

Low-Income Dynamics 1991-2005 (Great Britain)

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Introduction

The extent to which individuals living in low-income households at a point in time are simply experiencing transitory fluctuations in income, or are persistently experiencing low income, is clearly an important issue and one that can only be addressed using longitudinal data. The issues of income mobility and the extent of persistence of low incomes experienced by different groups are therefore addressed in this paper using data from the longitudinal British Household Panel Survey (BHPS).

As in 2004/05, the 2005/06 edition of Households Below Average Income (HBAI) only presented trends for individuals who are persistently observed as living in low-income households, with a Website address directing to the full Low Income Dynamics (LID) paper.

The information presented in this paper is based on analysis of fifteen waves of the BHPS, from 1991 up to and including 2005. This publication concentrates on low-income dynamics. It shows trends in relation to individuals who are persistently observed as living in low-income households and presents transition rates, that is, the likelihood of individuals to either enter or exit low income.

Changes since last year

- Some of the BHPS figures presented in this paper are subject to revisions because changes are made by the data providers. New information can be collected from respondents for earlier years.
- Tables for shorter time periods are shown in this edition for the two periods 1991-1997 and 1999-2005. These tables show whether income mobility has changed over time.

- Tables 2; 4.1(part); 5; 7.1; 8.1; 10.2; 10.3; 10.4; 11.2; 11.3; 11.4; 13.2; 13.3; 13.4; 14.2; 14.3; and 14.4; have not been included in this publication. See Appendix 3 for the detailed names of these tables. These tables were omitted to simplify the article. These tables can however be produced on request from the contacts cited at the bottom of page 7.

What are we trying to measure?

Information presented here is broadly consistent with the HBAI report. HBAI uses household disposable incomes, adjusted for household size and composition, as a proxy for material living standards. More precisely it measures the level of consumption of goods and services that people could attain given the disposable income of the household in which they live. However, one difference this year is that while the current paper continues to use the McClements scales for equivalisation, the HBAI report now uses the OECD equivalisation scales.

In order to allow comparisons of the living standards of different types of households, income is adjusted to take into account variations in the size and composition of the households. This process is known as equivalisation, and is explained in more detail below.

A key assumption made in HBAI is that all individuals in the household benefit equally from the combined income of the household. This enables the total equivalised income of the household to be used as a proxy for the standard of living of each household member.

Average 'household' income referred to in this paper is thus the average 'living standard' for individuals as determined by

their net disposable equivalised household income.

See Appendix 1 for a detailed definition of net disposable household income and Appendix 2 for further details of the methodology underpinning the analyses presented in this paper.

Equivalisation

As explained above, income is adjusted, or equivalised, to take into account variations in both the size and composition of the household. This process reflects the common sense notion that a family of several people needs a higher income than a single person in order for both households to enjoy a comparable standard of living.

Equivalence scales conventionally take a couple with no children as a reference point. The incomes of larger households are adjusted downwards and the incomes of smaller households are adjusted upwards relative to this benchmark. The income values quoted relate to the 'cash' income for a couple with no children, and the equivalisation process must be reversed in order for them to be converted to cash incomes for other family types.

The adjustment also incorporates assumptions about the extent to which sharing allows individuals to attain a higher standard of living than they would if living independently with the same cash income. Appendix 2 gives more detail.

Definition of income

The measure of income used in the BHPS analysis presented in this paper is net disposable household income. That is to say the sum, across all household members, of income (after the deduction of Income Tax and National Insurance Contributions) from employment and self-

employment, investments and savings, private and occupational pensions, Social Security benefits and Tax Credits (see Appendix 2 for further detail on income and housing costs.).

Traditionally, HBAI presents analyses of disposable income on two measures: Before Housing Costs (BHC) and After Housing Costs (AHC). This is principally to take into account variations in housing costs that may not correspond to comparable variations in the quality of housing.

As a form of general taxation, Council tax is also deducted from the definition of net disposable income used in FRS-based HBAI analysis. However there was insufficient information on Council tax collected on the BHPS in earlier years to allow the construction of an income measure excluding Council tax. Previous analyses have assessed the impact of not deducting Council tax on the FRS income. In general, not deducting Council tax leads to a slight reduction in snapshot estimates of the risk of low income, although this is most marked for pensioners, reducing their risk by up to three percentage points on a BHC measure, and around six percentage points on an AHC series .

Low income

Low income is defined in this paper in terms of thresholds of median income, specifically 60 per cent and 70 per cent of median income. This is in line with the indicators of persistent low income as presented in the Government's annual report on poverty and social exclusion, "Opportunity for all," and also the agreement reached at the Statistical Program Committee of the European Union in 1998, which recommended the 50, 60 and 70 per cent of median income, with preference for the 60 per cent median indicator. Analyses of results based on the bottom 20 and 30 per cent

of the income distribution have also been included. This is both for comparison, and to validate results based on thresholds of median, as they are vulnerable to measurement error because this part of the distribution is particularly densely populated.

Data Source

The British Household Panel Survey (BHPS) is a longitudinal survey designed to capture information on a nationally representative sample of the population of Great Britain; this was extended to cover Northern Ireland in 1997. It has been developed and run by The University of Essex, Institute for Social and Economic Research (further information and details of their database can be found on their web-site at <http://www.iser.essex.ac.uk/>).

The initial selection of around 5,500 households (approximately 10,000 individual interviews) was sampled from the Postcode Address File, with the same households/individuals re-interviewed, where possible, in each subsequent survey year. Measures are in place to compensate for the inevitable attrition rate, whereby the original respondents were no longer available. Additional samples for Scotland and Wales were introduced in 1999 to boost representation for these areas.

Reliability of Results

The BHPS is a sample survey and as such the figures presented here are

subject to variation as a result of both sampling error and bias due to non-sampling error (principally non-response and attrition of the original panel - see Appendix 2 for a fuller explanation). In particular, caution should be exercised with regard to year-on-year changes in results, as these are likely to be small in relation to sampling variation and other sources of measurement error.

The Family Resources Survey (FRS) is the main data source used to produce HBAI estimates. It remains the official source for cross-sectional low-income analysis as it has a much larger sample size, is designed as a cross-sectional survey first and foremost and collects more detailed information on incomes.

Acknowledgements

The British Household Panel Survey data was made available through the UK Data Archive. The data is released under the auspices of the ESRC UK Longitudinal Studies Centre (ULSC) at the University of Essex. Neither the ULSC nor the Archive bears any responsibility for the analysis or interpretation of the BHPS data presented here.

Contact Points

We welcome feedback on all our publications. If you have any comments or questions in relation to the information presented in this paper, please contact the DWP statistician responsible by telephone on 020 7962 8469, or by e-mail at team.hbai@dwp.gsi.gov.uk

Summary of key findings

Income mobility

- Over the period 1991-2005, there was considerable income mobility. For example, less than five per cent of the population remained in the same quintile, or fifth, of the income distribution for the whole of the period (see Table 3.1 BHC AHC). There was less mobility for people in the top quintile, with around 10 per cent (Table 3.1) of those who started in that quintile staying there throughout the period. This was much higher than similar measures for other quintiles.
- Around two-fifths of individuals who were in the bottom or top quintile in 1991 spent eight or more years in that particular quintile from 1991 to 2005. Individuals in any of the middle three quintiles were less likely to have spent the majority of their time in their original 1991 quintile (Table 3.1). Comparisons between the two time periods, 1991-1997 and 1999-2005 (Tables 3.2 and 3.3), indicate that there were no large differences in income mobility.
- A person's location on the income distribution at the beginning of the period 1991 to 2005 was a good indicator of their location at the end of the period (Table 4.1) Around two-thirds of people were, in 2005, in the same quintile as in 1991 or in an adjacent quintile.
- Comparisons between the two seven-year periods, 1991-1997 and 1999-2005, indicate similar positioning of individuals in the income distribution (Tables 4.2, 4.3).

The above statements hold for both the Before and After Housing Costs measures.

Persistence of low income

Persistent low income is defined by spending three or more years out of any four-year period in a household with below 60 per cent of median income.

On a BHC basis, there have been improvements for children and for pensioners over the period 1991-2005 (Table 6), but little change in persistent low income for the whole population or for working-age adults.

- There was, however, a reduction for children over the period 1991-1994 to 1993-1996, which remained broadly the same up to 1999-2002, but has shown successive falls since.
- By the latest period 2002-2005 the incidence of persistent low income for children had fallen by six percentage points since 1999-2002, and at 11 per cent BHC, was lower than it was at any time during the fifteen-year period since 1991-1994.
- For pensioners, there was a slight increase up to 1998-2001, followed by a steady fall of six percentage points since.

On an AHC basis, there were falls in the persistent low-income estimates for children, working-age adults and the population as a whole, over the fifteen-year period.

- For pensioners, the proportion rose between the periods 1991-1994 and 1998-2001, but has shown a marked fall since. The level of persistent poverty for pensioners in 2002-2005, at 13 per cent AHC, was lower than it was at any time during the fifteen-year period since 1991-1994.
- For children, the proportion in persistent poverty in 2002-2005, at 17 per cent, was lower than it was at any time during the fifteen-year period since 1991-1994.

The risk of experiencing persistent low income for children is higher for those living in lone-parent families, in rented accommodation and workless households. While this is true on both BHC and AHC measures (Table 8.2), the risks of poverty among these groups have declined markedly by 2002-2005 when compared to the earlier time periods.

Transitions into and out of low income

- Over the period 1991 to 2005, around three in ten individuals in low income exited between one year and the next (Table 9). Pensioners (both singles and couples) and lone parents had the lowest exit rates.
- The corresponding entry rate for all individuals into low income between any two successive years was seven per cent. Lone parents and the workless had the highest rates of entry into low income (Table 9).
- Analyses of the main events associated with movements out of and into low income are shown in Tables 10.1 and 11.1. A change in the head of household's earnings was the most common reason for the change in poverty status of these households. Alternatively, a rise in benefit income or a fall in income derived from other non-labour income events was the most common reason why these households respectively moved out of or into poverty.
- Taking the period 1991 to 2005 as a whole, of those people in persistent low income, on average one in six individuals exited in any one year, while one per cent not in persistent low income entered into persistent low income (Table 12).
- Pensioners, the workless, and all parents, were least likely to exit from persistent low income, while the workless, lone parents, and single pensioners were most likely to enter into low income.

