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HOUSING WEALTH AND THE ACCUMULATION OF FINANCIAL DEBT: EVIDENCE FROM UK HOUSEHOLDS

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Abstract

The relationship between housing wealth and the level and growth of debt in financial assets in the United Kingdom is examined, using household-level data. The analysis takes place against a background of rising housing equity and financial debt in several countries, including the UK, since the late 1990s, generating concern among commentators and central bankers as to the prospect of a 'debt overhang' if the house price boom ends. The chapter reviews models of how home ownership may give households greater access to both secured (collateralised) and unsecured debt. It shows how home ownership has enabled UK households to gain access to lines of unsecured credit such as credit cards, and that households without housing wealth shift their portfolio of financial credit towards alternative sources. However, there is no evidence across households that greater housing equity is associated either with greater unsecured debt in total, or greater arrears on debt. Moreover, the bulk of housing equity withdrawal occurs among households that are at the stage of the life cycle where they might be expected to reduce wealth, rather than being an across-the-board response to rising housing wealth.

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1. Introduction

1.1. Overview: house prices, household behaviour and indebtedness

This chapter explores the role that home ownership and, in particular, the accumulation and decumulation of housing equity, has played in underpinning recent household financial behaviour. It provides cross-country evidence on the importance of home ownership and on the extent of borrowing for house purchase, but focuses primarily on household-level data from the United Kingdom (UK). The United Kingdom is interesting both for institutional reasons (it has a high level of home ownership relative to many other countries in the European Union, significant house price volatility, high levels of mortgage and other financial indebtedness, and because it was an early 'deregulator' of financial markets) and for data reasons, since new data sets for the UK permit an exploration of the relationship between housing wealth and various forms of financial indebtedness at the household level.

The consequences of booms and busts in house prices on household behaviour – in particular on spending on non-housing consumption, and on the acquisition of financial debt – have been widely debated in the UK, US and elsewhere. The consequences for macroeconomic stability of the interaction between volatile housing markets and house-price sensitive household behaviour have been of particular concern to central bankers in a number of countries in recent years: see Barnes and Young, 2003; Borio and McGuire, 2004; Debelle, 2004; Reserve Bank of Australia, 2003, and references cited therein. One specific concern to the UK is the possible impact of future entry to the European Monetary Union, since the UK housing market

is perceived as exhibiting greater sensitivity to monetary policy than other EMU countries given its prevalence of variable rate mortgages and UK consumer spending appears to be relatively interest elastic (HM Treasury, 2003).

1.2. Changes in house prices and consumer behaviour

The basic 'building block' in modelling consumer spending and wealth acquisition is the life cycle hypothesis of saving. Households accumulate wealth, both in the form of housing and non-housing wealth, in order to smooth consumption over the lifetime. How much wealth to allocate to housing at any point in time depends on preferences, on the stage of the life cycle, and on the relative returns to housing and other wealth. These factors also underpin behavioural responses to unanticipated changes in the housing wealth arising from house price volatility. For example, rising house prices will tend to benefit older homeowners (who have low outstanding mortgages) but be detrimental to young households who are trying to enter the homeownership market. These relative wealth effects may cause offsetting changes in saving behaviour across households and substitution between consumption of housing and other goods. The net effect on consumer spending might be large, or zero (Case, 2000; Carroll, 2004).

But while the life cycle model focuses on consumption smoothing, rising housing prices may have other effects on the asset position of households. If the borrowing constraint of indebted households is tied to the value of their home, rising housing wealth underpin higher indebtedness by permitting households to increase their secured (collateralised) borrowing. And unsecured debt, such as credit card borrowing, may also be higher if households 'feel' more wealthy as a result of house price rises. Moreover, where credit providers and credit bureaux treat home ownership and/or the value of housing equity as a signal of current and future

household wealth, this permits home owners access to forms of credit that would not be available were they to rent property rather than to own. Several studies have used aggregate simulations to suggest that there is a sizeable fraction of credit constrained consumers, even in deregulated financial settings, and that for these consumers, the elasticity of consumption with respect to changes in house prices can exceed unity – the so-called 'financial accelerator' (Aoki, Proudman and Vlieghe, 2002; Iacoviello, 2004).

Households with rising housing wealth may also withdraw housing equity in order to finance consumption as an alternative to maintaining equity value and using other lines of credit. Re-mortgaging is the obvious route by which to withdraw equity from the home, but downsizing and even shifting out of owner occupation altogether are alternatives. To the extent that housing equity withdrawal is an alternative to acquiring additional financial debts, rising housing wealth might have an offsetting impact on total financial indebtedness, as well as affecting the ratio of secured to unsecured loans.

1.3. **Structure of the chapter**

The links between housing wealth and access to various forms of financial credit, and the trajectory of household indebtedness, are examined in this chapter. It uses household panel data sets in Britain, previously unused in this context, to measure household-specific values of housing equity and of housing equity withdrawal, to examine their influence on the credit channels used by households, on the extent of household indebtedness and on arrears of financial debt. Specifically, the chapter examines a number of questions:

- How does home ownership and the household's value of housing equity affect its access to sources of credit, such as bank loans, credit cards etc? Can any

impact of home ownership on access to unsecured debt be construed as evidence of credit rationing in the credit market?

- Are differences in housing equity across households associated with different values of household debt and changes in the composition of that debt?
- What factors induce households to exhibit indicators of 'debt distress' such as arrears in debt and self-reported difficulties in paying-off debt? Is there any evidence that homeowners have run into difficulties from borrowing excessively in recent years as a result of perceived increases in their housing wealth?
- What are the determinants of housing equity withdrawal (HEW)? Is there evidence that households with cumulated high values of HEW have ended the period with greater or lower financial wealth than would otherwise be the case?

The format of the chapter is as follows. Section 2 gives a brief overview of housing markets in Europe and then examines the macroeconomic evidence on key variables in recent years in the United Kingdom: the trend and volatility of house prices, consumer expenditure, the growth of personal financial debt (and, in particular, of credit card debt), and the value of housing equity withdrawal. Some of the macroeconomic episodes underlying these trends are described and explained.

Section 3 briefly surveys theories of credit constraints and of household access to financial markets. The particular focus, as described previously, is on the mechanisms by which homeowners have access to a greater variety of credit sources and the impact on their asset and debt portfolios. It then briefly describes macroeconomic evidence on the relationship between housing wealth, acquisition of financial assets and consumer spending. It argues that, whilst the macroeconomic evidence is insightful, there are again difficulties of interpretation arising from reduced form estimation of aggregate relationships. For example, increases in house

prices may increase spending on consumption of both housing and other goods (and therefore income), but house prices are themselves responsive to changes in income (see HM Treasury, 2003, Table 4.2). Disentangling these issues is tricky in practice.

One response to this potential problem of simultaneity in the aggregate data is to simulate impulse shocks, or to attempt quasi-structural estimation. However, an alternative tack is to examine the behaviour of households at the disaggregated level – for example, to see whether households that obtain above-average gains in housing wealth exhibit above-average gains in consumer spending (as in Attanasio and Weber, 1994). Section 4 therefore utilises two household data sets for the United Kingdom, matched by household characteristics, to examine the relationship between home ownership and housing equity values, access to different types of credit and accumulation of debt. It provides evidence that home ownership is used as a screening or signalling device for some kinds of credit but not other channels, and thereby affects the portfolio of assets and the magnitude of debts held by households with different housing tenure and housing equity. This sheds some light on a question implicit in much recent policy discussion of the association between rising housing wealth and rising debt levels, namely the extent to which rising housing wealth may induce financial debt overhang and generate early signals of stress among heavily indebted households.

Section 5 examines the sources of housing equity withdrawal (HEW) in the United Kingdom. The major departure from the existing macroeconomic evidence is that HEW is constructed here from observed actions of households such as downsizing and re-mortgaging, rather than from aggregate balance sheet calculations. Most episodes of housing equity withdrawal, it seems, derive from house moves and from re-mortgages of relatively small magnitude, almost certainly utilised to finance moving costs and home improvements. Events in which substantial housing equity is

released seem to be associated with the stage of the life cycle at which households are decumulating assets. There is little clear evidence that rising housing wealth in recent years is inducing households right across the life cycle to release significant housing equity in order to boost consumption. The main results of the paper are then summarised in Section 6.

2. Some preliminary evidence on housing markets

2.1. Housing markets in Europe

Chart 1 documents the extent of home ownership and mortgage debt as a percentage of GDP in a number of countries of the European Union. The home ownership rate as a percentage of total households varies from around 40% in Germany in 2000 to just over 80% in Spain. The United Kingdom lies towards the higher end of the distribution (although it is by no means the highest) at just under 70%. Home ownership rates rose significantly in the 1980s in the UK (due to the 'right to buy' policies providing for subsidised purchase of social housing by tenants) and also significantly in Sweden in the 1990s (see HM Treasury, 2003, Chart 3.1). Rates have drifted upwards in most other countries in the 1980s and 1990s (a notably exception is Germany, although this divergent trend may represent a consequence of unification). By way of comparison, the proportion of the US residential housing stock that was owner-occupied in 1999 was 58% (Case, 2000) although since around 10% of the stock was 'seasonal or vacant', the underlying proportion is closer to two thirds of the stock.

The EU cross-country pattern of home ownership is not mirrored in differences in the values of outstanding residential mortgage debt as a per cent of GDP across EU countries. Some countries have lower-than-average owner occupation rates accompanied by a high mortgage debt-GDP ratio (such as the

Netherlands), others the reverse (such as Spain). The UK is near the top end of the distribution of mortgage debt. Cross-country variation reflects differences in downpayment conditions, in the prices of new houses, in capital market constraints and in within-family sources of finance for home purchase.

<<Chart 1 here>>

Table 1 illustrates other indicators of cross-country variations. Column (1) illustrates some disparity in real house price growth across countries, with stagnant real house prices (over the whole period) in Sweden contrasting with rapid real house price increase in the Netherlands, Spain and the UK. Given that the supply of houses is relatively inelastic, the UK Treasury has calculated reduced form elasticities of house prices with respect to GDP growth, which are depicted in column (2). These estimates may reflect differences in the income elasticity of the demand for owner occupied housing across countries although of course other factors, such as changes in household composition and differing supply elasticities, may also play a role.

Column (3) suggests that there may be differences in volatility of house prices around the underlying trend. Again, the Netherlands stands out as having very high volatility; the UK, despite the cyclicality discussed further in the next sub-section, lies somewhere in the middle of the distribution (the same result applies if other measures of dispersion, such as a coefficient of variation, are used). Finally column (4) gives a date of significant deregulation for each country – that is, broadly, the date at which quantity controls and interest rate restrictions were relaxed for domestic consumers. However arbitrary it is to set a single such date for a process of deregulation, the data give a clear pattern of three early 'deregulators' (the UK, followed by Germany and the Netherlands) followed by the rest of the EU in the late 1980s/early 1990s.

