much lower compared to other developed nations (Choi, 2014; Ga, 2020; Ribbe *et al*., 1997). Taken together, the reduction in residential aged care beds in Australia is likely to mean that social services will increasingly be delivered to older Australians at least into the immediate decade in their own homes.

Ageing-in-Place and Attachment-to-Place

It is recognised that ageing-in-place can extend beyond the home to include the neighbourhood and communities. A body of literature has now been established examining 'attachment-to-place': i.e. the emotional and experiential elements of place, and its relationship to ageing-in-place and especially the importance of living in a stable and known environment where an older person can feel they belong. Attachment-to-place in seniors is reported to engender empowerment, social inclusion, social connectedness and social well-being and mediate the relationship between housing quality and well-being (Afshar *et al*., 2017; Bigonnesse & Chaudhury, 2020; Buffel *et al*., 2014; Butcher & Breheny, 2016; Evans *et al*., 2002; Pani-Harreman *et al*., 2020; Sawada & Toyosato, 2021; Scannell & Gifford, 2017; Wiles *et al*., 2009; Wiles *et al*., 2017). The broader view of ageing-in-place has led to calls for a greater

investment in home- and community-based care and a reduced reliance on residential aged care (Dyer *et al*., 2020). It has also led governments to experiment with policies that facilitate ageing-in-community options such supportive and community housing and downsizing to dwellings which have built with the needs of seniors in mind (Bigonnesse & Chaudhury, 2020; Harding *et al*., 2018; Yuen, 2019). Such programs for seniors have received support limited support in Australia which in general is characterized by an acute shortage of social and community housing with little private institutional investment and very limited purpose-built housing (Conteh *et al*., 2020; Cornell, 2020).

Ageing-in-place and Downsizing

Most people as they age express a clear preference to live independently and in a place of their own choosing—typically the family home established in early adult life (Fjordside & Morville, 2016; Gitlin, 2003). Contrary to expectations, seniors tend not to change their housing in response to changing physical, social and economic needs (Judd *et al*., 2014). Accordingly, the number of older Australians downsizing to an apartment or smaller dwelling or moving into residential age care accommodation are relatively few with the majority electing to age-in-place in their own home. Previous survey findings by our group in a subset of older Australian homeowners (n=400) found that 1.8 percent planned to move home in the next year, 2.6 percent within 3 to 5 years and 3.0 percent within 10 years (Lowies *et al*., 2020). Of the 9.2 percent anticipating a change in home, 29.7 percent planned to move to a detached dwelling, 24.3 percent a retirement village, 18.9 percent an independent living unit and 5.4 percent an apartment in a high-density development with 13.5 percent uncertain or other. Moreover, the intention to move was higher in young-old people (90.9 percent) compared to old-old people[2] (9.1 percent) and,

[2]Old age is typically thought to begin at 65 years. The period after 65 years can be further differentiated into 'young old' and 'old old'. The old old have been variously defined to begin at least at 75 years, 80 years and 85+

furthermore, the only significant, albeit weak, predictor of an intention to move was poor health status while no association was observed with age, gender, country of birth and financial preparedness. In contradistinction to our understanding of the factors underpinning the decision to stay the factors affecting the decision to move is less well understood. Roy and colleagues (2018) in a systematic review of the literature identified a myriad of factors affecting the decision of seniors to move (i.e. psychological and psychosocial, social, built and natural environment, time and space-time, economic and socioeconomic and health) but note that the factors have been poorly studied. James, Rowley and Stone (2020) report survey findings from Australians aged over 55 years that 26 percent had downsized and 29 percent were considering downsizing. In those that had downsized, the reasons included lifestyle (27 percent), financial (27 percent), demands of home maintenance (18 percent) and forced to move because of rental conditions or poor health (15 percent). Ageing in the neighborhood rather than in place has also been identified as important for a small percentage of older Australians (Han & Kim, 2017), although the paucity of suitable housing is a noted obstacle (James *et al*., 2020).