Detailed analysis

Income in real terms between 1991 and 2005

Table 1 is based on all fifteen waves of BHPS data and shows income levels for the mean, median and various percentiles over time, in January 2006 prices on Before Housing Costs (BHC) and After Housing Costs (AHC) bases.

The tables show income growth in real terms from 1991 to 2005 on both BHC and AHC measures. Over this period, there was a higher income growth on an AHC basis. Year-on-year, percentage growth of mean and median, on both BHC and AHC measures were similar.

These tables have been presented in order to allow users to assess the robustness of BHPS income data presented in this paper.

With fifteen waves of data it is possible to look at how the characteristics of those with persistently low incomes have changed over time.

The fifteen waves have been divided into twelve overlapping subsets of four waves, covering each four-year period, from 1991-1994 to 2002-2005 (Table 6). To be considered for inclusion in a particular period, individuals must have responded in the first year, and lived in fully responding households in all waves up to and including the final wave of the four-year period, or be a child born to a permanent panel member who satisfies the above conditions.

Given the relatively small sample size of the BHPS (around 5,400 fully responding individuals in the

longitudinal data by the end of the fifteen-year period), changes over time must be interpreted with caution, as they are likely to be small in relation to measurement error.

Comparison of Family Expenditure (FES) and Family Resources Survey (FRS) based low-income estimates with their BHPS equivalents

Questions on the BHPS do not allow reliable estimation of households' Council Tax liabilities, while those on the FRS do. While no comparisons have been attempted in this publication, past work suggests that not deducting Council Tax reduces rates of low income for all client groups but has a larger impact on pensioner figures, reducing their risk by up to three percentage points on a BHC measure, and six percentage points on an AHC series.

Income mobility

Table 3.1 shows where individuals spent the majority of the fifteen-year period, 1991-2005, in relation to their original quintile in 1991. From this we can conclude that relative to their position in 1991, on both BHC and AHC measures:

- Around two-fifths of all individuals who were in the bottom quintile in 1991 spent eight or more years in the same quintile out of the fifteen years. Similarly at least two-fifths of all individuals who were in the top quintile in 1991 spent between eight or more years in the same quintile over the period 1991-2005.
- Over the period 1991-2005, there was considerable income mobility.

For example, less than five per cent of the population remained in the same quintile of the income distribution for the whole of the period.

- There was less mobility for people in the top quintile, as those who started in that quintile were more likely to stay there throughout the period than those in any other quintile.

Tables 3.2 and 3.3 compare how income mobility has changed over two seven-year periods, 1991-1997 and 1999-2005. For individuals to be included in the analysis for table 3.2, they must have been interviewed in each of the seven years in the period 1991-1997. Similarly, Table 3.3 includes those people that were interviewed in each year during the period 1997-2005.

Comparisons between the two time periods indicate that there are no large differences. Tables 3.2 and 3.3 show that:

- Individuals were more likely to remain in the top quintile throughout the period 1991-1997. This was true on both BHC and AHC bases. Comparisons between the periods 1991-1997 versus 1999-2005 showed that individuals in the lowest quintile were less likely to remain in that bottom quintile throughout the later period, although for this group, this pattern was only evident on an AHC basis.

Table 4.1 This table shows the construction of a transition matrix relating to the position of individuals at the beginning and end of the fifteen-year period 1991-2005. It shows that:

- By the end of the fifteen-year period on a BHC basis, individuals were generally more likely to end up in the quintile they started in than in any other single quintile. This was especially so in the top and bottom quintiles.

The following holds for both BHC and AHC measures:

- At least three-fifths of people were, in 2005, in the same quintile as in 1991 or in an adjacent quintile. Overall, more than three in ten moved up or down by more than one quintile.
- One in ten of those in the top quintile in 1991 were in the bottom quintile in 2005; whereas slightly smaller proportions moved from the bottom quintile to the top.

Overall, for the majority of individuals their position in 2005 in relation to 1991 – that is whether it was lower, higher or the same - was generally indicative of where they had spent the majority of the fifteen-year period.

Tables 4.2 and 4.3 show the comparison between two shorter seven-year time periods 1991-1997 and 1999-2005. It indicates that, on both BHC and AHC measures:

- Individuals in the bottom quintile in 1991 were more likely to end in the bottom quintile seven years later, than those who were in the bottom quintile in 1999 when compared with 2005.
- Individuals were less likely to be in the same quintile in the latter year than in the initial for the longer fifteen-year period when compared to the shorter seven-year periods.

Persistent low income

One possible measure of 'persistence' of low incomes would be to consider only those individuals whose income was 'low' in each year of the period in question. However, this would exclude people who experienced slightly higher income for very short periods but whose long-term living standards were not actually very different from those captured in low income in each year.

This issue is relevant because the income distribution is particularly dense around the second and third deciles and the '60 and 70 per cent of median income' markers. In addition, some short periods of recorded high income may be due to measurement error and not reflect any real improvement in living standards.

Therefore other definitions of persistence are also considered which involve experiencing a low income for the majority of the period:

- i) Regardless of how high their income was in the remaining year(s). This approach is adopted in the Government's report on Poverty and Social Exclusion, 'Opportunity for all' (OFA) which defines persistence as spending three or more years out of any four-year period below low-income thresholds.
- ii) With an income just above these thresholds but in the bottom 40 per cent of the income distribution for the remaining year(s). This excludes from the definition of 'persistence' those with relatively high incomes for any period of time.

As we consider more restrictive definitions of 'persistence', we obtain measures with lower estimates for the proportion of the population who might be described as persistently poor.

'Opportunity for all' persistent low-income indicators

Table 6 presents the persistent low-income indicators for pensioners, children and working-age adults that are included in the Government's annual report on tackling poverty and social exclusion 'Opportunity for all' (Ofa). Additional figures are presented here for 'all individuals' for comparative purposes.

For the period 2002 to 2005 the table shows that, for income BHC:

- Nine per cent of individuals lived in households with below 60 per cent of median income for at least three out of four consecutive years. Overall, this figure has shown modest falls since 1991-1994.
- 11 per cent of children lived in households with below 60 per cent of median income for at least three of the last four years. There was a reduction for children over the period 1991-1994 to 1993-1996, which remained broadly the same up to 1999-2002. Data since 1999-2002 show successive falls in percentages of children in such households.
- Six per cent of working-age adults lived in households with below 60 per cent of median income for at least three years. Overall, this series has shown modest change since 1991-1994.

- 15 per cent of pensioners lived in households with below 60 per cent of median income for at least three years. For pensioners, there was a slight increase up to 1998-2001, followed by successive falls since.

On an AHC basis, the table shows that for the period 2001 to 2005:

- 11 per cent of individuals experienced persistent low-income (defined as at least three out of any four years below 60 per cent of median income). This figure has fallen by four percentage points from 15 per cent in 1991-1994.
- 17 per cent of children lived in households with below 60 per cent of median income for at least three out of four years. Most of the decline to this current level occurred after 1996-1999, with persistent low income for children now at its lowest level since 1991-1994.
- Eight per cent of working-age adults experienced persistent low-income. This figure has fallen since 1991-1994 but since 2000-2003, has shown no change.
- 13 per cent of pensioners lived in households with below 60 per cent of median income for at least three years. For pensioners, the proportion rose between the periods 1991-1994 and 1998-2001, but has shown a marked fall since. The level of persistent poverty for pensioners in 2001-2005 – at 13 per cent - was lower than it was at any time during the fifteen-year period from 1991.

The definition of persistence used in Ofa is 'at least three years out of four below thresholds of 60 or 70 per cent

of median income'. An alternative definition that does not appear in Ofa, using the bottom 20 or 30 per cent of the income distribution as opposed to thresholds of median income, is also included in Table 6 for validation purposes. This is useful as Ofa results may be subject to variation due to the density of the income distribution around the 60 and 70 per cent of median markers.

Composition of persistent low-income groups

In **Tables 7.2 and 8.2**, individuals are defined by their characteristics in the first year of the period covered. Although some will experience changes in the composition of their household over the period, this is not considered here. For example, not all those individuals recorded as living in a lone-parent family in 1991 will still be living in a lone-parent family in 1994.

Table 7.2 shows the family and household characteristics of those children who experienced 'persistent' low income. During the period 2002-2005, for those children living in households with below 60 per cent of median income in at least three years out of four, on both BHC and AHC measures, it shows that:

- Around two in three lived in couple families.
- Over half lived in rented accommodation.

Due to the small sample sizes and the risk of measurement error, changes over time should be interpreted with caution. However, there is evidence to suggest the following on both BHC and AHC bases since 1991-94, for those

individuals persistently below 60 per cent of median income:

- **Table 7.2** shows that there has been a fall in the proportion of children who lived in rented accommodation and those living in workless households.
- There has been an increase in the proportion of children living in couple households, where one is working and one is workless.

Risk of falling into persistent low-income groups

Table 8.2 shows the risk for children of experiencing 'persistent low incomes'. During the period 2002-2005, for those children living in households with below 60 per cent of median income in at least three years out of any four, on both BHC and AHC measures the table shows that:

- Those living in lone-parent families were more at risk compared to children in couple families.
- Children in rented accommodation and workless households also had a higher risk of persistent low income.

Again, whilst, due to small sample sizes and risk of measurement error, changes over time should be interpreted with caution, the evidence suggests that:

- **Table 8.2** suggests that since 1991-1994, there has also been a substantial reduction in the risk for children in lone-parent families, for those who live in rented accommodation, and for workless households.

Transitions into and out of low income

Introduction

As a complement to the previous section which looked at income mobility, and the extent of persistence of low income, the following section looks at events and characteristics that are associated with movements into and out of low income. The section describes the characteristics of low income escapers and entrants, and investigates how transitions are associated with trigger events. We consider exit and entry transitions separately because the factors that are associated with them differ. However, it is also important to look at them together, as movement into and out of low income is not uni-directional.

Methodology

The methodology in this section is based on that used in the report produced by S.P. Jenkins and J.A. Rigg with the assistance of F. Devicienti, for the Social Research Division at the Department of Work and Pensions.¹ The latest estimates also include new data for 2005.

The analysis is based on all fifteen waves of the BHPS, from 1991 up to and including 2005, and uses a measure of equivalised household income consistent with that used in the previous section. The focus is on what factors are associated with transitions in relation both to low income experienced in a single year, and to a definition of persistent low income, that is low income experienced over a

consecutive period of time.

