

Drivers of Over-indebtedness

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1. Summary of report

This report considers trends in household 'over-indebtedness' in the United Kingdom (UK) since the late 1990s. A number of indicators and benchmarks of over-indebtedness have been suggested in recent studies. This report finds that measures of over-indebtedness based on actual arrears and defaults seem to be the most pertinent indicators of current household economic and psychological stress, whilst measures of over-indebtedness based on household illiquidity and gearing provide reasonable predictors of the household's vulnerability to adverse shocks. It shows that self-reported problems of 'over-indebtedness' and 'financial difficulties' are pervasive, although declining until the mid-2000s. However self-reported problems are not always associated with specific adverse financial circumstances or evidence of arrears, suggesting that trends in self-reported over-indebtedness are partly linked to perceptions fuelled by media coverage and to the household's own self-esteem and economic stability.

In considering over-indebtedness, the report utilises new empirical evidence for the UK. This evidence is both qualitative, utilising in-depth interviews with several stakeholders in the credit market – including financial providers and debt/money advice agencies – and quantitative, based on analyses from two large-scale household data sets. Using these data, we are able not only to examine the correlates and incidence of over-indebtedness across households, but also, by using both the interviews and the 'panel'¹ aspect of our household data sets, to explore the 'triggers' that tip households into potential debt problems.

The qualitative and quantitative evidence described in the report, as well as a survey of the existing literature drawn from both UK data and from other OECD countries suggests some key conclusions:

- that the key adverse 'shocks' which expose households to the risk of excessive debt and other financial problems are loss of employment (including the failure of a business), marital breakdown, and poor financial management by the household.
- Both the report's analysis, and related results from other studies, suggest that adverse shocks often have a cumulative, rather than an immediate, effect on households' financial circumstances. Indeed there is likely to be a two-way relationship over the longer time frame between adverse shocks to the household and problems of indebtedness, insofar as the psychological and family stress associated with periods of over-indebtedness will likely 'feed back' onto

¹ We are able to track individual households over successive annual waves of our household data sets – thus they are termed 'panel' data sets.

employment status, family composition and self-confidence in the financial management capacity of the household.²

- despite coverage in the media and elsewhere of trends in 'extreme' indicators of 'over-indebtedness' such as personal bankruptcies and repossessions, such events remain relatively uncommon and do not appear with sufficient frequency in the quantitative data to warrant clear-cut conclusions as to the causes and consequences of such events.
- that there is a stratum of families which have more-or-less persistent difficulties in managing their finances for longer periods of time, arising largely from a lack of lifetime resources, which is in turn associated with low education, low employment prospects, lack of a stable breadwinner etc. Not surprisingly, being poor with high outgoings relative to income (such as arise from large family size), and a lack of substantial collateral (primarily in the form of housing equity) forces some households on the economic margin into inferior forms of credit. Such households often 'cycle' arrears on both private credit arrangements (where these families have been able to obtain credit) and also on household bills such as utility bills, council tax and rent and mortgage payments.

An interesting question, which we explore, is whether there are in fact 'triggers' that move such households out of potential cycles of indebtedness – such as (mirroring our previous analysis of 'shocks') – lone parents entering stable partnerships, moving into reasonably-paid employment, or buying a house. Of course, these transitions, by moving such households into the 'prime' sector of the credit market, will be associated with greater access to credit, which may expose such households to greater risk of financial over-indebtedness. But our evidence, very broadly, suggests that the risk of over-indebtedness declines in such circumstances. Whether this tentative conclusion is overtaken by the consequences of the post-2006 'credit crunch' remains to be seen.

The structure of this report is as follows. The next section focuses on background trends in credit and indebtedness in the UK economy. We caution against simply graphing the total level of debt and instead use indicators of debt ratios relative to, for example, income and assets. We also show that it is important to differentiate between secured debt (largely secured on housing) and unsecured debt. These types of debt have exhibited different trends in recent years, suggesting some degree of

² See, for example, Bridges and Disney (2006) and Brown, Taylor and Wheatley-Price (2005). Kempson, McKay and Willitts (2004) do not find evidence for a short-term impact of over-indebtedness on, for example, the probability of entering employment.

substitutability between secured and unsecured debt arising from changes in the value of collateral (again, largely housing equity).

The report then considers a variety of measures of over-indebtedness that have been used by researchers and policy-makers, with some analysis and interpretation of these measures.

We then set out a broad economic framework for analysing indebtedness and 'over-indebtedness' (which are sometimes wrongly assumed to be the same thing in popular perception). Specifically the 'life cycle hypothesis of saving and consumption (spending)' suggests that households will spend a significant part of their working lives with low or negative assets (debt) because they are using capital markets to smoothe out fluctuations in income. Financial liberalisation allowing access to capital markets has tended to increase household indebtedness over time. However, *ex post* problems of over-indebtedness may emerge in this framework, for reasons we discuss, and this 'model' of economic behaviour may not be applicable to all households.

Finally, in this first part of the report, we summarise some of the main findings of the existing literature on household 'over-indebtedness', particularly in relation to the measures and indicators discussed previously.

The next substantial section of the report summarises the result of our in-depth interviews with a number of 'actors' in the indebtedness arena – including credit counsellors, financial lenders (both in the prime and sub-prime markets) and other advisory bodies. Although the number of interviews that we were able to carry out in the time scale of the project was rather small, some common themes emerge, which motivate the analysis of our final substantive part of the report.

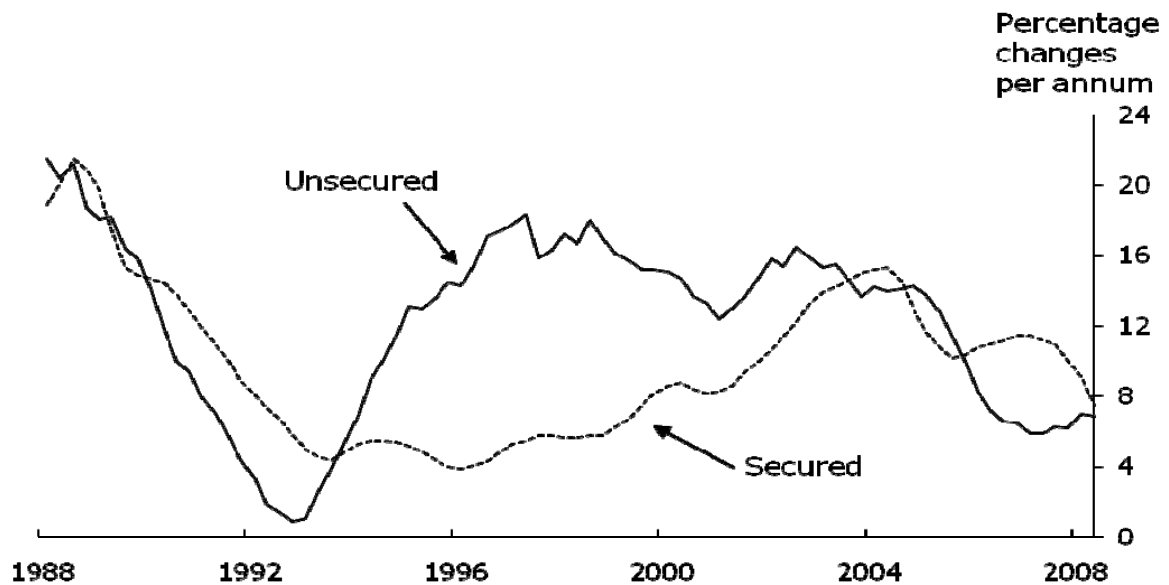
In that section we analyse two UK household panel data sets which contain information on indebtedness – as well as a variety of other household characteristics. These are the Family and Children Survey (FACS), which derived from the original Survey of Low Income Families. As the name suggests, the survey samples families with children; it also oversamples lone parents and the primary respondent in the survey in the household is generally female. The second, more familiar and more representative data set for the population as a whole is the British Household Panel Survey, which is now in its 18th wave but which only asks about some forms of household indebtedness at 5-year intervals. Nevertheless, we believe that taking these surveys together gives a good representative view of trends in household indebtedness in the UK.

2. Aggregate Trends in Household Indebtedness in the U.K.

Over the last decade the ratio of household indebtedness both secured on housing and unsecured, relative to income, has increased by approximately 50%. The falling cost of consumer credit and mortgage credit has occurred alongside growth in both secured and unsecured borrowing. The growth in unsecured lending consistently outstripped the growth in secured lending for a decade from the mid-1990s onwards, though the value of unsecured borrowing remains considerably below that of secured. Despite the increase in household indebtedness relative to income, the falling cost of credit has resulted in stable income gearing. In this environment of falling interest rates, increased household indebtedness does not imply an increased debt burden. However, households are more exposed to increases in the cost of borrowing and the type of risks that have becoming increasingly apparent after 2006.

The growth in secured and unsecured lending is illustrated in Figure 1 below. Following the retrenchment in the growth of both forms of lending during the downturn of the early 1990s, growth in unsecured credit outstripped growth in secured credit from the mid-1990s onwards until around 2005. The value of household unsecured credit exposure grew by approximately 15% year-on-year through the period 1995-2005. However, since late 2005 unsecured credit growth has fallen sharply, in part due to a general reduction in credit supply in the consumer credit market.

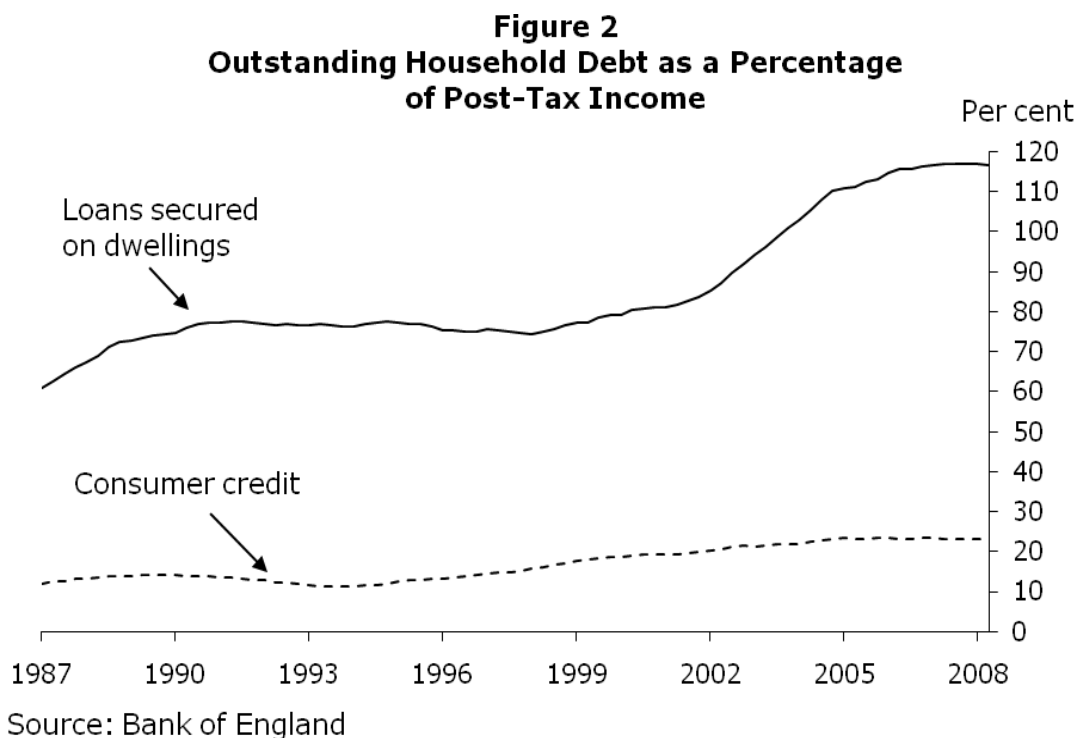
Figure 1
Secured and Unsecured Lending Growth



Source: Bank of England

By way of contrast, secured lending growth was steady during the mid-1990s but has tended to accelerate in the later period, before entering a sharp decline during 2008. Household use of secured and unsecured is most likely not independent – there is some evidence that rising house prices lead households to substitute secured for unsecured credit (Disney, Bridges and Gathergood, 2008). This evidence is consistent with the idea that households that experienced rising housing values during the late 1990s and the early 2000s took advantage of secured leverage to transfer unsecured credit commitments onto their mortgages, taking advantage of cheaper mortgage interest rates.

Growth in household indebtedness has exceeded growth in household post-tax income, leading to a rise in the debt-to-income ratio. Figure 2 plots the ratio of secured and unsecured household debt to post-tax income. The level of outstanding consumer credit commitments relative to household income remains considerably below that of secured credit: approximately 23% of household post-tax income in early 2008 compared to 118% for secured credit. The marked acceleration in secured lending since mid-2002 has seen the ratio of secured debt to income increase from approximately 80% of post-tax income to nearly 120% in 2008. In the context of the last 20 years, this is an unmatched level increase in outstanding household debt of some 50% in the course of only 6 years.



The falling cost of both secured and unsecured credit associated with rising household borrowing has both driven increases in indebtedness but also restrained the cost of servicing outstanding debts. Figures 3 and 4 illustrate the falls in the cost of unsecured and secured credit across a range of credit instruments. Average interest rates of advertised deals shown are calculated by the Bank of England. As shown in figure 3, relative to the Bank of England base rate (the 'repo rate') the cost of unsecured credit has fallen dramatically. Credit card rates have fallen by approximately one-quarter relative to the repo rates, with rates on a personal loan of £10,000 falling by nearly one-half. These reductions can principally be attributed to increased competition in the consumer credit market.

Figure 4 illustrates the relationship between secured lending rates and the Bank of England repo rate. The 'wedge' between the repo rate and mortgage rates has not declined in the manner observed for consumer credit rates over the course of the previous decade. Mortgage standard variable rates are seen to be consistently approximately 2 percentage points about the repo rate. Offered 2-year discount rates have historically tracked the repo rate closely. The trend in mortgage rates has been downwards, driven by reductions in the repo rate.

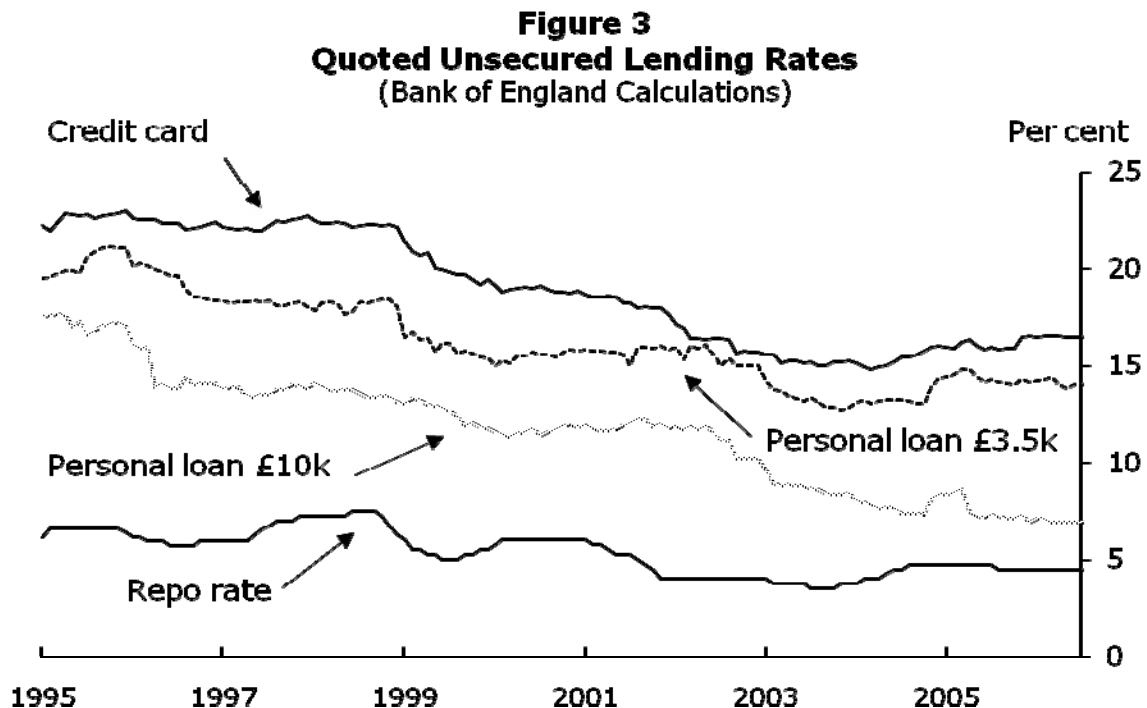
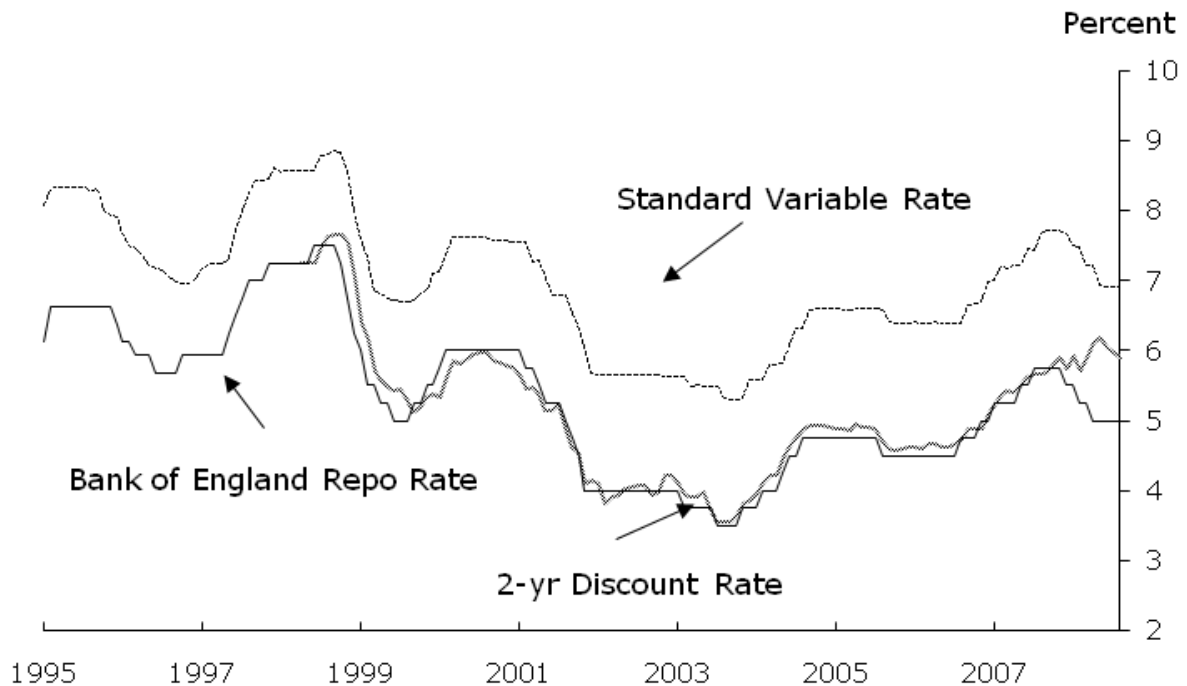


Figure 4
Quoted Mortgage Interest Rates
 (Bank of England Calculations)



However, since late 2007 the relationship between the Bank of England repo rate and the 2-year discount rate appears to have become detached, as increases in interbank lending rates relative to the repo rate have fed through to mortgage rates offered to borrowers. The 2-year rate has risen to approximately 1 percentage point above the repo rate (as at August 2008). Should this increase, attributed to the 'credit crunch' be sustained for any length of time, the medium-term downward trend in household debt servicing costs may be reversed. And should mortgage interest rates increase markedly, the increased value of outstanding household debt relative to income might result in substantial increases in the strain of mortgage servicing costs on household finances.

The medium-term trend for household indebtedness in the U.K. has been marked by increased household debt relative to income, with the composition of household debt dominated by mortgage debt. Until recently, the costs of servicing household debt have been historically low and closely tied to the Bank of England base rate. As market rates have risen above the base rate, so mortgage rates have increased sharply. The future path of market rates will prove to be the main determinant of the sustainability of household mortgage indebtedness and, within this, whether movements in the base rate are reflected in the rates charged to consumers by mortgage lenders.

3. Definitions of over-indebtedness

There is no agreed definition of 'over-indebtedness'; the term should certainly not be confused with the existence of high levels of debt in the economy. A number of indicators of over-indebtedness have been utilised in the UK, in large part derived as a consequence of the Task Force established in 2000 in the UK by the then Minister of Consumer Affairs to look at ways of achieving more responsible lending and borrowing. A variety of these indicators of over-indebtedness are discussed in Kempson (2002) although Bridges and Disney (2004) and Kempson, McKay and Willitts (2004) focus more narrowly on whether the family has arrears on consumer debt and on other household bills as the primary indicator.

In a survey commissioned by the then Department of Trade and Industry, MORI Financial Services (MORI, 2004) suggested four 'objective' indicators of over-indebtedness and one 'subjective' measure. These measures were:

- Individuals spending more than 25% of their gross monthly income on unsecured repayments;
- Individuals spending more than 50% of their gross monthly income on total borrowing repayments (secured and unsecured);
- Individuals with 4 or more credit commitments;
- Those individuals in arrears on a credit commitment and/or domestic bill for more than 3 months; and
- (a subjective indicator) Those individuals declaring their household's borrowing repayments to be a 'heavy burden' (*ibid*, pp.3-4).

This combination of indicators of household gearing (debt to income ratios), of the number of commitments, of the value of arrears, and subjective measures of debt, have become the benchmark for subsequent indicators and evaluations of 'over-indebtedness' in the UK. For example, they form the basis of the subsequent annual updates by the Government (e.g. Tackling Over-indebtedness Annual Report 2007³) on the extent of, and trends in, over-indebtedness in the UK, although these annual reports supplement them by other indicators relating to aggregate debt to asset ratios and trends in 'extreme' indicators of over-indebtedness such as bankruptcies, county court judgements and repossessions. To this list of indicators could be added several others: for example, the number and persistence of arrears, measures of household liquidity/illiquidity, and so on.

