Lengthening the ladder

The future of mortgage borrowing in older age

Full research report by the ILC-UK, supported by the BSA in conjunction with the CML. Authors: Ben Franklin, Cesira Urzì Brancati and Dean Hochlaf

Building Societies Association

ILC

About the BSA

We fulfil two key roles. We provide our members, all 44 building societies and four credit unions, with information to help them run their businesses. We also represent their interests to audiences including regulators, the Government and Parliament, the Bank of England, the media and the general public.

Building societies have total assets of over £366 billion and, together with their subsidiaries, hold residential mortgages of over £284 billion, 22% of the total outstanding in the UK. They hold over £262 billion of retail deposits, accounting for 18% of all such deposits in the UK. Building societies account for 33% of all cash ISA balances. They employ approximately 40,000 full and part-time staff and operate through approximately 1,550 branches.

About the ILC-UK

The International Longevity Centre – UK (ILC-UK) is a futures organisation focussed on some of the biggest challenges facing Government and society in the context of demographic change. Much of our work is directed at the highest levels of Government and the Civil Service, both in London and Brussels. We have a reputation as a respected think tank which works, often with key partners, to inform important decision-making processes.

Our policy remit is broad, and covers everything from pensions and financial planning, to health and social care, housing design, and age discrimination. We work primarily with central government, but also actively build relationships with local government, the private sector and relevant professional and academic associations.

Acknowledgements
This report was kindly made possible by the Building Societies Association in conjunction with the Council of Mortgage Lenders. The authors would also like to give special thanks to all those who came along to debate the report's findings and recommendations at a policy workshop in March. The advice provided was invaluable. Nevertheless, the approach, contents and findings of the final report are solely the responsibility of the report's authors.

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Foreword

Paul Broadhead, Head of Mortgage Policy at the BSA

When the BSA published its first report on lending into retirement in 2015, we all knew that older borrowers were becoming a bigger part of the market. Back then, we identified various challenges that lenders, policymakers and regulators needed to address. Last year we followed this up by publishing a leaflet for consumers, "Can I get a mortgage at my age?" to address concerns people may have about borrowing in older age.

The fascinating findings in this report from the International Longevity Centre (ILC-UK) demonstrate that the demographic and economic shifts are set to interact so that borrowing in retirement is expected to double by 2030. Today's niche market is to be tomorrow's mainstream. And it is not just older borrowers who will be affected – this will have a knock-on effect on homeownership across younger age groups as people wait longer before getting their first mortgage.

Addressing the challenges around lending to older borrowers is therefore vital. We need a market that can accommodate complexity and adapt to change, whether that is a change to the individual borrower's circumstances, or shifts in the financial position of future generations of borrowers entering retirement. We look forward to continuing to work with regulators, policymakers, and other parts of the industry to develop the flexible marketplace that we will need over the coming decades.

There are so many factors at play that understanding the customer is key. One thing that I drew from this report is the importance of maintaining a discussion with the borrower about their changing needs through the term of the mortgage, not just when the loan is granted. In older age life can change significantly if illness affects a person's capacity, or should a partner die. This amplifies the importance of lenders understanding their customers, to pick up on early warning signs of vulnerability, and to have policies to help deal with adjustments to circumstances.

Technological developments such as Big Data can no doubt help here, but to me it really comes down to the importance of relationships. And this indicates why mutual building societies have often been at the forefront of changes in this market, whether that be innovative mortgage products or reviewing – and in some cases removing – age limits on lending.

It has been said that the special value of mutuality rests in its capacity to build long-term relationships. Built on trust between the parties, such relationships help to promote a more free-flowing passage of information between borrower and lender, enabling a flexibility of response toward each parties' long-term best interests: helping people to make the most of their home for the whole of their retirement.

Executive summary

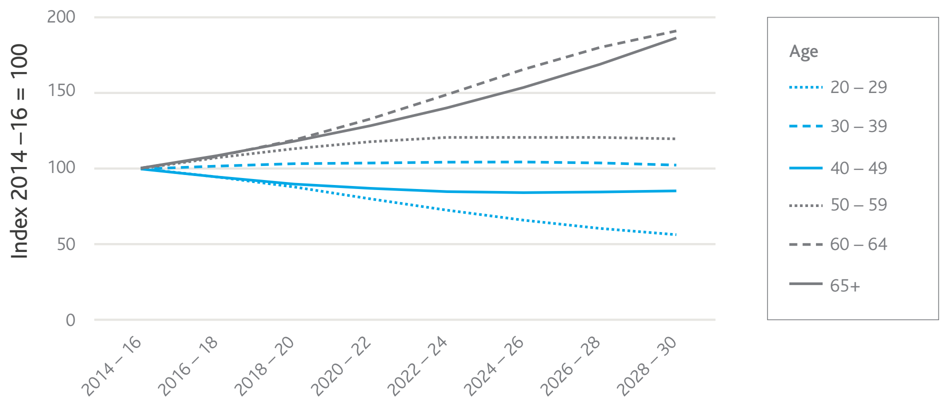
What does this report seek to address?

Mortgage borrowing into retirement is an increasingly hot topic, filling column inches across the financial and consumer press. Much of the debate has focused on whether older people are being discriminated against based on age, but it has, in the main, been devoid of hard evidence on the circumstances of older mortgage borrowers including the affordability of borrowing into retirement.

Developing such an evidence base is crucial as demographic and economic trends ensure older consumers play an increasingly important part in the mortgage market. Currently, the over 65s own around £1.5 trillion in housing wealth – accounting for 39% of self-reported housing wealth in the country. By 2030, we project that this will have more than doubled to £3.27 trillion – 58% of all housing wealth.

Meanwhile this older age group is also likely to account for a rising quantity and share of total mortgage debt, albeit starting from a low base. The over 65s currently hold around £20.1 billion of mortgage debt which accounts for roughly 2% of total self-reported mortgage debt. By 2030, we project that this will have doubled to £39.9 billion – approximately 4% of mortgage debt[1]. Due to the tiny numbers of consumers raising money from equity release we do not include this in our analyses.

Mortgage debt index by age group (base year = 2014-16)



Source: ILC-UK calculations based on WAS waves 1-4 and ONS 2014 Population Projections

1 For further details on our calculations please see Appendix A. Debt and housing equity levels rise at older ages because both the population of older people rises as does the level of debt and equity per older homeowner. Meanwhile debt and housing equity values fall for the under 50s as per the real term trend since 2006.This means older households account for an increasingly large share of both net property wealth and mortgage debt.

Many people are stepping onto the housing ladder later in life and taking mortgages with terms that extend into retirement. This trend is likely to increase. Based on current trends for homeownership, mortgage debt, housing equity and population change, we estimate that there will be a significant shift in the customer base of the mortgage market over the next 13 years.

In light of these trends, this report seeks to better understand the circumstances of those who are mortgage borrowers in retirement, through conducting in-depth analysis of the Wealth and Assets Survey (WAS) from the Office of National Statistics(ONS)[2]. This enables us to explore key sociodemographic and financial characteristics of those households who are still paying off their mortgages in retirement. In addition, we look at the characteristics of those who are currently of working age but who are likely to be paying off their mortgage in retirement based on their current mortgage term.

Our analyses help us to determine the extent to which we should be concerned about borrowing into retirement from an affordability perspective and allows us to draw some salient recommendations for different stakeholders. For the purposes of simplicity, this report defines someone as in retirement if they are age 65 or above. In reality, some people may leave the workforce earlier or later than this – the average effective age of leaving the workforce in the UK was 63 in 2014, but it is likely to rise as the State Pension Age increases[3].

Why might individuals borrow into retirement?

- Classical lifecycle theory suggests that in the face of volatile incomes over a lifetime, individuals seek to smooth their consumption in order to maintain a consistent standard of living. It is therefore not just current income which determines consumption levels, but expected future income.
- In this context, we might expect younger individuals to have the highest levels of mortgage debt, since they anticipate a higher lifetime income, middle aged individuals to be paying down their mortgages since they are earning more than at any other point in their lives, and retired individuals to have paid them off altogether, since they are no longer benefitting from a working income.
- This does not mean that mortgage borrowing in later life is altogether inconsistent with lifecycle theory. If for instance, an individual expects to have a consistent income stream long after pensionable age, secured through their private pension wealth and the state pension, or they anticipate continuing to work, borrowing after the age of 65 might still make sense.

2 For an explanation of the Wealth and Assets Survey please see page 28.

3 OECD Pensions at a Glance 2015.

Borrowing into retirement as a response to economic and demographic trends

- Real wages fell significantly in the aftermath of the financial crisis and are yet to return to their 2008 peak. According to the government's official forecasting agency, the Office for Budget Responsibility, wages are not expected to return to their pre-crisis levels for some time. Even by 2022, wages will still be lower in real terms than they were nearly 15 years earlier.
- The long-term lack of housing supply relative to continued population growth, compounded by falling real wages has meant that buying a home in the UK is particularly expensive. According to our calculations, while average house prices in the OECD are in line with their long run trend, UK house prices remain overvalued compared to historic levels.
- While working age households have been facing pressures on wages and incomes, retired households have more disposable income than ever before. Income growth amongst retired people has significantly outpaced income growth amongst non-retired people since the year 2000.
- Given that many young working people are unable to afford a mortgage deposit, while older people are becoming more prosperous and working for longer, it may make sense for some individuals to start borrowing for a house later than has traditionally been the case, and pay it off after the age of 65.
- Critically though, the effectiveness of such a strategy will depend on whether future income growth, pension wealth and pensioner benefits are as generous tomorrow as they are today. There are signs that this is unlikely to be the case, with Defined Benefit pensions becoming less and less common, and sluggish wage growth making saving for the future a challenge.

The circumstances of current mortgage borrowers in retirement

Headline numbers

- Approximately 4.9% (or 470,000) of all people aged 65 and over have not paid off their mortgage; the proportion of borrowers in retirement is higher among ages 65-69 (9.3%, equivalent to approximately 300,000 people) and progressively lower across the older age groups, with only 2.2% of the population aged 75 and over still paying off a mortgage.
- The amount of outstanding average debt also decreases with age, from approximately £68,000 at age 65-69 to roughly £32,000 among the 75+. We should however bear in mind that the latter group comprises a very small sample size, so the estimates should not be scaled up to population level.

- On average, people aged 65 and over have 8.4 years left to pay off their mortgage on their current mortgage term, which means that many of them will be debt-free by their mid-seventies. However, the average number of years left before they pay off their mortgage is higher for people aged 75 and over.

Key characteristics

- We explore the characteristics of households who are currently borrowing into retirement and compare them with those homeowners in retirement who have paid off their mortgage debts.
- Overall, our findings suggest that most of these consumers are unlikely to struggle to pay back their loans. Mortgage borrowers over the age of 65 typically have higher incomes and pension wealth than homeowners who do not have a mortgage, while the average size of the outstanding loan to household income is relatively low.
- One very important caveat is interest only mortgage holders – which account for 30% of over 65 households with a mortgage. While some may have accumulated substantial equity or other assets, these borrowers need to engage with their lender and develop a repayment plan, while some may simply not be able to repay.
- A distributional analysis of affordability suggests that the majority of older borrowers have low mortgage debt to incomes ratios.

The circumstances of future mortgage borrowers in retirement

Defining future mortgage borrowers

We define future mortgage borrowers as those who are currently aged 35-64 and whose mortgage terms will mean they still have outstanding debt after age 65.

Headline numbers

- We estimate that approximately 6.4% (or 1.42 million) of all people aged 35 to 64 will not have paid off their mortgage before entering retirement given the current term of their loan.
- The proportion is much lower among the 35 to 49 age group (5.4% equivalent to 230,000 people) and higher among the 55-59 age group (11.4%, equivalent to 400,000 people).
- The amount of outstanding mortgage debt (among mortgage borrowers) decreases with age, from approximately £160,000 at age 35-39 to roughly £85,000 among the 60-64 year olds.
- On average, future borrowers in retirement aged 35 to 64 have 17.8 years left to pay off their mortgage, while those aged 60 to 64 have 10.8 years left.

Key characteristics

- While current mortgage borrowers in retirement have higher incomes than those who do not borrow in retirement, which should help to support affordability and overall financial wellbeing, future mortgage borrowers have similar incomes to those who are not borrowing.
- Future mortgage borrowers in retirement have also accumulated lower pension wealth and have fewer financial assets than those who are not borrowing. It may therefore be the case that future mortgage borrowers are somewhat more vulnerable in retirement than those who are currently in retirement when it comes to paying down mortgage debt.
- By comparison to our results for current borrowers, there is a slightly higher proportion of households with high loan to income ratios and household debt, but this may be because we are looking at some cohorts of younger borrowers who are in the earlier stages of paying down the debt, in accordance with lifecycle theory.

Recommendations

In the context of the report's findings, we develop some high-level recommendations which were discussed and debated at a roundtable with mortgage market experts from across the sector.