The unit of analysis is the individual. However, as individuals live in households where the living standard of the individual is estimated with reference to the net income of the household to which he or she belongs, they will therefore be affected by changes at the household level. This could come about either through changes in income levels, or by changes in the household composition which affects the equivalisation process.

When analysing routes into and out of low income, the threshold used was the standard 60 per cent of contemporary median income using the Before Housing Costs (BHC) measure. For the reason that households are subject to measurement error, and in turn that the threshold is subject to sampling and measurement error, the analysis for transitions between one year and the next only include 'clear' transitions. For example - in Table 9 - for an exit or entry to occur, household incomes must change by at least 10 per cent higher / lower than 60 per cent median income in the following year. However for specific income events – for example a change in the household head's earnings – a change is recorded if earnings are at least 20 per cent higher / lower and are of an absolute money value of at least £10

As well as showing entry and exit rates for various family and household types, we also present tables showing to what extent these entry and exit rates can be associated with different trigger events. An approach used previously by Jenkins and Rigg in the aforementioned research was employed. In this method (described as 'Method 2' in the report) it is

¹ Jenkins, S.P and Rigg, J.A. with the assistance of Devicienti, F. (2001), 'The dynamics of poverty in Britain', DWP Research Report No 157

possible for exits to be recorded for more than one event. For example, the head of household may switch from a full-time to a part-time job and a household member may leave home. Analysis focuses on a set of ‘major’ events, and we then look at three types of statistic that are associated with these for individuals in low income:

- The prevalence of each trigger event. That is, how often the event in question occurs for those in low income.
- The exit or entry rate of those individuals who have experienced the event in question. For example for exit rates, this was the number of individuals in low income in one year who experienced the event and exited low income in the following year, expressed as a percentage of all those who were in low income and experienced the event.
- The proportion, or share, of all transitions that are accounted for by the event. That is for all the observed transitions into or out of low income, what proportion is associated with the event in question.

For a change in an income component to be regarded as an event, the change also had to be above a certain threshold, to increase the likelihood that a genuine event had occurred. For this analysis, household income had to increase by at least 20 per cent, and by a minimum of £10 to be regarded as an event. This meant that transitions were less likely to be attributed to an event due to either measurement error, or for example a slight increase in earnings occurring simultaneously alongside other events. Tables are presented both for transitions between successive years,

and for exits from and entries into persistent low income.

Low income escapers and entrants between successive years, for different family and household types

All tables looking at transitions between two consecutive interviews present a single estimate for the fifteen waves of data collected from the BHPS. These estimates were constructed by identifying all relevant events between all fourteen combinations of adjacent years and then pooling these results across all years.

Tables 9; 10.1; and 11.1 show exit and entry rates for all low-income escapers and entrants by family type and economic status of the household. For the purpose of this analysis, the status of an individual is that of the first year of the analysis in an adjacent pair of years.

Table 9 shows the entry and exit rates for all individuals.

- Around three in ten individuals who experienced low income in any one year, exited from low income in the following year.
- The entry rate for all individuals was seven per cent between one year and the next.

Family Type

- Lone parents had the highest entry rate into low income at around one in seven. Along with pensioners, they also had amongst the lowest exit rates at around one in four.
- Compared with lone parents, pensioners experienced lower entry

rates. This was particularly the case for pensioner couples whose rate of entry into persistent poverty was eight per cent over the period 1991-2005. By contrast, the entry rate for lone-parents was 15 per cent over this period.

- Low exit and low entry rates for pensioners suggests they had relatively stable incomes.
- Singles and couples without children had the highest exit rates at nearly 50 per cent.
- Under 1 in 20 couples without children entered low income between any two years. They were around four times less likely to enter into low income than singles with children.

Economic status

The economic status of an individual is based on their status in the year before the transition occurred. The five breakdowns presented are mutually exclusive.

- Pensioner households and the workless experienced the lowest exit rates at around one in four.
- Workless households when compared with any other economic status had markedly higher entry rates at around one in five.
- Families where all adults were employees had the lowest chance of entering low income at four per cent. This risk was higher for 'couples, one workless, one employee', and over twice as high for 'self-employed' families.
- However, the exit rate from low income for the 'self-employed', 'couples, one workless, one employee' and 'all adults are employees' were broadly similar, with around four out of ten exiting.

Events associated with exits from low income

Table 10.1 shows the main events that were associated with movement out of low income. Two distinct categories of events are presented: income events (further divided into labour and non-labour events) and demographic events, for example a change in household type.

A change in household type was said to occur where an individual's household status changed between one wave and the next, where household status can take the following categories (note these categories have not been identified in separate tables this year):

1. Single non-pensioner
2. Single pensioner
3. Couple no children
4. Couple: dependent children
5. Couple: non-dependent children
6. Lone parent: dependent children
7. Lone parent non-dependent children
8. Two or more unrelated adults
9. Other households

For an increase in income to be considered an event, the income had to increase by at least 20 per cent and by more than £10. The approach attempts to identify major events that may be associated with entry and exit into low income, as opposed to all possible events. It is possible that exits can be associated with more than one event, which means the sum of the share statistics is not necessarily 100 per cent. In Table 10.1, the sum of all events nearly always exceeds 100 per cent. For example, the event 'rise in other household members' income' will include some events where the number of workers has risen.

The tables distinguish between a change in the number of workers

where household size is unchanged – so someone has changed their work status – and a change in the number of workers where the household size has changed. This attempts to capture the dynamics separately for events that occur for adults within the household, compared with events where new workers enter the household. For non-labour income events, the tables identify only those instances where the same number of individuals was in the household in the year before as in the year after the transition. The exit rate is defined as the number of individuals moving out of low income between one year and the following year, expressed as a percentage of the total number of individuals who were in low income in the first year. The entry rate is the number of individuals moving into low income between one year and the following year, expressed as a percentage of the total number of individuals who were above the income threshold in the base year. While the number of people moving across the threshold in either direction is usually of the same order, the exit rate is always larger than the entry rate because the number below the threshold is small in relation to the number above the threshold.

Table 10.1 shows results, for all individuals:

- A rise in the earnings of the head of household was associated with almost four out of every ten exit events. This was due to the event being relatively prevalent for individuals in low-income households, and a high exit rate conditional on the event (that is, among those individuals who were in low income in the base year and experienced the event).

- Around one in ten exit events were associated with an increase in the number of workers and a change in household size. This was largely due to a high exit rate conditional on the event of around 70 per cent.
- A rise in the number of full-time workers had a higher conditional exit rate than just a rise in the number of workers (e.g. 67 per cent vs 56 per cent when household size remained the same). Additionally, the conditional exit rate associated with an increase in the number of workers in the household was higher when household size changed than when it did not (e.g. 69 per cent vs 56 per cent).
- A rise in benefit income was associated with around one third of all exits. However the exit rate conditional on the event, at 45 per cent, was lower than for an increase in non-benefits non-earnings income, which had a conditional exit rate of 65 per cent.

Events associated with entries into low income

Entries in low income have been defined as a change of income from twenty per cent above the low-income threshold to below 60 per cent of median income.

Table 11.1 shows the association between events and entries into low income for all individuals.

- Falls in non-benefit, non-earnings income had the largest share of entries, with over four out of every ten entries associated with this event.
- Falls in earnings of the head of household similarly had a high share of entries, and was

associated with around four in ten entries.

- A change in status to a single-parent household had a relatively high conditional entry rate at 27 per cent, but only a small share statistic (1 per cent) because it was not very prevalent.

Persistent low income escapers and entrants, for different household types

The analysis so far has presented rates of exit from and entry into low income between successive years. Another important concept to capture is the equivalent transition rates into and out of persistent low income. For the purpose of this analysis, we have defined persistent low income for an individual as having lived in a household with equivalised income below 60 per cent of contemporary median for at least three consecutive years. This differs from the definition used elsewhere in this paper which defines persistent poverty as being poor in any three out of four years. The slightly different definition has been introduced here for simplicity.

An exit from persistent low income has been defined where an individual spent three consecutive years below the relative low income threshold, followed by two further consecutive years above the standard 60 per cent of median low income threshold.

By introducing this stricter definition of exiting low income for two consecutive years, we have not counted as exits, those events where individuals only exited from persistent low income for a single year. These cases would still be classified as in persistent low income using the 'Opportunity for all' definition

of 'three years out of four in low income'.

An entry into persistent low income was defined as where an individual spent three consecutive years below the 60 per cent of median income threshold, which has been preceded by two consecutive years above the low income threshold.

Statistics for entries relate to a different time-frame to exits because exits can only be recorded after a period of low income, and entries only recorded for a point in time prior to a period of low income.

Tables 12; 13.1 and 14.1 show exit and entry rates from and into persistent low income. For the family type and economic status breakdown (Table 12), individuals must have remained in the same family type or economic status for the three years that preceded an exit, and for the first two years that preceded an entry. This ensured that any changes to individuals were those that only occurred at the point of transition. This restriction has not been applied to the 'All individuals' row.

Table 12 shows exit and entry rates from and into persistent low income by family type and economic status of the household. The rates of both exits from and entries into persistent low income were lower than transitions between successive years as shown in Table 9. Exit rates were 16 per cent, and entry rates only one per cent. These compared with Table 9 values of 32 per cent and seven per cent respectively.

Family type

- Pensioners – both couples and singles - were less likely to exit persistent low income than all other family types.
- Lone parents and single pensioners were most likely to enter persistent low income. Unlike successive year transitions (see Table 9) - where exit rates were similar - lone parents were more likely to exit than pensioners.
- Singles without children were most likely to exit persistent low income, with a rate of around one in three.
- Couples without children had a relatively high exit rate (21 per cent), but not to the same extent as for the equivalent successive-year transitions (Table 9) – where they had amongst the highest exit rates (47 per cent) along with singles without children.

Economic status

- The self-employed had the highest exit rate; over one in four of these exited persistent low income.
- Similarly, around a quarter of families where all adults were in employment exited persistent low income.
- Couples with one employee and one workless had an exit rate of around one in five. Pensioners had a lower exit rate than other economic types of household, at around one in ten.
- The workless had a relatively high entry rate, at four per cent, while households with at least one employee had an entry rate of one per cent.

Events associated with exits from persistent low income

The tables below show events associated with entry and exit from persistent low income. These differ from “successive-year” exit and entry rate results presented earlier, which showed transition rates from and into low income between any single year and the next.

