MORTGAGE EQUITY WITHDRAWAL BY OLDER AUSTRALIANS: RECENT TRENDS, INSTITUTIONAL SETTINGS AND PERSPECTIVES

European Network for Housing Research (ENHR) Conference
19 – 22 June 2013, Tarragona, Spain

Marietta Haffner, OTB Research Institute for the Built Environment, TU Delft
Rachel Ong, School of Economics and Finance, Curtin University
Gavin A. Wood, School of Global Urban and Social Studies, RMIT University

1. Introduction

The ageing of the population is a global demographic transition that is creating seismic shifts in the age structure of populations worldwide. The confluence of long-run declines in fertility rates and a lengthening of life expectancies has accelerated the rate of ageing. As a result, the cost of providing age-related payments and services are escalating, a fiscal responsibility that will only intensify in coming years and increasingly threaten the sustainability of balanced government budgets. It is therefore not surprising that the primary home has come under some scrutiny from governments as a key store of wealth that can potentially perform a pension role in retirement. This interest stems from the fact for the majority of (older) homeowners in Australia and other Western countries, the primary home on average represents their most significant asset (Chiuri and Jappelli, 2010; Sierminska and Takhtamanova, 2012; see also the summary given by Doling and Elsinga and others, 2013).

The mounting pressure on older homeowners to increasingly provide for themselves in retirement by tapping into their housing wealth, –henceforth called housing equity withdrawal (HEW) –, is evidenced by new policy recommendations that have dominated discussions surrounding the funding of aged care in countries such as Australia and the United Kingdom (UK). In Australia, a recent inquiry conducted by the Productivity Commission into the aged care sector argues that "many older Australians with low income have substantial wealth, which gives them the capacity to meet their lifetime accommodation costs and to make a modest contribution to the costs of their care" (Productivity Commission, 2011: xxvi). In the UK, the Dilnot et al. (2011) report emphasises personal responsibility as the starting point for meeting the costs of one's own care in old age, which can be paid from income, savings, housing assets or financial products that allow HEW[1].

Traditionally HEW required either sale of the home, or if a move was undesirable, refinancing which meant taking out a new or larger mortgage. Both channels are costly and time consuming methods of equity extraction. Compared to the traditional sale model, in situ mortgage equity withdrawal (MEW) is a relatively new style of HEW that allows homeowners to draw down on their housing wealth by adding to their mortgage debt after initial purchase of the home without having to move.

Whether older Australians are and or will be inclined to extract housing equity via MEW for funding spending needs is the focus of this contribution and is addressed in two key research questions. Firstly, what are the recent trends in MEW amongst older Australian homeowners, and how have these changed since the Global Financial Crisis (GFC) in comparison with other

[1] However, means-tested funding would still be available for those with insufficient resources to fund their own aged care.

countries? Secondly, do institutional settings in Australia encourage or impede the use of MEW by older Australian homeowners?

The answers to these questions foretell whether or not the interactions between ingrained institutional frameworks and recent policy shifts in Australia will increase the momentum of the use of MEW by homeowners. If so, policy measures that drive the use of MEW to fund spending needs amongst those approaching or in retirement will need to be balanced by a careful consideration of the risks posed by a government policy platform that sets the stage for homeownership to be treated as an asset base for welfare.

By 'older', we are referring to those in their 40s and 50s who are generally approaching retirement *as well as* 'elderly' homeowners aged in their 60s or over. The Australian Bureau of Statistics (ABS, 1995) broadly assumes the peak of life cycle earnings typically occurs at some point after 44 years of age. Asset accumulation and divestment decisions will become more critical from age 45 onwards. Baby boomers are currently in their 40s, 50s and 60s; by focusing on those aged in their 40s and over, we have an opportunity to gain some insight into the behaviours and expectations of baby boomers with respect to the use of housing equity in later life, as this group is likely to exert increasing influence on the direction of public policy-making in Australia and many other developed countries in the near future.

The paper is structured as follows. Section 2 expounds on homeownership's traditional welfare role in old age in Anglo-Saxon societies that have relatively less developed welfare states. It goes on to highlight the changing nature of housing asset based welfare that now reaches into earlier stages of the life course. This paper takes one of those Anglo-Saxon countries – Australia – to explore whether older households have a growing appetite for HEW in contemporary housing finance markets. The 'new' welfare role of homeownership is associated with a rising indebtedness, as section 3 documents, among all but the oldest age groups. In section 4, we also compare Australia with five other developed countries (see appendix for choice criteria) to gauge whether institutional settings offer a (un-)favourable environment for HEW that might correlate with the trends observed in section 3. We find Australia's institutional settings offer a relatively favourable environment for MEW by older homeowners. The implications of these findings for the retirement income system's effectiveness and the role of housing wealth as an asset base for welfare in old age will be discussed.

2. The changing welfare role of homeownership

Seminal studies by Kemeny (1980, 1981) and Castles (1998) have long proposed that there is a trade-off between the size of a country's owner-occupied sector and the size of its welfare programs. Kemeny (1981) found that countries with relatively less developed welfare states have high rates of homeownership. On a macro-level Castles and Ferrera (1996) found this inverse relation to be true for many OECD-countries in the 1980s. This proposition is based on the notion that homeownership can perform a welfare role in retirement, as at a minimum, outright homeownership in retirement removes the need to pay rents in old age. A growing number of social policy specialists believe that as welfare states retreat, particularly in those nations that Esping-Anderson (1990) classifies as liberal welfare regimes, there is a growing interest on the welfare role of housing wealth (Doling and Ronald, 2010).

Successive Australian Governments have promoted housing asset-based welfare by the use of tax expenditures, concessionary asset tests governing eligibility to allowances and pensions and assistance to first home buyers that promote home ownership and the accumulation of savings in housing wealth. The substitution was implicit; in the past home owners were not being asked to dip

into their housing wealth to fund retirement. Retired low to middle income persons meet low housing costs if they own their homes outright, and can therefore get by on smaller pensions. The assumption has been that older, low income persons will have relatively low housing costs because they own their homes outright, and can therefore get by on smaller pensions (Castles, 1998).

There is some recent comparative evidence supporting the effectiveness of this strategy. For example, the empirical evidence of Ritakallio (2003: 81) showed "that, instead of vast differences in inequality, poverty and, in particular, old-age poverty, the real differences between Australia and Finland are only modest when housing costs are taken into account." On comparing six countries, Yates and Bradbury (2010) find that while Australia has the highest before-housing poverty rate among those aged 65 years or over, it has one of the lowest after-housing poverty rates in this age group[2]. Hence, housing wealth has traditionally been an important pillar supporting Australian retirement policy. Government interventions that encourage extensive accumulation of wealth in the primary home have become a cornerstone of Australian social policy as it has allowed the age pension to be set at relatively low levels as compared to other countries (Baxter and McDonald, 2005).

In more recent times housing wealth has also become more important in earlier stages of the life course through MEW. Widespread financial deregulation and considerable mortgage production innovation that took place in the 1980s and 1990s has spawned a plethora of financial instruments that facilitate in situ MEW by homeowners. Their emergence or rather their success was helped along by soaring house prices between the mid-1990s and mid-2000s, and historically low interest rates over the same period. The more conventional forms of MEW involve refinancing an existing loan to withdraw more equity than the existing loan permits, or simply taking out an additional loan, such as a second mortgage, against the primary home. More recently, flexible mortgages have grown in popularity in countries with well-developed mortgage markets, such as Australia and UK. Broadly speaking, a flexible mortgage is a secured loan that can be repaid in varying instalments while at the same time allowing the homeowner-borrower to access his or her housing equity up to some agreed limit. Hence, in essence, a flexible mortgage operates like an overdraft facility that allows the borrower to add to his or her mortgage as long as the borrower remains below a pre-agreed credit limit. There is no costly application process; these products turn housing wealth into an 'ATM' with borrowers drawing down or adding to their housing equity as and when they choose (Klyuev and Mills, 2010) . Similarly, products such as home equity lines of credit (HELOCs) allow homeowners, e.g. in the United States (US), to use a line of credit to borrow funds up to some specified credit limit, using the primary home as collateral. As these MEW instruments do not appear to be restricted to homeowners beyond a certain age, the implication is that current cohorts of older homeowners are much more likely to have relatively easy access to HEW than past cohorts, either in situ or at the point of acquisition of the dwelling.

In addition, age-specific MEW products that are targeted at 'elderly' homeowners, generally in their 60s or over, such as reverse or lifetime mortgages, have been becoming increasingly popular in some countries such as the US, UK and Australia (Reifner et al. 2007b). Lifetime mortgages, which is a different name for reverse mortgages, allow borrowers to draw on loans. Repayment is not required until the house is sold (contrary to the flexible loans described above, that in principle require repayment during the loan term), with the sale proceeds channelled towards repayment of the loan. However, as confirmed in section 4 below, these products have not really taken off in most countries, with the possible exception of Australia.

[2] Doling and Ronald (2010) report a significant positive correlation between before-housing poverty rates among over 65s and the rate of homeownership in a sample of EU countries. Heylen and Haffner (2012) conclude that it is not about the rate of homeownership but the rate of outright owners that determines the reduction in after-housing poverty rates.

Recently, Toussaint and Elsinga (2009) distinguished between the traditional and new forms of housing asset-based welfare. In the former, homeownership is perceived as a means to accumulate housing equity that can be tapped into contingently, as a last resort, and typically late in the life course. In the latter, housing equity is used as a financial resource and built up or released as needed over the life course via financial products. The increased availability of these financial products permits the welfare role of housing wealth to reach into earlier stages of the life course. Hence, to the extent that HEW is exercised by MEW over the life course (and not just post-retirement), more and more older Australians will approach retirement with outstanding debt that motivate concern about the robustness of housing wealth as an asset base in old age.

3. Mortgage indebtedness in Australia

In this section, we invoke repeated cross-sectional data from the ABS Income and Housing surveys that span almost three decades from 1982 through to 2009 to chart long-run changes in borrowing behaviour amongst successive homeowner cohorts over a period when financial markets underwent significant changes. Financial deregulation was well underway from the 1980s. Massive increases in lending and borrowing activities were witnessed in the 1990s and early 2000s when house prices increased rapidly. However, by the latter part of the decade, financial markets had crashed as a result of the GFC. The use of long-run data also allow us to make more decisive judgements about whether any increase in mortgage indebtedness is an unusual phenomenon in the context of historical trends. We are particularly interested in whether older Australians are more inclined to tap into their housing equity by securing more debt against their primary homes. Firstly, are mortgagors becoming increasingly common among newer cohorts of homeowners? Secondly, are mortgagors becoming more leveraged than they have been in the past?