A further barrier to downsizing is cost (Judd, 2019; Judd *et al*., 2015). The cost of downsizing is thought to partly contribute to a higher percentage of older Australians retaining their family home rather moving to more manageable dwelling. Thus, much of the wealth of older Australians is tied up in the family home leaving many asset rich but income poor (Bradbury, 2010). It has also meant that many older Australians may not have sufficient disposable income to suitably maintain or modify their homes to accommodate needs especially if dependent on the age pension (Doling & Ronald, 2010; Faulkner,

years, and differ from the young old with respect to functional status, health and support needs see Smith, J., Borchelt, M., Maier, H., & Jopp, D. (2002). Health and well–being in the young old and oldest old. *Journal of Social Issues*, *58*(4), 715-732.

2017; Pawson *et al*., 2020). Low liquidity has been noted as problem for Singaporean, New Zealand and UK seniors (Loutzenhiser & Mann, 2021; McCarthy *et al*., 2002; Noviarini *et al*., 2019). In recognition of the cost barrier to downsizing, the Australian Government in 2021 introduced policies which allows retirees to place up to AU$300,000 per person from a house sale into superannuation without incurring capital gains tax (Australian Tax Office, 2021). Thus, allowing equity to be released in a cohort who are typically asset rich but income poor and until recently have been financially disadvantaged by downsizing. The outcome of this policy remains to be determined, but in general policies promoting downsizing have not been effective as they can conflict with policies that encourage ageing-in-place and especially when the family home is focused on as 'place' with its engendered attachment-to-place and the meaning that it can play in older people's lives (Harding *et al*., 2018).

Ageing-in-Place and Homeownership

Compared to most developed nations, most older Australians own their home. This can be attributed to Government policies post-WWII that promoted home ownership, affordability, and supply together with a favourable economic climate, greater disposable incomes and affordable mortgages (Beer, 1993; Bourassa *et al*., 1995). In 2021, more than more than 80 percent of people over retirement age in Australia owned a home and most titles were freehold (Australian Institute of Health and Welfare, 2021a). Studies examining the benefits of home ownership generally report a number of advantages including greater ontological security, i.e. "where people feel in control of their environment, free from surveillance, free to be themselves and at ease, in a world that might at times be experienced as threatening and uncontrollable" (Saunders, 2021), emotional wellbeing (Herbers & Mulder, 2017; Hu & Ye, 2020; Johnstone *et al*., 2016; Zheng *et al*., 2020) and financial security (Goodman & Mayer, 2018) especially in retirement (Eslake, 2017; Mudrazija & Butrica, 2017). The Australian Government in

response to the pressures of an ageing population in the 1990s shifted from an unfunded retirement income system to an asset-based retirement scheme through mandatory private superannuation savings and voluntary savings supported by a publicly provided means-tested age pension. The success of this program is predicated on their being a high level of homeownership in older Australians.

Homeownership is recognized as the fourth pillar of retirement income in Australia and to date has served to minimise income poverty in old age (Colic-Peisker *et al*., 2015; Ong *et al*., 2019; Yates & Bradbury, 2010). Australia is recognised as a home ownership society with minimal social renting (Australian Institute of Health and Welfare, 2021b). Despite this characterization, a developing trend is the increasing proportion of private renting (Hulse *et al*., 2019) with seniors and especially low income renters constituting an increasing proportion (Hulse *et al*., 2015; Yates, 2015). Based on 2016 data it is estimated that 13% of Australians aged 65 years and above are renting and this is predicted increase further in the coming decade (Whait *et al*., 2019). The ageing-in-place model assumes that the older person is living in stable housing which is suitable to need. Renters and especially low-income renters are more likely to live in insecure house. Moreover, because of either poor affordance or landlord's unwillingness to accommodate home modifications they may not be living in a home suited to need with negative consequences on the effectiveness of age-in-place programs (Cornell, 2020).

