

## ARTICLE

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# The housing market and household balance sheets

## SUMMARY

This article investigates the impact of the significant rise and fall in UK house prices over the last decade on the balance sheets and behaviour of households – specifically relating to consumption, saving, indebtedness and wealth. Data is taken from the quarterly UK Economic Accounts which records income, spending and saving flows as well as the household sector's holdings of financial assets and liabilities. This article is intended to follow up on the 'Recent developments in the UK housing market' article published in last month's *Economic and Labour Market Review*.

## Key messages

This article sets out to analyse the effects of housing market developments over the last decade, and more recently, on the balance sheets and behaviour of the household sector. The main conclusions are:

- Between 1997 and the peak in the summer of 2007 average UK house prices rose three-fold from £74,200 to £219,256. Since then prices have fallen by 13.6 per cent to £189,350 in 2009 Q2 (according to the Communities and Local Government house price index).
- Between 1997 and 2007 total lending secured on dwellings increased rapidly in line with house prices. However, lending has since fallen sharply due a strong fall in new mortgage approvals. In 2008 mortgage approvals were half the level in 2007 and a third of the level reported in 2006.
- Household consumption increased steadily as a proportion of disposable incomes up until 2007. Lending available for consumption also increased over this time – predominately driven by a large increase in mortgage equity withdrawal (MEW) which in turn was generated by sustained growth in house prices.
- Most MEW though has occurred automatically through the sale of inherited properties or by trading down – with most of the proceeds used to purchase financial assets or repay debts rather than fund consumption.
- The ratio of total household financial

liabilities to disposable incomes increased from 1.0 to 1.7 between 1987 and 2007 with the majority of the increase accounted for by loans secured on dwellings. This reflects the strong growth in house prices over the decade on levels of mortgage borrowing. When combined with recent falls in equity markets the ratio of household net financial wealth to disposable incomes is at its lowest point since 1991.

- Total household wealth (or net-worth) also consists of non-financial wealth. Between 1997 and 2007 the ratio of non-financial wealth to disposable incomes increased from 4.0 to 5.6 – all of which was accounted for by rising house prices on wealth in residential buildings. This ratio has since fallen back to 4.9 in 2008 following the subsequent fall in house prices. These changes in household wealth may have directly fed through to consumption.
- Changes in house prices have significant redistributive effects on wealth. The sustained increase in prices is likely to benefit those looking to trade down or those who have inherited (older households) but made those looking to trade up or buy for the first time (younger households) worse off. This may have non-neutral effects on household consumption by shifting wealth towards those who have more ability to determine their own consumption levels (that is away from the unborn, very young, or more credit constrained young households).

- There was a significant fall in the UK household saving ratio between 2004 and the start of 2008. This may reflect the burden of servicing growing mortgage debt on household disposable incomes. The recent increase in the saving ratio has coincided with an aggressive cut in UK interest rates, which has reduced the size of interest payments made by the sector.
- The rise in household saving and the fall in property transactions have combined to reduce the net-borrowing requirements of the household sector. In fact, in 2009 Q1 the sector almost became a net lender.
- The Household Assets Survey, currently being run by ONS, will provide detail on the distribution of household wealth and liabilities that cannot be deduced from the aggregated data published in the Economic Accounts. The results of the first wave are expected to be published by the end of 2009.
- According to calculations from the Bank of England, between 8 per cent and 11 per cent of mortgagors were in negative equity in 2009 Q1, corresponding to 700,000 to 1.1 million households. However, negative equity does not imply that households are in financial distress as long as mortgage payments can continue to be made. But due to the down-payment constraints involved in moving house, the growing incidence of negative and low equity is likely to reduce turnover in the UK property market.

## Background

Last month's edition of *Economic and Labour Market Review* included an article

on 'Recent developments in the UK housing market' (Chamberlin 2009). This presented a number of key housing market trends over the last decade including prices, affordability, financing, supply and changes to the size and characteristics of the UK population. The purpose of this article is to look at how some of these developments have impacted on household balance sheets and behaviour.

As **Figure 1** shows, house prices increased rapidly between 1997 and 2007. According to Communities and Local Government (CLG) statistics, the average mix-adjusted<sup>1</sup> house price was £74,200 in the first quarter of 1997. At the market peak in 2007 Q3 this average had risen three-fold to £219,256. During the decade long boom UK house prices grew at an average annual rate of approximately 11 per cent. Furthermore this was at a time when general inflation has been low by historical standards, so the increases in real house prices and the ratio with respect to average earnings have been particularly striking<sup>2</sup>.

Since the summer of 2007 house price growth has gone into reverse. In 2009 Q2 average prices had fallen by around £30,000 (or 13.6 per cent) from their peak to £189,350 – roughly their level at the beginning of 2006. However, more recent monthly data suggests prices are beginning to stabilise – perhaps indicating that a turning point has been reached.

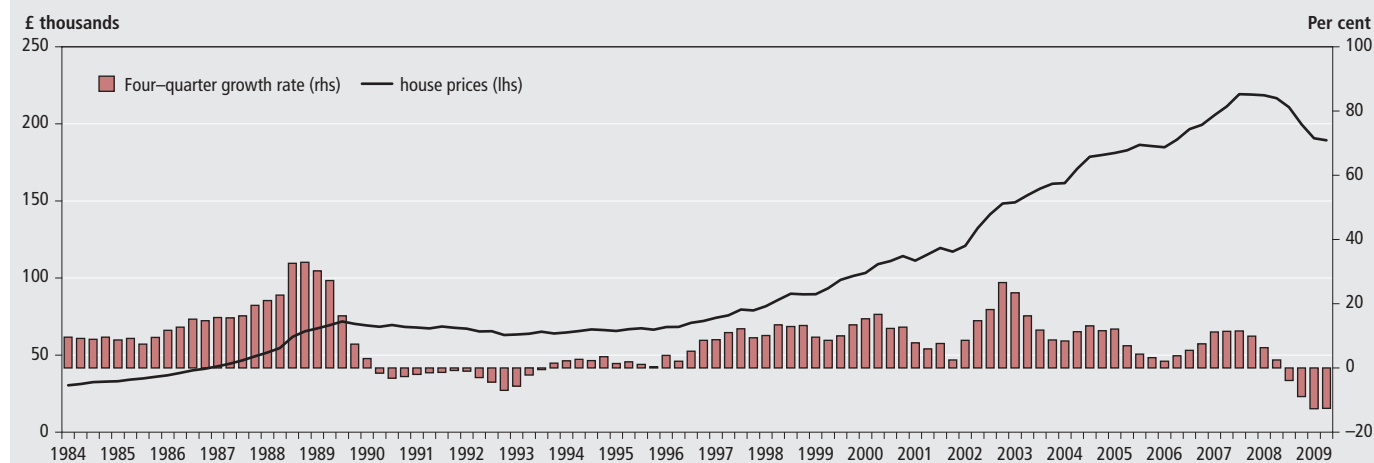
Changes in house prices have shown a strong correlation with the number of transactions and the value of mortgage lending (**Figure 2**). Although not all property is actually purchased using mortgage finance there has been a very strong correlation between the trends in numbers of mortgage approvals and

