

DIFFERENCES IN THE MEASUREMENT AND  
STRUCTURE OF WEALTH USING ALTERNATIVE  
DATA SOURCES: THE CASE OF THE UK

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**Differences in the measurement and structure of wealth using alternative  
data sources: the case of the UK<sup>1</sup>**

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In this paper, we identify methodological differences and similarities in the measurement of wealth using survey data constructed for different purposes in the United Kingdom and England. The focus of the paper is on two prominent surveys in the UK: the English Longitudinal Survey of Ageing<sup>4</sup> (ELSA) and the British Household Panel Survey (BHPS). We find conceptual difference in the measurement of financial assets and debt. At the same time, striking similarities exist in the measurement of non-financial assets. For the most part, many differences arise in the tails of the distributions of wealth. Comparable definitions of overall wealth in the surveys lead us to find a 10% and 3% difference in mean and conditional median of total net worth, respectively. Reassuring is the fact that inequality results carried out with the two surveys support one another and quantile regression shows that the distribution of total net worth across demographic groups is similar in the two surveys.

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## **1. Introduction**

With private assets playing an ever larger role in buffering life uncertainties as rich economies have been experiencing a shift of risk from the State to the households brought about by restraining welfare states and falling job security, there is a renewed interest in the study and measurement of wealth. Researchers often need to cope with weakness in the available data, as for example, household surveys suffer from large sampling errors due to the high skewness of the wealth distribution, as well, as from serious non-sampling errors. These issues are compounded in comparative analysis by differences in the methods and definitions used in various countries. The increasing need of detailed and reliable micro-data on household finance that can be compared across countries has led to the undertaking of several projects. The European Central Bank, for example, has put forward an initiative to carry out a joint Euro zone survey by the European National Central Banks that would measure household finance and consumption. Another example is the new Survey of Health, Ageing and Retirement in Europe (SHARE) which began in 2004. This is a multidisciplinary and cross-national data base of micro data on health, income, wealth and social and family networks of individuals aged 50 or over in the European Union.<sup>1</sup> It has been designed after the role models of the U.S. Health and Retirement Study (HRS) and the English Longitudinal Study of Ageing (ELSA). Another example is the new Luxembourg Wealth Study (LWS), which for the first time created a harmonized cross-national database on household assets and liabilities based on existing surveys.<sup>2</sup> The initial set of countries included in the project is Austria, Canada, Cyprus, Finland, Germany, Italy, Norway, Sweden, the United Kingdom and the United States.

With an increasing choice of comparable data sources being available to the researcher it is important to identify whether differences in empirical analysis arise

from methodological differences or the data at hand. This paper analyzes the conceptual issues that arise in measuring household wealth, provides principal findings in comparing wealth measures and discusses differences in the structure of wealth measured with two different surveys. The focus of the paper is on two prominent surveys in the UK: the English Longitudinal Survey of Ageing (ELSA) and the British Household Panel Survey that has been prepared for the inclusion in the Luxembourg Wealth Study. Similar analysis was carried out by Juster, Smith and Stafford (1999). They compared the measurement and structure of household wealth in two prominent American surveys – the Panel Study of Income dynamics (PSID) and the Survey of Consumer Finances (SCF). The SCF has a far more extensive set of questions to measure household wealth but they found that it is possible to characterize total household wealth with a moderate number of questions.

The following section describes the data sources; Section 3 discusses the wealth measures and the selection of the sample. Similarities and differences in the wealth measures are discussed in section 4. Section 5 looks at differences in inequality and Section 6 estimates conditional quantiles to see whether characteristics of individuals at different points in the wealth distribution differ across the two surveys. This is followed by conclusions.

## **2. Data Sources**

Our comparisons are focused on two datasets. One is the English Longitudinal Survey of Ageing (ELSA). The analysis is based on the first wave of ELSA which was carried out between March 2002 and March 2003.<sup>3</sup> ELSA is a representative sample of the English population aged 50 or over on February 29 2002 (See Figure 1.). The study contains a complete picture of financial circumstances as well as detailed information on health and socioeconomic factors (see Marmot et al (2003) for

further details and description of the ELSA data and sampling procedures). Full interviews were carried out on all household members aged 50 and over and their partners. Younger household members were not interviewed but information about those individuals was collected at various points in the survey. In total, around 12,100 individual interviews were carried out in nearly 8000 households.

The other dataset we use is the British Household Panel Survey. These data have been collected to understand the social and economic behavior at the individual and household level. Information includes detailed questions on income, employment, household composition, education and housing. Information on wealth, assets and debt was collected in 1995 and 2000 through an additional individual level module. This module collected data on savings, investment and debt with some information on joint ownership of these wealth components. This is the only other recent source of micro data on the whole wealth distribution. We use the second module that was collected from September through December 2000. The analysis considers BHPS as it was prepared for the inclusion in the Luxembourg Wealth Study (LWS) The LWS is an archive of micro data that have undergone harmonization in order to increase wealth concept comparability across countries. The details and challenges of the harmonization process are discussed in Sierminska (2005) and Sierminska, Brandolini and Smeeding (2006a, 2006b). Detailed documentation can be found on the LWS website.<sup>4</sup> Currently, data in LWS is at the household level with some detailed information available separately for the head and spouse.

### **3. Methodology**

#### *3.1 Construction of wealth measures*

The first stage in comparing the data from the two different sources is to identify which components of wealth are available in the BHPS and in ELSA. Table 1 provides a summary of the categories of wealth collected in each survey.

Information on wealth in ELSA is collected in a large amount of detail and at a very disaggregate level. Respondents are asked separately which type of financial products they hold and the amount of wealth that they hold in each of those products. In contrast, the BHPS asks which financial products individuals hold but information about the amount of wealth held is collected at a more aggregate level than in ELSA. Respondents are asked how much in total they hold in their “safe” assets (savings accounts), how much in total they hold in their “risky” assets (investment accounts) and how much non-housing debt they hold in total. In order to make our comparisons, the information in ELSA is summed across financial product types in order to construct a measure conceptually equivalent to the one found in the BHPS.

The constructed measure of wealth is as comparable as possible across the two surveys. Nevertheless, we have identified a number of possible sources that may lead to differences in our wealth measures. Appendix A describes in detail how the measures are constructed and where differences in definition occur.

In addition to definitional issues, there is one other area which might be a potential source of any difference between reported wealth in the two surveys. Firstly, the BHPS collects some wealth information on an individual level. That is, each adult in the household is asked individually to report how much wealth they hold in savings, TESSA or ISA accounts and the amount they invest in risky assets. The

amount of non-housing debt and inheritance received in the past year is also asked at the individual level. To help identify joint asset holding, individuals in couples are asked to report how much of their wealth, in total, is held jointly with their spouse.<sup>5</sup> ELSA on the other hand, takes a different approach. Individuals in couples are asked whether they keep their finances entirely separate. Couples who do not keep their finances separate<sup>6</sup> complete the assets module on a joint basis with just one member of the couple reporting wealth on behalf of the couple. Whilst it is not possible to identify the direction or nature of any bias (if any) in either of these different approaches, it is important to bear in mind that this different questionnaire design might lead to differences in reported wealth.

In summary, we identify 5 main areas that are potential sources of differences between the two surveys. These are:

- 1) The BHPS information was collected in 2000 and ELSA was carried out in 2002. Between these two years there was a big stock market crash and housing market appreciation. Although we have adjusted for this, it remains a possible source of any differences between the measures (See Appendix A for details on the adjustment).
- 2) The value of wealth held in current accounts (transactions accounts) is explicitly included in ELSA but not in the BHPS
- 3) Different items are included in investment property
- 4) ELSA collects wealth at a more disaggregate level than the BHPS
- 5) Differences in the way that couples report their financial assets and non-housing debt.