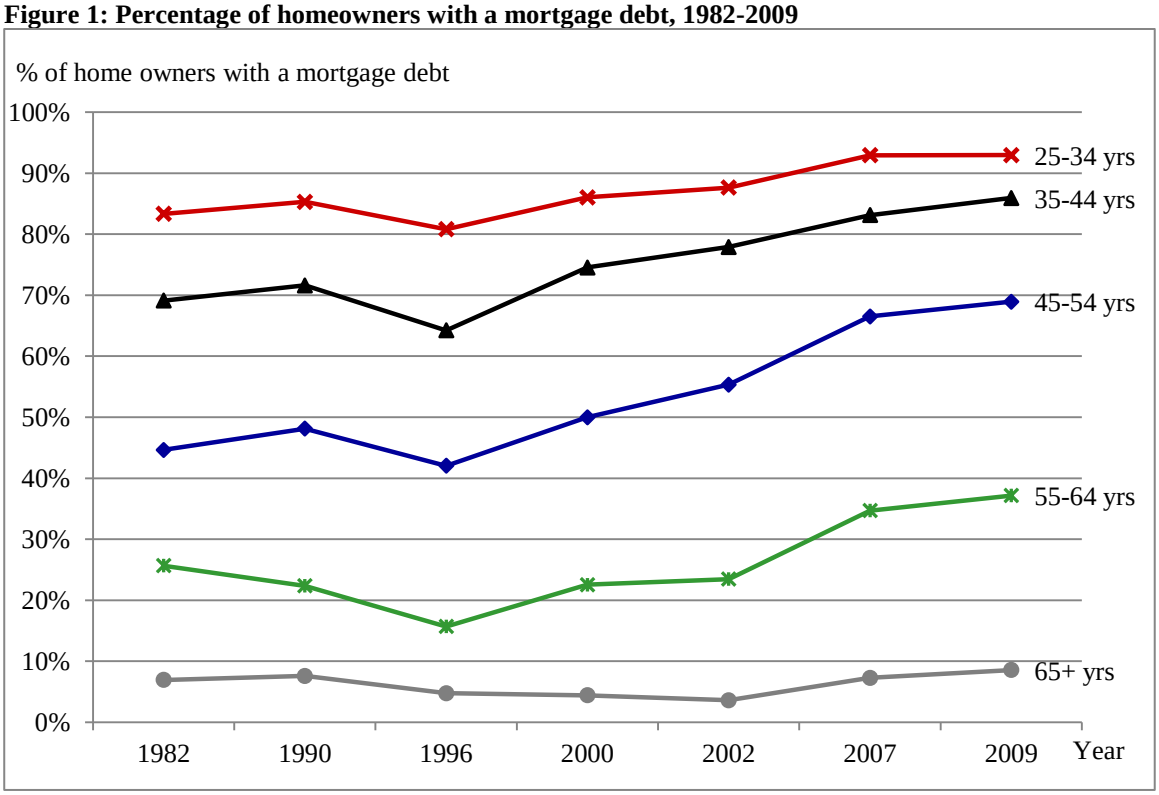
Figure 1 presents some striking trends for each of five age groups ranging from 25– 34 years to 65 years and over. With the exception of those aged 65 years and over, whose debts remain low, mortgage indebtedness rose significantly among all other age groups between 1982 and 2009. Among those of pre-retirement age, the rise in mortgage indebtedness coincided with the start of the house price boom in the mid-1990s. Between 1996 and 2009, the proportion of 35–64-year-old homeowners with a mortgage debt climbed by over 20 percentage points. Even during the post-GFC phase (2007–09), mortgage indebtedness continued to climb, albeit at a slower rate than during the period of rapidly rising house prices (2002–07).

Parkinson et al. (2009) show that in both Australia and Great Britain large numbers of young and middle aged owners (particularly couples with children) used flexible mortgage products to tap into housing wealth. Part of this increase in the number of 35–64-year-old mortgagors is likely due to the growing incidence of MEW. The bar chart in figure 2 compares the loan-value ratios of mortgagors in each of the same five age bands (25–34 years to 65 years and over). With the exception of the post-retirement age group there is a rise in gearing; the increase in the youngest age band (25–34) is as much as 20 percentage points. Even those approaching retirement age (55–64 years) are gearing up with loan-to-value ratios (LVRs) rising from 22 per cent to 28 per cent, an increase of six percentage points. These two figures reveal some important long run trends; more Australian homeowners are securing debt against property later in their lives, and are increasingly inclined to secure debt against their housing wealth.

Curiously, persons 65 years and above are defying these long run trends. A much more conservative borrowing profile is apparent; the proportion with outstanding mortgage debt has remained very low (below 10%) over the nearly 30-year timeframe, and in 2009 remained much the same as it was in 1990. Even those with a mortgage showed no inclination to gear up against their housing wealth.

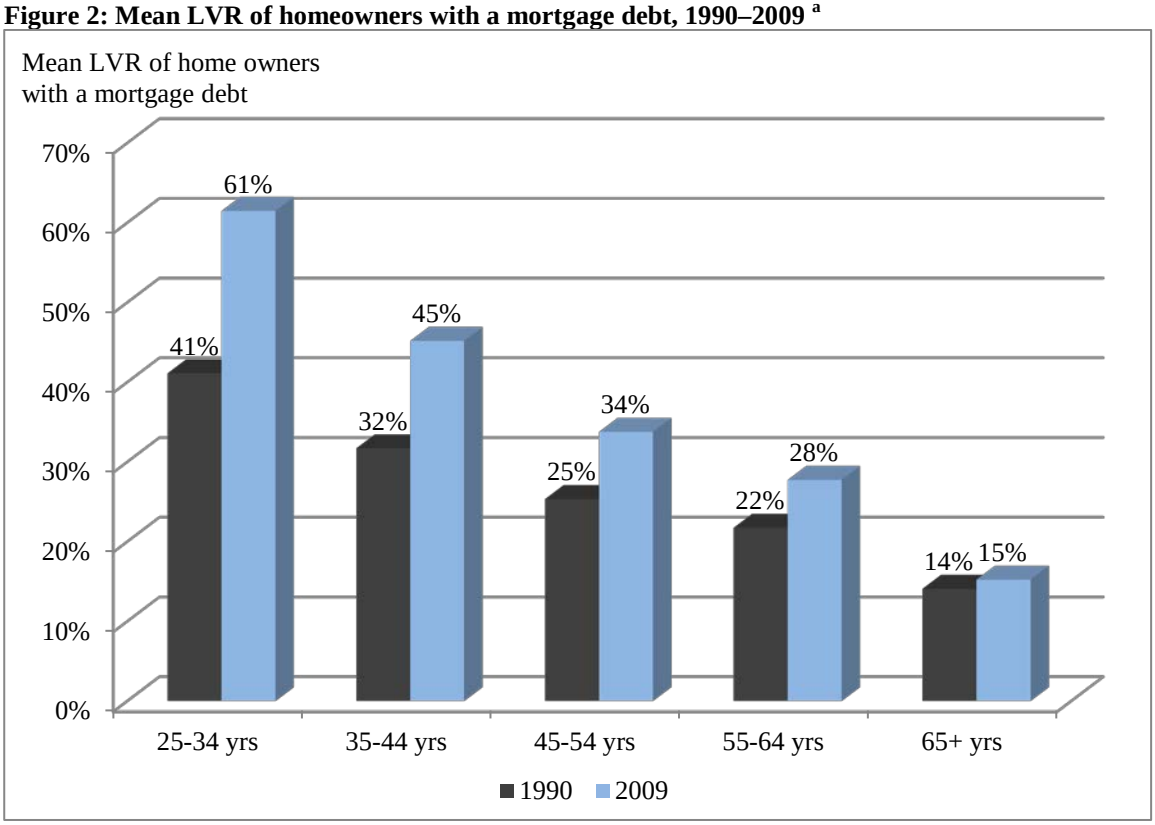
But how has their indebtedness remained low when pre-retirement age groups are becoming more indebted? A potentially important explanation is the use of lump sum superannuation to pay off mortgages on retirement; if true the divergent patterns in figures 1 and 2 could well reflect the use of mortgages to tap into superannuation balances before retirement.

Figure 1: Percentage of homeowners with a mortgage debt, 1982-2009



Source: 1982, 1990, 1996, 2002, 2007 and 2009 surveys of income and housing from the ABS

Figure 2: Mean LVR of homeowners with a mortgage debt, 1990–2009 [a]