Table 13.1 shows exits from persistent low income for all individuals, and the main events that were associated with these transitions. An event associated with an exit relates to a change in circumstances between the final year of a persistent low-income period, and the first year not in low income. Compared to “successive-year” (Tables 9 and 10.1) exits for all individuals, the prevalence of events was largely the same, as were the share of all exits that events were associated with (e.g. Tables 10.1 and 13.1 compared). Conditional exit rates however, were lower for exits from persistent low income.

- A rise in the head of household’s earnings contributed to the greatest share of all exits, which was a relatively prevalent event with around one in six individuals experiencing this event.
- The highest conditional exit rate was seen where an increase in the number of full-time workers occurred with a different household size, with around six out of ten individuals exiting persistent low income when this event occurred.
- A rise in benefit income was associated with a large share of exits - around one-third.
- An increase in non-benefit and non-earnings income was associated with almost one in five of all exits, less than the

successive-year equivalent where it was around one-third (see Table 10.1).

Events associated with entries into persistent low income

An entry event into persistent low income relates to a change in circumstances between the final year not in low income, and the first year of a period of persistent low income.

Table 14.1 shows the main events that were associated with entry into persistent low income for all individuals.

- Like exits, the prevalence of events for entries was comparable between the successive-year analysis and the persistent analysis, as were the share statistics (compare Tables 14.1 and 11.1). The main exception to this was for a fall in non-benefit non-earnings income, which had a lower share of entries into persistent low income, at around a third. This compared with more than four out of ten from the successive year analysis (Table 11.1)
- A fall in the head of household's earnings was associated with four out of ten entries, the largest share of all entry events.
- A change to a lone-parent household was associated with the highest conditional entry rate, at seven per cent.

Explanatory notes:

Please be advised that the following notes apply to specific tables as listed.

1. Some of the figures presented in the tables (1.0 to 14.1) may have seen revisions since their publication in the last HBAI (2005/06) report and in the LID (1991-2004) report. This is due to changes to the base dataset made by the data providers.
2. In Entry and Exit tables (10.1; 11.1; 13.1; and 14.1) for the category 'Fall or Rise in non-benefit, non-earnings income (same household size)', income here refers to all types of household income, excluding that derived from benefits and earnings. Such income may, for example, be from investments or private pensions.
3. In these Entry and Exit tables for the category 'Change in household type', includes all possible changes to the household, including all subsequent changes that are listed. Subsequent changes listed in specific tables are most prevalent among families in that type of household.

Table 1 (BHC): Equivalised weekly income levels (in January 2006 prices)¹

£pw equivalised		Source: BHPS 1991-2005						
Year	10th percentile	20th percentile	30th percentile	40th percentile	60% of median	70% of median	Median	Mean
1991	155	203	247	286	194	226	323	369
1992	150	192	232	271	190	221	316	360
1993	159	204	243	284	196	229	327	367
1994	164	208	247	286	194	227	324	372
1995	166	214	253	290	198	231	330	389
1996	175	219	256	299	206	240	343	391
1997	173	214	255	298	204	238	340	391
1998	181	228	271	312	214	250	357	414
1999	184	236	274	314	218	255	364	426
2000	187	237	281	326	226	263	376	427
2001	199	249	290	332	233	272	389	443
2002	198	257	293	344	236	275	393	448
2003	200	254	294	342	235	274	391	448
2004	210	259	305	348	241	281	401	456
2005	208	266	309	356	244	285	407	463
Percentage increase 1991 to 2005	34%	31%	25%	24%	26%	26%	26%	25%

Table 1 (AHC): Equivalised weekly income levels (in January 2006 prices)¹

£pw equivalised		Source: BHPS 1991-2005						
Year	10th percentile	20th percentile	30th percentile	40th percentile	60% of median	70% of median	Median	Mean
1991	124	175	214	254	174	203	290	334
1992	113	162	201	240	172	200	286	325
1993	127	173	215	252	178	208	297	333
1994	129	176	217	257	178	208	297	337
1995	134	181	221	261	181	211	301	357
1996	139	186	227	271	188	219	313	360
1997	145	188	229	273	190	221	316	364
1998	155	203	246	292	202	235	336	392
1999	152	203	248	291	204	238	340	399
2000	158	204	253	297	207	242	345	393
2001	167	215	258	303	211	246	352	406
2002	165	219	259	304	211	246	352	401
2003	170	219	259	303	209	244	349	401
2004	175	224	264	309	214	249	356	406
2005	174	231	270	316	215	251	359	409
Percentage increase 1991 to 2005	40%	32%	26%	24%	24%	24%	24%	22%

Notes:

1. The table shows summary statistics of the equivalised income distribution for each BHPS year in constant (January 2006) prices. These summary statistics are derived using the Retail Price Index (RPI).

2. The underlying figures are subject to revisions due to changes to the base dataset made by the data providers.

Table 3.1 (BHC): Where in the income distribution individuals spent the majority of their time relative to 1991

Percentage of individuals	Source: BHPS 1991-2005					
	Original position in 1991					
	Bottom Quintile	Second Quintile	Third Quintile	Fourth Quintile	Top Quintile	All individuals
All years in the same quintile as 1991	4	1	0	1	10	3
Majority of years in same quintile as 1991	37	19	16	19	38	26
Majority of years above 1991 quintile	52	38	29	15	...	27
Majority of years below 1991 quintile	...	15	29	38	46	26
None of the above	6	27	26	28	6	19
All individuals	100	100	100	100	100	100

Table 3.1 (AHC): Where in the income distribution individuals spent the majority of their time relative to 1991.

Percentage of individuals				Source: BHPS 1991-2005		
	Bottom Quintile	Second Quintile	Original position in 1991		Top Quintile	All individuals
			Third Quintile	Fourth Quintile		
All years in the same quintile as 1991	2	0	0	0	9	2
Majority of years in same quintile as 1991	39	18	13	16	33	24
Majority of years above 1991 quintile	53	40	29	15	...	28
Majority of years below 1991 quintile	...	12	31	42	51	27
None of the above	6	31	27	27	7	19
All individuals	100	100	100	100	100	100

Notes:

1. The "Majority of years in same quintile as 1991" row means eight or more years out of fifteen in the same quintile as 1991 but does not include those in the "All years in original/final quintile" row.
2. 'None of the above' implies that the individual has neither remained in the same quintile as the original, nor been in a higher or lower quintile for eight of the fifteen BHPS years. Possible combinations matching this criteria for respondents over the fifteen years are (6, 6, 3), (6, 4, 5), (6, 5, 4), (5, 4, 6), and (5, 5, 5) in any order for (lower quintile, original quintile, higher quintile). Only with an even number of BHPS years, is 'none of the above' possible for the top and bottom quintiles.

Table 3.2 (BHC): Where in the income distribution individuals spent the majority of their time relative to 1991, over the period 1991-1997

Source: BHPS 1991-1997						
	Bottom Quintile	Second Quintile	Original position in 1991		Top Quintile	All individuals
			Third Quintile	Fourth Quintile		
All years in the same quintile as 1991	19	6	5	5	30	13
Majority of years in same quintile as 1991	41	41	33	37	35	38
Majority of years above 1991 quintile	40	27	24	14	...	21
Majority of years below 1991 quintile	...	14	22	31	34	20
None of the above	...	12	15	13	...	8
All individuals	100	100	100	100	100	100

Table 3.2 (AHC): Where in the income distribution individuals spent the majority of their time relative to 1991, over the period 1991-1997

Source: BHPS 1991-1997						
	Bottom Quintile	Second Quintile	Original position in 1991		Top Quintile	All individuals
			Third Quintile	Fourth Quintile		
All years in the same quintile as 1991	17	5	3	4	24	11
Majority of years in same quintile as 1991	42	36	33	34	40	37
Majority of years above 1991 quintile	41	32	25	13	...	22
Majority of years below 1991 quintile	...	13	25	35	36	22
None of the above	...	14	15	14	...	9
All individuals	100	100	100	100	100	100

Notes:

1. The "Majority of years in same quintile as 1991" row means four or more years out of seven in the same quintile as 1991 but does not include those in the "All years in original/final quintile" row.
2. 'None of the above' implies that the individual has neither remained in the same quintile as the original, nor been in a higher or lower quintile for four of the seven BHPS years. Possible combinations matching this criteria for respondents over the seven years are (5, 1, 1), (4, 2, 1), (3, 3, 1), and (3, 2, 2) in any order for (lower quintile, original quintile, higher quintile). When there are an odd number of BHPS years, 'none of the above' is impossible for the top and bottom quintiles.

Table 3.3 (BHC): Where in the income distribution individuals spent the majority of their time relative to 1999, over the period 1999-2005

Percentage of individuals	Source: BHPS 1999-2005					
	Original position in 1998					
	Bottom Quintile	Second Quintile	Third Quintile	Fourth Quintile	Top Quintile	All individuals
All years in the same quintile as 1999	17	5	5	6	27	12
Majority of years in same quintile as 1999	42	39	34	38	36	38
Majority of years above 1999 quintile	41	29	21	15	...	21
Majority of years below 1999 quintile	...	13	27	28	37	21
None of the above	...	15	14	13	...	8
All individuals	100	100	100	100	100	100

Table 3.3 (AHC): Where in the income distribution individuals spent the majority of their time relative to 1999, over the period 1999-2005

Percentage of individuals	Source: BHPS 1999-2005					
	Original position in 1998					
	Bottom Quintile	Second Quintile	Third Quintile	Fourth Quintile	Top Quintile	All individuals
All years in the same quintile as 1999	11	4	5	6	27	11
Majority of years in same quintile as 1999	43	39	32	38	36	38
Majority of years above 1999 quintile	45	28	22	13	...	21
Majority of years below 1999 quintile	...	15	24	29	37	21
None of the above	...	14	17	13	...	9
All individuals	100	100	100	100	100	100

Notes:

1. The "Majority of years in same quintile as 1998" row means five or more years out of eight in the same quintile as 1998 but does not include those in the "All years in original/final quintile" row.
2. 'None of the above' implies that the individual has neither remained in the same quintile as the original, nor been in a higher or lower quintile for four of the seven BHPS years. Possible combinations matching this criteria for respondents over the seven years are (5, 1, 1), (4, 2, 1), (3, 3, 1), and (3, 2, 2) in any order for (lower quintile, original quintile, higher quintile). When there are an odd number of BHPS years, 'none of the above' is impossible for the top and bottom quintiles.