For industry and the regulator

- Within the broad groups of current and future borrowers in retirement, understanding the different market segments is vital.
- It is also crucial that mortgage products and arrears processes have the flexibility to adapt to 'trigger points' in people's lives, supplemented by regular communications, and perhaps routine, regular advice sessions through the mortgage term.
- The Financial Conduct Authority should explore through its Ageing Population Strategy how regulation and permissions may need to change to enable the goal of further integration of the financial planning processes.
- Age is only one factor to consider when making lending decisions and mortgage lenders will need to keep their age policies under review.
- Currently Mortgage Conduct of Business rules concentrate on income for determining affordability. The regulator may need to revisit this to look at models which better reflect the financial circumstances of many older borrowers.

- The industry and regulators should look to learn from other spheres, such as incorporating the expertise of the actuarial profession on longevity risk and exploring with the High Net Worth sector how other accumulated assets – such as property, savings and stocks and shares – can provide reliable alternative forms of repayment. Learning from behavioural sciences on how to incentivise older borrowers to make sound financial choices in good time is also important.

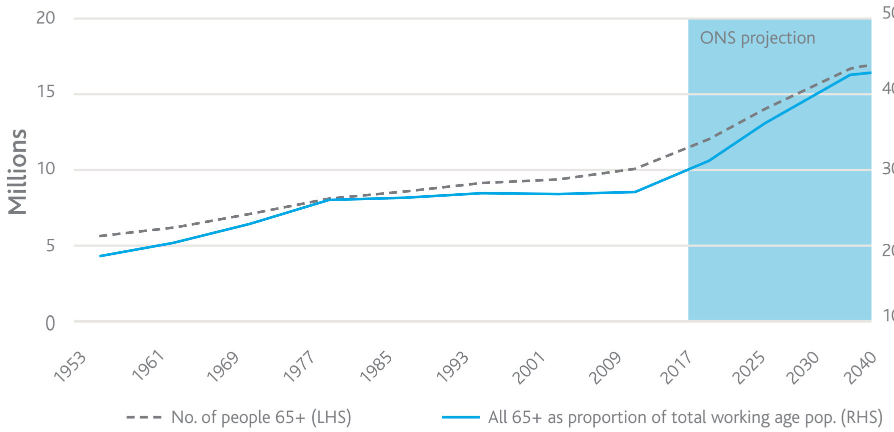
For Government

- Affordability pressures have been driven in part by the lack of supply of new homes. In response to the government's Housing White Paper, we would urge more initiatives for last-time buyers. This could unlock homes further down the chain for younger people.
- At the same time, the government may need to explore further expansion of shared ownership and shared equity models for younger people struggling to get onto the housing ladder.
- In the pensions world the introduction of more freedom and choice is still a relatively new development. It will be important for the mortgage industry, as well as the regulators and government to keep track of any emerging issues with consumers who borrow on the basis that they will repay all or part of a mortgage out of pension income.
- Finally, the merger of the Money Advice Service with the Pensions Advisory Service and PensionWise provides an opportunity to rethink how we engage consumers in their retirement planning and raise financial capability. It is important to keep political momentum going in this area in order to support better financial decision making.

Introduction

Demographic and economic trends are dramatically reshaping the consumer market. While the working age population might have been the prosperous growth market of the past century, this is unlikely to remain the case during this century. Growth in the UK's working age population is slowing considerably, while long run wage stagnation has limited their spending power. Today's young and middle aged workers are likely to be in the unenviable position of earning less in real terms over their lifetimes than their parents did. Meanwhile, what many refer to as the "older" population – those aged over 65 – are more numerous and prosperous than ever before. Moreover, their numbers are set to swell as the century progresses. The affluent over 65s are therefore likely to be the growth market of this century, and the nation's future economic performance may well hinge on the ability of producers to meet the needs of this burgeoning market.

The increasing prominence of the over 65s in the UK population



Source: ILC-UK analysis of ONS Population Estimates and 2014 Principal Projection
Note: The working age population is defined as age 20-64.

Within this context, the buying and selling of mortgages is a particularly critical enterprise for the UK economy. The UK's mortgage market is the largest in Europe in terms of amount lent per year and the total value of outstanding loans[4]. But this sector, like all others, is not immune to the challenges and opportunities posed by demographic and economic change.

Based on current trends for homeownership, mortgage debt, housing equity and population change, we estimate a significant shift in the customer base of the

4 https://www.cml.org.uk/industry-data/key-uk-mortgage-facts/

market over the next 13 years. Currently, the over 65s own around £1.5 trillion in housing wealth – accounting for 39% of self-reported housing wealth in the country. By 2030, we project that this will have more than doubled to £3.27 trillion – 58% of all housing wealth. Meanwhile this older age group is also likely to account for a rising quantity and share of total mortgage debt. The over 65s currently hold around £20.1 billion of mortgage debt which accounts for roughly 2% of total self-reported mortgage debt. By 2030, we project that this will have doubled to £39.9 billion – approximately 4% of mortgage debt[5]. This assumes there will be no additional changes to borrower behaviour, but the significant changes explored in Chapter 2 could result in even greater growth.

In short, by 2030, the over 65s will hold the majority of the nation's housing wealth, while also accounting for a rising share of overall mortgage borrowing. How the industry interacts with this group of consumers, a group that sits outside the 'traditional' market, will therefore become of increasing importance for lenders seeking to grow their businesses as well as from a financial conduct perspective, to ensure that older consumers are treated fairly and responsibly. Crucially, our research suggests the possibility of a significant shift 'up the age scale' in the housing and mortgage market.

We are at the beginning of a journey, but clues are already emerging about the circumstances facing older borrowers. This report is dedicated to examining these clues through detailed analysis of the largest nationally representative dataset on the wealth and assets of the population – The Wealth and Assets Survey (WAS) from the Office of National Statistics (ONS). This analysis allows us to unravel the sociodemographic and financial characteristics of those who are currently borrowing in retirement, as well as the characteristics of those who are likely to be borrowing into retirement in the future.

Our findings show that there are important differences between the two groups. While the generation currently borrowing in retirement has higher incomes and greater pension wealth, this will not necessarily be the case for future generations.

Wage growth is sluggish and house price inflation is stretching affordability. There is also a question of whether we are reaching a peak of pensioner wealth, with Defined Benefit pension schemes becoming less common and stagnant wage growth making saving for the future harder.

A key question, primarily for national policymakers including the government is whether we should take action to try to maintain the market status quo, or whether these socioeconomic changes are unstoppable. If the latter, then we need to take the necessary actions to adapt to a changing market.

5 For further details on our calculations please see Appendix A. Debt and housing equity levels rise at older ages because both the population of older people rises as does the level of debt and equity per older homeowner. Meanwhile debt and housing equity values fall for the under 50s as per the real term trend since 2006. This means older households account for an increasingly large share of both net property wealth and mortgage debt.

To this end, the report consists of the following chapters:

Chapter 1

Looks at the theory and evidence on the distribution of mortgage debt by age.

Chapter 2

Explores the demographic and economic drivers behind increased interest amongst older borrowers.

Chapter 3

Examines the characteristics of current borrowers in retirement, comparing those who do have mortgage debt with homeowners who do not have an outstanding mortgage.

Chapter 4

Examines the characteristics of future borrowers and compares them with those who are unlikely to have any outstanding mortgage debt in retirement.

Chapter 5

Discusses the findings from more sophisticated statistical modelling where we try to establish the key causal reasons determining the likelihood of being a borrower/non-borrower.

Chapter 6

Outlines some high-level implications and recommendations for policy, industry and the regulator.

Chapter 1

Economic theory and evidence on mortgage borrowing

About this chapter

In this chapter, we briefly discuss the theory on borrowing and consumption over the lifecycle before exploring recent trends in mortgage debt levels by age. Charts using ONS data are based on the Household Reference Person (HRP). This allows us to compare actual consumer behaviours with those behaviours that we might expect given economic theory. We conclude the chapter by discussing the implications of our findings.

Why take out a mortgage?

Housing represents a form of consumption and long-term investment. Through homeownership, families do not just own where they live, but build up their wealth, and once the mortgage is paid off, their monthly expenses are greatly reduced. Furthermore, housing equity can be tapped into for emergency expenses such as making adaptations to the home, or drawn upon late in life for routine expenditure not covered by regular income. Therefore, taking out a mortgage enables people who could not otherwise own a home to do so and make a long-term investment in the process.

When should consumers take out a mortgage?

For decades, economists have attempted to explain why consumers make certain consumption choices over the course of their life. Many theories and models have been presented from Friedman[6] to Modigliani and Brumberg[7] which attempt to establish a lifecycle framework to explain patterns of saving, borrowing and consumption. The common premise is that in the face of volatile incomes over a lifetime, individuals have a desire to smooth their consumption in order to maintain their standard of living.

Underpinning the theories of consumption smoothing are rational expectations. It is not just current income which determines consumption levels, but expected future income. As a consequence, proponents of the theory assert that younger people should borrow, expecting a higher average income over their lifetime. Middle aged people should earn more than at any other stage of their life, and so pay off debts while accumulating assets. Since older people may not have an income from work, they will run down their assets to fund retirement. This means that even upon entering retirement, when income is expected to drop, consumption will remain broadly consistent with what it was during their working lives. This ensures individuals have some control over their standard of living, throughout their lifetime despite incomes fluctuating.

6 Friedman, M., 1957. The permanent income hypothesis. In A theory of the consumption function (pp. 20-37). Princeton University Press.

7 Modigliani, F. and Brumberg, R., 1954. Utility analysis and the consumption function: An interpretation of cross-section data. Franco Modigliani, 1.

Considering this brief theoretical framework, in the context of mortgage borrowing we would expect that younger individuals are likely to have the highest levels of mortgage debt, middle aged individuals to be paying down their mortgages and retired individuals to have paid them off altogether. This does not mean that mortgage borrowing in later life is altogether inconsistent with lifecycle theory. If for instance, an individual expected to have a consistent income stream long after pensionable age, secured through their private pension wealth and the state pension, or they anticipated continuing to work, borrowing after the age of 65 might still make sense. But if they were unable to rely on these forms of income in later life, then such borrowing would be irresponsible and may lead to financial distress with the individual struggling to repay with negative consequences for their standard of living.

Similarly, for those who do not have significant pension wealth but have a high concentration of housing wealth in retirement, accessing the equity stored in their home (either by downsizing or using a financial product such as a lifetime mortgage) to support a comfortable standard of living may make sense. But individuals will need to understand the long run financial implications of the various options that are available to them.

The evidence: distribution of mortgage debt in Great Britain

Homeownership rates

Even though homeownership is still the dominant type of tenure, its rates have been declining steadily. In particular, since 2006 overall homeownership rates have declined by 4.9 percentage points – from 76.6% in 2006-2008 to 71.7% in 2012-2014, with the drop especially marked among the younger age groups. While 52.9% of people aged 20 to 29 owned their home in 2006-2008, by 2012-14 this had dropped to approximately 37.7%. A similar trend, albeit less pronounced, can be seen among the 30 to 39 year olds, with a drop of 9 percentage points, from 73.3% in 2006-08 to 64.6% in 2012-14. By contrast, homeownership rates have been slightly increasing, by only 1.5 percentage points, for the oldest age group, aged 75 and over.

Homeownership rates over time, by age of the Household Reference Person (HRP) or partner

	2006-08	2008-10	2010-12	2012-14	Change between 2006-14
Aged 20-29	52.9%	44.6%	41.6%	37.7%	-15.2 ppts
30-39	73.3%	69.2%	68.0%	64.6%	-8.7 ppts
40-49	79.8%	74.8%	72.5%	71.3%	-8.5 ppts
50-59	82.4%	79.6%	78.8%	76.7%	-5.7 ppts
60-64	82.9%	80.7%	81.5%	81.4%	-1.6 ppts
65-69	80.3%	79.4%	79.8%	80.7%	0.4 ppts
70-74	79.9%	77.9%	77.4%	75.5%	-4.4 ppts
Aged 75+	72.2%	70.9%	71.1%	73.7%	1.5 ppts
Aged 65+	76.9%	75.1%	75.2%	76.3%	-0.7 ppts
All ages	76.6%	72.6%	72.6%	71.7%	-4.9 ppts

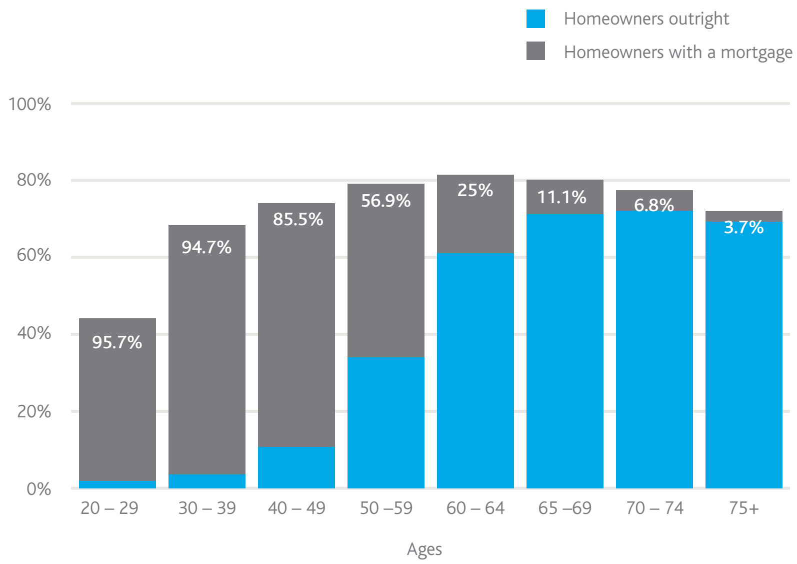
Source: Our elaborations from WAS (2006-2014); data are weighted using longitudinal weights.