volumes of housing transactions. In **Figure 2** the number of approvals showed an upward trend until the end of 2006, despite the effect of strongly rising prices on affordability. Since then the fall off in approvals has been dramatic. In 2008 the number of mortgage approvals was less than half in the previous year, and only about a third of their peak in 2006.

Although it is difficult to apportion the fall in approvals to the demand and supply sides of housing finance it is likely that both will have played a role, and both will have been influenced by movement in house prices. A strongly growing market, by providing equity gains to borrowers, and increased security to lenders, is likely to increase demand and supply of mortgages. Data from CLG show that the ratio of mortgage advances to house prices remained fairly stable through the boom years even though the ratio of advances to household income moved considerably upwards<sup>3</sup> – evidence that credit availability was supportive of the rising market. But as prices start to fall borrowers and lenders become increasingly concerned with negative equity (where the value of the house is less than the loan secured on it) – as a result the demand for new mortgages and the willingness of financial institutions to provide them shrinks. Therefore, the demand and supply of housing finance appears to be strongly pro-cyclical<sup>4</sup>.

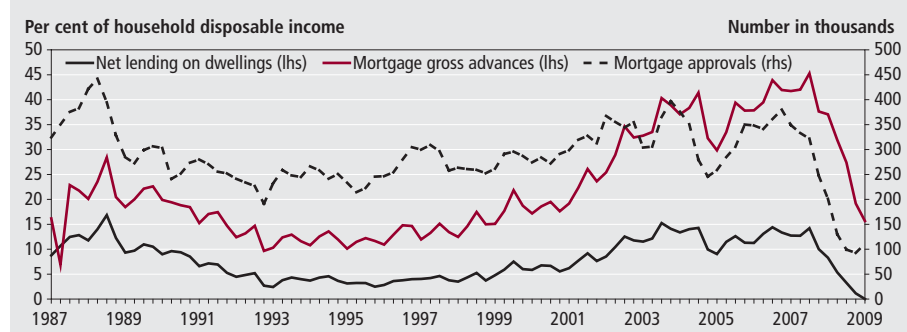
Mortgage financing has also been strongly affected by prevailing conditions in credit markets. The long upswing in UK and global housing markets coincided with a credit boom, where surpluses from emerging market and resource-rich economies kept wholesale money markets flush with liquidity and pushed down

**Figure 1**  
**UK average house prices**



Source: CLG

**Figure 2**  
**Lending secured on dwellings and mortgage approvals**



Source: Bank of England Bankstats

on yields. This enabled retail institutions such as banks and building societies to easily expand lending. Lending was also encouraged by financial innovation, where through the use of cleverly constructed securities and derivative assets, riskier loans could be repackaged with safer ones and resold. This gave financial institutions the feeling that default risks had been removed from their balance sheets and effectively managed to zero.

However, it is now apparent that risks were vastly underestimated and credit expansion excessive – resulting in a highly leveraged and fragile banking system.

The beginnings of the crisis emerged in the US sub-prime mortgage market, where large losses were made as defaults spiralled upwards. But as these loans had been repackaged in other derivative type assets such as structured investment vehicles (SIVs) and collateralised debt obligations (CDOs), there was no transparency as to exactly how big these losses were and where they would show up. The consequence was to bring the global credit system to a standstill.

Worried about the size and uncertainty of potential losses, banks stopped lending to each other and to the private sector, hoarding liquidity to protect their balance sheets. It was the collapse of Lehman Brothers in September, and the decision by the Federal Reserve not to mount a rescue, that panicked the financial markets and was the impetus for the hiatus in lending. The credit boom sharply turned to a credit crunch. The institutions that failed or ran into acute difficulty were those that had the greatest exposure to losses in commercial and residential property markets (such as RBS and HBOS) and those that were most dependent on wholesale funding (such as Northern Rock and Alliance & Leicester).

The combined effects of falling house prices and the drop off in mortgage approvals are reflected in the lending

secured on dwellings data (also shown in Figure 2). As a proportion of household disposable income, gross lending rose quickly between 1997 and 2007 before plummeting in 2008. Net-lending, which is the difference between gross lending and repayments and redemptions, shows the same trends. However, it is noticeable that in the latest period (2009 Q1) net-lending almost fell to zero implying that gross new lending simply matched the repayments on existing loans. This is despite the recent efforts of government to increase lending through their direct control of Northern Rock and their controlling stakes in Lloyds Banking Group and the Royal Bank of Scotland<sup>5</sup>.

The significant rise and fall in house prices and loans secured on dwellings have had a profound impact on the structure of wealth and liabilities recorded on household balance sheets. The analysis of this and the possible effects on consumption and savings behaviour of households is the main focus of the article.

Each quarter ONS publishes a full set of UK Economic Accounts, which records the financial flows (income, spending, saving) and the asset and liability position of each sector of the UK economy including households (and non-profit institutions serving households – NPISH). These are split into four main sections.