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<sup>5</sup> It is not straightforward to separate jointly owned assets from personal assets without making additional assumptions with respect to intra-household sharing of the assets and the current version of the LWS does not attempt to do this. Nevertheless, in the whole BHPS sample: 12.2% of individuals report that they hold financial assets jointly and 4% report that they hold financial assets both solely and jointly. For risky assets the corresponding numbers are 4% and 2%, respectively.

<sup>6</sup> Less than 20% of the couples in our sample report that they keep their finances entirely separate.

### 3.2 *Sample selection*

The BHPS and ELSA have different sampling frames. ELSA is a representative sample of individuals aged 50 or over and their partners in England whereas the BHPS core sample is a representative sample of the entire age distribution in Great Britain<sup>7</sup>. In addition, the BHPS is a sample of households whereas ELSA is a sample of individuals. This means that individuals aged 50 or younger (who are not partners of anyone aged over 50) are not interviewed in ELSA.<sup>8</sup> Although ELSA includes some summary questions on wealth held by younger household members, there is insufficient detail to construct a detailed household measure of wealth. In order to construct a measure that is comparable in the two surveys, we restrict our sample to households where all members are aged 50 or over (or who are partners of members aged 50 or over). In a couple household, the head of the household is defined as being the older individual. The resulting sample from ELSA is 5220 households (representing 66% of all households in the ELSA sample) and is 1377 from the BHPS.

The average unit size and mean age match in the two surveys (Table 2). There are some differences in the age composition. In our sample, percentage wise the BHPS captures a smaller number of younger households and more of the older ones. The education categories were defined in such a way to ensure comparability across surveys. Despite this, there are some differences in the sample education structure with a higher proportion being found to be in the lowest education category in the BHPS. Once we compare the age at which full-time education was finished these differences diminish. Nevertheless, a differences of about 2 percentage points remains for those with less than 16 and more than 19 years of schooling.

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<sup>7</sup> In 2000, the BHPS also contains additional sub samples from Wales, Scotland and Northern Ireland and over-represents low-income households (the ECHP sub-sample). However, for this paper we exclude all additional sub samples.

<sup>8</sup> Although details about other household members are collected.



#### **4. The measurement of wealth: comparisons among surveys**

We begin our comparison of wealth measurement in the two surveys by examining components of wealth at the mean and selected percentiles in the two surveys.

Table 3a shows mean wealth in ELSA and LWS and the ratio of the means along with standard errors of the means. Table 3b is similar to Table 3a except it shows median wealth, conditional on each component of wealth being greater than zero.

For the main component of net worth, we find non-financial assets and housing equity to be basically identical at the mean. Looking at the conditional medians, although the values are similar in the two surveys, they are statistically significantly different at the 95% level. There is around a 10% difference in the mean and conditional median value of principal residence in the two surveys (which is a statistically significant difference), but given that the two surveys come from different years and the numbers have been deflated in ELSA we find this remarkably close. There is a large difference in mean investment real estate. Even though ELSA reports net values, the estimates are higher than in the LWS by about 70%. However, conditional median investment real estate is similar across the two surveys. This suggests that the difference in the recording of investment real estate arises from a difference in reported ownership rather than a difference in the value amongst those that do report ownership.<sup>5</sup>

As expected (due to differences in definition detailed in Appendix A), financial assets are significantly higher at the mean in ELSA than in the LWS. This is likely to be both because ELSA has a wider measure of financial assets and the measure captures more wealth because the components are collected at a greater level of disaggregation. Additionally, the years 2000-2002 saw a lot of activity on the stock

market and this must also be tainting the results. Interestingly, Table 3b reveals that despite the large difference in mean financial assets, median financial assets amongst those who hold them are remarkably similar (and the difference is statistically insignificant). This suggests that the difference in the mean may be driven to some extent by differences in recording participation rates. However, although Table 5 finds that this is true for deposit accounts, it is not the case for risky assets where both the mean and conditional median are statistically different, but not the participation rates. As we will discuss later, the difference is largely due to differences in recorded wealth in the tails of the distribution of financial assets.

Debt in the two surveys is for the most part not comparable. This results in the mean total debt being 34% higher in the LWS than in ELSA. The difference is even more marked when we look at conditional medians. Some part of this is due to the fact that ELSA does not include other housing debt as a separate component. Although small in both surveys, mean non-housing debt, like financial wealth is higher in ELSA than in the LWS but this does not compensate in the aggregate debt category.

Despite the differences in the mean level of the different components of wealth, we find that the mean total net worth is very close in the two surveys with a difference of only 10% at the means and most of this can be explained by the differences in the scope of the financial assets definition. The difference is even smaller and statistically insignificant when we look at conditional medians (3%).

Table 4 shows the relative wealth numbers at selected percentiles. We find that for most assets the departures occur either at the top or bottom of the distribution. Relatively speaking the LWS understates deposit accounts and total financial assets at the bottom of the distribution and risky assets at the top of the distribution. On the

other hand, LWS wealth measures overstate, relative to ELSA, principal residence and housing equity throughout the distribution. In the overall wealth measure there is not much discrepancy in the two surveys throughout the distribution. The differences are more pronounced only for the top 1%.

For a more complete picture we examine the complete distributions of selected components of household wealth in both surveys. Figure 2 shows the discrepancies between the two surveys for different components of net worth, including overall wealth. In accordance with Table 3b, we find that the estimates for net worth between the 35<sup>th</sup> and 95<sup>th</sup> percentile are less than the difference in the means of household wealth (Table 3a). There is a considerable difference for the bottom of the distribution and some past the 97<sup>th</sup> percentile. Estimates for principal residence and housing equity are very close throughout the distribution. For financial assets the differences are large at the bottom of the distribution and systematically lower by about 20% past the 45<sup>th</sup> percentile. For risky assets the disparity increases as we move up the distribution. This is due, at least in part, to the definitional differences.

Despite the definitional differences between the two surveys and the different methodologies used in collection of the data, measured wealth in the two surveys is remarkably similar and where differences occur, they are usually in the tails of the distribution. The largest differences occur in financial assets but because these make up a small proportion of total assets, this does not have such a detrimental effect on comparability of the two surveys when looking at net worth.

#### *Asset participation rates*

One reason for departures in measured wealth could be due to differences in reported asset participation rates. Table 5 finds that for all wealth components the ELSA survey records higher participation across all asset types. The most pronounced

differences are present for deposit accounts and non-housing debt, which can be explained by the differences in the definitions of the two surveys. For non-financial assets and risky assets, differences are less than 5 percentage points. Apart from risky assets, participation rates are significantly different.

Figure 3 shows a breakdown of asset participation by age. Financial asset holdings are fairly constant across the ages in both surveys. However, although the LWS understates participation by about 10 percentage points on average, this gap widens to over 17 percentage points amongst those 85 and over. Not surprisingly, non-housing debt participation falls as we move up the age distribution in cross section. Differences in participation rates across the two surveys are less than 5 percentage points in the under 55 and the over 75 groups, but in the middle age ranges, differences are more marked (nearer 10 percentage points). In ELSA, as we focus on older individuals there is a slight increase in the percentage of those with positive net worth. In the LWS, participation rates are flatter across the 55-70 age range but then at older ages, participation rates across the two surveys narrow the gap. Homeownership slightly declines for the elderly and there is little difference in participation rates across the two surveys.

