

Saving, wealth and consumption

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The UK household saving ratio has recently fallen to its lowest level since 1988. A key influence has been the large increase in the value of wealth, which is likely to have reduced households' incentive to save. This article discusses the various forms of household saving and their determinants, and discusses the interactions between saving, wealth and consumption.

Introduction

Since the mid-1990s the UK household saving ratio has fallen substantially, recently reaching its lowest level since the late 1980s. Over the same period, household wealth has risen sharply, driven by rises in both equity and house prices. How should we interpret these developments, and what might they imply for the future growth of consumption?

The first section of this article shows that the fall in the saving ratio has been associated with rising borrowing, including mortgage equity withdrawal, which tends to be related to increases in housing wealth. The second section looks at capital gains and losses, and how these can be considered as part of wider income and hence affect the level of saving. The third section discusses how the sources and composition of wealth gains may affect the response of consumption and saving.

Saving and borrowing

The household saving ratio is the proportion of post-tax income⁽¹⁾ that households save for future consumption rather than consume now.

The saving ratio fell to 3% in 2000 Q3, its lowest level since 1988 (see Chart 1). As recently as 1997, the ratio was more than 10%. The sharp fall since then, which is similar in scale to that in the late 1980s, is accounted for by falls in post-tax income growth relative to consumption growth, which has been fairly stable at around 4%. In the year to 2000 Q3, real post-tax income growth was 2.6% (see Chart 2).⁽²⁾

Chart 1
UK household saving ratio

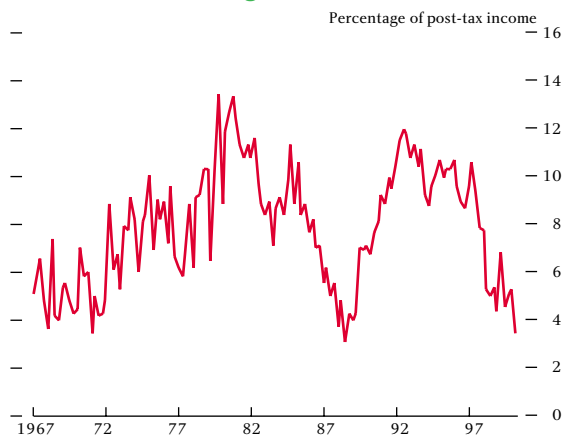
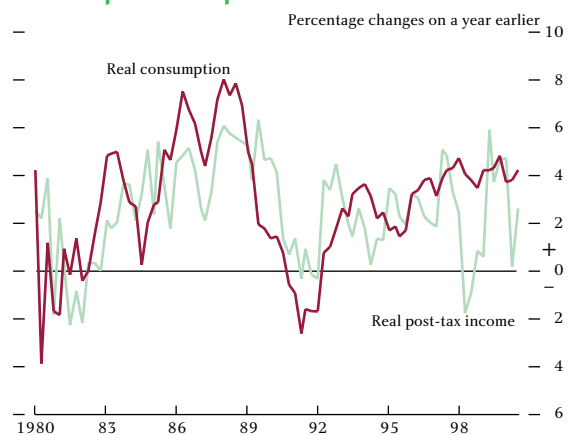


Chart 2
Consumption and post-tax income



The components of saving

Saving comprises net purchases both of physical assets (mainly investment in housing) and of financial assets. Net financial saving can, in turn, be split between net

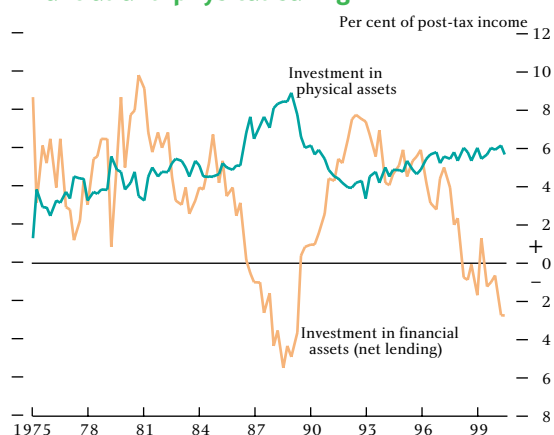
(1) Called 'available resources' by the Office for National Statistics.