- Income Accounts record the levels of income (disposable), consumption and savings
- Capital Accounts relate the values of savings and capital spending (investment) to determine whether the sector is a net-borrower or a net-lender
- Financial Accounts measures the accumulation of different types of financial assets and liabilities
- Financial Balance Sheets measures the value of total holdings of these types of assets and liabilities

Using this information on the household sector the article proceeds as follows. First the relationship between household income, wealth and consumption is explored. In particular, what effect has the large rise in house prices and mortgage borrowing had and is likely to have as the market goes into reverse? The second and third sections look at the impact of the housing market on the household savings ratio and its net-lending/borrowing position. Although the Economic Accounts provide a good range of data on the household sector it is at the aggregate level, so the final section discusses some of the distributional issues of the rise and fall in house prices, including the size and effects of negative equity.

### Household income, wealth and consumption

Household consumption is the largest part of total expenditure or aggregate demand, and it is through this channel that changes in house prices are expected to have their biggest impact on overall economic activity. This is recognised by the Bank of England in the setting of monetary policy (see Benito et al 2007). As Figure 3 shows, there has been a good correlation between household consumption growth and house prices over the last 25 years.

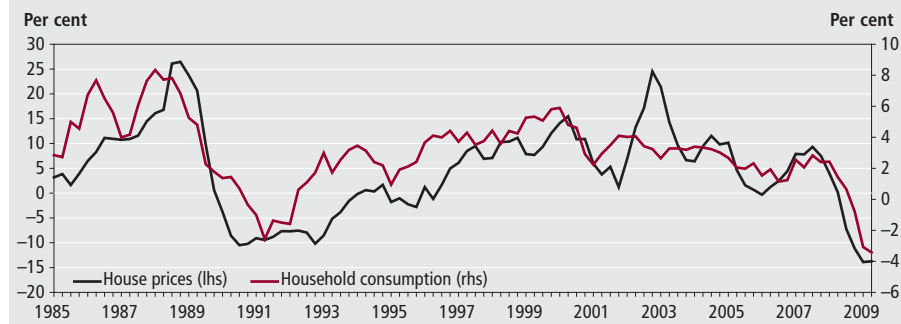
There are two main channels through which rising house prices may support growth in household spending relative to incomes. The first is through a *collateral effect*, whereby rising prices make it easier and cheaper for households to borrow. The second is a direct *wealth effect*, in which case households increase consumption simply because they are richer. Significant amounts of research literature investigating the importance of these effects already exists – the aim of this section is to put this into context by looking at the evidence from household balance sheets. Of course, there are other theories that might explain the co-movements seen in Figure 3, such as changes to precautionary saving and that both time series may be driven by common factors, which are also afforded some brief discussion.

### Household disposable incomes, consumption and credit

For the household sector the Income Accounts show total income by source and then, after the effects of taxes and benefits, how this is allocated between consumption and saving.

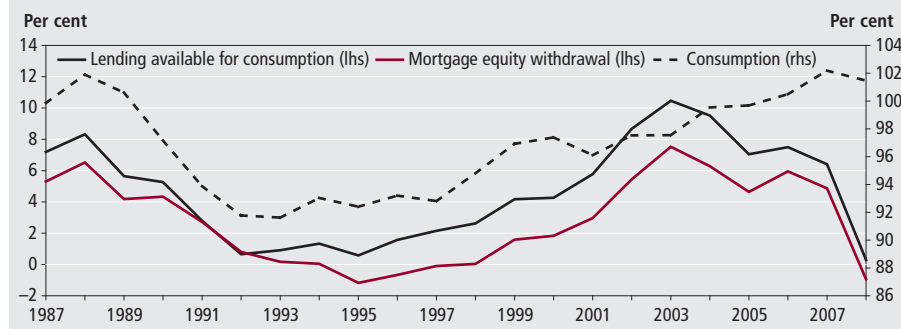
Household gross disposable income consists of two main parts (shown respectively in Tables A37 and A38 of the Economic Accounts):

**Figure 3**  
**Real house price and household consumption growth (quarter on same quarter 1 year ago)<sup>1</sup>**



**Note:** Source: CLG and ONS UK Output, Income and Expenditure  
 1 Both series have been deflated using the implied household consumption deflator.

**Figure 4**  
**Household propensity to consume and lending available for consumption as a proportion of disposable income**



Source: ONS Economic Accounts

- The Allocation of Primary Income Account records the gross earnings of households from various sources. This mainly consists of compensation of employees (wages and salaries and employees’ social contributions), and gross operating surpluses (the incomes of the self employed and the profits from household enterprises). However, another important part of primary incomes is net property income – which is the income earned from other sectors of the economy through the ownership of financial assets minus the income paid to other sectors due to financial liabilities. For example, dividends earned from share holdings constitute property income while the interest paid on a loan (such as mortgages) is a property payment.
- The Secondary Distribution of Income Account adjusts primary incomes by net taxes and social contributions resulting in household gross disposable income. These are the funds available to households to fund consumption and saving.

As **Figure 4** shows, household consumption as a proportion of gross disposable

income (often known as the propensity to consume) has been on an upward path since the mid 1990s before falling back slightly in 2008. Also shown in **Figure 3** is lending available for consumption as a proportion of disposable incomes. This is the sum of net consumer advances and net mortgage equity withdrawal (MEW) which households, in addition to disposable income, can use to fund consumption.

Net consumer lending is the difference between total new consumer credit and the repayment or redemption of existing consumer debts. Between 1993 and 2004 net consumer lending grew steadily as a proportion of disposable incomes. Clearly this reflects the long cyclical upturn in the economy which improves credit demand and supply, but also a general relaxation in credit constraints. Since 2005 though consumer credit expansion slowed and fell as a proportion of household disposable incomes. This was mainly the consequence of changing attitudes of banks in the face of growing impairments (credit write-offs on bad loans). However, there was also a reduced appetite by households for this relatively expensive debt.