#### *Asset holdings by demographic group*

The next question we ask is whether differences in wealth holdings are more pronounced for different demographic groups. In Table 6, we examine the wealth holdings amongst different age and education groups and different household types. For all non-housing assets, wealth is underestimated more at the top and bottom of the age distribution in the LWS relative to ELSA. This is particularly true for financial assets where assets are more than 50% lower for the youngest age group and 70% lower for the oldest. This is also the asset for which we saw the largest differences in

participation rates throughout the age distribution. Again in this case, these differences were more pronounced for the younger and older age groups. This is also the result of definitional differences across the two surveys. There is also a strong wealth-education gradient that is (except for principal residence) more pronounced in ELSA. The difference in the measurement of wealth does not vary across singles and couples.

### **5. Wealth inequality**

It is well-known that the distribution of wealth is very unequal even within age-groups. Compared to studies of income distribution however, the extent and precise nature of wealth inequality is relatively less understood. This is due in part to the lack of data available on wealth. In this section we use the data from ELSA and from the LWS to examine wealth inequality and to see whether the data from the two different sources tell us similar stories.

In the final column of Table 6, we report mean annual income.<sup>6</sup> Except for the over 80s, differences in measured income across the two surveys are fairly small—within the 10 percentage point range. In Table 7, we show wealth to income ratios for the different demographic groups. Similar to our findings in Table 6, we find that non-housing wealth/income ratios are more similar in the middle of our age distribution and are higher for ELSA for the older individuals. The largest differences by education level and type of households are in total financial assets.

Next, in Table 8, we compare inequality measurement in the two surveys. Reassuring is the fact that conclusions from the two surveys support one another. Table 8 finds negligible differences in all cases for the quantile to median ratios. Differences are in the range of less than one percent across the distribution. Ginis for net worth are about .6. When the share of net worth held by top population percentiles

is considered we find the richest 1 percent hold about 8-10 percent of the elderly wealth and the next 9 percent hold another 30%. A majority of the financial wealth among the elderly is held by the richest 10 percent of the elderly in terms of financial assets. The richest 1 percent of the elderly holds about 7 percent of the real estate wealth. Although differences in these results for the two surveys are less than 6 percent and in most cases in the range of 3% ELSA is capturing more of the wealth held by the richest elderly, which is expected given the focus of the survey.

## **6. Controlling for characteristics in the distribution of wealth**

Although it is reassuring to find that similar conclusions about wealth inequality are reached from the two different data sets, summary statistics do not give a complete picture of the distribution of wealth. As well as the overall mean, median and variance being the same across the datasets, what we are more interested in is whether individuals with given characteristics are found in the same parts of the distribution regardless of the data being used. This is what is important for the researcher wishing to estimate models of behavior which include wealth as an outcome variable or a determinant of behavior. In Section 4 (Table 6), we calculated means of total net worth and its components by demographic characteristics. In this section, we estimate conditional quantiles for the total net worth distribution. We use simultaneous quantile regression with bootstrapped standard errors.<sup>7</sup> As explanatory variables, we use available and comparable in both surveys demographic - age, education, location, household composition (single or couple and number of children), and labor market characteristics -employment status and disposable income, which excludes asset income. The coefficients and standard errors are shown in Table 9. We have highlighted coefficients that are significantly different at the 5% level across the two surveys.

The variable indicating whether or not the household owns their own home is the only characteristic which is statistically significant across the entire distribution of net worth. This is not surprising given the high share of the main home value in the overall net worth. In both surveys we typically find that those in the highest two income deciles have statistically significantly higher wealth at each of estimated quantiles. For the LWS BHPS, having a slightly higher share of those with low education, we get significant negative effects of having low education (relative to medium education) across all the estimated quantiles but a significant positive effect of having high education only at the 75th percentile. We find education has less of an effect on net worth in ELSA – we only find a significant positive effect of having high education at the bottom (10th and 25th percentiles) of the distribution. We find a positive significant effect of self-employment in both surveys at the top of the distribution and a negative effect of employment (relative to being retired) in the middle of the distribution.

Carrying out formal tests of whether there are differences in coefficients across the distribution of wealth in the two surveys reveals almost no significant differences (the exception being that there is a significant difference between the co-efficient on income decile 6 at the 75<sup>th</sup> percentile). This result is reassuring for any analyst wishing to use the wealth data in either survey.<sup>8</sup>

## **7. Conclusions**

In this paper we provide an overview of the differences in two prominent surveys for the United Kingdom that can potentially be used to perform analysis on individuals over the age of 50.

We have identified methodological and conceptual differences as well as compared empirical results based on the two surveys. We found a conceptual

difference in the measurement of financial assets and debt in terms of the aggregation level as well as its scope. We have also found striking similarities in the measurement of non-financial assets and in the main, any differences that arise are in the tails of the distributions of wealth. Comparable definitions of overall wealth in the surveys lead us to find only a 10% difference in mean total net worth and a 3% difference in conditional medians. Reassuring is the fact that inequality results carried out with the two surveys support one another and quantile regressions indicate that the distribution of net worth across demographic groups is similar in the two surveys.

Overall, despite definitional and methodological differences between the two surveys, measured wealth is remarkably similar. As with any comparative work care must be used when examining sub-components of overall wealth and the extremes of the distribution.



## Appendix A.

**Table 2. Construction of wealth measures**

	<b>BHPS</b>	<b>ELSA</b>
	<i>What is included....</i>	
DA	<i>Total value of:</i> Savings or deposit account National Savings Bank (Post Office) TESSA or ISA	<i>Sum of:</i> Current and savings account TESSA Cash ISA Life insurance ISA Stocks and shares ISA National Savings Accounts or Certificates
RA	<i>Total value of:</i> National Savings Certificates Premium Bonds Unit or Investment Trusts PEPs Shares National Savings Bonds Other investments	<i>Sum of:</i> Premium Bonds PEP Shares Share Options Share clubs Unit or Investment Trusts Bonds and Gilts Other Savings or Investments
PR	Value of main home if sold today	Value of main home if sold today
IR/IRnet	<i>Total value of:</i> Other houses , or a holiday home in the UK Other buildings, such as shop, warehouse or garage Land in UK Land or property overseas	<i>Sum of (Net of any debt):</i> Houses, flats or holiday homes, including timeshares (not including this home) Farm or Business Property (such as a shop, warehouse or garage)

	Other land or real estate	Not included but also collected is the <i>Total value</i> of: Other land Money owed to you by others A trust A covenant or inheritance Other assets (including works of art or collectibles such as antiques or jewelry)
MG/HSD	<i>Total value of:</i> Outstanding loans on all property owned	<i>Sum of:</i> Outstanding value of each individual mortgage held on principal residence
NHD	<i>Total value of:</i> Hire Purchase Agreements Personal loans Credit cards/store cards Catalogue of mail order purchase DSS social fund loan Other loans from private individuals Overdrafts Student loans	<i>Sum of:</i> Credit card/store cards Other loans from private individuals  <i>Plus total value of:</i> Hire purchase agreements Personal loans Overdraft Catalogue or mail order purchase agreements DSS Social fund loan Loan from a money lender or 'tally man'

The first category of wealth that is collected in both surveys is deposit accounts (DA). There are two potential difficulties with comparing this category. The BHPS asks respondents to report how much they hold in total in their savings or deposit accounts.