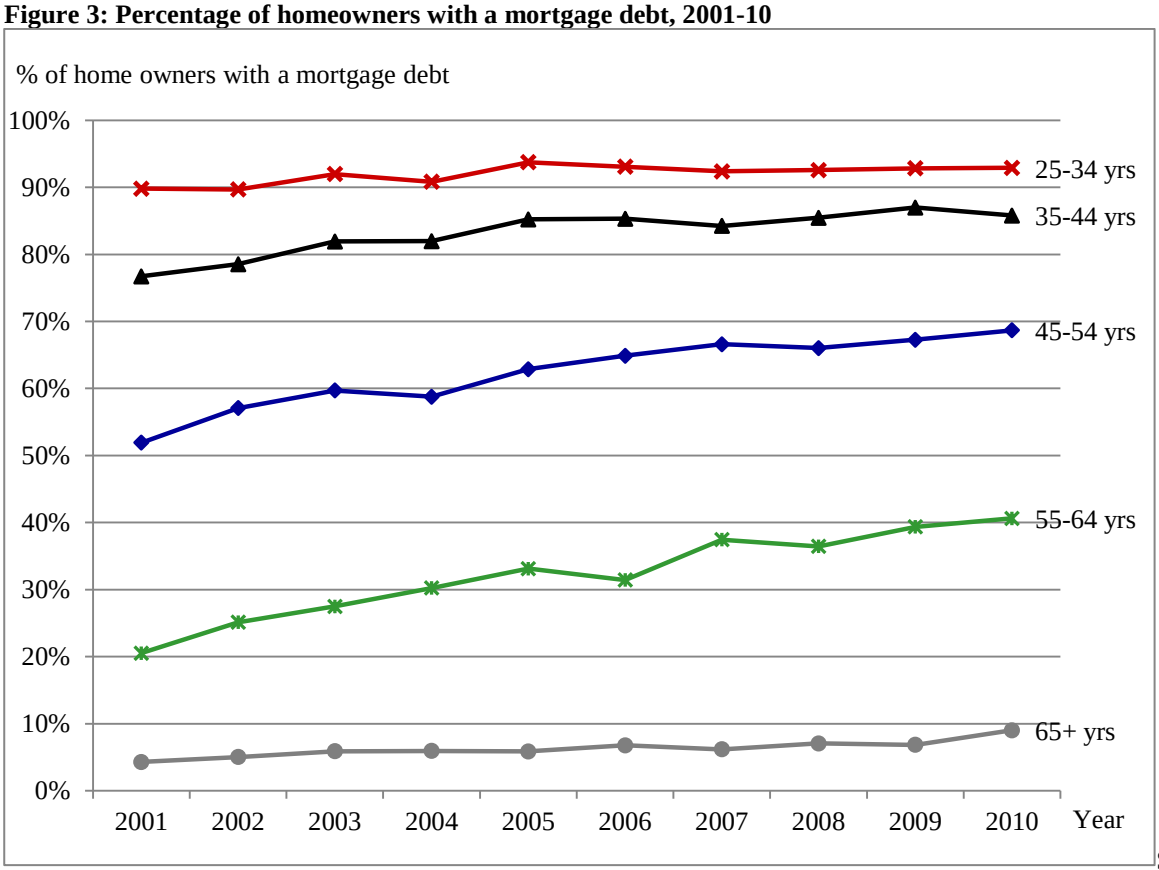


Source: 1990 and 2009 surveys of income and housing from the ABS.
Note:

a. It is not possible to calculate LVRs for 1982 due to the absence of house value and mortgage debt data in the 1982 survey.

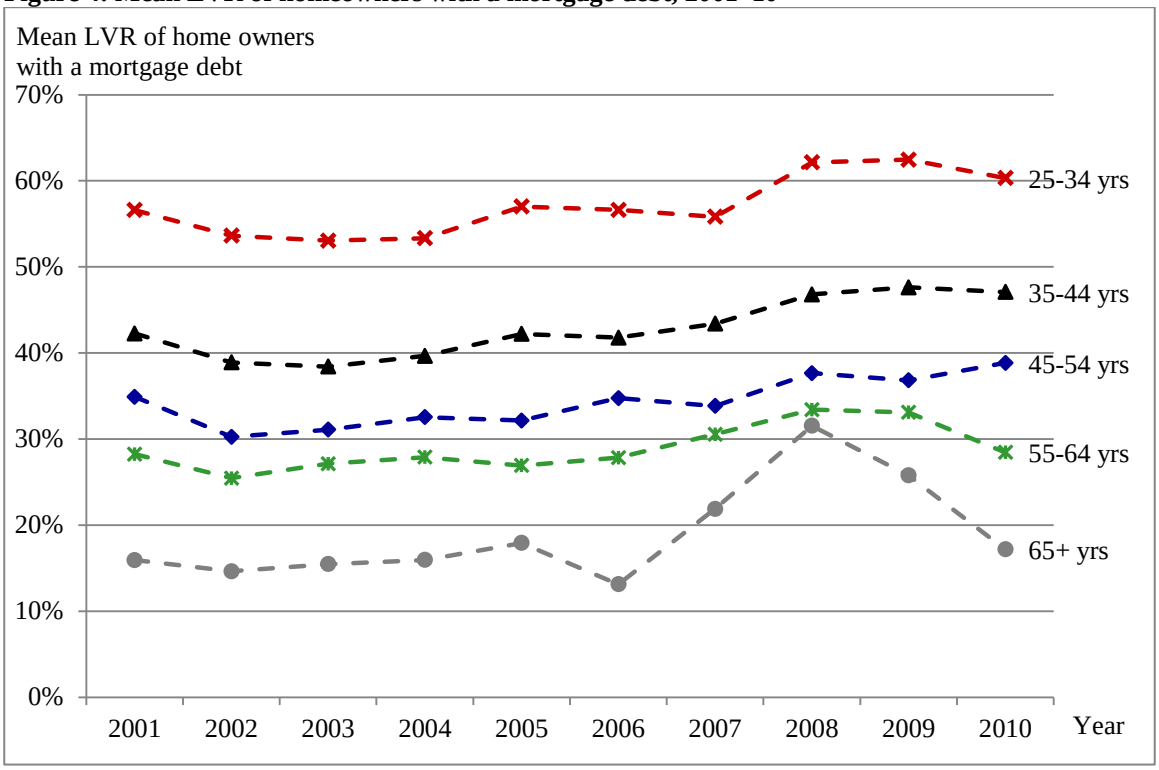
Having charted long-run trends using the ABS Surveys of Income and Housing, we now turn to a repeated cross-sectional analysis of the comparatively shorter-run Household, Income and Labour Dynamics in Australia (HILDA) Survey data, covering the years 2001-10. We are able to use debt and house value variables for homeowners in every year during the 2001-10 timeframe, thereby enabling a year by year analysis of borrowing behaviour. This presents an excellent opportunity to more closely scrutinise on a year-by-year basis the proposition that debt levels continued to rise post-GFC. Figure 3 suggests that the share of homeowners with a mortgage did continue to climb after the GFC among those aged 45 years and over; though among younger homeowners the share stabilised post-GFC. The average LVR estimates in Figure 4 suggest that in recent years older mortgagors 55 years and over have curbed their borrowing, though LVRs still remain slightly higher than in 2006. However, younger mortgagors continue to gear up against housing wealth, and this is particularly evident among the age cohort 45–54 years.

Figure 3: Percentage of homeowners with a mortgage debt, 2001-10



Source: Authors' own calculations from the 2001-10 HILDA Survey

Figure 4: Mean LVR of homeowners with a mortgage debt, 2001–10



Source: Authors' own calculations from the 2001–10 HILDA Survey.

4. The MEW market for older homeowners in Australia

In this section, we provide a detailed examination of the MEW market in Australia within the international context. We begin by examining the incidence of MEW by older Australian homeowners in section 4.1 (as opposed to more general measures of mortgage indebtedness presentation in the previous section). This is then complemented by a descriptive overview of the development of the market for MEW products in Australia in section 4.2. We make the distinction between age-specific-products for the elderly such as reverse mortgages which generally are only available to homeowners in their 60s or over, and non-age-specific products such as flexible mortgage products which homeowners in their 40s and 50s (as well as younger age groups) can access. We round up this section by comparing and contrasting the Australian MEW market with the MEW market in five other countries in section 4.3. This comparison allows us to evaluate in section 5 the extent to which the institutional environment in Australia supports or discourages the use of MEW by older Australians as opposed to countries with different institutional settings.

4.1 Trends in MEW in Australia

Table 1 analyses the incidence of MEW by the same five homeowner age groups in each year from 2001-2010. If a homeowner did not move between year *t* and *t*+1 but increased mortgage debt secured against the primary home, then MEW has occurred. The findings reported in the table confirm that regardless of year, and hence independent of house price trends, younger homeowners are more inclined to MEW. In the two youngest age groups (25-34 years; 35-44 years) between one quarter and one third of homeowners added to their existing mortgages in any one year. The very low incidence estimates for the oldest age band (65 years and over) confirm their conservative attitude and reluctance to add to borrowings in order to fund consumption. The trends over the decade are mixed. In the early years of the new millennium when house prices were booming the two youngest age groups seemed more disposed to MEW, but in the post-GFC years their enthusiasm for MEW cooled (or increasing numbers found that borrowing constraints were binding). On the other hand our oldest two groups of owners continued to MEW more frequently even though house price growth had slowed post-GFC. It is possible that the over 55 year old groups were more exposed to risks in the post GFC era, and were therefore forced to unlock housing wealth more often to meet emergencies. For example, mature age workers, especially the less educated who are more vulnerable to job loss, may be more likely to be leave the workforce when an economic crisis hits near retirement (Coile and Levine, 2011) and/or have difficulty regaining employment after a period of job loss (Weller, 2007).

Table 1: Incidence of MEW among homeowners, by age band, 2001-10, per cent

Year	25-34 yrs	35-44 yrs	45-54 yrs	55-64 yrs	65+ yrs
% of homeowners who engaged in MEW					
2001-02	26.5	26.0	18.4	8.3	2.0
2002-03	33.3	30.3	24.9	10.5	3.8
2003-04	34.0	27.3	23.1	9.9	1.5
2004-05	34.0	33.2	25.8	12.7	3.7
2005-06	30.7	32.2	23.0	10.1	3.0
2006-07	28.8	33.7	28.8	14.3	2.5
2007-08	30.1	30.2	23.4	13.6	3.8
2008-09	29.6	27.3	22.4	15.1	3.1
2009-10	24.7	27.1	24.3	16.0	4.0
% point change in the incidence of MEW					
2001-02 to 2006-07 (boom period)	2.3	7.7	10.4	6.0	0.6
2007-08 to 2009-10 (post-GFC)	-5.4	-3.1	0.8	2.4	0.2
2001-02 to 2009-10	-1.9	1.1	5.9	7.7	2.0

Source: Authors' own calculations from the 2001-10 HILDA Survey

4.2 Styles of MEW in Australia

Age-specific products for the elderly

With respect to forms of MEW typically used by older Australians, the literature tends to put an emphasis on reverse mortgages (see, for example, Australian Securities and Investments Commission, 2005; Bridge et al. 2010, 2011). During 1993–96, the Australian government subsidised a pilot home equity conversion scheme, but this was discontinued because of its low take-up (Dolan et al. 2005). It was only in the 2000s that the market for reverse mortgages started taking off, a relatively late start compared to other well-developed mortgage markets such as the UK and the US.

Reverse mortgages are currently supplied by a selected number of banks. Bridge et al.'s (2010) study on reverse mortgages reported that there were seven Senior Australians Equity Release Association of Lenders (SEQUAL) accredited lenders who provided five reverse mortgage products in 2008. ASIC (2007) notes that the maximum loan available is age-dependent, but usually constitutes 45 per cent or 50 per cent of property value. The payment options include lump sums, regular payments, or lines of credit and lenders' typically no negative equity guarantees. All these characteristics are consistent with the broad features of reverse mortgages described above. In addition, according to annual research conducted by Deloitte for SEQUAL, the majority of reverse mortgage products in Australia (85% in 2010) are typically characterised by variable rate loans.[3] Deloitte Touche Tohmatsu and SEQUAL further note that almost all reverse mortgages are taken out in the form of lump sum payments (95% in 2010). Furthermore, additional drawdowns are possible, as flexible product options such as lines of credit now allow homeowner-borrowers to make discretionary income draws against their reverse mortgage loans (Deloitte Touche Tohmatsu and SEQUAL 2011, 2012)[4].