MEW arises when loans secured on the

same stock of housing increases, the net part of this refers to MEW that isn’t subsequently re-invested in housing by either buying a new property or by making improvements to the existing stock. Hence net MEW are funds released from the ownership of property available for consumption purposes and clearly this has driven overall trends in lending available for consumption. Net MEW, in turn, has followed conditions in the housing market. As house prices started rising strongly in 1997 net MEW also grew in line. The lull in 2005 and the more significant fall since the second half of 2007 are also captured in the data.

**Figure 4** therefore gives the impression of a sustained increase in household consumption driven in part by equity released from growing housing wealth – which has now gone into reverse as house prices fall<sup>6</sup>. The process by which rising house prices eases borrowing constraints is known as a *collateral effect*.

**Household consumption and collateral effects**

Collateral effects describe how growing housing wealth, generated on the back of strongly rising prices, improves the availability and cost of credit. Essentially, households can use their added equity to fund consumption by either borrowing directly on their homes (for example remortgaging) or by using it as security in other loans. Both are types of MEW, and because the loan is secured, it is also cheaper than normal avenues of consumer credit.

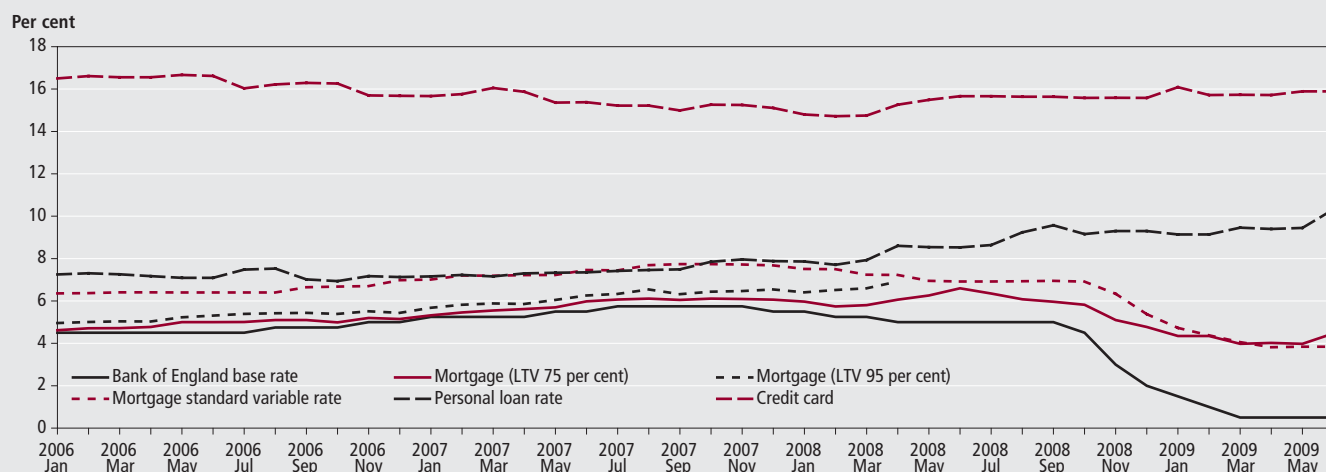
In **Figure 5** a selection of UK interest rates are presented. The base rate in the rate at which the financial sector can borrow from the central bank (the Bank of England) and this is the rate that underpins all new borrowing in the economy. A particular interest rate is usually set in relation to the base rate according to the relative time period and risks involved in the borrowing.

Lending is secured if it is backed by assets which can be sold should the borrower default (for example mortgages are secured by the property they are raised against). Therefore, as shown in **Figure 5**, mortgages or other loans backed on property tend to be available at lower rates than personal unsecured borrowing such as credit cards.

Nickell (2004) takes the view that the MEW channel has had a limited effect on household consumption spending arguing that little equity is actually extracted for this purpose. In fact, the bulk of MEW occurs from the last time sale of property, usually when the owner sells and moves into a

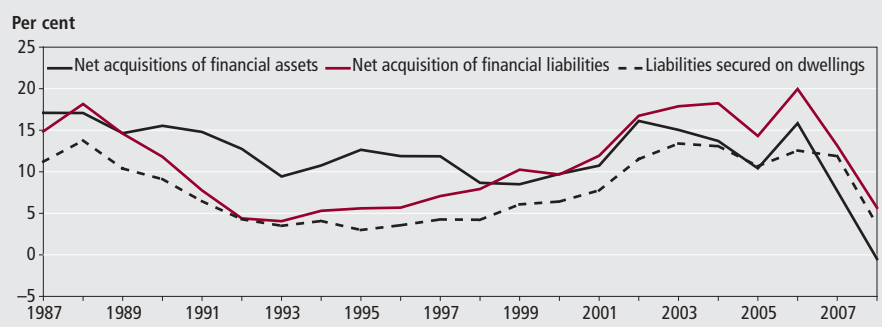


**Figure 5**  
**A selection of UK interest rates**



Source: Bank of England Bankstats

**Figure 6**  
**Household accumulation of financial assets and liabilities as a proportion of disposable incomes**



Source: ONS Economic Accounts

retirement home or by selling an inherited property, or through trading down. In these situations, the property is likely to be transferred from a vendor with little or no mortgage to a buyer with a more substantial one. Therefore the size of debt secured on the same housing stock has increased – automatically generating positive net MEW. Then as house prices continue to increase these flows become ever larger, explaining why net MEW so closely follows the movement in house prices.

But what happens to this extracted equity? **Figure 6** shows the accumulation of household financial assets and liabilities, taken from the household Financial Accounts (Table A53 in the Economic Accounts); have generally moved together and in line with the general pattern of house prices. Nickell uses this as anecdotal evidence that most equity released from the proceeds of house sales was used to fund financial assets purchases or pay off debts rather than consumption. As the accumulation of household financial liabilities is clearly driven by lending

secured on dwellings it gives further credence to the argument that net MEW was being generated by the transfer of ownership between households and trends in the prices and volumes at which these transactions took place.