<<Table 1 here>>

2.2. **The UK: Evidence on housing and financial markets**

The existing literature in the United Kingdom on housing wealth, the accumulation of debt and household spending has largely analysed macroeconomic trends. For long periods, trends in housing wealth, financial asset holdings and household consumption have been highly correlated, tempting analysts to assert causal links that may or may not be present. Despite our reservations on this interpretation, discussed later, macroeconomic trends serve as a background to what follows and are described briefly here. The data series used here are derived from data either downloadable from the Bank of England or the Office of National Statistics websites.

2.2.1. House prices in the United Kingdom 1970-2003

Chart 2 describes the annual changes in the average UK-wide change in house prices since 1970, both nominal and real. The indices are calculated for a representative house reflecting the mix of owner-occupied houses in the UK. Nominal growth is contrasted with the growth of house prices minus the change in the retail price index (RPI).

<<Chart 2 here>>

The chart shows that there have been four distinct booms in house prices in that period: the early 1970s; the late 1970s and early 1980s (although this was the weakest and most short-lived of the upturns); the 'Lawson' boom of the mid-to-late 1980s, and the period since the mid-1990s.

The two early booms in the period since 1970 were associated with incoming Conservative administrations but the 'dash for growth' in the early 1970s was curtailed by the real oil price rise and that around 1980 by rapidly rising unemployment, with consequent effects for the housing market. Both the early 1970s

and mid-1980s booms were also associated with increased liberalisation in capital markets - in the first case with the elimination of a good deal of quantity rationing and bank reserve requirements, in the latter case with greater competition among providers. Controversy, particularly around the mid-1980s boom, has centred on whether rising income expectations are sufficient to explain the upsurge of house prices in that period, or whether the asset market liberalisation in that period produced a classic asset 'bubble', reflected in the boom-bust feature of the housing market over the decade (see Muellbauer and Murphy, 1990, Attanasio and Weber, 1994).

The boom in house prices that has persisted from the mid-1990s to at least 2003 has some unusual features. It is longer lasting than previous episodes. Although in general real incomes have been rising over the period, the upsurge in house prices has not been accompanied by above-trend increases in other asset and consumer prices, so that the real and nominal house price indices track each other more closely than in past booms. Moreover the upsurge in prices has occurred despite measures to reduce the favourable tax treatment of owner occupiers relative to renters, and higher effective taxes ('stamp duty') on moving home. Real mortgage rates are *not* at historically low levels (at least, relative to the period from 1970 onwards) and in any event house prices seem to be rather real interest-inelastic (Meen, 1996). In fact, the two recent periods of falling real interest rates occurred during the early to mid 1970s, when 'stagflation' had been induced by rising oil prices, and in the early 1990s, when house prices were still falling.

One possible explanation for the post-1995 upsurge in prices is that historically low *nominal* interest rates, and therefore lower nominal mortgage payments on a loan of a given size, have induced homeowners to increase the average value of the loan. Higher loans have then been capitalised in the form of higher house prices. Higher prices themselves may have concealed an underlying increase in the

loan-to-value ratio, because other things equal low nominal interest rates have been associated with increased indebtedness. Moreover there may be an additional selection effect insofar as first-time and low income buyers, who may have lower loan-to-value ratios than average, are driven out of the market. These factors, quite apart from the unusual duration of the boom, have raised some concerns as to whether the post-1995 house price surge is also sustainable (Farlow, 2004).

2.2.2. House prices, consumption and income growth

Whatever the specific factors behind house price movements, rising house prices have typically been associated with periods of growing income expectations and with consumption spending. The accumulated evidence suggests that house price movements, both real and nominal, are highly pro-cyclical. This is confirmed in Chart 3, which depicts the four quarter-on-quarter growth of real household consumer spending (to eliminate seasonality) and the *quarterly* change in the real house price index, over the 1971-2003 period. There is a strong correlation between the series. Although this is consistent with evidence that rises in housing wealth increase consumption in the short run, it is also consistent with the reverse causation that consumption and income growth affect the demand for housing wealth. The overall long run income elasticity of real housing demand in relation to changes in real income has been estimated to be in the region of 1.7 to 3.0 (Meen, 1996). Since housing supply tends to be highly inelastic in the short run, this translates into a high volatility of house prices over the economic cycle.

<<Chart 3 here>>

2.2.3. The growth of consumer credit from the late 1980s

Rising housing wealth in the decade since the mid-1990s has been accompanied by a significant rise in consumer borrowing through other secured and

unsecured sources. Chart 4 illustrates 'stock' measures of outstanding consumer credit (excluding net housing debt), and in particular of credit card balances, as proportions of post-tax income from 1987 onwards.

<<Chart 4 here>>

The trends are somewhat different for consumer credit as a whole and credit cards balances. The cycle for consumer credit as a whole matches the economic cycle closely – rising in the mid-1980s, followed by a downturn coincident with the fall in house prices and final consumption expenditure at the end of the 1980s, and a subsequent surge from the mid-1990s onwards. In contrast, the trend in credit card balances is almost flat until the mid to late-1990s, after which there is a rapid rise in outstanding credit card debt. This trend may be associated with the more aggressive competitive strategy of credit card providers in the latter period, which involved both greater marketing to existing cardholders but also targeting income groups that had previously been excluded from credit card access either because of their income or credit histories.

Chart 5 describes a flow measure of consumer credit over the same period, illustrating the pattern of *net* lending (repayments versus new credit) as a proportion of post-tax income. This illustrates the strong seasonality of consumer credit, rising in the fourth quarter and negative in the first quarter. Again, the trend of net consumer credit follows the pattern of consumer spending and house prices, although the pattern of net credit card lending seems to show a rather undramatic secular upward trend, probably exhibiting a slow growth in seasonal volatility over the period. Thus the clear growth in outstanding credit card balances in Chart 4 may simply illustrate greater use of credit cards to shift consumption between quarters, rather than any secular trend in indebtedness. We come back to this important point when we examine household access to credit cards in a subsequent section.

<<Chart 5 here>>

2.2.4. Housing Equity Withdrawal

The final macroeconomic aggregate that has provoked interest in relation to housing equity, consumer spending and indebtedness is housing equity withdrawal. Housing equity withdrawal (HEW) describes explicit efforts by households to release part of the equity value of their home, either by re-mortgaging or by downsizing and is typically associated with periods in which house prices are rising. The equity released may be used to invest in other assets in order to rebalance the portfolio or in consumer spending. Since, HEW is strongly associated with moving house, HEW may in fact be used to finance specific expenditures such as moving costs or home improvement – the latter will, presumably, ultimately affect the value of the house so that the measured HEW is only transitory.

In the aggregate statistics provided by the Bank of England (Davey, 2001), housing equity withdrawal (there known as mortgage equity withdrawal) is defined as the difference between total net secured lending on the housing stock and investment in the housing stock. If net secured lending exceeds investment, there is HEW/mortgage equity withdrawal. The Bank's measure is defined specifically as the difference between lending secured on dwellings (mortgage advances) plus grants for housing, less investment in housing, defined as the sum of the value of new houses and the net transfer of houses into the home ownership sector (primarily sales of social – or public – housing to tenants), plus the value of home improvements, and house moving costs including stamp duty and legal fees. Chart 6 illustrates the Bank's calculated measure of housing equity withdrawal from 1970 to 2003.

<<Chart 6 here>>

As the chart illustrates, HEW as measured by the Bank of England has been strongly procyclical, but not as closely linked to the path of household consumer spending as, say, house prices. In fact HEW, although positive, was of lesser significance in the 1970s, and rose sharply in the early 1980s, despite the recession of the early 1980s. HEW became negative during the collapse of house prices in the late 1980s and early 1990s but has been steadily rising since that time.

Davey (2001) points out that, if gross saving rates are less volatile than consumer borrowing, there will be a strong link between changes in real consumption, real income and the net change in borrowing (HEW) simply from the underlying accounting relationship. In effect, there must be a positive correlation between the two series, even if the degree of co-movement varies over time. Moreover there will also be a strong link with house-moving rates since moving costs are a component of measured investment in housing, and which tend also to be pro-cyclical. Changing costs of moving home will also affect measured HEW – for example, a fall in legal and selling costs, other things being equal, would show up as an increase in HEW whereas increases in the tax on moving (stamp duty) would show up as the reverse. Since the aggregate series is therefore dominated by accounting and institutional relationships, examining household-level decisions to withdraw equity gives more insight into underlying household behaviour (see Section 4 below).

3. Access to credit and housing wealth: general considerations

3.1. Housing wealth, lifetime wealth and spending

How do house price increases affect the lifetime budget constraint? Why should there be any relationship between housing wealth and other forms of debt, both secured and unsecured? This section considers theses issues in general, before focussing on patterns of debt from household data from the UK.

House price fluctuations affect the value of lifetime wealth. In the life cycle saving 'story', permanently higher house prices increase the value of lifetime wealth of homeowners, reduce their need for additional borrowing, and, on the margin, increase consumer spending. However, the net impact on overall spending and lifetime wealth of a period of increasing house prices may be less clear-cut: the increase may be regarded as transitory or, if perceived as likely to continue, induce consumers to substitute spending on housing consumption for spending on other goods. Moreover, there are distributional effects: would-be buyers face a greater hurdle as house prices rise and may have to increase their indebtedness in order to enter the market, whereas housing wealth gains can only be obtained by downsizing or re-mortgaging. Overall, as Carroll (2004) points out, fluctuations in house prices redistribute wealth in the economy, rather than increasing the overall real income of the economy, although this redistribution may increase spending in the short to medium term.

Modifications of the basic life cycle consumption model arise if a proportion of consumers are *liquidity constrained*, in which case the standard Euler equation approach to consumption modelling (see the introduction to this volume and the chapter by Crook) has to be modified by the addition of various regressors that capture additional constraints besides the intertemporal budget constraint (Campbell and Mankiw, 1989). In particular, households may be liquidity constrained because they lack *collateral* against which to borrow or, for unsecured borrowing, evidence of asset ownership or a credit history (such as mortgage debt) that allows credit bureaux to provide a credit score for the household.

Home ownership, and housing equity, may therefore impact on asset holdings in other ways than through the intertemporal budget constraint. Formally, in a competitive capital market with perfect information, household decisions as to the

amount of financial debt and the pattern of net wealth (including debt) should be unaffected by changes in housing wealth – the main source of collateral on borrowing – other than through the impact of house price changes on lifetime wealth (the permanent income) of the household. The divergences from this stylised model (credit constraints) stem from imperfect markets, asymmetric information and the consequent use of screening and signalling mechanisms.