ELSA on the other hand asks respondents to report how much they hold in their *current* accounts and savings accounts. Generally speaking, deposit accounts are considered to be a general term for a savings account. Hence current accounts (transactions accounts) are not explicitly included in this component of wealth in the BHPS. The second difficulty is that in ELSA, National Savings Accounts are not distinguished from National Savings Certificates.<sup>ix</sup> In the BHPS, wealth held in National Savings Certificates is recorded along with other wealth held in risky assets. We consider this second problem to be less significant than the first since only around 5% of over 50s hold National Savings Certificates in the BHPS whereas 85% of individuals in ELSA hold a current account.

Wealth held in risky assets (RA) is also collected in both surveys. With the exception of the National Savings Certificate issue discussed above, the components of this category are fairly similar in the two surveys although ELSA has a finer disaggregation of share products. The difficulty in comparing risky assets stems from the fact that the two surveys were carried out in different years. In March 2003 (when the ELSA fieldwork ended), the FTSE100 index (the most commonly used stock market index in the UK) was 60% of its value in September 2000 (when the BHPS fieldwork began). For this reason, in order to compare risky assets in the two surveys we adjust the amount of wealth held in ELSA using the FTSE100 index by deflating (or inflating in this case) the values back to September 2000. Figure 1 shows the path of the FTSE100 index between September 2000 and March 2003.

Wealth held in principal residence is recorded in an identical way in both surveys. However, the period between the two surveys was a period of rapid house price appreciation. To allow comparisons across the two different years, wealth held

in principal residence is deflated to September 2000 using the regional nationwide quarterly house price index.<sup>9</sup>

For investment property, although collected in both surveys, it is difficult to construct a measure that is comparable. The first problem is that in the BHPS, the value of investment property is collected gross of any debt (and debt secured on investment property is collected together with debt secured on principal residences). In ELSA, investment property is recorded net of any debt secured upon that property. The second problem is that the BHPS includes land in the investment property wealth and although ELSA also includes land, its value is recorded together with other items of wealth (money owed by other, covenant/inheritance, and antiques/jewelry). If we include the latter element, we will be over-recording investment property relative to the BHPS but if we exclude it we will be under-recording relative to the BHPS.

The BHPS records the total value of all mortgages on all property whereas ELSA records debt secured on the principal residence separately. Because of this and because investment property is recorded gross of debt in the BHPS but net of debt in ELSA, we construct total housing equity (defined as principal plus investment property value minus total value of all mortgages).

Finally, non-housing debt has almost identical items included in its definition, with the exception of student loans. However, since our sample is restricted to the over 50s, we do not consider this to be a significant source of any difference.

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<sup>9</sup> [http://www.nationwide.co.uk/hpi/downloads/All\\_prop.xls](http://www.nationwide.co.uk/hpi/downloads/All_prop.xls)

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Table 1. Wealth classification matrix according to LWS

Asset or liability		United Kingdom BHPS 2000	United Kingdom ELSA
<b>FINANCIAL ASSETS</b>			
Total	TFA	Σ	Σ
Deposit accounts: transaction, savings and CDs	DA	Y (1) & (2)	Y
Total bonds: savings and other bonds	TB	Y	Y
Stocks	ST		Y
Mutual funds and other investment funds	TM		Y
Life insurance	LI	Y (2)	Y
Other financial assets (exc. pension)	OFA	–	Y
Pension assets	PA	–	Y
<b>NON-FINANCIAL ASSETS</b>			
Total	TNF	Σ	Σ
Principal residence	PR	Y	Y
Investment real estate	IR	Y (3)	Y(6)
Business equity	BE		Y(3)
Vehicles	VH	Y (4)	–
Durables and collectibles	DRCL	–	Y(7)
Other non-financial assets	ONF	–	Y
<b>LIABILITIES</b>			
Total	TD	Σ	Σ
Home secured debt	HSD	Y	–
Principal residence mortgage	MG		Y(8)
Other property mortgage	OMG		Y(6)
Other home secured debt (incl. line of credit)	OHSD		–
Vehicle loans	VL	Y (4)	–
Installment debt (incl. credit card balance)	IL	Y (5)	Y
Educational loans	EL		–
Other loans from financial institutions	OL		Y
Informal debt	ID		Y

Source: LWS database,  $\beta$ -version (March, 2007) and ELSA. “Y” denotes a recorded item; “–” denotes a not recorded item; “Σ” indicates that the variable is obtained by aggregation of its components. (1) Excludes transaction accounts. (2) DA and LI recorded together. (3) Business assets only. (4) VH recorded net of VL. (5) Includes also VL, which implies a double-counting. (6) IR recorded net of OMG. (7) Only ownership of durables is recorded but value of other collectibles is recorded (8) Only principal residence mortgage identified separately

**Table 2. Demographic structure**

	LWS BHPS	ELSA	Difference BHPS- ELSA
	2000	2002	
Average unit size	1.62	1.61	0.0
<i>Head of Household</i>			
Mean age	69	68	1.6
<i>Age composition (%)</i>			
50-54	12.0	14.2	-2.2
55-59	12.4	14.3	-1.9
60-64	11.9	13.6	-1.8
65-69	12.5	14.4	-1.9
70-74	16.5	14.1	2.4
75-79	14.0	12.5	1.6
80-84	10.9	9.4	1.5
85 and over	9.9	7.6	2.4
Total	100.0	100.0	
Percent of sample	39.9	67.0	
<i>Education<sup>2</sup></i>			
Low	62.3	54.4	7.9
Medium	31.2	34.7	-3.5
High	6.5	10.4	-3.9
<i>Age finished FT education</i>			
<16	63.8	61.8	2.0
16-18	28.4	27.9	0.5
19+	7.8	10.3	-2.4

Notes:

<sup>1</sup> 82% of the elderly sample<sup>2</sup> Low education defined as no qualification, high education defined as degree level or equivalent and medium education is defined as any qualification below a degree

Source: LWS BHPS and ELSA; authors calculations

**Table 3a. Mean household wealth in BHPS and ELSA (2002 USD).**

Wealth components	LWS BHPS 2000		ELSA 2002		Ratio BHPS/ELSA
	mean	std err	mean	std err	
Non-financial assets	161,755	(5,421)	158,046	(3,185)	102
Principal residence	148,328	(4,610)	135,587	(2,200)	109 *
Investment real estate (net)	na	-	22,458	(1,593)	
Investment real estate (gross)	13,427	(1,923)	na		
Total housing equity	150,929	(5,194)	151,069	(3,101)	100
Financial assets	49,073	(3,038)	69,016	(2,530)	71 *
Deposit accounts	24,358	(1,358)	32,504	(965)	75 *
Risky Assets	24,715	(2,392)	36,512	(1,935)	68 *
Business Assets	na	-	10,996	(3,193)	
Debt	12,326	(1,111)	9,107	(504)	135 <sup>1*</sup>
Home secured debt	10,826	(1,055)	na -		
Principal mortgage	na	-	6,976	(465)	
Non-housing debt	1,500	(194)	2,130	(121)	70 *
Total net worth w/o Business Assets	198,503	(7,015)	217,955	(4,644)	91 *
Total net worth with Business Assets	na	-	228,951	(5,858)	
Number of observations	1377		5220		

Note: <sup>1</sup> ELSA does not include any debt secured on investment property in total debt. Hence this ratio is overstated; \* indicates the difference is statistically different at the 5% level.

