Research Report

What does the distribution of wealth tell us about future retirement resources?

by James Banks, Rowena Crawford and Gemma Tetlow

DWP Department for Work and Pensions

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Abbreviations

AVC	Additional Voluntary Contribution
BHPS	British Household Panel Survey
ELSA	English Longitudinal Study of Ageing
DB	Defined Benefit
DC	Defined Contribution
DWP	Department for Work and Pensions
ESRC	Economic and Social Research Council
FRS	Family Resources Survey
FSAVC	Free-standing Additional Voluntary Contributions
FTSE	Financial Times Stock Exchange
IFS	Institute for Fiscal Studies
ISA	Individual Savings Account
NEST	National Employment Savings Trust
ONS	Office for National Statistics
PEP	Personal Equity Plan
Q1, Q2, Q3, Q4	First/Second/Third/Fourth Quarter (of a calendar year)
WAS	Wealth and Assets Survey

Summary

The Wealth and Assets Survey (WAS) 2006/08 provided the first detailed picture of wealth holdings in Great Britain among individuals of all ages and was, therefore, an important and long overdue addition to the statistical evidence base.

The first descriptive report on WAS revealed stark differences in asset holdings, wealth levels and debts within the household population (Office for National Statistics (ONS) (2009)). However, from an economic perspective some of these differences are to be expected, and cross sectional differences in wealth, which reflects the 'stock' of all past saving, should not be analysed in the same way as cross sectional differences in 'flow' variables such as income.

This paper therefore examines the cross-sectional distribution of household wealth holdings from the first wave of WAS from the perspective of a 'life cycle' model of saving behaviour. Rather than just document differences across the population in their raw form, the analysis is aimed at using evidence from both the initial WAS report and the WAS microdata itself to illustrate what the distribution of pension wealth and other forms of wealth can tell us about the level of, and uncertainty about, future retirement resources.

Levels of wealth

Household wealth holdings are lower at younger ages than among those aged close to retirement and are also lower among the oldest households. This 'hump' shaped pattern is particularly pronounced among the most highly educated households (that is, households headed by someone with qualifications at degree-level or above).

Median wealth levels vary less by age among the lowest education group (that is, those households headed by someone with no educational or vocational qualifications).

Mid-education households hold, on average, lower levels of wealth than high education households, but more than low education households, with the 'hump' shape by age also being less pronounced.

Composition of portfolios

We also examine what type of assets households hold their wealth in, focusing on four broad categories of asset: liquid safe, liquid risky, illiquid safe and illiquid risky. Liquid and illiquid distinguish assets from which it is relatively easy to withdraw money and ones where it is harder to do so, respectively. Safe assets are broadly defined as those whose value is normally quite predictable, while risky assets are those asset types whose value can be more volatile. We also present evidence looking specifically at the holdings of unannuitised DC pension wealth and owner-occupied housing wealth.

We find that the composition of portfolios varies significantly by age and education group:

- the low education group, on average, hold more of their wealth in liquid safe assets and hold very few risky assets (aside from, in some cases, their home);
- the mid education group hold a much smaller fraction of their wealth in liquid safe assets, on average, than the low education group but they hold more of their wealth in their homes than the high education group do, on average;
- the high education group hold, on average, more of their wealth in explicit retirement savings vehicles (Defined Contribution (DC) pensions, Defined Benefit (DB) pensions and pensions in receipt) than the households with low and mid-education do.

Implications for future retirement resources

With many of the households still many years away from retirement and with only one cross-sectional observation of wealth holdings for each household, we should be cautious of inferring too much from just one wave of data. However, we have made some tentative observations about what the information of WAS 2006/08 can tell us about the prospect for future retirement resources.

Households headed by individuals with low education tend to hold very low levels of wealth. However, to the extent that education acts as a reasonable proxy for lifetime earning potential, this group may well have low income throughout their lives. Current legislation means that the number of people with full entitlement to state pensions will increase in future. This, together with the plan to increase the level of the Basic State Pension at least in line with average earnings in future[1], suggest that state pensions may provide a relatively high level of earnings replacement to those with low earnings throughout their lives. Therefore this group may not have much need to do substantial private retirement saving on top of this state provision in order to smooth their consumption over their lifetimes.

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[1] The June 2010 Budget set out plans to increase the level of the Basic State Pension each year from April 2011 onwards in line with the greatest of average earnings growth, Consumer Price Index (CPI) inflation and 2.5 per cent.

Security in retirement for this group may, therefore, depend more on the level and future indexation of state benefits than on their current or future private savings.

The majority of high education households aged close to retirement hold substantial levels of private wealth: 83 per cent hold more than £191,000 per adult in the household (including housing wealth). Younger high education households have much lower levels of wealth than their older counterparts but they also have many years before they reach retirement. Their final outcomes may well depend not only on how much they save but also how wisely they invest it and what unforeseeable shocks affect asset prices over the next few decades.

For mid-education households there is arguably greater uncertainty about whether their current wealth holdings imply their future retirement resources will be sufficient. They have some qualifications and so this group are, on average, likely to have higher lifetime earning potential than the low education group – thus state benefits will tend to provide a lower level of earnings replacement for this group than for the low education group. However, they have much lower average wealth holdings than the highly educated group and hold more of this wealth in their main home.

Younger mid-educated households face the same opportunities and dangers to their future retirement resource accumulation as young highly educated households.

Estimated impact of the recent asset price falls

The actual impact of the financial market and housing market declines during 2008 on households' wealth holdings will depend on many factors, including exactly how households had their wealth invested, how successfully they managed their money through the crisis and whether or not they were forced to default on their mortgages. However, we have made some tentative estimates of how household wealth may have been affected given what we know about the broad composition of portfolios and average asset price changes.

On average, we estimate that most households will have lost only a small fraction of their gross wealth. However, the proportion of net wealth lost is likely to have been higher for younger households – this is because their gross housing wealth (which will be affected by house price changes) tends to be largely matched by mortgage debt (the value of which would remain the same even if house prices fell) and thus their net wealth position tends to be more exposed to house price falls.

1 Introduction

For many years there has been debate – both in academic and policy circles, in Great Britain and abroad – about how and how much individuals save for retirement, whether their provision is adequate and, if not, why not, and what policymakers could do to help. However, much of this debate in Britain has gone on in the absence of any detailed information on how much wealth individuals in Britain actually hold. The release of the first (2006/08) wave of data from the Wealth and Assets Survey (WAS) provided the first detailed picture of wealth holdings in Great Britain among individuals of all ages and was therefore an important and long overdue addition to the statistical evidence base.

The first descriptive report on the Wealth and Assets Survey data (ONS, 2009) revealed stark differences in asset holding, wealth levels and debts within the household population. It showed that many households held very low levels of wealth in certain forms and had high debts. However, from an economic perspective some of these differences are to be expected, and cross sectional differences in wealth, which reflects the 'stock' of all past saving, should not be analysed in the same way as cross sectional differences in 'flow' variables such as income. Indeed, household saving and borrowing can only be meaningfully understood in the context of an economic model of behaviour over the life cycle. Such a model would typically predict 'optimal' savings levels and saving rates that differed by age groups and, within age groups, across groups that differed in their expectations of, for example, future earnings, retirement date or consumption needs.

This paper therefore examines the cross-sectional distribution of household wealth holdings from the first wave of WAS from the perspective of such a 'life cycle' model of saving behaviour. Rather than just document differences across the population in their raw form, our analysis is aimed at using evidence from both the initial WAS report and the WAS microdata itself to illustrate what the distribution of pension wealth and other forms of wealth can tell us about the level of, and uncertainty about, future retirement resources. In addition, we examine what effect the falls in asset prices seen between 2007 and 2009 might have had on the wealth holdings of households (both in aggregate and by broad household type) in Britain since the time that that the initial WAS data were collected.

Other nationally representative household surveys have previously collected information on wealth, but each data source has suffered from particular drawbacks which have meant that such a detailed analysis has not been possible to date. The Family Resources Survey (FRS) collects information each year on the types of assets held, but does not collect enough information on the amounts of wealth held nor any details of pension wealth. The British Household Panel Study (BHPS) collected information on wealth in 1995, 2000 and 2005. In addition, in 2001 and 2005 it also contained relatively detailed information on private pension wealth. A recent report analysed non-pension wealth holdings and wealth accumulation using the 2000 and 2005 BHPS data (Crossley and O'Dea, 2010) and showed that wealth holdings rose with income and age (except at the very oldest age groups) and that the vast majority of household wealth was held in illiquid forms, such as housing. They also found that those households paying into private pensions typically had higher non-pension wealth than households who were not paying into private pensions. However, for the type of analysis we present in this paper the sample size in the BHPS is too small to look at wealth patterns among individuals with particular combinations of characteristics and the level of detail on ownership of individual asset types is not sufficient. Finally, while detailed wealth analysis has been carried out using the English Longitudinal Study of Ageing (ELSA) (e.g. Banks, Emmerson, Oldfield and Tetlow (2005)) these data are only representative of the household population aged 50 and over in England.

To facilitate our analysis we investigate the level and distribution of net wealth holdings and the broad ways in which this wealth is held, with asset types grouped according to their riskiness and their liquidity (these concepts are discussed in more detail in Chapter 3). Throughout our analysis we take advantage of the large sample size of the WAS data and work with subgroups defined by age and educational qualification. The former allows us to restrict comparisons solely within groups of households at similar points in their life cycle, while the latter split is an attempt to look within groups of households that might be thought to have similar income profiles over the lifetime.

We find substantial differences, on average, in the levels of wealth held by households with different levels of education. We also find differences in how households hold their wealth – for example, whether they predominantly hold it in safe, accessible forms like bank accounts, or are more likely to have it invested in their main home. Given the patterns of wealth holdings observed in WAS, we conclude that there are some groups for whom there may be greater concern about the level of their future retirement resources, while for others either private savings or state benefits look likely to provide a reasonable level of retirement income.

Before turning to our empirical analysis, in Chapter 2 we begin by outlining some simple economic background to motivate our approach. Chapter 3 provides a brief description of the data used and some common elements of our methodology. Chapter 4 looks at the cross-sectional distribution of gross and net household wealth in Britain using wave one of WAS, focusing on variations by age and level of

education. Chapter 5 looks in more detail at the composition of household wealth portfolios. Chapter 6 draws out some implications of the level and composition of wealth holdings for future retirement resources, while Chapter 7 discusses what the effect might have been on household wealth holdings of the asset price falls seen between 2007 and 2009. Chapter 8 concludes.

2 Background and motivation

People save money and hence build up stocks of wealth for a number of reasons. The following motives, among others, have been outlined in the economic literature. First, there is the life cycle motive for saving – if individuals expect their income to vary over their lifetimes (which is likely if they expect to work for a number of years and then retire), they might wish to save during periods when their income is relatively high and draw down on their savings when their income is relatively low to smooth their consumption over their lifetimes. Second, there is a precautionary motive for saving – individuals may want to build up a stock of wealth to guard against unexpected future expenditures that might exceed their income; this will be particularly important if they think they may face credit constraints and thus would not be able to borrow to meet these expenses. Third, if individuals do face credit constraints, they may need to save in order to purchase large consumption items – such as cars, electrical goods or the down payment required to buy a house. Fourth, there might be a bequest motive – individuals may save simply so they can leave a bequest to their heirs when they die.

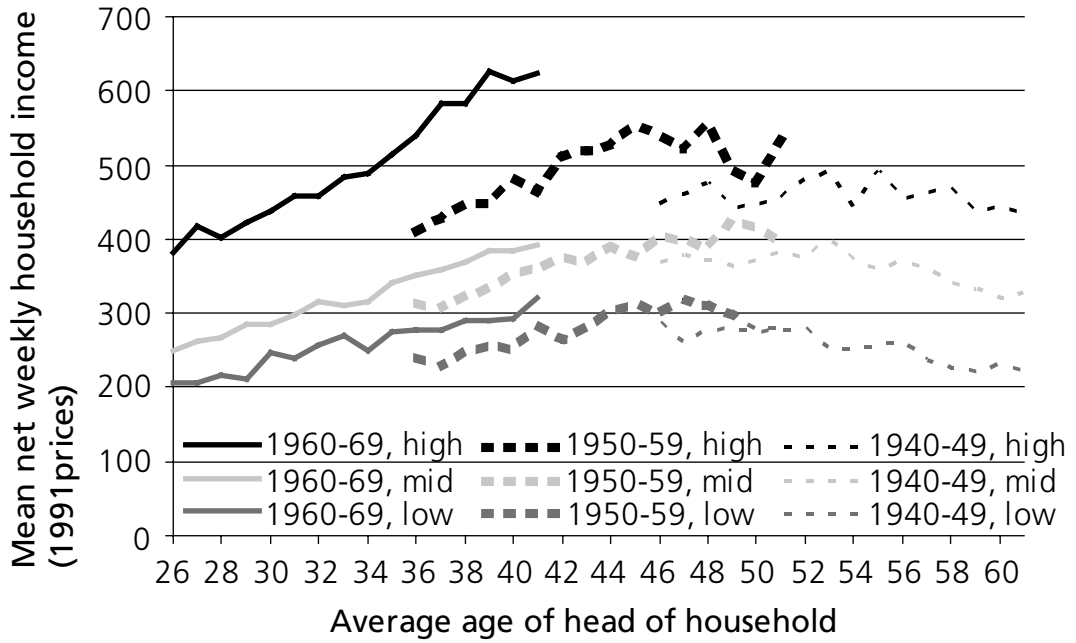
While savings cannot be subdivided neatly into these separate components – for example, liquid balances can be used to finance retirement or durable consumption in the event that adverse shocks do not occur – in this report we are principally interested in the first of these motives. In particular, we are interested in assessing what current wealth holdings can tell us about how well prepared households are to maintain their consumption levels during retirement, given that we would expect their incomes to drop at this point. However, our focus on the split between liquid (that is, easily accessible) and illiquid balances also allows us to look at the degree to which different groups of individuals may be able to use their existing stock of savings to buffer the effects of adverse shocks that may occur during working life.

We would expect individuals to have a greater need to build up assets for retirement if they expect their income during their working-age life to be significantly higher than any (non-asset-based) income to which they will have access in retirement. In Britain, compulsory contributory state pensions and means-tested benefits are available to all pensioners. The Pension Credit, for example, in 2008–09 amounted to £124.05 per week for a single pensioner, which was equal to about 22 per cent of average full-time earnings (DWP, 2008). Therefore, individuals who expect to be on fairly low earnings throughout their working lives may well have less need to build up a private stock of wealth, since state benefits are likely to be sufficient to allow them to maintain their consumption levels through retirement. Furthermore, for this group, the cost of foregoing £1 of consumption during working life in return for additional consumption during retirement may be very high given that they may be eligible for state benefits. Conversely, those who expect to have high earnings through their working lives may have particular need to save in order to smooth their consumption across work and retirement since state benefits will provide only a very low level of earnings replacement.

In light of the above discussion, we can draw some broad inferences for the patterns of lifetime wealth accumulation that we might expect to see. First, we would expect to see younger individuals holding less wealth than older individuals – they have had less time to accumulate any and have perhaps not yet reached their peak earning years. Second, we would expect those who will have permanently low incomes to save very little, whereas those who expect to have high incomes during working life should accumulate much more wealth.

To examine the first point, in this paper we present analysis of wealth holdings among different age groups. However, as we have only one cross-sectional observation of wealth holdings, any differences observed in the wealth holdings of different age groups could reflect either age differences or cohort differences – that is, individuals of different generations who were born at different times may have experienced different events and therefore display different savings behaviour from other cohorts. Unfortunately, with only one cross-section, we cannot escape these compounding effects. These must, therefore, be borne in mind when interpreting all the results that follow. Further waves of Wealth and Assets Survey (WAS) data, once they become available, will help to shed light on the accumulation of wealth over age among individual cohorts.

Figure 2.1 Change in mean household income as households age: evidence from panel data, by cohort and education level



Notes: The education level and age of each household are defined based on the characteristics of the household head. 'Low' education is defined as having no educational or vocational qualifications, 'mid' education includes all those with some qualifications below degree level and 'high' education includes those with qualifications at or above degree level.

Source: British Household Panel Survey,1991 to 2007.

The second point raised above – that wealth accumulation patterns should be different for individuals (and households) with high and low lifetime income – is harder to look at, as we cannot reliably identify (given the one, cross-sectional observation of individuals' incomes in the WAS data that is available at present) whether individuals and households will have or have had high or low incomes during their lives. However, one good proxy for the level and shape of lifetime income is individuals' qualification levels. Figure 2.1, based on data from the British Household Panel Survey (BHPS), shows mean household income for households headed by individuals with no educational or vocational qualifications (low education), some qualifications below degree level (mid-education) and qualifications at degree level or above (high education).[2] It shows that, on average,

[2] Three different cohorts of households are shown – those headed by an individual born between 1960 and 1969, 1950 and 1959 and 1940 and 1949. The horizontal axis shows the average age of households in each cohort when interviewed. Each figure for mean household income is based on one wave of the BHPS – for example, the left-most point on each line shows the mean household income of households in a particular cohort and education group when surveyed in the first (1991) wave of the BHPS.

households headed by low educated individuals have the lowest level of household income, which varies relatively little over their lifetimes. Households headed by mid-educated individuals have a higher level of household income, on average, which demonstrates a rather more 'hump' shape, with income rising to the mid 40s and then flattening out before declining slightly. The highest educated group of households have the highest average household income, which appears to rise more steeply through early working life. Therefore, in the following sections we also present analysis of wealth holdings among different education levels, using education level as a proxy for being on different lifetime income trajectories.

To the extent that we are interested in the analysis of retirement wealth as opposed to current wealth, it is important to remember that if individuals are saving (or have need to save) for any reasons other than the life cycle motive, then not all of the wealth we observe them holding when surveyed will still be available for consumption at retirement. Conversely, to the extent that individuals still have a number of years of working life remaining before reaching retirement, their current wealth holdings will understate the stock of wealth that will potentially be available to them when they do actually retire. Both of these factors will be more important to bear in mind for younger households, making any inferences about the degree to which they hold sufficient retirement resources considerably more speculative.

We do not attempt in this report formally to judge either the optimality or adequacy of individuals' retirement savings. The former would require us to make assumptions about individuals' future consumption needs and preferences. This type of exercise has, for example, been done previously using data from the United States (Scholz *et al*. 2006). Assessing adequacy would require value judgements relating to needs at older ages. Either of these types of modelling exercise fall outside the scope of this report but should be possible using the WAS data and should be the focus of future work.

3 Data and methodology

The analysis presented in this report is based on data from the first wave of Wealth and Assets Survey (WAS), collected between July 2006 and June 2008. WAS is representative of the private household population in Great Britain.[3] For WAS 30,595 households were interviewed, and our analysis uses all households headed by an adult aged 25 or over (n=29,662).[4] The survey collected detailed information on individual and household holdings of wealth in various forms:

- Formal financial assets: current accounts, savings accounts, Individual Savings Accounts (ISAs), National Savings products, bonds and gilts, shares and share options, unit and investment trusts, endowment policies, Personal Equity Plans (PEPs), insurance products (such as life insurance).
- Informal financial assets: amounts lent or saved informally.
- Private pensions: defined benefit (DB) pensions, Additional Voluntary Contributions (AVCs) and Free-standing Additional Voluntary Contributions (FSAVCs), employer-provided defined contribution (DC) pensions and personal pensions, private pensions in receipt (including those based on a former spouse/ partner's contributions).
- Property: owner-occupied housing, other residential property and land.
- Physical assets: household goods, vehicles, collectibles and valuables.