3.2. **Screening and credit constraints**

In their seminal paper, Stiglitz and Weiss (1981) develop a model in which uncertainty over individual borrower default induces lenders to set the interest rate too low and there is credit rationing. Assume that observationally equivalent borrowers bid for identical loan amounts, and that the interest rate attached to each loan and other conditions will be reflected in the default behaviour of borrowers in a way that is unobservable to the lender. In particular, assume that a high interest rate will tend to attract more risky borrowers (in the sense of default risk). Since the lender cannot 'price' each borrower according to their ex ante characteristics, any lender who sets the interest rate 'too high' will only get bad risks applying, so it is better to set the interest rate lower and ration credit. Rationing implies that some low risk borrowers will not get credit and that interest rates act as a *screening device*. The rationing arises not from any market 'disequilibrium' but because lenders set interest rates to obtain the right 'mix' of borrowers over the risk-return continuum.[1]

Faced with imperfect information on risks of individual loans, requesting collateral seems a sensible way of reducing the risk to the lender. The main source of collateral, to households and to small businesses alike, is housing wealth. The

[1] Ausubel (1991) argues that a model based on rationing the credit market because interest rates are 'too low' flies in the face of empirical evidence that credit providers, especially credit card providers, tend to levy interest rates well above those that would exist in competitive markets. For further

absence of collateral may therefore be a binding constraint on lending, which is why exogenous rises in the value of collateral such as increased house prices may increase observed lending on secured assets [see Black, de Meza and Jeffreys (1996), Aoki *et al*, (2002) and Iacoviello (2004)].[2]

The presence of borrowing constraints may in turn affect the portfolio choice of households, as in Paxson (1990). If the constraint takes the form of an exogenous ceiling on the loan amount, the borrower will hold more liquid assets to avoid credit constraints in the future. But when the constraint takes the form of an interest rate ceiling for a given loan amount, illiquid assets can serve as collateral to reduce the interest rate on the loan and/or to increase the maximum amount that can be allowed. The potential use of housing wealth as collateral therefore has two effects on spending on consumption goods relative to housing: it may induce households to substitute spending on housing for consumption of other goods as a source of future collateral, but by reducing the cost of credit it will increase the total demand for borrowing to finance consumption expenditure.

3.3.**Signalling and credit scoring**

Housing wealth can act as a signalling device as well as a screening device as it can also be used to 'signal' credit-worthiness (Bester, 1985). Credit constraints may not just restrict the ability of households to smooth consumption, but also limit their capacity to invest in more 'risky' activities (i.e. that incur the possibility of default risk, such as purchases of lumpy durables or investments such as retraining or

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discussion of why households borrow on credit cards (especially when they have assets earning lower interest rates) see the chapter by Bertaut and Haliassos in this volume.

[2] However under certain circumstances in the screening framework, Stiglitz and Weiss argue, requesting security on a debt may not help the lender – for example, if wealthier people are less risk averse (or projects differ in their 'riskiness'), then those that put up most collateral are prepared to take greatest risk and this may increase bank default risk. Collateral will deter the more risk averse individuals who are less likely to default. See also Chan and Kanatos (1985).

changing jobs). Suppose bankers can offer different interest rate-collateral options. If low risk borrowers (for given income level, etc.) *signal* their low risk by offering greater collateral, then a separating equilibrium with different interest rate-collateral combinations but without credit rationing could occur. Milde and Riley (1988) make a similar point concerning the size of the loan amount. If banks offer increasing loan size-interest rate 'packages', then under certain circumstances, applicants with less risky projects select larger rather than smaller loans.

Ownership of assets such as housing also affects access to unsecured debt. Credit bureaux exist to reduce information asymmetries – and have two specific functions. First, they attempt to screen out 'bad' risks to lenders by searches over credit histories. Second, they provide credit scores for individuals based on household characteristics, notably prospective income and the value of household assets. Home ownership, in particular, is given substantial weight as a 'signal' of creditworthiness, even on unsecured credit such as access to credit cards.

In the market for both secured *and* unsecured debt, therefore, lenders offer different contracts (screening) and borrowers offer collateral and credit records (signalling). New borrowers may find it more difficult to acquire credit – both mortgages and unsecured credit because they have neither the collateral nor the credit history (Duca and Rosenthal, 1993, suggest the young are typically credit-constrained – see also the chapter by Crook in this volume). So it may be worthwhile for new borrowers, such as young households, to invest in obtaining a credit 'history' in order to reduce the probability of being refused long-term loans such as a mortgage. So a way of *signalling* a lack of default risk is to acquire a clean credit record (Ben-Sahar and Feldman, 2003).

3.4. **From micro to macro**

The focus of policy-makers is on macroeconomic trends in the housing market, in consumer spending, and in how consumers finance that spending. The focus of the remainder of this chapter is on using household data to examine these issues. Why follow this strategy, and how can microdata be used to underpin macroeconomic policy?

As mentioned in the introduction, aggregate series of housing expenditure, housing equity withdrawal and consumer expenditure are highly collinear, making inference as to behavioural responses conjectural. For example, household income in the national accounts is allocated to consumption and investment expenditures, with investment differentiated between housing and financial assets (as noted by Davey, 2001). Since 'housing equity withdrawal' is measured as negative investment, this rules out anything other than a positive association between consumer spending and equity withdrawal, unless we are prepared to assume implausibly high substitution elasticities between asset holdings. In contrast, household-level measures of equity withdrawal allow us both to identify associated actions (for example, changes in equity values associated with moving home *versus* additional mortgages) and consequences (on household spending, saving decisions etc.).

There *are* studies that utilise time series data to examine the links between housing wealth and aggregate consumption spending in the UK [several are surveyed in Disney, Henley and Jevons (2003) and HM Treasury (2003)]. In addition vector autoregression methods have been used to examine the role of the housing market in the transmission of monetary policy as a 'financial accelerator' (Aoki *et al* 2002). Time series techniques can handle collinearity but are necessarily restricted in handling the structural aspects of the problem – in particular that, where housing demand is income elastic and supply of housing inelastic, consumption, income and

housing wealth (consumption) will be simultaneously determined. Some effort to overcome this problem using instruments is described by Iacoviello (2004).

But there remains the serious problem, described by Carroll (2004) that house price 'shocks' have very different effects on different types of households and that aggregate response parameters may conceal a good deal of heterogeneity of responses across households. By way of illustration, Disney, Henley and Jevons (2003) use the British Household Panel Survey to examine the relationship between housing wealth and consumption. Since investment in housing is endogenous to the life cycle saving hypothesis, the model examines the relationship between house price 'shocks' (measured as residuals from an AR2 process using county-level house price changes as the instrument) and the consumption behaviour of households. The authors tentatively find that propensities to consume from additional housing wealth differ according to whether those shocks are positive or negative, and also according to the value of housing equity held by the household. Heteroegeneity of responses is therefore of great importance.

We do not attempt any structural econometric modelling here, but the data sets described in the next section do allow us to examine behaviour at the household level. We can investigate households by their ownership status and by value of housing equity to see how this affects access to credit and credit-financed spending. We can examine what types of households utilise housing equity withdrawals and draw some inferences as to whether these are used to finance certain kinds of activity. We can see whether indicators of 'excessive' borrowing correlate with access to collateral in the form of housing wealth. As with the *caveats* arising from earlier work testing the link between consumer spending and changes in housing equity values using household data, our analysis urges caution in asserting that models such as 'financial accelerator' theories apply at the household level – that is, that households with

above-average increases in housing equity are more likely to see rapid increases in debt-financed spending.

4. Microeconomic evidence on home ownership, access to unsecured credit and the impact on household debt

4.1. Data and methods

This section examines how households access financial credit channels, their levels of outstanding debt and self-reported difficulties in repaying debt (such as arrears) using household data. The data used to examine these issues arise from two household surveys, the British Household Panel Survey (BHPS) and the Families and Children Survey (FACS). The BHPS is representative of all households within the geographical area of Britain that is covered (which excludes part of Scotland and Northern Ireland for much of the period), whereas the FACS covers only households with children. In this section, therefore, we construct a sub-sample of the BHPS that has the same selection criterion as the FACS. The constructed sub-sample of the BHPS has roughly 2500 households and FACS has around 7000 households.

British Household Panel Survey (BHPS)

The BHPS is a panel survey of approximately 10,000 adults in around 5,000 households that has been running annually since 1991. Apart from questions concerning household demographics, health and economic status, the BHPS asks about wealth and indebtedness in two of the eleven waves available at the time of writing: 1995 and 2000. It also asks in those waves about the sources of household debt, and the total value of this debt. Here, we focus primarily on the 2000 wave.

The data on the amount of 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 that they owe are then asked to

give a banded answer. In this analysis we impute a continuous value for those households who report banded information.[3] It also asks sufficient questions to allow us to estimate the current value of the house, as well as year-on-year self-reported house values. We experimented both with using self-reported values and in proxying the changing values among non-movers by an index of house prices disaggregated to the county level (as in Disney, Henley and Jevons, 2003). We use the former series to construct housing equity although results using the latter are available on request.

Families and Children Survey (FACS)

The FACS is a relatively new U.K household data set. First established as the Survey of Low Income Families in 1999, the survey was designed to elicit information on household characteristics, economic and financial status for a sample of low income families with children. Separate samples were constructed for lone parents and for low income couples with children (therefore there are more of the former than in the population as a whole). The financial status of households in that first wave are analysed in Bridges and Disney (2004). The same sample of families was re-interviewed in 2000, together with a 'booster' sample of moderate-income families. In 2001 the sample was boosted to encompass a representative sample of *all* families with children, and has continued thereafter in this format. Here we focus on the 2001 survey.

The main aim of the FACS was to examine the effectiveness of 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 and income sources. However, it also asks both qualitative and quantitative questions

[3] Since 'households' may include several family members that do not share resources, we follow standard practice and take as the 'household' the 'benefit unit' – that is, the household as defined for receipt of welfare benefits (this would also be the 'tax unit' except that in the UK, income tax is now individually assessed, although tax credits are assessed at household level).

on financial hardship, together with questions on the extent of credit and borrowing arrangements. Some of these questions are similar to the BHPS, but they are asked in *every* wave and not just at irregular intervals. Moreover FACS information on arrears on debt and indicators of financial stress are not available in other surveys. The major weakness of FACS, however, is that it does not have sufficient questions to permit us to construct a value of housing equity for each household. This limitation is unfortunate, because with housing equity measures, we could exploit the panel dimension to examine the 'financial accelerator' hypothesis explicitly. As it is, we have to rely on cross-sectional differences in debt and home ownership to examine the question.

A full list of questions asked in the two surveys is provided in Appendix A.

4.2. **Evidence on use of types of financial credit: the role of home ownership**

Table 2 depicts cross-tabulations from the British Household Panel Survey (BHPS) 2000 and the Families and Children Survey (FACS) 2001 concerning access to unsecured debt among households. It differentiates households in two dimensions – whether they are homeowners or tenants, and whether they are single parents or couples with children. An important difference between the surveys is that whereas the BHPS generally asks whether households owe money on each credit arrangement, the FACS asks about use *or* owing money. For credit cards, the BHPS asks both questions separately and the comparison of response in the two surveys concerning usage suggests very similar patterns. Not surprisingly across all types of credit, usage is higher than the probability of owing money but the proportionate differences in responses across household types are common whether the question concerns usage or owing money.

There are striking differences in access to credit and store cards use between homeowners and tenants [row 1, both panels (a) and (b)]. The probability of homeowners having such cards is over twice that for tenants. Single parent tenants are even less likely to have cards. This suggests *prima* facie evidence that access to such cards is related to home ownership (unless it solely reflects differences in preferences across households). We reject the possibility that it arises from omitted covariates (such as income) in the next table. Conditional on having a card [last row of panel (a)], the reported probabilities of having card debts are almost constant across household types.