(2) Post-tax income and consumption are deflated by the consumers' expenditure deflator to give real post-tax income and real consumption.

purchases of financial assets and changes in liabilities, ie borrowing.

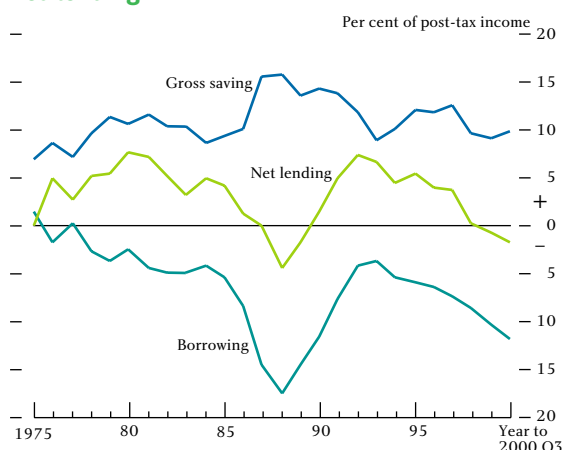
The fall in the saving ratio since the early 1990s mainly reflects a fall in net financial investment; investment in physical assets has remained robust (see Chart 3). This is the typical pattern in a cyclical upswing.

Chart 3
Financial and physical saving



Since 1997, the fall in net financial investment has to some extent reflected a fall in gross saving, ie purchases of assets have fallen. But since the early 1990s the main influence has been the rise in borrowing. Indeed, since the mid-1980s changes in net financial investment and the saving ratio have broadly reflected movements in borrowing (see Chart 4).

Chart 4
Contribution of borrowing and saving to net lending



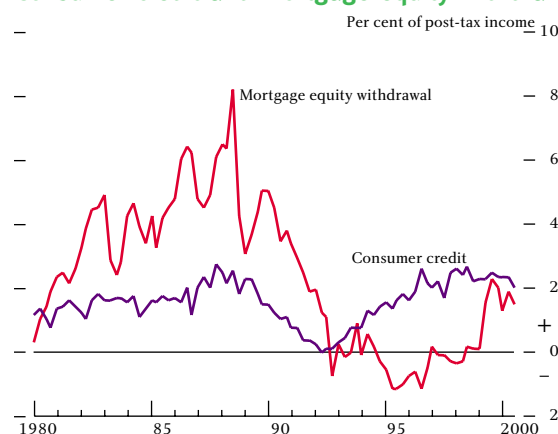
The components of borrowing

The main components of household borrowing are consumer credit and borrowing secured on

dwellings. Both have grown strongly in recent years, contributing to the fall in the saving ratio since the early 1990s.

Consumer credit is unsecured borrowing. It includes borrowing on credit cards and other short-term loans such as overdrafts. The stock of nominal consumer credit debt has been growing by more than 10% a year since 1995, with borrowing increasing by around 2% of post-tax income since 1996 (see Chart 5). The importance of credit card lending has risen over the past decade—the flow of net borrowing on credit cards is now around 1% of post-tax income. Part of this growth may reflect falls in interest rates for unsecured borrowing.⁽¹⁾

Chart 5
Consumer credit and mortgage equity withdrawal



Secured lending has also been growing strongly in recent years, with nominal mortgage debt increasing by more than 6% a year since the beginning of 1999. Some of this has been accompanied by rises in housing investment, but not all; the part that has not represents mortgage equity withdrawal (MEW), which is then available for consumption. The article on pages 100–03 discusses MEW in more detail. Chart 5 illustrates that MEW rose sharply in 1999, accounting for much of the recent rise in the saving ratio.

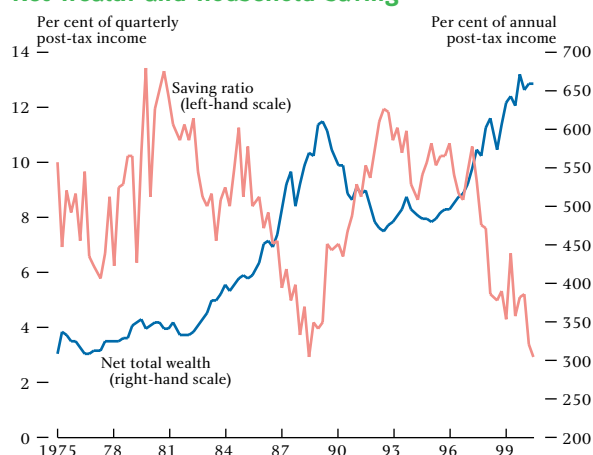
Capital gains and losses

The incentive to save will be affected by capital gains and losses. In particular, the large rises in equity and house prices in the past ten years and the fall in inflation will have allowed households to achieve a given level of wealth with less saving. Indeed, the main source of the growth in net household wealth over the past few years has been revaluations related to price changes, not