How many homeowners have a mortgage?

Approximately half of homeowners (49.6%) were buying their home with the help of a mortgage in 2012-14. The proportion of mortgage borrowers varies hugely across the age groups, with 9 in 10 people aged 40 or younger still paying off a mortgage, as opposed to approximately 6.1% of homeowners aged 65 and over. Upon reaching age 75, nearly all homeowners own their home outright, with only a tiny proportion (3.7%) still paying off a mortgage. This is broadly consistent with the theoretical framework outlined above, though it is notable that a small proportion of homeowners do still have a mortgage after State Pension Age – particularly in the 65-69 age group.

It is worth mentioning that currently only a tiny minority of homeowners (less than 1%) raise any money from equity release, and therefore we do not consider such loans in the analyses in this report.

Homeownership rates (outright/with mortgage), by age of the Household Reference Person (HRP) or partner



Source: Our elaborations from WAS (2012-2014); data are weighted using cross sectional weights.

How is mortgage debt distributed across the age groups?

The table overleaf summarises mean 'total outstanding on mortgage on first residence' among homeowners aged 20 and over who are buying their house with the help of a mortgage loan. According to our estimates, between 2006 and 2014 mortgage debt shrank by 2.8% in real terms.[8] However, there are huge differences across the age groups, with real values only declining amongst younger borrowers, that is people aged 20 to 40, and gradually increasing (by 10-12%) amongst borrowers in their late fifties, sixties and seventies. Nevertheless, when looking at the 2012-14 values, with the exception of the 20-29 age group, younger homeowners are likely to have larger outstanding mortgages than older homeowners, which is again broadly consistent with the theoretical framework already outlined.

8 Prices are adjusted using the RPI at 2012-14 prices; 2006-08 = 0.8092; 2008-10 = 0.8571; 2010-12 = 0.9175.

Mortgage debt (at 2014 prices), by age of the Household Reference Person (HRP) (or partner) and year

	2006-08	2008-10	2010-12	2012-14	% Change between 2006 and 2014
Aged 20-29	£127,524	£126,235	£118,067	£109,263	-14.3%
30-39	£116,773	£122,046	£119,823	£115,304	-1.3%
40-49	£91,913	£94,934	£95,520	£89,307	-2.8%
50-59	£61,947	£70,646	£69,544	£67,824	9.5%
60-65	£48,588	£55,829	£56,161	£58,621	20.6%
65-69	£48,712	£57,496	£49,547	£58,776	20.7%
70-74	£36,641	£40,968	£48,258	£44,610	21.8%
Aged 75+	£31,259	£36,172	£33,306	£32,390	3.6%
Aged 65+	£41,952	£47,804	£45,282	£49,625	18.3%
All ages	£92,545	£97,643	£94,524	£89,942	-2.8%

Source: Our elaborations from WAS (2006-2014); mortgage debt is deflated using the Retail Price Index (2014=100); Only positive values reported.

What type of mortgages do people take out and for what reasons?

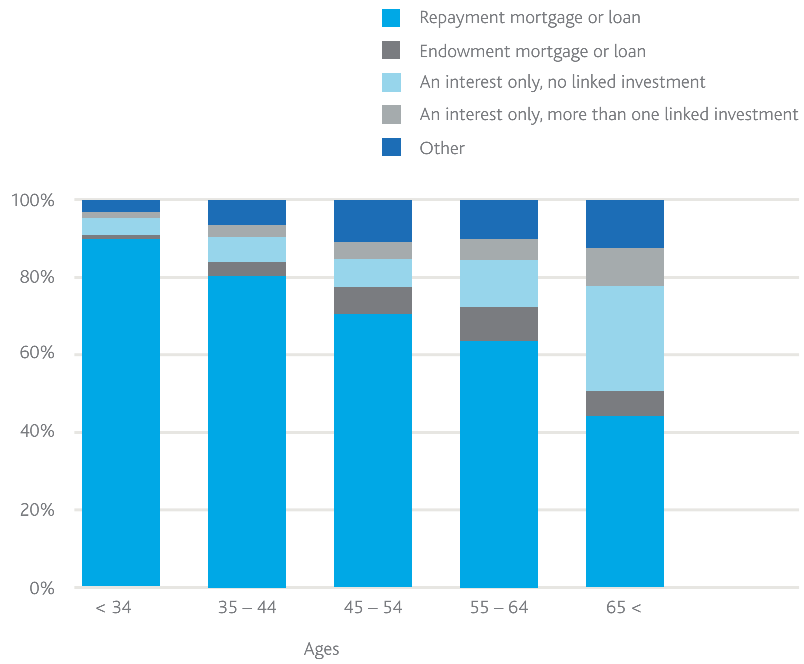
Between 2012 and 2014, only 6.6% of the mortgage borrowers have increased their borrowing by taking out an extension or top-up on an existing mortgage (excluding equity release schemes), with the proportion slightly higher amongst households headed by someone younger than 45 (7.1%). Home improvement was the most common reason cited for the extra borrowing, followed by paying bills or debts.[9]

Two thirds of mortgages are jointly held, while only a third is in one person's name, with the proportion of jointly held mortgages decreasing after age 65.

Approximately 4 in 5 mortgages (78%) are repayment mortgages, 12.4% are interest only (two thirds of which have no linked investment), and approximately 5% are endowment mortgages. The age of the borrower matters significantly for the type of mortgage taken out, with younger borrowers choosing repayment loans and older borrowers more likely to have interest only loans, especially after age 65. Indeed, somewhat worryingly, 30% of all mortgages amongst the over 65s are interest only mortgages. With these borrowers it is important to note that they will be in a range of scenarios. Some may be able to repay the capital but unwilling to, while others may have accumulated substantial equity or other assets but currently have little income. Others will, however, be unable to repay the mortgage and may be in need of forbearance measures.

9 To be noted that the sample of valid respondents to this question is extremely small.

Type of mortgage loan, by age of the Household Reference Person (HRP) or partner



Source: Our elaborations from WAS (2012-2014); data are weighted using cross sectional weights.

Summary

In this chapter, we have explored the distribution of mortgage debt by age group, noting how mortgage borrowing patterns are broadly in line with lifecycle economic theory whereby younger people borrow, middle-aged people pay down their debts and retired people have no debt. But our analysis also noted some interesting trends that, on the face of it at least, do not quite fit the theory. Average mortgage debt amongst the 30-39 group is now higher than amongst the 20-29 group, meanwhile a small if significant proportion of people continue borrowing into retirement. What's more, mortgage debt amongst the over 65s has increased by nearly 20% between 2006-2014 while average debt amongst the under 50s has significantly fallen. In the next chapter, we seek to understand the driving forces behind these changes and discuss how lending into retirement could be a rational response to broader demographic and economic trends.

Chapter 2

Borrowing into retirement as a response to demographic and economic change

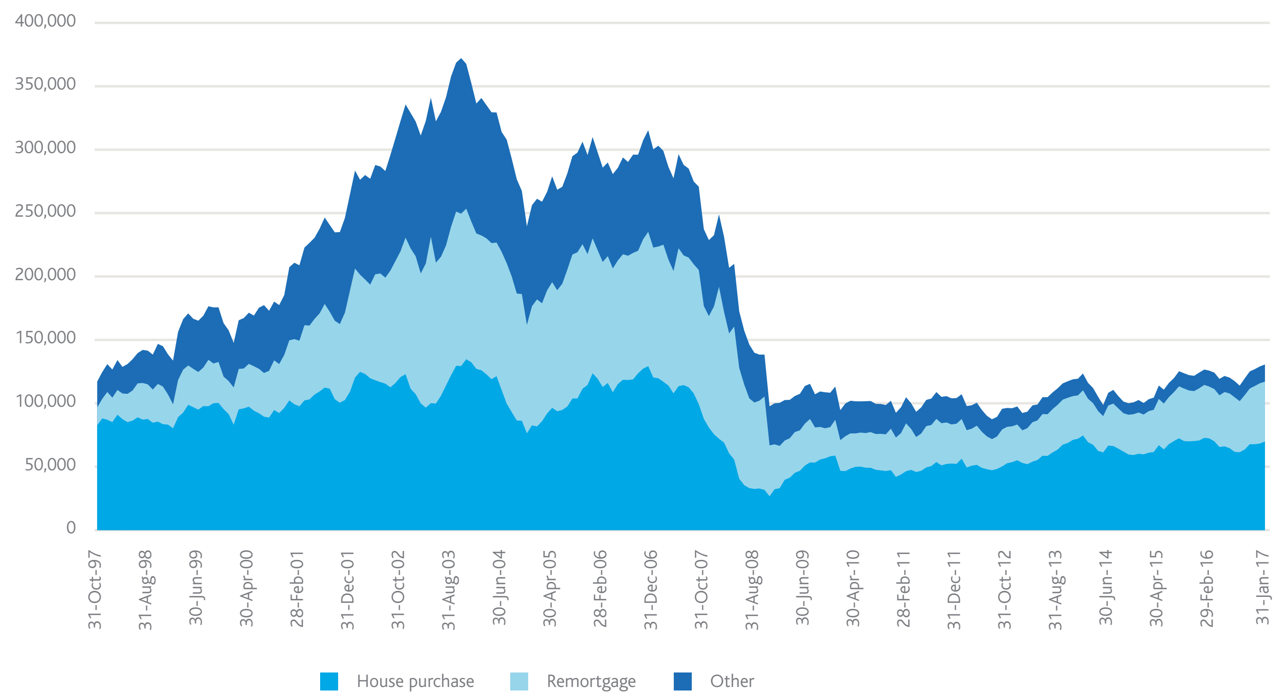
About this chapter

This chapter describes the changing economic and demographic landscape and how it is impacting on the mortgage market. It first traces the reasons for changing patterns in lending since the financial crisis before exploring why borrowing into retirement has become an area of increasing interest to lenders and consumers. We conclude with a discussion of how borrowing into retirement might be a rational response to the changing landscape and what some of the key risks facing lenders and consumers in this new environment might be.

A slowdown in mortgage borrowing amongst working age households

Since the financial crisis of 2008 and subsequent credit crunch, new mortgage borrowing in the UK has dramatically fallen. Between the late 1990s and early 2008, the UK was averaging over 100,000 mortgage approvals for house purchase every month. But since the crisis, this has almost halved, to 56,000 approvals for house purchase every month. As the chart below shows, all forms of mortgage lending have fallen dramatically during this time and remain at low levels relative to the pre-crisis period.

Monthly mortgage approvals by type



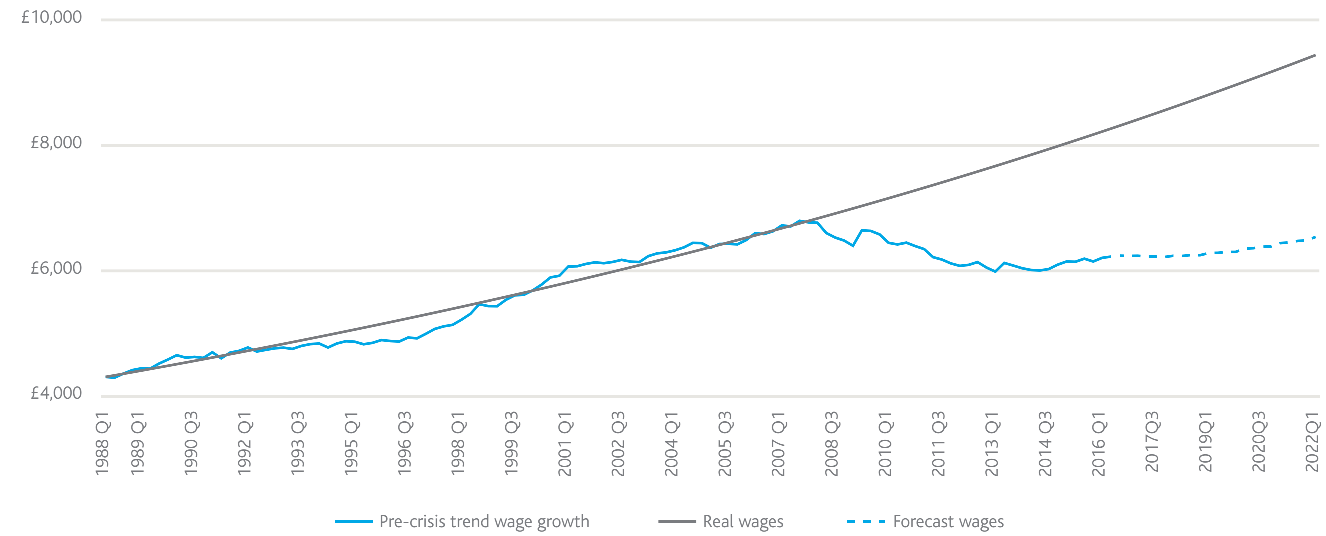
Source: ILC-UK analysis of Bank of England data

The fall in mortgage lending was at first a response from lenders to immediate balance sheet pressures during the financial crisis, with some financial institutions facing substantial losses as a consequence of building up risky assets and running down capital reserves during the pre-crisis boom. In addition, households were looking to reduce their reliance on debt in the aftermath of the crisis, leading to a fall in demand for credit. While these responses to the financial crisis explain the immediate fall in new mortgage borrowing, they do not explain why volumes have been persistently low ever since. In this regard, three factors are particularly important.