<< Table 2 here >>

Row 2 illustrates another common credit arrangement – using mail order catalogues. These can be regarded as close substitutes for credit cards for purchases of durables, clothing etc. but effective interest rates are usually less transparent (and sometimes higher) on catalogue purchases than on credit and store cards. Also, in general, use of mail order catalogues is not subject to credit scoring although defaults and arrears on such purchases will generally be flagged by credit bureaux. Use of catalogues ([panel (b)] is pervasive among all types of households but outstanding debts on mail order catalogues are much more prevalent among tenants than homeowners [panel (a)]. This suggests strong evidence of households substituting catalogue purchases for credit and store card-financed debts when the latter are not available; note however that some households often use both credit/store cards and catalogues in making credit-financed purchases (Bridges and Disney, 2004).

Finally, the table reports the probability of owing money on a personal loan. The higher proportions in panel (a) may reflect the broader nature of the question (including, for example, finance companies and other financial institutions) rather than the specific sources mentioned in panel (b). Homeowners have a greater

preponderance of loans than tenants, although the difference is not as pervasive as in the case of credit and store cards.

We now examine the household probabilities of using or owing money on unsecured credit arrangements in a multivariate regression framework using the BHPS.[4] What hypotheses underlie the analysis? First, from the cross-tabulations, we might anticipate that home ownership will be a significant predictor of credit card usage (but not necessarily the size of debt on the card) and also of owing money on personal loans, but will have no impact on owing money on mail order catalogues, as in Table 2. However we can now condition this finding on other characteristics – household income, education, demographics etc. to test explicitly the screening/signalling hypothesis that it is home ownership that permits access to certain credit arrangements. It is also interesting to see how this effect is modified if the household has significant housing equity. In the collateral model, it is the *value* of housing wealth that increases access to credit. We can examine whether a positive relationship holds for access to unsecured credit or whether it is home ownership *per se* that matters. Finally, it is useful to see what other household characteristics are associated with both access to and owing money on unsecured credit arrangements.

<< Table 3 here >>

Column (1) of Table 3 provides the marginal effects from a probit of the household having a credit or charge card, estimated on household characteristics. The probability of having a card is related positively to the individual having a higher income, working, being better educated and being single, and reduced if the individual is on a greater number of welfare benefits. Being a homeowner, independent of the value of housing wealth, raises the probability of having a credit or charge card by

19.5%.[5] The probability is also positively related to having more housing equity, given home ownership. Home ownership is therefore an important determinant of access to one form of unsecured debt.

Column (2) examines the probability that the household uses credit or charge cards to borrow, rather than simply rotating balances from month to month. An unrestricted probit would be an inappropriate estimation technique because borrowing on a credit card is conditional on having a card. Column (2) is therefore estimated as a probit with sample selection. Here being a homeowner has a positive and significant impact on the probability of owing money conditional on having a card although higher housing equity reduces that probability (presumably a wealth effect).[6] Few other coefficients are significant although higher numbers of children in the household increase credit card borrowing.

Column (3) examines borrowing using credit through mail order catalogue purchases. As implied in the discussion of Table 1, this form of borrowing is an alternative for individuals who are unable to acquire a credit card and is particularly prevalent among tenants. The question is whether, once we control for characteristics associated with tenancy (single parent, youth, a lower likelihood of working, a greater propensity to receive welfare benefits, lower wealth and so on), housing status has any independent effect on the probability of owing money by this route. There is no particular reason why housing status should have any independent effect, once we control for characteristics, since our contention is that tenancy status plays no

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[4] A similar specification is available on request from the authors using FACS. Although the sample size is far larger in FACS, there are no data on the value of housing equity, so we quote the results from BHPS. The key coefficients discussed in the text are similar.

[5] The marginal effect using the FACS data (n=7025) is 21.8%.

[6] Note however that the significance of the marginal effect conflates the direct effect of homeownership on the amount of debt and the indirect effect on the probability of having a credit or store card. Experimenting with separate probits for ownership and debt suggests that the homeownership effect on credit card debt is coming through having access to a credit card rather than the amount of debt conditional on having a card.

signalling or screening role in accessing this form of credit. And this is exactly confirmed by the multivariate analysis. There is, however, some evidence of a wealth effect arising from having housing equity.

Finally, column (4) illustrates the probit estimates for the other type of debt identified in Table 1: credit in the form of personal loans. Again, home ownership seems to act as a screening device, insofar as there is a positive association with the probability of having such a loan in addition to the positive impact of current income. Again higher housing equity *reduces* the probability of owing money on a personal loan, again perhaps illustrating a wealth effect.

Overall, therefore, home ownership does seem to play a role an independent role in enabling householders to acquire some forms of unsecured debt. Home ownership acts not just as collateral for secured loans but also allows the household access to a wide variety of unsecured credit arrangements (although some personal loans may be secured on the home). However, tenants are also able to acquire unsecured credit, such as mail order purchases, albeit often on unfavourable terms. There is, however, no evidence of a 'financial accelerator', at least in the cross section of households – that is, having greater housing equity, conditional on owning a house, is not associated with higher levels of outstanding unsecured debt. Indeed, typically, higher housing wealth is associated with lower outstanding debt. This is shown clearly in the next sub-section. However the *caveat* needs to be stated, and is reiterated in that section, that cross sections are of limited value in understanding the response, in terms of acquisition of debt, of homeowners to an unexpected increase in their housing wealth.

4.3. **Home ownership, total unsecured debt and arrears**

What is the overall impact of home ownership and the value of housing equity on the total stock of financial (largely unsecured) debt? And how does home

ownership affect self-reported arrears on debt? The 'financial accelerator' model [Aoki *et al* (2002)] suggests that rising housing equity values permit households to increase their secured debt. Evidence from the previous sub-section suggests that homeowners can also gain access to sources of unsecured debt less easily available to tenants, even allowing for differences in current and permanent income. The obvious risk in such a home-equity debt scenario is that households can rapidly find themselves with a debt overhang since, as Iacoviello (2004) points out: 'consumers [and here, primarily, homeowners] are actually inundated by offers of car loans, credit cards, home equity loans, and so on.' The risks arising from downturns in property values are then self-evident.

As described previously, cross sections do not permit us to test whether changes in property values or tenure status change values of household debt or arrears in debt. But we can examine between-household variations in debt and debt arrears, and see whether these differences are simply explained by characteristics other than the source of housing wealth.

Table 3 column (1) provides a tobit analysis of the logarithm of the amount of reported financial debt, comprising debt accumulated on the credit arrangements described in Table 1 plus money owed on: DSS social fund loan, hire purchases, overdrafts, and student loans. Again, the marginal effects are cited and can be interpreted as elasticities. Various measures of higher income (household income, partner working, more welfare benefits) are associated with a higher value of debts. The most interesting finding, however, is the insignificant impact of home ownership and the *negative* and significant impact of housing equity on the value of outstanding debt. Higher housing wealth is not associated with higher unsecured debt, at least in the cross section.

<< Table 3 here >>

This is not a refutation of the housing-financial debt model. To test it, we need to construct a measure of household house price 'shocks' (as in Disney, Henley and Jevons, 2003) and examine how household financial debt reacts to these unanticipated wealth shocks. Unfortunately the BHPS does not contain panel data on debt – the two waves that contain debt data (1995 and 2000) are not strictly comparable in their measures of debt and a long difference should not be constructed using that data (despite some efforts to the contrary in the literature). But the cross section evidence is also consistent with a story that it is wider access to credit arrangements, and rising real incomes, rather than housing wealth *per se*, that lies behind the rapid increase in unsecured debt in recent years.

A similar 'story' emerges when we examine arrears on financial debt among comparable families using the 2001 Families and Children Survey. As mentioned earlier, FACS does not contain information on housing equity, so we have to make do with a home ownership variable, and a slightly different set of additional regressors.

Table 3 column (2) estimates a tobit of the log of the total value of arrears reported by households in the 2001 FACS. The debts covered comprise debts on cards and catalogues, on financial loans, on utility bills and local taxes, and on housing payments including mortgages (see the Appendix). The regression shows that being a couple with children rather than a single parent, less educated and younger, as well as being in receipt of a greater number of welfare benefits, are all associated with higher arrears on debts. However owning a house is negatively associated with total arrears on debt. The analysis of the FACS suggests that low income, rather than access to housing equity, lies behind household problems with debt.

<< Table 4 here >>

We do not discuss arrears on particular kinds of credit arrangement and bill-paying separately here. Typically, mail order and catalogues charge high implicit rates of interest, reflecting less discrimination over clients and greater probabilities of default. Rates of arrears among low income families on mail order/catalogues are indeed typically higher than on credit cards, but this largely reflects the greater default rate of tenants relative to home owners – with the latter much less likely to have access to a credit card. Among homeowners, default rates appear to be roughly comparable on credit cards and catalogues (Bridges and Disney, 2004, Tables 2 and 3).

Overall, therefore, in analysing patterns of debt and arrears on debt, and focussing in particular on home ownership, a mixed analysis emerges. Home ownership undoubtedly allows households access to credit – and not just debt secured on housing equity. Homeowners and tenants therefore have different portfolios of debt. However higher housing equity is not associated with greater levels of unsecured debt, and home ownership is not associated with greater arrears on debt. The source of concern with rising house prices, if there is one, may therefore lie in the relationship between growing housing equity and the growth of secured debt. This is the topic of the next section.

5. Housing equity withdrawal: evidence from household data

5.1. Sources of housing equity withdrawal

This section examines the growth of debt secured on housing equity in the United Kingdom. Specifically, it focuses on the extent of housing equity withdrawal (HEW) in the mid to late 1990s in the United Kingdom using the British Household Panel Survey. This contrasts with calculating HEW from the aggregate national accounts as in Section 2.

There are two attractions to calculating HEW from household data. First, equity withdrawal can be identified with observable household-specific individual behaviour, rather than deriving HEW from the difference between two macroeconomic accounting measures. Second, it is possible to investigate the contribution to average HEW per household derived from different *methods* of equity withdrawal. It is standard in the literature to differentiate several 'routes' that households can use to withdraw equity. These are described in the next sub-section and the relative magnitude of cumulated HEW by these different methods is described for the period 1993 to 2001.

We also investigate whether these calculated cumulated values of housing equity withdrawal by households correlate with measures of financial wealth and financial debt at the end of the period. Unfortunately, and as described in the previous section, the latter variables are only measured once on a consistent basis (in 2000) and we can only compare the cumulated flows with the cross-section differences in holdings of wealth and debt, rather than pursuing a dynamic analysis of the evolution of housing equity withdrawal, household financial wealth and financial debt.

5.2. **Sources of housing equity withdrawal in the British Household Panel Survey**

The literature [such as Reserve Bank of Australia (2003)] typically delineates several 'routes' of housing equity withdrawal (HEW). In that source, the methods are:

i) 'down trading' when a seller moves to a cheaper property but reduces the mortgage by a lower amount;

ii) 'over borrowing' when a house move increases the mortgage by more than the difference between the value of the sale and the purchase;

iii) ‘re-mortgaging’; that is, taking out an extra mortgage *without* moving house; and

iv) ‘final sale’ when the proceeds from a sale are not used to buy a new house – for example when the owner dies and the estate sells the property, or when a household switches from owning to renting.