Benito and Power (2004) concur with this reasoning. Based on the analysis of the 2003 Survey of English Housing they find little effect of MEW on household consumption, as only a quarter of equity is released by remortgaging compared to over 60 per cent from either trading down or selling an inherited property. Furthermore the biggest motivation of those releasing equity by remortgaging was for home improvements.

However, Benito and Mumtaz (2006) did find evidence of a collateral channel working in micro-level data from the British Household Panel Survey between 1992 and 2002. Here, rising house prices helped to remove credit constraints from previously constrained households. This result is perhaps consistent with the argument that there is a non-linear relationship between house prices and collateral effects. When

house prices start to grow the collateral effect may be quite strong. But after a period of continually rising prices, the numbers facing credit constraints will fall, so further increases will have much smaller marginal effects. Therefore in a falling market the increased likelihood of negative or low equity may re-impose credit constraints on the household sector.

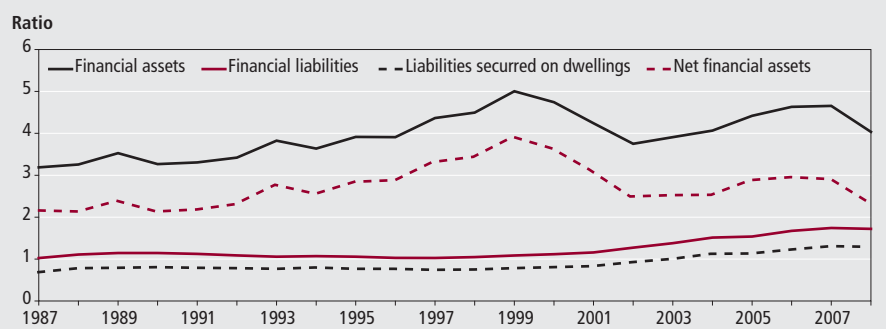
#### House prices and household wealth

Household Financial Balance sheets (Table A64 in the Economic Accounts) show the total value of holdings of financial assets and liabilities. These correspond to the accumulation and disposals of assets and liabilities in the Financial Accounts plus the effects of revaluations to existing holdings (see **Figure 7**).

Household indebtedness has been growing as a ratio of disposable incomes primarily because of loans secured on dwellings (see Hamilton 2003). Between 1987 and 2007 total financial liabilities as a ratio of disposable incomes have risen by 0.7 points from 1.0 to 1.7, of which 0.6 points was secured on dwellings. These ratios fell back slightly in 2008, and have clearly been driven by events in the housing market (see the trends in secured lending shown in Figure 2). Debt in real terms has also increased significantly because inflation has been relatively low and income growth modest in recent years.

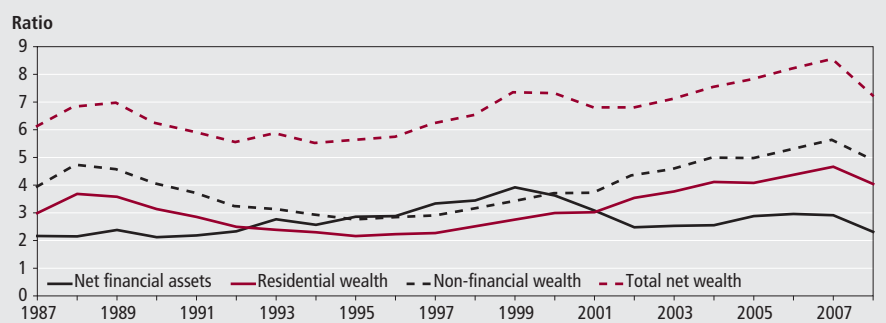
The valuation of financial assets held by households is more volatile reflecting the behaviour of equity prices and exchange rates. The impact of the dot com bubble is clearly evident in Figure 7 as financial wealth rose strongly between 1996 and 1999 before the equally large correction from 2000 to 2002. Since then, the ratio

**Figure 7**  
Household net financial wealth as a ratio of disposable incomes



Source: ONS Economic Accounts

**Figure 8**  
Total household net wealth as a ratio of disposable incomes



Source: ONS Economic Accounts and Blue Book

of financial wealth to disposable incomes increased from 3.8 to 4.7 between 2002 and 2007 due to higher rates of accumulation (see Figure 6) and rising stock market valuations. This was sufficient to offset the increase in financial liabilities keeping net financial wealth fairly constant relative to disposable incomes after 2002. However, both of these factors reversed sharply in 2008, and as a result, household net financial wealth is now at its lowest ratio to disposable incomes since 1991 – incidentally when the economy was previously in recession.

Total wealth of the household sector though consists of financial and non-financial (physical) wealth which is published in Table 10.10 of the Blue Book and shown in Figure 8. Despite the relatively flat contribution of net financial wealth, net non-financial wealth surged ahead between 1997 and 2007 – increasing from 4 times to 5.6 times disposable income. And all of this increase was accounted for by residential wealth<sup>7</sup> which in turn was mainly driven by the long and sustained rise in the market.

Household total net wealth (also referred to as net worth) increased markedly in the years of strong house price inflation. Since 2007 though it has fallen back as

a ratio of disposable incomes as equity and house prices fell. The implications of changes in household net wealth/worth on consumption are described as *wealth effects*.

### Wealth and consumption

Households may decide to alter their consumption expenditure in response to changes in wealth resulting from rising or falling asset prices (capital gains and losses). Wealth effects therefore reflect that part of consumption which is funded out of wealth rather than disposable income. Figure 8 shows that the housing market has generated a significant increase in household wealth or net worth over the last decade, and although this has been unwound in the last 18 months the falls have far from wiped the previous gains. The implications for consumer behaviour and economic activity have been of strong interest to economists and policy-makers.

The treatment of capital gains and losses in the National Accounts framework has stimulated much debate over the years. Presently they are not included in Income Accounts but the Hicksian view (see Hicks 1965) would treat capital gains and losses, even if they are unrealised, as income. Income is defined as the maximum that can be consumed while keeping current

wealth intact, so the large capital gains generated from the sustained rise in house prices increases household resources for consumption. Chamberlin and Dey-Chowdhury (2008) investigate the impact on the saving ratio of treating capital gains and losses in this way.