Source: LWS BHPS and ELSA; authors' calculations



**Table 3b. Median household wealth in BHPS and ELSA (2002 USD), positive wealth only**

Wealth components	LWS BHPS 2000		ELSA 2002		Ratio BHPS/ELSA
	c. median	std err	c. median	std err	
<i>All</i>					
Non-financial assets	174,952	(4,886)	158,615	(2,739)	110 *
Principal residence	165,744	(3,383)	148,775	(2,789)	111 *
Investment real estate (net)	na	-	117,061	(7,302)	
Investment real estate (gross)	117,862	(14,507)	na	-	
Total housing equity	165,744	(3,395)	152,249	(2,210)	109 *
Financial assets	18,416	(1,408)	18,821	(788)	98
Deposit accounts	12,891	(858)	13,002	(447)	99
Risky Assets	11,050	(1,228)	15,511	(903)	71 *
Business Assets	na	-	52,320	(6,769)	
Debt	14,733	(2,760)	6,809	(582)	216 <sup>1*</sup>
Home secured debt	49,723	(4,537)	na	-	
Principal mortgage	na	-	148,775	(2,789)	
Non-housing debt	1,934	(253)	2,093	(178)	92
Total net worth w/o Business Assets	147,420	(6,722)	151,759	(3,152)	97
Total net worth with Business Assets	na	-	153,258	(3,166)	

Note: <sup>1</sup> ELSA does not include any debt secured on investment property in total debt. Hence this ratio is overstated; \* indicates the difference is statistically different at the 5% level.

Source: LWS BHPS and ELSA; authors calculations

**Table 4. Selected LWS/ELSA wealth percentiles.**

<b>Percentiles</b>	<b>Net worth</b>	<b>Deposit Accounts</b>	<b>Risky Assets</b>	<b>Total Financial Assets</b>	<b>Principal Residence</b>	<b>Housing equity</b>	<b>Non-housing debt</b>
20	124	0	na	2	na	na	na
30	122	25	na	43	172	176	na
40	101	61	na	63	114	112	na
50	99	55	176	72	113	105	na
60	99	61	106	77	116	107	na
70	99	68	76	76	105	102	0
80	97	80	61	78	114	108	34
90	97	77	69	76	115	104	81
95	90	80	71	78	116	106	81
99	81	80	70	71	113	92	83
99.1	79	86	70	71	112	93	86
99.5	76	81	69	70	105	79	88
99.9	62	85	55	51	89	60	93

Source: LWS BHPS and ELSA; authors calculations

**Table 5. Household asset participation (per cent)**

Wealth components	LWS BHPS 2000		ELSA 2002		Difference BHPS-ELSA	
	per cent	se	per cent	se		
Net worth >0	89	0.9	91	0.4	-2	*
Net worth=0	8		4	0.3		
Net worth <0	3		6	0.3		
Non-financial assets	69	1.2	72	0.6	-3	*
Principal residence	68	1.3	72	0.6	-4	*
Investment real estate	8	0.7	12	0.4	-4	*
Financial assets	82	1.0	93	0.4	-11	*
Deposit accounts	76.8	1.1	92	0.4	-15	*
Risky Assets	51	1.3	52	0.7	-1	
Business Assets	na	-	4	0.3		
Debt	30	1.2	36	0.7	-6	<sup>1</sup> *
Principal mortgage	na	-	16	0.5	-	
Home secured debt	17	1.0	na	-	-	
Non-housing debt	22	1.1	31	0.6	-9	*

<sup>1</sup> Debt in ELSA doesn't include debt secured on investment property;

\* indicates the difference is statistically significant at 5%.

Source: LWS BHPS and ELSA; authors calculations

**Table 6. Mean household net worth, components of net worth and income in BHPS and ELSA by demographic characteristics (2002 USD).**

	Net worth			Deposit Accounts			Risky Assets			Total financial Assets			Principal Residence			Total Housing equity			Income \$ per year		
	LWS	ELSA	Ratio	LWS	ELSA	Ratio	LWS	ELSA	Ratio	LWS	ELSA	Ratio	LWS	ELSA	Ratio	LWS	ELSA	Ratio	LWS	ELSA	Ratio
	2000	2000		2000	2000		2000	2000		2000	2000		2000	2000		2000	2000		2000	2000	
	\$000	\$000		\$000	\$000		\$000	\$000		\$000	\$000		\$000	\$000		\$000	\$000		\$000	\$000	
<i>Age of head</i>																					
50-54	174.7	202.7	86	12.9	28.8	45	11.6	32.3	36	24.5	61.1	40	185.9	147.0	126	154.4	147.3	105	37.8	38.9	97
55-59	224.1	272.6	82	23.0	40.8	56	25.0	48.9	51	48.0	89.7	54	183.0	166.6	110	179.4	186.8	96	35.8	36.9	97
60-64	262.8	264.1	100	30.2	34.9	86	34.0	44.6	76	64.2	79.5	81	189.7	157.4	121	201.1	187.0	108	26.9	30.9	87
65-69	278.9	246.3	113	28.5	37.9	75	51.4	42.5	121	80.0	80.4	99	179.6	147.9	121	199.8	167.8	119	30.1	27.6	109
70-74	211.5	200.2	106	27.6	31.0	89	29.2	31.5	93	56.7	62.5	91	145.6	124.2	117	155.4	138.3	112	24.3	23.1	105
75-79	168.0	183.8	91	25.0	30.3	83	21.8	27.7	79	46.9	58.0	81	114.1	110.9	103	121.6	126.1	96	20.7	18.3	113
80-84	150.5	161.9	93	27.8	22.7	123	13.3	25.2	53	41.2	47.9	86	108.3	103.6	105	109.6	114.3	96	20.6	16.3	127
85 and over	91.6	165.2	55	17.4	27.7	63	4.7	33.0	14	22.1	60.7	36	68.1	94.6	72	69.5	104.7	66	15.0	18.9	79
<i>Education of head</i>																					
Low	136.8	139.3	98	18.8	20.9	90	15.2	17.4	87	34.0	38.3	89	100.5	91.9	109	103.6	102.2	101	21.3	20.2	105
Medium	272.7	267.3	102	32.4	41.7	78	33.6	44.6	75	66.1	86.2	77	212.8	166.8	128	209.3	183.9	114	32.9	32.4	102
High	425.8	460.9	92	42.8	63.3	68	76.5	107.3	71	119.2	170.7	70	212.8	261.6	81	309.6	294.9	105	47.3	49.1	96
<i>Type of Households</i>																					
Single	125.4	143.2	88	15.2	21.3	71	15.5	20.7	75	30.7	42.0	73	90.9	92.5	98	95.2	102.4	93	17.3	16.5	105
Couple	253.8	289.9	88	31.3	43.2	73	31.8	50.7	63	63.1	93.8	67	192.0	177.5	108	193.0	199.1	97	34.0	38.1	89
Other	423.9	217.3	(1)	50.3	34.2	(1)	50.0	55.5	(1)	100.2	89.7	(1)	311.9	126.6	(1)	328.4	130.2	(1)	62.8	26.9	(1)

Source: LWS BHPS and ELSA; authors

Note: (1) less than 20 observations for BHPS.