By analogy, housing equity can be injected into a property by reversing these actions.

Examining these motives for withdrawing equity, introspection suggests that they occur for different reasons and result in differential impacts on the household balance sheet. Additional mortgages on moving (ii) and re-mortgaging (iii) are often undertaken to finance moving costs (in the first case) and to finance home improvements (both cases). Essentially the HEW thereby obtained may be short-term only and matched ultimately by ‘investment’ in housing on the other side of the balance sheet, which may or may not result in low housing equity over a longer horizon. Nevertheless, rising house prices may have led to sharp increases in re-mortgaging, and this can be investigated using our data. In contrast, ‘down trading’ [(i) above] and ‘final sales’ [(iv) above] may well lead to permanent changes in the portfolio of household assets.

The tables and charts in this section use evidence from the British Household Panel Survey, described in Section 4, for the years since 1993 to examine housing equity withdrawal. We make use of self-reported information on house values, on moving decisions and moving motives, data on self-reported initial mortgage amounts, and calculated values of outstanding mortgages, as well as a variety of demographic controls. Unfortunately the British Household Panel Survey has very imperfect data on the value of home improvements.

Table 5 Columns (1) to (4) looks at what happens to the outstanding mortgage when households move (owner-occupation to owner-occupation). Around 6-7 % of the sample move in any year (the weights are sample weights provided by BHPS). Of these moves, Column (1) shows that around 13% are associated with a reduction in the outstanding mortgage principal – households injecting equity (presumably from other sources of capital in the household balance sheet, or from the proceeds of inheritance or a windfall gain).

<< Table 5 here >>

Column (2) shows that 5.5% of households withdraw equity by "trading-down", in that their outstanding mortgage remains constant while their self-reported house value falls. It may be, of course, that some of these respondents may have moved 'horizontally' in the market but have over-estimated the initial value of their home before the sale. But if this was the case we might expect this proportion to have fallen as realism in self-reported house values improved through the 1990s. Column (3) shows that on average 7.3% of household hold their mortgage constant but increased the value of their home by moving. These could be equity-injectors. Again, some of these may be mis-valuations – households who under-report the true market value of their home prior to selling. But again there is no consistent temporal pattern to this potential mis-valuation although it tended to increase in the latter part of the period when house price increases started to accelerate.

Column (4) shows that the vast majority of movers take out larger mortgages to finance a move from a smaller to a larger property. Column (5) is the only part of the Table that considers non-movers. Consistently, about 13% of stayers (who comprise 93-94% of the sample in any year) re-mortgage or extend their mortgage. As suggested, this may be because many of these non-movers use the withdrawn housing equity to finance purchases on consumer durables or home improvement.

One reason for thinking that releasing housing equity is *not* a primary motive for re-mortgaging is that, despite rising house prices in the latter part of the period, the proportion of re-mortgagers has stayed almost constant. On the other hand, as the next table shows, amounts withdrawn have increased as house prices have risen.

How much equity is withdrawn, on average, by each activity? Table 6 provides the key results – it shows the average level of calculated equity withdrawal (given the caveats above) for each of the first three 'routes' (Table 5, column (2) "down-trading"; Table 5, column (4) "over-borrowing", Table 5, column (5), "re-mortgaging").

<< Table 6 here >>

In the case of "over-borrowers", the equity withdrawal is calculated by netting out the change in the house value from before to after the move. For a given equity withdrawal "event" the most equity is withdrawn by "down-traders" (a nominal average of £42,000 withdrawn). The amount withdrawn through this route increases substantially over the period, particularly in the last two years, consistent with the upturn in the housing market. "Over-borrowing" is far more pervasive during moves, but the average amount withdrawn is generally small and does not increase over the period despite falling interest rates and rising housing equity. Again, this absence of any temporal pattern may suggest that such borrowing is used to cover moving expenses and other related expenses. Whilst legal fees and other expenses have risen over time, increased competition among estate agents (realtors) may have kept nominal moving costs down.

"Re-mortgagers" who do not move have the second highest average level of withdrawal per "event". This route is the most popular form of equity withdrawal simply because non-movers outweigh movers (from Table 5). The average amount withdrawn, while much lower than through "trading down", at an average of £4,000,

has increased significantly in the last few years of the period in question, again consistent with the housing market upturn.

Table 7 provides some limited information on the scale and effect of "final sales" in the BHPS sample. Equity withdrawal through the final sales of the property of deceased households is likely to be rather small. Less than 1 percent of BHPS households are recorded in any year as disappearing from the sample because the household dies. Equity withdrawal through the final sale of property belonging to households who move out of owner-occupation is also on a very small scale, albeit at a rather higher rate. Table 7 also reports the average level of household housing equity for such households. Given the very small numbers involved it is difficult to make any reliable interpretation in these averages from one year to the next.

<< Table 7 here >>

Finally, the BHPS has asked all household members since Wave 7 (1997) whether they have received an inheritance during the previous year. Table 7 also reports that around 4 percent of households in any year contain at least one household member in receipt of an inheritance. Such inheritances may be financial as well as being in the form of property. The average reported value of the inheritances is also given in the table, and does appear to have risen along with house prices.

5.3. **Housing equity withdrawal and financial assets**

In this section, the determinants of cumulative housing equity withdrawal by households are examined by regression analysis. The relationship between the cumulated totals and the distribution of financial wealth and debt at the end of the period are then examined. The object is to see if there is evidence that cumulative withdrawal affects the household's financial position at the end of the period, *ceteris paribus.*

Table 8 reports two estimated tobit equations. The tobit is an appropriate estimator for a reduced from model to capture the feature that only a sub-set of households withdraw *any* housing equity. The dependent variable is the estimated cumulative amount of equity withdrawn per household between 1993-1994 and 2000-2001. For a mover household, equity withdrawal (EW) is adjusted for the effect of moving to a more valuable house (HV) on the size of the mortgage (M), and is computed as

$EW_t = -((M_t - HV_t) - (M_{t-1} - HV_{t-1}))$ if $EW_t < 0$ and 0 otherwise

For a non-mover household it is computed as:

$EW_t = -(M_t - M_{t-1})$ if $EW_t < 0$ and 0 otherwise.

The dependent variable is $\sum_{t=1994}^{2001} EW_t$. While it is feasible to estimate the equation as a panel, the proportion of household-year observations censored at zero will be high. The right hand side of the equation includes covariates to capture initial household demographic status (age of household head, age squared, female household head, marital status, number of adults in household and number of dependent children in various age categories), to capture change in demographic status (head married, head divorced/separated, head widowed, change in number of persons in household), and for outright home-ownership (i.e. no initial mortgage). A series of dummy variables are also included which interact the type of equity withdrawal activity with year dummy variables ("down-trading", "over-borrowing", "re-mortgaging"). We experimented with an equation for the sub-period from 1997 to 2001 that included interaction dummy variables for inheritance (available annually only from 1997 – see Table 3) but the results are not significant so this specification is omitted here.

<< Table 8 here >>

Examining the demographic variables, housing equity withdrawal increases sharply with the age of the household head and peaks at 46.7 years old. Households with a female head are less likely to withdraw equity. Being divorced appears to be associated with equity withdrawal; becoming divorced weakly so. In the first equation the presence of very young children in the household is also associated with increased equity withdrawal, probably to finance home improvements.

The sets of interaction dummies between years and types of withdrawal attract strongly positive and significant coefficient estimates. As described in Section 4.2, the strongest form of equity withdrawal is down-trading. The scale of withdrawal on down-trading appears to have grown through the 1990s and in nominal terms a typical down-trade withdrawal is nearly twice as large in 2000-2001 as it was in 1993-1994 (cumulative consumer price inflation over this period was about 18 percent). Over-borrowing and re-mortgaging appear to be associated with much lower levels of equity withdrawal, other things equal. The degree of over-borrowing fluctuates substantially from year to year with little or no consistent pattern over time. As noted earlier this may reflect low sample numbers. The average scale of re-mortgaging, on the other hand, grows over time, and again almost doubles between the start and end of the period. This last result is the most consistent evidence obtained in the paper that rising housing wealth has led to significant increases in secured borrowing. Even so, as suggested in Table 5, the number of homeowners utilising this route has remained constant.

Chart 7 plots the marginal effects from the year-equity withdrawal interactions from column (2) to illustrate the sources of, and trends in, average amounts of equity withdrawn over the period. There is a rising trend in absolute HEW over the period, as in Chart 6, although the latter does not contain the ‘blip’ in household HEW observed for 1998. Release of equity by down-trading is by far the strongest

contributory factor to equity withdrawal. A *caveat* from the data is that we are unable to model precisely the amounts of equity withdrawal arising from dissolution of owner-occupation at death using this data set. Such events are of low frequency in the sample as a whole but may typically be the largest absolute sources of equity withdrawal. The impacts of bequests on holdings of financial wealth and on debt lie beyond the scope of this chapter, however.

<<Chart 7 here >>

We can now investigate the relationship between cumulative withdrawals of housing equity and the information in 2000 in the BHPS on holdings of financial wealth and debt. Unfortunately, year-on-year measures of household financial assets and debts are not available in the data set – questions on assets and debt were asked in 1995 but they are not directly comparable with 2000.

To undertake the investigation, we divide the self-reported data on total amounts of financial wealth and non-mortgage debt into equivalent bands. For each band of assets and debt, Table 9 describes the sample proportions and the average amounts of cumulative equity withdrawal from 1993 to 2001.

<< Table 9 here >>

The data on financial assets show a clear bifurcation of households. A substantial minority of households hold little or no financial assets. The next largest proportion is in the open-ended highest bracket. The figures on non-mortgage debt also show a majority of households have very little debt, with just under 70% having less than £500 and just over 10% having debt in excess of £5000. The final column of the Table gives average levels of housing wealth between 1993 and 2001. It reveals a U-shaped relationship between housing wealth and both levels of financial wealth and debt. Households with little financial wealth and little debt have higher overall levels of housing wealth than those with intermediate levels of financial wealth and debt. On

the other hand those households with very high levels of financial wealth and very high levels of debt tend to possess high levels of housing wealth.

The simple correlation (with BHPS household weights) between the level of financial assets and cumulative equity withdrawal is –0.01, and between non-mortgage debt and cumulative equity withdrawal of –0.12. There is therefore no overall relationship between equity withdrawal and the level of financial wealth, although the 31% of the sample with over £50000 of wealth have very low levels of equity withdrawal. There is a stronger relationship with unsecured debt, with an apparent negative correlation suggesting that higher HEW is associated with lower debt. However, the relationship is in fact non-linear: a quadratic regression of equity withdrawal on debt and debt-squared gives highly significant coefficients on both the level and the square. Higher equity withdrawal between 1993 and 2001 is associated with increasing unsecured debt in 2000 up to debt levels of £27000 but beyond that the association is negative. As Table 9 shows the least indebted (less than £0.5k) have the lowest levels of equity withdrawal. Unfortunately, we do not know what their level of debt would have been in the absence of equity withdrawal.