International and Australian findings indicate that seniors with limited social and economic resources are less likely to age-in-place especially if they unpartnered and have poor mental or physical health (Kendig *et al*., 2017; Roy *et al*., 2018; Smetcoren *et al*., 2017; Weeks *et al*., 2012). Older Australians who do not own their home and rely on the pension to cover the cost of rent and living expenses are also at a high risk of post-retirement poverty (Wood *et al*., 2020; Yates & Bradbury, 2010). As described by Fiedler and Faulkner (2019), they can be living 'one rent increase from disaster'. This

recognition has led to a call for greater social housing and assistance programs for vulnerable groups in the Australian community (Fiedler & Faulkner, 2019; Wood *et al*., 2017).

Ageing-in-Place and Home Design

It is well recognized that if people wish to age in place then the design of the home is critical. Findings from high income countries suggest that older people prefer single floor dwellings, no stairs, low maintenance and living in mixed neighborhoods (Jong *et al*., 2012). Despite the latter, a preference for house modifications can be mixed. For some seniors the symbolic qualities of the home may be important and continuing to successfully age-in-place despite frailty and infrastructure challenges, such as stairs and even sub-optimal living conditions, can be a source of empowerment (Sixsmith *et al*., 2014). On the other hand, house modifications for some seniors may be viewed as a signifier of frailty, stigmatization and therefore disempowerment (Sixsmith *et al*., 2014). The cost of home modifications can also be a barrier and an often-underappreciated consequence of home ownership especially in older single women (Temple, 2008; Viljoen *et al*., 2020) and those carrying a mortgage debt into retirement (Ong *et al*., 2019). Older Australians are spending proportionately more of their income on house maintenance and costs (Australian Bureau of Statistics, 2019). An often underappreciated concern expressed by seniors is that they may live longer than planned and therefore will run out of funds to support retirement (Bai, 2019; Brünner & Andersen, 2018; Choi & DiNitto, 2018; Litwin & Meir, 2013; Sass, 2018). This includes having the resources to successfully age-in-place in a home of their own choosing (Lewin-Epstein & Semyonov, 2016; Loibl *et al*., 2021; Oris *et al*., 2017). In seniors with limited resources, home maintenance costs can become a burden (Fausset *et al*., 2011) with an adverse effect on successfully ageing-in-place (Coleman *et al*., 2016).

Ageing-in-place programs typically involve home modification, and most studies indicate benefits. Camemolla and Bridge (2018) in a systematic review of home improvements report fewer falls and a positive impact on social participation, self-care and independence but mixed findings for cost-effectiveness, and limited evidence it had a positive effect on ageing-in-place and quality-of-life. Resendiz-Villasenor *et al*. (2021), in their literature review report that practical home adaptations such as grab rails in stairs and stairlifts notably improve quality-of-life.

Assisted technologies (also known as gerontechnologies) have received increasing attention as a method to support ageing-in-place. These include smart home technologies such as voice controlled intelligent personal assistants, telehealth and telemedicine, portable diagnostics, augmented reality, smart home lighting, smart door locks, care robots, etc. (Abdi *et al*., 2020; Andtfolk *et al*., 2021; Creaney *et al*., 2021; Thamil Amudhu, 2020; Tural *et al*., 2021; Waad, 2021). Two recent systematic review note that while assisted living technologies designed to enable seniors to age-in-place may reduce costs, evidence was either insufficient or of poor quality and the cost-effectiveness of programs doubtful (Abdi *et al*., 2020; Graybill *et al*., 2014). Technological developments have broadened what constitutes home modification, but the utility and acceptability of assisted technologies remain to be established (Elers *et al*., 2018; Ghorayeb *et al*., 2021).

Financial Wellbeing and Ageing-in-Place

Worldwide the financial landscape is becoming more complex and demanding. As a demographic, older people are increasingly required to make more complex financial decisions that often have profound long-term consequences. For example, immediately after retirement, an older person is faced with the choice of taking superannuation as a lump sum payment or as a regular pension payment. This decision will have

consequences due to different tax treatments and how the money is spent and/or invested. To navigate through these decisions, the older person must have the capability to seek advice in the first place, and then evaluate the options as to what is most appropriate for their needs and goals (Lowies *et al*., 2019). If these decisions are not appropriately made, retirement funds may run out, creating liquidity issues, and thereby reducing future choices and, in turn, well-being and ageing-well.