**Table 7. Wealth/income ratio for selected components of wealth**

	Net worth			Total Financial Assets			Housing Equity		
	LWS BHPS	ELSA	Ratio	LWS BHPS	ELSA	Ratio	LWS BHPS	ELSA	Ratio
	2000	2002		2000	2002		2000	2002	
<i>Age of head</i>									
50-54	4.62	5.21	89	0.65	1.57	41	4.09	3.79	108
55-59	6.27	7.38	85	1.34	2.43	55	5.02	5.06	99
60-64	9.77	8.55	114	2.39	2.57	93	7.48	6.05	123
65-69	9.27	8.92	104	2.66	2.91	91	6.64	6.08	109
70-74	8.70	8.67	100	2.33	2.71	86	6.39	5.99	107
75-79	8.12	10.02	81	2.26	3.16	72	5.87	6.87	85
80-84	7.31	9.95	73	2.00	2.94	68	5.33	7.03	76
85 and over	6.10	8.73	70	1.47	3.21	46	4.63	5.53	84
<i>Education of head</i>									
Low	6.43	6.90	93	1.60	1.90	84	4.87	5.06	96
Medium	8.28	8.25	100	2.01	2.66	75	6.36	5.68	112
High	9.00	9.38	96	2.52	3.47	73	6.54	6.00	109
<i>Type of Households</i>									
Single	7.25	8.70	83	1.77	2.55	69	5.50	6.22	89
Couple	7.46	7.61	98	1.85	2.46	75	5.67	5.23	109

Source: LWS BHPS and ELSA; authors calculations

**Table 8. Distribution of household net worth, total financial assets, principal residence and income.**

	Net worth			Total financial assets			Principal Residence			Income		
	LWS BHPS	ELSA	Ratio	LWS BHPS	ELSA	Ratio	LWS BHPS	ELSA	Ratio	LWS BHPS	ELSA	Ratio
	2000			2000			2000			2000		
Quantile/median ratios												
5th percentile	0.00	0.00	0.0	0.00	0.00	0.0	0.00	0.00	0.0	0.34	0.36	0.0
10th percentile	0.00	0.00	0.0	0.00	0.01	0.0	0.00	0.00	0.0	0.45	0.43	0.0
25th percentile	0.12	0.14	0.0	0.06	0.16	-0.1	0.00	0.00	0.0	0.65	0.60	0.1
75th percentile	2.15	2.12	0.0	4.30	4.09	0.2	2.00	1.87	0.1	1.65	1.71	-0.1
90th percentile	3.93	3.80	0.1	11.65	11.27	0.4	3.33	3.03	0.3	2.53	2.69	-0.2
95th percentile	5.25	5.45	-0.2	20.45	18.87	1.6	4.17	3.75	0.4	3.13	3.62	-0.5
Shares												
Top 10%	40.0%	41.8%	-1.80%	60.9%	61.2%	-0.30%	29.0%	34.5%	-5.59%	27.3%	32.7%	-5.44%
Top 5%	25.7%	28.6%	-2.87%	43.6%	45.4%	-1.74%	19.8%	21.6%	-1.75%	16.6%	22.0%	-5.39%
Top 1%	8.1%	10.9%	-2.83%	17.1%	19.7%	-2.69%	6.0%	7.1%	-1.11%	4.8%	9.1%	-4.33%
Gini*100	59	61		77	77		57	56		38	43	

Source: LWS BHPS and ELSA; authors calculations

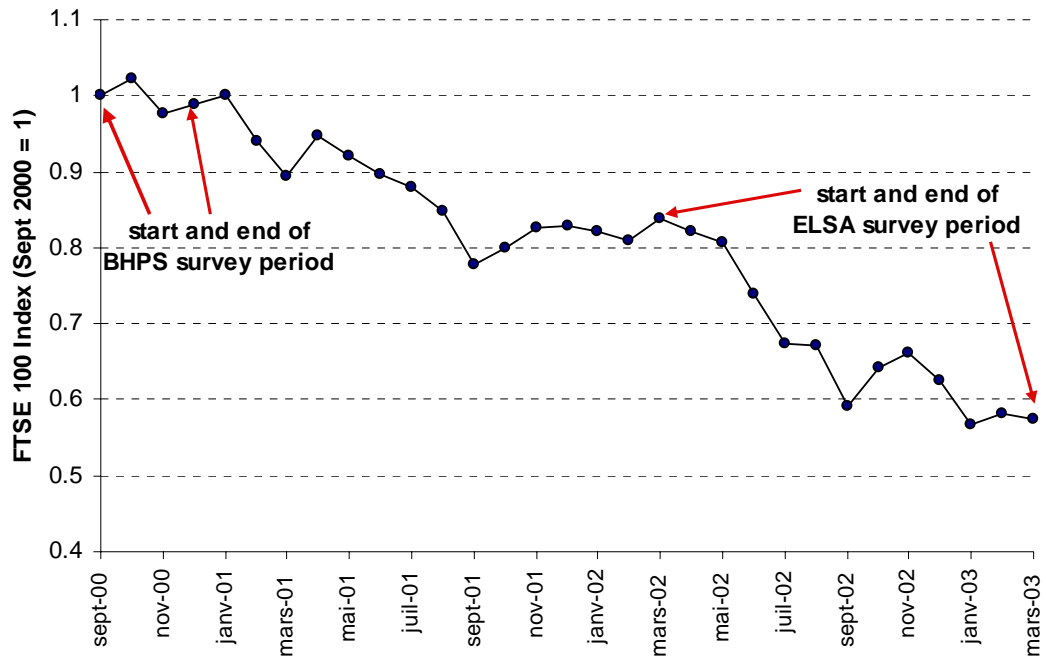
**Table 9. Quantile regressions of total net worth**

