

Mortgage equity withdrawal in Australia and Britain: towards a wealth-fare state?

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THIS IS THE LONG VERSION OF A PAPER SUBSEQUENTLY REVISED FOR PUBLICATION IN THE INTERNATIONAL JOURNAL OF HOUSING POLICY.

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Abstract

Abstract: Across the decade to 2007, a combination of house price appreciation and relaxed credit constraints were implicated in what some have described as a wave of consumption that kept developed economies afloat even through periods of recession. This paper uses 2001 – 2005 panel data on British and Australian homeowners positioned at the crest of the mortgage equity withdrawal wave, to argue that such borrowing has far-reaching implications for the micro-economy of households and therefore for housing and social policy. Our analysis explores three dimensions to mortgage equity withdrawal. We show, first, that equity borrowing is a common tactic among home-buying households. The propensity to engage in MEW across a five year period is high, and the sums involved are not trivial. Second, we consider what this means for the way households budget across the life-course. The equity borrowing behaviours reported in this paper suggest that home buyers are not (just) using equity borrowing to fund older age. On the contrary they are using it to draw from housing wealth much earlier in the life-cycle. Finally, we find that during the biggest housing bubble in history – which also coincides with a period of welfare retrenchment – it is the insurance rather than wider consumption role for housing wealth which is most marked. As house prices fall, and as credit constraints are re-introduced, the options for equity borrowing are likely to be dramatically reduced. So the ‘credit crunch’ is not just precipitating a crisis in the banking community, and a shock to the macro-economy; it may – by reducing the availability of a key channel from housing wealth into consumption– prompt a crisis of welfare too.

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Introduction

Across the decade to 2007, a combination of house price appreciation and relaxed credit constraints were implicated in a wave of consumption that kept developed economies afloat even through periods of recession (Benjamin et al, 2004, Iacoviello, 2004). These 'wealth effects' of housing became a hot topic among economists as the current cycle reached its zenith, and few dispute the implications of rising house prices for the macro-economy (Case et al. 2005). While it might be hard to establish precisely how house prices are channelled into consumption (Attanasio et al, 2005), it seems likely that a growing proportion of the overall wealth effect consists of mortgage equity withdrawal (Smith and Searle, 2008), or as Muellbauer and Murphy (2008) term it 'collateral effects'. Mortgage equity withdrawal occurs when people use their owned homes as collateral for loans that can be spent on other things. This rarely represents the largest stream of housing equity withdrawal (this is achieved by trading down and last-time sales), and not all mortgage markets are 'complete' enough to allow borrowers to draw from, as well as pay off, their loans. However, in countries where mortgage borrowing can be used to fund non-housing consumption, the potential to tap into home equity has become central to the way home-buying households manage their financial resources (Smith et al, 2009). This paper uses panel data from countries positioned at the crest of the mortgage equity withdrawal wave, to argue that while such borrowing may (or may not – this is debatable) be critical for the macro-economy, it has far-reaching implications for the micro-economy of households and therefore for housing and social policy.

The empirical case studies we use to examine this refer to Britain and Australia. There are many historical and institutional differences between these jurisdictions; however, one thing they have in common is a mortgage market sufficiently well-developed to provide a permeable interface between housing wealth and spending money (see Girouard, 2009). That is, both markets have, in the decade to 2007, not only issued borrowers with the incentive to remortgage (a common strategy among home buyers looking to unlock a proportion of home equity in a single lump sum), but introduced an array of products which make it easy – even routine – to borrow from housing wealth (Schwartz et al, 2009; Smith et al, 2002). A growing range of increasingly flexible mortgages means that, for a window of at least ten years, households in societies like Australia and Britain had more scope to spend from housing wealth than ever before; more possibilities to borrow against their single major asset than they are likely to have again.

Everything changed in 2007-08, as credit constraints took centre stage and prices began to slide across the UK, as well as in certain submarkets of Australian cities. Although the UK and Australian mortgage markets are rather different to those in the USA (in the former jurisdictions, most lending is still by deposit-taking banks, securitisation is less common, and the subprime sectors are smaller) neither the housing markets nor the banking sectors of these economies have been sufficiently insulated to escape the so-called ‘credit crunch’. Although the run of data in this paper does not capture the latest trends, mortgage equity withdrawal is sensitive to price dynamics, and tends to fall as housing markets slow and credit constraints tighten. These effects will be impacting now on household behaviours, and while the findings reported next do not document this directly, they do show that reducing people’s options to spend from housing wealth might have far

reaching – and perhaps unexpected – implications for the financial (and wider) wellbeing of households in the new phase of the housing cycle.

In the next section of the paper we introduce the data, address some key measurement issues and describe the analysis. The remaining sections consider, in turn, three common conceptions about the links between housing wealth, mortgage borrowing and consumption. First, we tackle the presumption that mortgage equity withdrawal is less significant than other mechanisms (i.e. trading down, last times sales, or the mobilisation of other savings and investments) in channelling personal wealth into consumption. Second, we challenge the idea that today's stores of housing wealth are primarily significant either as a component of inheritance, or as a resource for old age. Finally, we argue that, while mortgage equity withdrawal may be of interest for its macro-economic effects, its implications for households' micro-economic choices – for their decisions around saving, spending and debt – merit greater attention than they have hitherto received and are significant for housing and social policy as well as for managing the economy.

Method and Data

In this analysis we compare patterns of mortgage-use among homeowners in Britain and Australia, across a four year period, as measured by the two national longitudinal surveys: the British Household Panel Survey (BHPS) and the Household Income and Labour Dynamics in Australia (HILDA) Survey.¹ BHPS and HILDA are nationally representative longitudinal surveys that record a wide range of socio-economic and demographic information. Of particular importance

in the present context are housing and debt variables. Importantly, both surveys elicit the tenure status of respondents, as well as (among owners) self-assessed estimates of home prices and (among mortgagors) levels of outstanding mortgage debt.

Commencing in 2001, there is now a total of six waves of data available from the HILDA Survey. In the first year of the survey the respondent panel sample comprised 7,682 households and 13,969 individuals. By 2005 the total number of respondents had declined slightly to 12,759 individuals from a total of 7,125 households (MIAESR, 2007). The BHPS started earlier than its Australian counterpart and now comprises 16 annual waves covering the timeframe 1991-2006. It began as a nationally representative sample of 5,500 British households containing 10,000 individuals. Additional household samples were included to boost representation in Scotland and Wales in 1999 and in Northern Ireland in 2001, thereby covering the whole of the UK and raising the total sample size to around 10,500 householdsⁱⁱ. In both surveys individuals are re-interviewed each year; both sample designs follow members of the original household if they move into new households as well as adding people to the sample as they join existing households, or reach the age of 16 in BHPS, and 15 years of age in HILDA.

Our research focus is on mortgage equity withdrawal among existing home owners and buyers. We are concerned with a particular style of mortgage equity withdrawal, namely that which occurs when owner occupiers refinance or use flexible mortgages to add to their outstanding debt. Following Smith and Searle (2008) we refer to this practice as *in situ* equity borrowing. Over-mortgaging (increasing leverage) following residential relocation is also an important

component of mortgage equity withdrawal, but this is a by-product of moving and rarely prompted simply by the need or desire to borrow from housing wealth. The analysis that follows excludes episodes of borrowing that are associated with relocation, in order to focus on the range of attributes and life events that seem, in themselves, sufficient to prompt people to use their mortgages specifically to draw from housing wealth. In practice this means looking from year to year at changes in the level of outstanding mortgage debt reported by owner-occupiers who have not moved between adjacent waves.

The analysis concentrates on the years common to both surveys (2001 – 2005) using a sample of owner-occupiers that includes both mortgagors and outright owners. Neither survey distinguishes between mortgages secured against a primary residence and other secured loans. To keep a focus on the role of *home* equity (which has a dual role as a source of housing services and an investment vehicle), we have therefore omitted multiple property owners from the analysis.ⁱⁱⁱ This is important because secured borrowing is risky. In the event of default, repossession can follow, and for owned homes, this has ramifications for households' welfare and social policy as well as for their asset-base. For the purposes of the analysis, the owner-occupiers in the usable dataset are identified as income units,^{iv} and divided into two groups: 'equity borrowers' and 'equity savers'. *Equity borrowers* are homeowners who have not moved in the last twelve months but whose outstanding mortgage debt exceeds that of the previous year^v. *Equity savers* are homeowners who have, similarly, not moved in the last year, but whose outstanding mortgage debt is *less* than or equal to the previous year's outstanding debt. The 'savers' include those who have only paid mortgage interest and who therefore have an unchanged outstanding debt (but who did, to

2007 at any rate, generally benefit from some house-price appreciation, and so accrued equity, and collateral, through this route); this group also includes (for the same reasons) outright owners with no debt secured against their home.

For the analysis reported below, an unbalanced panel is used (unless otherwise stated); this means that there is a different sample size in each survey for each year, partly due to attrition,^{vi} but also because of: inconsistent reporting of mortgage debt between waves, residential relocation, renters that make the transition into homeownership, household break-ups due to separation and divorce and new household formation as dependents leave the parental home and become homeowners during the 2001 – 2005 timeframe. The effective sample of Australian homeowners thus ranges from 5617 in 2002 to 5201 in 2005, while the UK figures are 8375 and 8093, respectively. Missing data for outstanding mortgage debt is more problematic in BHPS than in HILDA: for example in 2002, 226 Australian owners (4% of those in the study sample) failed to quantify their mortgage debt, whereas in the same year, data were missing for 926 (12.7%) of UK owner-occupiers.^{vii} Among the other sources of variation in year-by-year sample numbers, residential relocation is the most important. For example, between 2001 and 2002, 243 Australian owners moved, while in the same period 517 British owners moved.