Several issues arise concerning the use of indicators. First, it seems more sensible to measure indicators of over-indebtedness at the family or household level

³ <http://www.berr.gov.uk/files/file42700.pdf>

rather than the individual level, unless it is assumed that income and asset-sharing in households are non-existent. And the incidence of over-indebtedness at the family level (as measured by Kempson, 2002 or Bridges and Disney, 2004) is lower by almost every indicator than at the individual level, as measured by MORI (2004). Second, some indicators such as bankruptcies and 'extreme' events are associated with legislative changes which distort the underlying trend.

Third, MORI (2004) identifies "a surprising lack of overlap between the indicators. This demonstrates the need to consider several measures when conducting analyses in this area" (*ibid*, p.1). For example (*ibid* Table 5), among individuals with a mortgage in the MORI survey, 53% have payments on unsecured debt exceeding 25% of income and fully 82% have payment on total debt exceeding 50% of income. In addition, over half of these individuals have 4 or more credit commitments. But only 36% of them consider their financial commitments a 'heavy burden' and an even smaller proportion (13%) has arrears of more than 3 months. Conversely, among social tenants, only 21% and 6% have debt payments exceeding the indicated fractions of unsecured and total debt as a % of total income but 44% consider their financial commitments a 'financial burden' and fully 62% of social tenants have arrears of more than 3 months. This suggests not so much that we should 'consider several measures' as suggested by MORI but rather suggests that multiple indicators run the risk of failing to identify the sub-set of 'overindebted' households or families – almost any family might satisfy one or other criterion of over-indebtedness.⁴

There are several possible solutions to this problem associated with multiple indicators. First we could use techniques, such as Principal Components Analysis which attempt to establish and exploit the primary correlations among the indicators.⁵ However, as suggested in the introduction, these indicators group in distinct categories which identify particular household types: for example the various measures based on debt to income ratios tend to identify households that may be potentially *exposed* to adverse shocks such as rising interest rates but which may not be currently overindebted, whereas measures of arrears and subjective responses are associated with households with current low economic resources, typified by social tenants. Moreover, risk factors are typically different across not just household types but also differ for households at different stages of the life-cycle. By way of illustration, 29% of individuals aged 25-34 in the MORI survey report total borrowing exceeding 50% of income whereas only 11% of those aged 55-64 report such a borrowing to income ratio. But

⁴ Much the same problem of lack of overlap arises in considering alternative measures of 'retirement saving adequacy': see Banks *et al* (2005).

⁵ According to BERR (2007), there are currently EU-led moves to develop composite indicators although the issue arises as to by what criteria the various indicators will be weighted.

there are very good reasons, which we discuss in the next section, why we might worry rather more about the incidence of such debt problems among that small minority of families headed by older individuals than among the somewhat larger proportion of such households in the younger age group, simply because of the nature of average annual income growth over the life cycle.

All this suggests that we should consider a more 'structural' and life cycle-based approach to the issue of 'over-indebtedness', while accepting that specific indicators and self-reported perceptions are important components of the over-indebtedness phenomenon. Thus OXERA (2004) defined over-indebtedness as "where households or individuals are in arrears on a structural basis, or are at significant risk of getting into arrears in a structural basis." However this definition arguably fails to define 'structural' whilst emphasising the importance of current and potential arrears in the definition.

A more precise definition, cited by Haas (2006) and derived from the German Federal Ministry defines 'over-indebtedness' as follows: "A household is regarded to be overindebted when its income, in spite of a reduction of the living standard, is insufficient to discharge all payment obligations over a longer period of time." Although slightly strangely translated, the attraction of this definition is that it relates the longer period minimum spending pattern of the household to its available resources; where the latter is clearly deficient, the household is considered to be 'overindebted'. Putting this more technically and extending the argument, we might therefore associate over-indebtedness with the circumstance where the household's credit-financed spending plans are inconsistent with its potential income stream – the imbalance is reflected in the fact that the household could not feasibly reduce its spending plans in a manner that would eliminate its credit commitments given the present value of its current assets and prospective income stream. Measuring this minimum living standard and prospective income stream are of course problematic practical issues but this approach has, in our view, a clear structural basis.⁶

In contrast, a more conventional definition of over-indebtedness in a cross-country study is provided by Betti *et al* (2007) who define overindebted households as those who report 'difficulty' in making payments on mortgages, consumer credit etc. The weakness of this definition is that it relies on there being a substantial proportion of households which report that it is 'not difficult' to pay such debts – not surprisingly the latter group are in a distinct minority in many of the countries that are surveyed.

⁶ The literature on credit scoring and modelling predictions of default has also considered definitions of 'over-indebtedness' and 'affordability'. The measure of over-indebtedness suggested by Finlay (2006) is essentially a static form of a structural model. Interestingly, given informational requirements, credit scoring methods tend to use 'number of credit instruments' as an indicator of potential over-indebtedness although such an indicator is given less prominence in studies of incidence of debt problems.

Finally, mention should be made of the 'NMG survey' conducted by the Bank of England which is an annual individual-level household survey which includes questions on household finances and household stress. Respondents who report difficulties in paying at least one debt (the basic definition of 'over-indebtedness' in the survey) are given a series of possible responses/causes including 'lack of cash that has been or will be resolved in the future', 'overspending', unemployment, 'higher-than-expected household bills' and 'loss of income through reduction or cessation of overtime'. However, in our own view, the subjective nature of the definition and the near-tautological nature of some of the potential responses render it hard to incorporate these factors into the potential composite indicator of over-indebtedness.

4. A framework for analysing over-indebtedness

The discussion in the previous section suggested that household debt and the definition of over-indebtedness should be put in a more structural context. Although, as a matter of practical analysis, this report will provide evidence on specific indicators of over-indebtedness, it is helpful to sketch out a more structural approach to the household debt problem in order to put the subsequent empirical analysis into context. Such a 'sketch' is undertaken in this section.

Households accumulate and decumulate wealth over the life cycle. There are periods in the life cycle, of varying duration, in which households will hold negative assets (debts). Moreover, because the future is uncertain, even a household which is 'cautious' (as defined shortly) may find itself in a position of 'over-indebtedness' by several of the criteria defined previously as a consequence of a series of unanticipated adverse shocks. Whilst it is an important part of public policy to encourage responsible lending and borrowing, high levels of debt, self-reported debt problems or even arrears for particular households are not, of themselves, evidence of 'irresponsibility'. For example, a household which is observed in a survey to have a high ratio of debts to current income may have a credible expectation of a future positive income shock. Nevertheless it is desirable that public policy limits the capacity of borrowers and lenders, either separately or in collusion, to deliberately generate 'unsustainable' debt by, for example, taking advantage of lax regulation or legal loopholes.⁷

The basic 'building block' of a more structural model of indebtedness is the 'life cycle hypothesis of saving and consumption (spending)' developed by Franco Modigliani and his collaborators.⁸ The key idea behind the hypothesis is that a forward-looking household uses a competitive capital market to smooth its spending over the life cycle

⁷ For further discussion of all these issues, see the introduction, and several specific chapters, in Bertola, Disney and Grant (2006).

⁸ See Ando and Modigliani (1963), Modigliani and Brumberg (1954, 1979).

relative to fluctuations in its income stream and changes in the household's composition (for example, births and ageing of family members). There is a strong likelihood that a rational household will accumulate and decumulate wealth (and debts) over its lifetime, utilising borrowing and saving to engage in 'consumption-smoothing'.

By way of example, young households typically have low incomes (relative to incomes later in their lifetime) and relatively high 'needs' (e.g. young children) but with the prospect of relatively fast income growth. Faster expected income growth should induce greater indebtedness among households (Brown *et al*, 2007). Since such households are net borrowers, they are exposed to credit market risk (such as interest rate rises). Conversely older households should have a net positive asset position because they face a slower expected growth of income. Older households are therefore less exposed to adverse interest rate shocks (in fact rising interest rates benefit households that are net savers) but are vulnerable to asset price falls. Consequently, as mentioned earlier, evidence of even relatively low levels of net indebtedness among older households might be of greater concern than larger levels of indebtedness among younger families.

The capital (credit) market is used to smooth over long periods of the lifetime (for example, between work and retirement) but could also be used to smooth income *volatility* – that is, short-term fluctuations in income arising from say, changes in hours (overtime), health and even employment status (unemployment). However, using borrowing to smooth spending over adverse short run shocks such as spells of unemployment, let alone family income shocks arising from household dissolution, is intrinsically more risky (see Sullivan, 2008). If, for example, households attempt to maintain spending during a spell of unemployment at a comparable level to when employed, there is the obvious danger that an adverse macroeconomic shock or other causes of difficulties in finding a job expose the household to the risk of direct measures of over-indebtedness such as arrears on borrowing. Unanticipated income volatility may therefore be a primary driver of over-indebtedness. There is the important counterbalancing factor that a responsible lender might be cautious in lending to such a household; however, this in turn may drive the household into a borrowing arrangement on much less favourable terms outside the primary credit market.

Simulated models of a stylised life cycle model with consumption smoothing and 'risk neutral'⁹ households often suggest that young households, in particular, should

⁹ A risk neutral household is indifferent between a certain future income stream and an uncertain income stream with the same expected value: for example between a sure £50 tomorrow and a 50-50 chance of £0 and £100. A *risk averse* household would always prefer the sure income value; the degree of risk aversion of the household would be reflected in the extent to which the expected value of the uncertain sum would have to exceed the value of the sure income for the household to choose the uncertain stream. In some arenas (for

accumulate *greater* debt than is observed in practice. At the aggregate level, household wealth is therefore likely to be greater and indebtedness correspondingly lower than would be predicted by simple 'consumption-smoothing' models in economies with developed credit markets such as most OECD countries (Attanasio, 1999). There are several reasons for this observed discrepancy:

- Future income streams are uncertain (Friedman, 1957) and households are risk-averse. In such circumstances, households engage in 'precautionary saving' (Carroll, 1992, 1997; Deaton, 1992) against future income risk, and therefore take on less debt, especially early in the working life. As the household's life cycle evolves, so the remaining time in which adverse shocks can occur diminishes – consequently the consumption (spending) growth of the household over the lifetime is faster than it would be were the income stream to be certain.
- Some households are *credit-constrained*. A 'perfect' capital market would allow individuals to borrow up to their expected lifetime wealth constraint, subject perhaps to an adjustment of the price to reflect the riskiness of that prospective income stream. However, where lenders do not have full information on the intrinsic riskiness of their potential customers, full risk pricing runs the risk that the lender will disproportionately attract customers which are likely to default on their debt. Not only that, but risk-adjusted credit may induce high-interest borrowers to default on loans. A rational lender may prefer to ration credit rather than offer unlimited credit at a risk-adjusted price (Stiglitz and Weiss, 1981). An alternative is to use *collateral* to provide a form of co-insurance or *credit-scoring methods* to check on past default behaviour (see Bertola, Disney and Grant, 2006). Even so, households without collateral (such as tenants) or without past history (such as young families) may find themselves excluded from the credit market.
- Income and price expectations may change. One of the consequences of the *liberalisation* of the credit market in the last several decades, as well as the development of credit scoring methods, is that the supply of credit has increased dramatically, as has access to the credit market (Cox and Jappelli, 1993; Aron, Muellbauer and Murphy, 2006). Nevertheless, viable credit market scoring relies on information-sharing, which is never completely perfect, and increased competition may force lenders into more marginal segments of the market (or to increase credit limits to existing borrowers), perhaps backed by expectations of

example, gambling and unfair lotteries) individuals seem to prefer the uncertain bet – this *risk-loving* behaviour likely reflects the value to the individual of the excitement derived from the activity itself.

rising collateral values, which makes the market more vulnerable to a 'credit crunch'. What appears as 'safe' borrowing in a period of rising asset prices and credit offers then becomes 'over-indebtedness' in different macroeconomic circumstances.

- Individuals, households, families and even lenders may not behave 'rationally' as suggested by the basic life-cycle model. Faced with recent trends in debt, and the fashion for 'behavioural economics' in recent years, this has become an explanation that is much favoured by some analysts and in the media. The life-cycle hypothesis broadly assumes that, in the face of uncertain future events, agents nevertheless make consistent, forward-looking decisions based on the information available to them at the time. Such a stylised model is obviously open to a range of pragmatic criticisms, but it should be emphasised that the standard model does *not* assume that individuals have access to full information. Decisions that were made rationally at the time may subsequently be revealed by events to have been a mistake. 'Over-indebtedness' is not ruled out by rational behaviour in an uncertain world and, faced with subsequent events, even rational individuals may 'regret' their past actions. 'Being wise after the event' is a form of learning that is perfectly consistent with the standard model; failure to learn less so.

Combining these points suggests that the type of definition of 'over-indebtedness' discussed by Haas (2006) is the appropriate one. The benchmark of over-indebtedness for a particular household would be to measure what would be a reasonable and financially viable level of debt for a household at a given point in its life cycle, given its prospective income stream and the likely evolution of the composition of the household. The (in)ability of the household to pay off its obligations given its requirement to maintain a minimum living standard and given also its future and prospective stream of resources would define whether (or not) the level of debt of the household was excessive. This type of financial evaluation is of course precisely what debt negotiators and counsellors undertake when deciding whether a household can sustain some form of voluntary repayment agreement or is bankrupt. Unfortunately (from a research point of view) we only observe such events among a highly indebted sub-set of families, and cannot use these cases to generalise to the population as a whole. However, we can and do provide evidence later which allows us to examine the circumstances which lead families to be in such a position.

5. Literature review on over-indebtedness

Studies of the United Kingdom

The survey of over-indebtedness for the then Department of Trade and Industry by Kempson (2002) utilised a stratified sample of some 1600 households conducted by MORI in early 2002. Roughly three-quarters of households had access to consumer credit, but despite a significant increase in access to, and values of, outstanding consumer debt – both secured and unsecured – in comparison to comparable studies from the mid-1990s, levels of over-indebtedness and of arrears in particular seemed to be no greater than in the earlier period. Between 5 and 7% of households (according to the indicator) had high levels of debt to income or a large number of current credit commitments. Around a quarter of households had found themselves in financial difficulties in the last 12 months, with 18% having current arrears. Nevertheless, there did not seem to be a cumulative increase in the fraction of households in arrears: the fraction of households who had exited 'financial difficulties' was the same as the fraction that reported entering adverse financial circumstances.

When considering the incidence of credit use and credit risk, Kempson (2002) found that households headed by an individual aged in their twenties or early thirties tended to have the highest debt-income ratios, this being associated with house purchase and having young children in the households. Not surprisingly, this group also typically contained households with the highest number of credit commitments. All this is compatible with the 'life-cycle hypothesis' described in the previous sub-section – in fact a very low incidence of debt among older families was found in Kempson's survey.

The 2002 survey found that usage of credit cards and secured debt had increased since the late 1980s whilst use of finance company loans, hire purchase and mail order had somewhat declined. This finding that, as real incomes rise credit instruments change, was also noted by Bridges and Disney (2004). The largest values of debt per credit instrument, other than mortgages, were found to be on financial loans and hire purchase arrangements. Those without access to formal credit (such as lone parent tenants) tended to use the Social Fund and various forms of localised lending; Bridges and Disney (2004) also suggest that such families disproportionately utilise loans from family and friends.

On arrears and self-reported over-indebtedness, Kempson noted that a 'surprisingly high' fraction of households reported having financial difficulties given the relative lack of evidence of actual arrears and repayment difficulties. For example, 7% of households were in arrears on household bills, and 4% of credit obligations but only 2% were in arrears on both, yet 18% of households reported 'financial difficulties'. She

also noted that those with, for example, 2 or more arrears did not necessarily report that they were in 'financial difficulties'.

In our view, there are two reasons for this discrepancy between responses to general questions of self-reported financial difficulties and debt problems, on the one hand, and actual arrears on the other. We assume in this that actual arrears, whether reported by the respondent or constructed by the researcher from data on individual credit arrangements as in the quantitative evidence described later in the present report, are accurate. First, respondents may feel that reporting 'no financial difficulties' in an interview concerning over-indebtedness smacks of complacency, especially when credit and debt problems are continually discussed in the media. Second, evidence from Bridges and Disney (2006) strongly suggests that a propensity to report financial difficulties and debt problems is associated with a self-reported lack of psychological well-being and other expressed 'lifestyle' attitudes – the overlap with actual arrears and repayment problems is strong but is mediated through psychological and health perceptions.

In general terms, the vaguer the question concerning 'financial difficulties' that is asked, the greater the likelihood that the interviewer is capturing these self-reflective attitudes and responses rather than the underlying debt position of the household. This is a major *caveat* to estimates of the extent and incidence of over-indebtedness based on general questions concerning financial circumstances. Yet, as we have seen in an earlier section, several studies do indeed use responses to very general questions in order to measure household over-indebtedness.

Concerning the factors that 'triggered' either self-reported financial difficulties or reported arrears on specific credit arrangements and household bills, Kempson (2002) found that 'loss of income' was the key factor (45-54% of households), arising primarily from redundancy, from a breakdown in the household relationship or from long-term sickness. 'Low income' was an additional important factor for those in arrears, but not so important for those reporting 'financial difficulties'; 'overcommitment' was also mentioned in around 10% of cases – but disproportionately by those reporting 'financial difficulties' rather than actual arrears. As mentioned previously, this suggests a sub-set of households that are facing debt difficulties because of their lack of resources in addition to those facing debt problems triggered by adverse economic shocks; however the former group may be more experienced in utilising techniques such as 'debt cycling' to keep their heads above water (see Whyley, Kempson and Herbert, 1997).

Kempson, McKay and Willitts (2004) also use data up to 2002 and focus primarily on arrears as their measure of over-indebtedness. Their core results are derived from the Over-indebtedness (OdS) Survey described previously, though supplemented by the

Family and Children Survey household panel from 1999-2002, also utilised by Bridges and Disney (2004). When examining the incidence of arrears in the OdS, Kempson *et al* find, in common with Bridges and Disney (2004), that arrears are disproportionately concentrated among low income families such as social tenants and lone parents; that arrears on consumer credit are low (by far the highest fraction of arrears among any group on any credit instrument is the 13% of lone parents reporting arrears on mail order and catalogue purchases) whereas arrears on household bills tend to be higher – again especially among lone parents. One important difference of this study from Bridges and Disney (2004) however, is that the incidence or correlation of arrears with particular family characteristics is obtained by pair-wise comparisons of variables whereas Bridges and Disney utilise multiple regression analysis. Some pair-wise correlations inevitably turn out to be less significant when conditioned on other household characteristics.

The correlation between arrears and other indicators, previously described, of over-indebtedness in Kempson *et al* is also interesting. For example, the probability that a household with two credit commitments has had no arrears in the past 12 months is 68%; with four or more credit commitments, 51%. The 'risk' of arrears is higher with 4 or more commitments but even so, the majority of this high-commitment group do not report having had recent arrears. In contrast, 52% of households with repayments of unsecured debt exceeding 25% of income *do* report arrears on at least one credit commitment, with 27% reporting at least three arrears. However, as the authors report: "It is not, of course, possible to say to what extent this [last finding] is because borrowing puts extra strain on budgets, or because the types of people who borrow most are the ones who are also most likely to overspend generally" (*ibid*, p.31). In our view, the only method by which it is possible to test between these two hypotheses is to use panel data methods to control for household preferences and then to examine the impact of 'shocks' to household budgets on overall over-indebtedness. We examine this idea later in our report.

The analysis in Kempson, McKay and Willitts (2004) of the 'dynamics' of arrears is, perhaps, rather less illuminating. The authors use FACS to focus on the average year-on-year probabilities of families exiting and entering arrears by certain 'state' characteristics (e.g. receipt of Income Support, work status). For example, lone parents who become couples have both higher rates of entry into arrears and higher rates of exit than those who remain lone parents. It would be interesting to know, over longer periods, whether this is because of greater access to forms of credit, higher income, or indeed whether the differences are strongly significant (e.g. an average of a 34.5% transition rate for lone parents to couples *versus* an average rate of 29% for those

remaining as lone parents). It does appear, however, that lone parents who move from work to economic inactivity are more likely to enter arrears although it is not clear from Table 7.3 of their report that the reverse transition from economic inactivity to working is associated with an *increased* exit from arrears.

The MORI (2004) report is perhaps an outlier in these studies insofar as it uses a sample of individuals, not families. In addition, being a one-off survey, it only provides a single 'snapshot' of the incidence of over-indebtedness. As described in our earlier discussion of indebtedness indicators, the key findings of the MORI survey are the somewhat higher levels of incidence of debt by various indicators across individuals compared to household-level debt indicators, and a lack of overlap between alternative indicators of over-indebtedness.

We do not discuss in detail here the findings of Bridges and Disney (2004) as they overlap considerably with (and are updated by) the results presented later in the present report. It is however, worth mentioning a key finding of Disney, Bridges and Gathergood (2008), which focuses largely on the impact of the increase in house prices until the mid-2000s on UK consumer indebtedness using data and measures constructed from the British Household Panel Survey (BHPS). The authors show that higher housing equity serves as a basis for households to increase collateralised (secured) lending. Many households used the increase in house prices in this period to increase their secured debt by remortgaging, although throughout the period the gearing of households (that is: the ratio of total debt to household wealth) actually fell quite sharply. Households with high loan-to-value ratios at the start of the period might be defined as 'credit-constrained': that is, wishing to borrow more secured against their house; the evidence from the BHPS data is that many households in such circumstances had above-average levels of *unsecured* debt in the late 1990s. The econometric evidence from this study of the BHPS suggests that the boom in house prices allowed such highly-g geared households to *substitute* cheaper secured debt for their unsecured debt, with only a modest increase in overall household indebtedness. This squares with the macroeconomic evidence presented earlier in this report, which suggested that, relative to income, secured debt has grown whereas unsecured debt has remained almost constant. This is an important finding insofar as many studies tend to 'lump' together all kinds of debt and credit instruments without considering how use of these credit instruments and patterns of indebtedness change over time in response to external trends and to household-specific shocks.

Unsurprisingly, the Bank of England has also been active in researching the causes and consequences of household indebtedness. In the NMG survey described in an earlier section of this report, the bank focuses on self-reported household 'financial

difficulties'. In the latest survey (September 2007 – see Young, 2007), approximately 8% of mortgage-holding households report difficulties in paying their mortgage and 5% difficulties in paying unsecured debts. Among renters, 20% report that unsecured debts represented a 'major burden' to them. Most households report that 'cash problems' are at the heart of their financial difficulties and that they would attempt to resolve them by cutting back on spending – the proportion reporting 'lack of cash' has grown sharply since the comparable survey in 2006.