First, the Financial Services Authority introduced strict new rules under the Mortgage Market Review (MMR) to ensure that lenders take into consideration the ability of consumers to be able to service and repay their mortgage debt. Many lenders had in fact implemented affordability calculations ahead of the formal changes to the Mortgage Conduct of Business (MCOB) rules in 2014. The MMR has been the most wide-reaching set of reforms affecting the sector since residential mortgages came under the remit of statutory regulation.

Second, real wages significantly fell in the aftermath of the crisis and are yet to return to their 2008 peak. According to the government's official forecasting agency, the Office for Budget Responsibility, wages are not expected to return to their pre-crisis levels for the duration of their forecast period. By 2022, wages will still be lower in real terms than they were nearly 15 years earlier. Stagnant wage growth may prevent individuals from taking on more debt since it will make it harder and more expensive to repay loans.

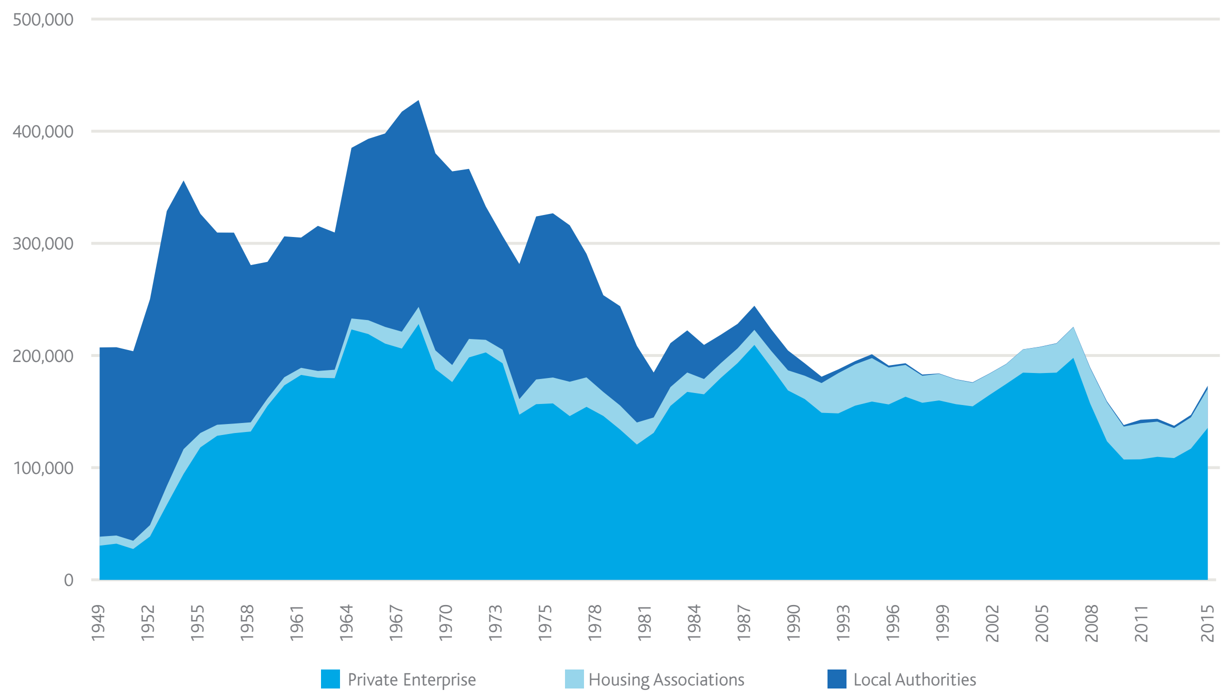
Average real wages, actual, forecast and trend



Source: ILC-UK analysis of ONS and OBR data. Notes: Inflation adjusted using CPI all items.

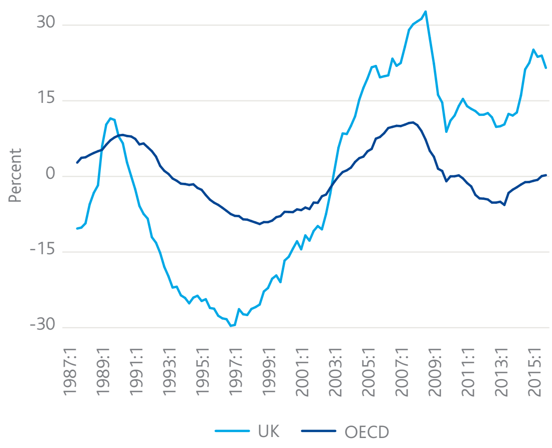
Third, since the 1980s, levels of housebuilding have remained subdued - regularly failing to surpass the 200,000 annual completions mark. The long-term lack of housing supply relative to continued population growth, compounded by falling real wages has meant that buying a home in the UK is particularly expensive, though it should be noted that there is significant variation across different regions. According to our calculations, while average house prices in the OECD are in line with their long run trend compared to earnings, UK house prices remain overvalued by around 20% relative to historic levels. With housing expensive, wages under pressure and lenders having to abide by strict affordability checks, it is no wonder that new mortgage borrowing remains significantly below pre-crisis levels.

Housing completions by type (1949-2015)



Source: ILC-UK analysis of DCLG Live Tables on Housebuilding.

House price to incomes: Percentage over or under valuation relative to long term averages

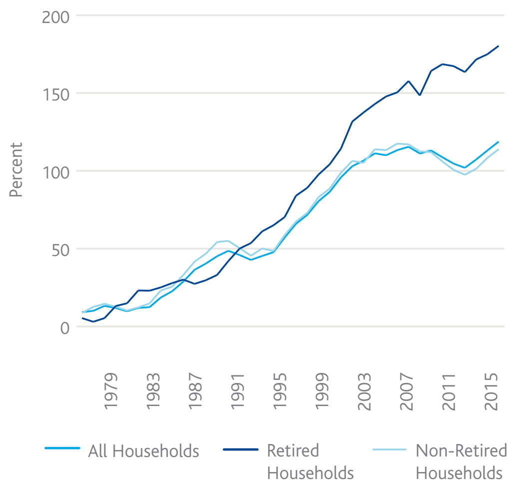


Source: ILC-UK analysis of OECD data

Moving away from the traditional "working age" market

While working age households have been facing pressures on wages and incomes, retired households have more disposable income than ever before. Income growth amongst retired people has significantly outpaced income growth amongst non-retired people since the year 2000 (see chart). Indeed, we are now in the unprecedented position of having a greater proportion of working age people in poverty than pensioners.

Cumulative change in disposable incomes by household type (1977-2015)

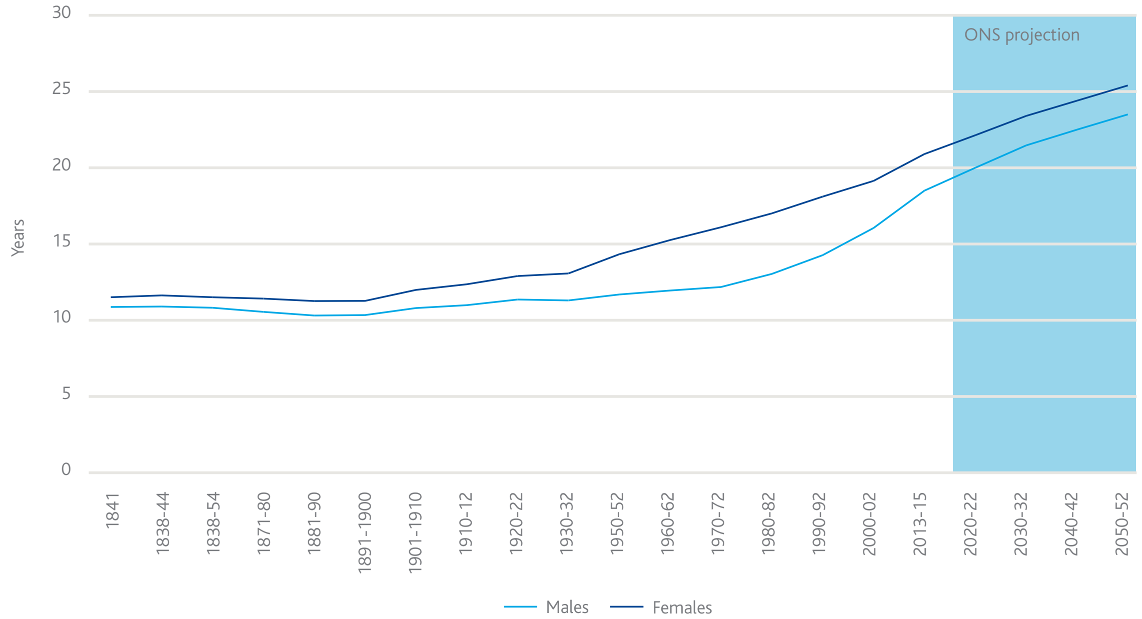


Source: ILC-UK analysis of ONS (2016) Nowcasting household income in the UK financial year ending 2016

Today's over 65s earned more income during their working lives than previous cohorts, managed to save more in private pension schemes than their parent's generation and benefitted from public policy initiatives that successfully reduced overall pensioner poverty. Indeed, we may be reaching a peak of pensioner wealth, with Defined Benefit pension schemes becoming less common and stagnant wage growth making saving for the future harder.

Older people are also living longer. Today the average person aged 65 can expect to live for at least 20 more years, and this is set to increase towards 25 years by the middle of the century. In fact, these projections may be an underestimate. Cohort life expectancy measures, which are seen as more useful predictors of individual life expectancy because they take future mortality improvements into account, suggest that individuals who are 65 today can reasonably expect to live to around 90.

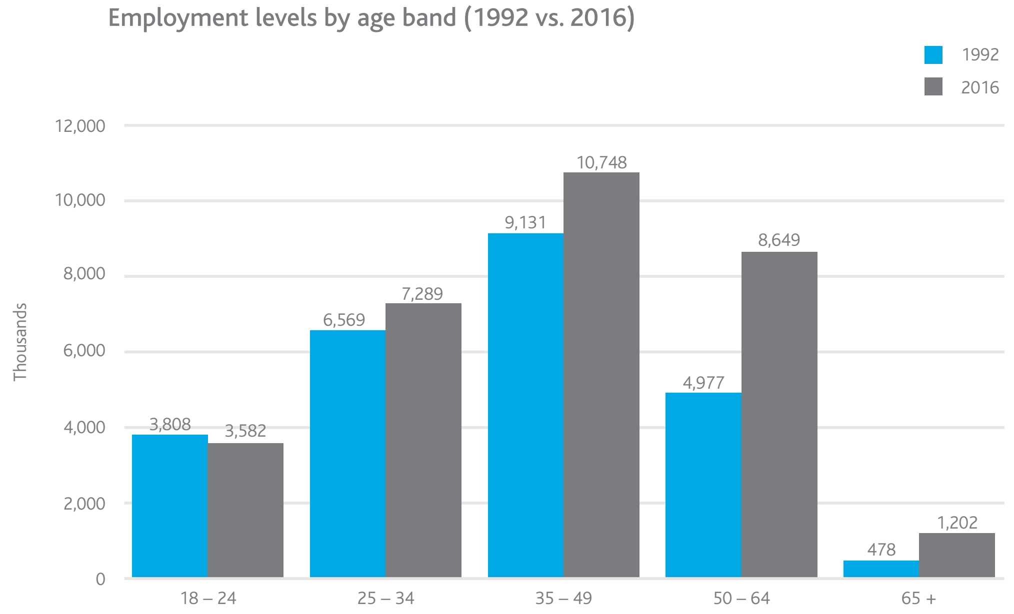
Historic and projected life expectancy at age 65 (1841-2052)

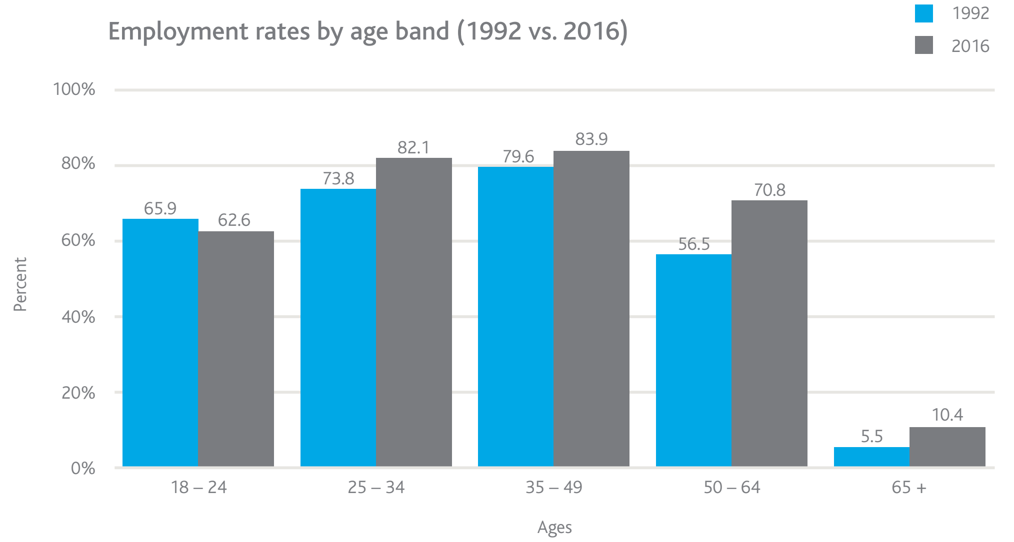


Source: ILC-UK analysis of ONS Decennial Life Tables and UK life expectancy 2014 Principal Projection
Notes: Data shows period life expectancies for men and women at age 65.