The Australian reverse mortgage market has grown steadily through the GFC years. Between 2005 and 2011, the number of outstanding reverse mortgage loans more than doubled to a total of 42,400. At the same time, the average size of each loan also grew from $51,100 in 2005 to over $78,200 in 2011. The interactions of these two trends meant that, by the end of 2011, the outstanding market size was about 3.3 billion Australian dollars (AUD), a tripling of the figure reported at the end of 2005. It would appear that older Australian homeowners' appetite for HEW through reverse mortgages was not dampened by the GFC in any significant way (Deloitte Touche Tohmatsu and SEQUAL 2011, 2012).

Other MEW products do not seem to have received as much attention in the literature that has studied the role of housing equity in ageing populations. Apart from reverse mortgages, the SEQUAL website also makes mention of another MEW product called accommodation bond loans targeted at older homeowners aged 70 years and over. These are loans with a term of three or five years secured against one's housing equity in order to meet the cost of entry into a residential care facility.[5] Recently, the Productivity Commission (2011) proposed a similar scheme, a government-backed Australian Aged Care Home Credit scheme, under which homeowner-borrowers can make flexible draws against their housing equity to meet aged care co-contributions or accommodation costs up to a specified limit. In principle, these MEW options are not necessarily an in situ form of equity withdrawal, as the homeowner-borrower will typically move into a residential aged care

[3] Since 2008, fixed rate loans are no longer available on new reverse mortgage loans in Australia.
[4] Additional draw downs amounted to around 4.1 per cent of outstanding loans in 2011 (Deloitte Touche Tohmatsu and SEQUAL 2012).
[5] For more information from SEQUAL, see <http://www.sequal.com.au/content/view/19/36/#Accommodation%20Bond%20Loan>.

facility. However, these products are designed to afford some protection to those remaining in the home, such as one's spouse (who may also be one of the homeowners) or dependent child with a disability.

Non-age-specific products

Although reverse mortgages, accommodation bond loans and the proposed Aged Care Home Credit scheme are all targeted at elderly homeowners, other forms of MEW have been available for decades, which are not age-dependent and can be accessed by homeowners of all age groups, including a key group of interest, i.e . older homewoners aged in their 40s and 50s.

Refinancing and second mortgages have long been used in Australia (and other countries) as a form of MEW. The last two decades have seen the emergence and growth in popularity of flexible mortgage products in Australian markets (Moloney and Bor 2003). During the term of the loan, flexible mortgages offer the borrower five key facilities; early repayment of the loan is possible through overpayments and lump sum injections, while HEW is facilitated via lump sum extractions, underpayments or taking payment holidays (Smith et al. 2002). These flexible mortgages were originally intended for the purposes of stimulating accelerated mortgage repayments from homeowners to save on mortgage interest payments. However, as stated in section 2, flexible mortgages also allow for HEW. In more recent times, the role of flexible mortgages has changed somewhat, as they are now increasingly being used by Australian homeowners as a style of in situ MEW by allowing for overdrafts to be drawn against one's housing equity in a relatively costless manner (Klyuev and Mills, 2010). An example of a flexible mortgage product available in Australia (and the UK) is offset mortgages, whereby transaction balances are simply offset against a homeowner-borrower's mortgage debt (Klyuev and Mills, 2010). Smith et al. (2002) note that flexible mortgages are commonly used in Australia these days, with one-third of homeowner-borrowers[6] holding a current account mortgage, a form of offset mortgage whereby a single account is provided for all transactions so that transaction balances are simply offset against a homeowner-borrower's mortgage debt.

Similarly, products such as HELOCs allow homeowners in Australia to use a line of credit to borrow funds up to some specified credit limit, using the primary home as collateral. In 1986, Citibank launched its Mortgage Power product, which Moloney and Bor (2003) described as the first line of credit product to be introduced in Australia.

4.3 How developed is Australia's MEW market compared to other countries? A cross-country review

Next, we attempt to contextualise our analysis of the MEW trends in Australia by comparing the developments in the Australian MEW market with MEW markets with five other countries, specifically UK, US, Netherlands, Finland and Germany. Appendix A1 describes the rationale behind our selection of these five countries as appropriate groups against which Australia can be compared. MEW has taken place in different countries because of different reasons. MEW markets vary across countries, and most are not very transparent about the prevalence and characteristics of products on offer. Having described the MEW system in Australia in section 4.1 and 4.2, we proceed next to provide a brief overview of the MEW market development in each of the five countries, before explicitly comparing and contrasting the institutional settings of these countries with Australia in section 5.

[6] This figure includes loans taken out by all homeowners, not just older homeowners.

MEW products have been available in the **UK** for up to 30 years (ASIC, 2005). It is widely accepted that the UK has the most developed housing equity release market in Europe. As noted by Reifner et al. (2007b: 3): "The UK, has by far the most sophisticated ERS [equity release scheme] market, based on any of the possible criteria that can be used to measure so called development of the market: size of business, number of providers, number of years for which products exist, level of consumer awareness with ERS, or quantity of literature, material and analysis describing the market. A number of countries, but the UK especially, is already demonstrating the market-driven process of product innovation when circumstances present an opportunity". ERS products are inter alia defined as products that deliver income for retirement: lifetime mortgages constitute the most frequently offered age-specific MEW product for the elderly in the UK (Reifner et al., 2007b). With an aggregate value of £560 million, lifetime mortgages dominate the sales (market share of 98%) in the UK market for age-specific MEW products for the elderly. According to a report released by the UK's Equity Release Council (ERC)[7], the take-up of age-specific MEW products by elderly homeowners fell post-GFC after growing strongly between 1991 and 2007. Over this period, the amount of equity released from homes via lifetime mortgages increased sharply from £10 million in 1991 to £1.1 billion in 2007. After the GFC, the extent of borrowing via lifetime mortgages declined. In 2011, the amount of equity released via lifetime mortgages was £560 million (The Wriglesworth Consultancy, 2011).

However, apart from lifetime mortgages that target elderly homeowners, non-age-specific MEW instruments such as interest-only mortgages and further advances also exist to facilitate MEW in the UK (Reifner et al., 2007b; Reinold, 2011). As in Australia, there has also been a definite move towards more flexible mortgage products in UK's mortgage markets over the years. These days, products which feature an overall borrowing facility that borrowers can choose when to draw down are the most popular product in the UK (Reifner et al., 2007b; see also Klyuev and Mill, 2010). As mentioned in section 4.1, an example of a flexible mortgage product available in the UK is offset mortgages, whereby transaction balances are simply offset against a homeowner-borrower's mortgage debt (Klyuev and Mills, 2010). The flexible mortgages can also be combined with age-specific equity release schemes for the elderly, such as lifetime mortgages (Reifner te al., 2007b).

In the **US**, the most widely used age-specific MEW product among elderly homeowners is most likely the reverse mortgage (ASIC, 2005). Reverse mortgages were introduced in the United States in 1961 (Wicke, 2008; see also Schneider, 2009a). The US was one of the first countries (together with the UK) where this style of mortgage was offered. In 1987, they were formally introduced by Congress to facilitate the financing of consumption in old age. Nowadays over 90% of all reverse mortgages are based on this Federal Home-Equity-Conversion-Mortgage (HECM) Program (see Bishop and Shan, 2008; Gotman, 2011). The federal program implies that government guarantees the fulfilment of the reverse mortgage contract towards the homeowner in the event that the lending financial institution encounters bankruptcy. It also covers the lender for negative equity risk, should the loan amount surpass the value of the dwelling which serves as collateral, as the consumer only owes the maximum of the value of the house (non-recourse clause). Even though the HECM program is federally insured it was not till the last decade before the take-up of HECMs increased. But despite the government guarantees that underwrite this product, CFPB (2012) notes that the reverse mortgage market remains very small, comprising two to three per cent of the 24 million homeowner households who are eligible for reverse mortgages[8]. Furthermore, in the US, the GFC also appears to have tempered the appetite for MEW by older homeowners. Even though the take-

[7] The ERC is an industry body which ensures that life mortgages and home reversion products offered to homeowners aged 55 years and over are safe and reliable.

[8] Those reverse mortgage products not covered by the HECM program are known collectively as proprietary reverse mortgages (CFPB, 2012). Their market share has steadily declined since the introduction of HECMs, and proprietary reverse mortgages are practically non-existent in the US nowadays.

up of HECMs spiked from less than 10,000 in 2001 to over 100,000 in 2007, its growth over the period 2007-09 was much slower plateauing at 110,000 in 2009[9]. The CFPB (2012: 76) notes that the US HECM market is "fragile" today.

Alternatives to reverse mortgages include refinancing with traditional home equity loans or HELOCs which allow homeowners in the US to borrow funds up to some specified credit limit via a line of credit, using the primary home as collateral. Older homeowners generally find these more difficult to qualify for than reverse mortgages as they require regular mortgage payments during the life of the loan (CFPB, 2012). Also, Do (2012: 301) states that the flexibility in the timing of repayment that HELOCs usually offer are often limited by pre-payment penalties or non-usage fees. However, HELOCs often carry an interest-only repayment feature, where the principal does not necessarily have to be repaid till the end of the loan term, which is potentially attractive to older borrowers.

In Europe, the **Netherlands** experienced accelerated house price inflation during the late 1990s. This price increase sparked a massive expansion in MEW in the Netherlands; this occurred in the general home-owning population and not just elderly homeowners. The MEW products that were popularly used in the Netherlands were thus not age-specific products for the elderly. Furthermore, the extraction did not always occur in situ, that is, after the initial purchase of the primary residence. In the Netherlands, MEW often took place when a mortgage loan was taken out at initial purchase of a property or when a mortgage contract was re-negotiated at the point of purchase of a new dwelling (Van Els et al., 2003; Ministerie van BZK, 2010). Also available are what Reifner et al. (2007b) calls extended or second mortgages that are offered by credit institutions. A form of second mortgage called KeuzePlus Hypotheek is offered by a bank (Rabobank) specifically to extract positive equity from the dwelling[10]. It can be described as a line of credit for which interest is paid for the amount drawn down, but for which repayment may be deferred until the end of the mortgage contract. MEW was popular, also because of the mortgage interest deduction that was available and unlimited until 2001 (Haffner and De Vries, 2010). Interest-only mortgages at the point of acquisition became popular in this century allowing cohorts of the over-65s to increasingly not repay their mortgage loan fully in old age (Haffner, 2008). Because of slower rate of house price appreciation this century and changes in the tax system (see below), the GFC adversely impacted on the take-up of MEW in the Netherlands.