Table 4.1 (BHC): Position of individuals in the income distribution by quintile in 2005 in relation to 1991

Percentage of individuals		Source: BHPS 1991-2005				
	Position in 1991					
	Bottom Quintile	Second Quintile	Third Quintile	Fourth Quintile	Top Quintile	
Position in 2005						
Bottom quintile	34	25	18	11	12	
Second quintile	27	23	23	15	12	
Third quintile	19	22	23	22	14	
Fourth quintile	12	18	20	27	22	
Top quintile	8	12	16	25	40	
Total	100	100	100	100	100	

Table 4.1 (AHC): Position of individuals in the income distribution by quintile in 2005 in relation to 1991

Percentage of individuals		Source: BHPS 1991-2005				
	Position in 1991					
	Bottom Quintile	Second Quintile	Third Quintile	Fourth Quintile	Top Quintile	
Position in 2005						
Bottom quintile	34	24	19	13	11	
Second quintile	26	24	20	16	14	
Third quintile	15	23	23	23	16	
Fourth quintile	15	17	23	25	20	
Top quintile	10	13	15	24	38	
Total	100	100	100	100	100	

Table 4.2 (BHC): Position of individuals in the income distribution by quintile in 1997 in relation to 1991

Percentage of individuals		Source: BHPS 1991-1997				
	Position in 1991					
	Bottom Quintile	Second Quintile	Third Quintile	Fourth Quintile	Top Quintile	
Position in 1997						
Bottom quintile	48	24	14	8	6	
Second quintile	25	34	21	13	8	
Third quintile	14	21	31	24	10	
Fourth quintile	8	13	23	31	25	
Top quintile	5	7	12	24	51	
Total	100	100	100	100	100	

Table 4.2 (AHC): Position of individuals in the income distribution by quintile in 1997 in relation to 1991

Percentage of individuals		Source: BHPS 1991-1997				
	Position in 1991					
	Bottom Quintile	Second Quintile	Third Quintile	Fourth Quintile	Top Quintile	
Position in 1997						
Bottom quintile	47	22	15	9	7	
Second quintile	23	33	22	14	7	
Third quintile	15	22	28	24	10	
Fourth quintile	8	14	22	30	26	
Top quintile	7	8	12	23	49	
Total	100	100	100	100	100	

Table 4.3 (BHC): Position of individuals in the income distribution by quintile in 2005 in relation to 1999

Percentage of individuals		Source: BHPS 1999-2005				
	Position in 1999					
	Bottom Quintile	Second Quintile	Third Quintile	Fourth Quintile	Top Quintile	
Position in 2005						
Bottom quintile	41	27	15	10	8	
Second quintile	27	33	24	10	7	
Third quintile	15	20	31	24	10	
Fourth quintile	8	13	22	32	25	
Top quintile	8	8	9	25	50	
Total	100	100	100	100	100	

Table 4.3 (AHC): Position of individuals in the income distribution by quintile in 2005 in relation to 1999

Percentage of individuals		Source: BHPS 1999-2005				
	Position in 1999					
	Bottom Quintile	Second Quintile	Third Quintile	Fourth Quintile	Top Quintile	
Position in 2005						
Bottom quintile	37	29	16	9	9	
Second quintile	29	31	21	11	7	
Third quintile	13	19	31	24	13	
Fourth quintile	11	15	20	33	21	
Top quintile	9	6	12	24	49	
Total	100	100	100	100	100	

Table 6 (BHC): Opportunity for all indicators

Source: BHPS 1991-2005

	Percentage of group below threshold in at least 3 out of 4 years			
	OFA definition		Alternative definition ¹	
	Below 60% of median	Below 70% of median	In bottom 20 per cent	In bottom 30 per cent
All individuals				
1991 to 1994	12	20	14	24
1992 to 1995	11	20	14	24
1993 to 1996	11	20	14	24
1994 to 1997	12	20	14	24
1995 to 1998	11	20	14	24
1996 to 1999	11	20	14	24
1997 to 2000	12	20	14	24
1998 to 2001	12	20	14	24
1999 to 2002	11	20	14	24
2000 to 2003	11	20	14	24
2001 to 2004	10	19	13	24
2002 to 2005	9	18	13	23
Children				
1991 to 1994	20	29	22	33
1992 to 1995	18	29	21	32
1993 to 1996	17	29	20	33
1994 to 1997	17	28	20	32
1995 to 1998	17	28	20	32
1996 to 1999	16	27	20	32
1997 to 2000	17	27	20	32
1998 to 2001	17	26	21	31
1999 to 2002	17	27	20	31
2000 to 2003	15	26	18	31
2001 to 2004	13	24	17	30
2002 to 2005	11	22	16	28
Working-age adults				
1991 to 1994	8	13	9	15
1992 to 1995	8	14	9	16
1993 to 1996	7	14	9	17
1994 to 1997	7	13	9	16
1995 to 1998	7	13	9	16
1996 to 1999	7	13	9	15
1997 to 2000	7	13	9	15
1998 to 2001	7	13	9	16
1999 to 2002	7	12	8	16
2000 to 2003	7	13	9	16
2001 to 2004	7	12	9	16
2002 to 2005	6	12	9	16
Pensioners				
1991 to 1994	17	35	21	41
1992 to 1995	17	33	21	41
1993 to 1996	17	34	22	41
1994 to 1997	19	35	25	43
1995 to 1998	19	35	24	42
1996 to 1999	20	36	24	43
1997 to 2000	20	37	25	45
1998 to 2001	21	37	26	44
1999 to 2002	19	37	24	44
2000 to 2003	18	34	24	42
2001 to 2004	16	34	23	43
2002 to 2005	15	31	23	40

Notes:

1. Some of the figures presented in the table above have seen revisions since their publication in the last (2005/06) HBAI report. This is due to changes to the base dataset made by the data providers.

2. There is a higher density of individuals around 60% and 70% median income. The alternative definition is presented for validation purposes as it presents estimates that are not vulnerable to errors in measuring median income.

Table 6 (AHC): Opportunity for all indicators

Source: BHPS 1991-2005

Below threshold in at least 3 out of 4 years				
	OFA definition		Alternative definition ¹	
	Below 60% of median	Below 70% of median	In bottom 20 per cent	In bottom 30 per cent
All individuals				
1991 to 1994	15	23	13	23
1992 to 1995	15	23	13	24
1993 to 1996	15	22	14	24
1994 to 1997	15	22	14	24
1995 to 1998	15	22	14	24
1996 to 1999	15	21	14	23
1997 to 2000	14	21	14	23
1998 to 2001	14	21	14	24
1999 to 2002	13	21	13	24
2000 to 2003	12	21	13	24
2001 to 2004	12	20	13	23
2002 to 2005	11	19	13	22
Children				
1991 to 1994	25	33	23	34
1992 to 1995	23	33	22	34
1993 to 1996	23	32	22	34
1994 to 1997	24	32	23	34
1995 to 1998	24	31	22	34
1996 to 1999	23	30	22	32
1997 to 2000	22	30	21	32
1998 to 2001	22	30	22	34
1999 to 2002	21	30	21	34
2000 to 2003	19	30	20	33
2001 to 2004	17	28	19	32
2002 to 2005	17	26	20	31
Working-age adults				
1991 to 1994	11	15	10	16
1992 to 1995	11	16	10	17
1993 to 1996	11	16	11	17
1994 to 1997	11	15	10	16
1995 to 1998	10	15	9	16
1996 to 1999	10	15	9	16
1997 to 2000	9	14	9	16
1998 to 2001	9	15	9	16
1999 to 2002	9	14	9	16
2000 to 2003	8	15	9	17
2001 to 2004	8	14	9	16
2002 to 2005	8	13	10	16
Pensioners				
1991 to 1994	18	35	14	36
1992 to 1995	17	34	14	37
1993 to 1996	17	34	15	35
1994 to 1997	19	34	17	37
1995 to 1998	21	33	18	36
1996 to 1999	21	33	19	36
1997 to 2000	22	34	20	37
1998 to 2001	22	34	21	37
1999 to 2002	18	33	19	36
2000 to 2003	16	31	17	35
2001 to 2004	15	30	17	35
2002 to 2005	13	27	16	33

Notes:

1. Some of the figures presented in the table above have seen revisions since their publication in the last (2005/06) HBAI report. This is due to changes to the base dataset made by the data providers.

2. There is a higher density of individuals around 60% and 70% median income. The alternative definition is presented for validation purposes as it presents estimates that are not vulnerable to errors in measuring median income.

Table 7.2 (BHC): Composition of persistent low-income groups of children by characteristics of family or household

Percentage of children												Source: BHPS 1991-2005			
	3 years out of 4 years below threshold						3 years out of 4 located in the:						All children		
	Below 60% median			Below 70% median			Bottom 20 per cent			Bottom 30 per cent					
	1991-4	1996-9	2002-05	1991-4	1996-9	2002-05	1991-4	1996-9	2002-05	1991-4	1996-9	2002-05	1991-4	1996-9	2002-05
FAMILY TYPE															
Couple with children	61	65	64	65	63	61	61	63	65	65	63	64	82	80	80
Single with children	39	35	36	35	37	39	39	37	35	35	37	36	18	20	20
TYPE OF TENURE															
Owner-occupied	31	35	44	36	38	44	31	35	46	39	40	46	69	68	73
Rented	69	65	56	64	62	56	69	65	54	61	60	54	31	32	27
ECONOMIC STATUS OF HOUSEHOLD															
All adults in employment	10	10	17	14	13	24	12	13	20	16	15	27	32	33	39
Couple, one employed, one workless	16	18	26	21	22	26	16	19	28	20	24	26	30	30	30
Workless	59	53	41	50	48	36	56	52	37	47	45	31	19	18	13
Self-employed	15	18	16	16	17	15	16	16	15	17	16	16	19	19	18
All Children	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Notes

1. The 'all children' columns are included to aid comparisons as changes in children composition over time are likely to affect the composition of those in low-income.
2. The figures presented in the table above are for the four-year periods, 1991-1994, 1996-1999 and 2002-2005, which span the fifteen-year period, 1991-2005. Children are classified according to their circumstances in the first year of the relevant four-year period.