With life expectancy at 65 having significantly increased, people are working longer. Increasingly retirement is becoming a process rather than an event, with many older people continuing to work part time beyond pensionable age. Employment numbers amongst the over 50s have shot up since the early 1990s, with nearly 10 million people employed amongst this age group (of which 1.2 million are over the age of 65). Now 7 in 10 people aged 50-64 are in employment which is a significant increase on around just over half in 1992. The employment rate for the over 65s has also risen with 1 in 10 now employed amongst this age group. Self-employment is particularly prevalent amongst the over 65s – of all those employed over this age, 40% are self-employed which is equivalent to over 450,000 people. This number has more than doubled since 2009 as rates of self-employment amongst this age group, and the sheer number of older people increase[10].

10 For data on the self-employed see: ONS (2016) Employees and Self-employment by age, UK, 2001 to 2016. https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/adhocs/005894employeesandselfemploymentbyageuk2001to2016





Source: ILC-UK analysis of ONS (2017) Labour Market Statistics

Asset rich cash poor older people

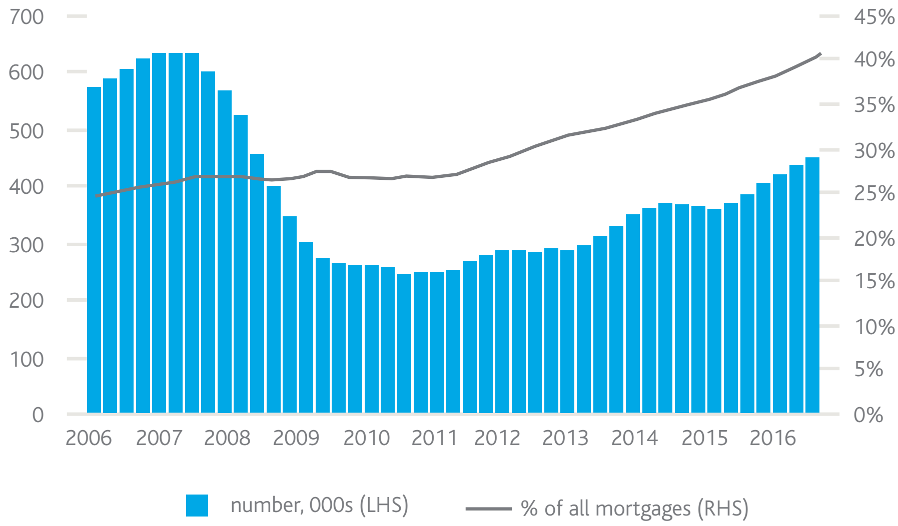
In addition to mortgage lending that extends into retirement, there is also increasing interest in reverse mortgages or equity release which is where individuals release equity from their home for various reasons, most usefully for older people who have no other means of deriving an income in retirement because they have few other assets. A high concentration of wealth in housing may be problematic for those approaching pensionable age. They may not have sufficient pension wealth to secure adequate retirement incomes but may have a significant amount of capital stored in property. This group is called 'asset rich cash poor' and is particularly sizeable. Defining this group can be somewhat arbitrary, but one study conducted by Cass Business School in collaboration with the ILC-UK defined it as those with incomes of less than £15,000 but assets worth more than £100,000. There are about 2.6m individuals in this group, of whom 1.4m are aged 65-74 and 1.2m aged 75+. Of those aged 75+ around 400,000 are thought to live alone[11]. Harnessing property wealth to support the incomes of these individuals could help to increase the quality of life in retirement and in some cases, pull people out of poverty.

Summary and discussion

Many young working people are unable to raise a deposit to get a mortgage. Meanwhile older people are becoming more prosperous and working for longer. It may therefore make sense for some individuals to start borrowing for a house later than has traditionally been the case, potentially with a longer mortgage term, and pay it off after the age of 65. This would still be broadly consistent with life cycle economic theory, if consumers and lenders anticipate a regular and substantial income stream throughout retirement. According to data from the Council of Mortgage Lenders, while the number of new mortgages extending beyond 65 fell after the financial crisis, they have since picked up slightly and continue to grow as a proportion of overall mortgage lending – now accounting for around 41% of all mortgages. Lending volumes that extend beyond 65 therefore remain down on pre-crisis levels – which may be a reflection of the fall in approvals generally – but account for an increasing share of the overall market.

11 Mayhew and Smith (2014) The UK Equity Bank Towards income security in old age, Report for the ILC-UK. http://www.ilcuk.org.uk/images/uploads/publication-pdfs/The_UK_Equity_Bank_1.pdf.

Number and proportion of mortgages extending to age 65 and beyond



Source: Regulated mortgage survey, CML estimates

While lending into retirement may be a rational response to economic and demographic trends there are potential pitfalls for lenders and borrowers. Financial institutions that offer mortgage loans which will not be paid off until borrowers are over pensionable age will need to have confidence that individuals can pay off the loan after leaving the workforce. This means they must be confident that borrowers can derive a sufficient income stream from their accumulated savings and pensioner benefits or alternatively work into their late 60s and 70s to pay off their debts. While current pensioner incomes are higher than ever before, this trend may reverse for future generations who have not benefitted from such substantial wage growth or investment returns as their parents did during their working lives. Future pensioners will also have more choice about how they use their accumulated pension savings. No longer required to annuitise their pension wealth at the point of retirement, there are risks that future generations will fail to act rationally and use their accumulated savings for one-off big ticket items rather than deriving a retirement income from it or using it to pay down pre-existing debts. The potential for such behavioural responses to "freedom and choice" in pensions makes lending into retirement complicated.

In terms of equity release, older consumers who invested predominantly in housing wealth but have little financial or pension wealth and no other sources of private income, might benefit from borrowing against their home to derive an income during their retirement years. This would ensure that overall consumption for this group remains stable during later life. Equity release may therefore be a rational choice for those who are asset rich cash poor, but rates of take-up have remained persistently low for many years – and this is not just common to the UK but also other markets in high income countries. Moreover, our analysis of WAS data show that only a tiny minority of homeowners (less than 1%) raise any money from equity release. Providers must therefore overcome continued resistance from individuals who either do not trust equity release due to past mis-selling scandals or fail to understand what it could deliver for them since the product is perceived as complex and expensive.

Having explored the potential reasons for changing patterns of mortgage borrowing, including the increased interest in older borrowing amongst consumers and lenders, this report now focuses on the characteristics of those people who currently have a mortgage in retirement. We then explore the characteristics of future mortgage borrowers in retirement before comparing results from the two groups.

Chapter 3

Characteristics of current borrowers in retirement

About this chapter

We have seen how mortgage borrowing tends to be associated with younger homeowners and how outstanding mortgage debt tends to dissipate with age. However, a substantial proportion of homeowners may not have paid off their mortgage until they reach retirement, and therefore it is worth investigating the extent to which this may or may not represent a problem for them. To this end, this chapter explores the socioeconomic characteristics associated with those currently borrowing in retirement.

Approach and methods

Our empirical investigation draws on data from the Wealth and Assets Survey (WAS). The WAS is a longitudinal survey that interviewed individuals and households across Great Britain; wave one achieved approximately 30,000 household interviews, wave two achieved approximately 20,000 household interviews, wave three achieved approximately 21,000 household interviews and wave four achieved approximately 20,000 household interviews.

The WAS can be used to assess the economic well-being of households as it gathers information on the ownership of assets (financial assets, physical assets and property), pensions, savings and debt. It is funded by a consortium of government departments and others: Department for Work and Pensions; HM Revenues and Customs; HM Treasury; Financial Conduct Authority; Scottish Government and the Office for National Statistics. Fieldwork is undertaken by the Office for National Statistics.

The WAS contains information on every household member, including children. However, for our analysis, we will only refer to the household reference person (HRP), who is generally responsible for financial decisions.

Approach

We pool observations across the four survey waves of the WAS to increase sample sizes and investigate the socio-economic characteristics of current and future borrowers in retirement.

Current borrowers in retirement are individuals – either household reference person (HRP) or their partner – aged 65 and over with outstanding mortgage debt.

Future borrowers in retirement are individuals – either HRP or their partner – aged 35 to 64, who have outstanding mortgage debt which won't be paid off by the time they turn 65.

We start by describing the following demographic characteristics:

- Gender (binary variable equal to 1 if female);
- Two measures for level of education (whether or not they have a degree, whether or not they have no qualifications);
- Marital status (being married or cohabiting; single, widow or divorced);
- Household size;
- If aged 35 to 64, we also look at economic status (employee, self-employed, unemployed) and 'inactive' (including students, homemakers, sick/disabled people and pensioners).

We then look at differences in psychological attitudes such as:

- Spending vs. saving: (Binary variable equal to 1 if the respondent claims to be a spender rather than a saver);
- Risk attitude: (Binary variable equal to 1 if respondent prefers a 1 in 5 chance of winning £10,000 to a guaranteed win of £1,000).

Finally, we look at economic factors such as:

- Net household income;
- Net financial and pension wealth,
- Value of the home of residence.
- For the sample of people aged 35 to 64, we also consider an affordability index equal to the ratio of outstanding mortgage debt to household income.

Definition of the main economic variables

Variable	Definition
Mortgage debt	Continuous variable including self-reported total outstanding mortgage on main residence (including repayment and all-in-one mortgages). Excludes equity release schemes. Only non-zero values.
Housing wealth	Continuous variable including only the self-reported value of the residential home for homeowners. We trimmed the top 1% of the distribution to clean the sample from outliers.
Individual pension wealth	Continuous derived variable provided by the WAS: total value of defined benefit occupational scheme, total value of current Defined Contribution (DC) pension wealth, total value of AVCs scheme, total value of current personal pension scheme, value of total retained Defined Benefit (DB) pension wealth, total value of retained rights in DC scheme, total value of retained rights for drawdown, value of pensions in payment, value of pensions expected from former spouse/partner[12]. Includes zero values. We trimmed the top 1% of the distribution to clean the sample from outliers.
Net financial wealth	Continuous derived variable provided by the WAS and includes all financial assets, such as current or saving account deposits, ISAs, fixed term investment bonds, corporate bonds, shares, national savings products and life insurance products. We trimmed the top 1% of the distribution to clean the sample from outliers.
Household income	Continuous variable indicating the sum of all personal incomes of the HRP and their partner. The WAS does not provide a derived variable for total personal net income, so we have constructed it by adding up employee income, profit from self-employment (which can be negative), earnings from second jobs, and capital income – including income from rent, investments etc. We trimmed the top 1% of the distribution to clean the sample from outliers.

12 Note that, while net property wealth, physical wealth and net financial wealth are calculated simply by adding up the value of assets (minus liabilities, if applicable) for every household in the dataset, private pension wealth is more complicated because modelling is needed to calculate the value of current occupational pension wealth, retained rights in occupational pensions etc for each household. As with all models, the results depend on the assumptions made. For reference, consult the WAS user guide

Current borrowers in retirement: the headline numbers

- Approximately 4.9% (or 470,000) of people aged 65 and over have not paid off their mortgage; the proportion of borrowers in retirement is higher among the 65-69 age group (9.3%, equivalent to approximately 300,000 people) and progressively lower across the older age groups, with only 2.2% of population aged 75 and over still paying off a mortgage.
- The amount of outstanding debt also decreases with age, from approximately £68,000 at age 65-69 to roughly £32,000 among the 75+. We should however bear in mind that the latter group is a very small sample size, so the estimates should not be scaled up to population level.
- On average, people aged 65 and over have 8.4 years left to pay off their mortgage, which means that many of them will be debt-free by their mid-seventies. However, the average number of years left before they pay off their mortgage is higher for people aged 75 and over.

Identifying current borrowers in retirement

		Among those who have not paid off their mortgage	
	Proportion with a mortgage	Average years left to pay off the mortgage	Average outstanding mortgage debt
65-69	9.3%	7.4	£67,973
70-74	4.3%	9.4	£51,314
Aged 75 and over	2.2%	10.7	£32,421
All 65+	4.9%	8.4	£57,628

Source: Our elaborations from WAS (2012-2014); data are weighted using cross sectional weights.

The characteristics of current borrowers in retirement

To explore their characteristics, we split individuals aged 65 and over in two groups depending upon whether or not they have outstanding mortgage debt. In other words, current borrowers in retirement are homeowners (HRP or their partner) aged 65 and over with mortgage debt; non-borrowers are homeowners (HRP or partner) aged 65 and over who own their home outright[13].