A key area of decision-making that most seniors typically have to consider at some point in life is to whether to remain in place or move to other housing/accommodation. A decision that is typically influenced by life change and dwelling satisfaction (Hansen & Gottschalk, 2006). The Australian Productivity Commission (2015) note that housing decisions are complex and are both emotionally and financially costly to make. If mistaken, they are also costly to remedy thereby placing an extra burden on seniors who are often asset rich but cash poor. Thus, emphasizing the importance of well-informed housing decisions to ensure financial wellbeing into older age. Notably, the individual's environment (including home) is omitted from the current conceptualization of financial well-being which is strongly focused on an individual's financial circumstances (Salignac *et al*., 2020). In sum, an understanding of money management and financial risk is key to the future financial wellbeing of older people, especially with regards to housing, but individual understanding is often poor as is the understanding of modellers and policy makers.

It is assumed that seniors enter retirement with clear financial goals and plan accordingly. Despite this expectation, US findings indicate that only 57 percent of non-retirees aged 50-65 years have determined how much money they will need in retirement (Stawski *et al*., 2007) while Australian findings indicate that only 48 percent of non-retirees aged 50-65 years have estimated how much money they need to save for retirement (Agnew *et al*., 2012). Retirement planning now occurs against a background

of increased life expectancy and a lengthened retirement horizon (Hurd, 1990; Kim & Moen, 2001). More people are now spending more time in retirement and the challenge for individuals is maintaining the balance between assets (such as the family home) and expenses (Hilgert *et al*., 2003; Smith & Ekerdt, 2011). This balance depends on the older person being able to convert assets and therefore have money to spend, i.e. liquidity. Most older Australians do not have adequate levels of liquidity to support them in later years of life (Croy *et al*., 2010) nor sufficient confidence in their financial capability to manage expenses (Lowies *et al*., 2019). In 2012, the main source of income for two-thirds (65 percent) of Australians aged 65 years and over was a government pension, a figure which has remained relatively unchanged in subsequent censuses of household wealth in 2015 (63 percent) and 2018 (67 percent) while 2015 data indicated that 67 percent lived in a household with an equivalised gross household income[3] in the lowest two quintiles and only 6 percent in the highest quintile (Australian Bureau of Statistics, 2015, 2018; Australian Institute of Health and Welfare, 2019). Moreover, of those in the higher quintiles, average superannuation savings amounted to AU$345 000, or 29 percent of their mean household net worth (Australian Bureau of Statistics, 2018). This is about half the recommended average superannuation balance required to achieve a comfortable retirement in 2021 of AUS$640 000 for a couple and AU$545 000 for a single person (Association of Superannuation Funds of Australia Limited, 2021).

Many older Australians have accumulated assets, such as homes and savings, which can be used to support their living into retirement. Indeed, for many Australians the family home is their most significant asset (Australian Productivity Commission, 2015). As previously discussed, older Australians are commonly asset rich but cash poor—a phenomenon not limited to Australia with the majority of

[3]Equivalised gross household income is income adjusted by an equivalised scale according to household size and composition to facilitate the comparison of income levels between households.

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American, Singaporean and UK retirees also classified as asset rich but cash poor (Davidoff *et al*., 2017; Hean *et al*., 2013; Phang *et al*., 2018; Rasmussen *et al*., 1995). The Australian pension system assumes that retirees own their home and for many this is the case which has helped them maintain a satisfactory living standard (Colic-Peisker *et al*., 2015; Ong *et al*., 2019; Yates & Bradbury, 2010)[4]. Government policy has been to encourage retirees to draw on the equity of their homes to fund retirement and meet essential needs (Leather, 1990). An ongoing challenge is finding suitable mechanisms for unlocking the wealth accumulated in an individuals' home (Whait *et al*., 2019). However, tapping into housing assets is a vexed issue as the process is both difficult and expensive and, moreover, can negatively impact the large number of benefits and services which home provides (Davidoff *et al*., 2017). Vehicles for releasing home equity include reverse mortgage schemes, fractional property investment and property crowdfunding.