Table 7.2 (AHC): Composition of persistent low-income groups of children by characteristics of family or household

Percentage of individuals												Source: BHPS 1991-2005			
	3 years out of 4 years below threshold						3 years out of 4 located in the:						All children		
	Below 60% median			Below 70% median			Bottom 20 per cent			Bottom 30 per cent					
	1991-4	1996-9	2002-05	1991-4	1996-9	2002-05	1991-4	1996-9	2002-05	1991-4	1996-9	2002-05	1991-4	1996-9	2002-05
FAMILY TYPE															
Couple with children	62	59	61	66	63	66	61	59	64	67	64	69	82	80	81
Single with children ⁵	38	41	39	34	37	34	39	41	36	33	36	31	18	20	19
TYPE OF TENURE															
Owner-occupied	37	32	44	40	39	47	35	31	46	40	39	48	69	68	73
Rented	63	68	56	60	61	53	65	69	54	60	61	52	31	32	27
ECONOMIC STATUS OF HOUSEHOLD															
All adults in employment	11	11	18	16	14	25	11	10	20	17	14	27	32	33	38
Couple, one employed, one workless	17	19	25	21	22	28	16	18	27	22	22	28	30	30	31
Workless	55	55	38	46	48	32	56	56	37	45	47	29	19	18	14
Self-employed	17	15	18	17	17	15	17	16	17	16	17	16	19	19	18
All children	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Notes

1. The 'all children' columns are included to aid comparisons as changes in children composition over time are likely to affect the composition of those in low-income.
2. The figures presented in the table above are for the four-year periods, 1991-1994, 1996-1999 and 2002-2005, which span the fifteen-year period, 1991-2005. Children are classified according to their circumstances in the first year of the relevant four-year period.

Table 8.2 (BHC): Risk of population groups experiencing persistent low income for children

Percentage of children			Source: BHPS 1991-2005									
	3 years out of 4 years below threshold						3 years out of 4 located in the:					
	Below 60% median			Below 70% median			Bottom 20 per cent			Bottom 30 per cent		
	1991-4	1996-9	2002-05	1991-4	1996-9	2002-05	1991-4	1996-9	2002-05	1991-4	1996-9	2002-05
FAMILY TYPE												
Couple with children	15	13	10	23	21	17	16	16	13	26	25	23
Single with children	43	28	23	57	50	44	47	37	29	63	58	52
TYPE OF TENURE												
Owner-occupied	9	8	7	15	15	14	10	10	10	18	19	18
Rented	44	33	25	61	53	46	49	42	33	66	61	57
ECONOMIC STATUS OF HOUSEHOLD												
All adults in employment	6	5	5	13	11	14	8	8	9	17	15	20
Couple, one employed, one workless	11	10	11	20	20	19	11	13	16	22	25	25
Workless	62	47	37	79	72	59	66	58	45	83	80	66
Self-employed	15	16	11	24	24	19	18	17	14	29	27	25
All children	20	16	12	29	27	22	22	20	17	33	32	28

Notes:

1. The figures presented in the table above are for the four-year periods, 1991-1994, 1996-1999 and 2002-2005, which span the fifteen-year period, 1991-2005. Children are classified according to their circumstances in the first year of the relevant four-year period.

Table 8.2 (AHC): Risk of population groups experiencing persistent low income for children

Percentage of children			Source: BHPS 1991-2005									
	3 years out of 4 years below threshold						3 years out of 4 located in the:					
	Below 60% median			Below 70% median			Bottom 20 per cent			Bottom 30 per cent		
	1991-4	1996-9	2002-05	1991-4	1996-9	2002-05	1991-4	1996-9	2002-05	1991-4	1996-9	2002-05
FAMILY TYPE												
Couple with children	19	17	13	27	24	21	18	16	16	28	26	26
Single with children	53	48	34	62	56	46	51	46	37	63	57	49
TYPE OF TENURE												
Owner-occupied	13	11	10	19	17	17	12	10	12	20	18	20
Rented	52	50	35	65	59	51	50	48	40	66	62	59
ECONOMIC STATUS OF HOUSEHOLD												
All adults in employment	9	8	8	16	13	17	8	7	10	18	13	22
Couple, one employed, one workless	14	15	14	23	22	24	12	14	17	24	24	28
Workless	74	71	47	83	80	60	71	69	52	83	83	63
Self-employed	22	19	17	29	27	21	21	19	18	30	29	27
All children	25	23	17	33	30	26	23	22	20	34	32	31

Notes:

1. The figures presented in the table above are for the four-year periods, 1991-1994, 1996-1999 and 2002-2005, which span the fifteen-year period, 1991-2005. Children are classified according to their circumstances in the first year of the relevant four-year period.

Table 9: Low-income exit and entry rates in successive years, by family type and economic status

Percentage of individuals		Source: BHPS 1991-2005
	Exit rate	Entry rate
Family type		
Pensioner couple	24	8
Single pensioner	25	10
Couple with children	32	7
Couple without children	47	4
Single with children	26	15
Single without children	46	7
Economic status of household		
All adults in employment	39	4
Couple, one employed, one workless	40	6
Workless	28	19
Pensioner	23	9
Self-employed	44	10
All individuals	32	7

Notes:

1. Individuals are classified according to their circumstances in the first year of the relevant two-year period
2. Individuals are defined as in low income, when the household in which they live has income less than 60 per cent of median (Before Housing Costs).
3. For an exit to occur, household income must be at least 10 per cent above the low-income threshold in a year following a period of low income.
4. For an entry to occur, household income must be at least 10 per cent below the low-income threshold in a year following a period when income was above 10 per cent of the relative low-income threshold.
5. Figures are pooled estimates from transitions between all two-year periods; e.g. for 1991-1992, up to 2004-2005.

Table 10.1: Events associated with movement out of low income in successive years amongst all individuals

Percentage		Source: BHPS 1991-2005	
	Prevalence of event	Exit rate, conditional on event	Share of all exits
Main event associated with low income exit			
Exit rate of all individuals in low income households = 32%			
<u>Labour events</u>			
Rise in household head's earnings	20	63	39
Rise in other household member's income	8	48	11
Rise in number of workers (same household size)	12	56	21
Rise in number of full-time workers (same household size)	9	67	18
Rise in number of workers (different household size)	5	69	10
Rise in number of full-time workers (different household size)	4	77	9
<u>Non-Labour income events</u>			
Rise in benefit income (same household size)	25	45	35
Rise in non-benefit, non-earnings income (same household size)	16	65	33
Rise in investment income (same household size)	6	56	11
Rise in private and occupational pension income (same household size)	5	60	10
<u>Demographic events</u>			
Change in household type	11	50	17
Change from single to couple status	3	55	5

Notes:

1. Individuals are classified according to their circumstances in the first year of the relevant two-year period
2. 'Benefit income' includes tax credits and retirement pension
3. The 'prevalence of event' refers to the percentage of those in low income who experience that particular event.
4. The 'exit rate, conditional on event' refers to the likelihood of a particular event causing the low income household to **exit** low income
5. The 'share of all exits' refers to the percentage of those who **exited** low income and who experienced a particular event
6. The 'share of all exits' do not sum to 100 per cent across events because the events are not mutually exclusive. For example, a person who exits low income, who obtained new work and changed couple / single status, may have been recorded in more than one row.

Table 11.1: Events associated with movement into low income in successive years amongst all individuals

Percentage		Source: BHPS 1991-2005	
	Prevalence of event	Entry rate, conditional on event	Share of all entries
Main event associated with low income entry			
Entry rate of all individuals in non low-income households = 7%			
<u>Labour events</u>			
Fall in household head's earnings	15	19	40
Fall in other household member's income	8	10	11
Fall in number of workers (same household size)	7	18	19
Fall in number of full-time workers (same household size)	8	15	16
<u>Non-Labour income events</u>			
Fall in benefit income (same household size)	11	17	25
Fall in non-benefit, non-earnings income (same household size)	24	12	42
Fall in investment income (same household size)	12	7	12
Fall in private and occupational pension income (same household size)	3	18	9
<u>Demographic events</u>			
Change in household type	12	11	19
Change to single parent household	1	27	4

Notes:

1. Individuals are classified according to their circumstances in the first year of the relevant two-year period
2. 'Benefit income' includes tax credits and retirement pension
3. The 'prevalence of event' refers to the percentage of those in low income who experience that particular event.
4. The 'entry rate, conditional on event' refers to the likelihood of a particular event causing the low income household to **enter** low income
5. The 'share of all entries' refers to the percentage of those who **entered** low income and who experienced a particular event
6. The 'share of all exits' do not sum to 100 per cent across events because the events are not mutually exclusive. For example, a person who exits low income, who obtained new work and changed couple / single status, may have been recorded in more than one row.

Table 12 Persistent low-income exit and entry rates, by family type and economic status

Percentage of individuals	BHPS 1991-2005	
	Exit rate	Entry rate
Family type		
Pensioner couple	9	2
Single pensioner	10	3
Couple with children	17	1
Couple without children	21	1
Single with children	17	3
Single without children	33	1
Economic status of household		
All adults are employees	26	0
Couple, one employed, one workless	20	1
Workless	14	4
Pensioner	9	2
Self-employed	27	2
All individuals	16	1

Notes:

1. Individuals are included in the analysis by family type or economic status, if their status remained unchanged in the period before the transition. This restriction has not been applied to the 'All individuals' row.
2. Individuals are classified by their status preceeding the transition.
3. Persistent low income here is defined as experiencing low income for at least three consecutive years.
4. An entry into persistent low income was defined as where an individual spent three consecutive years below the 60 per cent of median income threshold, which has been preceded by two consecutive years above the low income threshold.
5. An exit from persistent low income has been defined where an individual spent three consecutive years below the relative low income thrsehold, followed by two further consecutive years above the standard 60 per cent of median low income threshold.
6. Figures are pooled estimates of transitions across all years for which there are sufficient years to measure an event, e.g. for exits from 1994-2005.

Table 13.1: Events associated with movement out of persistent low income amongst all individuals

Percentage		Source: BHPS 1991-2005	
	Prevalence of event	Exit rate, conditional on event	Share of all exits
Main event associated with low income exit			
Exit rate from persistent poverty of all individuals in low income households = 17%			
<u>Labour events</u>			
Rise in household head's earnings	16	41	39
Rise in other household member's income	6	34	13
Rise in number of workers (same household size)	11	34	23
Rise in number of full-time workers (same household size)	7	49	21
Rise in number of workers (different household size)	4	46	12
Rise in number of full-time workers (different household size)	3	58	10
<u>Non-Labour income events</u>			
Rise in benefit income (same household size)	22	24	32
Rise in non-benefit, non-earnings income (same household size)	10	32	18
Rise in investment income (same household size)	4	29	7
Rise in private and occupational pension income (same household size)	3	24	5
<u>Demographic events</u>			
Change in household type	9	38	20
Change from single to couple status	3	44	7

Notes:

1. Individuals are classified according to their circumstances preceding the transition
2. 'Benefit income' includes tax credits and retirement pension
3. The 'prevalence of event' refers to the percentage of those in low income who experience that particular event.
4. The 'exit rate, conditional on event' refers to the likelihood of a particular event causing the low income household to **exit** low income
5. The 'share of all exits' refers to the percentage of those who **exited** low income and who experienced a particular event
6. The 'share of all exits' do not sum to 100 per cent across events because the events are not mutually exclusive. For example, a person who exits low income, who obtained new work and changed couple / single status, may have been recorded in more than one row.