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3 In particular, WAS (in common with most other household surveys) does not sample individuals living in institutions. Perhaps the most important institutional population that is excluded from the analysis presented here is those individuals living in nursing homes. This may affect the extent to which the very oldest groups included in the survey (those aged 85 and over) are representative of all surviving individuals in this age group. It is unlikely to introduce a significant bias to the results for younger groups.

4 We have excluded households headed by an individual aged under 25 as they are a rather unrepresentative sample of all individuals in this age group. A large number of individuals aged 16–24 are still in education and are therefore less likely to head their own households.

- **Debts**: mortgages, student loans, personal or cash loans, outstanding balances on credit and store cards, hire purchase, mail order, overdrafts and arrears on bills.

In addition, the survey also included questions to capture other individual circumstances, such as current economic activity, employment history, level of educational qualifications, income, attitudes to saving and debt and broad measures of recent expenditure.

The analysis in this report focuses on household wealth holdings, expressed as wealth per adult in the household. This is defined by taking the total (gross or net) wealth of the household – as reported at the date of interview – and dividing it by the number of adults in the household.[5] The distributions presented in the report include only one observation per household, rather than one observation per adult.

We begin our analysis by presenting some figures for household gross wealth, expressed on a per adult basis. Gross household wealth in this report is defined as the sum of:

- positive balances held in formal financial assets;
- the value at the date of interview of private pensions (including those from which an income is already being received)[6];
- the gross value of property (as reported by the respondent).

We include the value of owner-occupied housing, along with other property wealth, when looking at total wealth in order to give a complete picture of the wealth held by households. However, it may be more difficult for households to extract wealth from their main home than from other assets. Therefore, in Chapter 5, we consider in detail the composition of wealth holdings and discuss the relative importance of owner-occupied housing in the portfolios of different types of households.

The measure of gross household wealth presented in this report does not include the value of physical assets or informal financial assets, nor does it attempt to

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5 For the very oldest households in particular, current household composition may not reflect that which prevailed for the majority of the household's working life. In particular, one partner living in a nursing home or having died will result in the survey collecting information on a single individual, who holds the total wealth of both partners. In other words, wealth per adult in the household may tend to rise as individuals get older if one partner in a couple moves into a nursing home, or dies leaving their wealth to the surviving partner. This should be borne in mind when looking at the figures for wealth among the oldest groups presented in the following sections.

6 Further details on the derivation of these measures of private pension wealth can be found in Chapter 10 of (ONS, 2009).

account for the 'wealth' inherent in future state pension promises.[7] Since we exclude physical assets, children's assets and informal financial assets from the measures of total household wealth presented in this report, the figures we present are somewhat lower than the figures for total wealth presented in the Office for National Statistics (ONS) report on the first wave of WAS (ONS, 2009).

Most of the analysis in this report, however, focuses on household net wealth holdings, also on a per adult basis. Net household wealth is defined as gross household wealth minus any debts (as listed above). For ease of exposition, much of the text in the following sections refers to gross wealth per adult in the households simply as 'gross wealth' and net wealth per adult in the household simply as 'net wealth'.

Chapter 5 examines the composition of household wealth portfolios, in particular focusing on the division of assets between relatively 'accessible' and 'inaccessible' forms and between assets whose value has the potential to fluctuate significantly, compared to those whose value is more predictable. Broadly speaking, we split assets into those from which it is relatively easy to quickly take money ('liquid') and those from which it is harder to do so ('illiquid'). Second, we split assets into those whose value is predictable ('safe') and those whose value has the potential to fluctuate significantly ('risky'). There is inevitably quite a lot of heterogeneity in the accessibility and volatility in the value of even apparently similar assets; for example, a Defined Contribution (DC) pension fund's value may be highly volatile if invested in volatile shares, or very stable if invested largely in bonds. However, to provide an overview of households' portfolio composition, we have defined four broad categories of assets which tend to have similar characteristics:

- **liquid, safe**: current and savings accounts, cash ISAs, National Savings products, fixed-term bonds, UK and overseas bonds and gilts;
- **liquid, risky**: UK and overseas shares, PEPs, employee shares and share options, unit and investment trusts, investment ISAs;
- **illiquid, safe**: Defined Benefit (DB) pensions, pensions in receipt, pensions expected in future from a former spouse or partner, insurance products;
- **illiquid, risky**: unannuitised DC pensions (including personal pensions), Additional Voluntary Contributions (AVCs), property wealth, endowment policies.

In the case of the last category, we also present separate analysis looking specifically at holdings of DC pension wealth and owner-occupied housing wealth.

We have also defined two broad categories of debts:

- **secured debts**: mortgages and student loans;
- **unsecured debts**: personal or cash loans, outstanding balances on credit and store cards, hire purchase, mail order, overdrafts and arrears on bills.

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[7] Following the approach used in (ONS, 2009) we do not include the value of business assets in our measures of household wealth.

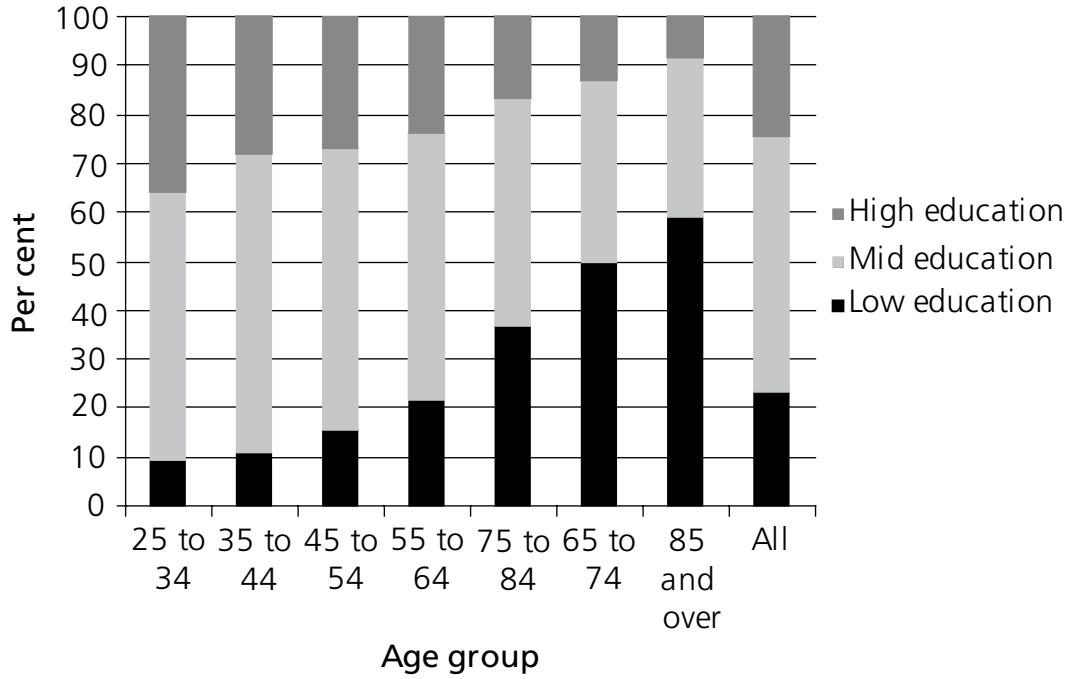
Throughout this report we present analysis using characteristics of each household, such as age and education level. These characteristics are defined using the characteristics of the Household Reference Person on the WAS dataset, here referred to as the household head, and defined as being the person in whose name the property is owned or rented (or the higher earner if more than one person owns or rents the property).

In the case of education, we split households into three groups depending on whether the household head has no educational or vocational qualifications (low), some qualifications below degree level (mid) or qualifications at degree-level or above (high). This definition tends to identify well the very low educated – just 23 per cent of the WAS household heads aged 25 and over had no formal qualifications – and the very highest educated – just 24 per cent of the household heads aged 25 and over had degree-level qualifications. The mid-educated group is therefore a more sizeable and more diverse group than the other two comparison groups. Figure 3.1 shows education levels of household heads within each age group. It is clear that having no formal qualifications is more prevalent among older cohorts than among younger cohorts, while the reverse is true for having degree level qualifications. Only a small fraction of those aged 85 and over hold degree-level qualifications – just 71 individuals in this age group. Therefore, it is worth bearing in mind that all the results presented in the following sections for high-educated households aged 85 and over are based on quite a small sample size.[8]

Part of the difference in the proportions of households with high and mid-education by age, shown in Figure 3.1, may be caused by the different emphasis placed on education during the working life of older cohorts. Among older groups there may be households counted as 'mid-education' who work or worked in the same professions as 'high education' households in the younger groups. For instance, older households in professions such as teaching would have completed professional training that culminated in a qualification below degree level, while younger households would now be required to hold a degree before entering such professions. The mid-education group may therefore be of higher ability, on average, for older households than for younger households.

[8] The following figures and table present statistics based on the small sample of highly educated households aged 85 and over: Figures 4.4, 4.6, 5.6, 7.2, 7.3 and 7.4 and Table 7.1.

Figure 3.1 Distribution of education level among household heads, by age



Note: Low education is defined as having no educational or vocational qualifications, mid-education is defined as having some qualifications below degree level, while high education is defined as having qualifications at degree-level or above.

Source: Authors' calculations using Wealth and Assets Survey 2006/08.

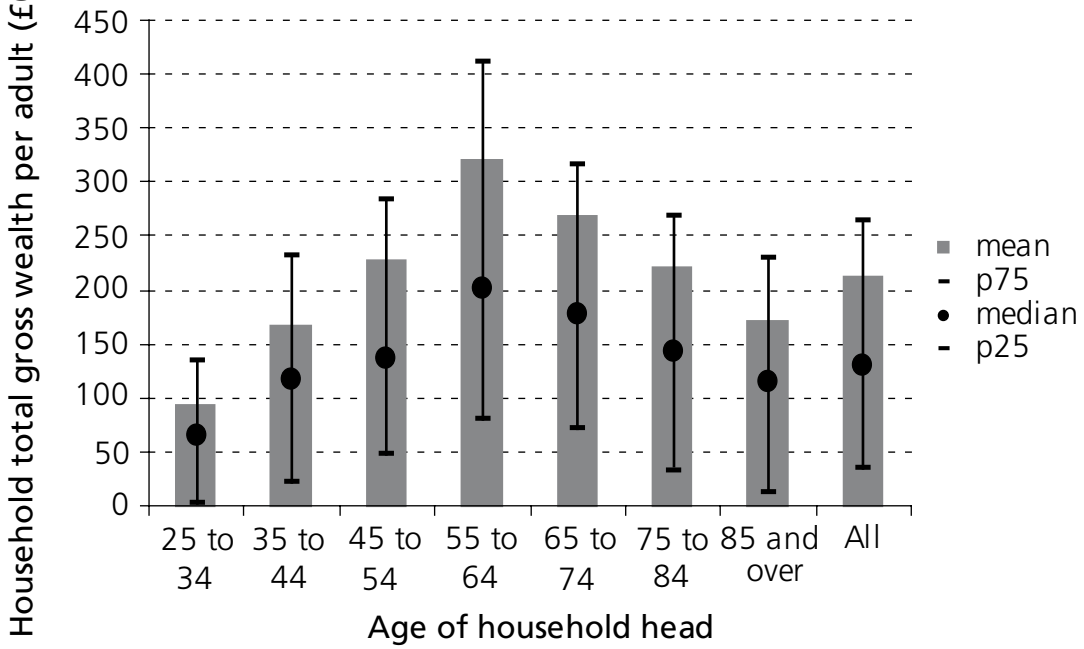
4 Distribution of gross and net wealth

We begin by describing the distribution of total wealth between and within age groups. For each broad ten year age group we compute mean wealth and three quantiles of the distribution – the 25th percentile, the median and the 75th percentile. These latter three amounts are the levels of wealth at which the fraction of the age group with less than or equal to that value is one-quarter, one half and three-quarters respectively.

4.1. Differences in gross and net wealth by age

As Figure 4.1 shows, average gross wealth holdings increase between the ages of 25 and 64 before declining across the older age groups. Median gross wealth is highest among the 55 to 64 year old group, at £201,000 per adult. There is, however, considerable variation in wealth holdings among all groups. One-quarter of households headed by someone aged 55 to 64 have at least £410,000 of gross wealth per adult, while one-quarter have less than £80,000.

Figure 4.1 Distribution of household total gross wealth, by age



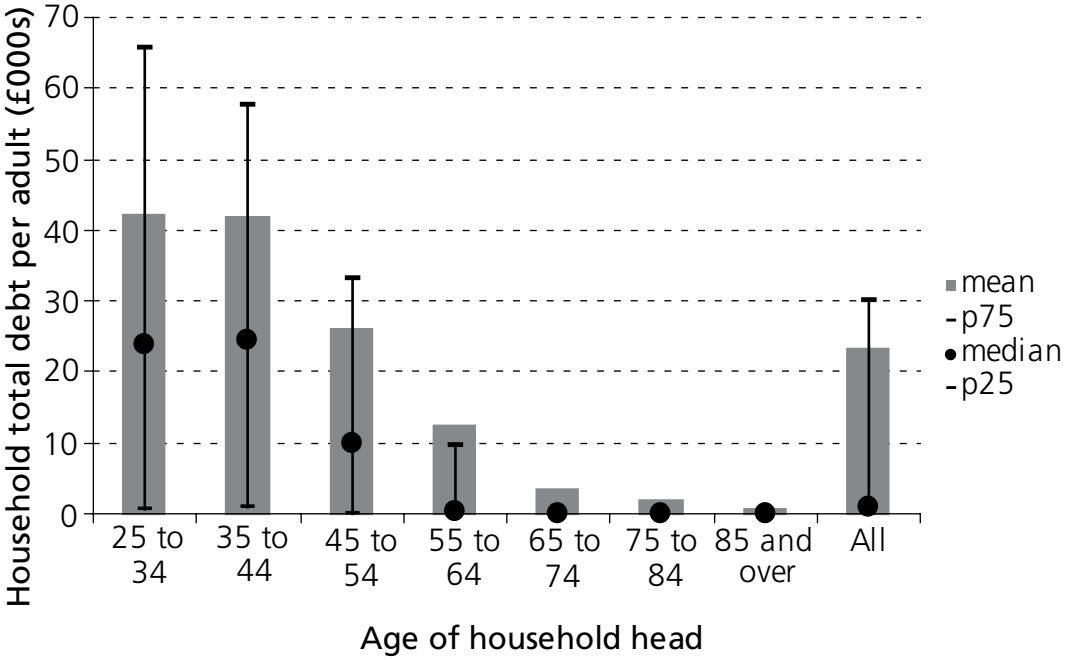
Note: The types of assets included in our measure of gross wealth are itemised in Section 3.

Source: Authors' calculations using Wealth and Assets Survey 2006/08.

However, Figure 4.1 only shows gross wealth – that is, not netting off any debts that the household also has. Figure 4.2 shows that outstanding debts are, on average, highest among young households: 83 per cent of households headed by someone aged 25 to 34 have some outstanding debts and half have debts amounting to at least £23,000. The largest single component of household debt for most households is mortgage debt. However, among younger households, student loans are also important.[9]

[9] In this report we will not discuss debt itself in any detail. Readers who are particularly interested in the prevalence of debt and the types and amounts of debt held should refer to Chapter 7 of ONS (2009).

Figure 4.2 Distribution of household total debt, by age



Note: The types of debt included in our measure of household debt are itemised in Section 3.

Source: Authors' calculations using wave one of the Wealth and Assets Survey.

Holdings of gross wealth and debts are positively correlated among households at younger ages in the Wealth and Assets Survey (WAS) data – in other words, among households aged 25 to 44, those with higher levels of gross wealth are also more likely to have higher levels of debts and vice versa. The strength of this correlation shows a marked decline with age, from a high of 0.7 for households aged 25 to 34 to 0.3 for households aged 45 to 54 and then to 0.0 among households aged 75 to 84 (in other words, among those aged 75 to 84, there is no relationship between the level of gross wealth and debts held). Younger households with high levels of wealth are therefore typically those who have borrowed it and so have associated high levels of debt – most commonly this is those who have a bought a house financed by a mortgage. The correlation between wealth and debts declines with age, as would be expected, since households have time to accumulate wealth from savings rather than borrowing, and have time to pay off debts, particularly mortgages, accumulated when younger.

Subtracting outstanding debts (shown in Figure 4.2) from gross wealth holdings (shown in Figure 4.1) gives a figure for net wealth; this is shown in Figure 4.3. The patterns of net household wealth by age are very similar to those seen for gross household wealth in Figure 4.1. That, on average, wealth is highest among households close to retirement and lower among younger and older households is consistent with the idea of life cycle saving outlined in Chapter 2. In other words, it is consistent with younger households not yet having reached their peak earning

years and having had less time to accumulate the stocks of wealth that they will later draw upon to fund consumption in retirement. Meanwhile, older households may have started to draw down the stocks of wealth that they had previously built up.

These patterns may also, however, reflect differences in the experiences of the various cohorts – in particular, since earnings increase on average over time, the oldest groups may have lower stocks of wealth not just because they have started drawing them down, but also because they experienced lower average earnings during their lifetimes. In other words, the missing piece of information is what wealth these older groups actually had when they had just retired and how that compares to the wealth they now have. Further waves of data from WAS will start to shed light on how wealth holdings evolve over time for particular cohorts.

Figure 4.3 Distribution of net household wealth per adult, by age

Notes: As Figures 4.1 and 4.2.

Source: Authors' calculations using Wealth and Assets Survey 2006/08.

4.2. Differences in gross and net wealth by education level

As mentioned in Chapter 2, a key factor in determining how much individuals will need to save in order to smooth their consumption over their lifetimes is the income trajectory that they face. One proxy for general differences in the level and profile of lifetime income is an individual's level of education; as discussed in Chapter 2, more highly educated individuals tend to have higher levels of

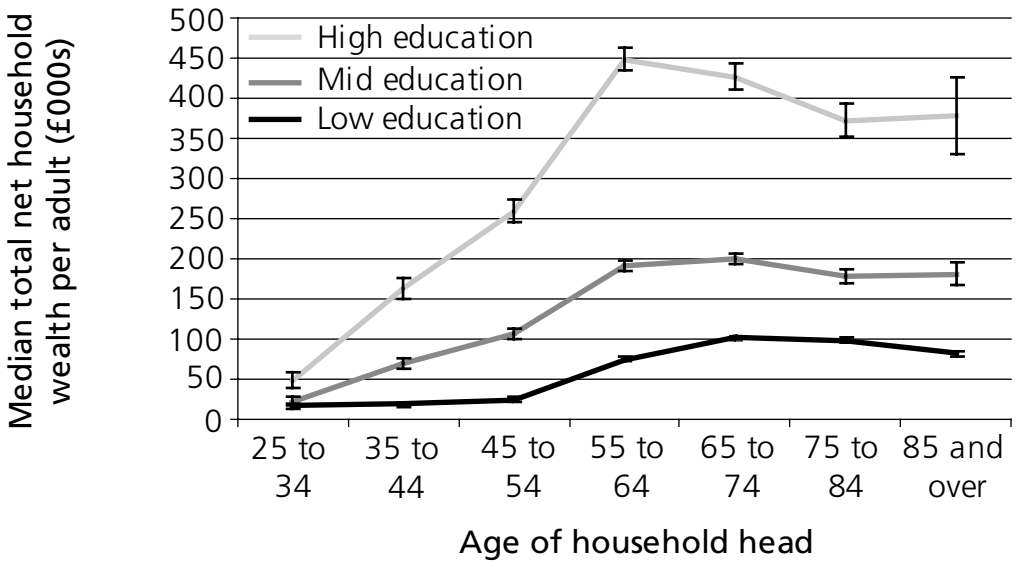
household income and also income profiles that exhibit more of a 'hump' shape. Figure 4.4 shows median household wealth per adult for three different education groups – those with no educational or vocational qualifications (low), those with some qualifications below degree level (mid), and those with qualifications at degree-level or above (high).