Total net worth	10th percentile				25th percentile				50th percentile				75th percentile				90th percentile			
	LWS		ELSA		LWS		ELSA		LWS		ELSA		LWS		ELSA		LWS		ELSA	
Age head	3,300	(3,013)	4,429	(16,562)	3,941	(3,022)	2,734	(6,057)	4,205	(4,773)	2,437	(22,540)	137	(9,814)	938	(36,557)	-2,920	(15,870)	-4,010	(4,010)
Age head sq	-23	(20)	-29	(108)	-27	(20)	-19	(42)	-34	(33)	-17	(154)	-9	(64)	-6	(276)	3	(105)	24	(24)
Number of children	-6,423	(10,094)	-9,375	(10,166)	-17,123	(26,333)	-18,671	(11,636)	-25,196 *	(12,000)	-22,562	(19,191)	-21,032	(15,949)	-21,100	(50,565)	-35,930 *	(19,088)	-17,779	(5,000)
High education	5,851	(10,692)	19,072	(13,588)	7,033	(70,844)	48,630 *	(22,086)	50,485	(40,785)	81,140	(60,494)	126,768 *	(58,426)	68,386	(147,920)	78,463	(86,186)	99,418	(40,000)
Low education	-10,888 *	(4,697)	-5,585	(6,818)	-25,021 *	(6,448)	-12,437	(9,097)	-41,187 *	(9,607)	-19,502	(23,541)	-72,116 *	(20,203)	-41,389	(92,932)	-83,323 *	(38,062)	-48,635	(19,000)
Missing education	-411	(34,347)	-5,984	(85,793)	-20,003	(39,090)	-25,132	(20,956)	-8,303	(36,349)	-49,549	(56,424)	-84,779	(50,868)	-105,973	(358,184)	-145,937 *	(57,719)	-169,533	(75,000)
Self-employed	255	(13,543)	5,260	(57,972)	-5,072	(29,365)	-4,258	(28,344)	16,986	(29,229)	6,763	(55,291)	42,823	(62,934)	332,743 **	(188,719)	144,598 **	(82,616)	105,120	(27,000)
Employed	-3,374	(11,506)	-22,155	(21,966)	-10,364	(8,830)	-40,213 *	(18,968)	-26,450 *	(11,440)	-72,550	(47,784)	-68,900 *	(27,551)	-105,449	(111,417)	-97,060	(60,360)	-131,319	(24,000)
Unemployed	-6,530	(9,495)	-4,964	(49,484)	-14,074	(36,162)	-10,821	(11,995)	-20,516	(14,697)	-18,929	(45,069)	-43,736	(31,324)	-8,371	(89,231)	-63,293	(51,960)	-29,703	(12,000)
Other emp status	-294	(12,363)	-1,015	(66,218)	10,688	(46,486)	13,921	(17,822)	9,201	(16,275)	29,651	(34,384)	33,041	(60,975)	94,223	(316,172)	170,105 **	(102,210)	169,855	(18,000)
London	-5,362	(9,238)	-2,112	(3,140)	-10,743	(35,865)	-6,275	(12,028)	25,986	(23,892)	-2,390	(30,904)	31,499	(51,576)	34,566	(127,680)	119,928	(78,812)	65,651	(24,000)
Midlands and East	-7,206	(9,092)	-5,594	(8,730)	-21,368	(43,551)	-16,262	(16,144)	-55,463 *	(11,081)	-43,394	(37,251)	-75,059 *	(24,246)	-65,448	(114,518)	-127,339 *	(37,337)	-81,921	(20,000)
South West	424	(5,478)	-1,678	(8,307)	-3,609	(25,412)	-4,980	(15,431)	-29,363	(18,200)	-24,263	(35,321)	-18,064	(29,981)	-30,503	(156,941)	-17,423	(42,408)	-13,435	(29,000)
North	-14,323 *	(7,243)	-19,521 *	(8,958)	-29,401	(29,319)	-35,068	(26,367)	-61,647 *	(12,009)	-51,075 *	(22,726)	-80,297 *	(25,895)	-74,300	(98,226)	-125,541 *	(39,878)	-105,948	(26,000)
Single	-5,625	(4,445)	-474	(6,863)	-12,825	(36,105)	-3,625	(9,177)	-18,168 *	(7,810)	2,148	(19,373)	-33,779	(21,737)	232	(143,823)	-43,432 *	(23,200)	6,955	(7,000)
Other marital status	2,527	(22,859)	-4,451	(22,955)	-391	(65,961)	-2,377	(17,622)	-17,994 *	(48,819)	-7,755	(40,140)	-22,480	(115,035)	-1,775	(134,764)	210,165 *	(215,755)	-6,594	(13,000)
Homeowner	94,323 *	(4,237)	77,225 *	(9,818)	120,964 *	(14,685)	111,356 *	(17,211)	146,510 *	(7,944)	147,592 *	(22,062)	195,164 *	(18,205)	214,193 *	(98,282)	250,410 *	(35,745)	286,967 *	(12,000)
Inc decile 1	-4,511	(6,020)	-1,465	(13,536)	3,176	(14,589)	2,814	(11,103)	9,562	(11,198)	-1,778	(33,925)	24,585	(25,657)	-1,512	(89,959)	-8,589	(44,067)	-32,112	(27,000)
Inc decile 2	-6,464	(7,249)	-5,124	(5,860)	-5,876	(58,280)	-4,637	(7,350)	4,103	(10,897)	-5,987	(33,579)	25,548	(24,199)	-4,941	(77,334)	-2,377	(41,600)	-38,916	(14,000)
Inc decile 3	-3,996	(7,407)	-377	(7,927)	-9,125	(29,551)	2,179	(9,712)	8,944	(9,954)	22	(31,344)	30,110	(34,644)	-1,408	(95,298)	6,419	(60,950)	-19,531	(22,000)
Inc decile 4	-4,361	(5,164)	-1,421	(13,154)	-5,508	(12,984)	-1,604	(9,516)	6,971	(12,537)	-4,284	(30,688)	25,548	(25,930)	-3,378	(108,909)	-1,800	(47,706)	-24,088	(16,000)
Inc decile 6	-2,291	(5,179)	1,891	(18,821)	2,627	(11,804)	6,076	(18,316)	24,751	(12,233)	14,544	(40,484)	49,447 *	(19,620)	-262,932 **	(140,147)	15,018	(41,925)	16,713	(22,000)
Inc decile 7	4,073	(7,682)	3,356	(9,182)	14,240	(19,133)	13,028	(11,718)	42,324 *	(12,751)	32,634	(68,486)	57,975 **	(29,675)	53,047	(97,587)	62,092	(64,919)	56,029	(43,000)
Inc decile 8	2,113	(6,284)	9,604	(24,755)	14,683	(23,149)	30,737 *	(11,055)	57,172 *	(17,551)	71,374 *	(28,568)	109,048 *	(34,707)	135,439	(177,174)	143,332	(65,667)	168,884	(18,000)
Inc decile 9	4,118	(12,070)	23,119	(18,499)	47,691	(28,776)	53,768 *	(21,018)	90,191 *	(19,252)	100,257 *	(37,914)	157,024 *	(42,309)	186,763	(144,802)	218,919 *	(75,636)	229,207	(40,000)
Inc decile 10	69,429 *	(16,843)	58,296 *	(24,707)	135,075 *	(26,758)	112,065 *	(16,987)	211,850 *	(29,693)	229,651 *	(46,895)	331,852 *	(56,132)	457,197 *	(132,790)	451,292 *	(90,824)	820,419 **	(42,000)
Constant	-99,398	(109,790)	-159,352	(626,239)	-91,986	(140,372)	-72,237	(211,077)	-17,270	(171,915)	-17,964	(843,355)	212,326	(378,439)	84,966	(1,248,335)	494,253	(620,852)	359,931	(1,600,000)

Notes: Omitted categories are: Medium education, Retired, South East, Couple, Income decile 5