Our approach in this paper is exploratory. It provides, for the first time, a detailed overview of behaviours around housing wealth and mortgage debt, using carefully constructed comparable variables in BHPS and HILDA. It is probably worth emphasising how time consuming and technically challenging it is to

achieve this degree of comparability; we are not aware of any other study that has matched the data in this way. Using simple descriptive statistics and cross-tabulations, the analysis casts light on the factors shaping decisions around savings, spending and debt, among a panel of British and Australian homeowners across the early years of the 21st century. This was a period of cheap credit, in which mortgage equity borrowing was used to draw from housing wealth to an unprecedented extent, in ways that we now know – having moved into a new era of credit constraints – is unlikely to happen again. The findings cast light on the implications of this.

2 Housing wealth: collateral effects

There is considerable interest in the literature on the relative impact of housing versus other asset-generated wealth effects on the macro-economy (Case et al, 2005; Dvornak and Kohler, 2007; Muellbauer, 2006; Poterba, 2000). Mainly, this is concerned with the extent to which the macro-economy is (or is not) insulated from the impact of housing market dynamics. But there is another critical question. This surrounds the implications for whole societies of the ‘micro-economic’ adjustments of household budgets to the changing character of housing wealth and the restructuring of welfare transfers.

We are interested in the micro-economic role of housing wealth, that is, its place in household budgeting behaviours. The analysis focuses on just one of the mechanisms transmitting housing wealth into the economy, viz. mortgage equity withdrawal. In a literature concerned mainly with macro-economic effects, there

is considerable debate and little consensus on how wide or well-used this channel might be. In Australia, for example, virtually nothing is published on this: the evidence to date is based on a single survey conducted in 2005 by the Reserve Bank of Australia, which indicates that, viewed cross-sectionally, the bulk of housing equity withdrawal is accounted for by transactions in the property market (trading down and last time sales), rather than mortgage equity withdrawal (Schwartz et al, 2006, 2008) However, in a review of the wider range of data resources and published research available for the UK^{viii}, Smith and Searle (2008) suggest that, while the same generalisation holds, equity borrowing accounts for a growing proportion of all housing equity withdrawal, and for the majority of equity withdrawal events. Beyond that there is a dearth of documentation on the frequency, character, predictors or effects of this type of behaviour.

To address this gap, Tables 1 and 2 provide two measures, of equity borrowing and its incidence. Table 1 measures the *propensity* of home owners to equity borrow in least one year between 2002 and 2005. This table excludes any homeowner who owned other residential property in *all waves*, and any homeowner that could not be tracked down or refused interviews in *all waves*. A homeowner who owned other residential property in some waves is included only for the waves in which they did not own a second unit. Likewise, if a homeowner refused an interview in one wave, but did respond in another, they are included for the wave in which they participated. So table 1 refers to 7607 Australian homeowners and 9051 British homeowners, each of whom were single property owners and successfully interviewed in at least two adjacent waves between 2001 and 2005. This measure of the propensity to engage in equity borrowing reveals that over a third of UK, and more than two-fifths of Australian homeowners, used

their homes as collateral to increase their net mortgage borrowing in at least one year between 2002 and 2005.

Table 2 provides a count, or a *frequency* measure, of the episodes of equity borrowing across the same period 2002-5. In this table, each wave (one calendar year) is treated as a single episode over which the homeowner has an opportunity to become an equity borrower (i.e. to increase the size of their outstanding mortgage). This measure monitors how often a homeowner has chosen to draw down equity by adding to net outstanding mortgage debt over the course of a calendar year. The units of measurement are episodes (individual years in which a household may or may not increase their mortgage debt), not homeowners. The counts in table 2 thus refer to numbers of episodes (not numbers of home owning households) over the four years 2002 - 2005.^{ix} The total number of episodes (years) in which homeowners could borrow from, or save into, their mortgage is, in theory, four times the total number of households recorded in table 1. However, in the Australian sample, 8,969 (29%) out of a possible 30428 episodes are excluded; for Britain the figures are 11,338 (31%) of a possible 36,204 episodes.^x The reasons for this are: the homeowner changed their address (they did not remain *in situ*, and/or they become renters); there is no record of outstanding mortgage debt; a second property was acquired; or the household splintered due to separation and divorce, with both partners subsequently moving out of the family home.^{xi} In the end, this *frequency* measure reveals that UK and Australian households engaged in equity borrowing in about 20 per cent of episodes between 2002 and 2005. Each equity borrower is responsible for an average 1.4 episodes of mortgage borrowing, and in total around a third of those

who ever engage in equity borrowing (33% in Australia, 31% in the UK) record two or more net borrowing episodes.

Insert tables 1 & 2 here

To summarise the position so far, there are three particularly striking findings in these tables. First, the propensity and frequency of equity borrowing is very similar in the two jurisdictions. Secondly, equity borrowing is a common practice involving large numbers of homeowners. Finally, while it has been shown elsewhere that serial remortgaging plays only a minor role in mortgage equity withdrawal, it is striking that more than one-third of the equity borrowers in this new study record two or more episodes of equity borrowing within a short timeframe of only 4 years. For some households equity borrowing was, in the early years of this century, becoming reasonably routine.

Table 3 disaggregates the equity borrowing episodes recorded in table 2 by year. It shows that each episode of equity borrowing involves substantial cash sums. In the UK, for example, equity borrowers typically withdrew between £5,000 and £7,500 in any one year, and their Australian counterparts released between A\$20,000 and A\$26,000. These amounts are far from trivial, and could not be accounted for by payment holidays or rollover of unpaid interest. To facilitate the cross-country comparison, table 3 also calculates the median figure for equity borrowing as a percentage of the borrowers' median un-mortgaged housing equity (as estimated for the preceding year). The proportion of un-mortgaged home equity withdrawn through equity borrowing ranges from 9% (in 2005) to 13% (in 2003) in the UK and from 9% (2005) to 17% (2002) in Australia.

Furthermore, some 13% of Australian equity borrowers and five per cent of those in the UK sample made a net withdrawal – in a single year – which amounts to more than three-quarters of the value of their (self-assessed) unmortgaged housing equity. Intriguingly, the table also shows that towards the end of the reference period, as house prices reached their zenith, the amounts, and in particular, the proportions of unmortgaged equity extracted by mortgage borrowing fell. This may reflect the extent to which rising prices outstrip the increase in equity borrowing; equally it might imply a reluctance to borrow against property as the housing market slows.

Insert table 3 here

Klyuev and Mills (2007, 2009) have argued that home assets might, thanks to the outlet of mortgage borrowing, work by analogy with an ATM, allowing, from day-to-day, week-to-week and month-to-month, regular withdrawals and injections of funds. This kind of activity might roll housing wealth into households budgeting routines with all kinds of consequences (for example reducing the appearance of having savings), with or without having a marked net effect on their outstanding balances in a given year. However, it is equally clear that major withdrawals do occur or accumulate – either in the form of a single lumpy withdrawal or by a steady accretion of debt (the data do not differentiate) – in amounts which, over time periods of a year, are large enough to suggest it is worth looking for specific precipitating events.

Before taking up that challenge, there are two other findings of note. First, there is a geography of equity borrowing which speaks to the broad factors constraining

or enabling mortgage borrowing. Figures 1a and 1b show this graphically, plotting the mean values of all the annual episodes of borrowing documented for the study period for Australian metropolitan and non-metropolitan regions and for the UK planning regions (see appendix 1 for the raw data). For Australia, and to a lesser extent for the UK, there is a strong positive and significant association ($\rho = 0.80, p < 0.01$ and $0.48, p < 0.01$ for Australia and the UK, respectively) between mean regional house prices and mean equity borrowing.^{xii} In Australia, equity borrowers typically release relatively large cash sums in Sydney and Melbourne, where home values are highest; in Tasmania and regional South Australia, where housing is relatively cheap, borrowers release relatively small cash sums. Even in the UK, where the association is less marked, equity borrowers in the house price peaks of London and the rest of the South East release relatively large sums, whereas in the lower-priced regions of Scotland and the North East of England the cash sums are relatively small. The indication here is that the main constraint on borrowing in the period of study was collateral (house prices) rather than incomes (which do not vary between regions as much as house prices)^{xiii}, repayment capacity, or credit (which was easy and cheap to obtain throughout the reference years). This is consistent with the positioning of loan-to-value ratios over most other considerations in lending decisions at that time, and a reminder that there is a strong regional and inter-city dimension to house price dynamics.

Insert figures 1a & 1b here

Second, the style of mortgage borrowing that lies behind these figures – to the extent that it is driven by collateral values rather than savings and income – tends to add to the risk profile of equity borrowers. Tables 4a and 4b and Table 5a and

5b show this by comparing the evolving repayment and credit risk of equity borrowers with that of equity savers. The data here refer to a balanced panel (a sample which does not change from year to year) comprising equity savers, who are defined as borrowers whose debt is either unchanged or lower in *every* year, and equity borrowers comprising all those whose outstanding mortgage debt increased in at least one year between 2002 and 2005.^{xiv} Because missing values for debt occur quite frequently, the panel of equity borrowers and savers is less than the numbers of borrowers and savers in table 1. Outright owners are included as equity savers in these tables (as in table 1) except where their exclusion is noted. The tables show three things of note.