Table 14.1: Events associated with entries into persistent low income, for all individuals

Percentage		Source: BHPS 1991-2005	
	Prevalence of event	Entry rate, conditional on event	Share of all entries
Main event associated with persistent low income entry			
Entry rate into persistent poverty of all individuals in low income households = 1%			
<u>Labour events</u>			
Fall in household head's earnings	14	4	40
Fall in other household member's income	7	2	9
Fall in number of workers (same household size)	7	3	16
Fall in number of full-time workers (same household size)	7	3	13
Fall in number of workers (different household size)	7	4	17
Fall in number of full-time workers (different household size)	5	4	15
<u>Non-Labour income events</u>			
Fall in benefit income (same household size)	9	3	17
Fall in non-benefit, non-earnings income (same household size)	24	2	32
Fall in investment income (same household size)	12	1	11
Fall in occupational and private pension (same household size)	3	2	6
<u>Demographic events</u>			
Change in household type	12	3	21
Change to lone parent household	1	7	5
Increase in the number of children	4	2	6
Change from couple to single status	3	4	9

Notes:

1. Individuals are classified according to their circumstances in the first three years of the relevant five-year period
2. 'Benefit income' includes tax credits and retirement pension
3. The 'share of all exits' do not sum to 100 per cent across events because the events are not mutually exclusive. For example a person who exited persistent low income, who obtained new work and changed couple / single status, may be recorded in more than one row.

Appendix 1

Technical Terms, Definitions and Concepts

Technical Terms

Equivalisation

The process by which household income is adjusted by household size and composition as a proxy for material living standards. Household incomes are divided by household equivalence factors, which vary according to the number of adults and the number and age of dependants in the household. For more information please see Appendix 2.

Equivalised income

Income which has undergone **equivalisation**.

Median

Median household income divides the population of individuals, when ranked by income, into two equal sized groups. The median of the whole population is the same as the 50th **percentile**. The term is also used for the mid-point of subsets of the income distribution.

Percentiles

These are income values which divide the population, when ranked by income, into 100 equal-sized groups. 10 per cent of the population have incomes below the 10th percentile, 20 per cent have incomes below the 20th percentile and so on.

Quintiles

Quintiles are income values which divide the population, when ranked by income, into five equal sized groups. The lowest quintile is the same as the 20th **percentile**. Quintile is also often used as a shorthand term for **quintile group**; for example 'the bottom quintile' to describe the bottom 20 per cent of the income distribution.

Quintile groups

These are groups of the population defined by the **quintiles**. The lowest quintile group is the 20 per cent of the population with the lowest incomes. The second quintile group is the population with incomes above the lowest quintile but below the second quintile.

Risk

This is the chance of individuals in a group falling below a given threshold (e.g. the risk of the unemployed being below the bottom decile median). It is calculated as the number in the group below the given threshold divided by the total number in the group.

Definitions used in BHPS

A number of definitions are employed in assembling the BHPS results. The main ones are described below.

Net disposable household income

Income is the sum across all household members of income from:

- Earnings from employment
- Profit/loss from self-employment
- Investments and savings
- All Social Security benefits - including state pensions and Pension Credit - and tax credits
- Private and occupational pensions
- Miscellaneous sources including educational grants, trade union/friendly society payments, maintenance, foster allowances and sickness/accident insurance.

minus income tax, National Insurance.

Adult

All those aged 16 and over, except unmarried 16 to 18 year olds in full-time non advanced education:

-

Benefit unit

A single adult or a couple living as married and any dependent children. .

Child

All those aged under 16 or an unmarried 16 to 18 year old in full-time non-advanced education .

Household

A single person or group of people living at th same address as their only or main residence, who either share one meal a day together or share the living accommodation (i.e. a living room). A household will consist of one or more benefit units.

Classifications

For some analyses individuals are classified into family type or economic status groups. Individuals are classified according to the status of the benefit unit in which they live. The classifications are defined below.

Family type

Single pensioner	-a single adult of state pension age or over.
Pensioner couple	-a couple, where the male in the benefit unit is of state - pension age or over.
Couple with children	-a non-pensioner couple with dependent children (a “dependent child is one defined as “Child” in the Definitions section above.
Couple without children	-a non-pensioner couple with no dependent children.
Single with children	-a non-pensioner single adult with dependent children.
Single without children	-a non-pensioner single adult with no dependent children.

Economic status classification

Individuals are allocated to the first category which applies in the following order; so, for example, a couple both of whom were over state pension age but one was employed would be allocated to the “Couple, one employee, one workless” group. It should be noted that this classification is not ILO consistent.

All adults are employees	– all adults in the benefit unit in full or part-time employment.
Couple, one employee, one workless	– couple, one workless adult, the other a full or part-time employee.
Workless	– all adults in the benefit unit are workless, with one or more of working-age.
Pensioner	– all adults in the benefit unit are workless and above state pension age.
Self-employed	– benefit unit contains one or more adults who are full-time self-employed.

Qualifications

Above A-level	-higher degree, first degree, teaching qualifications, other higher qualifications and nursing qualifications.
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A-level or below	-A-levels, GCSE or O-levels, commercial qualifications, CSE Grade 2-5, Scottish highers, Scottish standard 1-3, Apprenticeship and Youth training certificates.
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No qualifications	-None of the qualifications listed above.
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Tenure

Owner-occupied	-owned outright or owned with mortgage.
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Social rented	-local authority rent or housing association rent.
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Private rented	-rented from employer, rented privately or other renting.
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Appendix 2

Methodology

Income mobility and persistence of low income

Estimates of income mobility and persistence of low incomes are based on data from the British Household Panel Survey (BHPS), a longitudinal dataset developed at the University of Essex, Institute for Social and Economic Research, with core funding from the UK Economic and Social Research Council. The main objective of the survey is to gain an understanding of social and economic change at the individual and household level in Britain, to identify, model and forecast such changes, their causes and consequences in relation to a range of socio-economic variables.

British Household Panel Survey sample

The BHPS was designed as an annual survey of each adult (16+) member of a nationally representative sample of more than 5,000 households, making a total of approximately 10,000 individual interviews. The same individuals will be re-interviewed in successive waves and, if they split-off from original households, all adult members of their new households will also be interviewed. Children are interviewed once they reach the age of 16; there is also a special survey of 11-15 year old household members from Wave Four onwards. Thus the sample should remain broadly representative of the population of Britain as it changes through the 1990s.

The sample consisted of 8,167 issued addresses drawn from the Postcode Address File. Interviews were attempted at all private households found at these addresses (subject to selection where multiple households were found). All individuals enumerated in respondent households became part of the longitudinal sample. All these sample members are known as Original Sample Members (OSMs).

The sample for the subsequent waves consists of all adults in all households containing at least one member who was resident in a household interviewed at Wave One, regardless of whether that individual had been interviewed in Wave One. Thus, with a few exceptions, an attempt was made to interview all those individuals in responding households who had refused to participate at Wave One, or for any reason had been unable to take part. In addition, a number of households where no contact had been made in Wave One were approached for interview in Wave Two after confirmation that no household moves between waves had taken place.

The following rules, applied in subsequent waves, differed from the sampling rules in Wave One in only one respect. In both sets of rules, eligibility depended on domestic residence in England, Wales, or Scotland south of the Caledonian Canal. In waves subsequent to Wave One, however, OSMs were followed into institutions (unless in prison or in circumstances where the respondent was not available for interview e.g. too frail, mentally impaired etc.) or into Scotland north of the Caledonian Canal.

New eligibility for sample inclusion could occur between waves in the following ways:

1. A baby born to an OSM.
2. An OSM move into a household with one or more new people.
3. One or more new people move in with an OSM.

Additional sub-samples were added to the BHPS in 1997 and 1999.

- From Wave Seven the BHPS started providing data for the United Kingdom European Community Household Panel (UKECHP). The BHPS consequently incorporated a sub-sample of the original UKECHP, including all households still responding in Northern Ireland, and a 'low-income' sample of the Great Britain panel. This meant that the BHPS incorporated a new sample into the survey whose first wave is wave seven.
- In Wave Nine additional samples were taken in Scotland and Wales to boost the relatively small Scottish and Welsh sample sizes, so that country level analysis could be undertaken. The target sample size in each country was 1500 households. The Scottish sample includes the population living north and west of the Caledonian Canal.

Interviewing started in September 1991 for the first wave and the September of each subsequent year. In the text wave one will be referred to as 1991, wave two as 1992 etc.

Data collection

The mode of data collection between Wave One and Wave Eight was pen-and-paper (PAPI) but moved to Computer Assisted Personal Interview (CAPI) in Wave Nine. This is the most significant methodological change the BHPS has undergone with potentially wide ranging implications in terms of data quality. CAPI is designed to offer data improvements through minimising missing data and reducing the level of data cleaning and editing. This is because the complex routing used within the questionnaire is enforced consistently and correctly each time.

Income definition

The measure of income used here is the sum, across all household members, of income from employment and self-employment, investments and savings, private and occupational pensions, Social Security benefits and miscellaneous income, less income tax and National Insurance for those in employment. The components refer to receipts and payments made in the month prior to the interview or the most recent relevant period.

Income here, unlike the main HBAI estimates, does not deduct local taxation (including Council tax). This is something that needs to be borne in mind given the variation in Council tax rates between local councils and the deduction that operates for single householders.

In the BHPS, some self-employment incomes and income from second jobs are reported gross rather than net. Income tax and National Insurance contributions have been imputed for these cases to ensure consistency.

Equivalisation

The income measures used in the BHPS take into account variations in the size and composition of the households in which individuals live. This reflects the common sense notion that, in order to enjoy a comparable standard of living, a household of five adults will need a higher income than a person living alone. The process of adjusting income in this way is known as equivalisation and is needed in order to make sensible income comparisons between households.