In a more specific survey by Bank of England staff (Del-Rio and Young, 2005), data from the BHPS are used to examine household self-reported difficulties related to the repayment of unsecured debts. Using data from 1995 to 2000, the authors found no variation in the proportion reporting that debt obligations were a 'heavy burden' (the proportion was 9%). Using econometric techniques, they found that the probability that a household reported that debt obligations were a 'heavy burden' was related to its debt-to-income ratio, to a (lack of) educational qualifications or employment, to being divorced and to an adverse health state.

Del-Rio and Young then attempted a more ambitious modelling of the 'financial surprises' that might induce households to report debt problems. Each year the BHPS questions respondents as to whether they expect their financial situation to improve, stay the same or worsen. In the following (and every) year, respondents are asked to report whether their financial situation *did* improve, stay the same or worsen. The authors constructed a measure of a household-specific 'financial shock' based on the difference between the reported expectation and the reported subsequent experience. Re-estimating the econometric model for the extent of financial stress related to the household's unsecured debt-to-income ratio, the authors found that highly leveraged households which experience a negative financial 'surprise' are more likely subsequently to report a heavy debt burden – in particular the probability of reporting a high debt burden is associated with a series of past negative 'shocks' and also with a high initial debt-to-income burden. These findings do not of course tell us what induces the discrepancy between the expectation and the outcome (whether, for example, a household-specific event such as a fall in income, or a macroeconomic shock), but does suggest that *changes* in household self-reported debt problems appear to be related to unanticipated adverse financial shocks to the household.

International evidence

There is international evidence, in particular from other OECD countries, that can be examined for comparable trends and 'drivers' of over-indebtedness. An important *caveat* of comparisons of this type is that credit conditions – and in particular, ease of

access to credit – varies across countries. A lower fraction of households and, potentially, a different type of household, will report 'debt problems' where the capital market is less competitive or where access is more restricted. An important underlying determinant is how developed are credit-scoring and informational sharing methods – where these are less developed, the potential risk of default to lenders is higher which enhances the probability of lenders rationing the supply of credit to some households.

Betti *et al* (2007) use common panel data across European countries (the European Community Household Panel and household budget studies) to investigate the household use of credit and incidence of 'over-indebtedness'. The survey question concerns whether households have consumer debt but excludes mortgages and thus focuses on unsecured debt. In contrast, the common definition of an 'overindebted' household across the countries is where the household reports 'difficulty' in making payments on *any* type of debt, including secured debt. This is a rather loose definition and is open to the issue raised earlier of whether such general questions can really identify specific debt problems. It is also apparent that the definition of 'over-indebtedness' incorporates forms of debt that are not included in the question of whether the household has debt, so that it is possible (and indeed occurs in the data) that a greater fraction of households report having 'difficulties' with debt than report having (unsecured) debt. However these seem to be problems intrinsic to the cross-country data sets used rather than any fault of the authors of this study. All the data apply to 1996.

The study reports that in the EU-15 countries, 23% of households reported having consumer (unsecured) debt. Of these, 68% reported having 'difficulties' making payments on their debt (including all debts). The overall average proportion of households reporting difficulties in paying debts was 16%. For the United Kingdom, the respective proportions were 34%, 50% and 18%. The *variance* of these measures across the EU-15 is lowest for the last statistic – the fraction of all households that reports having difficulties in paying debt - the highest figure by far is for Greece (49%), followed some way behind by Ireland, Spain and Finland. The variance for the other country means is much greater – for example in Greece only 9% of households report having unsecured debt of which 96% report having difficulties in making payments on it. Italy reports the lowest fraction of consumers with unsecured debt and also the lowest proportion of households with overall debt 'difficulties' – but 88% of Italian households with unsecured debt report having difficulties making payments on it. In contrast, the countries which report a higher incidence of unsecured debt across households (such as Denmark, France and the UK) tend to report lower levels of 'difficulties' in making payments. It is hard to find a convincing explanation for the variation across countries

in the measures of over-indebtedness. The incidence of reported over-indebtedness does however commonly fall with age although is typically independent of income level. The study is not, however, able to provide any evidence on the 'triggers' that induce households to become 'overindebted', given that it is based on cross-section comparisons.

Jentsch and Riestra (2006) examine reasons for defaults on credit arrangements in a variety of European countries (including Austria, Belgium, France and Spain) as reported by households. The common factors that induce defaults that emerge in the various institutional settings include entering unemployment, marital dissolution, lack of information on the credit market and/or money management skills. Several studies (e.g. Bertaut and Haliassos, 2006) suggest that the United States credit market is somewhat different from other European countries (with the UK in an intermediate position). US consumers are more willing to incur debts and to shift between alternative credit arrangements, such as different credit card providers. An interesting statistic is that over 50% of US consumers do not regularly pay off credit card bills (i.e. do not use credit cards as 'revolving' credit) whereas the comparable figure for UK consumers (Mori, 2004) is 19%. In addition, in the US reported rejections of credit applications are much more widespread than in Europe but this seems to arise because many European consumers do not have access to formal credit arrangements or are discouraged from applying in the first place, whereas the sheer volume of credit activity among US families makes rejections more probable. For example, in Italy, whilst formal credit arrangements are dominant in the north, informal and family credit arrangements are still largely dominant in the south.

6. Qualitative Evidence from the Credit Industry and from Debt / Money Advice Agencies

This section summarises evidence on the drivers of over-indebtedness gained from interviews with informed actors in the consumer credit industry. Interviews were conducted with debt / money advice agencies, a consumer rights group, a commercial lender, a credit union and a credit rating agency to gain an industry perspective on over-indebtedness from a range of market viewpoints.

Interviewees were asked about the extent of over-indebtedness in the UK, patterns in over-indebtedness across different socio-economic groups and also across different forms of credit instrument. They were further asked for insights based on their experience in the market as to why consumers move into over-indebtedness – the key drivers and stories behind arrears and failure to repay debts both from the 'micro' and

the 'macro' perspective. Based on those interviews, this section outlines the principal groups at risk of over-indebtedness and the main causes of consumers moving into an over-indebted financial position.

6.1 A working definition of over-indebtedness

The previous section defined a variety of possible indicators of over-indebtedness, including measures based on the cost of servicing existing debt obligations, the number of credit commitments and self-reported financial stress. Our clear message from interviews, especially with counselling agencies, was that a criterion of 'over-indebtedness' based on current or prospective arrears was the most appropriate one. Henceforth, we will utilise as our primary definition of over-indebtedness whereby consumers are over-indebted when they fall into arrears on at least one credit commitment. That is, a consumer who has failed to meet the most recent required payment on an outstanding credit commitment is deemed to be 'over-indebted'. For example, failing to meet the required minimum payment on a credit card or failing to make a mortgage repayment would both be taken as an indication of over-indebtedness, despite the latter case being generally much more serious than the former. By this definition, each year approximately 8% of U.K. households could be considered as 'over-indebted' at some point in the year.¹⁰

This definition potentially overstates the proportion of consumers who face a serious debt problem. Credit card lenders report that less than 50% of households who miss one payment on their card go on to default on their repayments and require a renegotiated repayment plan and/or referral to a credit counsellor. This proportion increases steeply with consumers who miss two or three payments on their card. From this point of view a more accurate definition of 'over-indebted' might involve missing two or three payments (60-90 day arrears). However, the experience of debt / money advice agencies is that the vast majority of their clients contact them when they initially fall into arrears on a credit commitment (few clients seek the advice of counsellors before entering arrears). Hence consumers typically self-report their financial situation to be of concern to the extent needing to seek financial advice from a credit counsellor upon entering arrears. This insight from consumer behaviour justifies a definition of over-indebtedness based around a consumer exhibiting arrears on a least one credit instrument and it was the basis for defining over-indebtedness in discussions with interviewees.

¹⁰ Consumer Credit Counselling Service Statistical Handbook 2007.

6.2 'At risk' groups

Debt / money advice agencies report a broadening spectrum of socio-economic backgrounds among clients contacting them for debt advice, reflecting increased availability of credit to consumers across income levels, housing tenure, employment status and credit background. In recent years there has been a notable increase in the number of older clients seeking debt advice. More recently, the proportion of clients reporting mortgage arrears and problems meeting mortgage repayments has also increased. Credit counsellors recognise that some socio-economic groups may be less likely to seek debt advice and hence they do not see a comprehensive picture of indebtedness in society. Ethnic minorities, the socially excluded and consumers who lack basic literacy and numeracy may be less likely to seek credit advice due to cultural and educational reasons.

Amidst this picture, debt / money advice agencies highlight two particular groups of consumers who dominate their client base and could be described as the principal 'at risk' groups.

- Very low-income households who are susceptible to any small change in income or small increase in expenditure (such as an increase in energy prices or the need to replace a white good). This group is unable to sustain adverse income shocks due to the small gap between real income and expenditure. An above-average proportion of this group exhibit low levels of financial literacy together with little or poor credit histories and so are susceptible to aggressive marketing by sub-prime lenders who offer easily accessible finance at high interest rates. Also, low-income households fail to adequately insure themselves against adverse risks. They typically make little use of payment protection insurance, but also typically under-insure their durable goods such as white goods or even home contents. Consequently, an adverse change in circumstances such as a fall in income or failure of a durable good can expose the consumer to repayment difficulties or overuse of credit.
- Middle-income households with very high levels of income gearing. These might be young households with expected strong income growth who are highly leveraged in anticipation of rising income. These households are unable to sustain shocks to income due to debt service / repayment commitments. Many households in this group rely on income from both adults in the household and also the ability of refinance existing mortgage debt onto short-term discounted deals or extend low-cost existing consumer credit deals (such as credit card 'balance transfers'). For example, the Consumer Credit Counselling Service (CCCS) describe their typical client as a married man with children, aged in the

mid-30s with £24,000 of unsecured debt. All interviewees have recorded an increase in clients from this group reporting difficulties with mortgage repayments and/or arrears over the last 18 months.

The common feature among both groups is a high level of debt service cost relative to income (a high level of 'income gearing'). In the case of low income households, relatively small values of debt can involve high debt service costs due to higher interest rates which are often applied to lower income households perceived by lenders as less creditworthy. Among middle-income households, high income gearing can involve a dependence upon two incomes, perpetual use of consumer credit such as credit cards in addition to highly leveraged mortgage positions and a reliance on regular refinancing of both unsecured and secured credit in order to take advantage of short-term discount deals.

High levels of income gearing put these groups at risk of arrears. A variety of factors could move highly leveraged households into arrears. Highly indebted consumers in both groups are susceptible to changes in their individual circumstances which reduce their income or lead creditors to raise the rates charged on outstanding debts. Alternatively, irrespective of any such changes, they may be over-leveraged and unable to meet the repayment schedule required to pay-off the debt. Changes in the cost of credit unrelated to the individual's circumstances, such as movements in interest rates or restrictions on the supply of credit at a macroeconomic level may also lead to these consumers being unable to repay. The next section summarises interviewee responses on the prevalence and severity of these drivers of over-indebtedness.

6.3 Drivers of Over-indebtedness

Interviewees presented a range of views as to the most prevalent causes of consumers moving into over-indebtedness. This section summarises those views. Interviewee opinions on the leading drivers of over-indebtedness which move households from being highly geared into arrears can be summarised into three categories: financial imprudence, household income shocks and macroeconomic shocks.

6.3.1. Financial imprudence

Credit counsellors recognise that in the majority of cases their clients had arrived in financial distress due to poor previous financial decisions. Lack of financial literacy was cited by all interviewees as a major cause of over-indebtedness. In particular, a common view is that many consumers do not understand the true cost of repaying the credit commitment at the point at which they apply for credit, partly due to the obscurity of lenders' terms and conditions. However, financial imprudence is not only evident in consumer behaviour in terms of actively borrowing new monies for new purchases that

individuals can afford to repay loans against. Consumers can also become exposed to over-indebtedness by failure adequately to insure against adverse events and by failing to adjust their consumption patterns following reduced real income due to relative price shocks.

i) over-borrowing

It was generally recognised that over-borrowing most often takes the form of consumers using finance to purchase a particular new item (such as a house, car or electrical good) which they cannot afford to repay at the rate of interest agreed. Low levels of financial literacy among certain groups of consumers imply that the true cost of borrowing is not understood. For example, a recent MORI poll commissioned by the Citizen's Advice Bureau found that 50% of respondents did not fully understand the meaning of the term 'secured loan'. A credit union strongly expressed the concern that consumers are unable to interpret financial information provided in marketing material or on credit agreements, such as interest rates expressed in percentage terms or the use of the Annualised Percentage Rate (APR) and Annualised Equivalent Rate (AER) phraseology. This lack of understanding of the true cost of the loan, coupled with poor budgeting skills, was seen as a major cause of intractable debt problems. Debt / money advice services reported that many consumers attempt to alleviate the immediate financial pressure of repayment by seeking a new form of borrowing in order to pay-off their current commitment, such as using a credit card in order to make repayments on a personal loan or hire purchase agreement. Such forms of over-borrowing nearly always result in financial distress.

A debt / money advice agency raised the concern that recent innovations in the mortgage market might encourage consumers to take on greater debt obligations than they can repay. Concern was expressed that sub-prime lenders offering mortgage loans for 'right-to-buy' tenants might view default as a non-adverse outcome to mortgage contracts. With the market value of the property potentially exceeding the value of a 100% loan secured against it under a right-to-buy by a considerable margin (in some cases over 50%), lenders could potentially profit from borrowers who defaulted even very early into the mortgage period through resale of the property. Concern was also expressed that the market practice of mortgage brokers selling mortgage products to self-certification clients on behalf of the mortgage lender might allow unscrupulous behaviour on the part of the broker to go unpunished.

A commercial lender explained that certain borrowing behaviours are clearly indicative of over-borrowing and are used in the industry as warning signs of consumers undertaking borrowing which they were unlikely to be able to repay. Large withdrawals of cash in the early days of a credit card agreement, increasing balances on a number of

credit instruments simultaneously and consumers applying for multiple credit instruments simultaneously are taken as indicative of irresponsible borrowing behaviour.

ii) under-insurance

Failure by consumers to adequately insure themselves against adverse risks as a cause of over-indebtedness was seen as taking two forms. The first is a failure to purchase sufficient payment protection insurance. The second is a failure to adequately insure their property and belongings against adverse events. In the opinion of credit counsellors the latter is seen as a more relevant issue for over-indebtedness than the former.

Inadequate use of payment protection insurance on both secured and unsecured borrowing was seen as a cause of failure to repay in a limited number of cases. In the view of credit counsellors, borrowers do not prudently balance the risks to their income they face from unemployment and ill-health and consequently commonly neglect to insure themselves against these risks. However, it was recognised that the market for payment protection insurance (PPI) does not operate efficiently, insurance can be over-priced and consumer advice groups have expressed concerns relating to the transparency of the terms and entitlements of PPI as presented to consumers. Industry representatives also pointed out the market for PPI on non-mortgage products is limited and that adverse selection tends to lead to expensive pricing for those consumers who choose to take out insurance. Furthermore, a credit counsellor thought that for most households PPI is not an effective measure against over-indebtedness as arrears are typically caused by a behaviour for which the individual consumer is culpable.

A failure by consumers to adequately insure their property and belongings against adverse events was seen as the more dominant story of under-insurance by the credit counsellors and credit union consulted. Households failing to insure their home contents, or substantial household items such as a car, were seen as a major cause of over-indebtedness. Low income households often perceive that they cannot afford to insure valuable items or underestimate the risks of accident or burglary. When such events occur, households often make use of credit to purchase replacement items without considering the immediate cost of doing so. The loss of the consumption good or services from the durable goods are perceived as more pressing than the cost of repaying a loan against a replacement. This is a particular problem among low income households with poor credit histories who might live in areas where burglary rates are high which in turn increases their insurance premiums.

iii) relative price shocks

Debt / money advice services cited the failure by consumers to accommodate relative price shocks as a growing reason for accruing arrears in recent years. Increases in consumer price inflation focused around necessity goods such as fuel and food have impinged in household real incomes as wage growth fails to keep pace with price inflation. It is common for consumers to fail to adjust their consumption patterns in the face of rising prices, instead increasing their borrowing in order to maintain consumption at current levels. For example, a consumer who faced a rising price of petrol might choose to accommodate the increased cost by using a credit card. The pattern in consumption remains unchanged, but the pattern in financing consumption alters. Credit counsellors reported that consumers were typically slow to adjust their consumption patterns even when the extent of their falling real income was made clear to them.

It is increasingly common for consumers to finance their consumption of fuel and energy through fixed monthly direct debit payments which are reviewed annually or biennially. Over the course of a typical year the consumer's account with the provider will move from surplus over the summer period to arrears over the winter period as consumption patterns of energy move from low to high. With constant prices and usage the monthly payment is sufficient to cover a monthly average bill. However, increases in fuel prices have resulted in the existing monthly payment proving insufficient to cover the monthly average bill. As a consequence, consumers have faced deficits of their accounts which are cleared by either one-off payments or a jump in the monthly direct debit. Such spikes in expenditure are commonly unanticipated by households and can lead to consumers falling into arrears on their energy payments.

6.3.2. Income Shocks

It was recognised that consumers experience financial shocks to their income which are unforeseen and difficult to anticipate. Such shocks can move consumers from a stable financial position in which they are able to meet all of their credit commitments, to one in which they are unable to repay or service outstanding debts. Distinguishing between changes in income which are predictable and should be factored into individual borrowing decisions and changes in income which are unpredictable and for which individuals could be considered 'unlucky' to experience is difficult to achieve on an individual basis. However, some groups of individuals are more prone to experience variation in income (such as the self employed) and it was recognised that poor insurance against adverse income changes among groups likely to face variable income might lead to over-indebtedness attributable to financial imprudence rather than a shock to circumstances. The causes and effects of income shocks are often mediated through

the nature of the shock: unemployment might lead to a different pattern of over-indebtedness to that caused by family breakdown. Three principal sources of income shocks were identified: unemployment, family breakdown / divorce and ill health.

i) unemployment

Unemployment was seen as potentially causing over-indebtedness in two ways:

First, large falls in income associated with unemployment make meeting credit commitments based on previous labour income extremely difficult. The wedge between average earnings and unemployment insurance entitlements provided through the social security system mean that for the vast majority of households with outstanding credit commitments, unemployment would imply an inability to continue to service outstanding loans. Credit counsellors reported that many clients in the category of middle-income households with high levels of income gearing are reliant on two incomes to meet credit commitments. In such circumstances the loss of one income due to unemployment might be sufficient to cause financial distress. Another group particularly susceptible to the effects of unemployment were self-employed households who are typically less likely to purchase earnings replacement insurance to cover mortgage payments. However, with levels of employment historically high and limited prevalence of unemployment, this has not been a widespread problem experienced by consumers in recent years.

Second, through consumers finding themselves unable to pay credit commitments utilised to maintain consumption during periods of unemployment. Consumers experiencing periods of unemployment typically do not hold substantial savings and so make use of consumer credit in order to maintain consumption whilst unemployed. This can itself create a position of over-indebtedness if a consumer is unable to find new employment, or unable to find employment which yields a level of income sufficient to repay interim credit commitments. Credit reference agencies do not obtain information on consumers' employment status at the point at which an individual becomes unemployed, so unless the individual chooses to communicate their change of status to the lender it is unlikely that the lender will learn of a change in unemployment status. Commercial lenders would prefer to be in a position to limit credit or alter the terms of credit extended to households who are unemployed but find it difficult to do so. Therefore, while consumers will find it difficult to obtain new lines of credit once they have become unemployed, it is unlikely that existing lines of credit will be swiftly withdrawn. This is seen as a problem in information sharing which needs to be addressed in order to limit over-borrowing during periods of unemployment.

ii) family breakdown / divorce

With unemployment at historically low levels, family breakdown or divorce was seen as the most common cause of over-indebtedness among 'life events' which impact on consumers' ability to repay, though the impact of family breakdown is seen as less severe than unemployment, *ceteris paribus*. The dominant financial outcome of family breakdown was seen as one member of the family unit being left with a credit commitment which had previously been serviced out of both earners' incomes / been dependent upon the income of a spouse / partner. Credit counsellors reported that individuals experiencing family breakdown or divorce commonly seek financial advice from counselling agencies soon after the event, compared to the patterns of advice-seeking behaviour among the newly unemployed. Whereas individuals becoming unemployed are regularly seen to make increased use of credit instruments to fund consumption during unemployment or fund job search, it may be the case that following family breakdown individuals more readily recognise the non-sustainability of their financial situation and seek advice.

Credit counsellors regularly encounter consumers who have recently experienced family breakdown and are unable to service credit commitments, most commonly commitments on consumer credit items such as credit cards or store cards. Whereas mortgages will more commonly be in the name of the earner(s) within the family, and so the commitment will move with the individual earner; consumer credit obligations might more commonly be in the name of a non-earning individual (e.g. a non-working wife) but paid for by the earner. Hence relationship breakdown leaves the non-earner with an outstanding credit commitment. Furthermore, whereas family breakdown will most commonly result in the division of housing assets between the separating couple, the same is not necessarily true of consumer credit commitments. Should the family breakdown take the form of a divorce then a division of credit liabilities may take place. However, should the non-marital relationship break down this is again not necessarily the case. Credit counsellors also reported that a common cause of bankruptcy were imprudent financial decisions taken at or around the time of a divorce occurring.

iii) Ill health

A third life event which can lead to an unexpected fall in income is a change in a consumer's health status, such as a decline in health causing temporary or permanent absence from work. If a decline in health is severe or prolonged, individuals may experience a reduction in income and may be forced to leave the work force. Interviewees recognised that the causal relationship between ill health and over-indebtedness could potentially be two-way, for example over-indebtedness might lead to depression and *vice versa*. Ill health was not considered to be a widespread cause of

over-indebtedness, but it was recognised that, for a subset of individuals, persistent poor health combined with ongoing credit commitments can cause a prolonged cycle of debt and ill health, most commonly ill health related to psychological conditions such as depression or bi-polar disorder.