Insert Tables 4a & 4b here

Insert Tables 5a & 5b here

First, the equity savers appear to have very small outstanding loans (absolutely and in relation to home values) which are declining substantially over time and are very close to being paid off. This is true for both countries though the loan-to-value ratios are smallest in Australia. These figures are, nevertheless, skewed by the inclusion of outright owners. Once these are omitted, it is interesting that there are very few *mortgagors* who are net equity savers. That is, the majority of equity savers are outright owners not mortgagors paying off their loan in the traditional way. But while the mean outstanding debt of those equity savers who do have an outstanding loan is not trivial, it declines markedly across the four year period, especially in Australia^{xv}.

Second, equity borrowers on the whole carry more debt than equity savers, and have higher loan-to-value ratios, despite their higher (in Australia) mean estimated home prices. Arguably it is possible to identify two kinds of equity borrower from these tables. First, somewhat less than a third of equity borrowers follow an episode of borrowing with an injection of funds that effectively clears their loan. These may be thought of as ‘last time borrowers’ (who may be borrowing to ‘bring forward’ a pension lump sum, for example). A second group can be identified by removing these from the sample, leaving a larger group whose borrowings are higher. It is this group which is driving the steep increase in mean outstanding mortgage debt across the study period.

Finally, the divergence in mean debt among the borrowers and savers in the sample of mortgagors (i.e. excluding outright owners) is very striking indeed. This is particularly evident among Australian mortgagors where the mean debt of borrowers (\$149,222) is more than double that of savers (\$66,707) by the end of the reference period (see table 5a). The discrepancy is smaller in the UK, and this may reflect a number of factors, not least the possibility that equity savers are earlier in their repayment cycle than their Australian counterparts (so that a higher proportion of their monthly housing outlays are mortgage interest rather than capital reductions).

All this suggests that equity borrowers are disproportionately exposed to price and liquidity risks as the market slows. The extent to which this may impact on the financial wellbeing of households is indicated in tables 6a and 6b, which presents debt to income ratios – a measure of debt burden and repayment risk commonly used by financial institutions. Tables 6a and 6b again compares equity

borrowers and savers using a balanced panel that includes outright owners. The debt-to-income ratios of equity borrowers are – at between 2 and 2.5 – much higher than among equity savers whose debt burdens are typically less than one half their gross income. It is striking that Australian equity borrowers became more indebted relative to incomes across the five year reference period while UK equity borrowers seem more restrained, with declining debt-to-income ratios. However, part of the explanation rests with a faster pace of income growth among UK equity borrowers (30%) as compared to Australian equity borrowers (15%).

Insert Tables 6a & 6b here

When outright owners are excluded from the analysis (see tables 7a and 7b), stark differences in the risk profiles of the two groups of mortgagors are apparent. In 2002 equity borrowers and equity savers were almost equally indebted. But over the following three years Australian borrowers' debt ratios climbed to nearly 3, whilst that of savers declined to less than 1.5. This is despite the typically higher incomes among borrowers. In the UK the debt ratios of borrowers and savers both fell in the study period, but the savers decline was steeper and the reduction larger overall. It is striking, nevertheless, that in both these tables, UK equity borrowers' debt burden has fallen over time whilst that of their Australian counterparts has increased. This may reflect the high price of housing in Australia relative to incomes, together with the extent to which these high home values encourage borrowing through a collateral effect.^{xvi} It is unlikely to reflect a difference in the age profile of mortgagors (the mean age of equity borrowers in Australia is 43 and in the UK it is 41 years). The fact that UK home buyers do not hold all their

loans as mortgages and have relatively high levels of unsecured debt (Bridges et al, 2006), suggests there is limited scope for complacency.

Insert Tables 7a & 7b here

In sum, this part of the analysis has shown that contrary to popular wisdom, equity borrowing is widespread among owner occupiers, the sums involved are not trivial and one consequence is to enhance both the investment (price and liquidity) and credit (repayment) risks for equity borrowers relative to the rest.

3 Mortgage borrowing across the life course: generation effects

In light of the newfound fungibility of housing wealth, it is worth revisiting the life cycle approach to consumption (Ando and Modigliani, 1963). This theory is popular among economists as a means of accounting for the way households manage their wealth across the life course. It postulates that households anticipate substantial falls in income during retirement. They therefore accumulate stores of value in assets during their working lives that are then realised to help finance retirement. The presumptions of this theory have, hitherto, generally been confounded by the behaviour of home owners, who do generally store up housing wealth whilst earning, but do not spend it in older age (Cappozza and Megbolugbe, 1994), though they do secure low housing costs in retirement in return for higher outlays as employed mortgagors. The explanation for this is often attributed to a 'bequest' motive, by which accumulated housing wealth is passed on to the next generation as inheritance. Empirically, however, the evidence for this is mixed (Hurd, 1990).

The panel data, gathered at a time when changes in the lending environment have made housing wealth more fungible, and potentially available at more or less any stage in the life-cycle, might be expected to contain rather different behaviour patterns. What is intriguing is that while there are indeed some shifts, they still do not produce a pattern consistent with the life-cycle model. For example, whereas in any one year about 10% of 55-64 year old homeowners in both countries were equity borrowers, this rises to around one-third among the *under* 45s (see table 8). Moreover, taking out the very youngest cohort of home buyers, the inclination to engage in equity borrowing increases with youth not age. To be sure, a traditional life-cycle effect may kick in among older owners through trading down, and equity release (through reverse mortgages). These would not be apparent in the current analysis, though Turner and Yang (2006) argues such practices have helped fund a wave of early retirements in some European economies. Nevertheless the age-effect is very striking in the panel data, clearly indicating that mortgage borrowing is bringing spend from housing wealth forward, not to the retirement or pre-retirement years, but rather to fund spending needs much earlier in the life-cycle.

Insert table 8 here

There are a number of possible explanations for this. Changing attitudes to housing wealth must be a consideration. Studies in the UK, for example, show that a growing proportion of home owners in all the older age cohorts (aged from 45 to 80) now expect to access some of the equity in their homes before they die. Furthermore, those in their 40s and 50s are much more likely hold this view than

those who have already retired (eg Smith, 2004; Rowlingson and McKay, 2005). This is consistent with Henley and Disney's (2005) ESRC-funded research which, by analysing the BHPS, showed that people under 40 in 1993 spent a larger proportion of the wealth they accumulated through housing between 1993 and 1999 than did those who were 55 and over. It seems that most middle aged and younger households do not anticipate passing the entirety of their housing wealth to their heirs. They are planning to spend (some of it) before that time comes.

There is also undoubtedly a life-path/household formation element: this is evident in table 8 and figures 2a and 2b which show that in conjunction with an age-effect, the presence of children is strongly associated with equity borrowing. In fact the propensity for Australian couples with dependent children to borrow from home equity is more than two and half times higher than couples without children. Lone parents with dependent children are also twice as likely to borrow compared with single person households. An almost identical pattern is observed for the UK. The figures (2a and 2b) show further that in any one year a declining percentage of families add to their mortgages as their children age. Equity borrowing is particularly high among homeowners with children under 4, for example. In both countries, over one third of these homeowners add to their mortgages in any given year, suggesting that equity borrowing is being used to smoothing income fluctuations over a period when one partner has reduced rates of participation in the labour market. Even where children are aged 15-25 one in four home owners turns to equity borrowing, confirming that having dependent children and drawing from housing wealth tend to go together.

All this adds up to a rather different way of accounting for equity withdrawal behaviours in the early 21st century than that implied in the life cycle model. Trends in equity borrowing are, in practice, more consistent with the use of housing wealth as a store of precautionary savings as set out by Skinner (1996). This precautionary savings model presumes that housing wealth is accumulated as a form of self-insurance. That is, it is held as a contingency and used when necessary as a buffer against unanticipated loss of income or increased expenditure. Skinner's view is that in periods of rapid house price inflation – times that produce a housing windfall – any excess over and above the amount 'set aside' for precautionary reasons, would be used to fund consumption. Our conclusions are, as will be apparent later, slightly different; but the findings are in line with this general approach.

Insert Figures 2a & 2b here

4 Bonanza?

In the hey-day of house price appreciation, representations of equity borrowing, even in the respectable press, generally draw attention to the lifestyle options and luxury goods purchased on the back of housing wealth. Even the model of equity borrowing that we prefer – based on Skinner's precautionary savings thesis – presumes that house price appreciation eventually spills into non-essential styles of consumption. The same notion is embedded in the response categories of the major surveys: these capture spend on, for example, cars and consumer goods, together with a catch-all 'other' which tends to be rather large. Reflecting this 'high days and holidays' model of equity borrowing, the feeling amongst analysts

as credit restrictions began to bite, is that this is an overdue brake on a culture of consumption that is rather too keen on the maxim of 'eat, drink and be merry'. In this final section of the paper, however, we challenge the notion that, even at the height of macro-economic prosperity, people were exploiting their housing 'windfall' by spending from housing wealth primarily to fund non-essentials. On the contrary, the Australian and UK panel data suggest that equity borrowing is most strongly associated with transitions and events that increase financial pressures, or which prompt the use of housing wealth to protect the welfare of families.