13 This section of the analysis pools observations across the four survey waves in order to increase sample sizes.

In the table on the next page, we summarise the socioeconomic characteristics of current borrowers in retirement. For a detailed definition of the socio-economic characteristics, please refer to the approach and methods section.

At this stage of the analysis we are not explicitly modelling the simultaneous impact of all variables, but we are just looking at mean differences across the two groups (borrowers and non-borrowers) and testing whether such differences are significantly different from zero.

Sociodemographic and psychological characteristics

At first glance, estimates in the table overleaf tell us that the group 'current borrower in retirement' significantly differs from 'non-borrowers' in a number of ways:

- It comprises fewer people without any qualification (26.7% vs. 32.8%);
- Fewer widows/widowers (10.4% vs. 19.3%),
- But more divorced or separated people (14.8% vs. 5.8%); a smaller household size (1.81 vs. 1.92).
- In terms of psychological attitudes, a higher proportion of current borrowers in retirement find it more satisfying to spend money than save than outright homeowners of the same age (37.5% vs. 31.5%).

We find no significant difference in risk preferences (proportion of people who prefer a 1/5 chance of winning £10,000 to a guaranteed sum of £1,000) between the two groups.

Economic and financial characteristics

We also looked at economic attributes, and specifically household income, pension wealth, financial assets, housing value, outstanding mortgage debt and an indicator of affordability consisting of the ratio of outstanding mortgage debt to household income.[14]

All the differences in economic and financial attributes between the two groups are large and statistically significant:

- Borrowers in retirement have higher household income (+£6,295),
- Higher accumulated pension wealth (+£29,845) and
- A higher housing equity (+£21,113).
- Borrowers in retirement have, however, accumulated substantially fewer financial assets (-£38,550).

14 We estimate outstanding mortgage debt and affordability only for the sample of borrowers in retirement, given that figures for the other sample will be equal to zero.

- On average, current borrowers in retirement have an outstanding mortgage debt of £52,613 equal to approximately 2.7 times their household income.

The results are broadly in line with what might be expected, namely those who are borrowing in retirement are able to do so because they have higher income and higher pension wealth, meaning that they can afford to continue borrowing. They do however, have fewer liquid financial assets, so may be less able to absorb sudden income shocks in retirement. Average outstanding mortgage debts are small relative to the value of their house and income.

Comparing socioeconomic characteristics of current borrowers in retirement with not borrowers

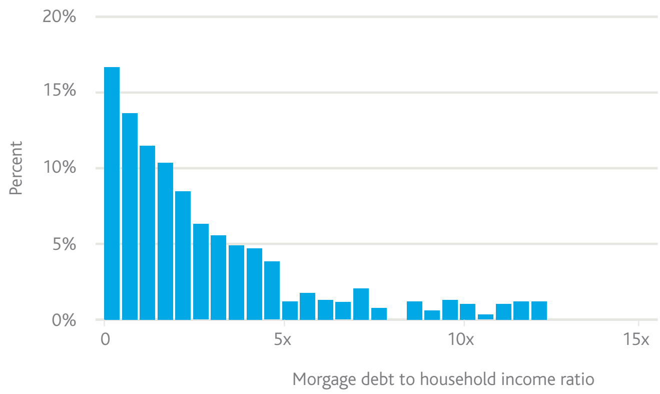
	Current borrower in retirement		Not borrower in retirement		Means across groups significantly different
Demographics	Mean	Stand Dev	Mean	Stand Dev	
Female	46.7%	49.9%	49.3%	50.0%	0.1527
With a degree	21.3%	40.9%	19.1%	39.3%	0.1243
No qualifications	26.8%	44.3%	32.8%	47.0%	0.0003***
Married or cohabiting	72.5%	44.7%	71.0%	45.4%	0.2462
Widowed	10.4%	30.5%	19.3%	39.5%	0.0000***
Divorced or separated	14.8%	35.5%	5.8%	23.3%	0.0000***
Household size	1.81	0.60	1.92	0.67	0.0000***
Psychological attitudes					
Find it more satisfying to spend money than to save	37.5%	48.4%	31.5%	46.5%	0.0018***
Prefer a 1/5 chance of winning £10,000 to a guaranteed sum of £1,000	19.8%	39.9%	17.8%	38.3%	0.1353
Economic attributes					
Net household income	£28,012	£40,794	£21,717	£37,729	0.0000***
Pension wealth	£176,812	£261,050	£146,967	£206,875	0.0000***
Financial assets	£30,893	£58,360	£69,443	£103,099	0.0000***
Value of residential home	£292,275	£262,581	£271,162	£197,383	0.0032***
Outstanding mortgage	£52,613	£52,013			
Outstanding debt to HH income ratio	2.69x	2.71x			
# observations	837		15,004		

Source: our elaboration from WAS (waves 1-4); *** p<0.01, ** p<0.05, * p<0.1;

Distribution of mortgage debt amongst retiree borrowers

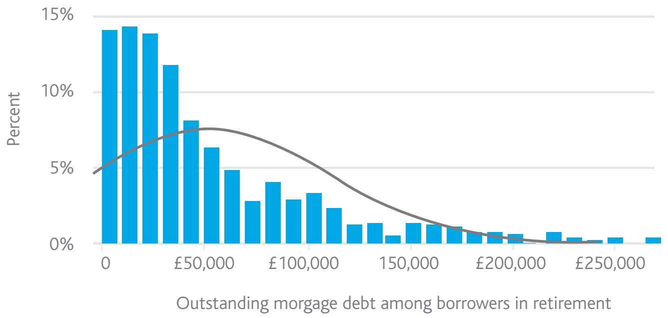
On the face of it, the results suggest that, on average, we do not need to be overly concerned about the individuals with mortgage debt in retirement. However, averages can mask significant distributional differences. We therefore look at the distribution of mortgage debt and distribution of mortgage debt to income ratios amongst the over 65s who are borrowing. In both instances, most borrowers are concentrated at the lower end with low debt to income ratios and small outstanding mortgages. However, a very small number of households in the WAS sample registered with high debt-to-income values but given the small sample size we cannot be sure exactly how many households this equates to amongst the country at large. While it may be a relatively small number overall, these households could well find themselves in financial difficulty with outstanding loans over five times as large as incomes in retirement. More work is needed to explore these individual's circumstances, whether they are in financial distress and what measures lenders might be able to take in response.

Affordability Index among current borrowers in retirement: Distribution of mortgage debt to household income ratio (2006-2014)



Source: our elaboration from WAS (waves 1-4); sample: mortgage borrowers aged 65 and over; sample size 693.

Distribution of outstanding mortgage debt among current borrowers in retirement (2006-2014)



Source: our elaboration from WAS (waves 1-4); sample: mortgage borrowers aged 65 and over; sample size 843.

Summary

In this chapter, we have explored the characteristics of households who are currently borrowing into retirement and compared them with those homeowners in retirement who have paid off their mortgage debts. Overall, our findings suggest that these consumers are unlikely to struggle to pay back their loans. Mortgage borrowers over the age of 65 typically have higher incomes and pension wealth than homeowners who do not have a mortgage, while the average size of the outstanding loan to household income is relatively low. The big exception to this is the 30% or so of the over 65 mortgage borrowers who have interest only mortgages – something we explored earlier in this report. While some of this group may have relatively high incomes and asset values, they still need to engage with their lender and develop a repayment plan, while some may simply not be able to repay. Finally, a distributional analysis of affordability suggests that the clear majority of older borrowers have low mortgage debt to incomes ratios.

Chapter 4

Characteristics of future borrowers in retirement

About this chapter

Whereas the last chapter explored the characteristics of current mortgage borrowers in retirement, this chapter explores the characteristics of those individuals who are yet to retire but may, given their current mortgage term, be borrowing into retirement. This allows us to see if there are likely to be differences in the challenges facing tomorrow's borrowers in retirement versus today's.

Approach to identifying future mortgage borrowers in retirement

To identify future mortgage borrowers, we analyse data on outstanding mortgage debt and mortgage term by age. We define future mortgage borrowers as those who are currently aged 35-64 and whose mortgage terms will mean they still have outstanding debt after the age of 65. We investigate this age group because, by our definition, all those aged 65 and over who have a mortgage are (current) borrowers in retirement, while there is far more uncertainty about the future facing the under 35 age group so we exclude this youngest group from our analysis.

Future borrowers: the headline numbers[15]

- We estimate that approximately 6.4% (or 1.42 million) of people aged 35 to 64 will not have paid off their mortgage before entering retirement given the current term of their loan.
- The proportion is much lower among the 35 to 49 age group (5.4% equivalent to 230,000 people) and higher among the 55-59 age group (11.4%, equivalent to 400,000 people).
- The amount of outstanding mortgage debt (among mortgage borrowers) decreases with age, from approximately £160,000 at age 35-39 to roughly £85,000 among the 60-64.
- On average, future borrowers in retirement aged 35 to 64 have 17.8 years left to pay off their mortgage, while those aged 60 to 64 have 10.8 years left.

15 We cannot rule out that more working age people today extend the duration of their mortgage and therefore become future borrowers in retirement.

Identifying future borrowers in retirement

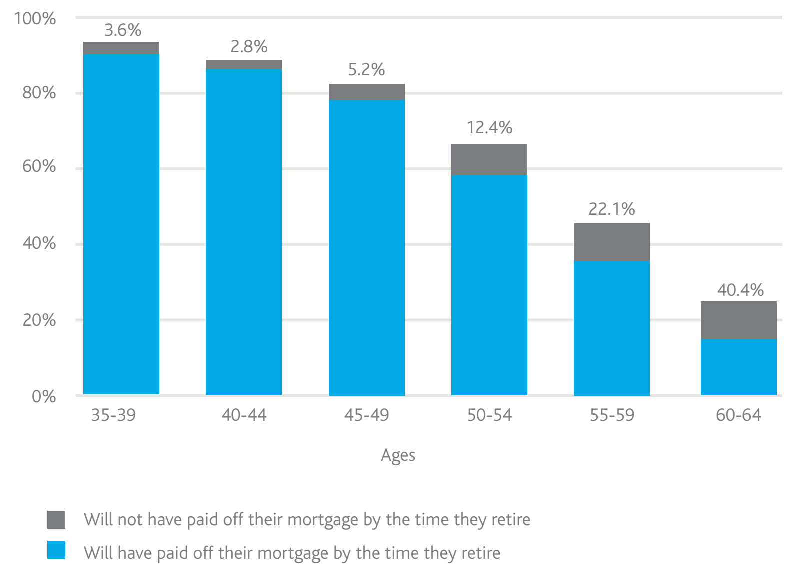
		Among those who may not have paid off their mortgage by age 65	
	Future borrowers in retirement	Average years left to pay off the mortgage	Average outstanding mortgage debt
Aged 35-39	3.3%	31.9	£161,058
40-49	2.6%	28.1	£155,201
45-49	4.2%	22.7	£152,695
50-54	8.2%	18.7	£133,799
55-59	10.0%	14.3	£114,593
60-64	9.8%	10.8	£85,235
All 35-64	6.4%	17.8	£122,738

Source: Our elaborations from WAS (2012-2014); data are weighted using cross sectional weights.

The prevalence of future borrowers amongst homeowners

The figure overleaf shows the proportion of future borrowers in retirement by age across all homeowners. The height of the bar represents the proportion of homeowners with a mortgage; even though approximately 42% of homeowners aged 60-64 who have a mortgage are projected to be borrowers in retirement, the overall numbers are rather small, because only 1 in 4 homeowners in that age group has a mortgage. This is consistent with what we might expect given economic theory, with the vast majority of individuals paying down their debts in their middle age and having no mortgage debt in retirement. Moreover, it shows that amongst all homeowners, only a small minority have loans that they will be paying off over the age of 65.

What proportion of homeowners who currently have a mortgage will still be paying it off by the time they retire?



Source: Our elaborations from WAS (2012-2014); data are weighted using cross sectional weights.

Characteristics of future borrowers

We have illustrated what socioeconomic characteristics distinguish people aged 65 and over who have paid off their mortgage from those who are borrowing in retirement. In this section, we look at the economic and demographic characteristics of future borrowers and test for differences between those who are likely to be future borrowers in retirement, and those who, according to their current mortgage term will have no outstanding mortgage by the time they turn 65.

Definitions

The group 'future borrowers in retirement' comprises homeowners (HRP or partner) aged 35-64 whose current mortgage term is such that they will still have outstanding debt by the time they turn 65; non future borrowers in retirement comprises homeowners (HRP or partner) aged 35-64 who either own their home outright[16] or have a mortgage term such that they will have paid their mortgage off once they turn 65.

16 This could include those who have inherited their home or may have been cash buyers.

Sociodemographic and psychological characteristics

In terms of demographic characteristics, the borrower/not borrower groups differ only along two dimensions:

- The group 'future borrowers in retirement' comprises fewer women (45.6% vs. 54.8%), and significantly more divorced or separated people (14.8% vs. 9.8%). However, there are no significant differences in terms of educational attainment or other marital statuses, such as being part of a couple or being widowed.
- In terms of psychological attitudes, future borrowers in retirement answer more frequently that they find it more satisfying to spend money rather than save (38.4% vs. 34.6%). However, we find no significant difference in risk preferences (proportion of people who prefer a 1/5 chance of winning £10,000 to a guaranteed sum of £1,000).