6.3.3 Macroeconomic Shocks

Given the timing of this report, unexpected changes in the cost or availability of credit were not cited as a major factor causing over-indebtedness among clients over recent years, but were raised as the single greatest concern relating to the ability of consumers to continue to meet their credit commitments in the future. Credit counsellors reported that they had begun to see clients seeking their services with credit problems directly related to the availability of mortgage credit, specifically refinancing of existing mortgage debts. Commercial lenders reported that they had not noticed a marked change in repayment behaviour since the end of 2007. However, a broader restriction on the supply of credit by credit card companies beginning in late 2005 had already taken effect in the credit card market. This final section on the causes of over-indebtedness describes the nature of the macroeconomic shocks affecting households and interviewees' opinions on the likely severity of the impact of credit supply restrictions currently experienced by UK consumers.

i) Movements in interest rates

Changes in the cost of credit due to movements in market interest rates were not cited by interviewees as a significant factor in the drivers of over-indebtedness over the previous decade. The UK has experienced a period of historically low interest rates (both nominal and real) together with a low variance in rates. Policy tightening is typically gradual in quarter-point or occasionally half-point movements and so does not lead to large movements in debt servicing costs. The speed of adjustment of interest rates on credit commitments held by consumers following changes in market interest rates varies by credit instrument, ranging from a few days for variable rate mortgages to a number of weeks or months for personal loans and credit card deals. The pricing of many sub-prime credit agreements appears unrelated to market interest rates.

However, changes in interest rates due to individual-specific changes in circumstances or repayment behaviour were cited as a more relevant reason for default occurring. Should the prepayment behaviour of borrowers worsen, or borrowers engage in certain patterns of borrowing considered indicative of borrowing without intention to repay (such as large cash withdrawals using credit cards), commercial lenders alter

interest rates on some flexible-priced credit instruments such as credit cards. This re-prices the terms of the credit agreement in line with the greater revealed risk of the individual borrower, but one effect of a re-pricing is that it may lessen the borrower's ability to repay.

ii) Restrictions on credit, the 'credit crunch'

The second issue relating to changes in the macroeconomic environment raised by interviewees was the restriction of credit, principally mortgage credit, to households since mid-2007. This was seen as the most significant macroeconomic development in the supply of credit since the downturn of the early 1990s and was cited as the major cause for concern related to household over-indebtedness at the current time. The UK economy has been through a period of credit liberalisation over the past 25 years which has seen the introduction of new credit instruments, increasing competition in the consumer credit and mortgage markets and a general increase in the flexibility of credit arrangements. Use of consumer credit has become pervasive across all socio-economic groups and credit instruments previously perceived as risky or over-priced by consumers, such as credit cards and bank overdrafts, have become socially more acceptable and better understood by consumers. Mortgage credit has become available on more flexible terms and at higher loan-to-value ratios. The typical household has also been able to access more mortgage credit for a given income and collateral position, with loan-to-value ratios permitted by lenders increasing and multiples of income on which consumers are able to borrow also increasing. In light of this long-term trend in the liberalisation of credit markets, the credit crunch is seen as a reversal of credit market liberalisation and tightening of credit supply.

Commercial lenders in the credit card market reported that a general reduction in credit supply had begun in late 2005. Through 2005 there was a notable upturn in delinquency rates on credit card lines across product ranges and card providers. This came after a period of increased competition for credit card business, including the introduction of 0% balance transfer deals and 0% introductory periods on new cards. Commercial lenders did not attribute the increase in delinquency to balance transfer customers. Indeed, they see balance transfer customers as a low-risk group of consumers who are typically more literate and sophisticated in their financial management than the broader consumer base. However, one effect of the decrease in performance of credit card lines has been a general restriction in supply. Balance transfer deals are now typically subject to an initial fee and credit card providers have become more stringent in terms offered and in providing credit. Notably, this development in consumer credit pre-dated the credit crunch period.

Developments in the mortgage market were seen by credit counsellors as the more dominant area for concern. One impact of the credit crunch has been an across-the-board tightening of mortgage credit terms and reduction in the volume of mortgage business. Mortgage terms have generally become more stringent with permitted loan-to-value ratios falling and fixed costs associated with refinancing increasing. Mortgage interest rates have also increased relative to the Bank of England base rate. In light of this restriction in mortgage credit, credit counsellors saw the most vulnerable group as households dependent upon mortgage refinancing instead of households seeking new mortgage credit. The credit crunch has greatly limited the accessibility of mortgage finance by first-time buyers. However, this was not seen as a cause of over-indebtedness for first-time buyers so much as a cause of increased saving by these households as they look to raise deposits and meet the fixed costs of taking out a mortgage. Instead, the most vulnerable group were seen as households who are dependent upon regularly refinancing of existing mortgage debt at the end of a discount of fixed period when the interest rate resets to a long-term rate.

Perpetual mortgage refinancing has become common for many households, especially younger households who make greater use of consumer credit. Households typically take out mortgage arrangements involving a short-term deal, be that a discount on a variable rate of a fixed-term rate. A typical time period for such a deal would be two years. At the end of the short-term deal, households look to refinance their mortgage onto another short-term deal, often switching lenders in the process as new lenders offer to meet the fixed costs such as fees or legal charges involved in refinancing. Credit counsellors were concerned that should households find themselves unable to refinance, many would struggle to meet the increased cost of servicing their mortgages when mortgage terms reverted from the short-term deal terms to the default terms (typically a standard variable rate). Two factors might limit the ability to refinance: firstly the increased fixed costs associated with refinancing and secondly and in general viewed as more important, households moving into negative housing equity. Households with negative housing equity seeking to refinance their mortgage require a loan-to-value ratio in excess of 1 on their new mortgage (i.e. they are effectively applying for a 100%+ mortgage). With mortgage providers now lowering permitted loan-to-value ratios, households in negative equity would find it difficult if not impossible to find a new lender willing to offer a refinancing deal on these terms. This was seen as the dominant source of concern for household over-indebtedness and financial stress in future months.

6.4. Conclusions from the qualitative evidence

Clear themes emerged from discussions with industry actors as to the most common reasons for consumers becoming overindebted. Financial imprudence was cited

as the principal cause of over-indebtedness. In the opinion of interviewees, over-indebtedness is commonly caused by individuals not appreciating the cost of the credit commitments they undertake or their inability to service and repay commitments. While some lending practices might be considered irresponsible and targeted at particularly vulnerable groups with low levels of financial literacy, all credit agreements ultimately involve decision and agreement from the borrower.

Adverse income shocks due to changes in labour market status or life events which impact households can potentially result in consumers moving into over-indebtedness in very short time periods. Unemployment and family breakdown / divorce are most likely to result in short-term over-indebtedness arising, with the former often more severe than the latter. Ill health can result in accumulating over-indebtedness over a period of time. While unemployment could potentially become a widespread driver of over-indebtedness, the U.K. has experienced low levels of unemployment over the previous decade.

Changes in the macroeconomic environment which lead to restriction in the supply of credit were cited as the leading concern as a cause of rising over-indebtedness in the near future. Restriction on mortgage lending through limiting borrowing ratios and increased fixed costs were seen as a significant problem for households dependent upon mortgage refinancing. The credit crunch was considered less telling for consumer credit pricing, with a period of credit tightening having already taken place since mid-2005. Credit counsellors anticipate seeing a rising number of clients with repayment difficulties relating to mortgage debts seeking their advice over coming months.

7. Quantitative Analyses from Household Panel Data Sets

7.1 The Families and Children Survey (FACS) and the British Household Panel Survey (BHPS)

The primary source of data for the quantitative analysis in this report is the Families and Children Survey (FACS), which has been conducted since 1999 and for which data is obtainable up to 2005 from the ESRC Data Archive. The FACS was first established in 1999 as the Survey of Low Income Families (SOLIF). This data set was originally designed to elicit information on household characteristics, health status and the economic and financial position of a sample of low-income families with children. The same sample of families was then re-interviewed in 2000. In 2001 the sample was increased to encompass a representative sample of *all* families with children, at which point it was renamed as the FACS, and has continued thereafter in this format. The

financial status and indebtedness of households in the first (1999) wave was analysed in Bridges and Disney (2004) and in some of the early waves by Kempson, McKay and Willitts (2004).

The main aim of the FACS was to examine the effectiveness of new government work incentive measures (particularly Family Credit and its replacement, Working Families Tax Credit), and in doing so it asked the standard questions on household demographics, health, and income sources. The usual primary respondent in the survey is female. But FACS is the best household panel data set for the UK for the analysis of year-on-year trends in indebtedness and arrears on debt. It asks both qualitative and quantitative questions on financial hardship in each wave, together with questions on the extent of credit and borrowing arrangements that are not available in other surveys. This includes, whether respondents are able to manage the repayments on each type of credit arrangement (i.e., meet the minimum amount they have to repay), loan and household bill. Respondents are also asked if they are able to keep up with these arrangements, and the amount they are behind with each repayment. From this we are able to calculate the total value (if any) of these arrears.

The second data set that we utilise is the British Household Panel Survey (BHPS), an annual panel survey of approximately 10,000 adults in around 5,000 households that has been running annually since 1991, sampled randomly across the whole population (although parts of Scotland, and Northern Ireland, were only sampled in later waves). As with FACS, we work at a household level in which we aggregate housing, debt and asset values of the respondent and his or her partner. Aside from standard questions concerning household demographics, health and economic status, the BHPS asks about wealth and indebtedness in three of the fifteen waves available at the time of writing: 1995, 2000 and 2005. Respondents in those waves are asked to list the sources of household debt, access to unsecured debt instruments and the total value of unsecured debt. This data on the amount of unsecured financial debt is collected in two stages. In the first stage, individuals are asked to give a precise value for the total amount they owe. Individuals who say that they do not know how much they owe are then asked to give a banded answer. In this analysis we assign the median for those households who report banded information.

The BHPS in every wave also collects information on secured debt, on housing status and self-assessed house value (this last question is not available in FACS). The questions obtain detailed information on mortgaging and remortgaging, as well as year-on-year self-reported house values. The mortgage data contains data on type of mortgage, original mortgage value, the regular value of mortgage payments, and the current estimated value of the mortgage. BHPS does not however collect regular

information on the nature and extent of household arrears on credit arrangements, unlike FACS.

All survey data sets have limitations. Although FACS is remarkably comprehensive on the indebtedness issue, with a battery of pertinent questions asked in every wave, it only covers families with children and cannot be grossed up in a comparable manner to BHPS to obtain a 'picture' representative of all households. In addition, there is a risk that a survey which focuses on low income families suffers disproportionate attrition from the panel among those families most 'at risk' of arrears and indebtedness – for example if repossession or rent arrears lead to moving home and losing the family from the sample. We check in the next section whether families in FACS with debt problems are disproportionately likely to attrit from the sample and, broadly, conclude that this is not a major problem. However, an attraction of FACS is that it oversamples single parents and has a large number of respondents who are tenants in public or private rented properties and who are not working (groups that, along with young families with children, we think of as particularly at risk of 'over-indebtedness' given the discussion of 'at risk' groups derived from our interviews and discussed in Section 6.2 earlier).

In contrast, the BHPS has two major limitations for our purposes: first, it only asks questions concerning household debt in 1995, 2000 and 2005 and second, that it has no information on arrears on debt, which we have deemed our primary indicator of 'over-indebtedness'. For this reason, in the remainder of Section 7, we focus on the Families and Children Survey. Since we have argued that our primary measure of 'over-indebtedness' is an arrears-based measure (supplemented by various indicators of self-reported over-indebtedness), FACS provides better information. However, because FACS does not cover families without children (and also under-represents older people whose children have left home) we provide some analysis derived from BHPS in Section 8, particularly related to debt to income ratios and of secured (and unsecured) debt to net worth.

7.2 Analysing panel data

Panel data can be analysed in several ways. First, *all* observations of households in a given period of years can be utilised to run either pooled or panel-data estimators on the sample: this is termed an 'unbalanced' panel. Some households will disappear each year (due to sample attrition) or (re-) appear in later years (due to replacement, to household dissolution, or to follow-up methods to recover previously 'lost' households). Alternatively we can track a specific group of households that are observed in each and every wave that is analysed: this is termed a 'balanced' panel.

Of course, a feature of a balanced panel of this type using household data is that the sample will age over time, leading to, for example, changes in their use of credit arrangements and debt. Therefore, yet another method of comparison is to take a sub-sample at some point, say t , and then take a sub-sample at a later date, say $t+5$, with the same average characteristics (e.g. age) as at time t . This method involves a comparison of snapshots of households at different points in time ('cross sections') but with similar average characteristics *over time*.

All three methods are utilised in Section 7 using the FACS but the initial focus is on descriptive statistics in which we take the average characteristics of all households in particular waves. These are coupled with descriptive statistics for households that we can track through all waves i.e. a balanced panel. In a later section (7.5), matched samples with similar average characteristics (cross sections) across different years are then compared.

Table 1 illustrates some sample statistics from the FACS data set. The first two columns describe the characteristics of the 'balanced panel' of respondents derived from the original 1999 sample that we are able to track through to the 2005 wave. The 'cross section' in column (3) shows that, of the sample of 4639 observations in 1999, we can only 'match' 2135 to the 2005 survey. This looks like a relatively small proportion of the original sample (46%) but attrition is usually quite substantial between the first and second wave and here we are comparing waves 1 and 6.

What matters, however, is not what fraction can be matched (so long as, in absolute numbers, there are enough families remaining in the balanced panel to provide meaningful results) but whether attrition *biases* the panel. The effect of attrition can be seen by looking at the mean characteristics of the 1999 panel relative to the whole sample in 1999 (i.e. comparing columns (1) and (3)). If these means are very different, in terms of characteristics in which we are interested, such as debt position, then the balanced panel is unrepresentative of the sample as a whole. However, looking at means in Table 1 for our variables, including our measures of debt and financial hardship, the proportions in columns (1) and (3) are very similar. Adverse 'shocks' (e.g. large arrears on mortgage or unsecured debt) do not appear disproportionately to be inducing exits from the balanced panel (that is, means in column (3) are not significantly higher than column (1)).

Table 1: Summary Statistics (standard deviation in parenthesis)

Variable	(1) 1999 balanced panel	(2) 2005 balanced panel	(3) 1999 cross- section	(4) 2005 cross- section
Number in each category	2135	2135	4639	3589
<i>Characteristics</i>				
Age	34.14 (7.41)	40.46 (7.46)	35.44 (8.51)	35.80 (8.99)
Couple	0.46 (0.50)	0.56 (0.50)	0.46 (0.50)	0.46 (0.50)
Number of dependent children	2.00 (1.01)	1.70 (1.12)	1.93 (1.03)	1.78 (0.97)
Highest qualification: GCSE D-G	0.06 (0.24)	0.09 (0.28)	0.06 (0.24)	0.07 (0.25)
Highest qualification: GCSE A-C	0.16 (0.37)	0.26 (0.44)	0.13 (0.34)	0.20 (0.40)
Highest qualification: A-Level	0.04 (0.19)	0.07 (0.25)	0.03 (0.17)	0.07 (0.25)
Highest qualification: 1 st Degree	0.02 (0.14)	0.05 (0.22)	0.02 (0.14)	0.05 (0.22)
Highest qualification: 2 nd Degree	0.01 (0.08)	0.02 (0.14)	0.01 (0.09)	0.02 (0.15)
Number of benefits	1.10 (1.04)	2.37 (1.29)	1.14 (1.06)	2.66 (1.16)
Respondent working	0.45 (0.50)	0.62 (0.48)	0.44 (0.50)	0.50 (0.50)
Total family weekly earnings (£)	110.50 (125.88)	196.67 (194.32)	103.23 (122.72)	106.53 (116.49)
Number of savings accounts	1.03 (1.13)	0.89 (1.16)	0.95 (1.11)	0.83 (1.17)
Home owner	0.40 (0.49)	0.51 (0.50)	0.39 (0.49)	0.42 (0.49)
<i>Debt arrangements</i>				
Number of utility (household) bills respondent is behind on	0.70 (1.17)	0.35 (0.83)	0.71 (1.16)	0.41 (0.91)
Number of credit card/catalogue repayments respondent is not managing	0.05 (0.24)	0.02 (0.17)	0.06 (0.26)	0.02 (0.18)
Number of borrowing repayments respondent is not managing	0.08 (0.29)	0.03 (0.18)	0.08 (0.28)	0.03 (0.20)
Number of debts the respondent has problems repaying.	0.94 (1.47)	0.45 (1.02)	0.96 (1.47)	0.53 (1.10)
Arrears>0	0.40 (0.49)	0.23 (0.42)	0.40 (0.49)	0.26 (0.44)

With all this in mind, Table 1 shows some of the key mean characteristics of the sample (we will refer to other characteristics in due course). The respondent for the

most part is either the lone parent, or the female partner within couples (i.e., is normally the woman). There were changes to the demographics and socio-economic characteristics of the balanced panel sample between 1999 and 2005. For example, in 1999 only 46% of this sample was in a couple, but by 2005 this proportion had increased to 56%. There has also been an increase in the proportion of respondents in the balanced panel in paid employment; 62% of respondents were in paid employment in 2005, compared to just 45% in 1999. Although there has been an increase in the average number of benefits the household receives this is due partly to an increase in the overall number of benefits available to households over this period. Finally the proportion of owner-occupiers in the balanced panel has increased; from 40% in 1999 to nearly 51% in 2005. In summary, the members of our balanced panel, as they aged, were more likely to be married, employed and homeowners than five years earlier.

7.3 Indicators of Over-indebtedness

As mentioned previously, FACS is a unique data set in that it asks households extensive questions on credit and debt, something that is not readily available in other UK surveys. FACS provides 'objective' (albeit self-reported) measures of indebtedness such as arrears on individual bills and financial debts (which we aggregate up to measure 'total arrears') but also measures others which relate to some of the potential indicators of 'over-indebtedness' discussed in Section 3 of this report, such as number of credit commitments and debt-income ratios. In this sub-section we examine the correlation between these various potential indicators and arrears. Summary statistics of our potential indicators of indebtedness are given in Table 2.

FACS asks subjective questions to households concerning their own perceptions as to whether the household has 'debt problems' or suffers from 'financial stress'. Respondents are asked: 'Taking everything together, which of these phrases best describes how you and your family are managing financially these days?' There then follows a spectrum of potential responses from 'manage very well' through to 'are in deep financial trouble'. As we can see in Table 2 in the 1999 cross-section (column 4) some 32% of families reported that they 'don't manage very well', or 'have some financial difficulties' or 'are in deep financial trouble', which we might interpret as respondents who are suffering from some degree of financial stress. Respondents are also asked: 'Thinking back over the past 12 months, how often would you say you have had trouble with debts that you found hard to repay?' As before there is an array of possible answers, but again in our 1999 cross-section 29% of respondents report trouble 'almost all the time' or 'quite often', which we identify as being families with persistent debt problems.

The 'mapping' of the observed (reported) financial position of the household into self-reported 'financial stress' or 'debt problems' may not be one-to-one since a given household may treat a given financial position as more or less 'stressful' depending on, for example, their general psychological well-being and specific propensities or outlook. Psychological well-being is potentially measurable (see Bridges and Disney, 2006), but individual-specific perceptions and responses to particular states are probably not observable to the researcher. However, as we saw from earlier sections of this report, these self-reported responses to more subjective questions are often perceived as an indicator of 'over-indebtedness'.

FACS also asks questions on financial hardship. Respondents are asked: 'How often, would you say, do you have money over at the end of a week?' and 'How often, would you say, do you run out of money before the end of the week?' Again we find that in 1999 a relatively high proportion of households report that they never/hardly ever have money over at the end of the week (69%). In contrast, only around 38% of households report that they always/mostly run out of money before the end of the week. On the other side, respondents are asked about sources of saving and access to credit arrangements, for example: 'Do you (or your partner) have any current accounts or savings accounts?' In our 1999 sample around 30% of households do not have a current account or savings account. However this falls to around 12% by 2005.

Finally other 'objective' indicators of over-indebtedness utilised in other studies can be constructed from the FACS data. These include:

- Number of credit commitments ≥ 4 (BERR indicator)¹¹
- Unsecured debt repayments = $>25\%$ of gross income (BERR indicator)
- Number of types of credit commitments (includes credit card, and charge card, store card)
- Number of types of loan arrangements (includes bank overdraft, bank loan, loan from finance company + 'other loans')
- Number of 'other' loans (includes finance company, moneylender, employer, friends/family)

¹¹ Here our definition of total credit commitments is the number of types of credit arrangements (credit card, charge card, store card) and debt instruments used (bank overdraft, bank loan, loan from a finance company, loan money lender or tallyman, loan from employer, loan from friend/family).

**Table 2: Summary Statistics: Indicators of Over-indebtedness
(standard deviation and number of observations (n) in parenthesis)**

Variable	(1) 1999 balanced panel	(2) 2005 balanced panel	(3) 1999 cross- section	(4) 2005 cross- section
Financial stress (=1 if financially stress, 0 otherwise)	0.30 (0.49, n=650)	0.14 (0.35; n=299)	0.32 (0.47; n=1500)	0.17 (0.37; n=598)
Debt trouble (= 1 if debt trouble, 0 otherwise)	0.28 (0.46, n=606)	0.18 (0.38; n=382)	0.29 (0.46; n=1364)	0.21 (0.41; n=752)
<i>Indicators of financial hardship/difficulty</i>				
Do you (or your partner) have any current accounts or savings accounts?' (1=No, 0=Yes)	0.29 (0.45, n=611)	0.12 (0.33; n=264)	0.31 (0.46; n=1438)	0.13 (0.34; n=482)
Never/hardly ever has money over at the end of the week	0.69 (0.46 n=1477)	0.47 (0.50; n=1009)	0.70 (0.49; n=3259)	0.49 (0.50; n=1752)
Always/mostly runs out of money before the end of the week	0.38 (0.49 n=811)	0.23 (0.42; n=489)	0.38 (0.46; n=1771)	0.25 (0.43; n=880)
Number of credit commitments = 4 or more	0.05 (0.22 n=108)	0.03 (0.16; n=55)	0.05 (0.49; n=212)	0.03 (0.17; n=103)
Unsecured debt repayments = >25% of gross income	N/A	0.01 (0.11; n=28)	N/A	0.01 (0.12; n=53)
Number of types of credit commitments	0.47 (0.72)	0.60 (0.72)	0.44 (0.70)	0.56 (0.71)
Number of types of loan arrangements	0.72 (0.81)	0.51 (0.70)	0.67 (0.80)	0.55 (0.73)
Number of 'other' loan arrangements	0.36 (0.56)	0.22 (0.46)	0.34 (0.55)	0.25 (0.49)

Table 3 examines what proportion of households with a particular 'indicator' of indebtedness is also in arrears. We do this for our 1999 and 2005 balanced sample. In summary, the table shows that there is a strong association between self-reported measures of debt problems (debt trouble and financial stress) and actual arrears. In 1999, for example, 70% of households in financial stress were in arrears. In contrast there is less of an association between arrears and having credit commitments of 4 or

more; 37% of household with 4 or more credit commitments were in arrears, compared to 40% of households who did not have more than 4 credit commitments.