To an extent this is apparent from the relationship between household type and equity borrowing set out in table 9. For example, there is no straightforward sense in which couples (who can pool their housing costs) are more likely to become equity borrowers than singles; and among singles, those who are separated are much more likely to have engaged in equity borrowing than those who are widowed, divorced or never married. There is an indication here that those whose financial needs are most pressing (least insured or insurable) are most likely to become equity borrowers. This is reinforced by the data for couples, which indicate that it is not those who are married who engage in equity borrowing, rather it is those in de facto partnerships. This difference is large and hard to account for unless it reflects a reluctance to save collectively (in a setting where there is little protection in the event of death of a partner or dissolution of the partnership), or unless it marks a freeing up of cash in anticipation of a split.

Insert Table 9 here

Figure 3 builds on these ideas, providing a snap shot of which, among a wide range of life events documented in the longitudinal surveys, seem most and least likely to precipitate an episode of equity borrowing. In another paper, we are modelling the effects of these and other variables. For the purposes of our argument here, it is enough to highlight the factors which most obviously add to, or detract from, the likelihood of borrowing from housing wealth.

Figure 3 about here

There are three main observations to draw from this figure (and the data informing it, which are provided in appendix 2). First, the early stages of household formation, particularly the occasion of marriage, pregnancy and children are all life course events that are strongly associated with equity borrowing. The early life of dependent children (as noted previously) is an especially influential prompt to equity borrowing. But this is the beginning not the end of the story.

Second, there is, paradoxically an enhanced likelihood of equity borrowing both when financial circumstances are improving (e.g. through promotion), and also when they deteriorate (for example through redundancy). There are, for example, minimal differences between employed and unemployed home owners: they are more or less equally likely to become equity borrowers – the former because they can service the loan, the latter, perhaps, because housing wealth is a sole or preferred income smoothing option. Changing job is also important; this may reflect either an increase or a decrease in income. All this suggests that it is reasonable to speculate that there are two groups of people with pressing

spending needs that can be met through equity borrowing. One group are those in the early stages of household formation, who have at least one partner employed, and who borrow against home equity to meet pressing financial obligations associated, for example, with children. The other group are those whose financial circumstances are seriously deteriorating either through household dissolution or through redundancy/ unemployment. These events typically cause additional spending or loss of economies of scale and specialization benefits that can worsen financial circumstances (Lehrer, 2003; Lupton and Smith, 2003). This group may become equity borrowers as a last – perhaps risky – resort.

Thirdly, these findings are consistent with those reported by Benito (2007) whose analysis of the BHPS takes a different starting point to ours (using a smaller set of responses around a specific question on additional borrowings), but nevertheless suggests that patterns of equity withdrawal in the BHPS are consistent with housing wealth being used as a buffer against adverse financial shocks and life events. However, given the suggestion that equity borrowing might draw on housing wealth that has been accumulated as a form of precautionary savings, it is intriguing that several adverse life events do not appear to trigger this action. For example, neither ill-health, injury nor death of a spouse is associated with equity borrowing; widowhood is less of a trigger than divorce; and divorce less important than separation. What is interesting here is that all of these non-trigger events can be – and routinely are in law – 'insured' against by means other than housing wealth. These events are typically accompanied by a loss of income that can be cushioned by public insurance (social security) programmes and private insurance arrangements. This is in marked contrast to pregnancy, to the needs of pre-school children, and to some economic shocks that might have prompted

deterioration in households' financial well-being. Government social security programmes typically offer limited assistance in these events, and no private insurance markets exist either. This is all consistent with a model of equity borrowing in which adverse, uninsurable life events trigger people to dip into their 'precautionary savings'.

Whether equity borrowing improves matters or not is the subject of a future paper. Here we simply note that reported levels of wellbeing are typically lower among equity borrowers. For instance, using a satisfaction with financial situation (income) measure for Australia (UK) we find that in 2002 average wellbeing scores of equity savers is 6.7 (7.0) compared to a mean score for equity borrowers of 6.0 (6.5)^{xvii}. These comparisons contribute to our argument that people are as likely to spend from housing wealth to meet welfare needs as they are to indulge their hedonism.

Conclusion

The analysis presented in this paper challenges three common assumptions about the role and relevance of mortgage equity withdrawal in two of the major 'home ownership' societies: Australia and the UK. Using comparable segments of two national longitudinal surveys for the early years of the 21st century, we show, first, that equity borrowing is a common tactic among home-buying households. The propensity to engage in MEW across a five year period is high, and the sums involved are not trivial. It is possible that the longitudinal surveys under-estimate the frequency of this type of financial behaviour, since the shortest accounting period is a year. What is clear, however, is that between a third and two-fifths of

home owners have, across a five year period, experienced at least one year in which net mortgage equity withdrawals exceed equity injections by a substantial margin. This indicates that equity borrowing is both widespread and ‘lumpy’: it is not just about using housing wealth as routinely as an ATM; rather housing wealth is funding some substantial ‘one-off’ or sustained expenditures.

Second, we consider what this means for the way households budget for welfare across the life-course. In particular, we consider whether the way people use new options for equity borrowing is consistent with that most fundamental of economic explanations for the pattern of savings and consumption: the life cycle hypothesis. In the past this model has not offered a credible explanation for the way housing wealth is managed. Hitherto older home owners have not spent substantially from their housing wealth as the model predicts: they have left it instead as a bequest for inheritance. Logically, however, the growing possibility to engage in a variety of styles of housing and mortgage equity withdrawal should make the predictions of this model more relevant and accurate. Reverse mortgages in particular give home owners the option to store up housing wealth into old age, enjoy the cheap housing services that this ‘income smoothing’ strategy yields, and draw from housing wealth to fund health and social care as well as to maintain lifestyle expectations. So it might be expected that people would not only store up housing wealth into older age, but go on to spend it before they die. Ironically, the equity borrowing behaviours reported in this paper suggests that home buyers are not (just) using equity borrowing to fund older age. On the contrary they are using it to draw from housing wealth much earlier in the life-cycle. Because of this we have suggested that housing wealth might most

plausibly be viewed through the lens of a ‘precautionary savings’ model of wealth management as set out by Skinner (1996).

This is underlined, but also qualified, by the third substantial finding in this paper, which suggests that during the biggest housing bubble in history – which also coincides with a period of welfare retrenchment – it is the insurance rather than wider consumption role for housing wealth which is most marked. The analysis shows that while housing wealth may be a spur to all kinds of consumption, people are most likely to draw down substantial sums to meet pressing expenditures around care for children, the management of uninsurable financial shocks (such as relationship breakdown), and the challenge of income smoothing associated with job loss. It is not, it seems, the exuberance of rising prices and a strong economy that underpins home equity borrowing; rather such behaviours are associated with financial difficulties, biographical disruptions and uninsurable spending needs. Furthermore there is evidence, which is especially notable for Australia, that borrowers are more prepared now than they were in the past, to take on the added price and liquidity (as well as credit) risks that equity borrowing implies.

The patterns of mortgage equity withdrawal reported in this paper were formed against a background of rising house prices, relaxed credit constraints, and relatively cheap borrowing. It may also be a setting in which home owners assumed that prices would continue to rise to replenish the wealth that equity borrowing eroded. However, the new evidence we have presented indicates that even in a buoyant environment, the continuing inclination to use owned homes as collateral for other styles of spending, is risky for equity borrowers. It increases

their vulnerability to credit risks (compared to equity savers), it exposes them to house price and liquidity risk, and as home buyers come to depend on the fungibility of their housing wealth to fund quite basic needs, it exposes them to welfare risks too, as described in Smith et al. (2009). It is well known that mortgage equity withdrawal, like house prices, is cyclical, and that the two trends are linked. As prices fall, there is less scope for home buyers to benefit from ‘collateral effects’, and as credit constraints are re-introduced, the options for equity borrowing are likely to be dramatically reduced. Furthermore the likelihood of being able to replenish housing wealth sufficiently to, for example, fund early retirement in the way Turner and Yang (2006) suggests is at best questionable. So the ‘credit crunch’ is not just precipitating a crisis in the banking community, and a shock to the macro-economy; it may – by reducing the availability of a key channel from housing wealth into consumption at a time when governments have positioned housing wealth as an asset base for living – prompt a crisis of welfare too.

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Endnotes

ⁱ Waves to 2005 are included in this analysis: wave 6 (HILDA) and 16 (BHPS) had not been released when the empirical work was completed.

ⁱⁱ No additional samples have been added to improve HILDA's representation.

ⁱⁱⁱ This excludes 14-15 % of Australian homeowners in each wave; and 9-11% in the UK.

^{iv} An income unit is defined as one or more individual persons whose command over income is assumed to be shared between the persons comprising the unit (ABS, 1997). Income sharing is assumed to take place within married and de facto couples, and between parents and dependent children. A household is a group of people who typically reside and eat together, and therefore contains one or more income units. For example, a household comprising a couple with an adult son 26 years of age in full time employment contains two income units. The income unit has advantages over the household for the purposes of analyzing mortgage borrowing (and saving) decisions. The income unit is more likely to be the decision making unit, and analyses of the characteristics of those non-dependents belonging to the income unit is then most relevant to an understanding of these decisions.

^v If an outright owner secures a new loan against their home, they are defined as an equity borrower in the year they take out the loan. Outstanding debt (and house value) is self-reported and some measurement error can be anticipated. However errors can 'cancel out' in aggregate, a phenomena that has been documented for self-reported house values (see Robins and West, 1977).