Among products specifically targeted at the elderly, the Florius Verzilver Hypotheek is a reverse mortgage which has a no negative equity guarantee. It has not become very popular, however, even though Florius Verzilver Hypotheek is the brand name of a large Dutch bank (Ong et al., 2013a).

In **Finland**, a key age-specific MEW product for the elderly is the reverse-loan model, which provides monthly payments at a variable interest rate, and was introduced by the OP-Pohjola Group (group of 200 cooperative banks) in 2007 (Reifner et al., 2007b). The reverse-loan model is a reverse mortgage offered to elderly homeowners either as a tenure loan or over a fixed term. Another age-specific product for the elderly that is aimed at extracting income during retirement is a balloon loan called Homeflex which was launched by the Nordea Bank Finland in 2005. This loan offers a line of credit (current account) facility where a loan can be granted up to the point where LVRs reach 75%. However, the customer pays interest during the course of the loan term and the

[9] This is the latest data available on the Department of Housing and Urban Development website. Details can be found at http://portal.hud.gov/hudportal/HUD?src=/program_offices/housing/rmra/oe/rpts/hecm/hecmmenu, last accessed 11 December, 2012.

[10] For more details, refer to http://www.rabobank.nl/particulieren/producten/hypotheken/overzicht_hypotheken/keuzeplus_hypotheek#tab2; see also Taskforce Verzilveren (2013).

loan capital must be repaid after ten years unless a new agreement is made or an amortisation scheme agreed on[11]. Ordinary lines of credit also exist to facilitate MEW, though these are not solely restricted to the elderly. Overall, the limited[12] literature on the Finnish market for MEW suggests that it is still relatively undeveloped compared to MEW markets in countries such as Australia, UK and US.

Similarly, the market for MEW products for the older **German** homeowners is not very well-developed, and second mortgages, too, are quite uncommon (Reifner et al., 2007b). The total equity release product market for the elderly was estimated at less than 100 contracts in 2008 (0.0008% of outstanding domestic mortgages), with only two products being offered. One of the products was a reverse loan where the retired homeowner would pay a monthly interest, but no capital repayment, until the homeowner leaves the property. Wicke (2008) argues that attempts to launch reverse mortgages have failed because of the complexity of products and associated legal insecurities.

Though the available literature on MEW products that are comparable across countries tends to be limited, we are able to draw some general conclusions from the studies reviewed and make a distinction between the growth of the age-specific MEW market for the elderly and the general MEW market in which non-age-specific financial instruments can be accessed by homeowners of all ages.

In countries where age-specific MEW products are offered to elderly homeowners, the market for such products is small. During 2010-11, around AUD320 million of equity was released via new reverse mortgage loans in Australia (Deloitte Touche Tohmatsu and SEQUAL, 2011, 2012). In the UK, the amount released through reverse mortgages in 2011 was £560 million (The Wriglesworth Consultancy, 2011). CFPB (2012) notes that the US reverse mortgage market remains rather small, comprising two to three per cent of the 24 million homeowner households who are eligible for reverse mortgages and that it is very
"fragile" today (CFPB, 2012: 76).

However, when the MEW market is considered more generally to include both age-specific and non-age specific products, existing statistics (for all homeowners[13]) indicate that the MEW market is reasonably large in countries with well-developed mortgage markets, which are Australia, UK, US and the Netherlands[14]. In Australia, AUD 68.7 billion was released via MEW in 2007-08 and in the UK the comparable estimate for the same year was £62.6 billion (see Ong et al., 2013b). In the US, Belsky (2010: 90) notes that: 'the amount of home equity extraction through borrowing soared during the 2000s in a truly epic manner .... In 2005 total real mortgage equity extracted through home equity loans and cash-out refinancing was $1,880 for every adult and child in the USA, nearly ten times the level in the early 1990s. Though equity extraction through home equity borrowing peaked in 2004, and cash-out from refinancing peaked in 2005, neither dropped significantly until 2007, and even then the combined total still amounted to $1,136 per capita'. Hence, the literature does point to a proliferation of MEW via non-age-specific MEW instruments. Indeed, Ong et al. (2013b) confirm that in situ MEW is by far the most frequent form of equity withdrawal in both Australia and the UK, accounting for 90% of housing equity withdrawal transactions in both countries over the period 2001-08. Greenspan and Kennedy (2007) estimate that in the US, in situ MEW accounted for 80% of the rise in home mortgage debt from 1990 to the mid-2000s. On the other hand, countries with less well-developed mortgage markets such as Germany and Finland do not support the spread of MEW.

[11] In comparison, the loan capital is usually only repaid when the dwelling is sold under a standard reverse mortgage.
[12] For example, statistics on the size of the MEW market in Finland are not available (Reifner et al., 2007b).
[13] Given the limited literature, we are unable to cite statistics specifically for older homeowners.
[14] All four countries have mortgage debts that exceed 70% of GDP (see figure A1 in appendix A1).

We find that among the four countries we have surveyed where MEW is more widespread, the take-up of MEW was adversely affected in some countries as a result of the GFC. As noted previously, during this period of housing market and economic slump, the general use of MEW in the Netherlands and the take-up of reverse mortgages in the UK declined. In the US, data from the Department of Housing and Urban Development[15] indicates that the rate of take-up of reverse mortgages plateaued during the GFC period. Australia is a possible exception; during the GFC, the general use of MEW by those aged 45 years or over continued to albeit at a slower rate (see table 1), but the reverse mortgage market grew steadily through the GFC (Deloitte Touche Tohmatsu and SEQUAL 2011, 2012).

However, it is clear that we are witnessing different MEW trends in Australia and the five other countries we have reviewed, with certain countries having relatively more vibrant MEW markets than others. Hence, in the next section, we dig deeper into the institutional settings of each country in an attempt to explain the extent to which institutional differences influence the use of MEW by older homeowners.

5. Explaining the MEW trends in Australia: The influence of institutional settings and perspectives

The country-specific review presented in section 4 offers an excellent opportunity to relate differences in the development of the MEW market in various countries to divergent institutional settings. In this section, we expose the institutional elements that appear to encourage or impede MEW, and in doing so deduce whether or not the interactions between ingrained institutional frameworks and recent policy shifts in Australia will increase the momentum of the use of MEW by homeowners.

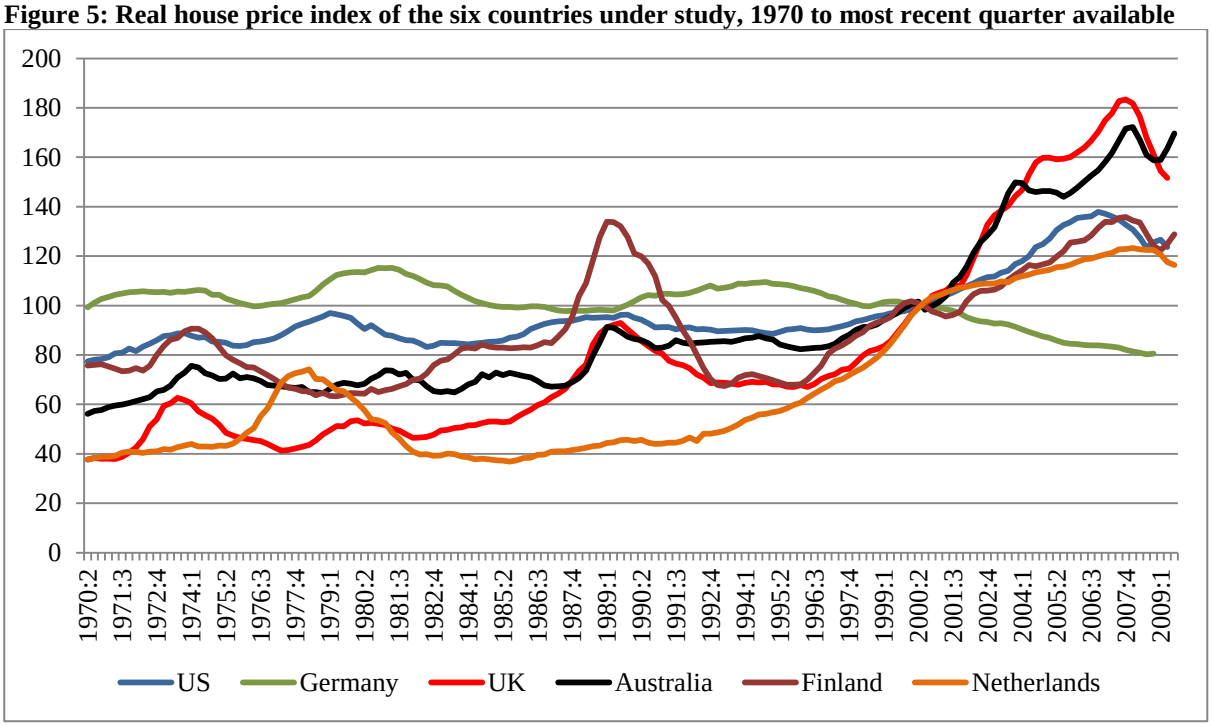
It is clear that the degree of **mortgage market development** is positively correlated with the propensity to MEW. We find that in Australia, UK and the US, the use of MEW products such as flexible mortgages and reverse mortgages is more prevalent than in countries with more limited closed circuit mortgage markets such as Finland and Germany. At the same time, figure A1 in the appendix shows that the mortgage debt to GDP ratio in the Netherlands, Australia, UK and US are all higher than the EU-27 average of 52.4%, whereas in Finland and Germany, the mortgage debt to GDP ratio is below the EU-27 average. In particular, Finland's financial markets are more regulated than other countries, and typically feature low LVRs, short average loan terms and the absence of fee-free prepayment of mortgage loan (IMF, 2008). In the Netherlands, MEW has also been taking place, not via flexible or reverse mortgages, but mostly via refinancing, second mortgages, and mortgages that were taken out upon acquisition of the dwelling.