Economic and financial characteristics

We also looked at economic and financial characteristics, and specifically household income, pension wealth, financial assets, housing value, and an indicator of affordability consisting of the ratio of outstanding mortgage debt to household income.

- Most of the differences in economic attributes between the two groups are relatively small, except for the affordability index, which is significantly larger among future borrowers in retirement (2.9x vs. 0.85x).
- Future borrowers in retirement have lower accumulated pension wealth (-£14,537) and lower financial wealth (-£26,277). However, they have a higher housing equity (+£26,300).
- It is worth noting that, in terms of socioeconomic characteristics, future borrowers in retirement differ not only from their immediate counterparts, i.e. people of the same age group but with fewer years left to pay off their mortgage, but also from current borrowers in retirement.

Summary statistics of future borrowers in retirement (aged 35-64)

	Future borrower in retirement		Not a future borrower in retirement		Means across groups significantly different
	Mean	Stand Dev	Mean	Stand Dev	
Demographics					
Female	45.6%	49.8%	54.8%	49.8%	0.0000***
With a degree	30.6%	46.1%	29.1%	45.4%	0.2201
No qualifications	13.2%	33.9%	12.7%	33.3%	0.5762
Married or cohabiting	78.7%	41.0%	81.0%	39.2%	0.0326**
Widowed	2.3%	15.1%	2.6%	16.0%	0.2462
Divorced or separated	14.3%	35.0%	9.8%	29.8%	0.0000***
Household size	2.6	1.2	2.6	1.1	0.0427**
Job Status					
Employee	63.7%	48.1%	60.8%	48.8%	0.0329**
Self-employed	14.9%	35.6%	11.2%	31.6%	0.0000***
Unemployed	2.6%	16.0%	2.2%	14.5%	0.2578
Inactive (incl/ pensioners)	18.8%	39.1%	25.8%	43.8%	0.0000***
Psychological attitudes					
Find it more satisfying to spend money than to save	38.4%	48.7%	34.6%	47.6%	0.0034***
Prefer a 1/5 chance of winning £10,000 to a guaranteed sum of £1,000	19.4%	39.6%	19.7%	39.8%	0.7713
Economic attributes					
Net household income	£48,875	£61,461	£48,763	£62,370	0.9486
Pension wealth	£181,612	£264,072	£196,148	£258,213	0.0429**
Financial assets	£24,265	£54,634	£50,542	£87,045	0.0000***
Value of residential home	£305,260	£267,461	£278,959	£218,274	0.0000***
Outstanding mortgage	£97,872	£61,571	£32,212	£51,898	0.0000***
Outstanding debt to HH income ratio	2.92x	2.30x	0.85x	1.53x	0.0000***
# observations	1,413		15,985		

Source: our elaboration from WAS (waves 1-4); *** p<0.01, ** p<0.05, * p<0.1

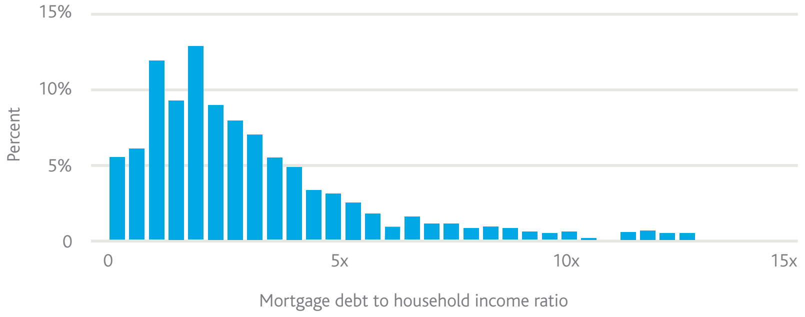
Discussion

While current mortgage borrowers in retirement have higher incomes than those who do not borrow in retirement, which should help to support affordability and overall financial wellbeing, future mortgage borrowers have similar incomes to those who are not borrowing. Future mortgage borrowers have also accumulated lower pension wealth and have fewer financial assets than those who are not borrowing. It may therefore be the case that future mortgage borrowers are somewhat more vulnerable in retirement than those who are currently in retirement when it comes to paying down mortgage debt. However, there is clearly a significant degree of uncertainty here given that many households still have many years left before they reach pensionable age and may have a change in financial circumstances and remortgage before then.

Once again though we need to explore the distribution of mortgage debt and mortgage debt to incomes amongst future borrowers to identify whether the averages are masking affordability challenges for some households. By comparison to our results for current borrowers, there is a slightly higher proportion of households with high loan to income ratios and household debt, but this may be because we are including individuals between the ages of 35-64 who will be at different phases of the lifecycle and therefore more likely to be borrowing more earlier in life. Moreover, values still appear to be concentrated at the lower end.

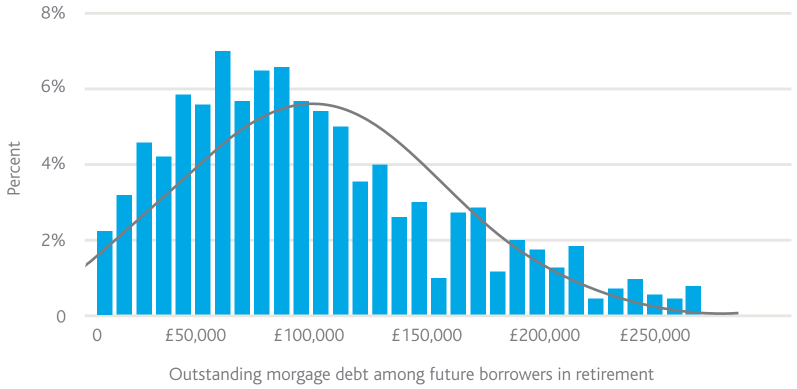
Distribution of mortgage debt amongst retiree borrowers

Affordability Index among future borrowers in retirement: Distribution of mortgage debt to household income ratio (2006-2014)



Source: our elaboration from WAS (waves 1-4); sample: mortgage borrowers aged 35 to 64 whose mortgage payments are likely to continue in retirement; sample size 1,211.

Distribution of outstanding mortgage debt among future borrowers in retirement (2006-2014)



Source: our elaboration from WAS (waves 1-4); sample: mortgage borrowers aged 35 to 64; sample size 1,319.

Chapter 5

Homing in on the factors that determine borrowing into retirement

About this chapter

While in the previous chapters we looked at how socioeconomic characteristics differed between borrowers and not borrowers, in this chapter we explore how the same characteristics jointly affect the probability of being a borrower in retirement[17]. The main difference between the two approaches is that, in this case, we isolate how each specific demographic or economic characteristic affects the probability of being a borrower in retirement holding everything else constant. For instance, we know that education and income are strongly correlated, and we have seen previously that a higher proportion of borrowers in retirement have a degree, and that borrowers in retirement have a higher income. But is having a degree associated with a higher probability of being a borrower in retirement once we take income into account? In this section, we will answer this type of question[18].

Sociodemographic and psychological determinants of 'current borrowers'

In terms of sociodemographics, we find no gender effects, which means that neither men nor women are more likely to be borrowing in retirement. In addition, we find that having no educational qualifications is associated with a lower probability of being a borrower in retirement, but having a degree has no impact.

Divorcees are 6.5 percentage points more likely to be borrowers in retirement, while we find no significant differences for married, singles or widow(er)s. A larger household size is also associated with higher probability of being a borrower in retirement, but the impact is rather small in magnitude.

In terms of psychological attitude, we find a weak association between being a self-professed spender and borrowing in retirement; conversely, we do not find any significant association between risk preferences and borrowing in retirement.

Economic and financial determinants of 'current borrowers'

Finally, we look at the impact of economic indicators, such as household income, real and financial assets, and pension wealth. Our analysis shows that higher household income and higher housing value are positively associated with the probability of being a borrower in retirement, while financial wealth has a negative association. In particular, a 1% increase in income is associated with a 1.6% increase in the probability of being a borrower in retirement; a 1% increase in the value of the home of residence is associated with a 1% increase in the probability of being a borrower

17 Results from a probit regression on pooled sample.

18 Full results from our regression analyses can be found in Appendix B.

in retirement; and a 1% decrease in financial wealth is associated with a 1.7% decrease in the probability of being a borrower in retirement.

Sociodemographic and psychological determinants of ‘future borrowers’

In terms of sociodemographics, we find some differences between the current generation of borrowers in retirement and the future one. In particular, while we could not detect any gender effects among homeowners aged 65 and over, we found that women aged 35 to 64 are significantly less likely to be future borrowers in retirement.

In addition, a larger household size at age 35 to 64 is associated with a lower probability of borrowing in retirement. The impact of a divorce is negative, as in the previous case, with divorced or separated homeowners aged 35 to 64 6.2 percentage points more likely to be borrowing in retirement than their married or single counterparts. Having a degree is associated with a small, albeit significantly higher probability of borrowing in retirement.

Economic and financial determinants of ‘future borrowers’

Finally, when looking at the impact of economic factors, such as household income, real and financial assets, and pension wealth, we uncovered the same relationships we had already witnessed for households aged 65 and over. In particular, higher housing wealth and to some extent higher household incomes are associated with a higher probability of being a future borrower in retirement, while higher financial wealth leads to a reduced probability, and pension wealth shows no association.

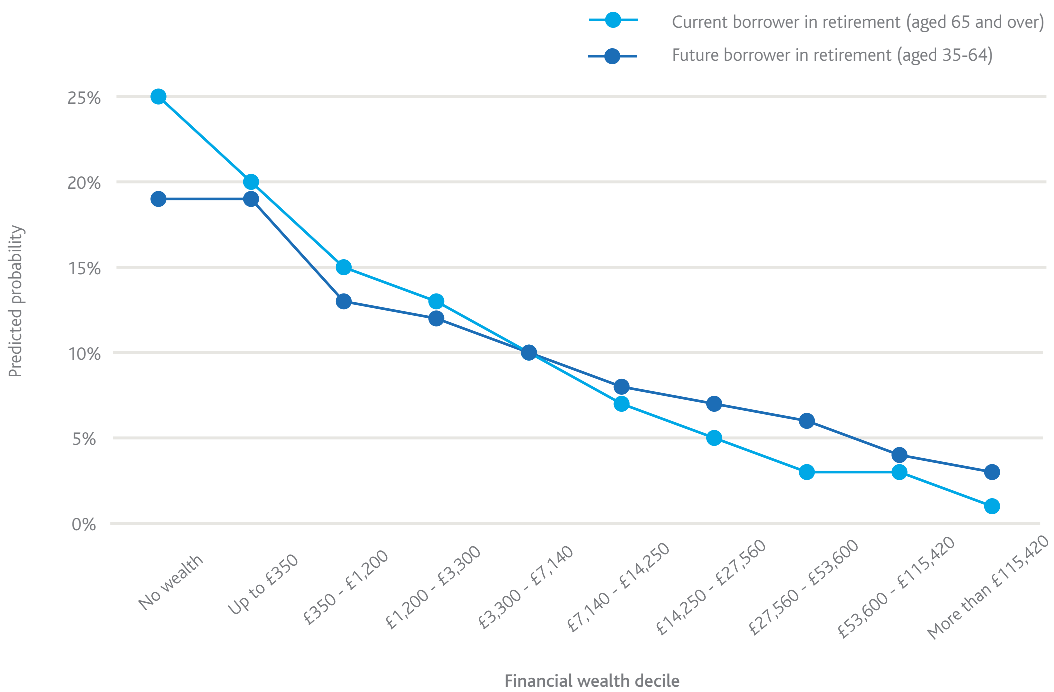
Focusing on the role of income and liquid financial assets in determining borrowers

While we have started to explore the relationship between income, wealth and borrowing in retirement by looking at average values, to understand really how economic factors affect the probability of borrowing in retirement, we need to look at the entire distribution of income and wealth.

Borrowers in retirement have less liquid wealth to fall back on

Estimates in the figure below show the predicted probability of being a (current or future) borrower in retirement at different wealth levels. While at the lowest levels of financial assets (less than £350 in total financial assets) the probability of being a borrower in retirement exceeds 20%, at the top wealth decile (more than £115,000 in financial assets) the probability of being a borrower in retirement drops to zero for people aged 65 and over, and to less than 3% for people aged 35 to 64. This does imply greater vulnerability for mortgage borrowers since they are less likely to have financial assets to fall back on if they face income shocks, while they must continue to keep up mortgage repayments.

The relationship between borrowing in retirement and financial wealth



Source: Our elaborations from WAS (2006-2014); graph shows marginal effects at mean values after probit regression.

...but higher incomes do matter, especially for current borrowers

The impact of household income on the probability of current and future borrowing in retirement goes in the opposite direction, and differs for the two groups. While the probability of being currently borrowing in retirement rises significantly with income for people aged 65 and over, it is substantially flatter for the potential future borrowers, i.e. people aged 35 to 64.