^{vi} The principal sources of attrition are: a general issue of failure to track households throughout the study time-frame; and an issue specific to this study design, households that are homeowners at the beginning of the panel study, but subsequently become renters

^{vii} British home owners with missing debt values in 2002 have slightly lower incomes than their counterparts with reported debt values. They are also more likely to be living in a couple relationship and to have children; in 2002 their average age was 46 years, which is 6 years younger than those reporting debt. These differences are, with the exception of income, statistically significant ($p < 0.001$).

^{viii} In 2004, the Survey of English Housing asked a suite of questions aiming to recover information on mortgage borrowing over the past five years; the Family Resources Survey has recorded similar data since 1998. Neither the most recent Australian Housing Survey (1999) nor the ABS Survey of Income and Housing Costs has any comparable data.

^{ix} So this table defines equity borrowing in a given wave by comparing the debt position in that wave with that reported in the previous wave. If the new debt is higher than that of the previous year, the episode is included in the measure of equity borrowing for the reference year.

^x Note that the 8969 (11338) episode figures in Australia (Britain) are net measures that include the addition of episodes due to household formation as dependents leave the parental home and become homeowners, and renters make the transition into homeownership.

^{xi} These exclusions are the by-product of an unbalanced panel design (see page 3 above). A balanced panel would contain the same cohort of homeowners in each year of the data collection period, and a sample of episodes equal to 4 times the number of homeowners in the sample. But this would give a smaller overall count, omitting episodes of equity borrowing and saving by homeowners who in the corresponding wave live in households with no change in household size or composition, have not moved, or own second properties. That is a balanced panel would exclude episodes of mortgage borrowing (or saving) behaviour that should be included.

^{xii} The association between median house prices and equity borrowing is less strong ($\rho = 0.66$ $p < 0.01$ Aus) and ($\rho = 0.35$ $p < 0.01$ UK)

^{xiii} For example, in Australia (UK), the standard deviation of mean house values is \$103,048 (£51,996) but that of mean household incomes is only \$5,658 (£2,243).

^{xiv} The tables do not reflect a year by year analysis (in which the outstanding debt of equity borrowers *in that year* is compared with those that are equity savers in that same year) because this would lose sight of individual households (who may be savers in one year and borrowers in the next). A further complication is that missing values on debt in one or more years would mean a changing composition of equity savers and borrowers.

^{xv} Only 135 (8%) of 1,765 Australian equity savers have declining mortgage debts; the mean outstanding loan fell from \$93,562 (2002) to \$66,707 (2005) in the study period. Similarly, 284 (13%) of 2,158 British equity savers have steadily reducing outstanding loans, falling from a mean of £50,463 to £42,373 in the same period.

^{xvi} Calculated using the person period data set the median house value is 7.8 times Australian homeowners median gross equivalent income, and the comparable UK multiple is 6.9.

^{xvii} Satisfaction with financial situation (income) is measured on a scale of 1 (no satisfaction) to 10 (completely satisfied). Mean scores in the years 2003 – 2005 are:

	2003	2004	2005
Australia: Savers	7.0	7.0	7.1
Borrowers	6.3	6.4	6.3
UK Savers	7.1	7.0	6.8
Borrowers	6.7	6.6	6.4

Table insert
Mortgage equity withdrawal in Australia and Britain: towards a wealth-fare state?
Housing wealth: collateral effects
Table 1. Equity borrowing: propensity, 2002-2005¹

Income Units	Australia		UK	
	n	%	n	%
Equity Savers	4,328	57	5,709	63
Equity Borrowers	3,279	43	3,342	37
Total	7,607	100	9,051	100

Note: 1 The sample is income units living in owner occupied housing. We exclude home owners that own second properties in *all waves*, and homeowners who were out of scope in *all waves*.

Table 2. Equity borrowing: frequency, 2002-2005¹

Episode Observations	Australia		UK	
	n	%	n	%
Equity saving	16,953	79	20,261	82
Equity borrowing	4,506	21	4,605	19
Total	21,459	100	24,866	100

Note: 1 An episode is a one year interval of time during which a home owner could have added to their outstanding mortgage debt. Episodes are omitted if debt has not been recorded, the homeowner relocated, the household fractured and both partners moved out, or the homeowner acquired a second property in the corresponding wave. Outstanding mortgage debt is measured on an income unit basis.

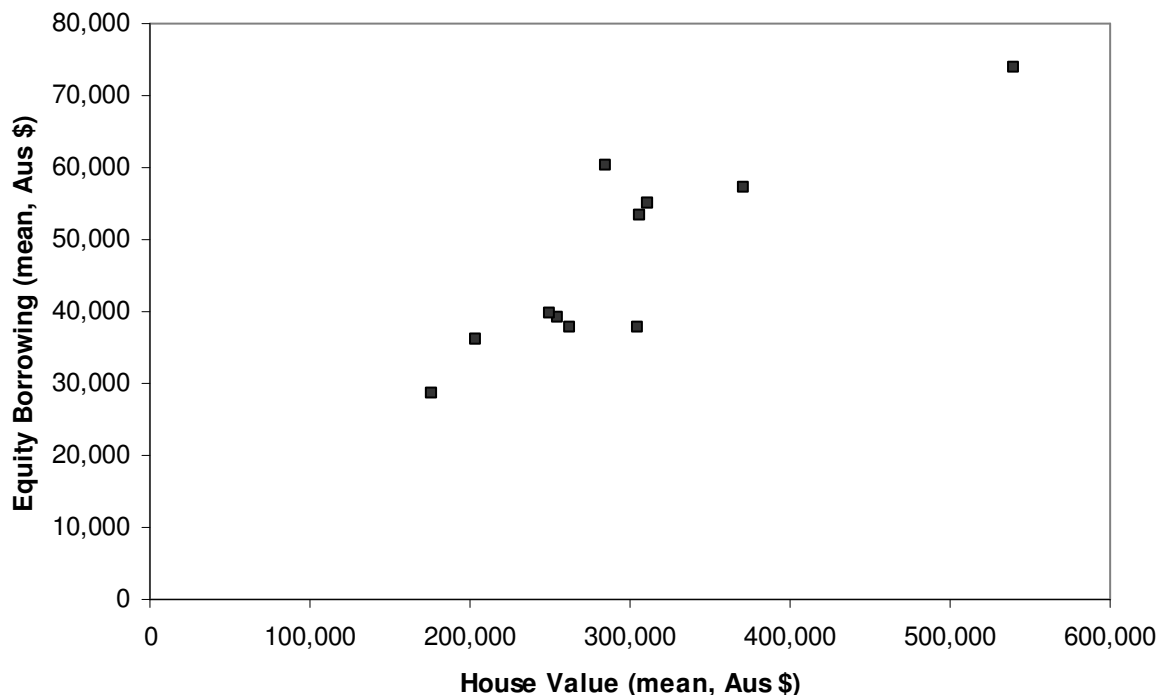
Table 3. Equity borrowing as a proportion of unmortgaged housing equity

	Housing equity of equity borrowers							
	Median equity held prior to borrowing ¹		Median amount and percent of equity borrowed				Number of Episodes ²	
	UK	AUS	UK	%	AUS	%	UK	AUS
	£	\$	£	%	\$	%	n	n
2001-02	43,000	120,000	5,000	12	20,000	17	1,154	1,035
2002-03	53,000	159,000	7,000	13	20,000	13	1,200	1,213
2003-04	68,000	170,000	7,500	11	26,000	15	1,158	1,096
2004-05	81,000	230,000	7,000	9	21,000	9	1,093	1,162

1 Note median equity held is taken from the year prior to borrowing.

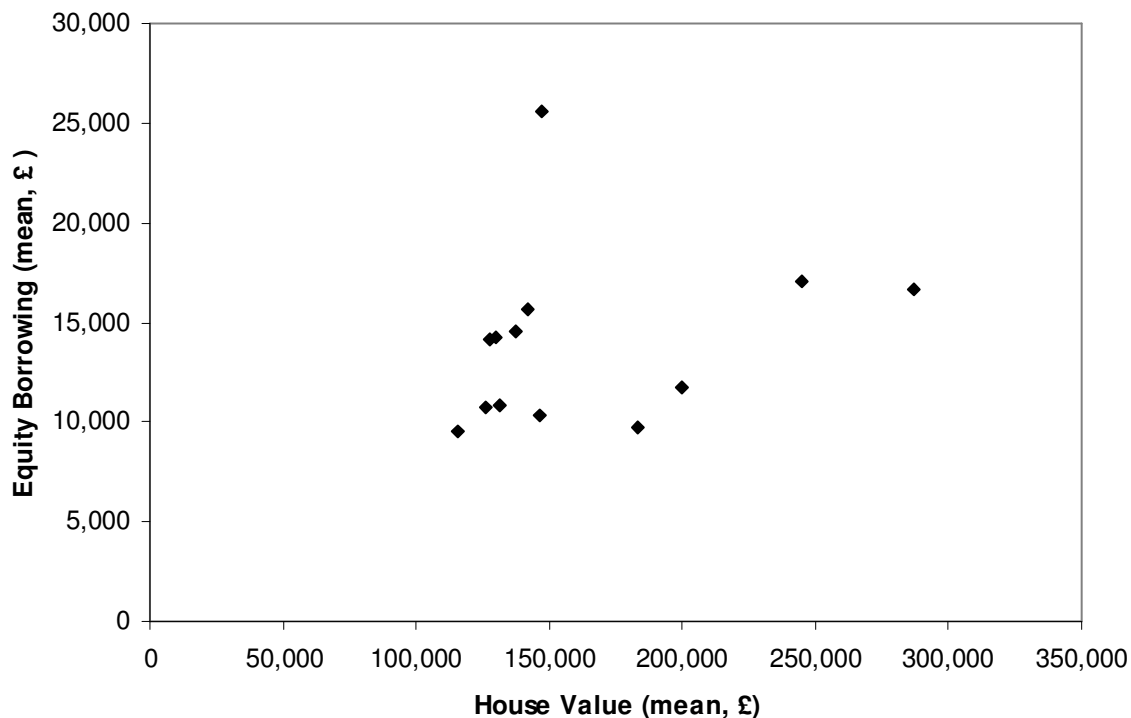
2 The episode sample design is as defined in table 2 and so the number of Australian (UK) episodes of borrowing add up over the time period to the total borrowing episode figures in table 2 (4,506 in Australia and 4,605 in UK).