Estimated propensities to consume out of housing wealth are generally quite small. Disney et al (2008), using data from the British Household Panel Survey, estimated a wealth coefficient of 0.01 in a consumption function. Earlier estimates have usually been in the range of 0.01 to 0.03. Although these coefficients are small, given that wealth changes are large, they still may have quantifiably important effects on total household consumption. But often the relationship is found to be unstable over time and the findings of significant effects closely linked to the availability of credit (see Muellbauer and Murphy 2008, Benito et al 2006)

The propensity to consume out of housing wealth is generally accepted to be greater than for financial wealth. Volatility in equity markets means that capital gains and losses are viewed as more fleeting and hence do not derive such a strong consumption response. Furthermore, most household financial wealth in equities is held indirectly in pension and life insurance funds – which are illiquid and often treated as ring-fenced from consumable assets.

One school of thought is that housing wealth isn't really wealth at all and hence has limited effect on spending. This is because housing is a unique type of asset in that owner-occupiers live in it and derive a flow of future housing services from their ownership. Therefore, a general rise in house prices not only increases the value of the asset but raises the cost of future housing services. Rational forward looking consumers households would be expected to take this into account and save any increase in equity to offset higher future housing costs.

But house price movements do impart significant redistribution of wealth across households. Those who intend to increase their future consumption of housing services (by trading upwards) are made worse off by increases in house prices. While those intending to trade down and consume less housing service in the future are made better off. So typically a strong rise in house prices redistributes wealth from young to old.

As Buiter states: 'On average you live in the house you own', implying that these redistribution effects should cancel out in

the aggregate. This view is strengthened even further if it is believed that households behave dynamically. That is even if an older household expected to trade down and benefit from house price growth they care about the fact that their children may intend to trade up and have been made worse off by house price developments. As a result they may use their increased equity simply to make a larger bequest, posthumously or while living. For example, the Council of Mortgage Lenders (CML) have reported that 80 per cent of first time buyers now receive some form of parental assistance, evidence that equity is being transferred from the top to the bottom of the housing market. Furthermore households expecting to trade up may count on higher future gifts, bequests, inheritances and hence are not too perturbed by negative wealth effects stemming from a strong rise in house prices.

Buiter's true argument though is that these types of redistribution are rarely neutral so some form (positive) of wealth effect on consumption should be expected. This is because wealth is transferred away from those with limited ability to determine their own consumption (the very young and the unborn) to those who do. Also politically the very young and unborn count for less – so policy makers are under less pressure to restore any notion of intergenerational equality.

### Precautionary savings

A further channel through which the wealth effect may work is in reducing precautionary saving motives. A natural reason for saving is to generate buffer stocks that protect against unexpected income shocks. As Benito (2006) states:

'It is difficult to take out insurance on unanticipated events such as redundancy', so housing equity could act as that buffer.

Not only did the UK housing market deliver strong equity gains between 1997 and 2007, the high levels of transactions probably gave the impression that housing was a more liquid asset than previously thought. That is high turnover in the market, on the whole, enabled the opportunity for a quick sale without having to accept significant price reductions. Now that the housing market is in downturn the size and liquidity of housing buffer stocks may be compromised prompting an increase in precautionary saving and a fall in consumption. This would also be in response to the weakening labour market.

### Joint effects on consumption and the housing market

Figure 3 shows a good correspondence between real house price and real consumption growth in the last two-and-a-half decades. But correlation does not imply causation, so it is difficult to jump to a conclusion that consumption was fuelled by the growing equity in property. An alternative, and very realistic, proposition is that both consumption and house prices are being driven by the same common factors. Benito et al (2006) suggest that both consumption and house prices will certainly be pushed in the same direction by changes in interest rates, credit availability and expectations of future income.

House price growth though is considerably more erratic than consumption growth (note that the time series in Figure 3 are plotted on

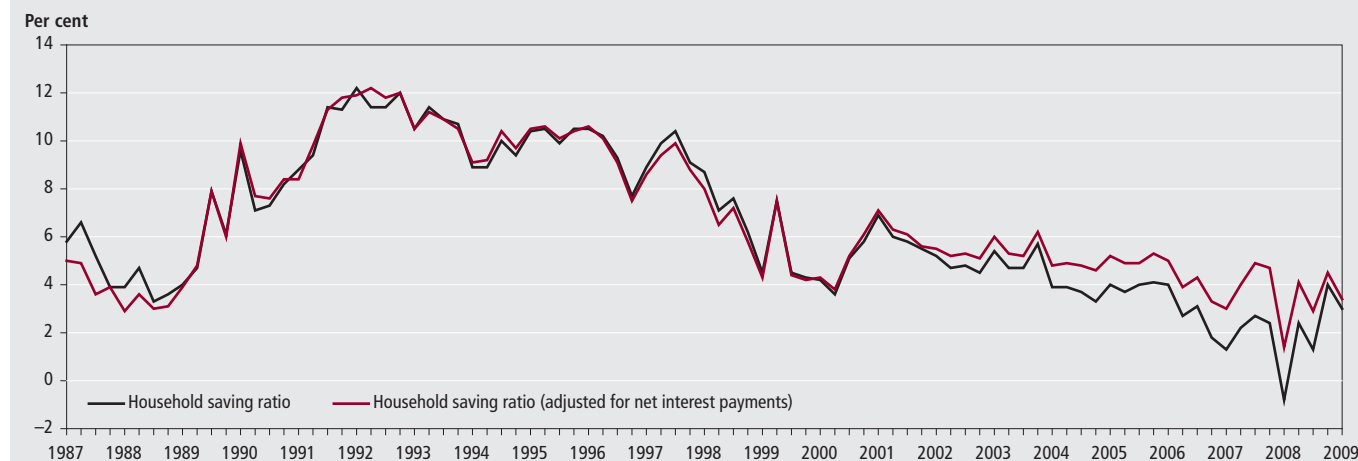
different scales). For starters the income elasticity of demand for housing is usually estimated to be much larger than for general consumer spending, so the same change in income will have a more significant impact on housing demand than consumer demand. Furthermore, the supply of housing is more constrained on the supply-side than the bulk of consumer goods meaning shifts in demand feed through more rapidly into prices than volumes.