These median wealth levels were estimated using a median regression of net household wealth per adult on age band, education level, sex and interactions between age band and education level and between sex and education level. A regression approach was used (instead of taking the simple median within each age and education group) because it allows us to control for differences in wealth holdings between male and female headed households – the prevalence of which varies across age and education groups and therefore confounds the age and education level related patterns of wealth holdings that we are focusing on. The vertical lines in Figure 4.4 show the range within which there is a 95 per cent chance of the true median lying; these allow us to assess whether the median levels shown are statistically significantly different from one another.

Figure 4.4 shows that the increase in average wealth towards later working-life and the decline across the older age groups is most pronounced among the most highly educated. Median net wealth per adult rises from £50,000 among highly educated households aged between 25 and 34, to £450,000 per adult in households aged 55 to 64. Among the mid- and low education households, the peak level of median wealth is much lower than for the high education group and occurs among the 65 to 74 year olds.

The gap between the median wealth levels of the high, mid- and low education groups is largest towards the end of working life – being narrower among younger and older groups. Further information on how the distributions of wealth within each age and education group compare to one another can be found in Table A.1 which presents other quantiles of the distribution of wealth within each age and education group. Though we have only one cross-section of data, the pattern shown in Figure 4.4 is consistent with the idea that the higher educated group tends to have higher earnings during working life and therefore more need to save through working life and then dissave significantly during retirement in order to smooth consumption.

Figure 4.4 Median household total net wealth per adult, by age and education

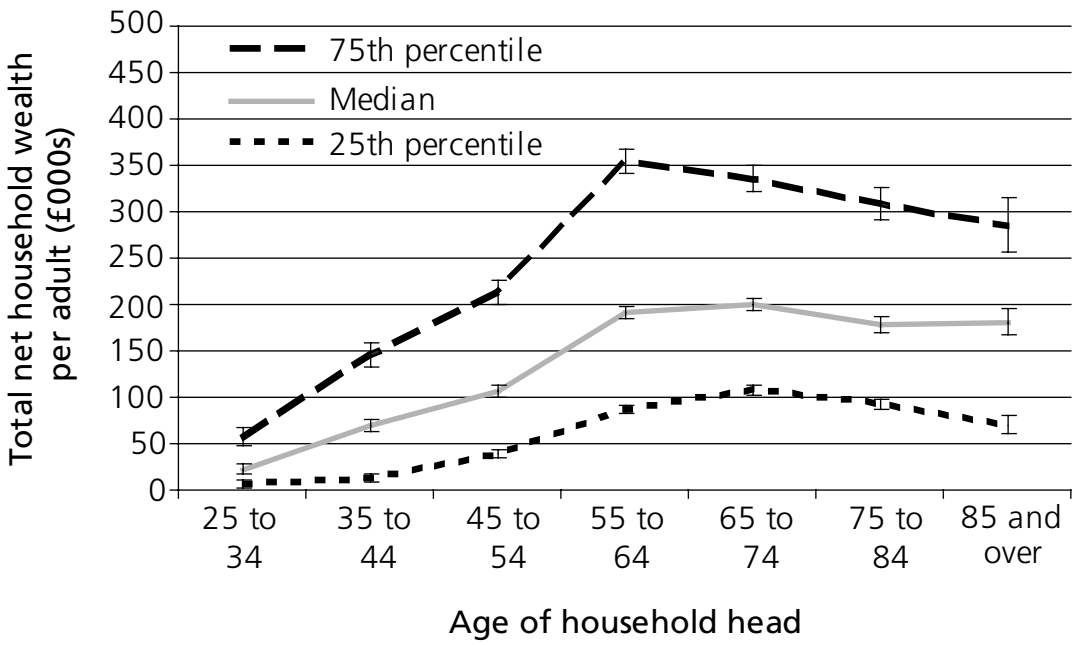


Notes: The 'error bars' show the 95 per cent confidence interval around the estimated medians – that is, the range within which there is a 95 per cent chance that the true median lies. The 95 per cent confidence intervals will tend to be wider for groups where the sample size is small – for example, highly educated households aged 85 and over.

Source: Authors' calculations using Wealth and Assets Survey 2006/08.

As mentioned in Chapter 3, the mid-educated group is about twice as large as either of the other groups and contains a slightly more diverse set of individuals in terms of their qualifications. Therefore, it is also interesting to look at some other points in the distribution of wealth for the mid-educated. Figure 4.5 shows that the top quarter of the distribution of wealth among the mid-educated households displays more of a 'hump' shape than the rest of the group, just as the median for the high education did in Figure 4.4. However, even the 75th percentile of the mid-educated aged 55 to 64 is only £355,000 of net wealth per adult in the household, compared to a median level of £450,000 for high education households in this age group. This suggests that most of the distribution of wealth among the mid-educated lies below most of the distribution among the highly educated.

Figure 4.5 Distribution of net household wealth per adult among the mid-educated, by age



Note: The percentiles are estimated using quantile regression of household net wealth per adult on sex and age band for the mid educated households. The 'error bars' show the 95 per cent confidence interval around the estimated percentiles – that is, the range within which there is a 95 per cent chance that the true percentile lies.

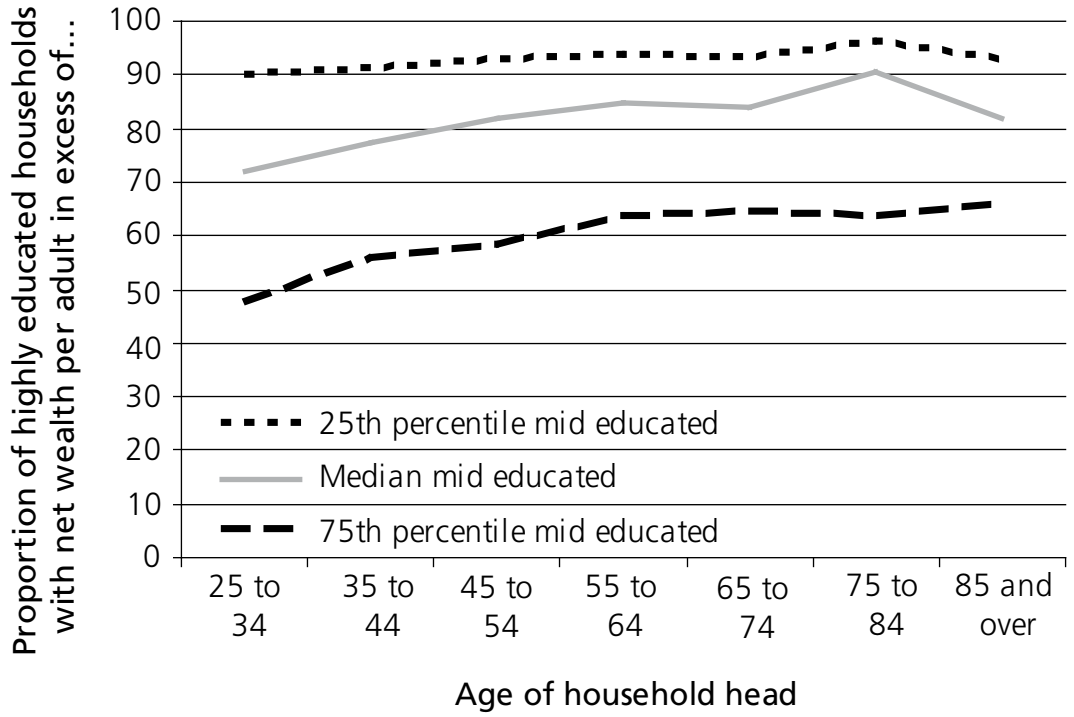
Source: Authors' calculations using Wealth and Assets Survey 2006/08.

A further comparison between the wealth distribution of the highly educated and mid-educated households is shown in Figure 4.6. This shows the proportion of the highly educated group who have household wealth per adult in excess of the median, 25th and 75th percentiles of the distribution for the mid-educated (in other words, the proportion of the high education group falling above each of the three lines shown in Figure 4.5, respectively). Among the 25 to 34 year old group, 72 per cent of highly educated households have at least as much wealth as the median mid-educated household. This percentage increases with age – for example, reaching 91 per cent among households aged 75 to 84. Also shown in Figure 4.6 are the proportion of the high education group with at least as much wealth as the 75th and 25th percentiles of the mid-education group. These have a similar shape, indicating that across the distribution the wealth of the highly educated moves away from the wealth of the mid-educated group as age increases.

Figure 4.7 shows similar figures for the low education group, looking at the proportion of low-educated households with wealth above the 25th percentile,

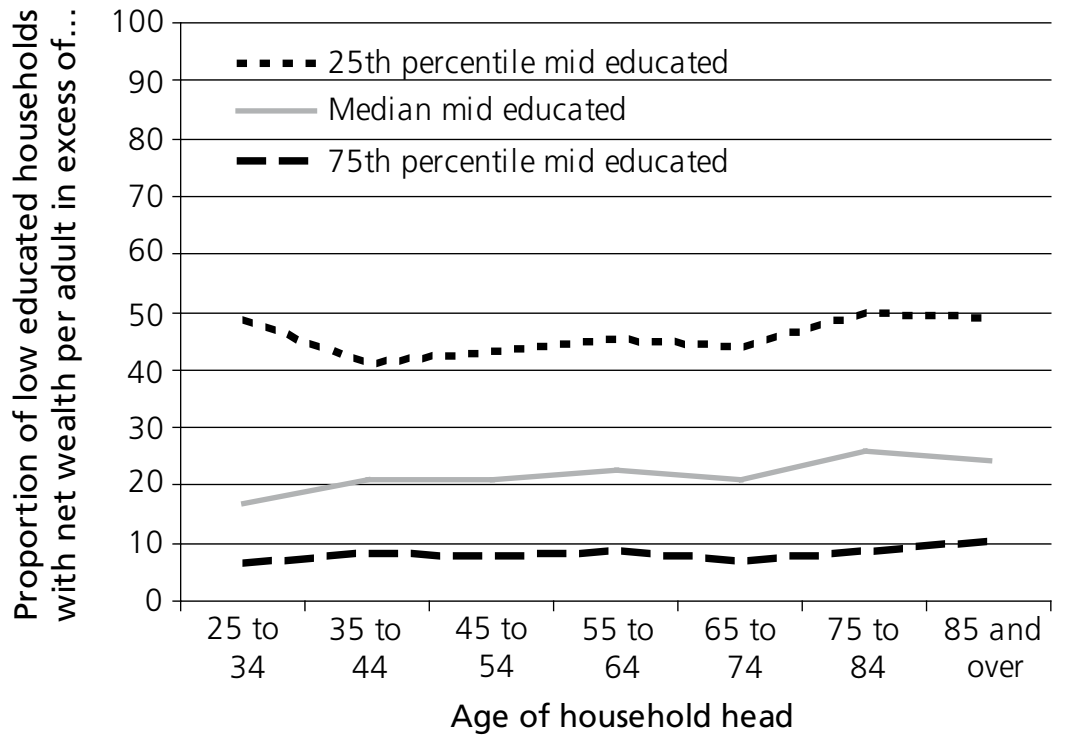
median and 75th percentile of the distribution for the mid-educated. Here we see that only around 20 per cent of households with low levels of education have wealth at least as great as the median among the mid-educated households. However, this figure does not change much across the age groups, suggesting that the distribution of wealth among the low education group sits uniformly below that of the mid-education group across all age groups, rather than 'pulling away' as the distribution among highly educated households appears to.

Figure 4.6 Comparison of the distribution of household wealth among high education households with that among the mid education group



Source: Authors' calculations using Wealth and Assets Survey 2006/08.

Figure 4.7 Comparison of the distribution of household wealth among the low education households with that among the mid education group



Source: Authors' calculations using Wealth and Assets Survey 2006/08.

Median wealth among highly educated households is quite high at all ages – reaching a peak of £450,000 per adult among households aged 55 to 64, as shown in Figure 4.4. Though this does include all forms of wealth, including housing wealth, these figures are sufficiently high that many of these high education households are unlikely to have inadequate retirement resources, at least in terms of providing a subsistence level of income. A stock of wealth of £130,000, if it were annuitised at a rate of five per cent, would be adequate to provide a greater annual income in retirement than the 2008-09 level of the Guarantee Credit component of the Pension Credit and so make an adult ineligible for the means-tested benefit that aims to ensure all pensioners have a minimum income level in retirement. As shown in Figure 2.1, there is evidence that low education households have relatively low lifetime incomes on average and, therefore, state benefits may provide a reasonable level of earnings replacement for these households, reducing the need for substantial private retirement provision in order to smooth consumption over their lifetimes. Figures 4.8a and 4.8b therefore present further analysis of characteristics that are relatively more or less common among high and low wealth households within the middle education group, focusing on those aged between 25 and 54, who are likely to have somewhat higher average lifetime incomes than the lowest educated but who also have lower average wealth holdings than the most highly educated.

The mid-education group of households is, by definition, larger and more heterogeneous (at least in terms of their qualifications) than either of the other groups and as Figure 4.5 showed, there was quite a range in the levels of net wealth that these households held. Figures 4.8a and 4.8b examine what characteristics are associated with having wealth in the top quarter and the bottom quarter of the wealth distribution (among mid-educated households). In particular, we focus on family composition, current employment status and whether the household owns or rents their main residence.

Renters are over-represented among the least wealthy quarter of mid-educated households aged 25 to 54 – 92 per cent of households in the bottom quartile are renters, compared to 37.9 per cent of all mid-educated households and just 6.7 per cent of the wealthiest quarter. This is perhaps not surprising given that we have included owner-occupied housing wealth in the definition of net wealth used here. However, it does highlight the fact that renters are not, in general, saving as much in other forms as owner-occupiers have accumulated in their housing. Single adult households with children (whether earning or not) are also disproportionately represented among the least wealthy quarter – 23.9 per cent of the least wealthy households are comprised of a single adult with dependent children, compared to 12.1 per cent of all mid-educated households. Conversely, multiple adult households with multiple earners (with or without dependent children) are over-represented in the wealthiest quarter – 59.1 per cent of the wealthiest quarter of families contain multiple adults, more than one of whom works, compared to just 26.5 per cent of the least wealthy quarter and 50.2 per cent of all mid-educated households. Tables A.2 to A.4 provide further analysis of the distribution of net wealth per adult within each of the household types shown in Figure 4.8, for households aged 25 to 34, 35 to 44 and 45 to 54 respectively.

On average, high education households have higher levels of wealth than mid- and low education households. In fact, at all ages, the vast majority of highly educated households have more wealth per adult than most mid-educated households. Among the group of mid-education households, renters and single parents are more likely to have low levels of wealth, while multiple adult households with multiple earners are more likely to have high wealth holdings per adult in the household.

In light of what we have seen in terms of levels of wealth held by different groups, the next chapter turns to examine how households hold their wealth.

Figure 4.8a Characteristics of the lowest wealth quartile of mid-educated households, aged 25 to 54

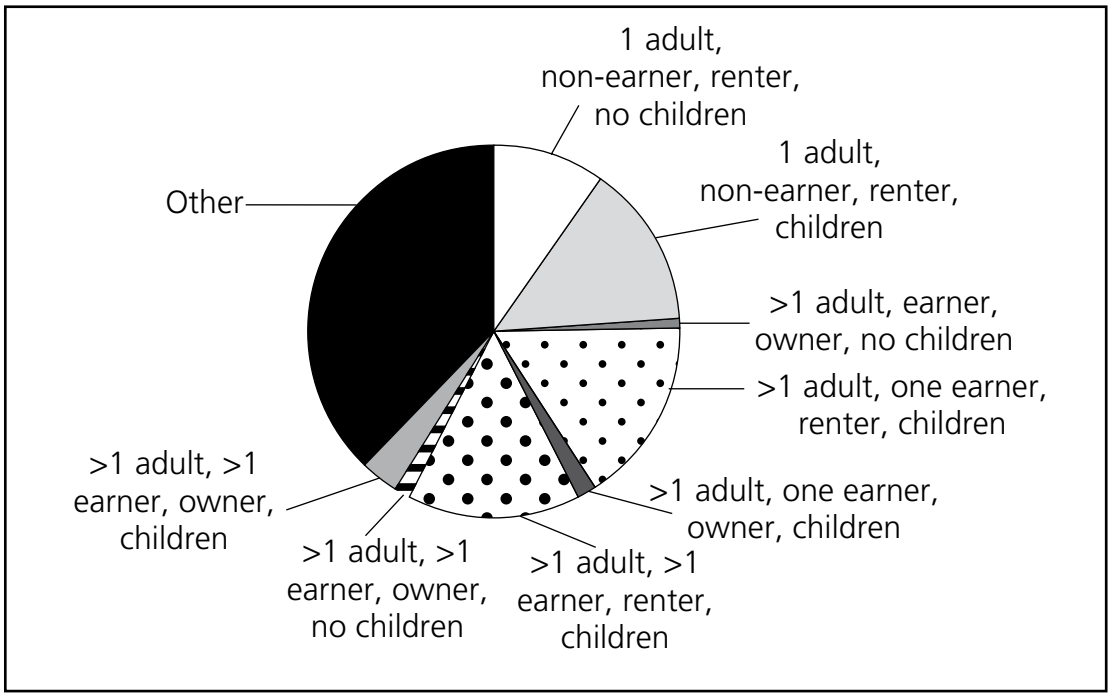
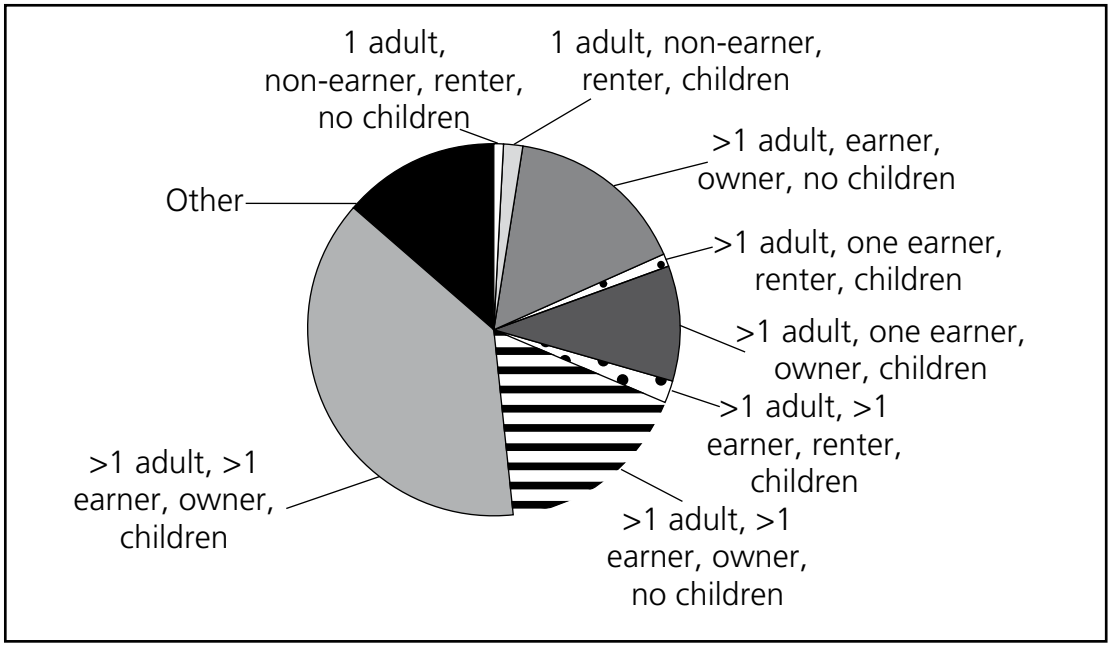


Figure 4.8b Characteristics of the highest wealth quartile of mid-educated households, aged 25 to 54



5 Composition of portfolios

Chapter 4 described the level of wealth held by households, in particular looking at the differences by age and education level. However, one further important factor in considering how much wealth might be available for retirement consumption (and what risks that wealth might be exposed to between now and when individuals reach retirement) is the form that the wealth is held in. This chapter, therefore, examines what type of assets households hold and the relative importance of each asset type in households' portfolios (in terms of the proportion of their wealth held in each form).