Table 3: Relationship between 'Indicators' of Over-indebtedness and Arrears>0

	1999		2005	
	Arrears > 0		Arrears > 0	
	No	Yes	No	Yes
Financial stress (yes)	27.21	70.15	15.58	67.56
Debt trouble (yes)	29.23	68.15	13.63	65.18
Number of credit commitments ≥ 4	40.45	37.04	22.60	32.73
Unsecured debt repayments = $>25\%$ of gross income	N/A		21.88	96.43
Household does not have any current accounts or savings accounts?	33.01	58.43	20.84	37.12
Never/hardly ever has money over at the end of the week	24.92	47.12	11.28	35.78
Always/mostly runs out of money before the end of the week	30.59	56.10	14.82	49.90
Percentage with arrears >0				
Number of types of credit arrangements used household:				
0	49.43		30.40	
1	25.91		15.62	
2	17.90		9.84	
3	11.11		23.08	
Number of types of borrowing arrangements per household (including bank overdrafts, bank loan, loan from a finance company, lender, employer, friend):				
0	32.77		17.48	
1	44.93		26.72	
2	48.24		41.48	
3	67.21		56.52	
4	50.00		100.00	
Number of types 'other' borrowing arrangements per household (including loan from finance company, lender, employer, friend):				
0 (n=1441; 1716)	31.44		16.61	
1 (n=614;375)	55.37		44.53	
2 (n=75;42)	82.67		80.95	
3 (n=5;2)	100.00		100.00	

In contrast, the number of types of borrowing arrangements per household appears to have a stronger association with arrears; especially loans from 'other' sources. And in addition the number of unsecured debt repayments = >25% of gross income is also strongly related to arrears. In summary, Table 3 shows that arrears on debt are strongly associated with:

- A high probability of self-reported financial stress or 'debt trouble',
- 3 or more borrowing arrangements, 'formal' or 'informal',
- 2 or more loans from non-bank sources.

Arrears on debt are *not* particularly strongly associated with:

- Number of credit arrangements

7.4 Examining the financial position of the 1999-2005 balanced panel

This sub-section and the next examine in more detail the evolution of household indebtedness over time. They examine how the financial position of the household has changed over the last 5 years for two different samples of households. First, a balanced panel is utilised, taking a sample of low income households with children in 1999 and then examining what has happened to that sample's financial position after they have aged 5 years (i.e. to 2005). Since the cohort has aged, their finances will have been driven by both economic 'shocks' and also life-cycle factors – for example Table 1 showed that there were changes to the demographics and socio-economic characteristics of the balanced panel sample between 1999 and 2005 such as greater homeownership rates and fewer single parents. In the second approach, the results of which are described in Section 7.5, we take the sample of families in 1999 and compare them with a group with *similar average characteristics* in 2005, and examine how their finances compare. To avoid the 'narrative' becoming swamped by tables, the majority of subsequent tables are in the Appendix and referred to as appropriate. Finally, in most of these tables, the sample is split into those who are homeowners and those who are tenants. There seem to be strong differences in borrowing and credit arrangements across these two sub-samples, as well as other characteristics (such as income and employment status). It is also necessary to consider the different trends for those families which change status from tenant to owner or (less commonly), the reverse.

7.4.1 Credit and Debt usage

Tables 4 and 5 in the Appendix examine how the pattern of credit usage has changed between 1999 and 2005 for the balanced panel. A summary of the key results is as follows:

- There has been an increase in the proportion of respondents who reported using at least one type of credit card among those whose home ownership status remained the same between 1999 and 2005 (Table 4). By 2005 almost two-thirds of owners utilize credit, store and charge cards in the sample.
- The same increase is true of those who remained tenants, although usage remains low (Table 5) – only just over one quarter of tenants use these cards. Becoming a tenant having been an owner reduces usage of credit instruments with the reverse true among those who became homeowners over the period.
- There has been a corresponding reduction in the use of 'inferior' types of credit, such as catalogues/mail order schemes, across all groups. This may arise partly because the sampled households have had a chance to build up a credit history as they have aged and so obtained a better credit score, but also because home ownership and employment rates have increased (which improves an individual's credit score). However it may also have been the result of increased market penetration and better credit scoring methods over the period.

Turning to other forms of borrowing (see Appendix Tables 6 and 7), in summary:

- Between 1999 and 2005 there has been a fall in the use of other types of borrowing across most groups. The one exception to this is among those who become homeowners over the period where there was an increase in the use of bank overdrafts and bank loans other than mortgages (as well as, presumably, mortgages).
- Use of borrowing (excluding mortgages) has been sharp among those who have remained owners (down from 56% of the sample to 36%) than among tenants (down from 51% to 42%).
- Particularly sharp falls are noted in the use of moneylenders and in loans from finance companies, which is to be expected as the panel ages and, on average, acquires (better) credit scores. Use of informal sources ('family and friends') also drops sharply, except among those who remain, or become, tenants, probably for the same reasons.

7.4.2 Household 'debt' problems

The qualitative evidence presented in Section 6 suggested that 'over-indebtedness' is generally associated with the presence of arrears and multiple debts and also that financial stress impacts on the socio-economic (and psychological) well-being of households. The FACS also asks a series of questions about household 'debt' problems. This includes the extent to which families are up-to-date with their repayments (or in the case of credit cards, charge cards and store cards the extent to which they are able to meet their minimum repayments), and the amount they are behind on each repayment. The evidence from FACS suggests that the overall incidence of debt problems of this type is relatively low (Appendix Tables 8 and 9) and, significantly, that among all groups there has been a fall in the proportion of households reporting that they are behind with their repayments as the sample has aged 5 years. For example, in 1999 3% of owners were falling behind on loan payments and other credit arrangements but this proportion had fallen to little over 1% in 2005. Debt problems were however twice as prevalent among tenants, with arrears on rent among 17% of tenants in 1999, falling to 10% in 2005.

Of course, problems of arrears arise only if the family has been able to access a particular service or credit arrangement in the first place. For completeness, therefore, Tables 10 and 11 in the Appendix depict the fraction of arrears for a particular credit arrangement or loan as a proportion of households that report that they have that particular credit arrangement/loan. Hence the incidence of debt problems increases (especially among tenants), it is still relatively low and declining as the sample aged. For example, in 1999, 9% of tenants were behind on at least one loan but, of those who had a loan, the proportion was 19%. But both proportions had more than halved by 2005. It should however be noted that these observations take place in a rather more economic benign environment than has been the case since 2007. Overall, however, these results confirm the findings on other comparable data sets (e.g. MORI, 2004) that fail to find large-scale arrears.

In summary:

- Self-reported arrears fell between 1999 and 2005 for all household types, except for those who switched from ownership to tenancy.
- Arrears on loans are significantly more likely among tenants than owners.

7.4.3 Utility costs and other household bills

Notwithstanding the prevalence of various forms of borrowing and financial debt, the most common form of arrears among our sample of families arises from arrears on

utility bills (including, gas, electricity, water, and council tax). Over 36% of low income families with children in 1999 were behind with bills for various household utilities and services, although this declined to 22% by 2005. Tables 12 and 13 in the Appendix look at the percentage of households who were behind with their repayments by type of household. The greatest fall in the proportion of households that were unable to meet their repayments was among those who become home owners by 2005 – this is not surprising insofar as access to mortgages will have in part relied on evidence that the household did not have outstanding or potential arrears. Likewise, it is also not surprising to find that becoming a tenant was associated with difficulties with repayments. Among the utility bills, electricity bills are less prone to arrears, but this is likely to be explained by the presence of pre-payment electricity meters, especially for tenants and low-income families.

7.5 The Financial Position of the 1999-2005 Matched Sample

The results in the previous sub-section reflected a combination of 'life cycle' and 'time' effects. It is possible to separate these two effects by constructing a matched sample for 2005 with 1999 characteristics; we are then left with comparison across time which abstracts from life cycle effects. This is done by deflating net incomes in the 2005 sample by the Retail Price Index and then applying the following 1999 selection criteria to FACS 2005 to obtain a sample similar in characteristics to the 1999 sample. Namely:

"Lone parents whatever their employment or financial situation; Couples with children who work less than 16 hours a week, or where no-one is in paid work; Couples who receive family credit; Working couples whose income is up to 35% above the point at which they would have been eligible for family credit."

This was the criterion utilised to construct the original 1999 SOLIF sample, so by doing this, a matched sub-sample is constructed from the 2005 sample with the same eligibility criterion. Note that the matched 2005 sample (and therefore the comparison between 1999 and 2005) will differ from the 2005 sample in the balanced panel for three reasons. First, the matched sample will exclude couples in 2005 whose income or employment status removes them from the 1999 eligibility criterion. Second, it will include couples and lone parents who, in 2005, are younger than the lowest age among the 2005 balanced panel (remembering that the original 1999 sample will have aged by 2005). Third, it might include a few couples whose incomes in 1999 would have been too high for inclusion in the sample but whose income had dropped by 2005 enough to render them eligible for inclusion. The rationale for this matched sample is that it allows us to look at a group in 2005 with similar characteristics to those of 1999 (see column 4 of Table 1) but not necessarily the same families.

7.5.1 Credit and Debt usage

Here we find similar results as before (see Appendix: Tables 14 and 15). Overall there has been an increase in the use of credit cards, but a reduction in the use of 'inferior' types of credit such as catalogues & mail order schemes, and financial loans. So, for example, the use of credit cards has risen among home-owning couples from 50.39% in 1999 to 61.85% in 2005, and among tenant couples from 18% to 28.15%. Note, however, that the use of money-lenders and informal credit does not decline as rapidly as in the balanced panel (compare these tables with Appendix: Tables 6 and 7). This, we surmise, is because we no longer capture the ageing of the balanced panel, and the improved credit scores that arise from longer tenure in the labour market and in access to the financial market.

7.5.2 Household 'debt' problems

With our 'matched' cross-sections, we see a similar story of declining arrears to the balanced panel in Appendix Table 16, although tenants again seem to be at greater risk of repayment difficulties than owners; 18.6% of tenants reported rent arrears in 1999, but this had almost halved to 9.8% in 2005. This is a slightly faster fall than in the 'balanced panel' for owners (if not tenants), suggesting that it is the rather benign economic conditions, rather than the cohort ageing which lies behind this fall in arrears over time.

7.5.3 Utility costs and other household bills

In this sub-section, we again examine arrears on household bills, but here again for the cross-section rather than the panel (Appendix Table 17). A comparison with Tables 12 and 13 suggests similar levels of arrears in 1999 but, if anything, the decline in the probability of arrears is somewhat faster than for the balanced panel. Nevertheless, it is striking that, for example, 44% of tenant couples and 50% of single tenants reported being behind with at least one utility bill in 1999, although these proportions fall significantly by 2005.

7.5.4 Summary

This analysis of FACS using both matching a balanced panel, and examining matched cross sections, gives several clear conclusions:

- Owners have access to more credit market instruments than tenants, but the latter are more exposed to problems of repayment.

- Increased use of credit cards among all groups, mostly at the *expense* of other credit arrangements, is the key development of the early 2000s.
- Rates of arrears and repayment difficulties on credit arrangements are not that large in the sample over this period, with some exceptions (for example, missed payments on finance loans among tenants in 1999).
- In the 'balanced panel', use of moneylenders and informal credit arrangements declines as the sample ages, especially among owners and those who become owners. This decline is not as great in the 'matched sample'. We hypothesise that this reflects longer attachment to the labour market and enhanced access to financial markets with age in the balanced panel, so improving credit scores and thus access to 'better' credit. This trend is, for equally obvious reasons, less pervasive among tenants who continue to rely on both formal and informal credit arrangements as they age.
- Arrears and repayment difficulties on household bills such as utility bills and council tax are much more prevalent, especially among tenants. Low income families appear to have greater difficulty in paying such bills, or else are prepared to try to address arrears on other credit arrangements before addressing these repayment problems. This may be because they regard utility providers and local authorities as a 'softer touch' since they are often unable to implement sanctions (for example cutting off water or power supplies). Alternatively, households may regard maintaining payments on, for example mortgages and car loans, as more 'essential' than paying council bills given their direct relevance to their day-to-day living arrangements (this suggestion was put to us by a sub-prime lender).
- There is clear evidence, whether we use the 'balanced panel' or the comparison of cross-sections that the incidence of repayment difficulties and arrears fell between 1999 and 2005. Since we observe this with both methods of comparison, we would argue that this is not primarily an 'age/life cycle effect' (i.e. as the 1999 cohort ages, it tends to (re)marry, buy a house, have an increasing income and so reduces its initial arrears and debt) but rather a reflection of the increasingly benign economic conditions until the mid-2000s. The post 'credit crunch' picture may therefore look rather different, as suggested by our qualitative evidence from debt / money advice agencies which suggests that economic downturn raises problems such as adverse household shocks and difficulties in refinancing costly loans among 'prime' households as well as the more traditional 'at risk' group of low income families represented here.

7.6 FACS: Multivariate Analysis

In the next part of the report we use the *individual* data (as opposed to sample proportions) to examine the *persistence* of perceived debt problems, financial stress and arrears more generally using year-to-year data on individual households. We then investigate the *drivers* of self-reported debt problems, financial stress and arrears. Since these subjective responses to given 'objective' circumstances may be person-specific, we also exploit panel data methods to difference out the 'person-specific effect', so that we are left with a statistical model in which changes in circumstances induce changes in self-perceived debt problems, financial stress and arrears.

It is striking, however, as we shall demonstrate, that a large component of the association between objective circumstances and self-reported over-indebtedness (i.e., debt problems, financial stress) appears to be driven by person-specific effects. This implies that different households react differently to given financial circumstances, and that how households perceive 'over-indebtedness' is in large part related to how a particular respondent interprets (and responds to) those circumstances.

7.6.1 Persistence of household 'over-indebtedness' – both self-reported and arrears-based measures

Tables 18 and 19 in the Appendix examine the persistence of responses to self-reported questions concerning indebtedness and financial stress respectively. To interpret the general questions (for example, from Table 18); among individuals who responded that they had 'debt problems' in 2005, we ask: how strong is the probability that they also reported having 'debt problems' in 2003, 2003 etc? The large coefficient on 2004 suggests a strong and significant probability that the individual also reported debt problems in that year, with (as expected) significant but diminishing coefficients in the years back to 2001. The first column examines this persistence for the sampled households in 2005 which can be traced back to the original low income sample from 1999; the next column repeats the exercise using the broader post-2001 sample, which included higher income couples with children. The coefficients are similar across the two samples. This suggests that debt persistence is not simply confined to the lowest income groups. Finally in each table, columns 3, 4 and 5 repeat the exercise using the respective bases of 2004, 2003 and 2002 to check that we are not picking up some persistence parameter that is specific to 2005. Table 19 in the Appendix conducts the exercise for 'financial problems' rather than 'debt problems' but derives similar results.

This persistence could be 'driven' by two factors: first that individuals who are psychologically disposed to see their financial circumstances as problematic will do so year after year, or second, that the underlying financial conditions are indeed persistent and that families find it hard to escape adverse 'events'. The latter hypothesis can be tested by examining the persistence of various measures of arrears, either having arrears of a particular form, or of a particular value.

The persistence of the sum of reported arrears (as calculated by the researcher) is examined in Appendix Table 20. For example, Panel B of the table can be interpreted as saying that a respondent who reports that they are in arrears in 2005 has a 56% probability that they reported arrears in 2004 (limitations on the question limit the capacity to 'track' longer term lagged persistence in the value of arrears as opposed to the existence of arrears). The striking aspect of this table, in comparison with Tables 18 and 19, is that arrears are at least as persistent as self-reported 'over-indebtedness' over one year, although they tend to persist for less time. Whilst, as we show shortly, individual-specific perceptions of 'over-indebtedness' do indeed differ, and these differential perceptions are an important explanation of survey responses, persistent self-reported debts do in the large part drive from 'objective' factors such as persistent arrears on particular bills.

7.6.2 The determinants of self-reported 'over-indebtedness'

In this sub-section we examine the correlates of self-reported over-indebtedness. We use two measures of self-reported 'over-indebtedness' – self-reported 'debt problems' and self-reported 'financial stress'. We pool the observations across two samples: all observations of the original 1999 sample to 2005, and all observations of the augmented 2001 sample, also to 2005. Our initial pooled estimates (Appendix Table 21) reflect a combination of financial and other household circumstances and individual household perceptions that a 'given' situation represents 'over-indebtedness'. We then (Appendix Table 22) utilise a panel-data method – the conditional logit – which conditions out person-specific effects (if we assume these individual measures to be constant over time), and then re-estimate the equations. The resulting estimates can then be interpreted as showing how *changes* in personal circumstances (e.g. growing household arrears) can induce a change in the household's perception as to whether it is 'overindebted', controlling for the person-specific 'effect'.¹²

¹² The logit model or *logistic regression* is a model used for prediction of the probability of occurrence of an event by fitting data to a logistic curve, calculated by maximum likelihood. In a pooled regression where we utilise observations of the response of an individual to changing circumstances over time (as in Table 21), the parameter estimates reflect a combination of the changing circumstances themselves and the individual-

Table 21 provides the pooled 'levels' regression which makes no attempt to control for individual-specific responses to given household circumstances. It shows that:

- single parents are more likely to report that they have 'debt problems' or suffer from 'financial stress'; the 'marginal effect' tells us that a respondent in a couple is more than 2% less likely to report 'debt problems' and more than 1% less likely to report 'financial stress'.
- Those from a white/British background, who are working or who have a partner working (if appropriate), homeowners who own their home outright and households on higher incomes are all also less likely to report these subjective measures of 'over-indebtedness', as intuition would suggest. The magnitudes of the 'marginal effects' on these variables can be interpreted in similar fashion to the couple/lone parent example above.
- A variety of financial and indebtedness variables are associated with a higher probability of reporting 'over-indebtedness'.
- Having financial loans, being behind on payments and having arrears on debt (but only above a certain level) are all significantly associated with perceptions of 'over-indebtedness' – these findings do not support the view that people are unaware of high debt levels when it comes to self-evaluating their financial position.
- Ill-health and, especially, low psychological well-being, are also associated with a perception of 'over-indebtedness' (the causation potentially runs both ways – see Bridges and Disney, 2006).

We conclude from this that perceptions by household of 'over-indebtedness' are fairly pervasive and are associated with the kinds of economic and financial circumstances that we might expect. What Table 21 does not tell us is which of two 'stories' is 'correct': whether adverse 'events' such as increases in arrears, changing employment status etc, cause households to change their perception, or whether these associations are largely driven by fixed individual-specific perceptions. This is resolved in Table 21 where we estimate a 'fixed effects' logistic regression (the conditional logit) which effectively 'differences out' these individual-specific perceptions, and which can be

specific response to those circumstances. In contrast, in the 'fixed effects' (here 'conditional logit') model utilised in Table 22, we assume that the individual-specific responses to a given change in household circumstances are fixed over time. Under this restriction, we can interpret the coefficients on particular events (e.g. a change in employment or family circumstances) directly as an average behavioural response (e.g. a change in indebtedness).

interpreted as investigating what *changes* in household circumstances induce households to come to believe that they are 'overindebted'.

Table 22 in the Appendix suggests that changing household circumstances which induce the household to be *more* likely to perceive that it has become 'overindebted' include:

- The divorce or death of a partner
- A fall in income (although the relationship is non-linear).

Changing household circumstances which induce the household to be *less* likely to perceive that it is 'overindebted' include:

- (weakly), a partner finding employment
- (weakly) paying off a mortgage
- More dependent children (perhaps households which add children do not have time to feel financial stress!).

Changes in ill-health status (as opposed to the general 'level' of health) appear to have no effect. Changes in the respondent's own employment status (such as entering unemployment or inactivity) also have no direct effect, although the impact may be felt through the change in income.

The variables measuring financial circumstances are interesting. Indicators that the household engages more with the financial market, such as has access to a greater number of credit arrangements, or saving accounts, seem to be associated with a lower perception of 'over-indebtedness' – it is not engagement with the financial market that induces perceived financial insecurity. However perceived 'over-indebtedness' is more likely if the household increases its number of loan arrangements or falls behind with a greater number of loans. Once we control for loan arrangements and difficulties with loan repayments, changes in the overall value of arrears (which is calculated by the researchers from individual reported arrears) does not appear to affect the likelihood of reporting 'debt problems' although it is likely to increase the probability that the household will report 'financial stress'.

7.6.3 *The determinants of arrears*

Similar methods are utilised to examine our other key measure of 'over-indebtedness': a household's incidence of arrears (=1 if arrears, 0 otherwise) in order to look for evidence on the 'drivers' of observed changes in arrears. Observations are again pooled across all the years for the two samples (the 1999 sample and the augmented 2001 sample).

In the first approach (Table 23 in the Appendix), associations between arrears and certain personal characteristics and household circumstances are examined; the second approach (Table 24) examines how *changes* in circumstances affect the probability of the family being in arrears.