\* indicates statistically significant at the 5% level. \*\* at the 10% level

Figure 1. The FTSE 100 Index September 2000 to March 2003



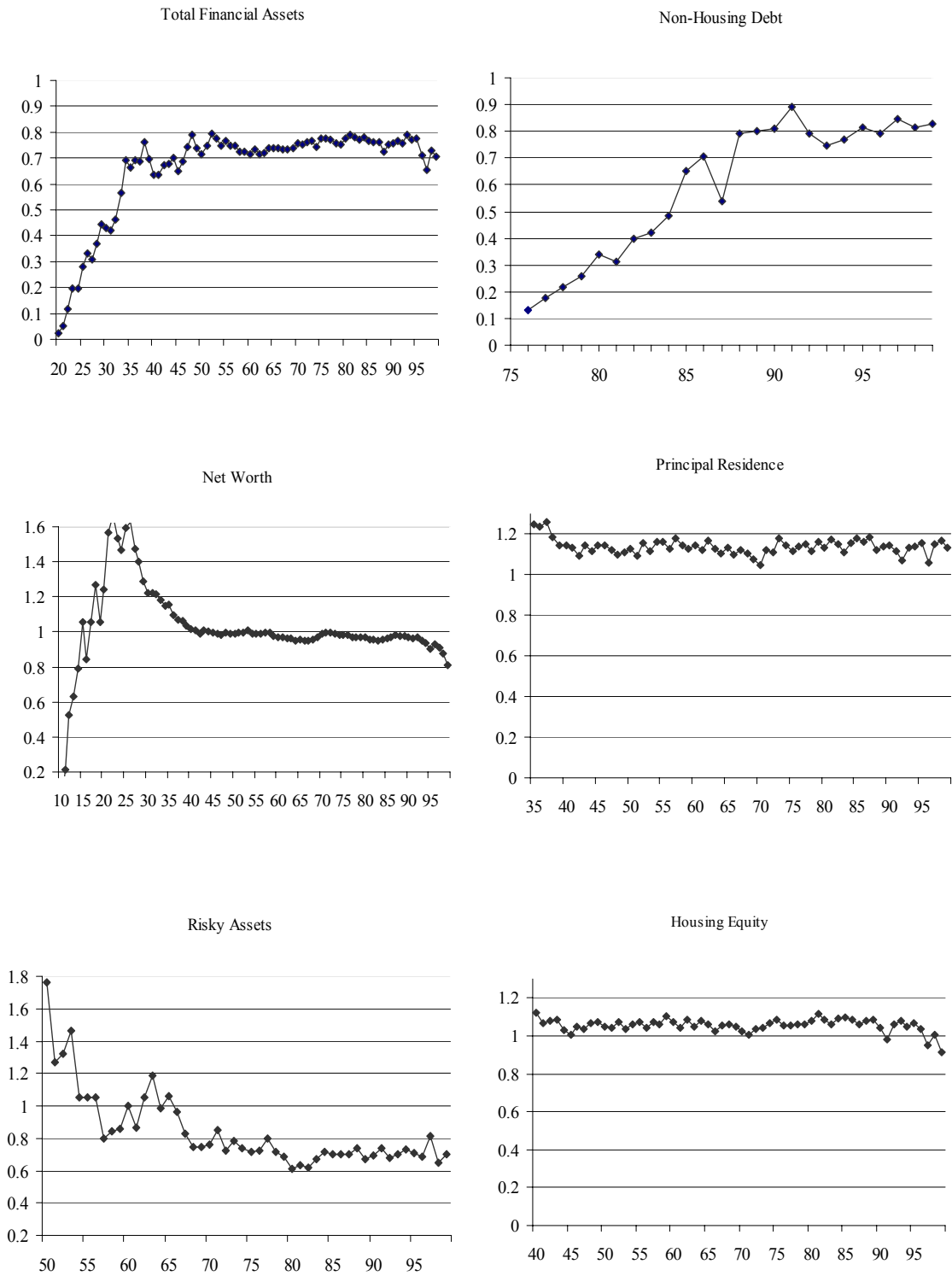
Source:

<http://uk.finance.yahoo.com/q/hp?s=%5EFTSE&b=1&a=00&c=2000&e=1&d=00&f=2003&g=m>

Adjusted monthly close price

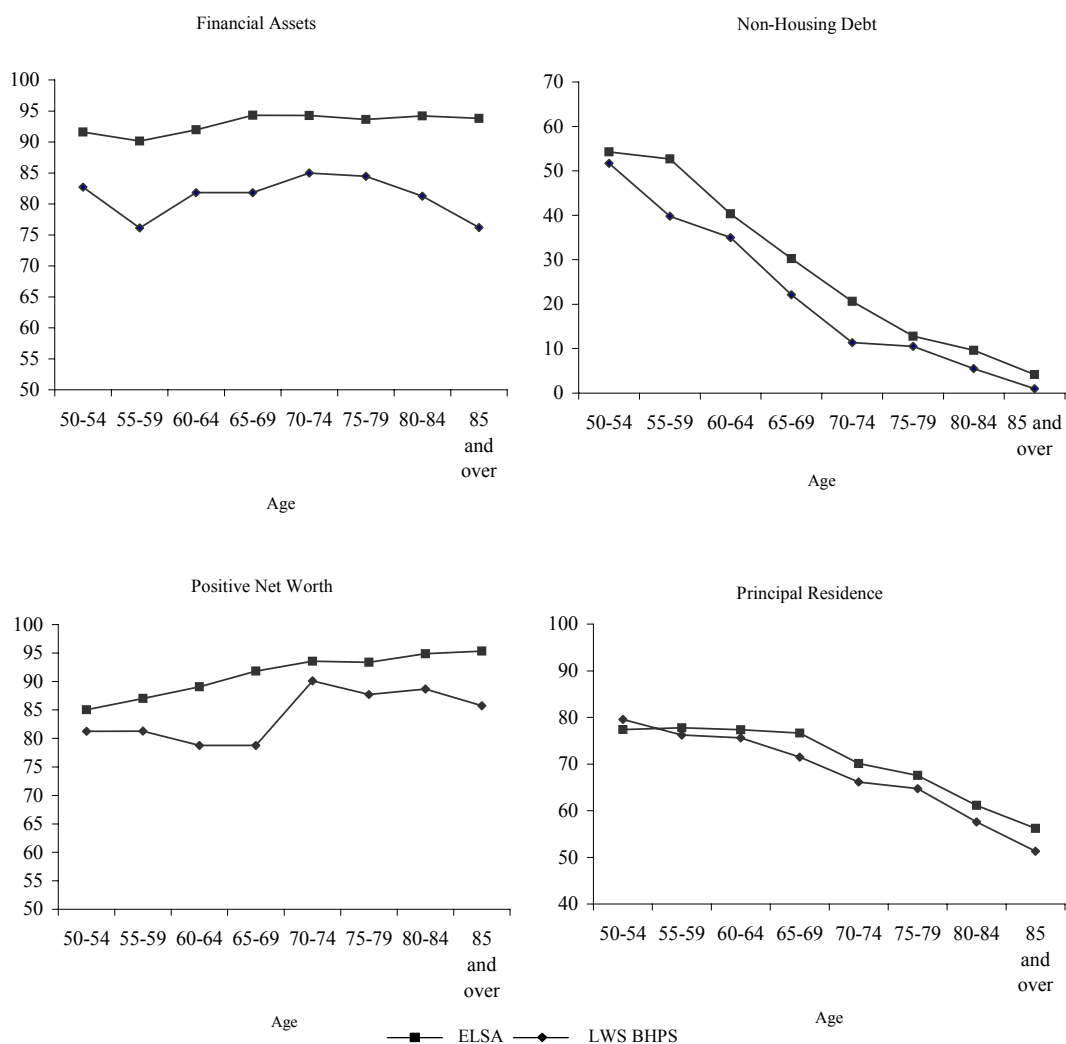


**Figure 2. Ratio of wealth components by selected percentiles (BHPS/ELSA).**



Source: LWS BHPS and ELSA; authors calculations

Figure 3. Fraction of holders, by age of the household's head in BHPS and ELSA surveys (per cent).



Source: LWS BHPS and ELSA; authors calculations

<sup>1</sup> Eleven countries have contributed micro data to the 2004 SHARE baseline study. They are balanced representation of the various regions in Europe, ranging from Scandinavia (Denmark and Sweden) through Central Europe (Austria, France, Germany, Switzerland, Belgium, and the Netherlands) to Mediterranean (Spain, Italy and Greece). Further data have been collected in 2005-06 in Israel. Two 'new' EU member states - the Czech Republic and Poland - as well as Ireland have joined SHARE in 2006 and will participate in the second wave of data collection, which will be conducted from September 2006 through May 2007.

<sup>2</sup> See Sierminska, Brandolini and Smeeding (2006a) for details.

<sup>3</sup> The second wave took place in 2004 and further waves will take place every 2 years.

<sup>4</sup> <http://www.lisproject.org/lws.htm>

<sup>5</sup> This is confirmed in Table 5.

<sup>6</sup> Income in ELSA is income last month multiplied by 12.

<sup>7</sup> We use 300 repetitions.

<sup>8</sup> We also perform separate estimates for housing equity and total financial assets. Our findings confirm what was found in the descriptive statistics controlling for demographic and labor market characteristics that the largest differences between the surveys exist for the second quantile for housing equity. For financial assets we find significantly different coefficients for the top income deciles.

<sup>9</sup> National Savings Certificates are lump sum investments that earn a guaranteed rate of interest over a set period of time.