For various reasons we might expect the types of assets held to vary across age groups. For example, younger households (with lower total wealth) might choose to hold their wealth in relatively safe, accessible assets as they may wish to use it not only for retirement but also as a precautionary buffer in case of adverse shocks. Later in working life, as total wealth rises and individuals no longer need to devote marginal saving to meet precautionary motives, households may start to place more of their assets in less accessible or more volatile assets with potentially higher returns. Finally, as households move into retirement, they may wish to move their wealth into safer assets; if individuals need to sell (through, for example, buying an annuity) their assets at a particular point, moving gradually into safer assets (that is, assets whose value is less volatile) prior to this date reduces the risk that they will be forced to sell their assets just after experiencing a capital loss. In other words, it reduces the risk that they will have to 'crystallise' their capital loss. There are thus various reasons that we would expect the types of assets held to vary over an individual's lifetime. However, there may also be differences across cohorts in the types of assets they hold, given the life experiences they have had. So with only one cross-section of data, we must be cautious in inferring too much from the age patterns that we observe.

5.1 Prevalence of asset types and debts by age

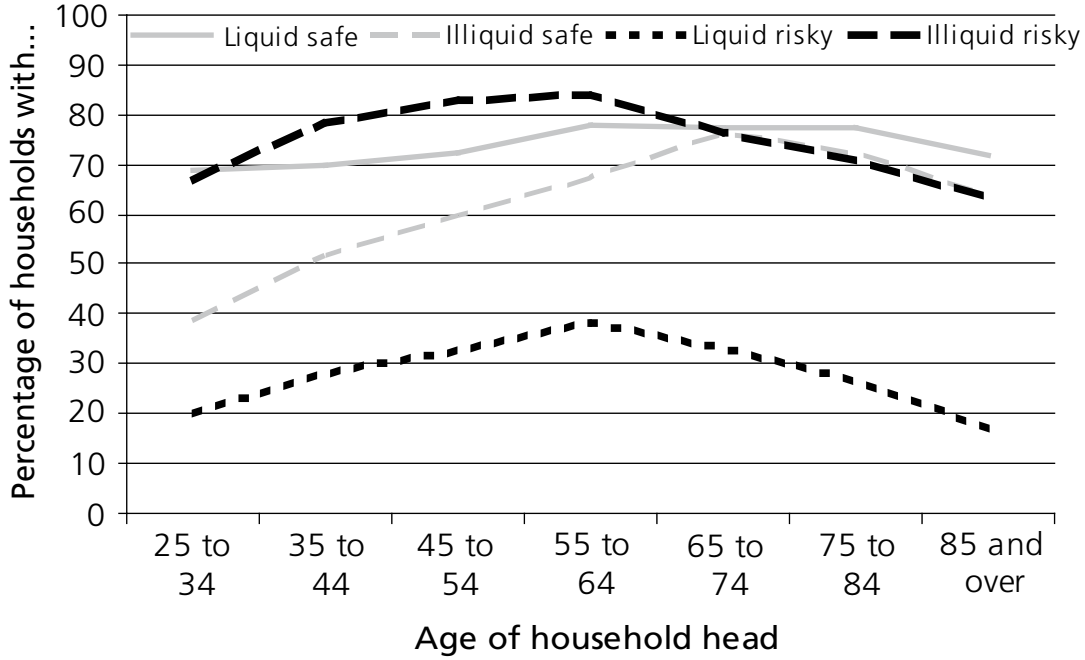
As described in Chapter 3, we group asset types into four broad categories according to their general characteristics; we also present separate figures for holdings of (unannuitised) Defined Contribution (DC) pension wealth and owner-occupied housing wealth. Figure 5.1 shows the proportion of households in each age group who hold particular types of assets.[10]

Liquid safe assets (including, for example, savings accounts and cash ISAs) were prevalent at all ages: 68.7 per cent of households aged 25 to 34 have some liquid safe assets, rising to 78.0 per cent among 55 to 64 year olds. Wealth in such assets is easily accessible and may be used in emergencies or to save for regular, predictable expenses. It is, therefore, not surprising that so many households hold these types of assets.

Liquid risky assets (including, for example, shares and investment trusts) are relatively uncommon at all ages but particularly uncommon among the old and the young. This pattern may reflect cohort differences in preference for asset types. However, it may also reflect that younger, lower wealth households prefer to hold their wealth initially in safer assets, while older working-age households start to diversify into a mix of riskier asset types as their portfolios expand, before then gradually moving away from risky assets as they move into retirement and have need to draw down their assets (and so do not want to risk having potentially to crystallise capital losses). This possibility is discussed in more detail below, where we show that more highly educated, on average higher wealth, households also hold more of their wealth in liquid risky assets.

10 As mentioned in Chapter 3, the prevalence of liquid safe assets shown in Figure 5.1 excludes holdings of current accounts, since almost all households have at least one current account.

Figure 5.1 Proportion of households with different types of assets



Note: The asset types included in each of these broad categories are itemised in Section 3.

Source: Authors' calculations using Wealth and Assets Survey 2006/08.

Illiquid safe assets principally comprise DB pensions and pensions from which an individual is drawing a pension already. Such assets are relatively uncommon among younger households (just 38.9 per cent of 25 to 34 year olds hold this type of asset), but prevalence rises to 76.4 per cent of households aged 65 to 74, before falling slightly to 63.6 per cent among those households aged 85 and over. Across the working-age groups, this rise in the prevalence of illiquid safe assets reflects an increasing proportion of older working-age households having Defined Benefit (DB) pensions. While this may be because they have had longer to acquire such pensions, it may also be that older cohorts were more likely to be offered a DB pension than younger workers will be, given that many private sector companies have closed their DB schemes to new entrants.[11] The prevalence of illiquid safe assets is highest among those in their late sixties and early seventies as individuals annuitise their pensions and thus DC pensions also become illiquid but safe. However, once pensions are in payment, having illiquid safe assets is a permanent state. Therefore, the decline in prevalence of illiquid safe assets among the oldest groups (shown in Figure

[11] This has been documented by, for example, (Watson Wyatt, 2008).

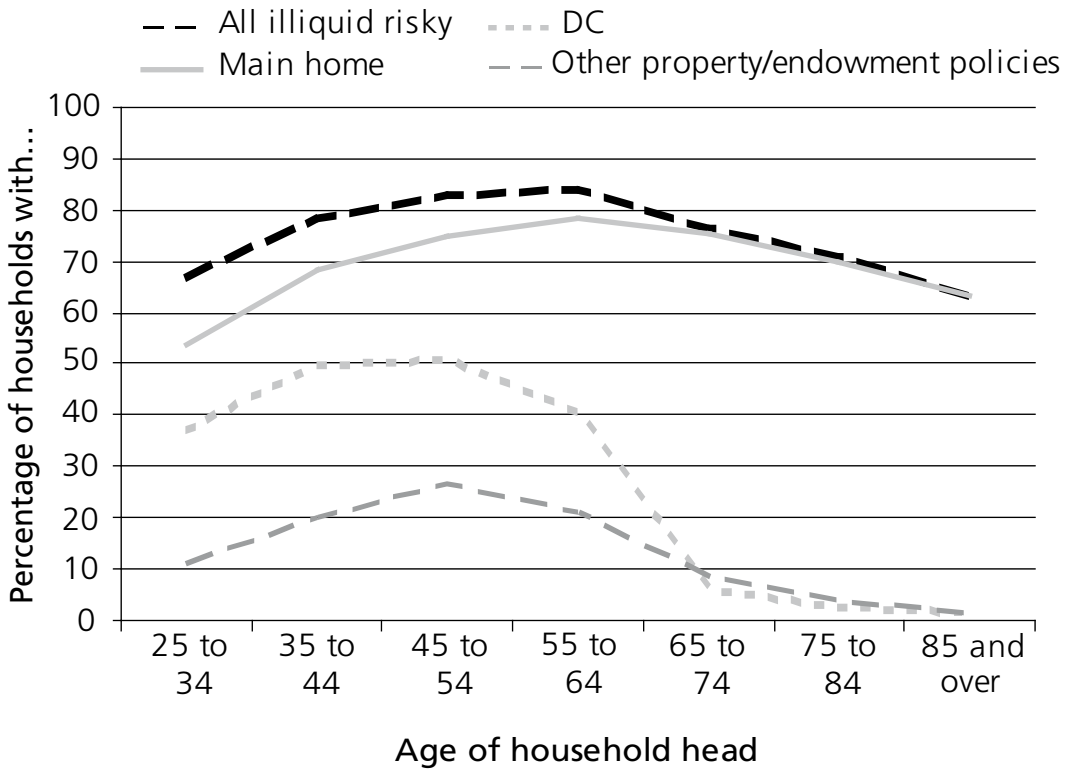
5.1) is likely to reflect cohort differences in ever having been offered and joined a private pension scheme.[12]

Illiquid risky assets (including, for example, unannuitised DC pensions and property wealth) are prevalent at all ages, and for some ages are actually the most widely held form of asset: 66.7 per cent of households aged 25 to 34 have illiquid risky assets, rising to 84.1 per cent of households aged 55 to 64.

Figure 5.2 decomposes illiquid assets further, to show the proportion of households with unannuitised DC pensions, owner-occupied housing, and other illiquid risky assets (the line for the proportion of households holding any illiquid risky assets is the same as in Figure 5.1). Owner-occupied housing is the most prevalent form of illiquid risky asset, with 53.9 per cent of households aged 25 to 34 owning their own home rising to 78.3 per cent of households aged 55 to 64. The prevalence of owner-occupation then falls at higher ages – most likely the result of a cohort effect where older individuals are less likely to have bought a house when they were younger. Unannuitised DC pensions are not a particularly common asset, with at most around half of households in a given age group having assets of this type. They are less common in the youngest households, probably reflecting that these households have had less time to acquire such assets. The fall in the proportion of households with unannuitised DC pensions after age 54 is likely partly a cohort effect – older households are more likely to have been members of DB schemes – and partly the result of DC schemes being annuitised when households retire. The sharp fall in the proportion of households with unannuitised schemes between the 55 to 64 and the 65 to 74 age groups is likely predominantly caused by the latter.

[12] Another possibility is that, among this cohort, men were more likely than women to have been members of private pensions. Therefore, to the extent that men are more likely to die younger than women, households headed by an individual aged 75 and over are more likely to contain only women and therefore are perhaps more likely not to have private pension wealth. Forty-five per cent of households headed by an individual aged 75 and over were headed by a female (39 per cent being single female households), compared to just 36 per cent of households headed by an individual aged under 75. However, to the extent that men's private pensions offered survivor benefits, widows in this cohort will also be counted as having illiquid safe assets.

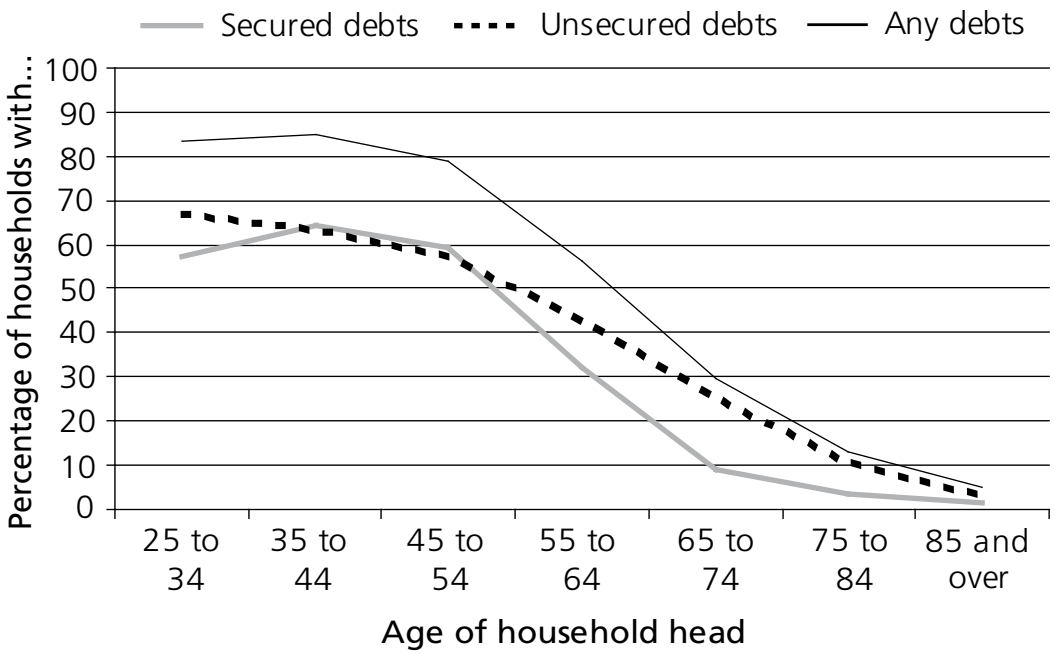
Figure 5.2 Proportion of households with different types of illiquid risky assets



Source: Authors' calculations using Wealth and Assets Survey 2006/08.

Finally, Figure 5.3 examines the prevalence of debts among the different age groups. As described in Chapter 3, we split debts into two categories – secured and unsecured. As with asset holdings, holdings of debts follow a pattern that we would expect, given the earlier discussion of the lifecycle motive for saving. Young households are most likely to hold unsecured debts (perhaps borrowing in expectation of future higher income), while these types of debts become increasingly rare among older age groups. In the case of secured debts, which predominantly reflect mortgage debt, prevalence increases to the early forties as more households acquire mortgages and then starts to decline as households pay off their mortgages. As Figure 5.2 showed, ownership of housing is no less common among those of older working age, so the decline in secured debts almost certainly reflects paying off mortgages, rather than older groups simply never having had mortgage debt. Over 80 per cent of households aged under 45 have any debts, but this falls with age so that less than five per cent of households aged 85 and over have any debts.

Figure 5.3 Proportion of households with different types of debts



Note: The types of debt included in each of these broad categories are itemised in Section 3.

Source: Authors' calculations using Wealth and Assets Survey 2006/08.

5.2. Variation in the prevalence of asset types by education level

There are some differences in the prevalence of wealth holdings among the different education groups – principally that lower educated households are less likely to hold assets of all types than higher educated households, as Figures A.2 to A.6 show. However, the broad age patterns discussed above remain apparent among each of the education groups.

High education households aged 45 to 74 are the only group among whom more than half hold liquid risky assets, such as shares and investment ISAs (see Figure A.3). Among all education groups there is a tendency for liquid risky assets to become more prevalent towards the older working-age groups and then decline among the oldest groups.

The highly educated households are also much more likely to hold illiquid safe assets, (which primarily comprise DB pensions during working life, and pensions from which an individual is drawing a pension at later ages). Just over half of households aged 25 to 34 had illiquid safe assets, rising to around 90 per cent for those aged over 65. By contrast, only eight per cent of low education households aged 25 to 34 had assets of this type, increasing to around 65 per cent for those aged 65 to 74.

The proportion of households with unannuitised DC pension wealth is quite similar between high and mid-education households (shown in Figure A.5), which is somewhat higher than the prevalence among low education households. The proportion of mid- and high education households with DC pension wealth rises to over 50 per cent by age 45 to 54, but for low education households it only reaches 30 per cent. Finally, the proportion of high and mid-education households who own their own home is much higher than the proportion of low education households, although this gap is slightly narrower at older working ages (as shown in Figure A.6).

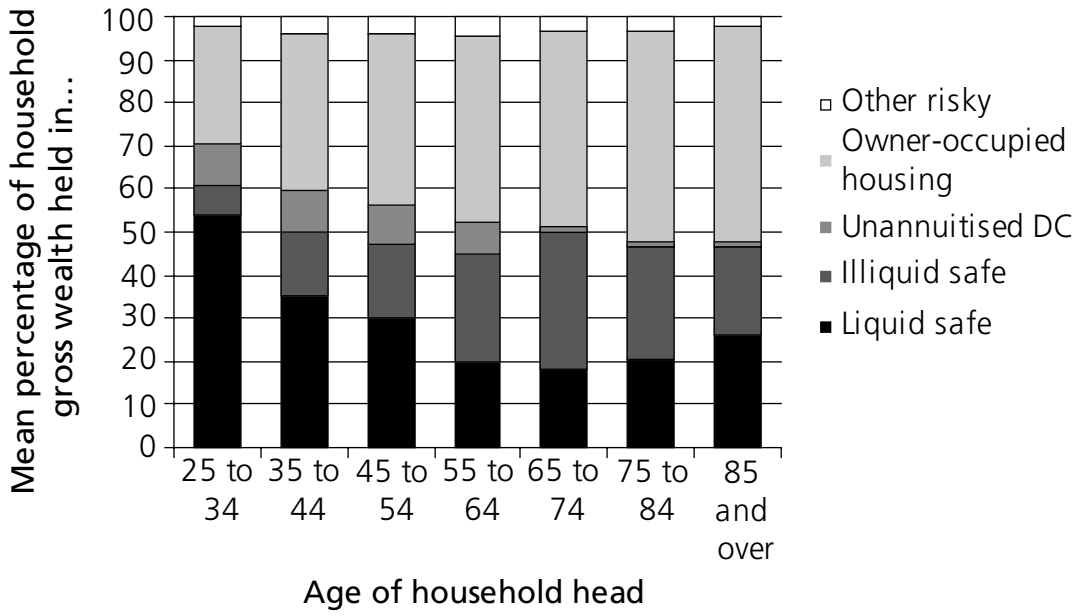
5.3 Importance of each asset type within household portfolios

So far, this chapter has outlined what proportion of various groups hold any assets with particular characteristics. However, in order to assess what wealth might be available to fund retirement consumption and how exposed this wealth might have been to recent fluctuations in asset prices (as we do in Chapters 6 and 7, respectively) we need to know how important these asset types are in terms of their size within households' overall portfolios.

Figure 5.4 shows, for low education households, the mean proportion of household gross wealth held in each type of asset – liquid safe, illiquid safe, DC pension wealth, owner-occupied housing and other risky assets. In other words, for each individual household, we have calculated what proportion of their wealth is held in each type of asset. Figure 5.4 then presents the average (mean) of these percentages across all low-educated households within a particular age group. Figures 5.5 and 5.6 show the same statistics for the mid- and high education groups. While the average portfolio composition among the mid- and high education groups is quite similar (and is discussed in more detail below), the composition of portfolios among the low educated is rather different.