Table 23 in the Appendix provides the coefficients from the pooled regression analysis of the relationship between arrears and family characteristics and circumstances. It shows that:

- Older respondents, and male respondents, are significantly less likely to experience arrears.
- Those from a white/British background are also significantly less likely to have arrears, as are more educated respondents. Although ethnic minorities are more likely to be in arrears, they appear to have access to fewer credit/borrowing arrangements than whites (but are more likely to make use of loans from friends/family).
- Homeowners are also less likely to have arrears. For homeowners, the 'marginal effect' indicates a 10% lower probability of having arrears on debt for the poorer 1999 sample and an 8% lower probability for the augmented 2001 sample.
- The regression analysis includes dummy variables to try and pick up the effect of both current status and changes in status of being in a couple/lone parent or being at work. While current couple and work status are insignificant (or weakly significant) on their own, changes of individuals between these states have an impact on current arrears. Becoming a lone parent since last period increases the likelihood of being in arrears. Recent changes in work status (either becoming unemployed *or* obtaining a job) also have a positive effect on the probability of being currently in arrears. This suggests that changing work status – whether in or out of work – leads to changes in income, which in turn impacts on the probability of being in arrears.
- An interesting finding is that, although being unemployed in the past two years has no significant impact on arrears, being unemployed interacting with the total number of credit commitments has a positive effect on the probability of being in arrears. In other words, the sub-sample of individuals who have been unemployed for 2 periods *and* has a large number of credit commitments is more likely to be in arrears. This suggests that low income/unemployment does not of itself generate arrears, but that the combination of high financial commitments with certain labour market states is risky.

- Low psychological well-being is associated with arrears, although ill-health is insignificant.
- An array of financial and indebtedness variables are also, not surprisingly, associated with a higher incidence of arrears. The number of saving accounts, for example, has a negative effect on the incidence of arrears, while the number of credit/borrowing commitments has a positive effect on the incidence of arrears

Table 24 in the Appendix again estimates a 'fixed effects' logistic regression to examine what *changes* in circumstances cause a household to move into or out of arrears. In summary, the following changes in household circumstances have a significant impact on the probability of a household moving out of arrears:

- Becoming a home owner (either outright or with a mortgage).
- An increase in the number of saving accounts.
- Obtaining a current account.
- Time effects (over the period 1999 to 2005) have tended to reduce the incidence of self-reported arrears.

Changing household circumstances which induce the household to move *into* arrears include:

- Becoming employed in t-1.
- Having moved out of a couple 2 years before to becoming a lone parent last year.
- An increase in the number of credit commitments.
- An increase in housing costs (1999 sample).
- Never/hardly ever having any money left over at the end of the week, and frequently running out of money before the end of the week
- Obtaining a prepayment electricity meter.

Changes in ill-health status and becoming depressed are also associated with an increasing probability of being in arrears.

Among the factors that do not appear to have a direct impact on change in arrears, in this regression analysis, are changes in current income, and loss of employment. However, the 'life cycle' model of saving and indebtedness discussed in Section 4 of this report does not suggest that income changes necessarily impact on indebtedness – it is adverse *shocks* to income, possibly coupled with high existing debt commitments, which cause problems. Some evidence for this arises from the positive coefficients on 'number of credit commitments' (which, in this specification in changes in

variables, should be interpreted as an *increasing* number of commitments) combined with the positive coefficient on 'number of credit commitments (interacted with) having been unemployed in the previous two periods'. Employment status *does* matter for the family, but only in conjunction with an exposed debt position. In addition, dissolution or creation of a partnership (such as marriage or divorce) also often has a direct impact on arrears.

In summary, the econometric results on the probability that a family is in arrears, or likely to enter or leave arrears, provides limited support for the qualitative evidence on the drivers of over-indebtedness described in Section 6. Levels of arrears are indeed associated with low income relative to credit commitments, poor health, tenancy, lack of 'buffer-stock' saving and the like, although the risk also differs across families even with quite similar observed characteristics.

The determinants of moving in and out of arrears are harder to identify from the analysis. This may be because *anticipated* changes in incomes and even in work status need not trigger adverse shocks to the financial position of the household, as suggested by the 'model' in Section 4. Conversely events that are likely to be unanticipated in some families – such as marital dissolution – do seem to have an impact on arrears. There is also evidence that it is the *interaction* between the financial position of the household and labour market changes that is important – for example, in both Tables 23 and 24, households which report having been unemployed for the last two years are more likely to be in arrears when their credit commitments increase; indeed an increase in credit commitments also raises the probability of the household having arrears irrespective of its employment status. Becoming a homeowner does not increase either the probability of arrears or the perception of 'debt problems' (this should not be too surprising) but a rise in housing costs conditional on housing tenure does have an adverse effect. Altogether, the results tentatively suggest that it is a combination of the state of household finances (exposure in the form of number of credit commitments) and the personal experience and expertise of the household that determine how adverse shocks to the household's economic status or family circumstances will impinge on its debt position in practice.

8. The British Household Panel Survey

8.1 Patterns of debt by age and whether household has children

The statistical analysis of household indebtedness described in Section 7 using the Families and Children Survey (FACS) is limited to households with dependent children. The advantage of FACS is that it includes high-quality, detailed information on

household finances (including incomes, assets and debts) together with information on the types and values of arrears owed by the household together with self-reported indicators of financial distress. No other U.K. household-level data set provides information on both household finances and financial distress in this detail.

However, by utilising a dataset containing exclusively families with children, the analysis is necessarily restricted to a subset of the population. It may be the case that older households without dependent children exhibit high levels of debt and arrears, or those younger households in a similar life-cycle position but without children report debt problems. These households are omitted from the analysis by the sampling frame of the Families and Children Survey.

To gauge whether families with children are an appropriate group for an analysis of household indebtedness, and whether focusing on that subset omits other important at-risk groups, this section examines the distribution of indebtedness in a representative household survey, the British Household Panel Survey (BHPS). As described in Section 7.1, the BHPS is a representative survey of a sample of U.K. households with no selection based on relationship status or dependent children status. Hence it includes families without children and older households without dependent children. The survey also contains details on household finances (incomes, assets and debts) in three waves, 1995, 2000 and 2005. The BHPS does not contain any information on financial arrears and minimal information of self-reported debt problems and so is not appropriate for a comprehensive analysis of debt and arrears.

Two figures in the Appendix describe the distribution of household indebtedness in the BHPS. Figure A1 plots the distribution of total household debt by age across households in the BHPS in 1995, 2000 and 2005, with all values adjusted to 2000 prices using the Retail Prices Index. Total household debt is the sum of all outstanding balances on mortgages and consumer credit. It is evident from the figure that debt levels vary considerably over the life-cycle, with the distribution of household indebtedness centred upon households of working age (in the 20-60 age bracket and, especially, the 30-39 age bracket). Households aged under 20 exhibit very low levels of indebtedness, as do households aged in the 60-69 and 70-79 age bracket. This pattern is evident in all three available waves of data. Hence the exclusion of older households without dependent children from FACS *prima facie* does not appear to omit an at-risk group for over-indebtedness.

Figure A2 in the Appendix illustrates the distribution of household indebtedness by dependent children status, using the BHPS year 2000 wave (the FACS data used in the analysis spans 1999 to 2005, so BHPS 2000 was used for comparison). Across all age levels, households with children exhibit higher levels of indebtedness compared to

households with no dependent children. The difference is more marked within particular age ranges – the 30-39 and 60-69 age brackets stand-out in this respect. This distribution of indebtedness by age group suggests that families with children might be considered a group more at-risk of overindebtedness compared to families without children.

8.2 Debt-to-income ratios and mortgage arrears

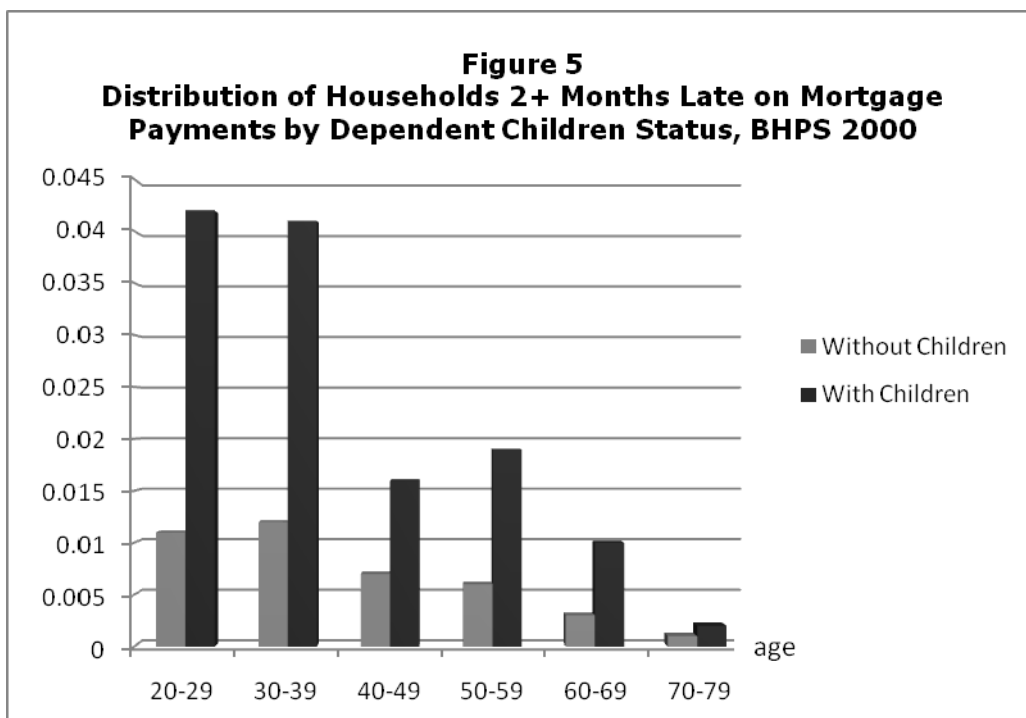
The preceding two illustrations have been based on measures of total indebtedness, which most likely are not good indicators of the risk of being 'over-indebted'. Therefore, to consider a measure of indebtedness related to ability of repay, as discussed in Section 3 of the report, Figure A3 in the Appendix plots the distribution of debt-to-income ratios across age groups by dependent children status. The debt-to-income ratio is calculated by dividing the total value of outstanding household debt by the total value of household incomes (including benefit income). Figure A3 illustrates that debt-to-income ratios are greater among households with dependent children across all age groups, and higher among younger households of working age. A similar pattern emerges in the debt-service-to-income relationship illustrated in Figure A4 in the Appendix.

One suggested indicator of 'overindebtedness' is if a household spends more than 50% of its income on servicing its debt. In the BHPS we do not observe the cost of servicing non-mortgage debt, but we do observe the cost of monthly mortgage payments. Therefore, it is possible to calculate the proportion of monthly income which households devote to mortgage payments. Table 25 summarises the number of households who spend at least 50% of their monthly income on mortgage repayments. As is evident, very few households fall into this group compared to the size of the BBHPS sample. It is also evident that the vast majority of households spending at least 50% of their income on mortgage payments have dependent children and fall into the lower age brackets.

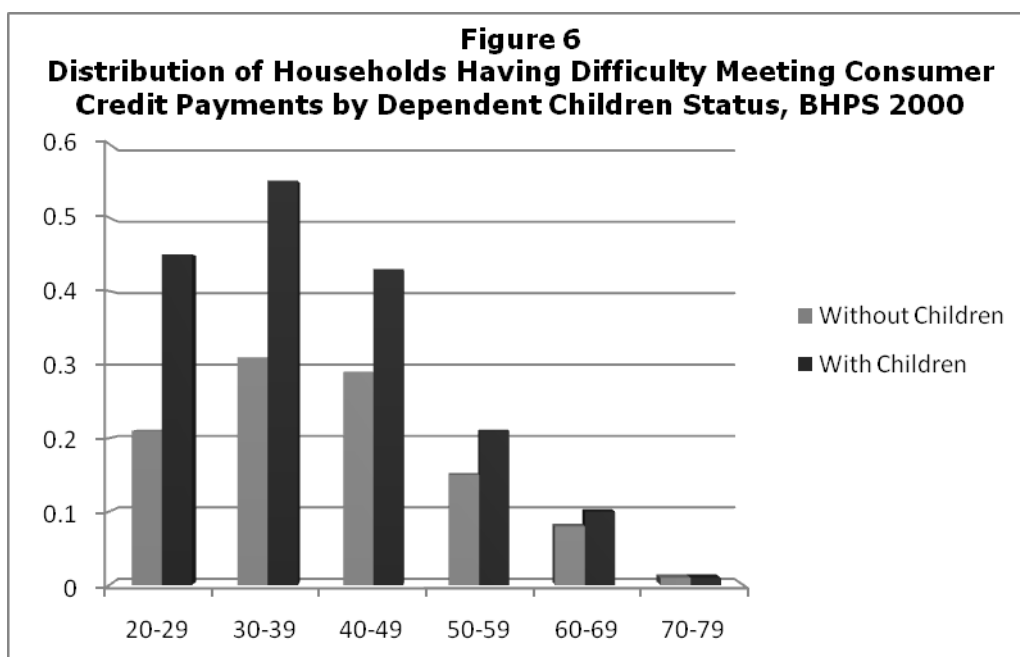
Table 25
Households Spending At Least 50%
Monthly Income on Mortgage Payments

50% income spent on mortgage			Total No. Households in BHPS Sample
Age	Without Children	With Children	
20-29	5	39	984
30-39	7	53	952
40-49	2	27	805
50-59	0	3	644
60-69	0	1	549

Finally, although the BHPS does not contain detailed information on arrears and financial difficulty, the questionnaire to respondents does include some questions relating to overindebtedness. Respondents are asked about their ability to repay their mortgage, whether mortgage payments required cutbacks in spending or additional borrowing, and whether they are two months or more in arrears on their mortgage payments. Figure 5 illustrates the distribution of arrears by age and dependent children status. It is very evident from the illustration that very few households are two or more months in arrears on mortgage payments (the maximum proportion is just over 4% of a particular age-children status group), and that the likelihood of being in arrears is much higher for households with dependent children who are in the younger age bracket – in fact, almost wholly concentrated among families with children headed by a 20-39 year old.



Respondents to the BHPS are also asked whether they are having difficulty meeting consumer credit payments. The question asked does not distinguish between individual credit commitments and is asked of consumer credit as a whole. Figure 6 illustrates the distribution of self-reported difficulty by age and dependent children status. As with mortgage arrears, households reporting difficulty making repayments are concentrated in the lower age bracket and the with children category. It is notable that across all age brackets approximately ten times more households report difficulties meeting consumer credit payments than report 'two month plus' arrears on mortgage payments. This confirms the literature surveyed in Section 5 that families are much more likely to report 'difficulties' in paying off loans than are actually observed to be behind with their payments at any point in time.



This analysis of the distribution of household indebtedness and household indebtedness relative across age groups and dependent children status indicates that young families with children are at most at-risk group for the BHPS measures of over-indebtedness. BHPS data indicates that other groups do not exhibit the same levels of total indebtedness or same exposure of indebtedness relative to income compared to this group. Younger households with dependent children hold greater debts, spend a larger proportion of their income on debt repayments and dominate the group of households spending in excess of 50% of their income on mortgage payments. These households also exhibit higher rates of mortgage arrears and self-reported difficulties in meeting payments on consumer credit commitments. This confirm that the analysis of

FACS – which samples such groups – is an appropriate means to understand the extent and incidence of over-indebtedness.

Appendix: additional Tables

Table 4: 1999-2005 Balanced Panel (Owners in 1999)
Percentage of Households who have Purchased Items on Credit

	1999 Owner	2005 Owner	2005 Tenant
Currently using at least one of the following forms of credit cards:			
Credit Cards (e.g., Access, Visa)	60.05	65.91	44.26
Charge Cards (e.g., American Express, Diners Club)	51.05	60.25	39.34
Shop or store cards (e.g., Marks and Spencer, John Lewis)	3.27	1.64	1.64
Uses Catalogues/Mail Order Schemes	30.72	25.91	13.11
Number of types of credit used per household:			
0	48.71	29.31	21.31
1	39.95	34.09	55.74
≥2	36.80	45.03	36.07
<i>Base</i>	23.25	20.88	8.20
	856	795	61

Table 5: 1999-2005 Balanced Panel (Tenants in 1999)
Percentage of Households who have Purchased Items on Credit

	1999 Tenant	2005 Owner	2005 Tenant
Currently using at least one of the following forms of credit cards:			
Credit Cards (e.g., Access, Visa)	17.75	60.94	26.99
Charge Cards (e.g., American Express, Diners Club)	12.67	56.90	23.63
Shop or store cards (e.g., Marks and Spencer, John Lewis)	0.31	2.02	0.81
Uses Catalogues/Mail Order Schemes	8.76	15.15	8.76
Number of types of credit used per Household:			
0	57.31	37.37	37.37
1	82.25	39.06	73.01
≥2	14.00	48.48	20.98
<i>Base</i>	3.75	12.45	6.00
	1,279	297	982

Table 6: 1999-2005 Balanced Panel (Owners in 1999)
Percentage of Households who have other Forms of Borrowing

	1999 Owner	2005 Owner	2005 Tenant
Is currently using at least one of the following forms of borrowing:	55.72	37.48	36.07
- Bank Overdraft	35.75	23.14	22.95
- Bank Loan (excluding mortgage)	16.59	10.44	6.56
- Loan from a Finance Company	13.43	4.53	4.92
- Loan from a Money Lender or 'Tally Man'	0.93	0.63	0.00
- Loan, or Advance on Wages from Employer	0.82	0.13	1.64
- Loan from a Friend/Family	12.15	7.04	11.48
Percentage number of loans per household (including bank overdrafts):			
0	44.28	62.52	63.93
1	35.63	29.81	26.23
2	16.59	6.92	8.20
3	3.15	0.75	1.64
4	0.35	-	-
<i>Base</i>	<i>856</i>	<i>795</i>	<i>61</i>

Table 7: 1999-2005 Balanced Panel (Tenants in 1999)
Percentage of Households who have other Forms of Borrowing

	1999 Tenant	2005 Owner	2005 Tenant
Is currently using at least one of the following forms of borrowing:	50.90	45.12	42.46
- Bank Overdraft	16.18	30.98	15.27
- Bank Loan (excluding mortgage)	8.76	14.14	6.62
- Loan from a Finance Company	15.01	8.42	8.86
- Loan from a Money Lender or 'Tally Man'	7.66	1.68	3.97
- Loan, or Advance on Wages from Employer	1.02	0.34	0.71
- Loan from a Friend/Family	18.92	7.07	17.41
Percentage number of loans per household (including bank overdrafts):			
0	49.10	54.88	57.54
1	37.06	29.97	33.40
2	11.10	12.79	7.94
3	2.66	2.36	0.92
4	0.08	-	0.20
<i>Base</i>	<i>1,279</i>	<i>297</i>	<i>982</i>

Table 8: 1999-2005 Balanced Panel (Owners in 1999)
Percentage of Families who were behind with their Repayments

	1999 Owner	2005 Owner	2005 Tenant
Currently behind with at least one credit arrangement.	3.04	1.13	1.64
Currently behind with at least one loan	3.39	1.13	3.28
Has mortgage/rent arrears	5.96	2.26	6.56
<i>Base</i>	856	795	61

Table 9: 1999-2005 Balanced Panel (Tenants in 1999)
Percentage of Families who were behind with their Repayments

	1999 Tenant	2005 Owner	2005 Tenant
Currently behind with at least one credit arrangement.	6.25	1.35	2.24
Currently behind with at least one loan.	9.77	1.01	4.07
Has mortgage/rent arrears	16.89	2.69	10.59
<i>Base</i>	1,279	297	982

Table 10: 1999-2005 Balanced Panel (Owners in 1999)
Percentage of Families who were behind with their Repayments
– conditional on having loan/credit arrangement

	1999 Owner	2005 Owner	2005 Tenant
Currently behind with at least one credit arrangement (base: those that have at least 1 credit arrangement)	3.31	1.34	3.70
Currently behind with at least one loan (base: those that have at least 1 borrowing arrangement)	6.08	3.02	9.09

Table 11: 1999-2005 Balanced Panel (Tenants in 1999)
Percentage of Families who were behind with their Repayments
– conditional on having loan/credit arrangement

	1999 Tenant	2005 Owner	2005 Tenant
Currently behind with at least one credit arrangement (base: those that have at least 1 credit arrangement)	7.93	2.21	5.28
Currently behind with at least one loan ((base: those that have at least 1 borrowing arrangement)	19.2	2.24	9.35

Table 12: 1999-2005 Balanced Panel (Owners in 1999)
Utility Bills: Percentage of Families who were behind with their Repayments

	1999 Owner	2005 Owner	2005 Tenant
Has a prepayment electricity meter:	15.42	10.44	29.51
Currently behind with at least one utility bill:	17.41	6.67	24.59
<i>Unable to repay the following bills:</i>			
Electricity Bill	3.27	2.01	3.28
Gas Bill	5.37	1.01	8.20
Other Fuel Bills	0.12	0.13	0.00
Council Tax	9.93	3.90	9.84
Insurance Policies	0.82	0.00	0.00
Telephone Bills	4.56	1.64	8.20
Television/Video Rental or HP	0.12	0.25	1.64
Other HP Payments	1.75	0.38	0.00
Water Rates	5.02	2.14	9.84
Number of Utility Debts:			
0	82.59	93.33	75.41
1	9.11	4.53	16.39
2	5.02	0.75	1.64
3	1.99	0.63	4.92
4	0.82	0.38	1.64
5	0.35	0.25	-
6	-	0.13	-
7	0.12	-	-
<i>Base</i>	<i>856</i>	<i>795</i>	<i>61</i>

Table 13: 1999-2005 Balanced Panel (Tenants in 1999)
Utility bills: Percentage of Families who were behind with their Repayments

	1999 Tenant	2005 Owner	2005 Tenant
Has a prepayment electricity meter:	61.38	25.93	59.98
Currently behind with at least one utility bill:	48.40	9.43	33.50
<i>Unable to repay the following bills:</i>			
Electricity Bill	7.74	2.69	6.42
Gas Bill	17.20	3.03	7.23
Other Fuel Bills	0.47	0.00	0.10
Council Tax	19.62	5.05	13.54
Insurance Policies	1.09	0.34	0.31
Telephone Bills	18.14	2.69	9.88
Television/Video Rental or HP	4.22	0.00	1.32
Other HP Payments	6.65	1.01	5.19
Water Rates	20.25	2.36	14.15
Number of Utility Debts:			
0	51.60	90.57	66.50
1	22.75	4.71	17.72
2	12.82	2.36	9.67
3	7.51	1.68	4.07
4	3.05	0.67	1.43
5	1.56	-	0.51
6	0.47	-	0.10
7	0.23	-	-
<i>Base</i>	<i>1,279</i>	<i>297</i>	<i>982</i>