It is possible to focus, however, on those who withdraw large amounts of equity and to examine their background characteristics. As suggested in Table 8 and Chart 7, these are mostly ‘down sizing’ households, which we might surmise are older households who are retiring or where children are leaving home. This is broadly confirmed by a detailed analysis of this sub-set of households: the head of household is, on average, 12 years older than the sample as a whole, typically an outright owner (that is, without a mortgage), with no dependent children and often widowed (49% of the sub-sample) and inactive, mostly retired (52% of the sub-sample) with a high ratio (number of rooms to number in the household) which is typically a sign of housing

size ‘disequilibrium’ (see Feinstein and McFadden, 1989; Disney, Henley and Stears, 2002). Whilst these substantial flows contribute to the aggregate level of housing equity withdrawal, they are consistent with the life cycle hypothesis of saving, suggesting that older households (who are increasing proportionately as the population ages) are engaging in consumption smoothing, which should not be a cause for concern.

6. Conclusion

As in several OECD countries, the United Kingdom has seen fluctuating house prices for several decades, coupled with changes in the level of secured and unsecured debt. In particular, since the late 1990s, there have been substantial rises in house prices, in levels of unsecured debt, and in home equity withdrawal, illustrated in this chapter. The chapter has explored the theoretical links between home ownership, changing housing wealth and levels of secured and unsecured debt. Its main novelty, however, is to examine the empirical relationships between these macroeconomic variables using two new household panel data sets for Britain.

The findings from the cross-section suggest that we must be cautious in drawing inferences from macroeconomic trends. Certainly, it has shown, home ownership is associated with access to certain types of unsecured debt, and homeowners and tenants have different portfolios of credit arrangements. Homeowners, for example, are typically more likely to have credit cards whereas tenants are more likely to rely on catalogues and mail order purchases in order to obtain unsecured credit. Overall, however, total levels of household unsecured debt and arrears on debt and payments of bills tend to be negatively associated with home ownership. Higher income families typically acquire more unsecured debt, and low

income families tend to run into difficulties with debt, but home ownership and housing equity play little part in these outcomes.

Concern over growing levels of housing equity withdrawal (HEW) in the UK suggests that it is the relationship between housing wealth and *secured* debt that is more significant. However, again using household data, the chapter suggests that the largest value of HEW is associated with decumulation of assets later in the life cycle. The gradual ageing of the population may increase the total value of HEW over time for this very reason. Whilst the value of re-mortgaging has increased substantially (which is a typical indicator of using rising housing wealth to secure debt), the proportion of households that have utilised re-mortgaging has remained roughly constant over time. More analysis is required, and in particular it would be useful to have household panel data that permit us to understand the trajectory of household debt over time, but the results here show that analyses from household data are essential if we are fully to understand the aggregate trends over time.

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Table 1
Basic indicators of EU members' housing and financial markets

Country	*(1) Annual real house price inflation 1971-2001 (per cent)*	*(2) Long run income elasticity of house prices*	*(3) Volatility: average percentage deviation of real house price from trend 1970-2001*	*(4) Date of interest rate deregulation*
Germany	0.1	0.0	11.1	1981
Denmark	1.3	n.a.	13.4	1988
Netherlands	2.8	1.2	25.1	1981
France	1.2	0.6	7.6	1990
Finland	0.7	0.5	19.0	1986
Sweden	0.0	–0.7	13.5	1985
Italy	1.5	0.4	15.5	1990
UK	3.3	1.0	15.1	1979
Belgium	2.1	1.0	14.3	1990
Ireland	3.1	1.1	17.4	1993
Spain	3.3	1.9	17.3	1992

Source: HM Treasury (2003). Column (1), Table 4.1; Column (2), Table 4.2; Column (3), Table 4.5; Column (4), Tables 5.3, 5.5.

Table 2: Percentages of households using or owing money on a given credit or borrowing arrangement

(a) *BHPS 2000*

Question to Household:	Home Owning Couples	Tenant Couples	Home Owning Singles	Tenant Singles	Total
Have a credit card (and/or store card)?	74.87	32.66	70.74	23.81	57.86
Owe money on a catalogue purchase?	9.49	20.77	17.55	33.60	16.22
Owe money on a personal loan?	27.65	19.15	26.60	15.61	23.93
Base	*1,349*	*496*	*188*	*378*	*2,411*
Owe money on a credit card (given you have a credit card)?	38.02	41.36	45.86	48.89	39.86
Base	*1,010*	*162*	*133*	*90*	*1,395*

Source: Percentages in each category calculated from British Household Panel Survey, Wave 10, 2000, for sample of households with children only.

(b) *FACS 2001*

Question to Household:	Home Owning Couples	Tenant Couples	Home Owning Singles	Tenant Singles	Total
Use a credit card	78.88	36.08	61.11	20.27	57.57
Use a catalogue	42.35	46.79	36.99	45.64	43.23
Used loan from bank, building society to borrow money	19.61	12.63	11.84	5.49	14.63
Base	*3,712*	*1,045*	*684*	*1,584*	*7,025*

Source: Percentages in each category calculated from Families and Children Survey 2001

Table 3: Probit models of access to credit and types of debt - Marginal effects

	(1)	(2)	(3)	(4)
	Credit Card	Owe Money – Credit Card	Owe Money – Catalogue	Owe Money – Personal Loan
Owner	0.195***	0.103***	-0.002	0.065***
	(7.12)	(2.63)	(0.12)	(2.80)
Owner*Housing Equity	0.001***	-0.001***	-0.001***	-0.001***
	(4.48)	(4.13)	(3.60)	(4.59)
Couple	-0.134**	0.014	-0.144**	0.058
	(2.28)	(0.13)	(1.97)	(0.84)
Couple*Married	0.031	-0.116***	-0.051**	0.066**
	(1.12)	(2.95)	(2.21)	(2.47)
No. of Benefits	-0.014***	0.018***	0.013***	-0.003
	(4.32)	(3.78)	(5.16)	(1.00)
Ln(income)	0.057***	0.007	-0.015	0.056***
	(4.83)	(0.35)	(1.50)	(3.72)
Respondent Working	0.042**	0.079***	0.041***	0.079***
	(2.09)	(3.12)	(2.59)	(4.12)
Couple*Partner Working	0.077**	0.010	-0.037	0.026
	(2.42)	(0.24)	(1.52)	(0.85)
Respondent's Age	0.001	-0.003	-0.004***	0.000
	(1.00)	(1.59)	(3.77)	(0.06)
Couple*Partner's Age	0.002	0.001	0.004***	-0.004**
	(0.99)	(0.47)	(2.65)	(2.10)
Other	-0.078	0.175	-0.038	-0.150***
	(1.02)	(1.40)	(0.70)	(2.62)
A-level	0.069**	-0.029	0.011	-0.023
	(2.28)	(0.68)	(0.40)	(0.73)
Degree	0.102***	-0.013	-0.007	0.026
	(4.89)	(0.43)	(0.45)	(1.28)
Higher Degree	0.165***	-0.007	-0.065*	-0.031
	(3.53)	(0.13)	(1.66)	(0.71)
Number of Children	-0.001	0.042***	0.004	0.024**
	(0.09)	(2.88)	(0.54)	(2.35)
Number of Observations	2411	2411	2411	2411

Notes: 't' statistics in parentheses. ***1% **5% *10% level of significance.
Columns (1) and (3) and (4) illustrate the marginal effects, evaluated at covariate means in the case of the continuous variables, and evaluated at the effect of a discrete change in the case of all other binary variables. Column (2) illustrates the marginal effects from an equation reporting credit debt estimated as a probit with sample selection, with an additional equation (with similar specification to (1)): do you have a credit/store cars? The results from the latter are not reported.
Sources: Calculated from British Household Panel Survey, 2000.

Table 4: Determinants of (the ln of) total household debt, and arrears on debt (Tobit specifications)

	(1)	(2)
	Total Debt (£) *Marginal Effect*	Total Arrears on Debt (£) *Marginal Effect*
Owner	-0.050	-205.008***
	(0.29)	(12.34)
Owner*Housing Equity	-0.005***	-
	(4.11)	
Couple	1.213**	210.625***
	(2.49)	(4.35)
Number of Benefits	0.060***	30.541***
	(2.62)	(3.90)
ln(income)	0.757***	1.794
	(7.38)	(0.32)
Respondent Working	0.547***	-26.098
	(3.89)	(1.24)
Couple*Partner Working	0.362*	-78.055***
	(1.69)	(2.65)
Respondent's Age	-0.004	-2.257**
	(0.37)	(2.36)
Couple*Partner's Age	-0.030**	-7.017***
	(2.29)	(5.72)
GCSE grade A-C	0.266	-46.732***
	(0.48)	(3.41)
A-level	0.200	-109.149***
	(0.84)	(4.96)
Degree	0.192	-138.858***
	(1.31)	(5.09)
Higher Degree	-0.627*	-146.149***
	(1.91)	(3.77)
Number of Children	0.187***	27.261***
	(2.59)	(4.31)
Number of Observations	2411	7025

Notes: 't' statistics in parentheses. ***1% **5% *10% level of significance.
Columns (1) and (2) illustrate the marginal effects (conditional on being uncensored), evaluated at covariate means in the case of the continuous variables, and evaluated at the effect of a discrete change in the case of all other binary variables.
Sources: Column (1) calculated from British Household Panel Survey, 2000.
Column (2) calculated from Families and Children Survey, 2001.
Default categories: tenant, single householder, not working with no children and no qualifications. [a]This educational category in BHPS is 'other qualifications'.

Table 5: Percentage of households according to change in mortgage and moving status

Households (%)		(1)	(2)	(3)	(4)		(5)
	Movers as % of all households *of which*	Outstanding mortgage reduced	Outstanding mortgage unchanged, house value fell	Outstanding mortgage unchanged, house value rose	Outstanding mortgage increased	Non-movers as % of all households *of which:*	Outstanding mortgage increased
1993-1994	6.7	12.0	4.1	6.3	77.7	93.3	14.7
1994-1995	5.8	11.2	5.0	4.5	79.4	94.2	12.4
1995-1996	5.6	13.1	7.8	7.5	71.5	94.4	13.8
1996-1997	7.3	13.0	4.5	7.8	74.7	92.7	14.3
1997-1998	6.4	12.1	4.2	8.0	75.8	93.6	12.8
1998-1999	6.4	16.7	3.2	6.0	74.1	93.6	12.2
1999-2000	6.4	10.1	6.6	11.2	72.1	93.6	12.9
2000-2001	6.7	15.2	8.6	6.7	69.6	93.3	13.7
Average all years	6.4	12.9	5.5	7.3	74.3	93.6	13.4

Column (1) identifies households that used a house move to reduce mortgage debt
Column (2) identifies households that used a house move to trade down and withdraw equity
Column (3) identifies households that used a house move to trade down and inject equity
Column (4) identifies households that used a house move to increase mortgage debt
Column (5) identifies households that did not move house and increased mortgaged debt

(Note: columns 1 to 4 may not sum exactly to 100% due to rounding, proportions are weighted using BHPS household weights, house value is self-reported)

Table 6: Average nominal mortgage equity withdrawal by year and source

	(1)	(2)	(3)
	Mover households with no change in outstanding mortgage, house value fell ("down-traders")	Mover households who increased outstanding mortgage ("over-borrowers")	Non-mover households who increased outstanding mortgage ("re-mortgagers")
1993-1994	£15,468	£3,450	£2,209
1994-1995	£14,680	£3,310	£2,225
1995-1996	£36,862	£1,865	£2,737
1996-1997	£26,834	£1,066	£3,957
1997-1998	£40,300	£2,078	£2,482
1998-1999	£34,266	£2,116	£4,563
1999-2000	£56,217	£3,056	£5,250
2000-2001	£72,575	£1,995	£8,563
Average all years	£41,723	£2,355	£3,997

Computed as nominal (non-negative) change in outstanding mortgage principal, adjusted for trading down effect on house value for house movers.
Source: BHPS using household weights.