(1) See the box on page 6 of the February 2001 *Inflation Report*.

saving. Chart 6 illustrates that the saving ratio tends to fall when the ratio of wealth to income rises and *vice versa*.

Chart 6
Net wealth and household saving



Note: Annual income is a four-quarter moving sum.

One way to assess how much these capital gains and losses may have affected saving is to adjust measures of the saving ratio to allow for the effects that the gains and losses have on income, defined more broadly than simply current income. The behaviour of these adjusted measures can be compared with that of the standard measure.

Two adjusted saving ratios are considered here: one that adjusts only for the capital losses associated with general price inflation and one that adjusts for all capital gains and losses.

Adjusting household savings for inflation

Inflation generates capital losses on wealth denominated in nominal terms.⁽¹⁾ The saving ratio tends to rise with inflation when households are net holders of nominal wealth, as savers try to compensate for the falling real value of nominal assets. This makes it difficult to compare the real level of saving in the recent low-inflation period with earlier periods, particularly the 1970s.

The most important components of wealth that are fixed in nominal terms⁽²⁾ are households' bank and building society deposits and holdings of bonds via insurance companies and pension funds (see the box on

page 94).⁽³⁾ Inflation erodes the real value of these assets. To compensate for this loss, the nominal interest rate on these assets can be thought of as consisting of a real interest rate plus an inflation supplement. The inflation component merely compensates for a real capital loss, as a higher price level erodes the spending power of wealth. This increases nominal household income. But to maintain the real value of assets, households have to save this extra income: it does not increase the resources available for future consumption, but merely compensates for the falling real value of their savings.

A measure of gross saving can be constructed that adjusts for the effects of inflation on the real value of assets; adjusted gross saving is measured saving minus this inflation component.

There is of course an offsetting effect on liabilities. When inflation is high, households with nominally denominated liabilities (such as mortgages) will have lower measured income and net saving, because the interest rates they pay are high to compensate the lender for erosion of the real value of the loan; but the real value of the debt is also falling, and this is not measured as income or saving.

The impact of the inflation adjustment depends not only on the inflation rate but also on the proportion of household assets with values fixed in nominal terms. This proportion has varied considerably. The most important change is the fall in net deposits from the mid-1980s onwards (see the box on page 94). But net nominally denominated assets were clearly very important in the 1970s and early 1980s.

As households are net holders of nominal assets, high inflation tends to increase measured saving and the saving ratio. Unlike the conventional saving ratio, the adjusted ratio⁽⁴⁾ shows that current saving is not low in historical terms, given the recent return to a low-inflation environment (see Chart 7). And the high saving rates in the 1970s were not sufficient to offset the effect of inflation on net wealth. The adjusted ratio is close to its average of 2.7% since 1968 and above the trough of the late 1980s, although well below the 5.6% average since 1980.

(1) This analysis follows Taylor and Threadgold (1979).

(2) That is, assets whose value on redemption is fixed in money terms.

(3) Since 1982 the United Kingdom has issued index-linked gilts which, to an extent, protect holders from the effects of inflation. An adjustment can be made for this based on data on pension funds' holdings, but it has little effect on the series.

(4) Measured as a proportion of post-tax income adjusted for inflation.

The composition of household wealth

Household wealth has many different components, including financial assets, houses, jewellery and other valuables, and consumer durables, but the official measures of wealth include only housing and net financial wealth. Table 1 shows how the composition of total net wealth has changed over time.

Table 1
Household wealth (percentage of total net wealth)

	1975–84	1985–94	1995–99
Gross financial wealth	60	65	75
Gross financial liabilities	18	20	19
Net financial wealth	43	44	57
Housing wealth	57	56	43

Note: Net financial wealth is gross financial wealth minus gross financial liabilities (subject to rounding).