Figure 1a. Equity borrowing and home values: Australia



Spearman rank correlation coefficient ($\rho = 0.80, p < 0.01$) of amount of equity withdrawn by major areas produced from table 1a in appendix 1. Note: Northern Territory and Australian Capital Territory are omitted due to small sample numbers.

Figure 1b. Equity borrowing and home values: UK



Spearman rank correlation coefficient ($\rho = 0.48, p < 0.01$) of amount of equity withdrawn by major areas produced from table 1b in appendix 1

Table 4a: Loan to value ratios: all home owners (Australia)¹

	Equity savers				Equity borrowers			
	n	Mean House Value \$	Mean Debt \$	LTV %	n	Mean House Value \$	Mean Debt \$	LTV %
2002	1,765	292,616	9,605	3.3	2,006	302,571	89,396	29.5
2003	1,765	349,135	7,718	2.2	2,006	362,469	104,355	28.8
2004	1,765	390,129	6,100	1.6	2,006	406,284	112,473	27.7
2005	1,765	410,173	5,102	1.2	2,006	430,397	124,442	28.9

Note: 1 LTV ratio is measured as mean debt divided by mean house values and estimated from a balanced panel of home owners (including outright owners). The balanced sample is income units who were non-moving homeowners without second properties in each and every wave 2002-2005. Home owners with missing debt and home values in any wave are also omitted from the final balanced sample.

Table 4b: Loan to value ratios: all home owners (UK)¹

	Equity savers				Equity borrowers			
	n	Mean House Value £	Mean Debt £	LTV %	n	Mean House Value £	Mean Debt £	LTV %
2002	2,158	135,126	7,865	5.8	2,153	128,550	48,346	37.6
2003	2,158	151,858	7,046	4.6	2,153	146,868	52,936	36.0
2004	2,158	181,724	6,249	3.4	2,153	171,869	57,945	33.7
2005	2,158	191,048	5,576	2.9	2,153	183,035	61,507	33.6

Note: 1 See table 4a

Table 5a: Loan to value ratios: mortgagors (Australia)¹

	Equity savers				Equity borrowers			
	n	Mean House Value \$	Mean Debt \$	LTV %	n	Mean House Value \$	Mean Debt \$	LTV %
2002	135	265,359	93,562	35	1,348	288,614	109,502	38
2003	135	325,059	85,897	26	1,348	346,745	123,817	36
2004	135	362,170	76,535	21	1,348	393,541	136,593	35
2005	135	376,556	66,707	18	1,348	422,000	149,222	35

Note: 1 Excludes homeowners that had no outstanding mortgage debt in one or more waves. This exclusion encompasses owner occupiers that achieve outright ownership status during the data collection period, despite equity borrowing, and those who are outright owners at the start of the data collection period but subsequently secure debt against the principal residence.

Table 5b: Loan to value ratios: mortgagors (UK)¹

	Equity savers				Equity borrowers			
	n	Mean House Value £	Mean Debt £	LTV %	n	Mean House Value £	Mean Debt £	LTV %
2002	284	151,014	50,463	33	1,170	132,727	48,702	37
2003	284	169,285	48,573	29	1,170	145,731	51,172	35
2004	284	193,909	45,776	24	1,170	170,852	54,578	32
2005	284	205,190	42,373	21	1,170	177,309	54,686	31

1. See note 1 table 5a.

Table 6a. Incomes and mortgage debt: all home owners (Australia)¹

	Equity Savers			Equity Borrowers		
	n	Gross Income ² A\$	Debt Ratio	n	Gross Income A\$	Debt Ratio
2002	2,059	33,919	0.3	2,127	45,034	1.9
2003	2,059	34,663	0.2	2,127	46,012	2.2
2004	2,059	35,365	0.2	2,127	48,358	2.2
2005	2,059	36,560	0.1	2,127	51,630	2.4

Note: 1 Equity borrowers have increased their mortgage debt in one or more waves. Equity savers have reduced their mortgage debt in every wave. The debt ratio is measured as mean debt divided by mean gross household equivalent income and estimated from a balanced panel of home owners (including outright owners). The balanced sample is income units who were non-moving homeowners without second properties in each and every wave 2002-2005. Home owners with missing debt and gross household equivalent income in any wave are also omitted from the final balanced sample

2 Equivalent income is calculated by dividing household income by the square root of household size. The sample differs from tables 5a and 5b above because there are a greater number of missing values for house value compared with income for Australia and in the UK there is a greater number of missing values for income compared with house value.

Table 6b. Incomes and mortgage debt: all home owners (UK)¹

	Equity Savers			Equity Borrowers		
	n	Gross Income ² £	Debt Ratio	n	Gross Income £	Debt Ratio
2002	2,118	15,496	0.5	1,294	18,797	2.4
2003	2,118	16,771	0.4	1,294	21,950	2.1
2004	2,118	17,188	0.4	1,294	23,127	2.1
2005	2,118	17,346	0.3	1,294	24,164	2.0

1. See note 1 table 6a

2. See note 2 table 6a

Table 7a. Income and mortgage debt: mortgagors (Australia)¹

	Equity Savers			Equity Borrowers		
	n	Gross Income A\$	Debt Ratio	n	Gross Income A\$	Debt Ratio
2002	146	40,995	2.3	1,416	44,930	2.4
2003	146	42,727	2.0	1,416	46,232	2.6
2004	146	46,245	1.7	1,416	48,283	2.8
2005	146	48,500	1.4	1,416	51,578	2.9

Note 1 The sample design is the same as table 6a except that all outright owners have been excluded.

Table 7b. Income and mortgage debt: mortgagors (UK) ¹

	Equity Savers			Equity Borrowers		
	n	Gross Income £	Debt Ratio	n	Gross Income £	Debt Ratio
2002	271	20,946	2.4	1,120	18,993	2.6
2003	271	23,946	2.0	1,120	22,414	2.3
2004	271	24,665	1.9	1,120	23,691	2.3
2005	271	26,145	1.6	1,120	24,769	2.2

Note 1 The sample design is the same as table 6b except that all outright owners have been excluded.

3. MEW across the life course (life cycle – new generation effects)

Table 8. Equity borrowing: life course dimensions

Age & Family Type	Equity Borrowers			
	Australia		UK	
	n	% ¹	n	%
<i>Age</i>				
15-24yrs	74	36.3	94	33.8
25-34yrs	946	38.9	1,219	35.4
35-44 yrs	1,717	33.6	1,712	31.4
45-54 yrs	1,204	25.5	1,081	23.2
55-64 yrs	440	11.6	381	8.3
65+yrs	125	2.4	118	1.8
Total	4,506	21.0	4,605	18.5
<i>Family Type</i>				
Couple family without children	1,023	12.9	1,180	12.1
Couple family with dependant children	2,692	34.2	2,397	32.9
Couple family with independent children	203	15.3	377	16.2
Lone parent with dependant children	192	31.3	199	31.5
Lone parent with independent children	43	12.7	77	14.0
Single person	334	10.1	340	8.4
Other hh	19	20.9	35	12.3
Total	4,506	21.0	4,605	18.5

Note: 1 Percentages represent the proportion of all episodes in which homeowners of different age and family types equity borrow. Age and family groups with percentages above 21% of Australia and 18.5% for the UK indicate an increased likelihood of borrowing whilst percentages below these amounts reveal a decreased likelihood.