Table 7: Equity withdrawal on transition out of owner-occupation and receipt of bequests

	(1)	(2)	(3)	(4)
	% transition out of owner-occupation	Average fall in housing equity (1995 prices)	% owner-occupiers receiving an inheritance	Average value of inheritance (1995 prices)
1993-1994	1.2	£39,269		
1994-1995	1.9	£37,406		
1995-1996	1.4	£31,428		
1996-1997	1.6	£31,453	3.7	£18,252
1997-1998	1.3	£66,608	4.9	£15,387
1998-1999	1.3	£43,611	3.2	£19,669
1999-2000	1.1	£38,551	4.0	£27,154
2000-2001	1.4	£61,308	3.7	£26,122
Average all years	1.4	£43,704	3.9	£21,317

Table 8: Tobit models of mortgage equity withdrawal

Dependent variable: household nominal mortgage equity withdrawal, mover households adjusted for trading down.

		(1) 1993-2001		(2)	
		Coefficient	Std. Error	Marginal effect conditional on being uncensored	Std. Error
Initial status:					
Age		2791.7	982.9***	545.4	192.0***
Age squared		-30.0	10.1***	-5.86	1.98***
Female household head		-7489.7	3550.8**	-1436.0	693.7**
Married household head		7971.9	7337.4	1516.7	1433.5
Divorced household head		15775.2	7532.3**	3426.5	1471.6**
Widowed household head		13125.9	9201.3	2786.6	1797.6
No of adults		872.2	2640.3	170.4	515.8
No of children 0-2 yrs		9679.7	5252.3*	2024.1	1026.1**
No of children 3-4 yrs		-617.4	4544.3	-120.6	887.8
No of children 5-11 yrs		-122.7	2341.9	-24.0	457.5
No of children 12-15 yrs		-297.5	3588.2	58.1	701.0
No of children 16-18 yrs		4605.8	8384.4	931.6	1638.0
Change in status:					
Married		9380.2	7584.4	1963.0	1481.7
Divorced		14049.6	8988.8	3058.0	1756.1*
Widowed		-613.2	10282.7	-119.3	2008.9
Change in hh size (persons)		-1176.6	2039.7	-229.9	398.5
Housing					
Outright owner		-20351.0	4966.1***	-3817.7	970.2***
Down-trading	1994	63427.7	17334.1***	21344.2	3386.5***
	1995	70397.6	17693.0***	25204.1	3456.6***
	1996	85532.5	15099.2***	34831.3	2949.9***
	1997	100905.5	19303.6***	46526.6	3771.3***
	1998	106241.9	23091.5***	50976.8	4511.3***
	1999	88424.8	22872.9***	36992.8	4468.6***
	2000	104297.9	15999.2***	49227.2	3125.7***
	2001	115623.4	12198.0***	58733.0	2383.1***
Over-borrowing	1994	41498.5	6381.1***	11286.5	1246.7***
	1995	23609.2	7644.7***	5550.9	1493.5***
	1996	27618.5	9465.4***	6733.6	1849.2***
	1997	9797.6	7591.8	2060.8	1483.2
	1998	25604.3	8280.4***	6128.7	1617.7***
	1999	16610.4	8328.6**	3692.0	1627.1**
	2000	8252.5	9875.8	1717.4	1929.4
	2001	20410.1	8071.5**	4676.2	1576.9**
Remortgaging	1994	27140.0	6209.8***	6552.0	1213.2***

1995	22784.8	6285.1***	5310.4	1227.9***
1996	27092.3	6044.4***	6532.8	1180.9***
1997	27807.8	5685.1***	6733.6	1110.7***
1998	29430.8	7340.5***	7267.2	1434.1***
1999	25709.0	5647.7***	6119.1	1103.4***
2000	45305.3	5374.9***	12647.4	1050.1***
2001	46440.3	5526.8***	13106.4	1079.8***
Sigma	37539.8	1386.7***	37539.8	1386.7***
Intercept	-113024.0	22873.3***	-22081.2	4664.1***
N	1636		1636	
N (uncensored)	413		413	
Log Likelihood	-5214.7		-5214.7	

Note: Marginal effects are evaluated at covariate means in the case of the continuous variables (age, no. of adults, no. of children in each age category, change in household size), and evaluated as the effect of a discrete change in the case of all other binary variables.

Table 9: Relationship between housing equity withdrawal and the household balance sheet

	Average equity withdrawal 1993-2001	Proportion of sample	Average real housing equity 1993-2001
Financial Assets in 2000			
Less than £500	£5875	50.9%	£56493
£500-£999	£12605	2.4%	£49321
£1000-£4999	£5769	11.9%	£51253
£5000-£9999	£5223	8.9%	£65807
£10000-£49999	£7387	18.7%	£77995
£50000 or more	£3967	7.2%	£117945
Non-mortgage debt in 2000			
Less than £500	£4507	69.3%	£71343
£500-£999	£7227	4.9%	£67243
£1000-£4999	£6584	15.4%	£51214
£5000-£9999	£17446	7.0%	£43708
£10000-£24999	£16187	2.9%	£49208
£25000 or more	£7515	0.5%	£109281

Chart 1

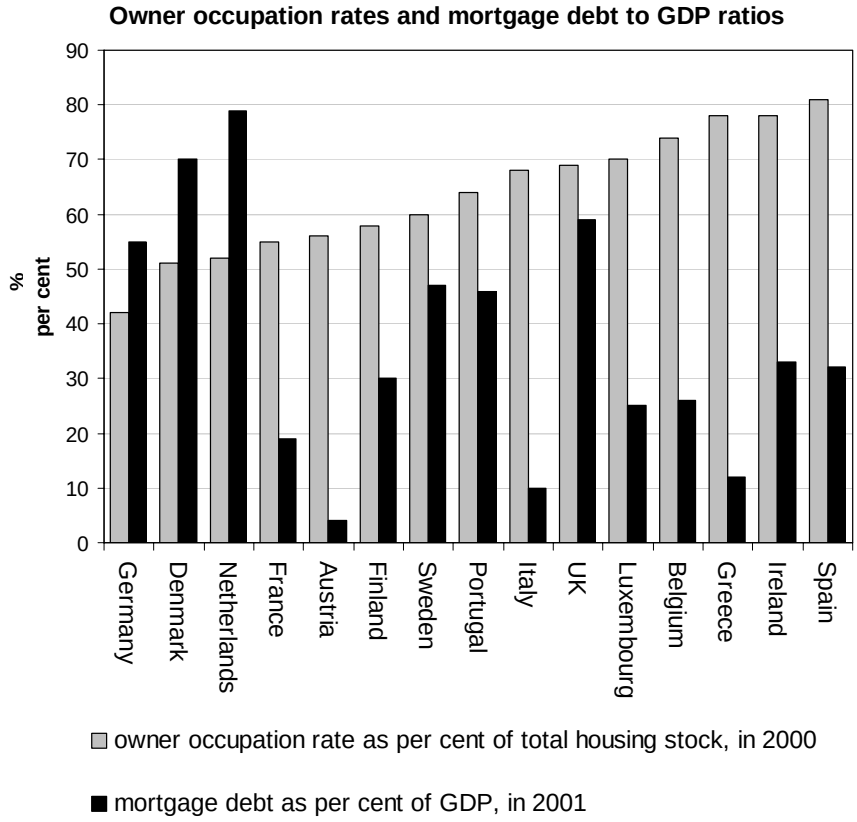
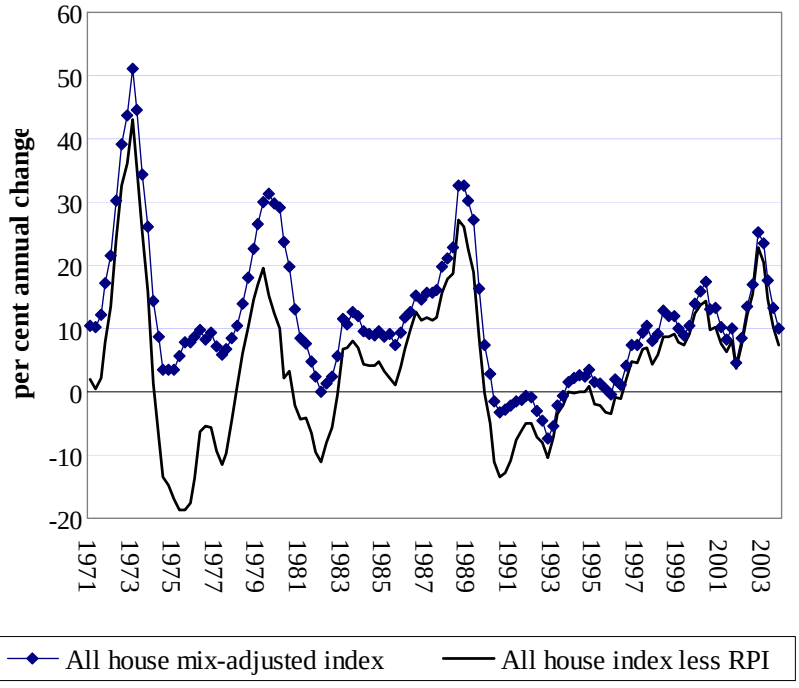