Housing wealth has fallen in importance relative to financial wealth. In the 1970s it accounted for around 60% of total wealth but now it is around 40%. Gross financial asset holdings have risen from around 60% of total wealth to 75% by 1995–99, but liabilities (mainly mortgages) have been a broadly constant proportion. These changes are partly due to changes in household portfolios, and partly due to differences in the growth of asset prices.

Assets

Households' financial assets include bank deposits, government bonds, shares in companies, and indirect

holdings in insurance companies and pension funds (ICPFs), which invest in a variety of assets on behalf of households (see Table 2). An increase in the importance of wealth held indirectly in the 1980s was largely offset by a fall in the relative importance of bank and building society deposits. In the 1990s, rises in both ICPF assets and directly held equity wealth led to a sharp rise in gross financial wealth and a large rise in its share in total wealth.

Table 2
Financial assets (percentage of total net wealth)

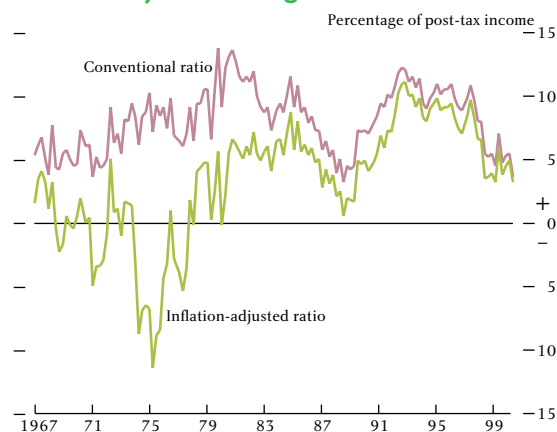
	Foreign assets	Bonds	Deposits	Equities	ICPFs
1975–84	1	3	27	8	21
1985–94	1	1	21	11	31
1995–99	1	1	19	15	39

Table 3 shows households' total holdings of each asset type, including both direct holdings and indirect holdings. Households' exposure to bonds and equities is greater than suggested by the direct holdings only: bond holdings are 12% of total net wealth and equities 42%.

Table 3
Household gross exposure to asset types (percentage of total net wealth)

	Bonds		Deposits		Equity	
	Foreign	United Kingdom	Foreign	United Kingdom	Foreign	United Kingdom
1975–84	1	8	0	30	4	21
1985–94	2	7	1	23	5	27
1995–99	2	10	1	21	7	35

Chart 7
Inflation-adjusted saving ratio



Adjusting household saving for asset price changes

A broader measure of saving includes all capital gains or losses. The ratio of gains-inclusive saving to post-tax

income looks very different from the inflation-adjusted measure (see Chart 8).⁽¹⁾ It is more volatile and, on average, larger. In 1999, the inflation-adjusted household saving ratio was less than 4% but gains-inclusive saving was more than ten times higher, at 60% of current post-tax income (not including gains as income).

The large fall in the gains-inclusive saving ratio in 1990 was related to sharp falls in house prices. This is clear from Chart 9, which splits the gains into those due to changes in gross housing wealth and those due to changes in net financial wealth. The strength of the total gains-inclusive ratio since the early 1990s is mainly related to equity market gains, although the housing market has played an important role in the past few years, supporting gains-inclusive saving in

(1) This ratio can also be calculated using gains-adjusted income as well as gains-adjusted saving, but this increases the volatility of the series and is not reported here.

2000 when the equity markets gains were unwound somewhat.