Equivalence scales conventionally take a couple as the reference point, with an equivalence value of one. The process then increases relatively the cash income of single person households (since their incomes are divided by a value of less than one) and reduces relatively the incomes of households with three or more persons, which have an equivalence value of greater than one.

Consider a single person, a couple, and a couple with two children, all having unadjusted household incomes of £100 Before Housing Costs. The process of equivalisation might give an equivalised income of around £160 to the single person, £100 to the couple but only around £70 to the couple with children.

Estimates are equivalised using the McClements scale Before Housing Costs, the components of which can be found in the adjacent table. The construction of household equivalence values from these scales is straightforward. For example, the BHC equivalence value for a household containing a couple with a four year old and a fourteen year old child together with one other adult would be 1.87 from the sum of the scale values:

$$0.61 + 0.39 + 0.42 + 0.18 + 0.27 = 1.87$$

The total income for the household would then be divided by 1.87 in order to arrive at the measure of equivalised household income used in HBAI analysis.

McClements Equivalence Scale (Before Housing Costs)	
Head	0.61
Spouse	0.39
Other second adult	0.46
Third adult	0.42
Subsequent adults	0.36
Each dependent child aged:	
0-1	0.09
2-4	0.18
5-7	0.21
8-10	0.23
11-12	0.25
13-15	0.27
16 or over	0.36

Housing Costs

Traditionally, HBAI presents analyses of disposable income on two bases: Before Housing Costs (BHC) and After Housing Costs (AHC). This is principally to take into account variations in housing costs that themselves do not correspond to comparable variations in the quality of housing. This report also presents results on the persistence of low-income on both measures.

The housing costs in HBAI include the following:

- rent (gross of housing benefit);
- water rates, community water charges and council water charges;
- mortgage interest payments (net of tax relief);
- structural insurance premiums (for owner occupiers);
- ground rent and service charges.

These differ from the housing costs used in the BHPS. For this analysis, housing costs have been defined simply as weekly gross housing costs as recorded on the BHPS. In the case of renters, these housing costs will include service and water charges because this is how the information is requested on the questionnaire. For mortgage payers, these amounts will not be included. There is also no information collected on cost of structural insurance payments on the BHPS. Another difference is that for HBAI methodology, only the interest element from a repayment mortgage is deducted as housing costs; whereas in BHPS both the repayment and interest elements will be included as part of 'gross housing costs'. On the BHPS, there were around 500 cases with this type of mortgage, whose AHC income (as compared with standard HBAI methodology) will be understated.

As for the BHC series from the BHPS, the BHPS-based AHC series does not deduct Council tax payments from income. This differs from HBAI methodology.

Previous analyses suggest that not deducting Council tax leads to a slight reduction in snapshot estimates of the risk of low income, although this is most marked for pensioners, reducing their risk by up to three percentage points on a BHC measure, and around six percentage points on an AHC series.

Longitudinal analysis

Whilst some analysis is based on the full fifteen years of data (i.e. individuals present in all fifteen waves), analysis of different 'rolling' four-year periods is presented as a variation on this. The period 1991 to 1994 uses individuals present in all of the first four waves. The periods 1996 to 1999 and 2002 to 2005 use individuals present in all nine/fifteen waves together with all children born to permanent panel members in the first five/nine years of the survey.

Account is also taken of the inevitable changes of address/location that some interviewees experience; the survey follows members of the original household if they move to a new household. All these methods are employed to ensure that the household/family history is not lost, and that there is no significant fall off in interview numbers.

Attrition

The BHPS carry out a number of procedures to maintain contact with respondents between waves. Thank you letters are sent to respondents after each interview, including a gift voucher and a change of address card. Summary findings are sent to respondents prior to each round of fieldwork along with an address confirmation card.

After the first wave of a Panel Study the main focus of interest is response at the individual level and the calculation of response rates. Such response rates are very complex and a wave-on-wave response rate (how many people of the people interviewed in the last wave are re-interviewed in the current wave) and a longitudinal response rate (how many of the people interviewed at Wave One are interviewed in the latest wave) can be calculated. Most of the analysis we have produced is based upon longitudinal data and consequently longitudinal response rates are shown below.

WAVE	Full respondent interviews	Longitudinal Response Rates (%)
1	9912	-
2	8568	86.4
3	7839	79.1
4	7577	76.4
5	7183	72.5
6	7132	72.0
7	6903	69.6
8	6651	67.1
9	6396	64.5
10	6143	62.0
11	5914	59.7
12	5694	57.4
13	5593	56.4
14	5490	55.4
15	5386	54.3

Grossing

Grossing up is the term usually given to the process of applying factors to sample data so that they yield estimates for the overall population. The simplest grossing system would be a single factor, the uniform grossing factor, which could be calculated as the number of households in the population divided by the number in the achieved sample. However, surveys are normally grossed by a more complex set of grossing factors, which attempt to correct for differential non-response at the same time as they scale up sample estimates.

In order to account for differential non-response and subsequent differential attrition, most the estimates presented are based on data weighted using the BHPS Wave 15 longitudinal enumerated individuals weights, constructed by the University of Essex.

Although the weights attempt to correct for biases arising from sample attrition that are related to factors observed within the data, such as non-respondents, unequal selection and accommodation type, it is possible that some biases, related to factors for which we have not controlled, may persist.

Persistent exit and entry rates

Five-waves of information were required in order to estimate separate exit rates for each spell of persistent low income that occurred in a three-year period. This meant only ten sets of results relating to the separate waves could be constructed, with exit rates only being measurable for the following three-year periods: a-c, b-d, c-e, d-f, e-g, f-h, g-i, h-j, i-k, j-l and k-m. This meant exit rates from persistent low income that relate to the years 1994 to 2004. For entry rates, the three-year periods were: c-e, d-f, e-g, f-h, g-i, h-j, i-k, j-l, k-m, l-n and m-o. Thus, these relate to entry rates into persistent low income where transitions occurred between 1993 and 2003. Transition rates were calculated - using exit rates as an example - by presenting the total number of exits as a percentage of the total number of cases persistently poor in each three-year period. A single fifteen-year estimate was subsequently estimated by pooling together all estimates for all three-year periods.

Hence, the timing of the events to which persistent entry and persistent exit rates relate, are not the same.

Population

The analyses are based upon the British Household Panel Survey, which in Wave One relates to Great Britain only (excluding the area North of the Caledonian Canal). In Wave One the survey covers the private household sector i.e. excludes people living in institutions, e.g. nursing homes, barracks or jails; and homeless people living rough or in bed and breakfast accommodation. After Wave One, the sample members were followed into institutions or into Scotland north of the Caledonian Canal. From Wave Seven additional households from Northern Ireland were introduced into the sample and can consequently be used for cross-sectional analysis.

Reliability of results

All of the BHPS analyses are based upon a sample and are therefore subject to sampling error and non-sampling errors.

Sampling Error

Sampling error is the uncertainty in the estimates which arises because the results are derived from a random sample of the household population. No two randomly chosen samples would give exactly the same picture of the income distribution and the particular sample chosen in any year could yield results that, by chance, are either high or low. However, the likely size of such variation can be identified, at least approximately, by taking account of the size and design of the samples.

Sampling error is thus quite distinct from any systematic errors or biases that may be present in the survey and analysis processes, such as a tendency to under-report a

particular item of income. An estimate of sampling error is a measure of only one particular type of uncertainty in the estimate, and therefore cannot be taken as a guarantee that the figure is 'accurate' within certain limits.

For further information on the standard errors associated with different BHPS variables please see:

http://www.iser.essex.ac.uk/ulsc/bhps/doc/pdf_versions/volumes/bhpsvola.pdf

Non-response

As with any survey the BHPS results are at risk from a systematic bias due to non-response, when households that had been selected for interview do not respond to the survey. Individuals within households may also be non-responders even if the rest of the household does respond. In an attempt to correct for these biases, the results are weighted to adjust for non-response at the household and individual level.

Item non-response

Item non-response occurs where a respondent has given a full interview, but has refused or given a 'don't know' answer to a particular question, which consequently leads to a missing value for that item. ISER have used imputation in the BHPS to correct for this item non-response, whereby a valid value is imputed in to replace the missing value. BHPS data contains imputation for important money amount variables, with the aim of reducing potential bias caused by the missing values.

For more information on the background to the survey, and the methods used, please see the ISER web site: <http://www.iser.essex.ac.uk/ulsc/bhps/doc/>

Appendix 3

The following tables have not been included in the current publication, but can be produced on request from the contacts cited on page 7.

Table 2 (BHC ; AHC) - Comparison of FES/FRS based estimates of the percentage of individuals below 60% median household income at a point in time, and their BHPS equivalents

Table 4.1 part (BHC ; AHC) – Position of individuals in the income distribution by quintile in 2005 in relation to 1991, by where they spent the majority of their time

- Of those individuals who were in the same quintile in 1991 and 2005
- Of those individuals who were in a higher quintile in 2005 relative to 1991
- Of those individuals who were in a lower quintile in 2005 relative to 1991

Table 5 (BHC ; AHC)- Number of years spent in the bottom of the income distribution, measured by percentiles and thresholds of median, over four-year and fifteen-year periods

Table 7.1 (BHC ; AHC) - Composition of persistent low-income groups of individuals by characteristics of family or household

Table 8.1 (BHC ; AHC)- Risk of population groups experiencing persistent low income for all individuals

Table 10.2 - Events associated with exits from low income for individuals in lone-parent families

Table 10.3 - Events associated with exits from low income for individuals in pensioner families

Table 10.4 - Events associated with exits from low income for individuals in couple with children families

Table 11.2 - Events associated with entries into low income for individuals living in lone-parent families

Table 11.3 - Events associated with entries into low income for individuals living in pensioner families

Table 11.4 - Events associated with entries into low income for individuals living in couple with children families

Table 13..2 - Events associated with exits from persistent low income for individuals in lone-parent families

Table 13.3 - Events associated with exits from persistent low income for individuals in pensioner families

Table 13.4 - Events associated with exits from persistent low income for individuals in couple with children families

Table 14.2 - Events associated with entries into persistent low income, for individuals in lone-parent families

Table 14.3 - Events associated with entries into persistent low income, for individuals in pensioner families

Table 14.4 - Events associated with entries into persistent low income, for individuals in couple with children families