On average, low-educated households aged between 25 and 34 hold more than half their gross wealth in liquid safe assets. This predominantly reflects that a large proportion of this group have very little wealth at all and therefore hold most of it in very accessible forms. However, as discussed above, this group on average are likely to have low incomes over their lifetimes and so it may be very rational for them to hold what little wealth they have acquired in more accessible forms so that it can act as a precautionary buffer. Households in this group, on average, hold only a small proportion of their wealth in illiquid safe assets (which comprise DB pensions and pensions in receipt) or DC pensions – 17 per cent on average among those aged 25 to 34, rising to 33 per cent among those aged 65 to 74. In other words, these households on average hold only a small fraction of their wealth in assets explicitly labelled as retirement saving products. However, looking at DC pension wealth specifically, low-educated households aged 25 to 34 are actually the group that hold the highest proportion of their wealth in this form, almost ten per cent.

Figure 5.4 Portfolio composition, by age: low education only



Note: Figures shown are the average (mean) proportion of household gross wealth held in each form. Households with no gross wealth are excluded from this figure; with the exception of the young, low-educated, very few households have zero gross wealth.

Source: Authors' calculations using Wealth and Assets Survey 2006/08.

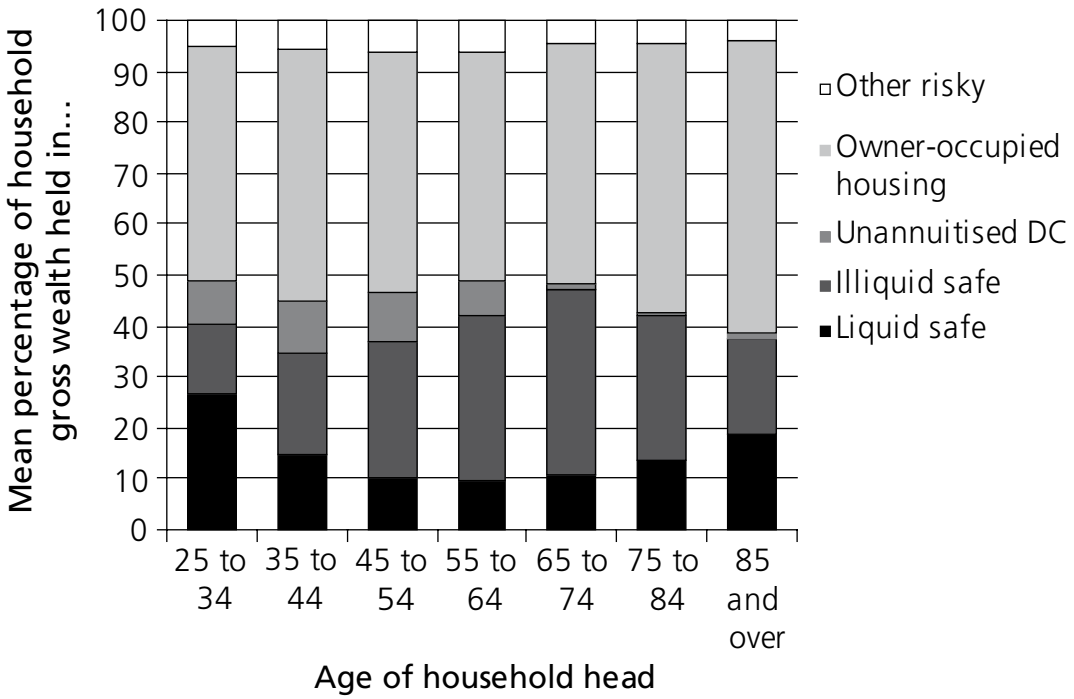
Compared to low education households, mid- and high education households hold far less of their wealth in safe, liquid assets. Among mid- and high education households aged between 45 and 74, safe liquid assets make up no more than about 10 per cent of total wealth holdings. Owner-occupied housing is, by a long way, the single largest component part of these households' portfolios, on average. For mid-educated households, the value of their primary residence makes up over 44 per cent of total gross wealth on average. Among highly educated households, this figure is slightly lower, particularly for older working-age individuals.

Risky assets (other than unannuitised DC pensions and owner-occupied housing) are more important, on average, in the portfolios of highly educated households than mid- and low education households. On average, highly educated households aged up to 74 hold at least ten per cent of their wealth in these risky assets. This proportion is lower among those aged 75 and over, but these risky assets still make up, on average, seven per cent of the portfolios of highly educated households aged 85 and over.

The highly educated are the group that, on average, hold the highest proportion of their wealth in explicit retirement saving vehicles (DC pensions, DB pensions and pensions in receipt). Highly educated households aged between 25 and 34,

on average, hold 23 per cent of their gross wealth in DC or DB pensions. This rises to 47 per cent among those aged between 55 and 64. In comparison, the youngest mid-educated households hold 22 per cent of their wealth in pensions, on average, but this fraction only increases to 39 per cent among mid-educated households aged between 55 and 64. Instead, mid-educated households in late working life tend to hold more of their wealth in safe liquid assets and owner-occupied housing than highly educated households of the same age.

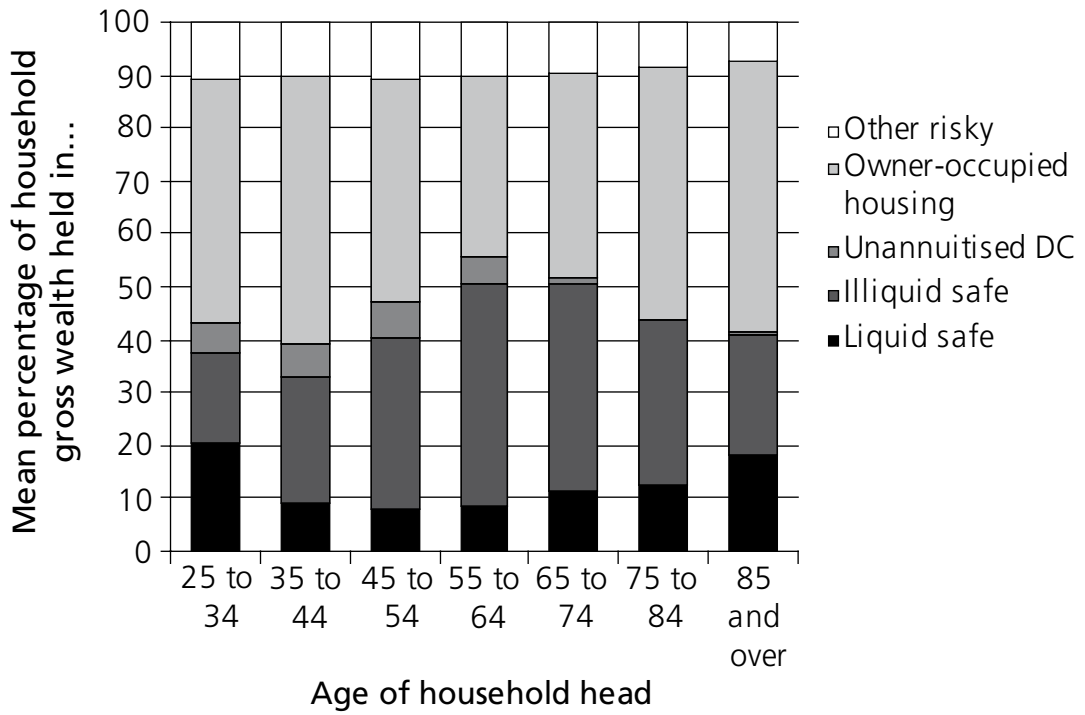
Figure 5.5 Portfolio composition, by age: mid-educated only



Note: As Figure 5.4.

Source: Authors' calculations using Wealth and Assets Survey 2006/08.

Figure 5.6 Portfolio composition, by age: high education only



Note: As Figure 5.4.

Source: Authors' calculations using Wealth and Assets Survey 2006/08.

6 Implications for future retirement resources

Chapters 4 and 5 discussed, respectively, the level and composition of household wealth holdings, focusing in particular on differences across age groups and between education groups. This chapter draws together this evidence and the theory of wealth accumulation discussed in Chapter 2 to consider what the cross sectional distribution of wealth in the first wave of Wealth and Assets Survey (WAS) can tell us about future retirement resources.

Broadly speaking, households close to retirement hold the highest levels of wealth. This is in accordance with the standard economic theory of life cycle saving – that households save when their income is relatively high and draw down their savings (or borrow) when their income is relatively low, in order to smooth their consumption over time. However, we have seen that there is also considerable dispersion in wealth holdings within age groups. This raises the question of whether there are good reasons for some households to hold relatively low levels of wealth or whether policymakers should be concerned about the implications of this for future pensioner incomes.

One key prediction of the economic theory of life cycle saving is that individuals will have most need to save if they expect their income to vary considerably over their lifetime and, in particular, if they expect a drop in income towards the end of life. If this is the case, they will need to set aside some of their income when earnings are high and then consume these savings when earnings fall. When thinking about the implications of this prediction for 'optimal' current private wealth holdings we need to account not only for individual earning potential, but also for state-provided benefits to which households might be entitled in the future. In Great Britain, state pensions and means-tested benefits for pensioners currently provide (and, under current policy plans, are expected in future to provide) a reasonable level of earnings replacement for individuals whose working-life earnings are relatively low. Therefore, economic theory suggests that it is probably rational for households who expect their income during working-age life to be low not to save much for retirement if they wish to smooth their consumption over their lifetimes. With only one (cross-sectional) observation of income currently available

from WAS, it is hard to identify with certainty those households with low lifetime incomes. However, one reasonable proxy for this (as we have argued in Chapter 2) is education level.

Among low-educated households (those headed by an individual with no educational or vocational qualifications at all), wealth holdings were found to be, on average, very low. Half of low education households, aged between 25 and 54, have net wealth of no more than about £25,000 per adult in the household. Median net wealth rises to £100,000 per adult for low education households aged between 65 and 74. These figures include the value of any owner-occupied housing wealth, though less than half of low-educated households own their own home – this is substantially lower than among the other education groups. Low education households tend to hold what wealth they do have in safe, liquid assets – those aged between 25 and 34 on average hold over half their gross wealth in safe liquid assets (such as bank accounts and cash ISAs). Taking into account the wealth held in liquid, safe assets and that wealth held in owner-occupied housing, this group have little wealth explicitly devoted to 'retirement saving'.

That this group hold little net wealth on average may be very rational: they are likely to have lower potential lifetime earnings than more highly educated individuals and thus state benefits may provide a relatively high level of earnings replacement in retirement. Given this, for many low education households the forgoing of consumption during working years in order to supplement retirement incomes through accumulating private pension wealth may not maximise expected lifetime utility. As such, security in retirement may depend more on the level and future indexation of state benefits than on their current and future private savings.

The means-testing of state benefits also potentially makes providing an additional £1 of consumption in retirement from private savings more costly in terms of consumption forgone today for someone who will be on means-tested benefits in retirement than for someone who will not be.[13] For example, if an individual is entitled to Pension Credit Savings Credit, then due to the way this means-tested benefit is tapered away as incomes increase, each additional £1 per week of private income reduces the amount of Pension Credit an individual is entitled to by 40p. Therefore, an individual who is entitled to this benefit could need to save around 67 per cent more than someone not entitled in order to increase their

[13] The reforms to state pensions legislated in the Pension Act 2007 are designed to limit the future growth in the number of pensioners who will be eligible for means-tested benefits. This should, therefore, have reduced the number of individuals who can expect to be subject to means-testing in retirement (and thus for whom the incentive to save privately is reduced in the way described) relative to what was implied by previous policy.

total retirement income by the same amount.[14] Given that these households have such low levels of wealth on average, it may also be very sensible for them to be keeping it in relatively accessible forms, as it can then be used in the event of adverse shocks to income before retirement. If no such shocks occur, this wealth could then be used to fund consumption in retirement.

Among highly educated households (those headed by an individual with degree-level qualifications or above) we see a very different pattern of wealth holdings. Most highly educated households hold substantial levels of wealth. Among those aged between 55 and 64 (in other words at, or around retirement age) 62 per cent of households have net wealth in excess of £191,000 per adult. We do not know what income these individuals have been used to over their lifetime, so it is possible that these resources are not sufficient to provide a high level of earnings replacement. However, though these figures do include all forms of wealth, including housing wealth, these figures are sufficiently high that many of these high education households are unlikely to have inadequate retirement resources, at least in terms of providing a subsistence level of income. A stock of wealth of £130,000, if it were annuitised at a rate of five per cent, would be adequate to provide a greater annual income in retirement than the 2008-09 level of the Guarantee Credit component of the Pension Credit and so make an adult ineligible for the means-tested benefit that aims to ensure all pensioners have a minimum income level in retirement.

High education households also hold, on average, less wealth in liquid assets: high education households aged between 35 and 64 hold, on average, less than ten per cent of their gross wealth in safe, liquid assets. Instead, they typically hold more of their wealth in assets explicitly labelled as retirement saving (that is, Defined Benefit (DB) and Defined Contribution (DC) private pensions) than low and mid-educated households do – 55 to 64 year old highly educated households hold on average 47 per cent of their gross wealth in DC or DB pensions or insurance products, compared to 39 per cent among mid-education households of the same age and 32 per cent among low education households of the same age.

Younger, highly educated households hold lower levels of wealth, on average. However, if they display similar levels of wealth accumulation between now and when they reach retirement to that displayed by the earlier cohorts of highly educated households then, so long as their current levels of wealth are not lower than those that were held by older cohorts when they were of a similarly young age,

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[14] An individual entitled to Pension Credit and subject to the 40 per cent taper would experience a 60p increase in total income for each £1 increase in private pension income, since 40p of the increase in private pension income would be offset by a reduction in Pension Credit entitlement. Therefore, they would need to increase their private pension income by £(1/0.6)=£1.67 in order to increase their total income by £1. This is 67 per cent higher than the £1 increase in income that would be required by someone not entitled to Pension Credit.

the adequacy of their retirement savings maybe of less concern. These households are, however, many years from retirement. This presents both opportunities and dangers for their retirement saving.

Given the number of years remaining of working life, younger highly educated households have the opportunity to save from their future income and to invest their existing and future savings in order potentially to earn a high return – the highly educated, more so than other younger households, are more likely to hold a greater fraction of their wealth in risky liquid assets (such as stocks and investment ISAs). They could also benefit from future positive shocks to asset prices. However, the potential dangers to their future retirement provision were made very apparent by the asset price falls that occurred during 2008 (the potential impact on household wealth of these asset price changes are discussed in more detail in Chapter 7). Also, the cohort currently approaching retirement have faced a slightly different saving environment from that facing current younger households. They have, arguably, benefitted from a positive 'shock' to the housing market – house prices rose dramatically during the late 1990s and early 2000s, once this cohort were already on the housing ladder. The current cohort of younger households may not be so lucky. Furthermore, the current cohort of younger households also faces a somewhat different pension saving environment. DB pension schemes are now less prevalent in the private sector. However, recent reforms (for example, the planned introduction of auto-enrolment into workplace pensions or the National Employment Savings Trust, NEST) have aimed to increase the number of employees saving for retirement in private pensions. The future retirement resources of current younger, highly educated households will thus depend not only on how much they save, but also how wisely they invest it and what unforeseeable shocks affect asset prices over the next few decades.

This leaves the group of households headed by mid-educated individuals (that is, individuals with educational or vocational qualifications below degree level). It is in this, more heterogeneous, group that we would argue (for at least some households) there is greater uncertainty about whether their current wealth holdings imply their future retirement resources will be sufficient.

Given that they have a higher level of qualifications, this group are likely to have higher lifetime earning potential than the low education group – thus state benefits will tend to provide a lower level of earnings replacement for this group than for the low education group. However, as Chapter 4 showed, households in this group have much lower average wealth holdings than the highly educated group. Half of mid-educated households aged between 55 and 64 have net wealth of no more than £191,000 per adult and one-quarter have net wealth of no more than £87,000 per adult. Furthermore, mid-educated households aged between 55 and 64, on average, hold more of this wealth in their main home than the highly educated households do – 45 per cent, compared to 34 per cent among highly educated households aged between 55 and 64.

Chapter 4 showed that the mid-educated households (of working age) who were more likely to hold low levels of wealth were those who rented and single-adult households with children (whether or not they are working). Conversely, the mid-educated households who were more likely to have high levels of wealth were multiple adult households with multiple earners (with or without children).

Younger mid-educated households will face the same opportunities and dangers to their future retirement resource accumulation as outlined above for highly educated households. To examine one recent example of the potential dangers facing household wealth holdings – the recent financial and housing market decline – the next chapter attempts to model the potential effect of these asset price changes on wealth holdings, taking into account the relative importance of different types of assets within households' portfolios.

7 Potential impact of asset price fluctuations

As described in Chapter 6, the exposure of wealth to changes in asset prices will be an important factor affecting what resources individuals are likely to have available in retirement. This chapter aims to illustrate this by examining the extent to which household wealth might have been affected by the asset price changes that occurred between 2007 and 2009, which was an example of a period of considerable asset price volatility.

Different types of assets will have been exposed to different changes in prices over this period. We simulate the possible effect of the market declines on wealth holdings by considering various asset types as follows:

- risky financial assets: The value of all assets of this type (including risky liquid assets as defined in Chapter 3 and endowment policies) are assumed to have moved in line with an index calculated from the FTSE All Share index and data on total returns to UK equities. Appendix B describes how this index is calculated;
- main residence: The value of the owner-occupied main residence is assumed to have been exposed to the change in the Nationwide region-specific house price index;
- other property: Other property and land is assumed to have been exposed to the change in the Nationwide UK-wide average house price index;[15]

[15] We have applied the change in the UK-wide house price index (rather than region-specific changes) to other land and property, as we do not know from the survey where this other property is located.

- Defined Contribution (DC) pensions: the value of unannuitised DC pension funds is assumed to have changed in line with an index constructed using information on the average returns earned by DC pooled pension funds.[16]

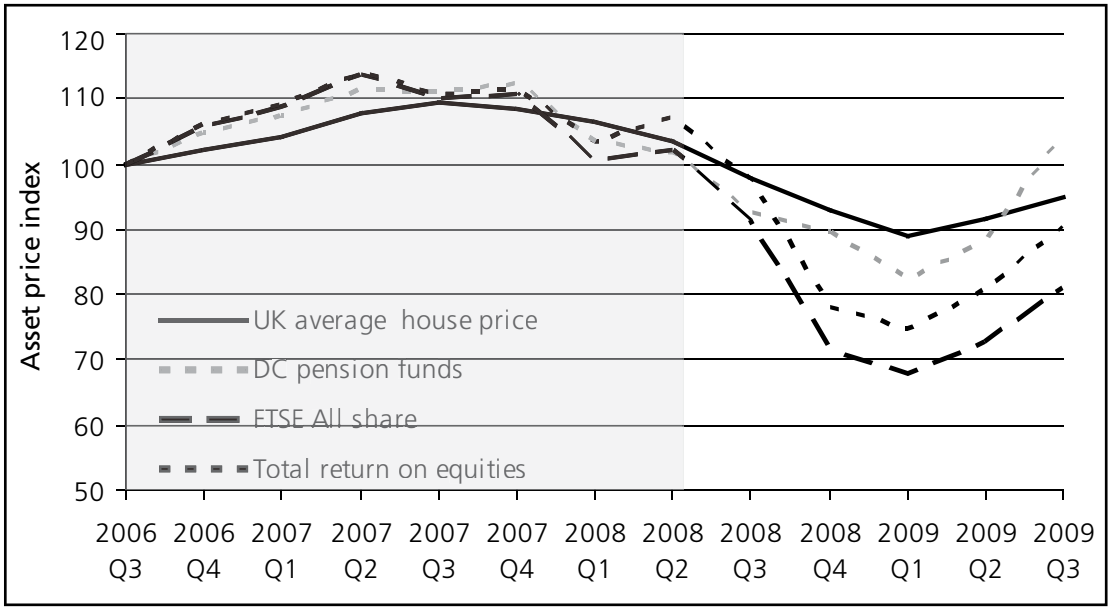
Clearly this is a very broad-brush approach to estimating the potential losses, or gains, to wealth resulting from the changes in asset prices over this period. Different types of financial assets will have been exposed to greater and lesser changes in prices than the average return on UK equities, changes in house prices varied substantially even within regions and DC pension funds could have been held entirely in safe assets (such as cash or bonds) or could have been held in much riskier than average assets. To the extent that the changes in asset prices are, on average, similar to the changes in the indices we have used, our results should not be biased. However, there may be reason to believe that the actual average changes in asset values will not be the same as the changes in our indices when looking at subgroups by age and education. For example, those very close to retirement are more likely than average to hold their DC pension assets in low risk bonds, whereas those near the start of working life may be more likely to hold higher risk assets. Also, just as we saw in Chapter 5 that more of the highly educated than the mid- or low educated hold risky financial assets, it may also be the case that highly educated households have a higher tolerance for riskier assets in their DC pension funds; average returns on these riskier assets may have been different from the average return on pooled pension funds that we use here. If these differences do hold, then our average asset price indices may cause us to underestimate the losses of young and higher educated households. On the other hand, more highly educated households and those more involved in financial markets may have been more aware of what was going on in the markets and so may have been able to move their assets into safer forms sooner than other households in order to minimise their losses. In this case, using our average indices may overstate the losses they faced. In essence, it is important to keep in mind that these are very broad estimates of the average changes in asset prices and therefore our figures are best taken only as an illustration of possible losses for different groups.