Reverse Mortgages

Home equity is held to be an illiquid asset which can be converted to cash through either the sale or mortgaging of a property through products such as reverse mortgages (Moulton *et al*., 2015). Despite its potential affordability and promise of greater financial security, the take-up of home mortgage products has been low. This has been attributed negative publicity, high costs and limited knowledge. A 2017 survey of US homeowners aged 58 years and over about their knowledge of reverse mortgage products revealed a high awareness of reverse mortgages but a lack of knowledge on how the product works,

[4]Homeownerships rates however are declining affecting the financial stability of future cohorts as they enter retirement Ketchell M. The Conversation: Retiree home ownership is about to plummet. Soon little more than half will own where they live. 2018. Available from: https://theconversation.com/retiree-home-ownership-is-about-to-plummet-soon-little-more-than-half-will-own-where-they-live-115255

including contract terms and conditions (Davidoff *et al*., 2017). Preliminary findings in 2020 involving Australian seniors indicate that reverse mortgages products are also not well understood and the market for them poorly developed (Thomas *et al*., 2020). Additional factors affecting the uptake of reverse mortgage products are home maintenance costs, interest rates and insurance fees (Haurin & Moulton, 2017; Redfoot *et al*., 2007). In the latter case, the increased risk of loan default has led US mortgagees to pay as much as $6000 at loan origination as insurance fees to the lender whilst interest rates can be as high as 6.6 percent (Development, 2019; Lucas, 2015). The reverse mortgage market is more established in the UK, but a barrier to uptake has also been the financial and legal risks both from a consumer and lender perspective coupled with substantial early repayment charges (O'Mahony & Overton, 2015). According to the UK Care Guide (UK Care Guide, 2019), interest rates in the UK can be as high as 7 percent with insurance fees amounting up to £4000 upfront.

In Australia reverse mortgages are available through major commercial lenders and the Federal Government through its Pension Loans Scheme (PLS). In a recent review conducted by the Australian Securities and Investment Agency (2018), high interest rates (currently between 5 to 5.6 percent) and high upfront costs have been identified as risks to borrowers and causes of equity erosion. The review also concluded that the reverse mortgage market was underdeveloped and poorly understood. In the former case, competition in the Australian reverse mortgage market was low leading to limited options for borrowers. In the latter case, they found that prospective borrowers were poorly informed as to how reverse mortgage products work and how they will affect future needs—especially regarding the absence of tenancy protection clauses for non-borrowers forcing them to vacate the property in the event of the borrower vacating the property or passing away thereby affecting spouses and dependent children. However, the review also noted benefit for reverse mortgage products including the presence of no

negative equity guarantees and that they do assist older Australians achieve short term financial objectives. The Australian Federal Government offers pensioners and self-funded retirees that own their property outright a non-taxable supplement to their retirement income through the PLS. It is effectively a reverse mortgage administered by Federal Government and has been available to older Australians for the past 30 years. However, the uptake has been low with only an increase from 768 to 3771 participants over June 2019 in December 2020 (Hanewald *et al.,* 2021) . The slow uptake has been attributed to the restrictive eligibility rules and to address this issue the Australian Government has recently changed PLS rulings to allow for lump sum payments and introduced no negative equity guarantees (Australian Government Services, 2021). Over and above the risks associated with high interest and upfront charges, older Australian generally hold strong negative views regarding reverse mortgages as a debt instrument (Whait *et al*., 2019). Other drawbacks include strongly held values by older Australian regarding debt avoidance and retaining their property as a security asset and not for bequests, together with strong concerns regarding the transparency of terms and conditions and whether they might change in future without redress (Whait *et al*., 2019).