**Table 14: 1999 and 2005 Matched Sample
Percentage of Households who have Purchased Items on Credit**

	Home Owning Couples 1999/2005	Tenant Couples 1999/2005	Home Owning Singles 1999/2005	Tenant Singles 1999/2005	Total* 1999/2005
Currently using at least one of the following forms of credit cards:				14.8/25.0	33.1/43.9
Credit Cards (e.g., Access, Visa)	57.6/66.2	22.1/30.8	57.2/68.1		
Charge Cards (e.g., American Express, Diners Club)	50.4/61.9	18.0/28.2	48.8/62.3	10.7/20.2	27.6/39.5
Shop or store cards (e.g., Marks and Spencer, John Lewis)	2.3/3.2	1.0/1.0	5.4/2.6	0.3/0.6	1.7/1.7
	24.5/21.9	8.3/8.8	30.1/23.4	7.6/9.7	15.2/14.9
Uses Catalogues/Mail Order Schemes	47.8/31.4	51.3/31.2	39.5/26.2	52.9/31.6	49.4/30.6
Number of types of credit used per Household:					
0	42.4/33.8	77.9/69.2	42.8/31.9	85.2/75.0	66.9/56.1
1	39.3/46.9	17.5/24.1	33.1/48.9	11.2/19.5	22.7/32.3
2	17.0/17.8	4.0/6.3	21.1/18.2	3.6/5.4	9.5/10.9
3	1.3/1.5	0.6/0.4	3.0/1.0	0.1/0.08	0.9/0.7
<i>Base n=</i>	<i>1165/928</i>	<i>1000/714</i>	<i>664/589</i>	<i>1830/1358</i>	<i>4659/3589</i>

**Table 15: 1999 and 2005 Matched Sample
Percentage of Households who have other Forms of Borrowing**

	Home Owning Couples 1999/2005	Tenant Couples 1999/2005	Home Owning Singles 1999/2005	Tenant Singles 1999/2005	Total* 1999/2005
Is currently using at least one of the following forms of borrowing:				46.8/45.6	49.5/43.0
- Bank Overdraft	52.6/37.0	47.9/43.7	53.5/45.8		
- Bank Loan (excluding mortgage)	31.2/24.1	18.1/17.2	35.2/30.7	12.6/17.9	21.9/21.5
- Loan from a Finance Company	19.1/10.2	9.6/7.1	16.1/12.4	5.4/6.8	11.3/8.7
- Loan from a Money Lender or 'Tally Man'	11.6/4.4	13.2/11.3	10.1/5.1	12.8/9.2	12.2/7.4
- Loan, or Advance on Wages from Employer	1.0/0.5	5.6/3.9	0.5/1.4	6.8/5.2	4.2/3.1
- Loan from family and/or friends	1.0/0.2	1.2/1.1	0.9/0.3	1.1/0.6	1.1/0.6
	11.7/6.4	16.5/17.9	13.1/10.4	20.7/19.4	16.4/14.2
Percentage number of loans per household (including bank overdrafts):					
0	47.4/63.0	52.1/56.3	46.5/54.2	53.2/54.4	50.6/57.0
1	34.0/27.9	34.5/32.9	34.5/32.9	36.3/34.7	35.1/32.3
2	14.7/7.4	10.9/9.0	15.7/11.0	8.6/9.7	11.6/9.2
3	3.5/1.5	2.1/1.5	3.2/1.9	1.8/1.2	2.5/1.5
4	0.4/0.1	0.4/0.3	0.2/0.1	0.2/0.1	0.3/0.1
<i>Base</i>	<i>1165/928</i>	<i>1000/714</i>	<i>664/589</i>	<i>1830/1358</i>	<i>4659/3589</i>

**Table 16: 1999 and 2005 Matched Sample
Percentage of Families who were behind with their Repayments**

	Home Owning Couples 1999/2005	Tenant Couples 1999/2005	Home Owning Singles 1999/2005	Tenant Singles 1999/2005	Total* 1999/2005
Currently behind with at least one credit arrangement.	3.1/1.3	6.0/1.4	4.7/1.2	7.1/3.5	5.5/2.1
Currently behind with at least one loan.	4.2/0.2	7.7/3.8	4.1/1.5	9.6/5.5	7.1/3.2
Has mortgage/rent arrears/	5.8/2.1	18.6/9.8	8.6/3.2	13.6/9.9	12.0/6.8
<i>Base</i>	<i>1165/928</i>	<i>1000/714</i>	<i>664/589</i>	<i>1830/1358</i>	<i>4659/3589</i>

**Table 17: 1999 and 2005 Matched Sample
Percentage of Families who were behind with their Household Bills**

	Home Owning Couples 1999/2005	Tenant Couples 1999/2005	Home Owning Singles 1999/2005	Tenant Singles 1999/2005	Total* 1999/2005
Has a prepayment electricity meter	16.6/11.3	55.9/51.5	14.3/10.9	61.9/54.9	42.5/35.8
Currently behind with at least one utility bill:	17.7/7.5	43.8/29.3	22.4/8.2	49.6/35.1	36.5/22.4
<i>Unable to repay the following bills:</i>					
Electricity Bill	4.1/2.6	7.1/5.6	4.5/2.4	9.2/9.8	6.8/5.9
Gas Bill	5.3/1.9	14.3/6.7	6.2/2.7	18.0/9.5	12.4/5.9
Other Fuel Bills	0.2/0.1	0.2/0.3	0.0/0.2	0.5/0.3	0.3/0.2
Council Tax	11.2/3.8	22.2/12.6	10.2/4.2	17.5/11.6	15.9/8.6
Insurance Policies	1.1/0.3	1.0/0.1	2.0/0.3	0.6/0.6	1.0/0.4
Telephone Bills	5.0/1.9	15.9/9.4	7.7/1.7	18.6/9.9	13.1/6.4
Television/Video Rental or HP	0.4/0.1	3.1/2.1	1.2/0.5	4.0/2.6	2.5/1.5
Other HP Payments	1.7/0.7	6.3/2.7	3.2/0.9	6.3/4.9	4.7/2.7
Water Rates	6.3/1.2	16.3/13.2	6.5/2.9	21.4/14.7	14.4/9.0
Number of Utility Debts:					
0	82.3/92.5	56.2/70.7	77.6/91.9	50.4/64.9	63.5/77.6
1	7.7/4.4	20.0/15.1	11.6/4.6	22.8/17.8	16.9/11.6
2	5.2/2.2	12.6/7.8	5.6/1.5	14.2/9.8	10.4/6.1
3	3.0/0.3	6.2/4.1	3.0/0.9	7.9/4.8	5.6/2.8
4	0.9/0.3	3.1/1.5	1.7/0.9	2.7/2.0	2.2/1.3
5	0.6/0.3	1.3/0.7	0.6/0.2	1.5/0.7	1.1/0.5
6	0.2/-	0.5/-	-	0.4/0.2	0.3/0.1
7	0.1/-	0.1/-	-	0.1/-	0.1/-
8	-	-	-/0.2	-	-
<i>Base</i>	<i>1165/928</i>	<i>1000/714</i>	<i>664/589</i>	<i>1830/1358</i>	<i>4659/3589</i>

Table 18: Self-reported debt problems

	= 1 if debt problems in 2005, 0 otherwise – 1999 panel	= 1 if debt problems in 2005, 0 otherwise – 2001 panel	= 1 if debt problems in 2004, 0 otherwise – 2001 panel	= 1 if debt problems in 2003, 0 otherwise – 2001 panel	= 1 if debt problems in 2002, 0 otherwise – 2001 panel
Constant	Coefficient 0.037*** (5.26)	Coefficient 0.027*** (7.38)	Coefficient 0.037*** (10.08)	Coefficient 0.042*** (13.60)	Coefficient 0.073*** (20.39)
= 1 if debt problems in 2004, 0 otherwise	0.358*** (9.55)	0.323*** (11.00)			
= 1 if debt problems in 2003, 0 otherwise	0.168*** (4.77)	0.156*** (5.51)	0.320*** (12.10)		
= 1 if debt problems in 2002, 0 otherwise	0.136*** (3.88)	0.141*** (5.19)	0.191*** (7.66)	0.358*** (16.53)	
= 1 if debt problems in 2001, 0 otherwise	0.096*** (3.12)	0.102*** (4.11)	0.115*** (5.12)	0.235*** (11.19)	0.415*** (22.36)
No. of observations	1,561	3,812	4,639	5,665	6,425

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 19: Self-reported financial stress

	= 1 if financial stress in 2005, 0 otherwise – 1999 panel	= 1 if financial stress in 2005, 0 otherwise – 2001 panel	= 1 if financial stress in 2004, 0 otherwise – 2001 panel	= 1 if financial stress in 2003, 0 otherwise – 2001 panel	= 1 if financial stress in 2002, 0 otherwise – 2001 panel
Constant	Coefficient 0.041*** (6.01)	Coefficient 0.025*** (7.34)	Coefficient 0.030*** (8.90)	Coefficient 0.030*** (11.00)	Coefficient 0.048*** (16.21)
= 1 if financial stress in 2004, 0 otherwise	0.184*** (4.62)	0.267*** (8.69)			
= 1 if financial stress in 2003, 0 otherwise	0.203*** (4.85)	0.166*** (5.26)	0.227*** (7.70)		
= 1 if financial stress in 2002, 0 otherwise	0.153*** (4.01)	0.139*** (4.85)	0.194*** (7.24)	0.306*** (12.74)	
= 1 if financial stress in 2001, 0 otherwise	0.124*** (3.90)	0.099*** (4.23)	0.185*** (7.97)	0.204*** (10.34)	0.381*** (20.96)
No. of observations	1,561	3,812	4,639	5,665	6,425

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 20: Persistence of unsecured debt and of arrears on debt

OLS estimates (t-statistics in parentheses; weighted for sample attrition)

Panel A: One-year persistence of unsecured debt (£)

	2005 Amount of debt – 1999 panel	2005 Amount of debt – 2001 balanced panel	2005 Amount of debt – 2001 panel weighted by 2004- 05 attrition
Constant	Coefficient 108.51*** (7.05)	Coefficient 78.42*** (9.23)	Coefficient 76.34*** (9.82)
Amount of unsecured debt in 2004	0.33*** (3.76)	0.26*** (4.36)	0.30*** (5.33)
No. of observations	1561	3812	3981

* significant at 10%; ** significant at 5%; *** significant at 1%

Panel B: One-year persistence of unsecured debt >0: (Yes/No)

	= 1 if unsecured debt in 2005, 0 otherwise – 1999 panel	2005 Amount of debt – 2001 balanced panel	2005 Amount of debt – 2001 panel weighted by 2004- 05 attrition
Constant	Coefficient 0.09*** (10.50)	Coefficient 0.05*** (12.42)	Coefficient 0.05*** (13.53)
= 1 if unsecured debt in 2004, 0 otherwise	0.56*** (20.95)	0.56*** (25.55)	0.56*** (27.44)
No. of observations	1561	3812	3981

* significant at 10%; ** significant at 5%; *** significant at 1%

Panel C: Persistence of whether family has arrears on debt and bills >0: (Yes/No)

	2005 Arrears >0 – 1999 panel	2005 Arrears >0 – 2001 panel	2004 Arrears >0 – 2001 panel	2003 Arrears >0 – 2001 panel	2002 Arrears >0 – 2001 panel
Constant	Coefficient 0.037*** (4.78)	Coefficient 0.016*** (4.91)	Coefficient 0.028*** (8.23)	Coefficient 0.037*** (12.21)	Coefficient 0.082*** (20.97)
= 1 if 2004 arrears >0, 0 otherwise	0.372*** (10.53)	0.321*** (11.28)			
= 1 if 2003 arrears >0, 0 otherwise	0.196*** (5.79)	0.213*** (7.65)	0.355*** (13.51)		
= 1 if 2002 arrears >0, 0 otherwise	0.095*** (3.07)	0.124*** (4.73)	0.206*** (8.35)	0.448*** (22.56)	
= 1 if 2001 arrears >0, 0 otherwise	0.049* (1.83)	0.067*** (3.06)	0.155*** (7.43)	0.211*** (11.23)	0.510*** (32.92)
No. of observations	1,561	3,812	4,639	5,665	6,425

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 21: Maximum likelihood estimates of the probability of self-reported debt problems/financial stress

(t-statistics in parentheses)

Variable	Debt trouble		Financial stress	
	Marginal Effect 1999 - sample	Marginal Effect 2001 - sample	Marginal Effect 1999 - sample	Marginal Effect 2001 - sample
Household characteristics:				
Age/10	-0.026* (1.90)	-0.022 (1.61)	0.016 (1.44)	0.012 (1.15)
(Age/10) squared	0.003* (1.81)	0.003 (1.51)	-0.000 (0.16)	0.000 (0.08)
Sex (=1 if respondent male, 0 otherwise)	-0.004 (0.29)	-0.004 (0.30)	-0.015 (1.36)	-0.006 (0.55)
Couple (=1 if in a couple, 0 otherwise)	-0.026*** (3.38)	-0.021*** (2.88)	-0.012** (1.97)	-0.013** (2.05)
=1 if in couple in t-1	0.004 (0.50)	0.004 (0.53)	0.008 (1.21)	0.010* (1.69)
Number of dependent children	0.001 (0.72)	0.001 (0.58)	-0.001 (0.39)	-0.000 (0.07)
Educated to GCSE (A-C)	0.008 (1.50)	0.008 (1.51)	0.005 (1.22)	0.004 (1.02)
Educated to 'A' level	0.007 (0.85)	0.002 (0.21)	0.010 (1.57)	0.007 (1.15)
Educated to degree/higher degree	0.004 (0.44)	0.003 (0.38)	0.005 (0.77)	0.007 (1.08)
Ethnicity (=1 if British/white background, 0 otherwise)	-0.021*** (3.25)	-0.014** (2.10)	-0.038*** (6.56)	-0.029*** (5.17)
Work status:				
Respondent working, 0 otherwise	-0.009* (1.77)	-0.010** (2.08)	-0.018*** (4.53)	-0.016*** (4.23)
Respondent working in t-1	-0.009* (1.95)	-0.007 (1.51)	-0.002 (0.61)	-0.002 (0.48)
Couple*Partner working	-0.004 (0.49)	-0.003 (0.40)	-0.017*** (2.75)	-0.017*** (2.83)
Couple*Partner working in t-1	-0.013* (1.78)	-0.015** (2.14)	-0.004 (0.66)	-0.005 (0.94)
Financial variables:				
Owner (=1 if owned outright, 0 otherwise)	-0.021** (2.41)	-0.016* (1.85)	-0.005 (0.61)	-0.001 (0.11)
Mortgage (=1 if has mortgage against property, 0 otherwise)	0.009* (1.68)	0.008 (1.50)	0.013** (2.48)	0.010** (2.13)
Equivalent income after housing costs (£-weekly/1000)	-0.063*** (3.45)	-0.053*** (3.14)	-0.080*** (5.04)	-0.063*** (4.43)
Equivalent income after housing costs ((£-weekly/1000) squared)	0.004*** (4.12)	0.003*** (3.76)	-0.013 (0.54)	-0.013 (0.60)
Number of benefits received	-0.001 (0.64)	-0.002 (1.09)	-0.004** (2.43)	-0.004** (2.55)
Net housing costs per week (combines renters, those with mortgages and those con	-0.018 (0.66)	-0.013 (0.50)	0.022 (0.25)	0.028 (0.37)
Number of types of formal credit arrangement	-0.004 (1.44)	-0.004* (1.72)	0.002 (0.90)	0.001 (0.39)
= 1 if uses a catalogue, 0 otherwise	-0.010*** (2.86)	-0.006* (1.88)	-0.010*** (3.30)	-0.008*** (2.95)

Number of types of formal loan arrangements	0.033*** (8.17)	0.033*** (8.36)	0.025*** (7.09)	0.024*** (7.10)
Number of types of 'other loans'	0.036*** (9.20)	0.035*** (8.79)	0.016*** (4.97)	0.015*** (4.69)
= 1 if behind with 1 debt, 0 otherwise	0.101*** (7.34)	0.093*** (5.72)	0.059*** (5.17)	0.060*** (4.70)
= 1 if behind with 2 debts, 0 otherwise	0.154*** (10.51)	0.140*** (8.19)	0.092*** (7.37)	0.089*** (6.39)
= 1 if behind with 3 debts, 0 otherwise	0.190*** (12.12)	0.175*** (9.73)	0.117*** (8.71)	0.115*** (7.76)
= 1 if behind with 4 debts, 0 otherwise	0.214*** (12.09)	0.193*** (9.59)	0.155*** (10.01)	0.141*** (8.45)
= 1 if behind with between 5 and 11 debts, 0 otherwise	0.257*** (12.32)	0.230*** (10.55)	0.175*** (10.49)	0.160*** (9.17)
= 1 if arrears>0 & arrears<=500	-0.013 (0.94)	-0.010 (0.64)	0.012 (1.12)	0.000 (0.01)
= 1 if arrears>500 & arrears<=1000	0.014 (0.97)	0.011 (0.64)	0.030*** (2.61)	0.015 (1.16)
= 1 if arrears>1000 & arrears<=2000	0.030* (1.93)	0.023 (1.34)	0.037*** (3.04)	0.021 (1.58)
= 1 if arrears>2000 & arrears<=10000	0.042*** (2.60)	0.035* (1.88)	0.052*** (4.02)	0.035** (2.46)
Number of saving accounts	-0.031*** (14.58)	-0.028*** (13.87)	-0.024*** (11.02)	-0.022*** (10.21)
Health variables:				
= 1 if report depression/mental illness	0.029*** (4.50)	0.029*** (4.59)	0.028*** (5.22)	0.026*** (5.07)
= 1 if report depression/mental illness in t-1	0.019*** (2.84)	0.017*** (2.61)	0.020*** (3.72)	0.019*** (3.63)
Index: ill health	0.001 (1.05)	0.001 (0.89)	0.001** (2.02)	0.001** (2.10)
Index: ill health in t-1	0.002** (2.52)	0.002** (2.13)	0.001* (1.77)	0.001 (1.31)
Year 2001	-0.005 (1.01)		-0.015*** (3.79)	
Year 2002	0.000 (0.05)	0.006 (1.25)	-0.031*** (7.33)	-0.013*** (3.93)
Year 2003	0.000 (0.02)	0.006 (1.24)	-0.031*** (6.86)	-0.014*** (3.61)
Year 2004	0.001 (0.15)	0.007 (1.42)	-0.031*** (6.82)	-0.013*** (3.33)
Year 2005	0.010* (1.75)	0.016*** (3.02)	-0.022*** (4.96)	-0.006 (1.43)
Log-likelihood	-8797.78	-7534.00	-8076.67	-6734.74
Number of observations	30,657	27,560	30,657	27,560

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 22:
Fixed effects estimates of the probability of self-reported debt problems/financial stress
(coefficients, not marginal effects)
(t-statistics in parentheses)

	Debt trouble		Financial stress	
	Coefficient 1999 - sample	Coefficient 2001 - sample	Coefficient 1999 - sample	Coefficient 2001 - sample
Constant				
Household characteristics:				
Age/10	-0.524 (0.41)	-0.693 (0.40)	0.203 (0.17)	-0.137 (0.07)
(Age/10) squared	-0.007 (0.07)	-0.016 (0.11)	0.008 (0.08)	-0.247* (1.69)
Couple (=1 if in a couple, 0 otherwise)	-0.345** (2.18)	-0.307* (1.66)	-0.062 (0.36)	-0.034 (0.17)
=1 if in couple in t-1	-0.086 (0.57)	-0.179 (1.01)	0.043 (0.26)	0.126 (0.67)
Number of dependent children	-0.151** (2.19)	-0.197** (2.37)	-0.219*** (3.03)	-0.251*** (2.84)
Educated to GCSE (A-C)	-0.028 (0.18)	0.022 (0.12)	0.024 (0.14)	0.167 (0.79)
Educated to 'A' level	-0.013 (0.06)	-0.172 (0.63)	0.172 (0.67)	0.216 (0.73)
Educated to degree/higher degree	-0.159 (0.55)	-0.511 (1.53)	0.063 (0.21)	-0.031 (0.09)
Work status:				
Respondent working, 0 otherwise	0.038 (0.39)	-0.075 (0.65)	-0.107 (1.02)	-0.147 (1.21)
Respondent working in t-1	-0.064 (0.70)	-0.107 (1.02)	0.070 (0.72)	0.076 (0.68)
Couple*Partner working	-0.014 (0.08)	-0.004 (0.02)	-0.242 (1.40)	-0.385* (1.96)
Couple*Partner working in t-1	-0.091 (0.63)	-0.065 (0.38)	-0.030 (0.19)	-0.032 (0.18)
Owner (=1 if owned outright, 0 otherwise)	-0.045 (0.17)	0.152 (0.50)	-0.749** (2.52)	-0.628* (1.83)
Mortgage (=1 if has mortgage against property, 0 otherwise)	-0.085 (0.52)	-0.083 (0.42)	0.044 (0.25)	-0.020 (0.09)
Equivalent income after housing costs (£-weekly/1000)	-1.830*** (4.56)	-1.677*** (3.83)	-2.464*** (5.81)	-2.262*** (4.88)
Equivalent income after housing costs ((£-weekly/1000) squared)	0.491*** (3.59)	0.455*** (3.08)	0.482*** (4.48)	0.441*** (3.79)
Number of benefits received	-0.003 (0.08)	-0.023 (0.53)	-0.064 (1.55)	-0.078* (1.65)
Net housing costs per week (combines renters, those with mortgages and those con	-0.949 (0.91)	-0.612 (0.51)	-3.247*** (3.60)	-3.156*** (3.06)
Number of types of formal credit arrangement	-0.124** (2.00)	-0.116* (1.68)	0.114* (1.67)	0.156** (2.02)
= 1 if uses a catalogue, 0 otherwise	-0.131* (1.83)	-0.076 (0.92)	-0.084 (1.05)	-0.168* (1.81)
Number of types of formal loan arrangements	0.243*** (3.29)	0.247*** (2.98)	0.180** (2.22)	0.179* (1.95)
Number of types of 'other loans'	0.408***	0.439***	0.229***	0.197**