Figure 7.1 shows how the indices we focus on changed, relative to their level in the third quarter of 2006 (henceforth 2006 Q3), over the Wealth and Assets Survey (WAS) fieldwork period (2006 Q3 to up to 2008 Q2) and over the subsequent

[16] Median DC fund returns from BNY Mellon Asset Servicing's Pooled Pension Fund Surveys (see for example http://bnymellon.mediaroom.com/index.php?s=43&item=906). Annuity rates have also changed since 2007, with rates tending to increase until the end of 2008 due to the lack of liquidity in financial markets, and then falling again from 2009 when the Bank of England introduced quantitative easing (see for example http://tim.burrowscummins.co.uk/charts/chart12.aspx). We have not attempted to incorporate here any estimate of the impact of changing annuity rates on the ultimate income that could be derived from a DC fund.

period up to 2009 Q3. According to our broad indices, asset prices tended to increase until around 2007 Q3, before falling fairly continually until 2009 Q1. The sharpest falls were in equity prices, while the UK average house price index declined much more gradually. The index for DC pension funds fell more rapidly than that of house prices, but particularly strong recovery towards the end of 2009 has meant that (according to this index of DC fund performance) in 2009 Q3 DC assets were back at the level they were in 2008 Q1 (and above the level they were at at the start of the WAS fieldwork period). House prices and (we estimate) the value of equities had not recovered as much by 2009 Q3.

Figure 7.1 Changes in asset price indices, 2006 Q3 to 2009 Q3



Figures presented below for the change in the value of households' assets are estimated by taking the value of assets reported in the WAS interview and the change in the relevant index between the quarter in which a household was interviewed and 2009 Q3. This provides an illustration of how household wealth holdings may have changed (from the levels described in Chapter 4) since the WAS interview. It assumes that households made no active changes to their holdings of risky financial assets, property wealth or DC pensions over this period – in other words, that they made no new pension contributions and saved no more or less in other financial or housing assets. To the extent that we demonstrate that households may have experienced a loss of wealth, this is a loss relative to their position when interviewed for WAS, rather than when they initially invested in the assets they hold.

In Section 7.1 we start by considering the average losses (in cash terms) of groups of households by age and education, and how this compares to the average wealth held by these groups. We then look (in Section 7.2) at the distribution of

individual household losses (as a share of initial gross household wealth[17]) among households, before briefly considering the implications of these wealth changes for future retirement resources in Section 7.3.

7.1. Average losses

Table 7.1 takes into account losses of property wealth, unannuitised DC pension wealth, and risky financial wealth to illustrate the mean total loss estimated to have resulted from asset price changes between the interview date and 2009 Q3, by education and age. (The mean loss from property wealth, risky financial wealth and unannuitised DC pension wealth are provided in Table A.5 in Appendix A, where it can be seen that the majority of losses – in cash terms – are caused by losses of housing wealth, particularly among low and mid education households.)

The size of estimated total losses (in cash terms) increases with education and age (up to around the end of working life) as these groups have greater stocks of wealth that are exposed to asset price changes. These estimates suggest that each mid education household aged 25 to 34 lost an average £5,400 per adult, rising to £13,800 among mid-education households aged 55 to 64. By comparison, each highly educated household aged 55 to 64 lost an average £24,200 per adult. However, when considered as a share of initial wealth, losses are actually lower among more educated and older households. The group of low education households aged 25 to 34 may have lost around 7.8 per cent of initial gross wealth, while mid- and high-education households lost 7.3 per cent and 6.2 per cent respectively.

Since net wealth is necessarily lower than gross wealth for households with any debts, the average loss as a share of initial net wealth will be larger than the same loss as a share of initial gross wealth. In particular, consider a household that has a large mortgage secured on their property: while their loss of gross housing wealth may be relatively small, their loss of equity in the property could be very large (indeed, it could potentially exceed 100 per cent of their initial net housing wealth – in other words, it may have moved them into negative equity). As discussed in Chapter 4, debts are significantly larger among younger households than older households and so considering losses as a share of initial net wealth makes a more significant difference to these households. For example, we estimate that the group of mid-education households aged 25 to 34 may have lost 14 per cent of their initial net wealth, compared to 7.3 per cent of their initial gross wealth, while the group aged 55 to 64 lost only 5 per cent of their initial net wealth, compared to 4.8 per cent of their initial gross wealth. However, even though the younger households may have lost a larger proportion of their net wealth, our estimates suggest that the proportion of households with negative wealth overall may not have changed very much: the estimated changes in net wealth described

[17] Initial wealth (gross or net) is defined as the level of wealth reported in WAS, regardless of the date of interview.

above imply that the proportion of low-educated households aged 25 to 34 who have negative net wealth may have increased by about 1.9 percentage points, with the comparable figures for mid- and high-educated households being 2.4 and 2.2 percentage points, respectively. Across all other age groups, the increase in the proportion with negative net wealth is less than 0.6 percentage points.

Table 7.1 Mean total loss, initial gross wealth and initial net wealth among groups of households, by age and education (£000s)

	Mean total loss per adult	Mean initial gross wealth per adult	Mean initial net wealth per adult
Low education			
25 to 34	1.7	21.7	10.4
35 to 44	4.2	59.4	42.1
45 to 54	6.4	90.3	79.5
55 to 64	7.4	139.0	133.1
65 to 74	7.5	132.3	130.1
75 to 84	8.3	133.2	131.3
85 and over	8.6	118.2	118.0
Mid-education			
25 to 34	5.4	73.1	38.2
35 to 44	8.6	137.0	101.5
45 to 54	9.8	186.4	164.3
55 to 64	13.8	290.5	278.4
65 to 74	13.7	286.1	282.9
75 to 84	14.7	253.5	251.5
85 and over	15.0	212.5	211.4
High education			
25 to 34	8.7	140.1	80.8
35 to 44	16.2	281.3	214.9
45 to 54	20.0	410.7	366.5
55 to 64	24.2	602.6	581.9
65 to 74	25.8	607.5	599.3
75 to 84	25.7	565.2	564.3
85 and over	28.6	473.1	473.0

Source: Authors' calculations using Wealth and Assets Survey 2006/08.

The distribution of losses experienced by individual households within any education and age group varies widely, depending on households' portfolios and thus what proportion of their assets were exposed to price changes. For instance, while the group of low education households aged 25 to 34 as a whole may have lost 7.8 per cent of their initial gross wealth, as was shown in Figure 5.4 the majority of households in this group held most of their wealth in the form safe assets, and therefore the group loss is being driven by a small number of

wealthier households who are more exposed to asset price changes. In Section 7.2 we therefore consider the distribution of losses of individual households as a share of their initial gross wealth.

7.2. Losses as a share of households' initial gross wealth

Figures 7.2 to 7.4 show the mean loss of property wealth, risky financial wealth and DC pension wealth (respectively) as a share of initial total gross wealth for households of each education group. Since the asset price indices used are the same across education groups, the differences in average losses shown are primarily the result of the different portfolio compositions of these groups, as shown in Figures A.2 to A.6.[18]

Figure 7.2 shows that the mean loss of property wealth, as a share of initial total gross wealth, is similar for the high and mid-educated households, as would be expected given they have similar shares of their portfolios invested in property on average (see Figures 5.5 and 5.6). Figure 7.1 shows that the fall in the UK-wide house price index from the peak (in 2007 Q3) to 2009 Q3 was about 13%; this loss varied somewhat across regions, with the largest fall over this period being in the East Midlands (where there was a fall of nearly 15 per cent) and the smallest being in Scotland (where there was a fall of just eight per cent). Because mid- and high-educated households hold around half of their wealth in property on average the average losses of initial gross wealth as a result of falling property prices are around four to five per cent (as shown in Figure 7.2). The mean loss among the low education households is lower because these households are less likely to have owner occupied housing (as shown in Figure A.6) and so on average have a lower proportion of their total gross wealth invested in property.

Very few households (particularly among the low and mid-educated) have any risky financial wealth (see Figure A.3) and those who do have only a small share of gross wealth invested in this form. Therefore, the impact of mean losses of financial wealth on gross wealth holdings (shown in Figure 7.3) are small despite the negative estimated returns on equities over this period.

Finally, while the proportion of gross wealth held in unannuitised DC funds is larger than the proportion held in risky financial assets – between around six per cent for working-age high education households and around nine per cent for working-age low education households (see Figures 5.4 and 5.6) – our index for DC funds exhibits a large recovery from the second quarter of 2009. Therefore, the average losses of DC pension wealth as a share of initial total gross wealth from the date of interview to 2009 Q3 are fairly negligible for households of all education levels, as shown in Figure 7.4.

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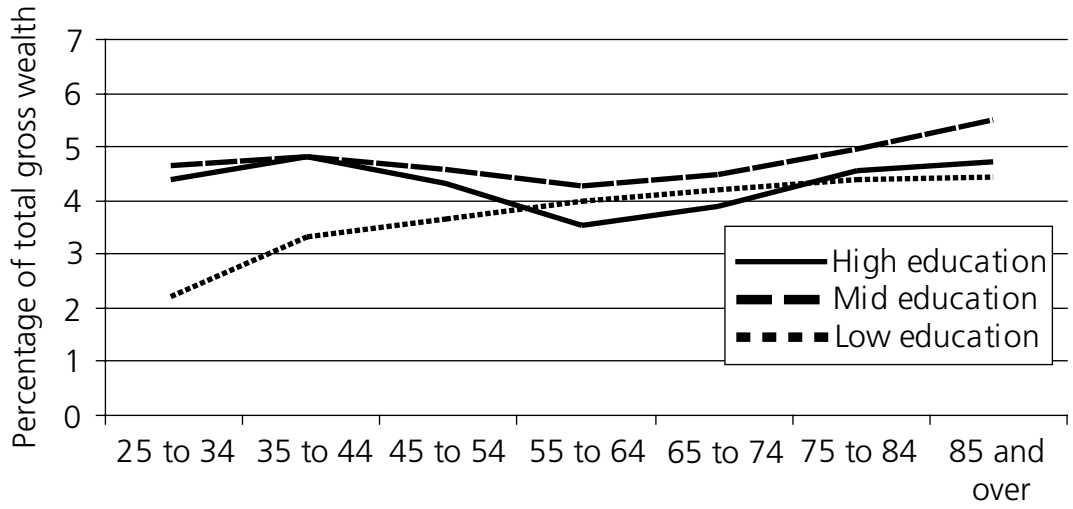
[18] The losses experienced will also differ between groups if the regional distribution of owner-occupied housing differs across groups and/or individuals in the different groups were interviewed on average at different times during the fieldwork period. The latter is, however, unlikely.

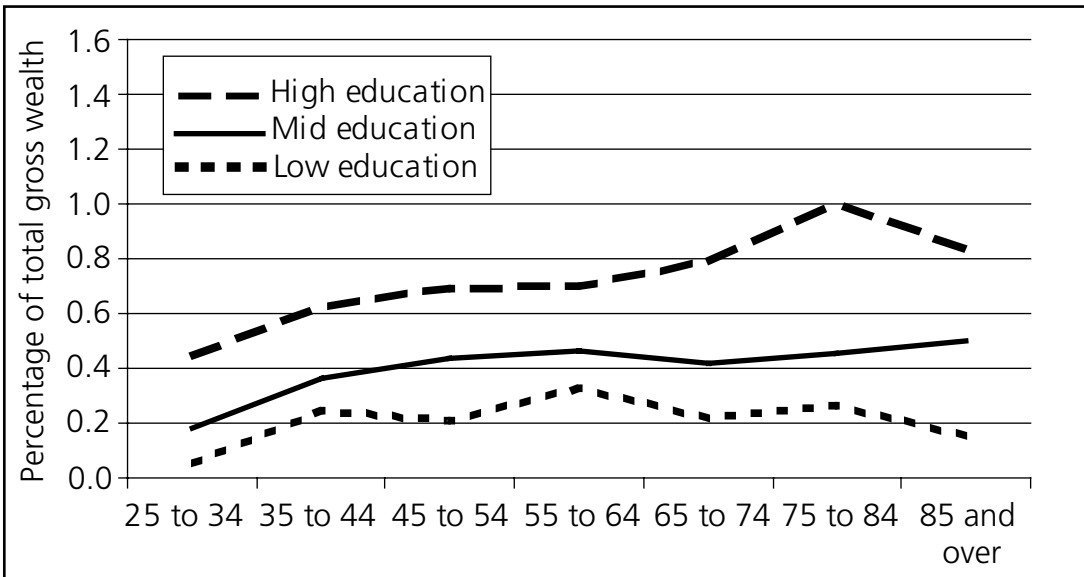
Figure 7.2 Mean loss of property wealth: interview date to 2009 Q3, by education and age



Note: Excludes households with zero initial gross wealth; with the exception of the young, low-educated, very few households have zero gross wealth.

Source: Authors' calculations using Wealth and Assets Survey 2006/08.

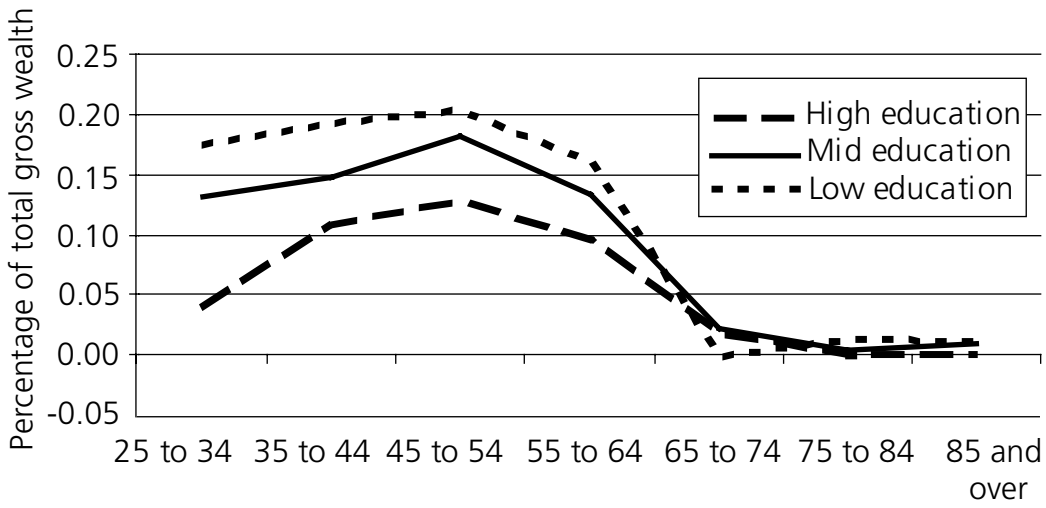
Figure 7.3 Mean loss of financial wealth: interview date to 2009 Q3, by education and age



Note: As Figure 7.2.

Source: Authors' calculations using Wealth and Assets Survey 2006/08.

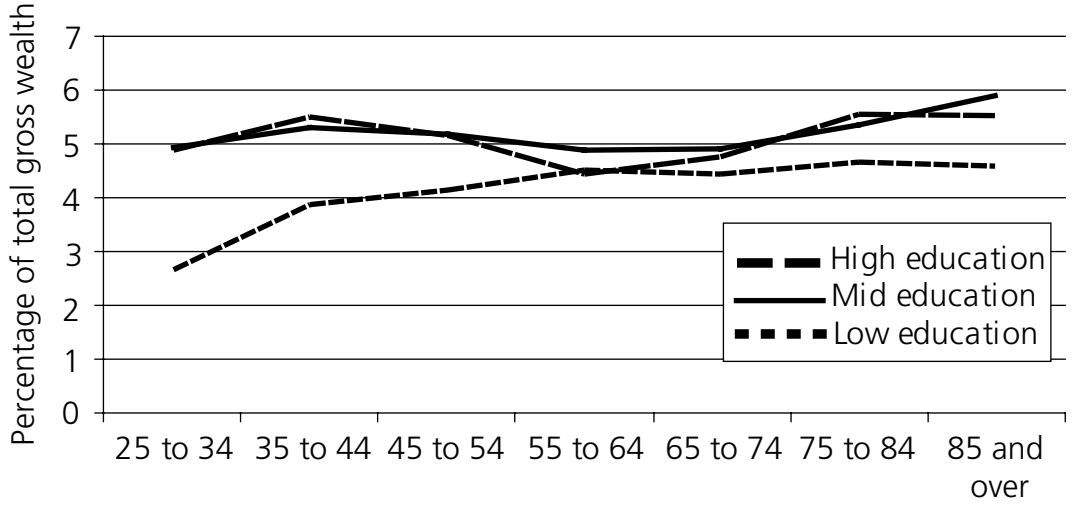
Figure 7.4 Mean loss of DC pension wealth: interview date to 2009 Q3, by education and age



Note: As Figure 7.2.
Source: Authors' calculations using Wealth and Assets Survey 2006/08.

Figure 7.5 takes into account losses of property wealth, unannuitised DC pension wealth, and risky financial wealth to illustrate the mean total loss, as a share of initial gross wealth, resulting from asset price changes between the interview date and 2009 Q3. Since the mean losses of financial wealth and DC wealth are so small relative to the losses of property wealth, the picture looks largely the same as Figure 7.2. Losses are highest for the mid- and high-education households, who are the most exposed to the housing market, but losses as a share of initial total gross wealth tend to be relatively small – on average, less than six per cent.