Alternate Vehicles for Unlocking Home Equity

Alternative avenues for unlocking home equity are emerging but to date remain largely unexplored and under-utilised. The new models have largely arisen out of the recent emergence of disruptive digital property investment vehicles such as fractional property investment and property crowdfunding (Lowies *et al*., 2017; Lowies *et al*., 2018).

Fractional property ownership involving less than 100% interest in a property has been a long-established model for creating greater liquidity and has been prominent in several countries including the

UK, Spain, India and Thailand (Lowies *et al*., 2018). The model is very similar to the patent developed by Vicino (2008) which allows investors to own a fraction (or a share) in a high yielding, high value residential property. The facilitation of transactions (buying and selling) is conducted through digital online platforms, with the homeowner receiving the capital purchased through the shares sold. In Australia fractional property investment through online platforms are still in its infancy and it is a relatively new innovation. Preliminary evidence suggest however that Australian seniors find these digital platforms attractive especially older Australian females pointing to potential further development of these products for the senior market (Lowies *et al*., 2018).

The concept of crowdfunding is not new but is relatively unknown in the Australian property environment. Although uptake remains limited, property crowdfunding has been used with success in countries with rigid financial regulations such as Italy (Battisti *et al*., 2020). Property crowdfunding involves a special purpose vehicle (SPV) that allows investors to pool their investments (O'Roarty *et al*., 2016). In this model the SPV is managed by a crowdfunding platform who finds the sponsor (residential or commercial property asset), obtains ownership, and distribute dividends back to the investors while the sponsor receives the equity but still occupies the property. Property crowdfunding is thought to hold great opportunity for growth, but also comes with risk (Cohen, 2016). In a study surveying Australian investors on their perceptions of property crowdfunding as an investment opportunity, product uncertainty underpinned low product endorsement especially amongst older Australians (Lowies *et al*., 2017).

A range of other equity release products also currently exist in the Australian market and include home reversion products and equity release agreements both of which allow homeowners to sell a percentage of the future value of their property while still occupying it (Ong *et al*., 2013). Although sharing

many similarities, the homeowner with a home reversion product keeps the remaining proportion of the home equity while for an equity release agreement they pay a fee for the portion they have sold thereby reducing the equity they hold over time in the remaining portion of the property (Moneysmart, 2021). The low uptake of the aforementioned equity release products in Australia has been attributed to poor availability and product unfamiliarity (O'Mahony, 2015).

Conclusion

In this chapter we first examined the concept of ageing-in-place including current policy directions and the strengths and weaknesses of the model. We conclude that demographic trends and an ageing population will necessitate a more financially sustainable and self-dependent older society if the goals of ageing-in-place are to be advanced. Current funding models however place a strong reliance on homeownership which for many older people is their most valuable but not most easily accessible asset often leaving them asset rich but cash poor. In a society that must increasingly become more financially self-dependent, this presents a major liquidity issue. In the second section of this chapter, we examined potential ways of unlocking the accumulated wealth held in housing, the level of acceptance of equity release products by older Australians and their strengths and weaknesses. The reluctance of most seniors to take on additional debt obligations late in life underlies the low uptake of equity release products and alternatives are needed if Australia to realise a financially sustainable and self-dependent older society.

What strategies can be advanced to support ageing-in-place together with increased financial wellbeing? We suggest a three-tier strategy. First, a change in government policy to accommodate more older Australians to age-in-place, by placing less emphasis on homeownership and a higher emphasis on affordable housing supply. This will assist older people to downsize as well as unlock much needed equity in an increasing financially self-dependent world. Second, a rethink and redesign of existing financial

products and services, by both the aged-care and financial services sectors, to assist older people in providing liquidity for increasing expenses in later life, especially towards health and wellbeing. It is clear that the current financial products and services landscape is not geared to service the majority of this cohort. Third, a more prominent focus on financial education and financial counselling of older people to empower them with the necessary financial capability to make sound financial decisions in older age, backed by a supporting government policy and clearly defined financial products and services to choose from. Addressing these three strands as a priority will have a positive impact not only for an older cohort, but also for younger generations that follow.

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