Clearly higher incomes help to support affordability, so it is good to know that higher incomes are associated with current mortgage borrowers. But the story is not so clear with regards to future mortgage borrowers, where the relationship is not as strong. This group appears more vulnerable, since middle to lower income households are similarly likely to be borrowers as high income households and they have low levels of financial assets.

The relationship between borrowing in retirement and income

Source: Our elaborations from WAS (2006-2014); graph shows marginal effects at mean values after probit regression.

Summary

This chapter has undertaken in-depth statistical analysis in order to control for the different factors which help determine whether someone is borrowing into retirement. As with our previous analysis, this chapter finds that being a divorcee and having higher income are both important factors – particularly for current mortgage borrowers in retirement. However, perhaps more worryingly, it also confirms our earlier finding that income levels are less important in determining the likelihood of being a future mortgage borrower, which may tentatively suggest affordability challenges will be more acute amongst this younger group.

Chapter 6

Conclusions and recommendations

Fuelled by a rise in the number of people over the age of 65, combined with long run wage stagnation and overvalued house prices, the number of households borrowing into retirement looks to be on the increase.

While it may only be a minority of total households that are currently borrowing in retirement and that are expected to borrow in retirement in the future, the numbers are significant – both in terms of overall numbers of households and levels of debt. The big overarching question, is whether those who are borrowing into retirement can afford to do so, or whether such borrowing is actually the result of unforeseen circumstances that have reduced anticipated lifetime household income which may ultimately lead to affordability challenges and financial distress.

In this context, this report has explored differences between mortgage borrowers and non-borrowers in retirement. In the main, our results are consistent with what might be expected if people are acting rationally, especially for current borrowers. Current borrowers have higher incomes, larger housing equity and bigger pension wealth than non-borrowers which is perhaps reflective of a relatively affluent group who are somewhat more disposed to spending rather than saving over the lifetime. Our distributional analysis of debt to incomes amongst current borrowers suggest that debts are concentrated at the lower end of the distribution, meaning that they are affordable for the clear majority.

There are, however, some important things to bear in mind which may hint at potential problems for some consumer segments. First, around 30% of current mortgage borrowers have interest only mortgages. While some of this group may have relatively high incomes and asset values[19], they still need to engage with their lender and develop a repayment plan, while some may simply not be able to repay. Second, current borrowers are more likely to be divorced or separated, which, in itself, can act as a financial shock to the individual thereby making it harder to repay existing debts. Third, those who are currently borrowing into retirement have fewer liquid financial assets, making it harder for them to cope in the event of a sudden shock, such as needing long term care. Perhaps though, higher pension wealth and incomes may offset this risk.

19 Consistent with the FCA's 2013 review of interest only borrowers: https://www.fca.org.uk/news/press-releases/fca-publishes-findings-review-interest-only-mortgages-and-reaches-agreement

The story for future retirement borrowers is perhaps not quite as positive. They do not appear to be more wealthy or have higher incomes than future non-borrowers. Indeed, there are no significant differences between the incomes of future borrowers and future non-borrowers, while values for pension wealth and liquid financial assets are lower amongst borrowers. When looking at the relationship between income levels and the chances of being a future borrower, we only find a weak positive statistical relationship, by comparison to a strong, positive one amongst current borrowers. The distributional analysis of future borrowers is also less clear, with a wider dispersion of mortgage debt to income ratios across the population of future borrowers.

The above findings suggest that, overall, current borrowers who are in retirement will be able to afford their mortgage. Future borrowers in retirement may not all be as financially comfortable. However, there is clearly a significant degree of uncertainty here given that many households still have many years left before they reach pensionable age and may remortgage before then.

But any concerns over affordability facing future borrowers are likely to be exacerbated by continued stagnant wage growth over future decades, which at the time of writing looks the most likely scenario for wage growth. It will be important to watch this space very carefully, and to consider ways to reduce mortgage debt burdens where possible.

Crucially, our research suggests the possibility of a significant shift 'up the age scale' in the housing and mortgage market. We therefore need a market that is able to adapt and deal with change, on two levels:

- **At the level of the individual borrower** to help older consumers respond to life events and subsequent changes in needs and circumstances
- **At the market level** to accommodate demographic and economic shifts such as people working for longer, entering retirement in stages and changes to the pension landscape.

What does the mortgage market need to look like to deal with the growth, and the changing needs, of borrowers over the coming years? We discussed these recommendations at a policy roundtable with mortgage experts from across the industry, with the aim of describing a more adaptable market in the future.

Recommendations for industry and regulators

Know your customer – throughout the life of the mortgage

The growth in the number of borrowers in retirement doesn't mean they are all in the same situation. Understanding the different market segments is vital, as is understanding how these might evolve and people may move between them as circumstances change.

While this report has looked at the characteristics of two broad groups – current and future mortgage borrowers – there are important sub-groups within these. Interest only mortgage holders amongst the over 65s potentially represent a problem for people who cannot afford to repay the capital, while future mortgage borrowers with low incomes and little pension wealth are clearly cause for concern. More work is needed to identify the different subgroups of interest and to develop appropriate industry and regulatory responses. We therefore welcome the emerging approach being taken by the Financial Conduct Authority which is seeking to advance a more nuanced view of consumer vulnerability and how it relates to the mortgage market at older ages.

Given the multitude of events that can happen to anyone – needing to stop work, to seek social care or the death of a partner – it is vital to move towards a better understanding of customers' evolving needs. Mortgage products and arrears processes need the flexibility to adapt to these 'trigger points' in people's lives, supplemented by regular communications, and perhaps routine, regular advice sessions through the mortgage term.

Lenders should be aware of specific vulnerabilities which may be more likely to affect older individuals. For instance, there are currently 850,000 people with dementia in the UK – equivalent to 1 in 79 of the whole population, rising to 1 in 14 people over the age of 65[20]. Staff need to be trained to recognise vulnerability, including the ability to recognise the signs of dementia and other cognitive vulnerabilities. During the policy roundtable we were delighted to hear that some firms are actively seeking to become 'dementia friendly'.

20 https://www.dementiastatistics.org/statistics/numbers-of-people-in-the-uk/

Recognise that age is only one factor

While in the past, lenders may have been reluctant to extend mortgages into retirement, this is changing as firms and the regulator realise that age is just one factor to take into account in the pricing and availability of mortgages. Borrowers cannot be rejected solely on the basis of their age but in the light of our findings mortgage lenders will need to keep their age policies under review to adapt to these developing trends.

The extent to which borrowers can afford to repay the mortgage over their retirement or on death is the important judgement in lending. Currently Mortgage Conduct of Business rules concentrate on income for determining affordability. The regulator may need to revisit this to look at models which better reflect the financial circumstances of many older borrowers.

To improve lending decisions for older borrowers the industry and regulators should look to learn from other spheres, such as incorporating the expertise of the actuarial profession on longevity risk; exploring with the High Net Worth sector how other accumulated assets – such as property, savings and stocks and shares - can provide reliable alternative forms of repayment; and learning from behavioural sciences on how to incentivise older borrowers to make sound financial choices in good time.

Recommendations to improve consumer outcomes

Encourage more partnerships and integration

Currently the delivery of expert financial advice is highly compartmentalised. Mortgage advisers, financial advisers and later life advisers look at different aspects of the financial planning processes. As a result, it may be the case that no single firm or adviser can provide a comprehensive financial planning or product solution for each older borrower, so will have to form partnerships and links with others. These arrangements should be open and flexible, and carefully designed so that they do not have gaps or barriers that prevent an older borrower’s interests being served.

In addition to these planning needs, it may be necessary to consider other lifetime events, such as advice around work, family and health over the long run and how these inter-relate with changing financial needs and circumstances.

Given the potential range and complexity of older borrowers’ circumstances, there may be a need for the relevant industry and professional bodies to seek further integration of advice across the marketplace. The Financial Conduct Authority should explore through its Ageing Population Strategy how regulation and permissions may need to change to enable this goal.

We also look forward to a forthcoming report from the Council of Mortgage Lenders which is looking at the advice framework in the round.

Recommendations for government

Drive new housing supply across a range of tenures and price points

Our analysis has shown a significant shift in the housing and mortgage market. This has in part been driven by the lack of supply of new homes combined with stagnant wage growth reducing affordability for many working age households. There is a risk that this will simply lead to longer mortgage terms, more expensive loan to income values and higher rental prices in the medium to long term. While there is agreement that more homes are needed, most of the focus has been on first-time buyers.

In response to the government's Housing White Paper, we would also urge more initiatives for last-time buyers, who have typically accumulated more housing wealth. This could unlock homes further down the chain for younger people[21]. A range of homes designed with older people in mind, with flexible spaces which can adapt as customers' needs change, could be an attractive option for last-time buyers.

However, our findings also show that a shrinking proportion of younger people are able to access mortgage finance. Reversing this trend will be difficult but the government may need to explore further expansion of shared ownership and shared equity models, as well as the increased supply of new homes which is needed. For those who may still find it difficult to get onto the housing ladder, a high-quality rental market with more certainty for tenants will be vital.

Planning for freedom and choice

The end of compulsory annuitisation and the introduction of more "freedom and choice" in the pension world is still a relatively new development. However, greater choice also has the potential to introduce greater uncertainty and complexity.

Lenders may be concerned about what this means for consumers who borrow on the basis that they will repay all or part of a mortgage out of pension income. It will be important for the mortgage industry, as well as the regulators and government to keep track of how consumers are behaving.

21 For more details see: Lyons et al (2016) How a greater focus on 'last time buyers' and meeting the housing needs of older people can help solve the housing crisis, Future of the Welfare State ILC-UK Thinkpiece. http://www.ilcuk.org.uk/images/uploads/publication-pdfs/Future_of_the_welfare_state_thinkpiece_-_Sir_Michael_Lyons.pdf

The importance of financial education

Pensions are complex and to deal with greater freedom and choice, consumers need to be equipped with the tools and expertise to make sound decisions. It is widely known that the level of financial literacy is low – not just in the UK but right around the world. This means that consumers may fail to make financial decisions in their long run interest. We must therefore find ways to increase financial literacy but also, and perhaps more challenging, explore ways to change our attitudes and behaviours towards money. In this regard, more hard evidence on what interventions work to raise financial capability is needed supported by high quality evaluations of pilots and projects that are currently ongoing.

The merger of the Money Advice Service with the Pensions Advisory Service and PensionWise provides an opportunity to rethink how we engage consumers in their retirement planning and raise financial capability. Sustained effort and long run political support are required to deliver positive outcomes for consumers and support better financial decision-making.

The policy workshop consisted of:

- Dudley Building Society
- Nationwide Building Society
- Santander UK plc
- Skipton Building Society
- The Family Building Society
- Coreco Group
- The Council of Mortgage Lenders
- The Equity Release Council
- The Building Societies Association

Appendix A:

Projecting future housing equity and mortgage debt

In order to project future mortgage debt and housing equity we collected data on current and historic homeownership, net housing wealth for homeowners, and mortgage debt by age. Data for the period 2006-2014 was sourced from the Wealth and Assets Survey and we calculated the change over time in each of the key variables. We then assumed that future rates of homeownership and mortgage debt by age rises/falls in line with the trend between 2006-2014.

The exception to this was property wealth which we assume rises in line with past trends for total household wealth rather than just property wealth. In order to project aggregate levels for housing wealth and mortgage debt we then apply household projections by age. To do this, we first collected household population projections for England via the DCLG Live tables on Household Projections (we used Detailed Tables for Modelling).

Given the absence of similar information for Wales and Scotland, we assumed the same future age distribution of households for Scotland and Wales as for England and apply these to overall population projections for these regions. This enables us to make a best guess as to the future household composition by age of Great Britain as a whole.

Appendix B:

Probability of being a 'borrower in retirement'/ 'potential future borrower in retirement' – Marginal effects at means of covariates

	(1) Borrowers in retirement	(2) Future borrowers in retirement
Baseline probability	0.0497	0.0745
Female	-0.003 (0.003)	-0.027*** (0.004)
With a degree	0.003 (0.005)	0.011** (0.005)
No educational qualification	-0.013*** (0.004)	0.004 (0.008)
Married or cohabiting	-0.017 (0.012)	0.005 (0.010)
Widow	-0.001 (0.010)	0.017 (0.020)
Divorced or separated	0.065*** (0.021)	0.062*** (0.016)
Household size	0.016*** (0.004)	-0.006*** (0.002)
I find it more satisfying to spend money than to save	0.008* (0.004)	0.007 (0.005)
I prefer a 1/5 chance of winning £10,000 to a guaranteed sum of £1,000	0.008* (0.005)	0.000 (0.005)
Natural logarithm of net personal income	0.016*** (0.002)	0.009*** (0.003)
Natural logarithm of pension wealth	-0.000 (0.002)	-0.001 (0.002)
Natural logarithm of financial wealth	-0.017*** (0.001)	-0.016*** (0.001)
Natural logarithm of housing value	0.010** (0.004)	0.032*** (0.005)
Economic Activity		
Self-employed		0.008 (0.007)
Unemployed		0.011 (0.017)
Inactive		-0.005 (0.006)
Year effects	YES	YES
Observations	11,958	13,992
Pseudo R^2	0.1017	0.0530

Standard errors in parentheses are clustered at the household level; *** p<0.01, ** p<0.05, * p<0.1

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