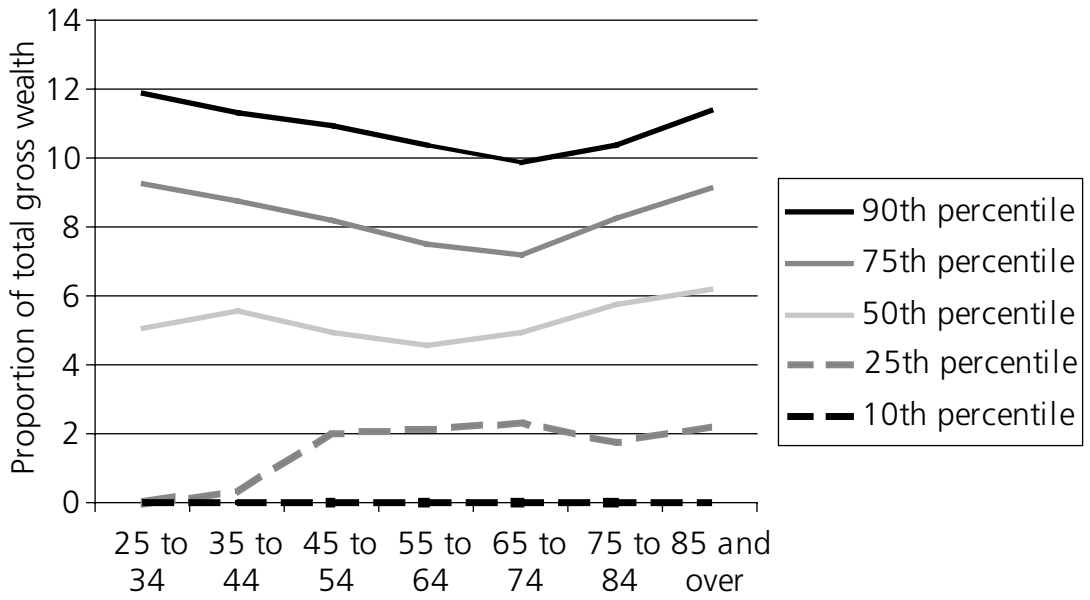
Figure 7.5 Mean total loss as a share of gross wealth: interview date to 2009 Q3, by education and age



Note: As Figure 7.2.
Source: Authors' calculations using Wealth and Assets Survey 2006/08.

While the mean losses may seem relatively small, this hides some dispersion. Figure 7.6 shows various quantiles of the distribution of losses, as a share of initial gross wealth, for mid-education households – the 10th percentile indicates that one-tenth of mid-education households experienced a loss no greater than that level, the 25th percentile indicates that one-quarter of mid-education households experienced a loss of no greater than that level and so on. While the mean total loss for mid-education households was between five and six per cent of initial gross wealth (as shown in Figure 7.5), some households may have lost more than that amount. For example, among mid-education households aged 25 to 34, one-quarter of households have an estimated loss of over nine per cent of initial gross wealth, and one-tenth have a loss in excess of almost 12 per cent. On the other hand, some households are likely to have lost less than the average – ten per cent of mid-education households of all age groups have a loss of zero. Equivalent figures to those shown for mid-education households in Figure 7.5 are provided for the high and low education households in Figures A.7 and A.8 and show a similar dispersion of losses.

Figure 7.6 Total loss as a share of initial gross wealth among mid-education households: interview date to 2009 Q3, by age



Note: As Figure A.7.
Source: Authors' calculations using Wealth and Assets Survey 2006/08.

7.3 Implications of wealth losses for future retirement resources

The changes in asset prices between the date of the WAS interview and 2009 Q3 are likely to have resulted in losses of wealth which are, on average, relatively small (given the scale of the asset price changes) as a share of households' initial gross wealth. However, for younger households, the losses may have been large as a share of households' initial net wealth. This is largely the result of these households having a large proportion of their assets invested in owner-occupied housing with associated mortgages that still have large outstanding balances. Therefore, they have lower levels of net wealth than older households but are exposed to the same risk and wealth losses from house price changes that other property owners are.

Since the larger losses of net wealth are concentrated among younger households, the implications for the retirement resources of households are not as great as they might be. Losses result primarily from house price changes, but may not be realised if households can avoid crystallising these losses. They may be able to do this either by not selling their homes until asset prices recover further or by taking advantage of the fact that more expensive properties have also fallen in price by 'up-sizing'. Younger households may be more likely than older households to be able to do this, as older households are more likely to be considering down-sizing

in order to use their housing wealth to fund their immediate consumption needs. Therefore, the greater risk for younger households is whether their income remains sufficiently high for them to keep up with interest payments on their mortgage. Falling behind on their repayments would likely result in them being forced to sell their property and thus crystallise the loss. However, even if younger households were unable to avoid realising the losses in housing wealth just discussed, they still have longer to save and accumulate more wealth before retirement than older households do. So they are perhaps better placed to repair the adequacy of their resources.

Those households nearing the end of working life, for whom losses of wealth will be more important for the resources available in retirement, on average face losses of around five to six per cent of their gross wealth. Since such losses primarily come from house price changes, these losses will only be realised if the households wish to sell or withdraw equity from their homes through home reversion schemes. Households would be able to withdraw equity from their homes through lifetime mortgages without having to realise any short-term losses to the value of their property, although since the maximum equity that can be withdrawn is typically a proportion of the property value, the amount that they can borrow may be lower until asset prices recover further. Losses of wealth explicitly labelled as for retirement consumption (such as unannuitised DC pension funds) are likely to have been fairly insignificant, except for the small minority of households who hold large shares of their wealth in this form and/or who were forced to annuitise these assets at the bottom of the market. The impact on the adequacy of retirement resources for most of those approaching retirement is therefore likely to be small. Those who were significantly affected may have had to consider, if they were able, delaying retirement while they wait for asset prices to recover somewhat. The simultaneous increase in unemployment since 2007 may, however, have made this option more difficult for some.

8 Conclusions

The questions of how and how much individuals save for retirement, whether their provision is adequate and, if not, why not and what policymakers could do to help, have exercised policymakers' and academics' minds for years. The release of the first (2006/08) wave of the Wealth and Assets Survey (WAS) has provided a welcome addition to the hitherto limited statistical evidence base in Britain. The first descriptive report on the WAS data (ONS, 2009) revealed stark differences in asset holding, wealth levels and debts within the household population. It showed that many households held very low levels of wealth in certain forms and some had high debts. However, from an economic perspective some of these differences are to be expected, and cross sectional differences in wealth, which reflects the 'stock' of all past saving, should not be analysed in the same way as cross sectional differences in 'flow' variables such as income. This report has attempted to explore, using the initial WAS report and the WAS microdata – and in the light of standard economic theory on how individuals save over their lifetimes – what the level and composition of wealth held by households in Great Britain can tell us about potential future retirement resources. With only one cross-sectional observation of wealth holdings and some of the households surveyed being many decades away from retirement, some of our conclusions are necessarily speculative. Further waves of WAS data will ultimately help to fill in the picture of how individual households actually accumulate wealth over time.

We have focused our analysis on examining the differences in wealth holdings among groups defined by their age and their education level – the latter being a reasonable proxy for differences in lifetime earnings. Wealth holdings are, on average, lower among younger households and less educated households. Average wealth holdings are also lower among the oldest households than they are among households around retirement age.

Low-educated households are likely to have the lowest lifetime earning potential and so state benefits (including state pensions and means-tested benefits for pensioners) may well provide a reasonable level of earnings replacement for this group. Meanwhile, the levels of wealth held by the vast majority of high-educated households (that is, households headed by someone with degree-level qualifications) nearing retirement age suggests that their resources are likely to

be sufficient to provide at least a subsistence level of income in retirement. The outlook for younger high-educated households is considerably less certain, given the length of time remaining before they reach retirement and the potential shocks they could face in the future. However, if they demonstrate the sort of asset accumulation that earlier cohorts of high-educated households have, there may be little cause for concern here either. The composition of their portfolios, however, is weighted towards risky assets (they hold, on average, 62 per cent of their wealth in assets that are likely to be exposed to house or stock price changes); this suggests that their final outcomes will depend to a large extent on the (positive or negative) shocks to asset prices in the coming years and how well they are able to manage their investments.

There is greater ambiguity surrounding the outlook for retirement resources among the mid-educated category (that is, those headed by an individual with some educational or vocational qualifications below degree level). Most mid-educated households have less net wealth per adult than the vast majority of high-educated households. Furthermore, they hold, on average, more of this wealth in their main home than do high-educated households (who tend to hold more of their wealth in assets explicitly labelled as retirement saving – that is, Defined Benefit (DB) and Defined Contribution (DC) pensions). Overall mid-educated households hold about as much of their wealth in assets potentially exposed to house or stock price fluctuations as do high-educated households, though with a slightly greater fraction exposed to house price fluctuations and a slightly smaller fraction exposed to stock price fluctuations (on average).

To examine the possible impact of the large changes in asset prices that occurred between 2007 and 2009 on the distribution of wealth captured by WAS 2006/08, Chapter 7 modelled the potential loss of gross and net wealth experienced by households. This showed that, while losses of gross wealth were on average quite small, there were small numbers of households who may have experienced larger drops (in excess of ten per cent of gross wealth, for example). Furthermore, particularly for younger households, the potential loss of net wealth may be substantially larger. This will have been a particular risk where households had large outstanding mortgages on their properties.

There are many reasons that people accumulate wealth and to the extent that people do so for reasons other than to fund retirement consumption, current wealth holdings will not necessarily all be available to consume during retirement. Bearing in mind first the impossibility of separating out asset holdings that will be devoted to retirement consumption from those to be used for other purposes and second the fact that we cannot predict how much wealth younger households will accumulate between now and retirement or what shocks they may face, this report has drawn out some tentative conclusions about the outlook for future retirement resources using the first wave of WAS.

WAS is a rich source of information on asset holdings in Britain and further waves will shed light on the saving behaviour of individual households over time. While

this report has painted a broad picture of what the cross-sectional distribution of wealth in WAS 2006/08 can tell us about future retirement resources, there is considerable scope for further work. We have made no formal judgements here about the optimality or adequacy of households' current wealth holdings. Both require further assumptions about consumption needs or household preferences but could shed more light on household saving behaviour and where perhaps there may be scope (or need) for further policy intervention.

Appendix A Supplementary tables and figures

Table A.1 Distribution of household net wealth per adult, by education and age

		Household net wealth per adult, £000s					
	Sample size	p10	p25	p50	p75	p90	Mean
25 to 34							
Low education	*344*	-2.2	0.0	16.4	14.5	47.2	90.6
Mid-education	*2,082*	-1.5	6.8	22.2	57.5	101.7	90.6
High education	*1,340*	0.5	11.5	48.7	108.9	213.7	90.6
All	*3,766*	-0.9	11.7	31.1	77.5	147.1	62.5
35 to 44							
Low education	*653*	-1.0	1.1	19.1	55.4	139.8	122.5
Mid-education	*3,581*	0.3	13.6	69.5	145.0	246.7	154.0
High education	*1,664*	12.8	70.3	162.2	282.4	477.6	224.0
All	*5,898*	0.4	19.4	81.8	177.9	318.9	135.6
45 to 54							
Low education	*840*	-0.1	2.7	24.2	89.7	192.2	159.8
Mid-education	*3,153*	1.7	38.6	105.9	212.1	387.7	216.7
High education	*1,485*	51.5	130.8	259.4	443.5	761.8	375.0
All	*5,478*	1.9	39.7	118.1	257.6	488.9	210.2
55 to 64							
Low education	*1,231*	0.1	3.4	74.1	177.4	319.1	213.3
Mid-education	*3,070*	9.0	86.8	190.8	354.9	580.7	330.9
High education	*1,349*	122.2	251.9	448.2	695.8	1,123.2	590.3
All	*5,650*	2.4	75.6	196.5	399.1	691.0	317.9

Continued

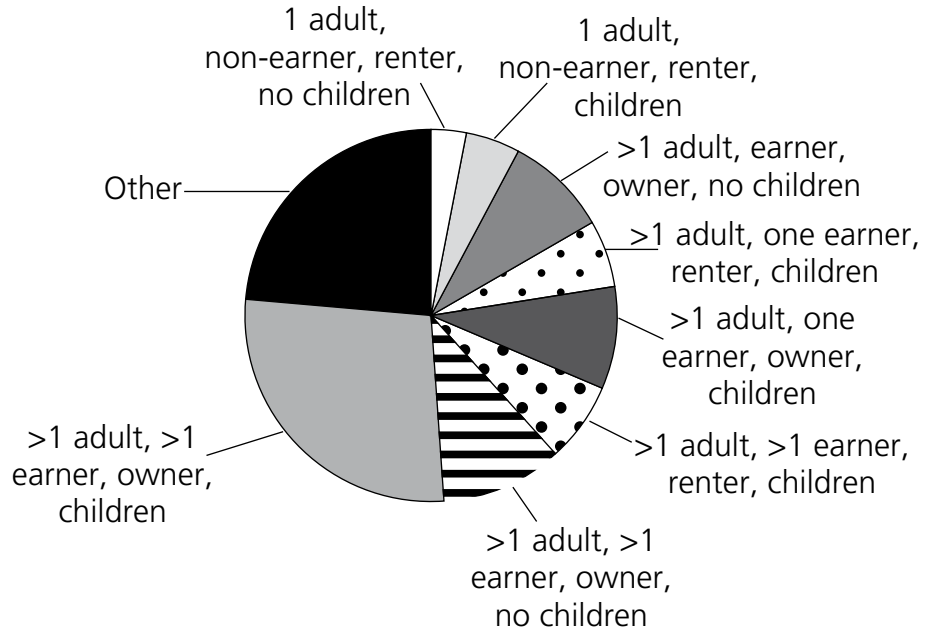
Table A.1 Continued

	Sample size	Household net wealth per adult, £000s					
		p10	p25	p50	p75	p90	Mean
65 to 74							
Low education	*1,679*	0.6	14.3	101.6	181.5	301.1	210.6
Mid-education	*2,144*	29.8	107.8	199.7	335.7	522.2	335.4
High education	*767*	123.8	255.1	426.8	659.3	1,065.1	606.4
All	*4,590*	3.6	75.1	172.8	320.7	555.6	275.0
75 to 84							
Low education	*1,567*	0.8	12.5	98.7	187.6	306.9	214.6
Mid-education	*1,179*	16.7	92.8	177.9	308.6	484.7	303.9
High education	*418*	158.6	258.4	372.3	559.1	950.8	571.1
All	*3,164*	3.7	45.6	150.6	277.7	460.5	232.6
85 and over							
Low education	*515*	1.0	8.0	82.0	183.5	308.0	203.9
Mid-education	*287*	11.0	75.0	207.5	336.9	568.3	263.7
High education	*71*	114.9	216.2	378.3	549.1	922.2	483.2
All	*873*	2.7	27.5	127.1	242.2	413.5	187.0

Notes: p10 indicates the 10th percentile, p25 the 25th percentile and so on. The 10th percentile is the level of wealth at which the fraction of the group with less than or equal to that level of wealth is one-tenth.

Source: Authors' calculations using Wealth and Assets Survey 2006/08.

Figure A.1 Characteristics of mid-educated households aged 25 to 54 – family composition, employment status and owner-occupation



Source: Authors' calculations using Wealth and Assets Survey 2006/08.

Table A.2 Distribution of household net wealth per adult: mid-education, age 25 to 34, by household type

		Household net wealth per adult (£000s)					
	Sample size	p10	p25	p50	p75	p90	Mean
1 adult, non-earner, renter, no children	*54*	-2.2	-0.4	0.0	0.1	1.1	-0.3
1 adult, non-earner, renter, children	*217*	-4.8	-1.6	-0.2	0.0	1.0	0.0
1 adult, earner, owner, no children	*196*	16.9	33.2	57.1	99.4	173.9	92.0
>1 adult, one-earner, renter, children	*140*	-2.7	-0.6	0.0	2.0	20.3	5.3
>1 adult, one-earner, owner, children	*121*	2.6	19.9	43.3	78.2	133.0	56.9
>1 adult, >1 earner, renter, children	*132*	-6.2	-2.0	0.4	6.5	37.7	12.9
>1 adult, >1 earner, owner, no children	*278*	7.5	18.5	40.5	76.1	110.6	52.4
>1 adult, >1 earner, owner, children	*374*	7.9	23.6	45.6	83.4	130.4	64.4
Other	*570*	-5.5	-0.6	0.8	20.6	66.0	19.7
All household types	*2,082*	-2.3	0.0	15.6	54.6	100.0	38.2

Notes: p10 indicates the 10th percentile, p25 the 25th percentile and so on. The 10th percentile is the level of wealth at which the fraction of the group with less than or equal to that level of wealth is one-tenth.

Source: Authors' calculations using Wealth and Assets Survey 2006/08.

Table A.3 Distribution of household net wealth per adult: mid-education, aged 35 to 44, by household type

		Household net wealth per adult (£000s)					
	Sample size	p10	p25	p50	p75	p90	Mean
1 adult, non-earner, renter, no children	*112*	-2.2	-0.4	0.0	0.6	26.1	13.3
1 adult, non-earner, renter, children	*106*	-2.6	-1.0	0.0	0.2	4.7	11.5
1 adult, earner, owner, no children	*269*	57.3	90.9	141.4	221.2	363.3	187.9
>1 adult, one-earner, renter, children	*203*	-2.1	-0.4	0.3	5.3	25.4	11.3
>1 adult, one-earner, owner, children	*394*	20.0	43.7	77.0	147.8	259.9	119.2
>1 adult, >1 earner, renter, children	*231*	-2.6	-0.1	2.4	25.0	97.7	27.2
>1 adult, >1 earner, owner, no children	*287*	26.4	61.8	105.3	201.1	317.7	149.3
>1 adult, >1 earner, owner, children	*1,242*	26.5	50.5	93.4	161.5	261.8	127.2
Other	*736*	-1.2	0.0	13.3	88.1	211.0	72.2
All household types	*3,580*	-0.1	8.0	63.0	141.8	245.9	101.5

Notes: As Table A.2.

Source: Authors' calculations using Wealth and Assets Survey 2006/08.

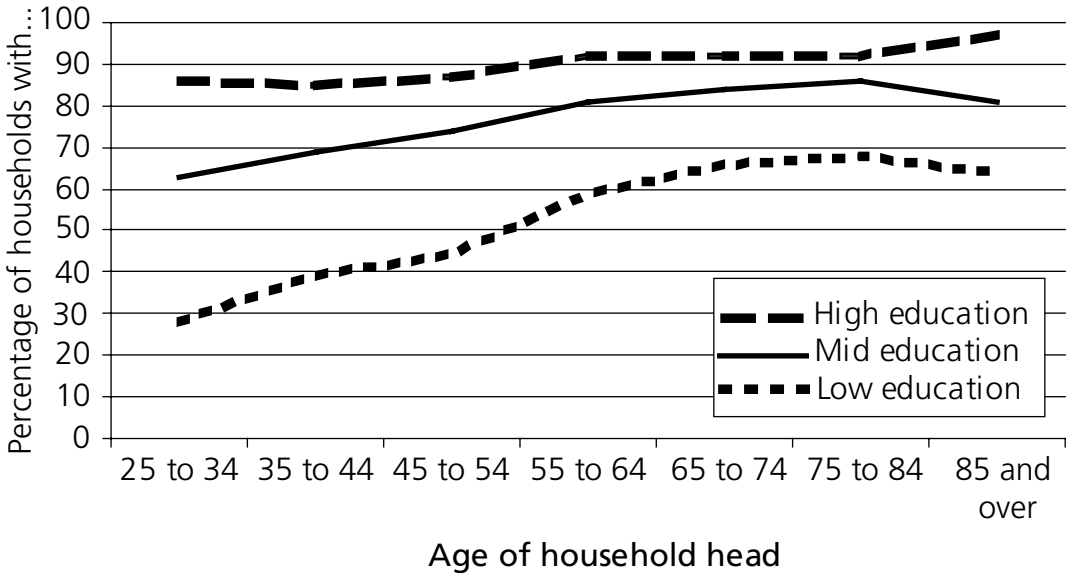
Table A.4 Distribution of household net wealth per adult: mid-education, aged 45 to 54, by household type

		Household net wealth per adult (£000s)					
	Sample size	p10	p25	p50	p75	p90	Mean
1 adult, non-earner, renter, no children	*146*	-5.1	-0.6	0.0	2.0	44.4	11.5
1 adult, non-earner, renter, children	*30*	-6.0	-0.9	0.0	0.2	11.8	3.1
1 adult, earner, owner, no children	*328*	67.7	125.2	228.6	433.9	662.2	338.3
>1 adult, one-earner, renter, children	*100*	-2.6	-0.3	0.2	8.9	52.5	15.4
>1 adult, one-earner, owner, children	*270*	33.6	55.6	106.9	201.7	332.4	155.1
>1 adult, >1 earner, renter, children	*131*	-1.1	0.8	7.9	32.2	69.8	34.1
>1 adult, >1 earner, owner, no children	*450*	55.0	94.4	178.7	299.2	477.4	239.4
>1 adult, >1 earner, owner, children	*1,072*	34.9	62.4	106.9	187.8	312.6	151.5
Other	*625*	-0.6	1.8	56.6	185.9	431.1	151.6
All household types	*3,152*	0.1	35.2	99.5	209.8	387.6	164.3

Notes: As Table A.2.