Figure 2a. Equity borrowing and age of children: Australia

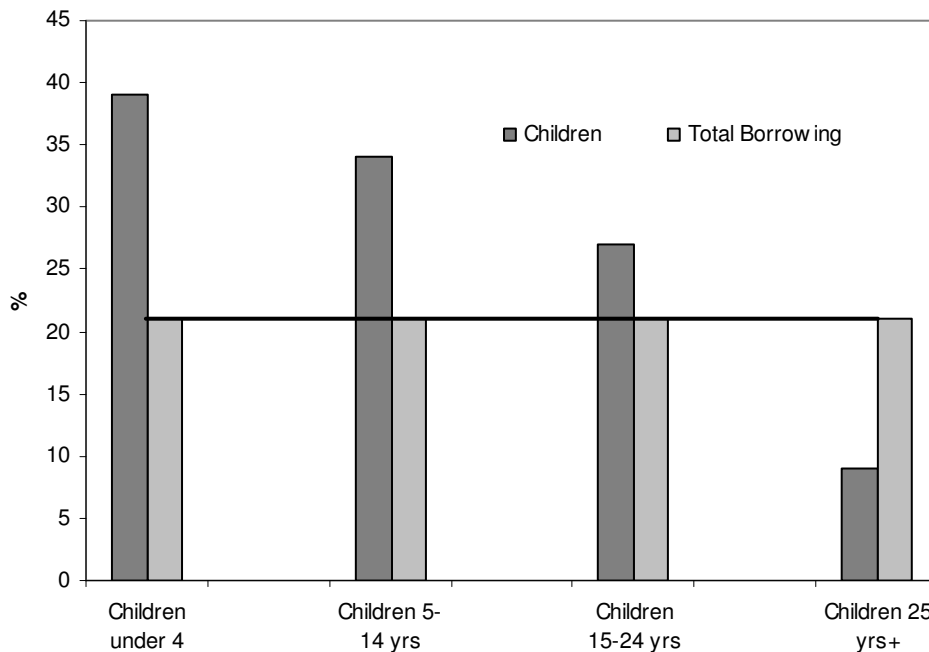
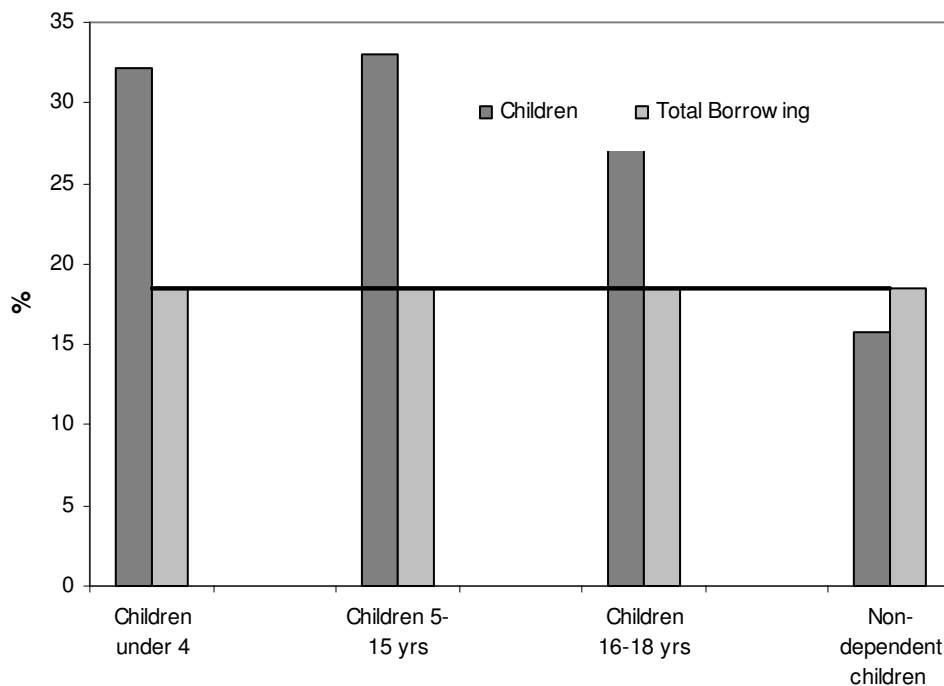


Figure 2b. Equity borrowing and age of children: UK



Note: The trend line in figures 2a and 2b shows the proportion of all episodes in which homeowners equity borrowed between 2002 and 2005. The dark gray bars depict the proportion of episodes in which homeowners with children in each age group equity borrowed between 2002 and 2005. Income units with children in each age group above the trend line have an increased likelihood of borrowing.

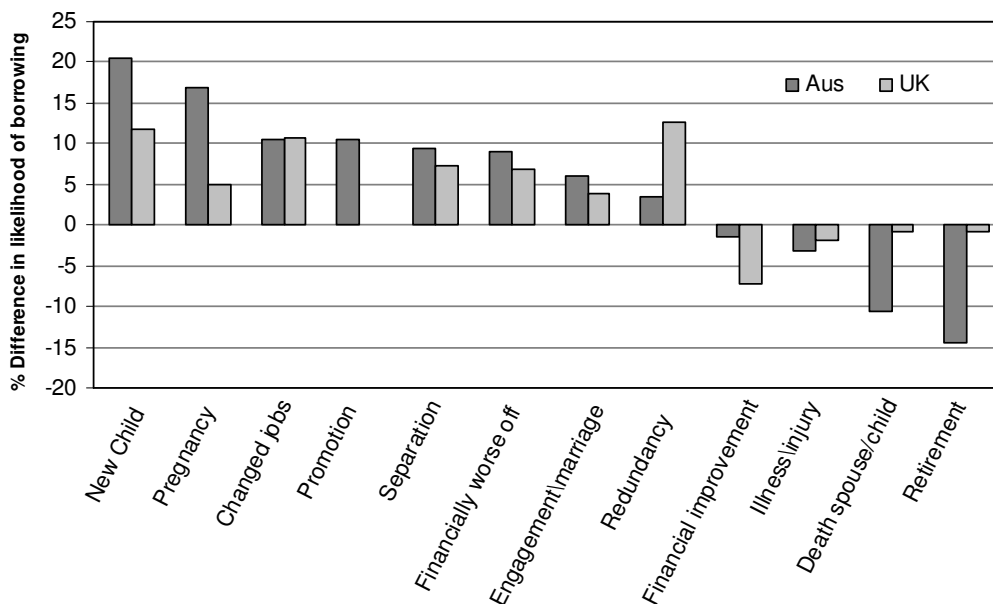
4. Bonanza?

Table 9. Equity borrowing: Marital status

Marital Status	Equity Borrowers			
	Australia		UK	
	n	% ¹	n	%
Legally married	3,496	22.1	3,340	19.3
De facto	438	31.2	632	29.5
Separated	146	27.8	85	27.7
Divorced	199	18.0	250	20.1
Widowed	49	3.0	43	1.8
Never married and not de facto	178	18.2	255	17.1
Total	4,506	21.0	4,605	18.5

Note 1: The percentages represent the proportion of borrowing episodes amongst different household types. Percentage above 21% of Australia and 18.5% for the UK indicate an increased likelihood of borrowing whilst percentages below these amounts reveal a decreased likelihood.

Figure 3: Equity borrowing, biographical disruptions and financial shocks



Note: Life events and MEW activity for Australian figures commence from 2002-2005, whilst UK events were only available for 2001 and 2004. The graph shows the difference in the frequency of equity borrowing as calculated by subtracting the overall sample frequency of equity borrowing (21.1%) from the frequency of equity borrowing among the subgroup that have experienced the indicated event. For example amongst Australian home owners that got married between 2001 and 2005 the frequency of borrowing was 27.2%, which is 6.1 percentage points higher than the overall sample frequency of 21.1%.

Appendices

Appendix 1

Table 1a. Equity borrowing and house values by major statistical region: Australia

Major Australian Statistical Region	Equity Borrowers Amount withdrawn			All Home Owners House value ²		
	Median A\$	Mean A\$	n ³	Median A\$	Mean A\$	n ⁴
Sydney	30,000	73,822	639	490,000	571,687	5,743
Balance of NSW	24,000	55,016	629	250,000	336,575	5,466
Melbourne	30,000	57,126	809	320,000	383,001	6,481
Balance of Victoria	20,000	39,119	354	210,000	270,971	2,988
Brisbane	18,000	37,886	423	285,000	313,260	3,060
Balance of QLD	19,500	37,907	482	220,000	269,696	3,883
Adelaide	20,000	39,704	315	220,000	257,250	2,298
Balance of SA	14,000	36,102	127	150,000	204,516	1,121
Perth	20,000	53,419	365	290,000	318,150	2,724
Balance of WA	20,250	60,221	120	180,000	300,365	1,120
Tasmania	15,000	28,484	131	150,000	185,145	1,084
Total	20,000	50,907	4,394	290,000	351,556	35,968

Note: 1 Northern Territory and Australian Capital Territory are omitted due to small sample numbers n=112. 2 The house values are the self-assessed values of owners between 2001 and 2005. 3 Number of episodes of mortgage borrowing. 4 Number of dwellings occupied by all homeowners in region

Table 1b: Equity borrowing and house values by major statistical region: UK

Major UK Regions	Equity Borrowers Amount withdrawn			All Home Owners House value		
	Median £	Mean £	n	Median £	Mean £	n
London	9,000	16,686	184	230,000	287,216	2,526
Rest of the South East	8,000	17,057	578	200,000	244,773	6,771
South West	5,000	11,738	213	175,000	200,021	3,284
East Anglia	5,000	9,754	91	150,000	182,937	1,522
East Midlands	5,000	10,381	229	120,000	146,613	2,700
West Midlands	8,000	15,621	253	120,000	142,100	2,912
Greater Manchester	9,000	25,632	136	120,000	147,231	1,336
North West	7,000	14,595	190	115,000	137,486	2,356
Yorkshire + Humberside	8,000	10,794	241	110,000	131,176	3,075
North East	7,000	10,759	175	95,000	126,187	1,938
Wales	7,000	14,231	694	100,000	129,920	10,248
Scotland	4,000	9,556	778	85,000	115,867	9,965
Northern Island	6,000	14,140	784	100,000	127,364	11,114
Total	60,000	13,591	4,546	120,000	153,948	59,747

Note: Region of residence is missing for 59 income units.