	(5.94)	(5.59)	(3.09)	(2.35)
= 1 if behind with 1 debt, 0 otherwise	0.973***	1.017***	0.556*	0.694*
	(3.76)	(3.00)	(1.91)	(1.86)
= 1 if behind with 2 debts, 0 otherwise	1.595***	1.669***	1.012***	1.179***
	(5.81)	(4.67)	(3.31)	(3.04)
= 1 if behind with 3 debts, 0 otherwise	1.941***	2.053***	1.451***	1.595***
	(6.70)	(5.48)	(4.57)	(3.96)
= 1 if behind with 4 debts, 0 otherwise	2.332***	2.359***	2.280***	2.381***
	(7.20)	(5.78)	(6.41)	(5.41)
= 1 if behind with between 5 and 11 debts, 0 otherwise	2.552***	2.687***	2.415***	2.566***
	(7.06)	(6.08)	(6.44)	(5.57)
= 1 if arrears>0 & arrears<=500	-0.160	-0.125	0.449	0.228
	(0.62)	(0.37)	(1.55)	(0.61)
= 1 if arrears>500 & arrears<=1000	0.147	0.187	0.817***	0.657*
	(0.53)	(0.52)	(2.64)	(1.67)
= 1 if arrears>1000 & arrears<=2000	0.206	0.160	0.974***	0.812**
	(0.72)	(0.44)	(3.04)	(2.01)
= 1 if arrears>2000 & arrears<=10000	0.495	0.488	1.121***	0.918**
	(1.62)	(1.25)	(3.32)	(2.18)
Number of saving accounts	-0.132***	-0.114**	-0.245***	-0.216***
	(2.90)	(2.26)	(4.76)	(3.73)
Health variables:				
= 1 if report depression/mental illness	0.169	0.136	0.029	0.105
	(1.20)	(0.85)	(0.20)	(0.65)
= 1 if report depression/mental illness in t-1	0.190	0.156	0.050	0.073
	(1.33)	(0.95)	(0.33)	(0.43)
Index: ill health	-0.004	-0.015	-0.015	-0.010
	(0.24)	(0.77)	(0.88)	(0.50)
Index: ill health in t-1	0.019	0.020	-0.010	-0.010
	(1.08)	(1.05)	(0.57)	(0.55)
year 2001	-0.147		-0.480***	
	(1.06)		(3.71)	
year 2002	-0.050	0.143	-0.947***	-0.255
	(0.24)	(0.87)	(5.08)	(1.34)
year 2003	-0.023	0.204	-1.043***	-0.113
	(0.08)	(0.69)	(4.18)	(0.33)
year 2004	-0.017	0.237	-1.029***	0.119
	(0.05)	(0.55)	(3.24)	(0.23)
year 2005	0.137	0.412	-0.860**	0.492
	(0.30)	(0.74)	(2.27)	(0.75)
Log-likelihood	-2506.92	-1923.21	-2108.80	-1607.15
Number of observations	7774	5990	7080	5231
Number of serial number	1801	1533	1636	1350

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 23:
Maximum likelihood estimates of the probability of self-reported arrears
(standard errors in parentheses)

Variable	(1) Marginal Effect	(2) Marginal Effect
	1999 - sample	2001 - sample
Constant	0.03 (0.03)	0.03 (0.03)
Household characteristics		
Age/10	-0.05*** (0.02)	-0.04*** (0.01)
(Age/10) squared	0.00** (0.00)	0.00** (0.00)
Sex (=1 if respondent male, 0 otherwise)	0.06*** (0.01)	0.05*** (0.01)
Couple (=1 if in a couple, 0 otherwise)	0.00 (0.03)	0.00 (0.03)
Number of dependent children	0.01*** (0.00)	0.01*** (0.00)
Educated to GCSE (A-C)	-0.00 (0.01)	-0.00 (0.01)
Educated to 'A' level	-0.03*** (0.01)	-0.02*** (0.01)
Educated to degree/higher degree	-0.05*** (0.01)	-0.04*** (0.01)
Ethnicity (=1 if British/white background, 0 otherwise)	-0.04*** (0.01)	-0.04*** (0.01)
Work status:		
Respondent working, 0 otherwise	0.01 (0.00)	0.00 (0.00)
Couple*Partner working	-0.01* (0.01)	-0.01* (0.01)
Owner (=1 if owned outright, 0 otherwise)	-0.10*** (0.01)	-0.08*** (0.01)
Mortgage (=1 if has mortgage against property, 0 otherwise)	-0.08*** (0.01)	-0.07*** (0.01)
Equivalent income after housing costs (£-weekly/1000)	-0.12*** (0.02)	-0.09*** (0.02)
Equivalent income after housing costs ((£-weekly/1000) squared)	0.01*** (0.00)	0.01*** (0.00)
Number of benefits received	0.00* (0.00)	0.00* (0.00)
Net housing costs per week	-0.07*** (0.02)	-0.05*** (0.02)
Number of saving accounts	-0.04*** (0.00)	-0.04*** (0.00)
= 1 if report depression/mental illness	0.04*** (0.01)	0.04*** (0.01)
= 1 if report depression/mental illness in t-1	0.02*** (0.01)	0.02*** (0.01)
Index: ill health	0.00 (0.00)	0.00* (0.00)
Index: ill health in t-1	-0.00 (0.00)	-0.00 (0.00)
Lone parent (t-1), couple (t-2)	0.03*** (0.01)	0.02*** (0.01)
No change - couple	-0.01 (0.03)	-0.01 (0.03)

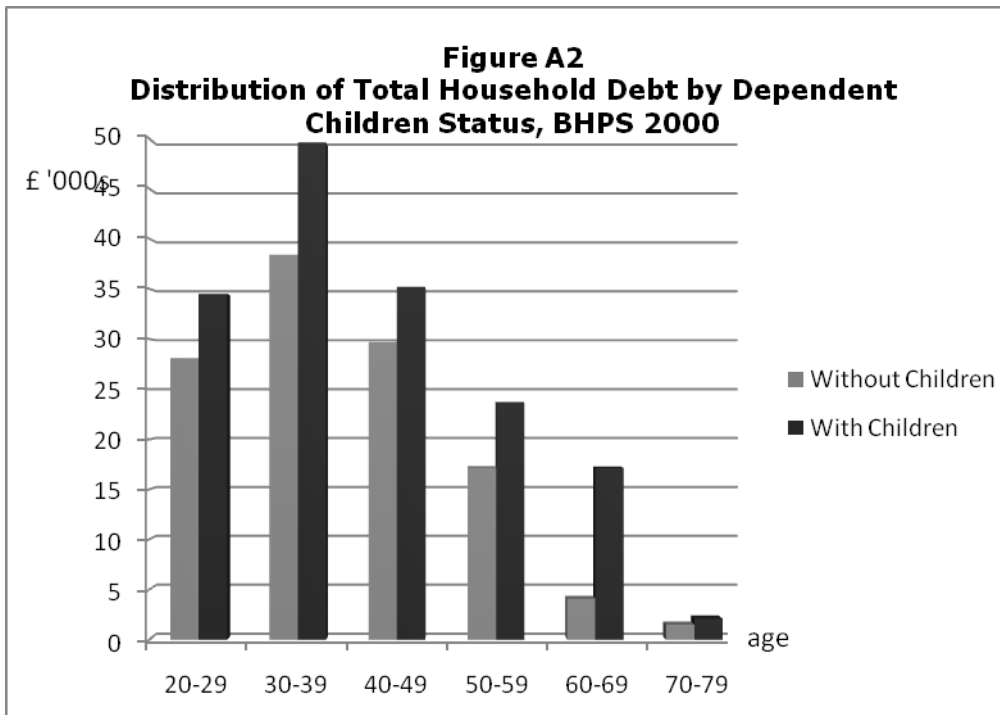
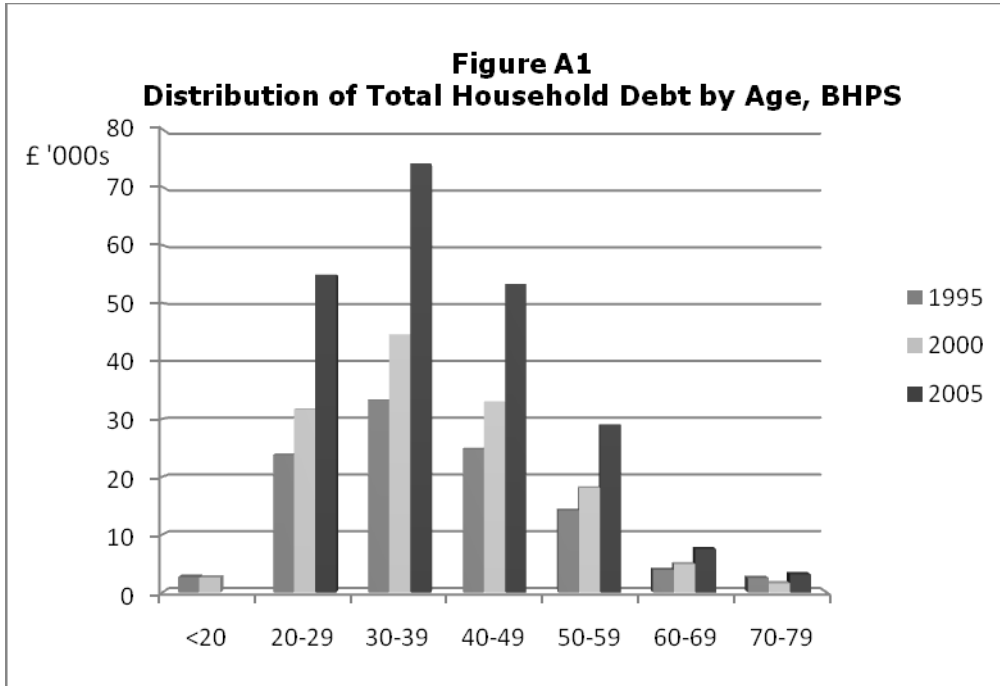
Couple (t-1), lone parent (t-2)	0.03 (0.03)	0.03 (0.03)
Working (t-1), unemployed (t-2)	0.04*** (0.01)	0.03*** (0.01)
No change – unemployed	0.00 (0.01)	-0.00 (0.01)
Unemployed (t-1), working (t-2)	0.03*** (0.01)	0.02*** (0.01)
Total number of credit commitments	0.02*** (0.00)	0.01*** (0.00)
Total number of credit commitments*Unemployed (t-1 and t-2)	0.02*** (0.00)	0.01*** (0.00)
No current account or savings account	-0.01*** (0.00)	-0.01** (0.00)
Never/hardly ever has money over at the end of the week	0.04*** (0.00)	0.03*** (0.00)
Always mostly runs out of money before the end of the week	0.08*** (0.00)	0.07*** (0.00)
Has a prepayment electricity meter	0.07*** (0.00)	0.06*** (0.00)
year 2000	0.03*** (0.01)	
year 2002	-0.00 (0.00)	-0.00 (0.00)
year 2003	-0.02*** (0.01)	-0.01*** (0.00)
year 2004	-0.02*** (0.01)	-0.02*** (0.01)
year 2005	-0.03*** (0.01)	-0.03*** (0.01)
Log-likelihood	-10392.18	-8705.84
Number of observations	30,659	27,562
* significant at 10%; ** significant at 5%; *** significant at 1%		

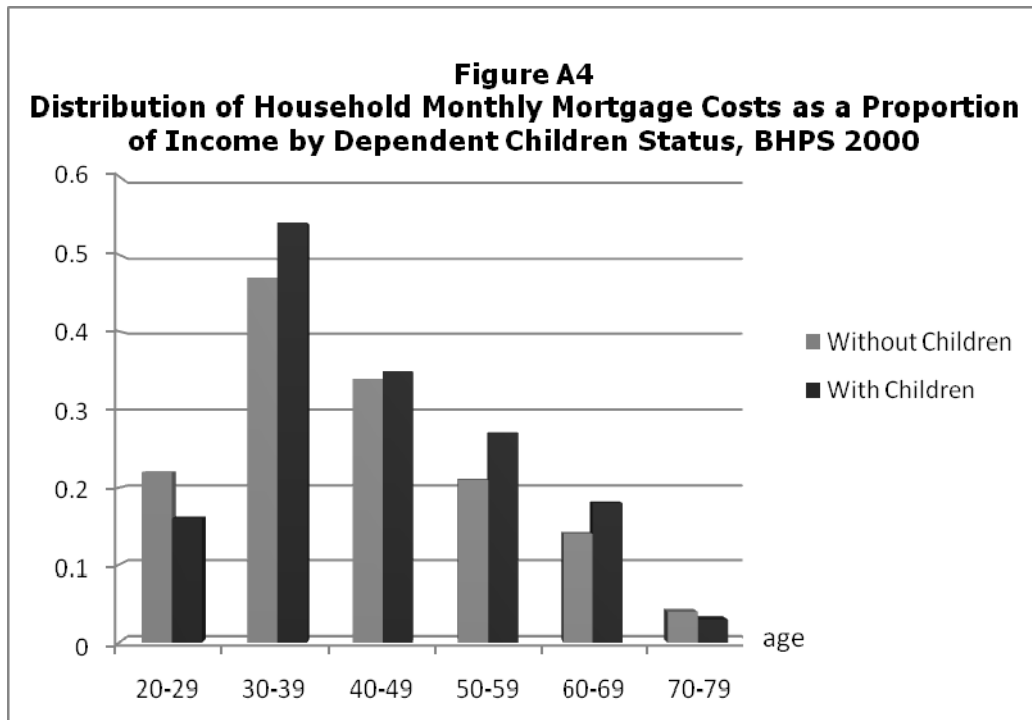
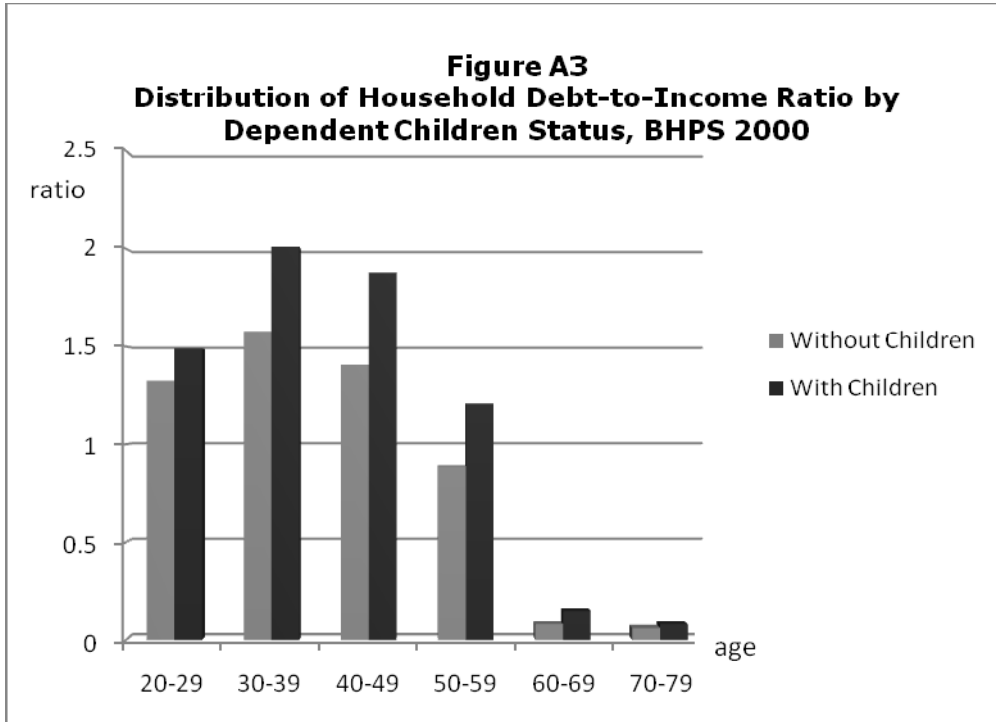
Table 24:
Fixed effects estimates of the probability of self-reported arrears (coefficients, not marginal effects)

(standard deviation in parentheses)

Variables	(1) Coefficient	(2) Coefficient
Household characteristics:		
Age/10	0.57 (1.05)	-1.25 (1.75)
(Age/10) squared	-0.07 (0.10)	-0.01 (0.14)
Couple (=1 if in a couple, 0 otherwise)	-0.24 (0.50)	-0.01 (0.53)
Number of dependent children	-0.01 (0.06)	0.02 (0.08)
Educated to GCSE (A-C)	-0.24* (0.14)	-0.25 (0.18)
Educated to 'A' level	-0.54** (0.23)	-0.48* (0.28)
Educated to degree/higher degree	-0.05 (0.30)	0.05 (0.36)
Work status:		
Respondent working, 0 otherwise	-0.01 (0.09)	-0.00 (0.11)
Couple*Partner working	-0.13 (0.15)	-0.19 (0.17)
Owner (=1 if owned outright, 0 otherwise)	-0.53** (0.26)	-0.50* (0.30)
Mortgage (=1 if has mortgage against property, 0 otherwise)	-0.79*** (0.14)	-0.93*** (0.18)
Equivalent income after housing costs (£-weekly/1000)	-0.15 (0.27)	0.06 (0.28)
Equivalent income after housing costs ((£-weekly/1000) squared)	0.01 (0.02)	-0.01 (0.02)
Number of benefits received	0.00 (0.03)	0.00 (0.04)
Net housing costs per week (combines renters, those with mortgages and those con	2.17** (1.05)	1.22 (1.21)
Number of saving accounts	-0.25*** (0.05)	-0.23*** (0.05)
= 1 if report depression/mental illness	0.45*** (0.14)	0.46*** (0.16)
= 1 if report depression/mental illness in t-1	0.17 (0.14)	0.22 (0.16)
Index: ill health	0.03* (0.02)	0.04** (0.02)
Index: ill health in t-1	-0.01 (0.02)	-0.02 (0.02)
Lone parent (t-1), couple (t-2)	0.41** (0.17)	0.47** (0.20)
No change - couple	0.18 (0.49)	-0.18 (0.51)
Couple (t-1), lone parent (t-2)	0.23 (0.50)	-0.14 (0.53)
Working (t-1), unemployed (t-2)	0.34*** (0.11)	0.34*** (0.12)
No change - unemployed	0.06	-0.06

	(0.10)	(0.11)
Unemployed (t-1), working (t-2)	0.09	0.02
	(0.13)	(0.14)
Total number of credit commitments	0.22***	0.19***
	(0.04)	(0.04)
Total number of credit commitments*Unemployed (t-1 and t-2)	0.13**	0.13*
	(0.06)	(0.07)
No current account or savings account	-0.25***	-0.24***
	(0.08)	(0.09)
Never/hardly ever has money over at the end of the week	0.41***	0.41***
	(0.07)	(0.08)
Always mostly runs out of money before the end of the week	0.52***	0.57***
	(0.07)	(0.08)
Has a prepayment electricity meter	0.35***	0.41***
	(0.10)	(0.11)
year 2000	0.59***	
	(0.13)	
year 2002	-0.07	0.08
	(0.10)	(0.17)
year 2003	-0.32**	-0.06
	(0.16)	(0.30)
year 2004	-0.49**	-0.06
	(0.22)	(0.45)
year 2005	-0.78***	-0.22
	(0.28)	(0.59)
Log-likelihood	-2878.40	-2160.83
Number of observations	8437	6306
Number of groups	1904	1594
* significant at 10%; ** significant at 5%; *** significant at 1%		





Debt/Arrears Questions – FACS

1. How much do you owe for each bill (above)?
2. Over the past few years a lot of different ways of buying things have been introduced and many people use them. Do you use any of the different ways of buying things listed on this card?
 Credit cards (like Access, Visa etc)
 Charge cards (like American Express, Diners Club)
 Shop or store cards (like Marks and Spencer, John Lewis etc)
 Catalogues/mail order schemes
 None of these.
3. Are you at the moment able to manage the repayments on the above cards? I mean, to meet the minimum amount you have to repay?
4. How much are you unable to repay at the moment?
5. There are also more and more ways of borrowing money these days. Over the past 12 months, have you used any of these ways to borrow money?
 Bank overdraft
 Fixed term loan from the Bank or Building Society
 Loan from a finance company
 Loan from a moneylender or 'tally man'
 Loan from a friend or relative
 Loan, or advance on wages, from your employer
 None of these.
6. Have you been able to keep up with the repayments for the above loans, or are you getting behind?
7. How much do you owe on these overdue payments?
8. How often would you say you have been worried about money during the last few weeks?
9. Is your rent paid up to date at the moment, or do you have some rent arrears that will have to be paid?

10. How much are your rent arrears at the moment?
11. Enter amount of rent arrears to the nearest £.
12. Enter number of weeks in arrears.
13. Enter number of months in arrears.
14. And may I just check, are you up to date with your loan or mortgage payments or are you now behind with your loan or mortgage?
15. How much are your mortgage or loan arrears at the moment?
16. Enter amount of mortgage or loan that is in arrears.
17. Enter number of weeks in arrears.
18. Enter number of months in arrears.

Debt Questions – BHPS

Currently owe money

I would like to ask you now about any other financial commitments you may have apart from mortgages and housing related loans. Do you currently owe any money on the things listed on this card? Please do not include credit cards or other bills being fully paid off in the current month.

Hire purchase

Personal loan (from bank, building society, or other financial institution)

Credit card(s) (including store card)

Catalogue or mail order purchase

DSS Social Fund loan

Loans from individual

Overdraft

Student loan

Anything else?

If owes money

About how much in total do you owe? WRITE IN TO NEAREST POUND

If don't know, the following series of questions is asked to determine a band for debt

Would it amount too?

- a) 500 or more? (if yes, ask (b), if no, ask (d))
- b) 1500 or more? (if yes ask (c))
- c) 5000 or more?
- d) 100 or more?

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