The extent of **house price appreciation** clearly plays a critical role for suppliers to offer such products. Figure 5, which displays the long-run growth in real house prices during the last 40 years, illustrates this point effectively. Real house prices have soared in countries such as Australia and the UK, but more moderately so in the US, Netherlands and Finland. However, real house prices have in fact declined somewhat in Germany over the long-run, starting the period with the highest real house prices, but ending it with the lowest. Germany is the only country being reviewed that has experienced a drop in real house prices since the mid-1990s, as figure 5 shows. Here, the sluggish house price movements may have dampened suppliers' incentives to engage in MEW, as there are

[15] Details can be found at http://portal.hud.gov/hudportal/HUD?src=/program_offices/housing/rmra/oe/rpts/hecm/hecmmenu, last accessed 11 December, 2012.

no real capital gains that can be cashed out to fund consumption. According to Reifner (2007b: 101), an important consideration for German MEW product suppliers is the fact that regional differences exist in the demographic and economic context, which in turn cause house price developments to vary across regions. Fear for negative publicity prevented them from offering their products selectively, such as in metropolitan areas. On the other hand, homeowners in countries such as Australia, US, Netherlands (in the 1990s) and the UK would have had much stronger incentives to tap into their housing equity to fund consumption on the back of generally soaring house prices.

Figure 5: Real house price index of the six countries under study, 1970 to most recent quarter available



Source: OECD Economics Department house price database; for a description of sources see Girouard et al. (2006).

The institutional environment concerning **taxation**[16] does impact on the take up of MEW. In Australia, tax preferences such as capital gains tax exemption and non-taxable net imputed rents and asset test concessions have traditionally favoured accumulation of wealth in the primary home and this approach was given added impetus by a decade-long period of sustained house price appreciation prior to the GFC. The availability of a mortgage interest deduction (from taxable income) for home loans makes for attractive borrowing compared with loans for other purposes e.g. in the US (Do, 2012).

In regard to MEW, until recently, mortgage interest deduction was available in the Netherlands, hence encouraging the withdrawal of housing equity via MEW. The institutional environment concerning taxation , however, has changed, and will temper any inclinations to further engage in MEW in the Netherlands. Firstly, the 2001 tax reform abolished the mortgage interest deduction for that part of the mortgage spent on non-housing uses. Secondly, since 2001, the mortgage interest deduction term has been limited to 30 years. Given the length of the term, it is likely to end in later life. Hence, older homeowners will have fewer incentives to continue to engage in MEW when they reach the end of their mortgage interest deduction term. Thirdly, from 2005 onwards, the amount of taxable imputed rent (which is taxed under income tax provisions) is also limited to the amount of

[16] Except for the income tax aspects mentioned here, other tax rules can also deter or stimulate the use of MEW. Transaction costs upon acquisition may play a role, as well as income tax when the taxation or non-taxation is concerned of payments received from HEW or of capital gains (Reifner, et al., 2007a).

mortgage interest to be deducted. The intention is to motivate accelerated repayment of the principal because once a mortgage loan is repaid, the owner-occupier no longer pays income tax on imputed rent (Haffner and De Vries, 2010). More institutional changes have been agreed upon by policy-makers, which will make the use of mortgage loans to release housing equity less attractive than it used to be (Ministerie van Financiën, 2012; VVD-PvdA, 2012). As of 1 January 2013, all new loans will have to be repaid in 30 years at least in an annuity pattern, will a mortgage interest deduction be possible. This will make interest-only mortgages unattractive. These changes suggest that MEW and in situ MEW will become less attractive in the Netherlands in the future than at present.

The role of **regulation** is an important one that influences the willingness of older persons to take up MEW due to the multitude of risks associated with reducing equity in the primary home, to which one usually has a strong emotional attachment. Currently in the US, over 90% of all reverse mortgages are based on the Federal Home-Equity-Conversion-Mortgage (HECM) Program (see Bishop and Shan, 2008; Gotman, 2011), under which the Federal Housing Administration (FHA) is responsible for accrediting financial institutions providing the HECM reverse mortgages. The involvement of the US government in the reverse mortgage market, and its willingness to assume a guarantor-type role has inspired more confidence in the use of HECMs than proprietary reverse mortgages that are not government-backed. In the UK, apart from standard contract and consumer protection laws, certain equity release products that are deemed to pose higher risks to consumers are subject to the its Financial Services Authority (FSA)[17] regulation, including lifetime mortgages, home reversion products and sale and leaseback products. Moreover, industry self-regulation is extensive, with 90% of equity release business being transacted with providers who subscribe the ERC's self-regulatory codes (Fox-O'Mahony and Overton, 2013). Similarly, in Australia, SEQUAL operates as a peak industry body which seeks to maintain professional standards of practice in the equity release market. SEQUAL's code of conduct requires that all providers who are SEQUAL members include clear and transparent no-negative equity guarantees in the products they offer, as well as comply with other self-regulatory codes (SEQUAL, n.d.). On the other hand, the lack of success of MEW products in Germany may be attributed to the presence of legal barriers that complicate the supply of MEW products by lenders. For example, financial institutions that are not licensed as an insurer need to search for alternative ways of insuring against the longevity risk of the homeowner (Reifner et al., 2007b).

To go back to the original idea of a trade-off between the share of owner-occupation and the extent of the welfare state (see section 2), the generosity of public **pension system** in a country will no doubt also influence the use of MEW by older persons. While public pension regimes vary considerably across countries, the gross replacement rate from public pension schemes offers a valuable point of comparison as it estimates the level of public pensions in retirement relative to earnings when working. According to the OECD (2011), the gross replacement rate from public pension schemes is lowest in Australia at 11.8%. The replacement rates in the Netherlands, UK and US fall in the intermediate range, being 29.2%, 31.9% and 39.4% respectively. The public pension replacement rates climb up to 42% in Germany and 57.8% in Finland, indicating that the public pension systems much more generous in these two countries, in particular Finland.

It is noteworthy that only the Netherlands has a quasi-mandatory private pension system, under which pensions are provided by employers or industry-wide schemes. At the end of 2008, there were 656 pension funds covering more than 95% of the workforce that qualified. The quasi-

[17] The FSA is an independent non-governmental organisation that has statutory powers by the Financial Services and Markets Act 2000. While financed by the financial services industry, the FSA is accountable to Treasury Ministers and the UK Parliament. For more information, please refer to http://www.fsa.gov.uk/about/who .

mandatory private pension system came about as a result of the introduction of the private occupational pension schemes in the mid-1800s for railroad workers. By 1949, a law on occupational pension sectoral funds had been implemented, which made it obligatory for employers to participate in pension funds in sectors where there was a collective agreement on occupational pensions schemes (Trampusch, 2010 Under this system, each employee has to pay a fixed percentage of his or her salary in return for future pension entitlements. In 2008, this percentage was around 16% of gross income (Ministerie van Sociale Zaken en Werkgelegenheid, 2008). In comparison, Australia's compulsory guarantee system was only established in 1992 (OECD, 2011: 107).

The differences in institutional settings influencing the propensity to MEW in the six countries are summarised in table 2. Overall, it is not altogether surprising to find more widespread use of MEW products in Australia, the UK and US, than in countries that are supported by more generous public or private pension systems such as the Netherlands, Finland and Germany. Given growing pressures on government budgets to meet age-related payments and services, we can expect the continued retreat of welfare states in countries with neo-liberal welfare regimes such as Australia (see section 2), and as a result older homeowners may have to increasingly engage in MEW to supplement retirement incomes.

Table 2: A cross-country comparison of institutional settings that affect older homeowners' propensity to use MEW products

Institutional setting	Australia	UK	US	Netherlands	Finland	Germany
Degree of mortgage market development	Well-developed mortgage markets	Well-developed mortgage markets	Well-developed mortgage markets	Well-developed mortgage markets	Relatively regulated mortgage markets	Relatively regulated mortgage markets
House price movements (based on figure 5)	Strong long-run growth in real house prices	Strong long-run growth in real house prices	Moderate long-run growth in real house prices	Moderate growth in real house prices, followed by strong growth in the last decade	Moderate long-run growth in real house prices	Decline in real house prices
Mortgage income tax deduction	No mortgage interest deduction on home loans	No mortgage interest deduction on home loans*	Mortgage interest deduction available on home loans	Mortgage interest deduction available on home loans until recently**	Limited mortgage interest deduction*	No mortgage interest deduction on home loans**
Regulation of age-specific MEW products for the elderly	Industry regulation via SEQUAL	Government regulation via FSA regulation and extensive industry self-regulation	Government regulation through FHA, which accreditis financial institutions providing HECM reverse mortgages; government guarantee for consumers and financial institutions	No special market regulation**	No special market regulation **	No special market regulation ***
Generosity of public pension system	Low gross replacement rate from public pension schemes	Moderate gross replacement rate from public pension schemes	Moderate gross replacement rate from public pension schemes	Moderate gross replacement rate from public pension schemes, plus a quasi-mandatory private pension system, under which pensions are provided by employers or industry-wide schemes	High gross replacement rate from public pension schemes	High gross replacement rate from public pension schemes

Sources: * Yates (2012); ** Oxley and Haffner (2010); *** Reifner et al. (2007b); all other details from Ong et al. (2013a).

6. Discussion

Drawing together the key observations from the existing empirical evidence and cross-country comparisons, we hypothesise that MEW is likely to grow at a faster rate in Australia in the future than other countries reviewed in this paper (with the possible exception of the UK and US). The growth in the use of MEW will most likely occur mainly via the increased use of non-age-specific MEW products than age-specific-products for the elderly. Australia's institutional settings appear to be more favourable for MEW than in other countries. It has an extremely well-developed mortgage market which was not significantly affected by the GFC, the least generous public pension scheme as indicated by the lowest gross replacement rates among all the countries reviewed, and the significant house price appreciation experienced in Australia over the last few decades have fuelled incentives to cash out capital gains (although on the other hand, younger cohorts may not be able to enter homeownership as easily as in the past).

Government policies (e.g. tax expenditures and concessionary asset tests) that encourage accumulation of wealth in the primary home are a cornerstone of Australian social policy. These policies are prefaced on the assumption that homeowners will own their homes outright in old age, hence lower incomes in retirement will be matched by low housing costs, and retirees can therefore get by on smaller pensions (Castles, 1998; Baxter and McDonald, 2005). However, homeowners that use MEW to meet spending needs earlier in their life cycle will eat into housing wealth.