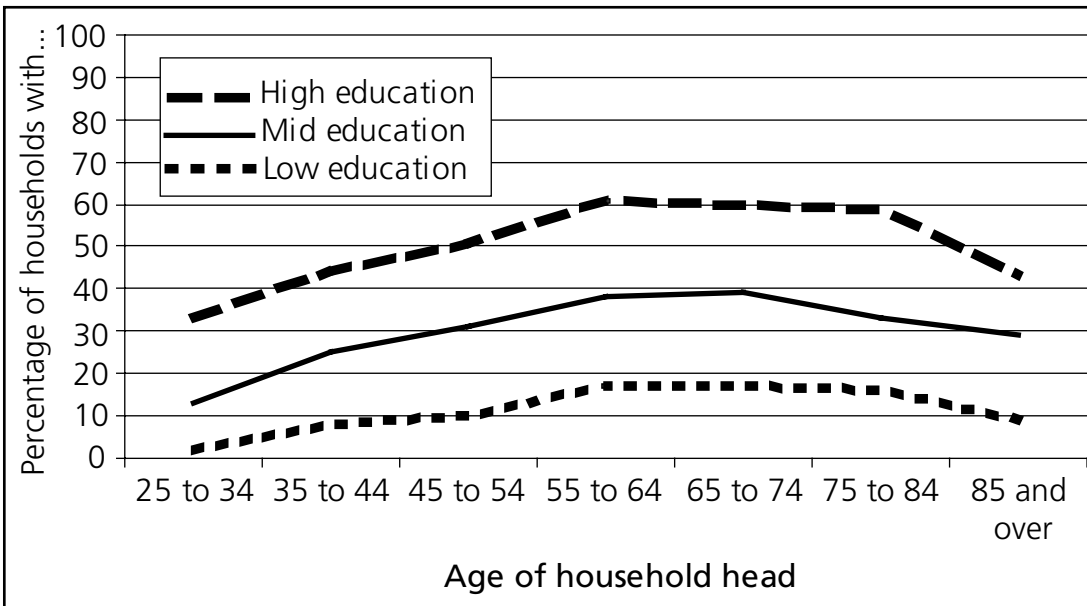
Source: Authors' calculations using Wealth and Assets Survey 2006/08.

Figure A.2 Proportion of households with liquid safe assets, by education level



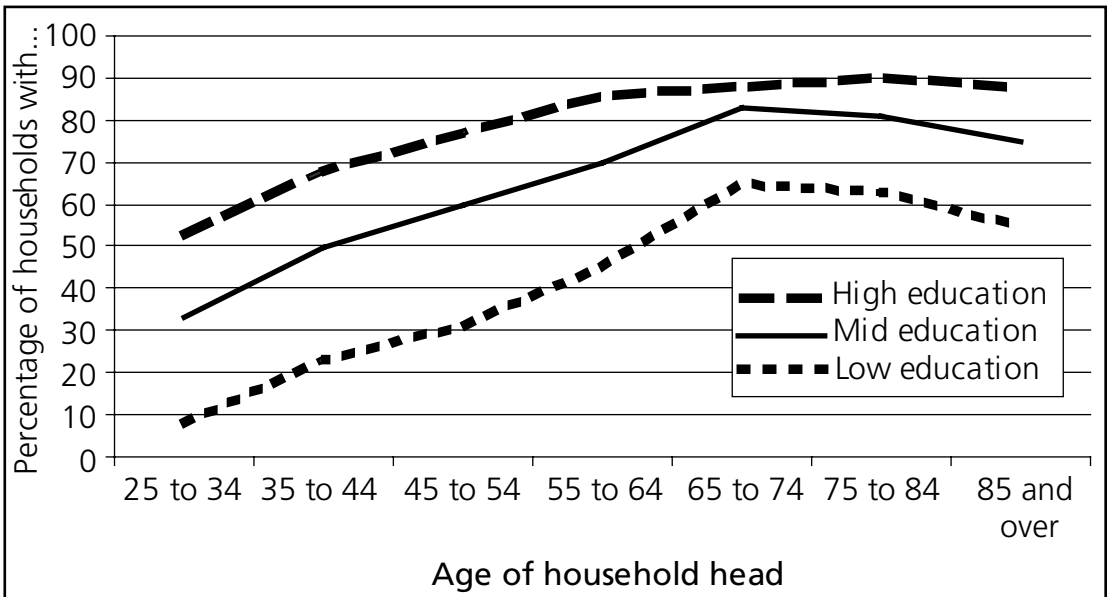
Note: The asset types defined in liquid safe are itemised in Chapter 3.
Source: Authors' calculations using Wealth and Assets Survey 2006/08.

Figure A.3 Proportion of households with liquid risky assets, by education level



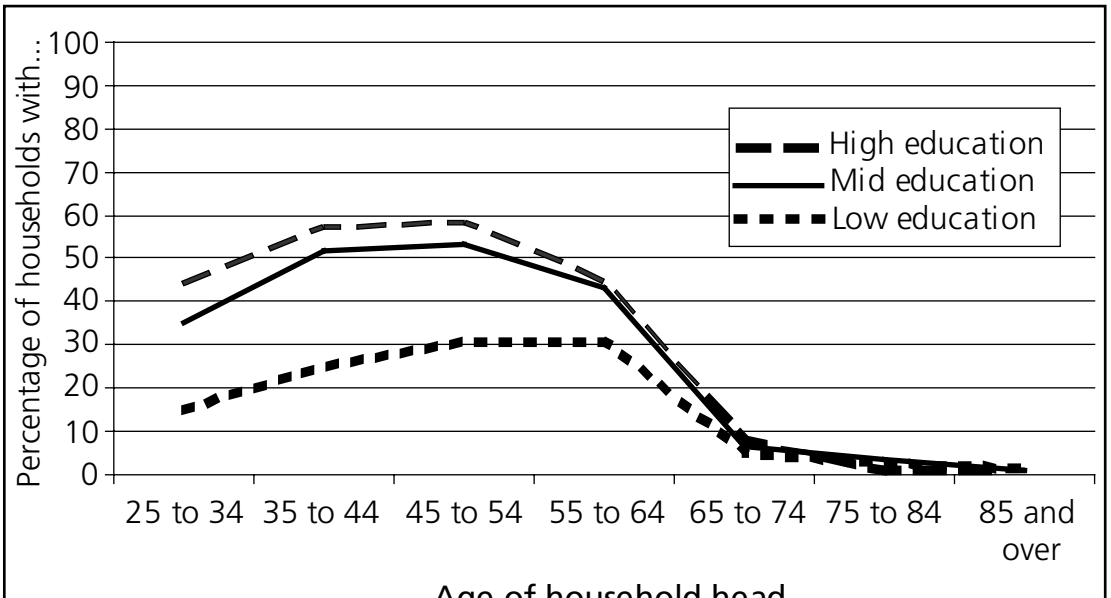
Note: The asset types defined in liquid risky are itemised in Chapter 3.
Source: Authors' calculations using Wealth and Assets Survey 2006/08.

Figure A.4 Proportion of households with illiquid safe assets, by education level



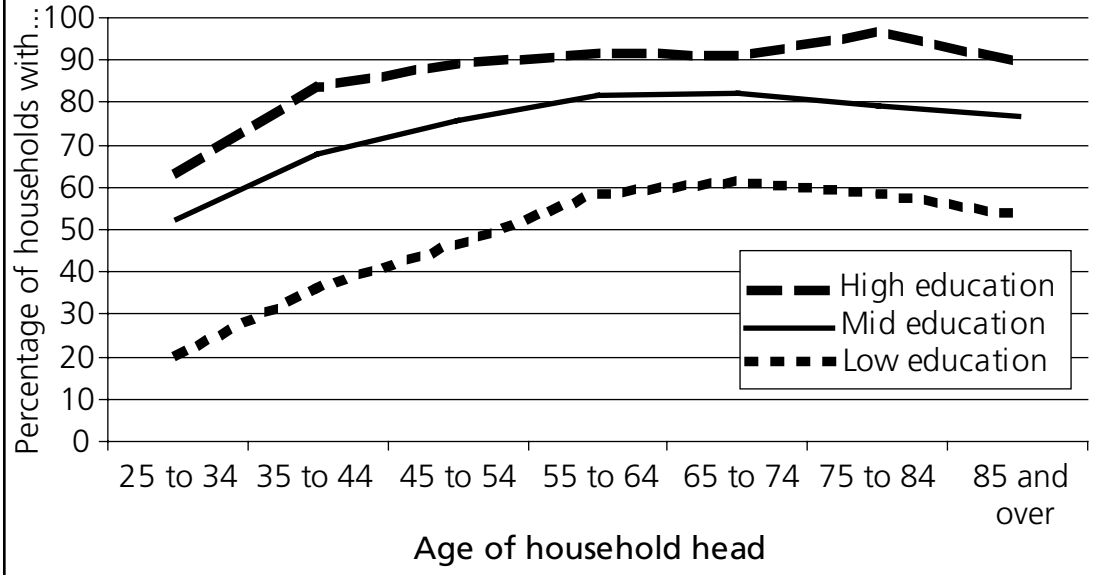
Note: The asset types defined in illiquid safe are itemised in Chapter 3.
Source: Authors' calculations using Wealth and Assets Survey 2006/08.

Figure A.5 Proportion of households with unannuitised DC pension wealth, by education level



Source: Authors' calculations using Wealth and Assets Survey 2006/08.

Figure A.6 Proportion of households with owner-occupied housing, by education level



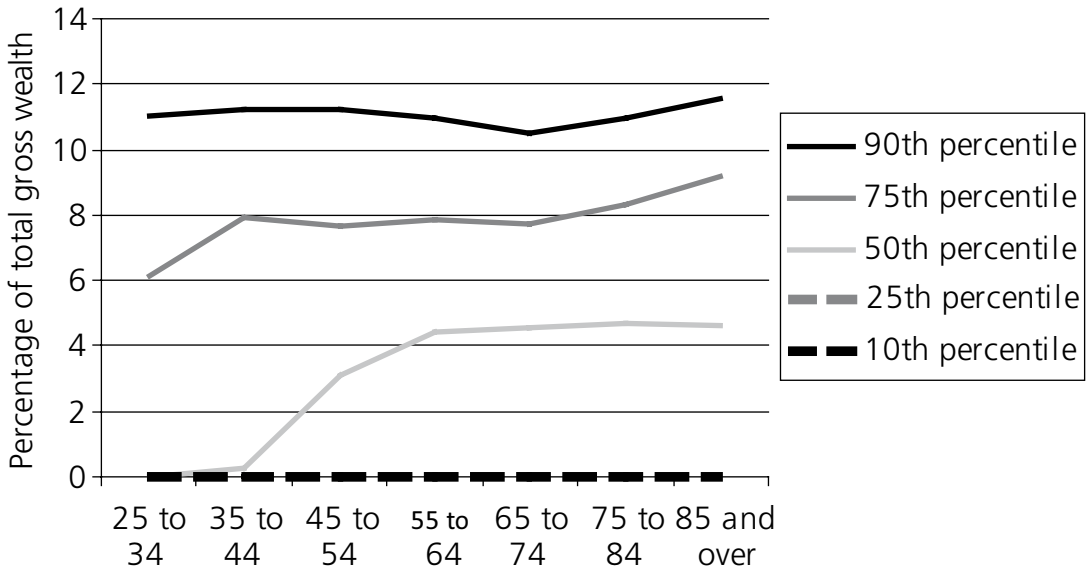
Source: Authors' calculations using Wealth and Assets Survey 2006/08.

Table A.5 Mean losses of components of wealth among groups of households, by age and education (£000s)

	Mean loss (per adult) of:			
	Housing wealth	Risky financial wealth	Unannuitised DC pension wealth	Total wealth
Low education				
25 to 34	1.7	0.0	0.0	1.7
35 to 44	4.0	0.2	0.1	4.2
45 to 54	6.1	0.3	0.1	6.4
55 to 64	6.7	0.6	0.2	7.4
65 to 74	7.1	0.4	0.0	7.5
75 to 84	7.7	0.6	0.0	8.3
85 and over	8.4	0.2	0.0	8.6
Mid-education				
25 to 34	5.1	0.2	0.0	5.4
35 to 44	7.7	0.8	0.1	8.6
45 to 54	8.5	1.0	0.3	9.8
55 to 64	11.6	1.9	0.3	13.8
65 to 74	11.9	1.8	0.0	13.7
75 to 84	12.6	2.1	0.0	14.7
85 and over	13.1	1.8	0.0	15.0
High education				
25 to 34	7.9	0.7	0.1	8.7
35 to 44	13.5	2.4	0.2	16.2
45 to 54	15.9	3.7	0.4	20.0
55 to 64	18.4	5.1	0.6	24.2
65 to 74	20.2	5.5	0.1	25.8
75 to 84	18.9	6.9	0.0	25.7
85 and over	21.8	6.8	0.0	28.6

Source: Authors' calculations using Wealth and Assets Survey 2006/08.

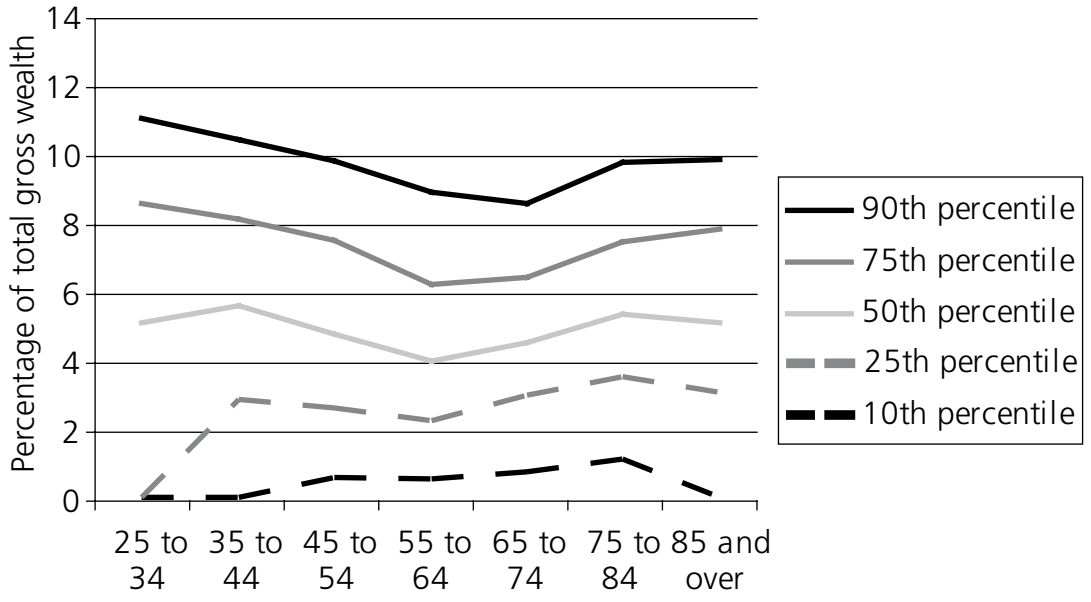
Figure A.7 Total loss as a share of initial gross wealth among low education households: interview date to 2009 Q3, by age



Note: Both the 10th and 25th percentile have zero total loss as a share of gross wealth and so lie along the x-axis. Excludes households with zero initial gross wealth; with the exception of the young, low-educated, very few households have zero gross wealth.

Source: Authors' calculations using Wealth and Assets Survey 2006/08.

Figure A.8 Total loss as a share of initial gross wealth among high education households: interview date to 2009 Q3, by age



Note: As Figure A7.
Source: Authors' calculations using Wealth and Assets Survey 2006/08.

Appendix B
Estimating quarterly total returns on equities

This Appendix describes how the measure of 'total return' on equities, used in Chapter 7, has been calculated.

The change in the value of a financial asset over time will depend on two components: (i) the change in the face value of that asset – i.e. the capital gain, and (ii) any income received over time as a result of holding that asset. Standard indices of share prices reflect the change in the face value of the relevant stocks or shares – i.e. the capital gain – but they do not take into account the gain to the investor from the dividend income received. Barclays' Equity Gilt Study 2010 provides information on total returns – that is growth in capital value plus dividends received – on UK equities for each calendar year. These total return figures assume that dividend income is reinvested each year. In practice, holders of stocks and shares may or may not reinvest the income in the same stocks.

For the purposes of the analysis in Chapter 7, we are particularly interested in the change of asset values over shorter time horizons than one year – specifically, we examine differential asset value fluctuations depending on the quarter in which the individuals were interviewed. In order to exploit the information present in the Barclays data on dividend income while retaining the ability to examine quarterly asset price changes, we combine the information from the quarterly change in the FTSE All Share Index with the annual total return data from Barclays. We calculate quarterly total return on equities as follows:

With capital letters denoting annual growth rates and small letters denoting quarterly growth rates, we know that the total return on equities from the Barclays data $(1+B)$ is higher than the growth in the FTSE All Share index $(1+F)$:

$(1+B) - x(1+F)$

We also know the quarterly profile of growth in the FTSE All Share index:

$$(1+F) = (1+f_1)(1+f_2)(1+f_3)(1+f_4)$$

But we do not know the quarterly profile of total returns. Therefore, we have estimated quarterly total returns by scaling quarterly growth in the FTSE All Share index by a constant (year-specific) factor such that the resulting annual growth rate is equal to the annual total return from the Barclays data:

$$(1+B) = x^{1/4}(1+f_1)\, x^{1/4}(1+f_2)\, x^{1/4}(1+f_3)\, x^{1/4}(1+f_4)$$

And we define the total return in a given quarter (i) as:

$$(1+B) = x^{1/4}(1+f_1)$$

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The Institute for Fiscal Studies (IFS) was commissioned by the Department for Work and Pensions (DWP) to provide background analysis and context to aid interpretation of data on the distribution of wealth in Great Britain available from the first wave of the Wealth and Assets Survey (WAS).

This analysis uses evidence from WAS data to illustrate what the distribution of private pension and other forms of wealth can tell us about the level of, and uncertainty about, future retirement resources. Tentative estimates are also made of how household wealth may have been affected by the financial and housing market declines, given what is known about the composition of portfolios at the time of the first WAS interview and average asset price changes since then.

If you would like to know more about DWP research, please contact:
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http://research.dwp.gov.uk/asd/asd5/rrs-index.asp

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