### Household savings ratio

Saving is defined as total household resources available for consumption which are not consumed. These resources consist of gross disposable income, as defined earlier, and also a relatively small adjustment for net equity in pension funds which is designed to correctly attribute saving in private funded pension schemes to the household sector. The saving ratio then is the proportion of savings to total resources. The data underlying the measurement of the saving ratio can be found in Table A40 of the Economic Accounts and an overview of the methodology and some interesting measurement issues can be found in Chamberlin and Dey-Chowdhury (2008).

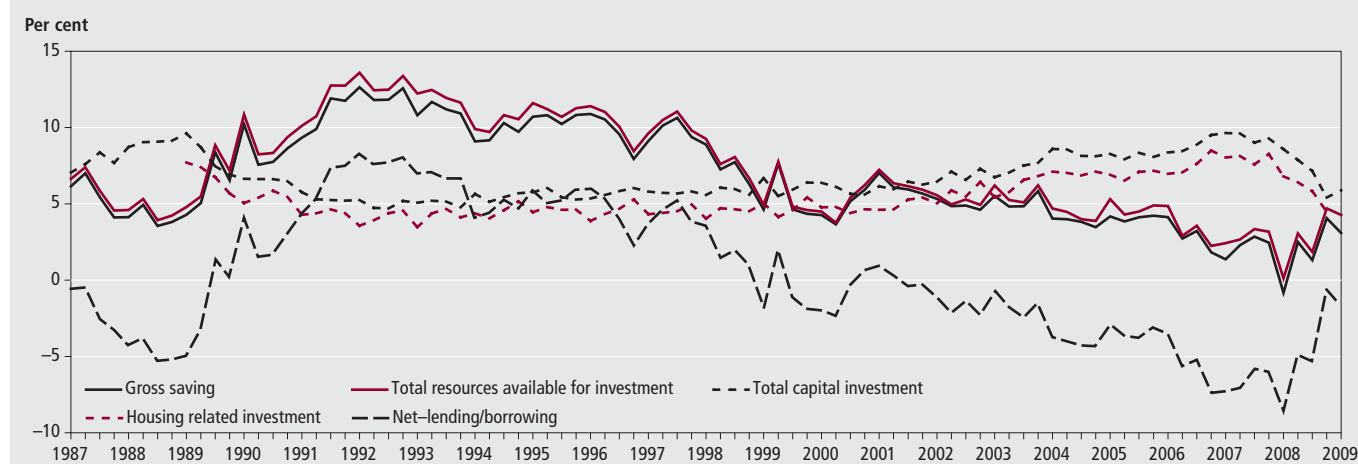
Because saving is basically the counterpart to consumption the long upward drift in the propensity to consume out of disposable income has been reflected in an equally long decline in the saving ratio (see Figure 9). This downward trend accelerated between 2004 and the beginning of 2008. Since then, and as the economy entered recession in the summer of 2008, the saving ratio has started to rise but still remains considerably below its historical average.

Figure 9  
Household savings ratio



Source: ONS Economic Accounts

**Figure 10**  
**Household sector net borrowing/lending as a percentage of disposable incomes**



Source: ONS Economic Accounts

Part of the rise in the savings ratio is the result of falling household consumption, as shown in Figure 3. Households have cut back spending in line with their weakening balance sheets and labour market prospects. However, the interaction between the stock of debt built up on residential property and interest rates has also been a contributing factor to movements in the ratio.

Strong growth in house prices along with a relaxed lending regime has seen a large rise in the stock of mortgage debt held by the household sector (see Figure 7). Therefore interest payments required to service these growing liabilities have also increased<sup>8</sup> – acting to reduce net property income and pushing down on measures of disposable income and the saving ratio. In fact, since 2001 net interest payments from the household sector have increased notably faster than the interest earnings of the sector.

Also presented in Figure 9 is an adjusted saving ratio where net interest income is set to zero (that is interest payments and earnings of the household sector are excluded from the calculation of the saving ratio). Here the long-term fall in the saving ratio is less pronounced – particularly between 2001 and 2008 – a reflection of the impact of the costs of servicing rapidly growing mortgage debt on the ratio.

However, since the autumn of 2008 the gap between the actual and adjusted saving ratios has closed as aggressive cuts in the Bank of England base rate are passed through to variable rate mortgages. This can be clearly seen in Figure 5. Since September 2007 the Bank of England base rate has fallen from 5.75 per cent to 0.5 per cent in June 2009. And over the same time period

the standard variable mortgage rate (based on an average of UK banks and building societies) more than halved from 7.72 per cent to 3.84 per cent. This has provided a boost to household net property incomes and saving. But this also implies that future increases in interest rates (it is inevitable that rates will return to more normal levels at some point) will reverse this effect putting downward pressure on the saving ratio.

### Net borrowing and lending of the household sector

The household Capital Account (Table A41 in the Economic Accounts) basically records the difference between saving and investment (spending on capital items). The difference determines the net borrowing or lending requirements for the sector (see Figure 10).

As Figure 10 shows, levels and trends of total capital spending for the household sector is mainly accounted for by investment in housing – this is new dwellings and the costs associated with the transfer of existing dwellings or land. The other components of household capital spending are relatively small and also include changes in valuables and inventories. Housing is defined as an investment good because it yields a flow of future housing services for the household to consume.

Although gross savings are the main source of total resources available for investment, these have to be adjusted to take account of investment subsidies and taxes.

The difference between these total resources and actual investment is the net lending or borrowing position of the sector. If investment exceeds available resources

the sector funds their capital purchases by borrowing from other sectors – in this case the household sector is a net borrower. However, if these internally generated resources exceed desired investment then they can be lent to other sector of the economy – so households become net lenders.