Chart 2

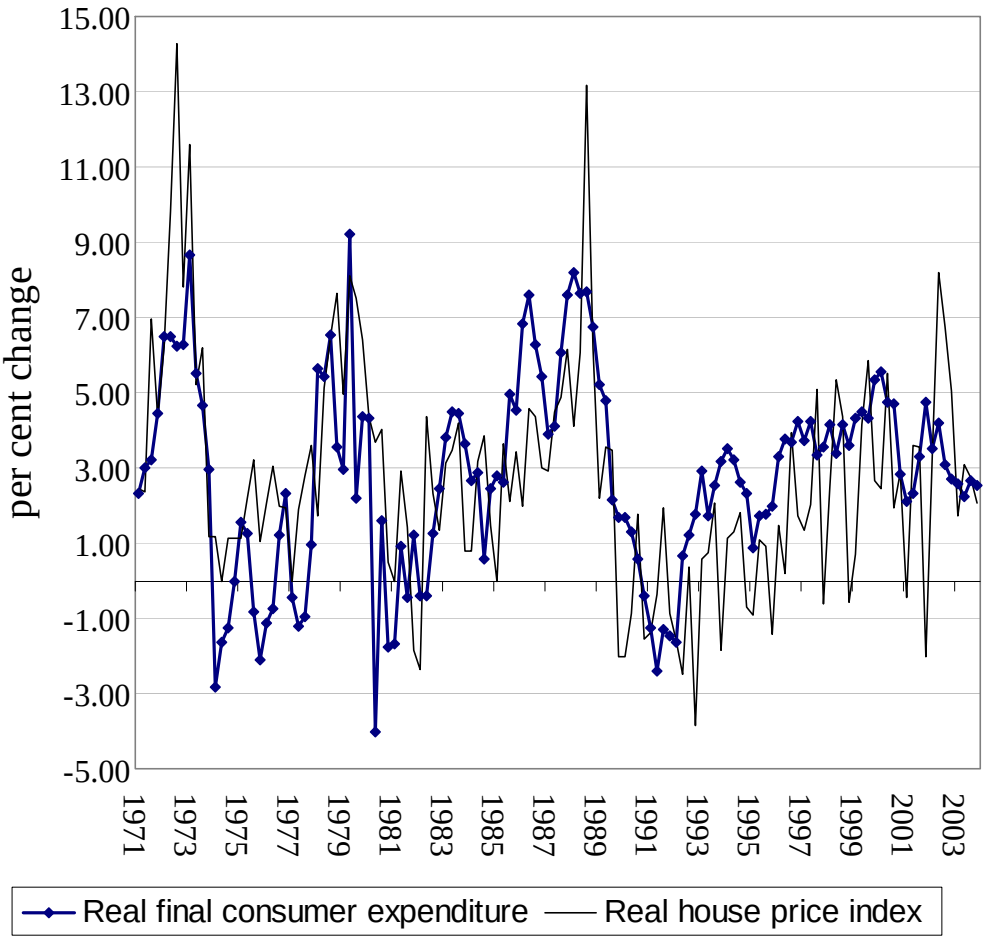
Changes in nominal and real house price indices, 1971 to 2003



Source: Office of National Statistics online data for house price index and retail price index.

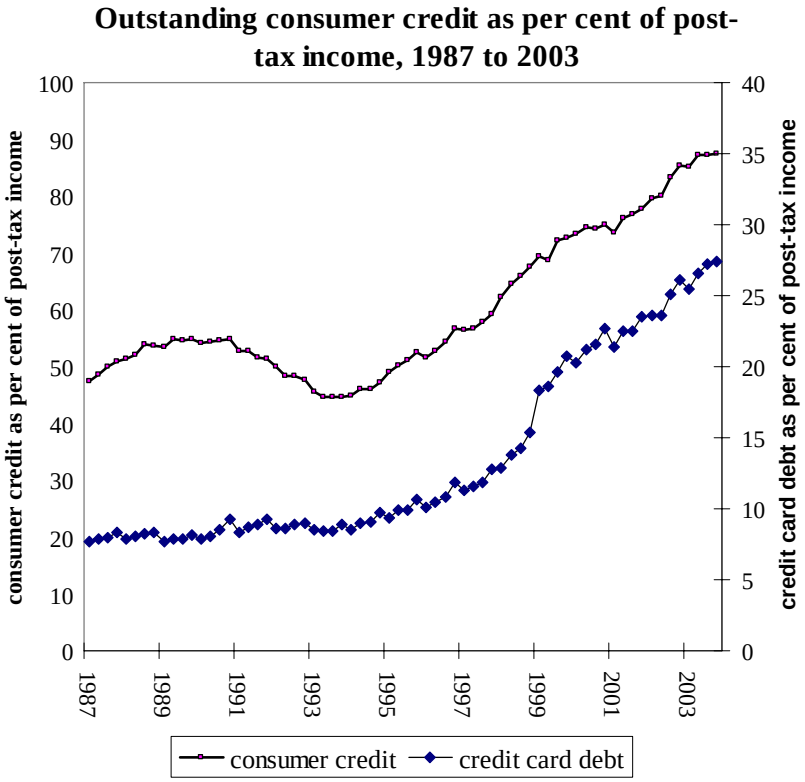
Chart 3

Final consumption expenditure (annual changes) and real house prices (quarterly changes)



Source: Calculated from Office of National Statistics online data.

Chart 4



Source: Calculated from Office of National Statistics online national accounts data.

Chart 5

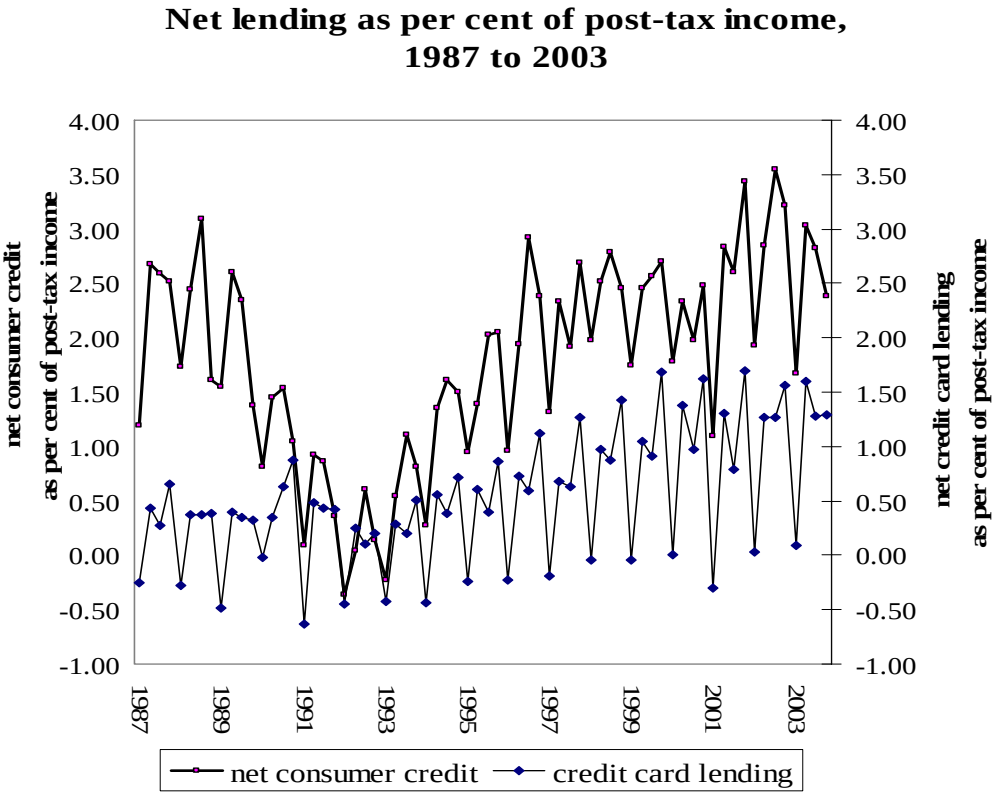
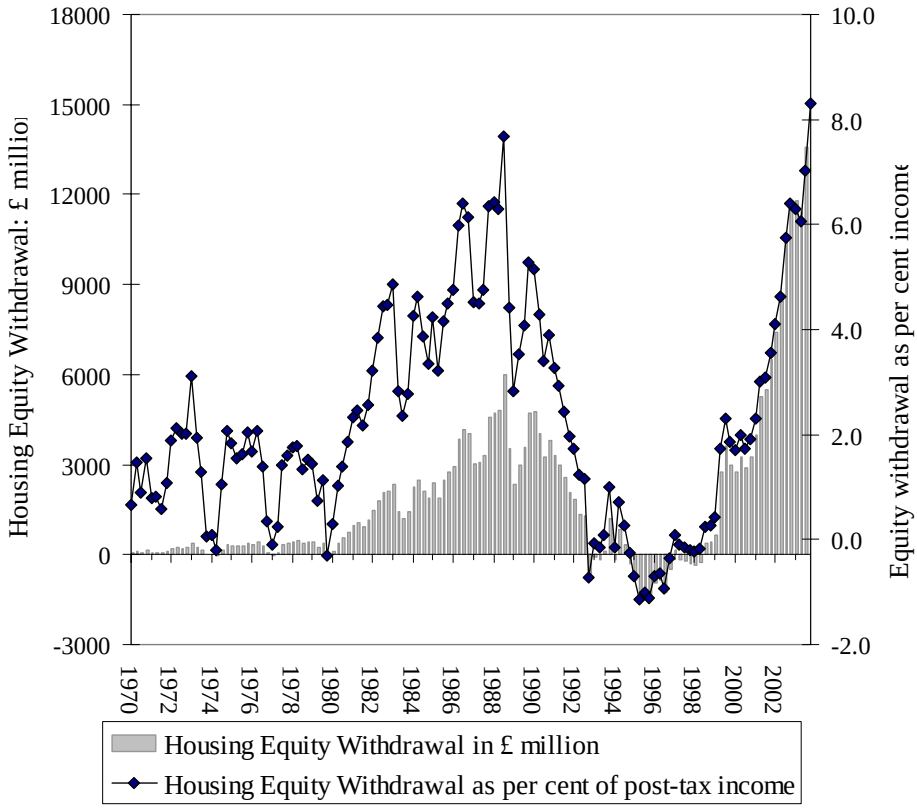


Chart 6

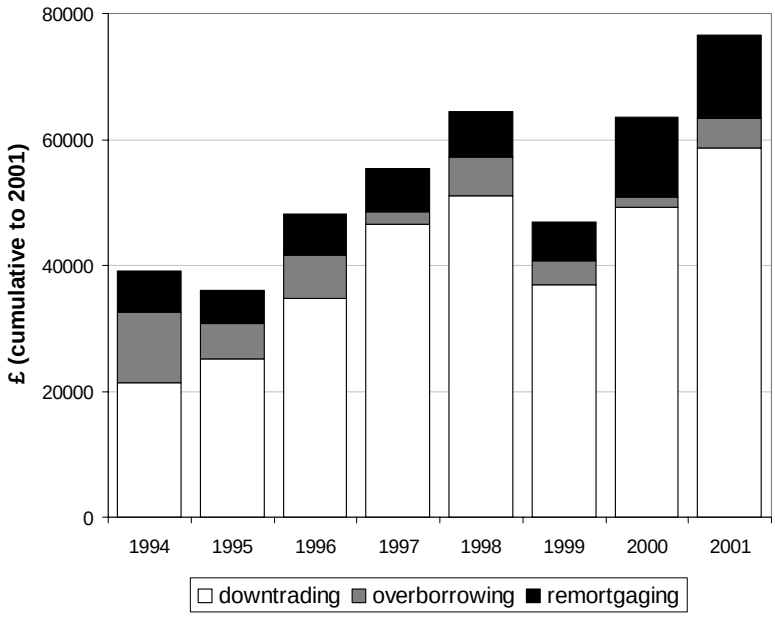
Housing Equity Withdrawal in UK, 1970 - 2003



Source: http://www.bankofengland.co.uk/mfsd/mew/mew.htm

Chart 7

Sources of Cumulative HEW 1994-2001



Source: Calculations from British Household Panel Survey: For definitions of terms and methods, see text.

Appendix A

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?

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.