The statistical analysis reported in sections 3 and 4.1 confirms that more and more Australians aged in their 40s and 50s are approaching retirement with outstanding mortgage debt, a trend that (on early indications) has not been reversed by the GFC. The consistent low incidence of mortgage indebtedness in successive cohorts aged 65 year or over may have been achieved by the drawdown of lump sum superannuation payouts to pay off mortgage debts in old age. Those who do not do so will presumably continue making regular mortgage repayments after they retire. While this might constitute a rationale decision on the part of homeowners with mortgages to pay down their mortgage debt with their superannuation upon entering retirement, there is no doubt that such moves will result in increasing pressure on the age pension system, as superannuation funds and pensions are drained to repay mortgage debts that are still outstanding as retirement approaches. Since the 1990s housing's role as a pillar supporting retirement incomes policy has weakened as baby boomers use their housing wealth to bring forward superannuation balances and smooth consumption during their working lives.

Given this finding, it is prudent for Australian policy-makers to balance the need to maintain fiscal sustainability via encouragement of reliance on personal housing wealth in old age with a careful consideration of the risks posed by a government policy platform that treats homeownership as an asset base for welfare in retirement.

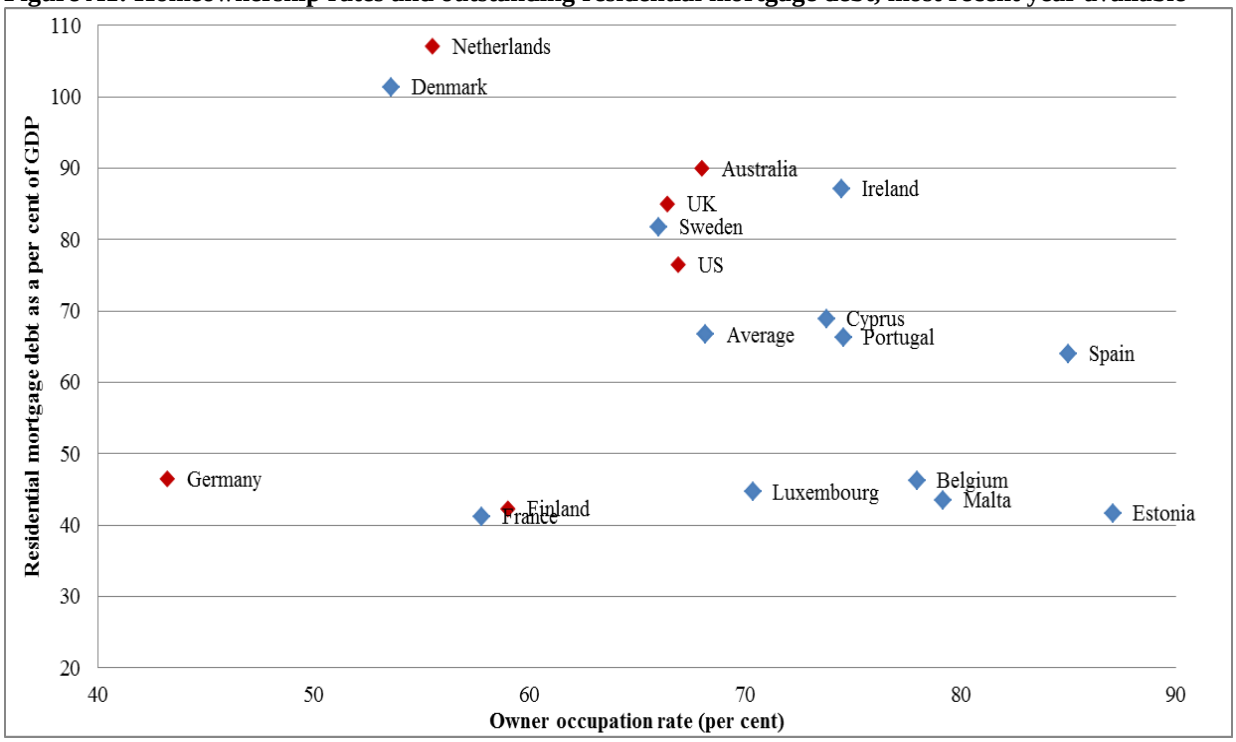
There are two other important trends that have relevance. Wood and Ong (2012) argue that the edges of homeownership are now more fluid as growing numbers of Australians churn back and forth between owning and renting, or even permanently fall off the 'homeownership ladder'. First transitions into ownership are no longer the secure foothold they once were, and this is particularly evident among the casualties of relationship breakdown. Those on the edges of homeownership confront a particularly uncertain future housing career that threatens their security in retirement. Moreover, the fact that MEW has become quite routine among

working age Australian homeowners in the new millennium was clearly fuelled by soaring house prices in the period 1996-2007; high real house prices were sustained in the post-GFC period and it seems that homeowners in their 40s and 50s have continued to use MEW. Indeed the incidence has risen in the post-GFC period among the 45-64 year age group. But there is a tension here that may undermine MEW for younger Australians. High real house prices impede access to homeownership and higher debt stress means that more and more Australians are losing homeownership status. There are then polarising trends; those Australian homeowners that succeed in securing that status throughout the life course can take advantage of the fungible housing wealth that is inflated by rising real house prices. On the other hand there are increasing numbers of Australians that are unable to fall back on housing wealth as a welfare resource.

Appendix A1 Selection of countries in cross-country review

The selection of countries against which we compare Australia was based on three criteria. The first criterion is a country's homeownership rate; the rationale being that owner-occupation in a country has to be prevalent in order for the population to develop distinct attitudes and views towards the use of housing equity in retirement (Haffner, 2008). Figure 5 shows the homeownership rates of 27 countries in the European Union (EU), Australia and the US. The figure contains also the information on our second criterion, a mature and deep mortgage market, which we have defined as countries in which outstanding mortgage loans make up at least 40% of GDP. We expect in line with literature that Klyuev and Mills (2010: 67) cite that the existence of well-developed mortgage markets is necessary in order for MEW to flourish.

Figure A1: Homeownership rates and outstanding residential mortgage debt, most recent year available [a]



Sources: EMF (2010); Australian homeownership rate from Oxley et al. (2010); Australian mortgage shares from IMF (2011)

Note:

a. The countries that are reviewed in our study have been depicted using red squares.

These criteria suggest that the UK and US are apposite benchmarks against which the Australian scenario can be evaluated, these three countries having similarly high rates of owner occupation (>60%), and very complete mortgage markets (>75% of GDP).

The Netherlands is also included in our study as it has the biggest mortgage market relative to GDP (IMF, 2008) and a growing rate of homeownership closing in on the 60% share that has been surpassed easily in Australia, US and UK.

Our third criterion is based on the need to achieve diversity in the selection of countries in order to explore whether countries with low rates of homeownership and/or mortgage debt have any kind of HEW market. We therefore include Finland and Germany as the last two countries in our study. Homeownership is the major form of housing tenure in Finland (almost 60%) as in the Anglo-Saxon countries, but its mortgage market is much smaller. Germany is an interesting contrast because it has the smallest share of homeownership (complemented by a well-functioning rental market), and a relatively small mortgage market that is comparable to Finland's. A key aim of incorporating countries with divergent institutional settings is that the influence of institutional context on decisions surrounding the use of housing equity in later life can be more easily uncovered when we compare differences in the take up of MEW across countries with contrasting institutional backdrops.

References

ABS (Australian Bureau of Statistics) (1995), *Australian Social Trends, 1995*, Cat. No. 4102.0, ABS, Canberra.

ASIC (Australian Securities and Investments Commission) (2005), *Equity Release Products*, Report 59, Available: http://www.asic.gov.au/asic/pdflib.nsf/LookupByFileName/Equity_release_report.pdf/$file/Equity_release_report.pdf (last accessed 19 December 2012),

ASIC (Australian Securities and Investments Commission) (2007), *All We Have is This House: Consumer Experiences with Reverse Mortgages*, Report 109, http://www.asic.gov.au/asic/pdflib.nsf/LookupByFileName/Rep109_reverse_mortgages_Nov07.pdf/$file/Rep109_reverse_mortgages_Nov07.pdf (last accessed 19 December 2012).

Baxter, J. and McDonald, P. (2005), *Why is the Rate of Homeownership Falling in Australia?* Research and Policy Bulletin, Australian Housing and Urban Research Institute, Melbourne.

Belsky, E.S. (2010), Housing wealth effects and course of the US economy: Theory, evidence, and policy implications, in: Smith, S.J. and Searle, B.A. (eds.) (2010), *The Blackwell Companion to the Economics of Housing: The Housing Wealth of Nations*, Wiley-Blackwell, Chichester, West Sussex, pp. 82-104.

Bishop, T.B. and Shan, H. (2008), *Reverse Mortgages: A Closer Look at HECM Loans*, National Bureau of Economic Research, Cambridge.

Bridge, C., Adams, T., Phibbs, P., Mathews, M. and Kendig, H. (2010), *Reverse Mortgages and Older People: Growth Factors and Implications for Retirement Decisions*, Final Report No. 146, Australian Housing and Urban Research Institute, Melbourne.

Bridge, C., Adams, T., Phibbs, P., Mathews, M. and Kendig, H. (2011), *Reverse Mortgages and Older People*, Research and Policy Bulletin, Australian Housing and Urban Research Institute, Melbourne.

Castles, F. (1998), The really big trade-off: homeownership and the welfare state in the new world and the old, *Acta Politica*, 33(1), 5-19.

Castles, F.G. and M. Ferrera (1996), Home Ownership and the Welfare State: Is Southern Europe Different? South European Society & Politics, 1(2), 163-185.

CFPB (Consumer Financial Protection Bureau) (2012), *Revere Mortgages*, Report to Congress, no place of publication given, CFPB.

Chiuri, M.C. and Jappelli, T. (2010), Do the elderly reduce housing equity? An international comparison, *Journal of Population Economics*, 23, 643-663.

Coile, C.C. and Levine, P.B. (2011), Recessions, retirement, and social security, *American Economic Review*, 101(3), 23-28(6).