Appendix 2
Table 2a. Equity borrowing and age of children: Australia

Children in household	Numbers			Percentages		
	Borrowers	Savers	Total	Borrowers	Savers	Total
Children under 4						
<i>Yes</i>	1,117	1,761	2,878	38.8	61.2	100
<i>No</i>	3,389	15,172	18,561	18.3	81.7	100
Children 5-14 yrs						
<i>Yes</i>	2,051	3,947	5,998	34.2	65.8	100
<i>No</i>	2,455	12,986	15,441	15.9	84.1	100
Children 15-24 yrs						
<i>Yes</i>	1,400	3,767	5,167	27.1	72.9	100
<i>No</i>	3,106	13,166	16,272	19.1	80.9	100
Children 25 yrs+						
<i>Yes</i>	851	8,744	9,595	8.9	91.1	100
<i>No</i>	3,655	8,189	11,844	30.9	69.1	100
Total Borrowing and Saving	4,506	16,933	21,439	21.0	79.0	100

Note - Children identified from both residential and non residential children amongst mortgage borrowers and savers.

Table 2b. Equity borrowing and age of children: UK

Children in household	Numbers			Percentages		
	Borrowers	Savers	Total	Borrowers	Savers	Total
Children under 4						
<i>Yes</i>	788	1,664	2,452	32.1	67.9	100
<i>No</i>	3,817	18,597	22,414	17.0	83.0	100
Children 5-15 yrs						
<i>Yes</i>	1,938	3,942	5,880	33.0	67.0	100
<i>No</i>	2,667	16,319	18,986	14.0	86.0	100
Children 16-18 yrs						
<i>Yes</i>	238	634	872	27.3	72.7	100
<i>No</i>	4,367	19,627	23,994	18.2	81.8	100
Non-dependent children						
<i>Yes</i>	454	2,428	2,882	15.8	84.2	100
<i>No</i>	4,151	17,833	21,984	18.9	81.1	100
Total Borrowing and Saving	4,605	20,261	24,866	18.5	81.5	100

Table 3a. Equity borrowing, biographical disruptions and financial shocks: Australia

Experienced event	Numbers			Percentages		
	Borrowers	Savers	Total	Borrowers	Savers	Total
Got married						
Yes	114	305	419	27.2	72.8	100
No	4,090	15,375	19,465	21.0	79.0	100
<i>Total</i>	4,204	15,680	19,884	21.1	78.9	100
Separated from spouse						
Yes	111	252	363	30.6	69.4	100
No	4092	15379	19471	21.0	79.0	100
<i>Total</i>	4,203	15,631	19,834	21.2	78.8	100
Reunited with spouse						
Yes	40	63	103	38.8	61.2	100
No	4,161	15,563	19,724	21.1	78.9	100
<i>Total</i>	4,201	15,626	19,827	21.2	78.8	100
Pregnancy						
Yes	325	531	856	38.0	62.0	100
No	3876	15109	18985	20.4	79.6	100
<i>Total</i>	4,201	15,640	19,841	21.2	78.8	100
Birth adoption of new child						
Yes	258	360	618	41.7	58.3	100
No	3,943	15,258	19,201	20.5	79.5	100
<i>Total</i>	4,201	15,618	19,819	21.2	78.8	100
Serious personal injury/illness						
Yes	313	1428	1741	18.0	82.0	100
No	3890	14196	18086	21.5	78.5	100
<i>Total</i>	4,203	15,624	19,827	21.2	78.8	100
Serious injury/illness to family member						
Yes	783	2734	3517	22.3	77.7	100
No	3,420	12,881	16,301	21.0	79.0	100
<i>Total</i>	4,203	15,615	19,818	21.2	78.8	100
Death of spouse or child						
Yes	24	202	226	10.6	89.4	100
No	4,180	15,420	19,600	21.3	78.7	100
<i>Total</i>	4,204	15,622	19,826	21.2	78.8	100
Death of close family member/relative						
Yes	515	1,679	2,194	23.5	76.5	100
No	3,689	13,957	17,646	20.9	79.1	100
<i>Total</i>	4,204	15,636	19,840	21.2	78.8	100
Retired from the workforce						
Yes	38	525	563	6.7	93.3	100
No	4,162	15,115	19,277	21.6	78.4	100
<i>Total</i>	4,200	15,640	19,840	21.2	78.8	100
Fired/made redundant						
Yes	104	318	422	24.6	75.4	100
No	4,097	15,317	19,414	21.1	78.9	100
<i>Total</i>	4,201	15,635	19,836	21.2	78.8	100
Changed jobs						
Yes	514	1,108	1,622	31.7	68.3	100
No	3,686	14,530	18,216	20.2	79.8	100
<i>Total</i>	4,200	15,638	19,838	21.2	78.8	100
Promoted at work						
Yes	282	610	892	31.6	68.4	100
No	3,909	14,976	18,885	20.7	79.3	100
<i>Total</i>	4,191	15,586	19,777	21.2	78.8	100
Major improvement in finances						
Yes	115	470	585	19.7	80.3	100
No	4,090	15,179	19,269	21.2	78.8	100
<i>Total</i>	4,205	15,649	19,854	21.2	78.8	100
Major worsening in finances						
Yes	139	323	462	30.1	69.9	100
No	4,066	15,319	19,385	21.0	79.0	100
<i>Total</i>	4,205	15,642	19,847	21.2	78.8	100

Table 3b. Equity borrowing, biographical disruptions and financial shocks: UK

Experienced event	Numbers			Row percentages		
	Borrowers	Savers	Total	Borrowers	Savers	Total
Illness/Injury						
Yes	163	838	1001	16.3	83.7	100
No	1,986	8,853	10,839	18.3	81.7	100
<i>Total</i>	2,149	9,691	11,840	18.2	81.8	100
Caring responsibility						
Yes	2	17	19	10.5	89.5	100
No	2,142	9,693	11,781	18.2	81.8	100
<i>Total</i>	2,144	9,656	11,800	18.2	81.8	100
Education						
Yes	161	497	658	24.5	75.5	100
No	1,983	9,159	11,142	17.8	82.2	100
<i>Total</i>	2,144	9,656	11,800	18.2	81.8	100
Change of job						
Yes	152	373	525	29.0	71.0	100
No	1,922	9,283	11,275	17.7	82.3	100
<i>Total</i>	2,144	9,565	11,800	18.2	81.8	100
Get job (following economic inactivity)						
Yes	9	20	29	31.0	69	100
No	2,135	9,636	11,771	18.1	81.9	100
<i>Total</i>	2,144	9,656	11,800	18.2	81.8	100
Redundancy/unemployment (threat of / actual)						
Yes	30	67	97	30.9	69.1	100
No	2,114	9,589	11,703	18.1	81.9	100
<i>Total</i>	2,144	9,656	11,800	18.2	81.8	100
Retirement						
Yes	15	71	86	17.4	82.6	100
No	2,129	9,585	11,714	18.2	81.8	100
<i>Total</i>	2,144	9,656	11,800	18.2	81.8	100
Pregnancy						
Yes	178	588	766	23.2	76.8	100
No	1,966	9,068	11,034	17.8	82.2	100
<i>Total</i>	2,144	9,656	11,800	18.2	81.8	100
Cohabitation						
Yes	4	11	15	26.7	73.3	100
No	2,140	9,644	11,785	18.2	81.8	100
<i>Total</i>	2,144	9,655	11,800	18.2	81.8	100
Engagement/Wedding						
Yes	101	359	460	22.0	78.0	100
No	2,043	9,297	11,340	18.0	82.0	100
<i>Total</i>	2,144	9,656	11800	18.2	81.8	100
Relationship end						
Yes	24	70	94	25.5	74.5	100
No	2,120	9,586	11,706	18.1	81.9	100
<i>Total</i>	2,144	9,656	11,800	18.2	81.8	100
Leave parental home						
Yes	12	47	59	20.3	79.7	100
No	2,132	9,609	11,741	18.2	81.8	100
<i>Total</i>	2,144	9,656	11,800	18.2	81.8	100
Death						
Yes	96	459	555	17.3	82.7	100
No	2,048	9,197	11,245	18.2	81.8	100
<i>Total</i>	2,144	9,656	11,800	18.2	81.8	100
Domestic incident (eg fire, burst pipe)						
Yes	2	6	8	25.0	75.0	100
No	2,142	9,650	11,792	18.2	81.8	100
<i>Total</i>	2,144	9,656	11,800	18.2	81.8	100
Financial Problems						
Yes	9	27	36	25.0	75.0	100
No	2,135	9,629	11,764	18.1	81.9	100
<i>Total</i>	2,144	9,656	11,800	18.2	81.8	100
Financial improvement						
Yes	6	48	54	11.1	88.9	100
No	2,138	9,608	11,746	18.2	81.8	100
<i>Total</i>	2,144	9,656	11,800	18.2	81.8	100

Table 3b cont. Equity borrowing, biographical disruptions and financial shocks: UK

Experienced event	Numbers			Row percentages		
	Borrowers	Savers	Total	Borrowers	Savers	Total
Consumption (vehicle, house, home improvements)						
Yes	112	297	409	27.4	72.6	100
No	2,032	9,359	11,391	17.8	82.2	100
Total	2,144	9,656	11,800	18.2	81.8	100
Move into residential care						
Yes	6	25	31	19.4	80.6	100
No	2,138	9,631	11,769	18.2	81.8	100
Total	2,144	9,656	11,800	18.2	81.8	100
Victim of crime						
Yes	6	23	29	20.7	79.3	100
No	2,138	9,633	11,771	18.2	81.8	100
Total	2,144	9,656	11,800	18.2	81.8	100