Recent developments in the economy and the housing market have had an interesting impact on the net lending/borrowing position of the household sector. In recent years the fall in household savings and the increase in house prices feeding through to investment spending meant the sector become an increasing net borrower. However, the recent increase in the saving ratio and the large fall in property transactions has seen this situation reverse almost to the extent that the household sector becomes a net lender.

### Distribution of wealth and negative equity

It was clear from the discussion of wealth effects that the aggregated household balance sheets presented in the quarterly Economic Accounts do not provide information on the distribution of income and wealth. Recent activity in the housing market is likely to have had a diverse impact across households.

Daffin et al (2009) explains how ONS plans to improve the measurement of household savings and wealth along these lines. The Household Assets Survey has been designed to collect information on household personal assets and liabilities including property (physical), financial and pension wealth. 32,000 households have been surveyed over a two year period. Wave 1 of the survey ran from



July 2006 until June 2008 with the results available by the end of 2009. Wave 2 is currently running from July 2008 to June 2010 with the results planned to be released by end of 2011. A follow up survey which commenced in October 2007 will specifically look at indebted households.

### Negative equity

Falling house prices are having a negative impact on wealth, but again this will have a rather differential impact on individual households. For most the recent fall in the market will not wipe out the large equity gains of recent years – but for some negative equity is already an actuality or a real possibility. Those households who bought near the top of the market in the summer of 2007 with high loan to value ratios are the most susceptible.

Estimates reported in Hellebrandt et al (2009) are that, depending on the approach followed, between 8 per cent and 11 per cent of mortgagors were in negative equity by the spring of 2009. This constitutes 700,000 to 1.1 million households. Tatch (2009) arrives at a broadly similar number, and also reports that two-thirds of mortgagors in negative equity are only so by a small amount (less than £10,000). The incidence is less than during the housing market crash in the early 1990s and far less concentrated in the first time buyer category. Here it may be the case that first time buyers had already been (luckily for them with retrospect) priced out of the market by the time the peak was reached<sup>9</sup>.

Although negative equity is a necessary condition for default it is not a sufficient one, so it does not necessarily create problems in paying back mortgages. In fact, prevailing low rates of interest have eased affordability, and while households can maintain payments there is no evidence of a direct link between negative equity and financial distress. Much will depend on the reaction of lenders. As Figure 5 shows, there is a large and widening gap between secured and unsecured lending rates in the current credit markets, so households may come under more acute pressure if lenders demanded repayment or treated the extent of negative equity as an unsecured loan at higher interest rates. Thus far lenders have shown no signs of doing this, indicating that it is not in their own self-interest to place further financial pressures on more severely indebted households at this time.

But lenders have responded to rising negative equity by reducing the loan to value of mortgage products. For example,

in Figure 5 it can be seen that fixed rate mortgages at a 95 per cent loan to value simply disappeared in April 2008. If the market is expected to fall by double digit percentages then it makes little sense for lenders to advance loans where there is only 5 per cent equity in the property. Benito and Mumtaz (2006) also highlight that households in negative equity are more prone to credit constraints which might strengthen the downward collateral effect on household consumption.

A significant impact of negative equity though is likely to be on volumes of housing transactions. As Benito (2006) shows, there are significant down payment constraints in the UK housing market at the best of times – which will be even tighter when equity has been reduced by falling prices and mortgage availability on the better terms is only accessible at lower loan to value ratios. The down payment constraint explains the general pattern in house prices, turnover, and numbers of first time buyers in the UK market. In this respect low equity is likely to be just as troublesome as negative equity, and while negative equity is not so widespread, there is a much greater incidence of households with low equity. As a result households may be trapped in their existing homes and the restrictions on mobility may have some adverse labour market outcomes.

### Notes

1. Mix-adjustments take into account changes in the composition of houses being bought or sold in any particular time period. For example, a price rise between two periods, based on a simple average of all house prices, could just reflect changes in the type or location of houses being sold, and not underlying prices.
2. See Figures 2 and 3 in Chamberlin (2009)
3. See Figure 7 in Chamberlin (2009).
4. The link between money, credit, house prices and economic activity is examined in Goodhart and Hofmann (2008). They argue that financial market liberalisation has increased the procyclicality of financial systems, making economies more susceptible to financial imbalances. As a result monetary policy should 'lean against the wind', perhaps by using countercyclical loan to value ratios on mortgages as an additional policy tool.
5. Recent data presented in the Bank of England *Trends in Lending* shows that while levels of mortgage lending have been maintained by the major UK high street banks there have been substantial falls in lending from foreign banks to UK residents.
6. Although consumption as a proportion of disposable incomes has been growing, as a proportion of primary incomes it has been fairly stable. Therefore the trend in the propensity to consume may reflect cyclical factors through the tax and benefits system. This tends to be an automatic stabiliser, pushing down on income in the upswing and pulling it up in the downturn. A further consideration is the use of fiscal drag to raise tax revenues post 1997. As income tax thresholds have been adjusted in line with inflation, which generally lags behind income growth, there have been growing numbers of workers migrating into higher tax brackets. The Institute for Fiscal Studies have reported that the number of top rate tax payers grew by over 1 million between 1997 and 2008. As a result disposable income growth has lagged behind growth in primary incomes.
7. The other components of household non-financial or physical wealth include: agricultural assets, commercial and industrial buildings, civil engineering works, plant and machinery, vehicles including ships and aircraft, stocks and works in progress, and intangibles which are mainly non-marketable tenancy rights (See Table 10.10 of the Blue Book). As a ratio of disposable incomes these are relatively small and constant compared to the residential buildings component.
8. Mortgage payments as a proportion of income is shown in Figure 6 of Chamberlin (2009). This trended upward between 1997 and 2008 mainly due to the large increase in mortgage debt, but has fallen back in the last year following substantial cuts in interest rates.
9. Figure 9 in Chamberlin (2009), showing recent trends in the proportion of first time buyers in the UK housing market, has seen a steady fall during the period of strong house price inflation. This may represent affordability constraints, but as also discussed, it might reflect the changing attitudes of young people to different tenure choices.

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