Deloitte Touche Tohmatsu and SEQUAL (2011), *Australia's Reverse Mortgage Market Reaches $ 3bn at 31 December 2010*, http://www.sequal.com.au/images/Media_Releases/australia%5C%27s%20reverse%20mortgage%20market%20reaches%20%243bn.pdf

Deloitte Touche Tohmatsu and SEQUAL (2012), *Australia's Reverse Mortgage Market Reaches $ 3.3bn at 31 December 2011*, http://www.deloitte.com/assets/Dcom-Australia/Local%20Assets/Documents/news-research/Press%20releases/Louise%20Denver/Media%20Release%20_Australia%20reverse%20mortgage.pdf

Dilnot, A., Warner, N. & Williams, J. (2011), *Fairer Care Funding: The Report of the Commission on Funding of Care and Support*. London: UK Commission on Funding of Care and Support, Final Report. Available: http://www.thirdsectorsolutions.net/assets/files/Fairer-Care-Funding-Report%20Dilnot%20July%202011.pdf

Do, C. (2012), Withdrawing home equity: Differences across race and ethnicity, *Housing Studies*, 27(3), 299-323.

Dolan, A., McLean, P. and Roland, D. (2005), *Home Equity, Retirement Incomes and Family Relationships*, Paper prepared for the 9th Australian Institute of Family Studies Conference, Melbourne, 9-11 February.

Doling, J., Elsinga, M. and others (2013), *Demographic Change and Housing Wealth: Home-owners, Pensions and Asset-based Welfare in Europe*, Springer.

Doling, J. and Ronald, R. (2010), Property-based welfare and European homeowners: How would housing perform as a pension?, *Journal of Housing and the Built Environment*, 25, 227–241.

EMF (2010), Hypostat 2010. *A review of Europe's Mortgage and Housing Markets*, no place of publication given, European Mortgage Federation.

Esping-Andersen, G. (1990), *The Three Worlds of Welfare Capitalism*, Cambridge, Polity Press.

Fox, O'Mahony and Overton, L. (2013), *Equity Release in the UK: Markets, Consumers and the Role of the State*, Paper presented at the Health, Wealth and Hearth: Perspectives on an Ageing Australia Masterclass, University of Western Australia, Perth, 14 February.

Gotman, A. (2011), Towards the end of bequest? The life cycle hypothesis sold to seniors. Critical reflections on the reverse mortgage financial fashion, *Civitas, Porto Algre*, 11(1), 93-114.

Greenspan, A. and Kennedy, J. (2007), *Sources and Uses of Equity Extracted from Homes*, Finance and Economics Discussion Series 2007-20, Divisions of Research and Statistics and Monetary Affairs Federal Reserve Board, Washington, D.C.

Haffner, M.E.A. (2008), Savings for old age? Housing wealth of the Dutch elderly, *Housing, Theory and Society*, 25(2), 110-131.

Haffner, M.E.A. and de Vries, P. (2010), Dutch house prices and tax reform, in: Stewart, M. (ed.) (2010), *Housing and Tax Policy*, Australian Tax Research Foundation, Sydney,

pp. 151-173, republished in De Vries, P. (2010), *TU Delft Institutional Repository*, http://repository.tudelft.nl/view/ir/uuid%3A57c33fa8-a663-47cf-a63b-dcef16429edc/

Heylen, K. and Haffner, M.E.A. (2012), The effect of housing expenses and subsidies on income distribution in Flanders and the Netherlands, *Housing Studies*, 27(8), 1142-1161.

IMF (International Monetary Fund) (2008), *World Economic Outlook: Housing and the Business Cycle*, International Monetary Fund, Washington DC.

IMF (International Monetary Fund) (2011), *Global Financial Stability Report: Durable Financial Stability: Getting There from Here*, International Monetary Fund, Washington DC.

Kemeny, J. (1980), Home Ownership and Privatisation, International Journal of Urban and Regional Research, 4(3), pp. 372–388.

Kemeny, J. (1981), The Myth of Home Ownership: private versus public choices in housing tenure (London: Routledge).

Klyuev, V. and Mills, P. (2010), Is housing wealth an "ATM"? The relationship between household wealth, home equity withdrawal, and savings rates, in: Smith, S.J. and Searle, B.A. (eds.) (2010), *The Blackwell Companion to the Economics of Housing: The Housing Wealth of Nations*, Wiley-Blackwell, Chichester, West Sussex, pp. 58-81.

Ministerie van BZK (2010), *Cijfers over Wonen, Wijken en Integratie 2010,* Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, Den Haag.

Ministerie van Financiën (2012), *Belastingplan 2013*, Ministerie van Financiën, Den Haag.

Ministerie van Sociale Zaken en Werkgelegenheid (2008), *The Old-Age Pension System in the Netherlands*, Publicatie-nr. SZW 74r610, Juni, Rijksoverheid, Den Haag.

Moloney, D. and Bor, A. (2003), *Improving Accessibility and Flexibility of Mortgage Lending for Australians*, A Report for the Prime Minister's Homeownership Task Force, Booz Allen Hamilton Inc., Sydney.

OECD (Organisation for Economic Co-operation and Development) (2011), *Pensions at a Glance 2011: Retirement-Income Systems in OECD and G20 Countries*, OECD Publishing, Paris.

Ong, R., Haffner, M., Wood, G., Jefferson, T. and Austen, S. (2013a), *Assets, Debt and the Drawdown of Housing Equity by an Ageing Population*, Positioning Paper, Australian Housing and Urban Research Institute, Melbourne.

Ong, R., Parkinson, S., Searle, B.S., Smith, S.J. and Wood, G. (2013b), Channels from housing wealth to consumption, *Housing Studies*, DOI:10.1080/02673037.2013.783202

Oxley, M. and Haffner, M.E.A. (2010), *Housing Taxation and the Subsidies: International Comparisons and the Options For Reform*, Joseph Rowntree Foundation Housing Taskforce, Joseph Rowntree Foundation, York. Available: http://www.jrf.org.uk/publications/housing-taxation-subsidies (last accessed on 19 December 2012).

Oxley, M., Ros Lishman, Tim Brown, Haffner, M.E.A. and Joris Hoekstra (2010), *Promoting Investment in Private Rented Housing Supply: International Policy Comparison*, Department for Communities and Local Government, London. Available: http://www.communities.gov.uk/publications/housing/investprivaterentedhousing (last accessed on 19 December 2012).

Productivity Commission (2011), *Caring for Older Australians*, Report No. 53, Final Inquiry Report, Canberra.

Reifner, U., Clerc-Renaud, S., Pérez-Carillo, E.F., Tiffe, A. and Knobloch, M. (2007a), *Study on Equity Release Schemes in the EU – Part I: General Report*, Institut für Finanzdienstleistungen e.V., Hamburg.

Reifner, U., Clerc-Renaud, S., Pérez-Carillo, E.F., Tiffe, A. and Knobloch, M. (2007b), *Study on Equity Release Schemes in the EU – Part II: Country Reports*, Institut für Finanzdienstleistungen e.V., Hamburg.

Reinold, K. (2011), Housing equity withdrawal since the financial crisis, *Research and Analysis*, Q2, 127-133.

Ritakallio V.M. (2003), The importance of housing costs in cross-national comparisons of welfare (state) outcomes, *International Social Security Review*, 56(2), pp. 81-101.

Schneider, M. (2009), Kalkulation von reverse mortgages: Rechnet sich das?, *Die Bank*, 7, 30-34.

SEQUAL (Senior Australians Equity Release Association of Lenders) (n.d.), *Code of Conduct*, Available: http://www.sequal.com.au/attachments/SEQUAL_Conduct_Code.pdf (last accessed 6 March 2013).

Sierminska, Eva and Yelena Takhtamanova (2012), Financial and Housing Wealth and Consumption Spending: Cross-Country and Age Group Comparisons, Housing Studies, 27(5), 685-719.

Smith, S.J., Ford, J. and Munro, M. (2002), *A Review of Flexible Mortgage*, Council of Mortgage Lenders, London.

Statistisches Bundesamt (2011), *Im Blickpunkt: Ältere Menschen in Deutschland und der EU*, Statistisches Bundesamt, Wiesbaden.

Taskforce Verzilveren (2013), Eigen haard is zilver waard, http://www.boercroon.nl/fileadmin/user_upload/Afbeeldingen/Publicaties/taskforce_verzilveren.pdf.

The Wriglesworth Consultancy (2011), *SHIP 20th Anniversary Report*: *December 1991 to December 2011*, no place of publication given, The Wriglesworth Consultancy.

Toussaint, J., and Elsinga, M. (2009), Exploring 'housing and asset-based welfare' – Can the UK be held up as an example for Europe? *Housing Studies*, 24(5), 669–692.

Trampusch, C., Eichenberger, P., de Roo, M., Bartlett Rissi, R., Bieri, I., Schmid, L., Steinlin, S. (eds.) (2010), *Pension in the Netherlands*, Research on Social Benefits in Collective Agreements, Database, Part 2 'Social Benefits in Collective Agreements'. SNF-Project No. 100012-119898, Institute of Political Science, University of Berne, Available: http://www.bridge.uni-koeln.de/fileadmin/wiso_fak/wisosoz/pdf/REBECA/Netherlands_Pension_eng.pdf (last accessed on 19 December 2012).

Van Els, P.J.A., van den End, W.A. and van Rooij, M.C.J. (2003), *Financial Behaviour of Dutch Households: An Analysis of the DNB Household Survey 2003*, Research Memorandum WO no. 744, October, De Nederlandsche Bank, Amsterdam, see also Kwartaalbericht September 2003.

VVD-PvdA (2012), Bruggen slaan. Regeerakkoord VVD – PvdA, place of publication not given, 29 oktober, http://www.rijksoverheid.nl/regering/documenten-en-publicaties/rapporten/2012/10/29/regeerakkoord.html.

Weller, S.A. (2007), Discrimination, labour markets and the labour market prospects of older workers: what can a legal case teach us? *Work Employment & Society*, 21(3), 417-437.

Wicke, E. (2008), Umgekehrte Hypotheek – Ein zukunftsmodell für Deutschland?, *E-Journal of Practical Business Research*, Sonderausgabe Bank Nr. 1 (12), 1-17.

Wood, G. and Ong, R. (2012), *Sustaining Homeownership in the 21st Century: Emerging Policy Concerns*, Final Report No. 187, Australian Housing and Urban Research Institute, Melbourne.

Yates, J. (2012), Taxation, in: Smith, S.J., Elsinga, M., O'Mahony, L.F., Ong, S.E., Wachter, S. and Ronald, R. (eds.) (2012), *International Encyclopedia of Housing and Home*, vol 7, Elsevier, Oxford, pp. 138–147.

Yates, J. and Bradbury, B. (2010), Homeownership as a (crumbling), fourth pillar of social insurance in Australia, *Journal of Housing and the Built Environment*, 25, 193–211.