Chart 8
Total gains-inclusive saving

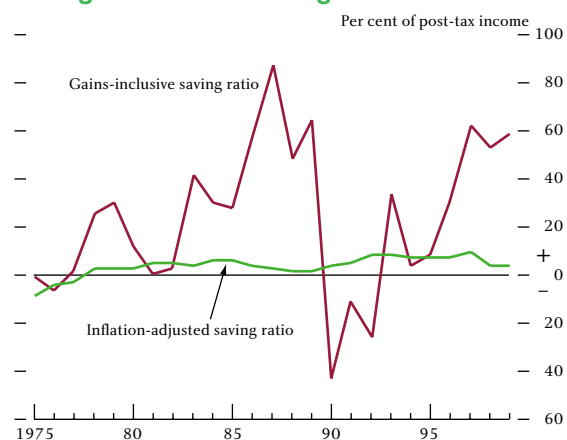
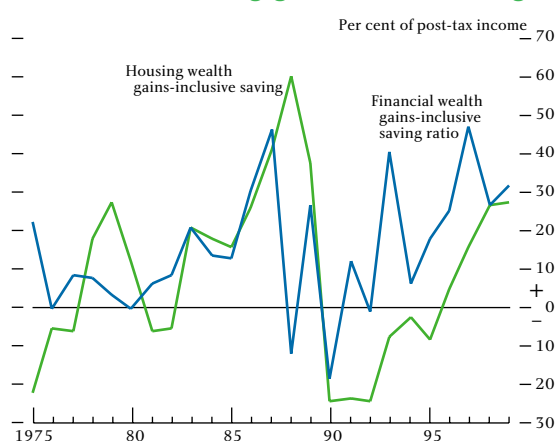


Chart 9
Financial and housing gains-inclusive saving



Wealth and consumption

What does all this imply for the relationship between wealth and consumption? Increases in wealth will tend to increase consumption and so reduce saving out of current income. But the linkages are not straightforward, as not all increases in measured wealth imply higher future consumption possibilities.

In this section, we look at some factors that influence the relationship between household wealth and consumption—the composition of wealth, the effects on wealth of windfalls from demutualisations and privatisations, the source of wealth changes, the distribution of wealth, and the effect of wealth on consumer confidence. Wealth effects may in practice be weaker than the size of capital gains might suggest, but there is some evidence that they may be becoming more important.

The composition of wealth

The composition of household wealth may be important in determining how changes in wealth affect household consumption. Different characteristics of assets may affect households' willingness or ability to spend out of capital gains. Asset characteristics include liquidity, capital certainty and visibility. At the most 'spendable' end of the scale, for example, wealth held in a bank account is highly liquid, capital certain (in nominal terms) and visible.

Equities—direct and indirect holdings

Equity values are capital uncertain—gains today may be lost tomorrow, for both direct and most indirect shareholdings. So households may be unwilling to increase consumption if they are uncertain about the sustainability of any wealth increase.

The visibility and liquidity of equity gains depend on how shares are held. Direct holdings are highly visible; shareholders will usually be able to follow the value of their investment easily. And these holdings can usually be liquidated with little notice, so gains can be cashed in quickly.

By contrast, indirect investment via insurance companies and pension funds (ICPFs) is usually intended as longer term, and can often only be redeemed at set dates or when certain events occur. So these assets are highly illiquid from the perspective of households. It may be possible to liquidate assets early but this will generally be costly. ICPF assets can sometimes be used as collateral for borrowing, but less commonly than housing. As this is a longer-term form of saving, gains accruing to these assets may be treated differently from those on other wealth to protect future consumption.

Indirect wealth is also less visible. Holders of ICPF assets may only be informed of the value of wealth at discrete intervals, for example in an annual statement. And even if they know the current value of the fund this may be only loosely related to the redemption values for some policies, eg final salary schemes and with-profits insurance policies. So it may be difficult to see the link to stock market changes.

There is some evidence from the United States on this. Poterba and Samwick (1995) find that US pension fund holders are less willing to spend these stock market gains. The consumption of those holding shares

indirectly through a retirement account is less correlated with equity returns than the consumption of direct shareholders.⁽¹⁾ Even the effects on those directly holding equity may be small. The majority of respondents to the US Survey of Consumer Finances say that equity market gains have no appreciable effect on their spending, whether they are using retirement accounts or not (Starr-McCluer (1998)).

Windfall payments

Windfalls worth nearly £37 billion were paid out by demutualising building societies and insurance companies to around 15 million households in 1997. Further windfall payments have been made since then, most notably in 2000, though these have been smaller in scale. Because of the way in which demutualisations are treated in the National Accounts, the payment of windfalls increased measured wealth but did not increase measured saving. Saving would have been reduced by sales of shares to fund consumption or spending of windfalls paid in cash.

Households hold a much greater proportion of demutualisation shares than shares in general, but they have been reducing their holdings over time. The Share Ownership survey contains information on individual shareholdings in recently demutualised companies. It shows that at end-1997 individuals held 60.6% of shares in demutualised firms but by end-1998 this had fallen to 48.5%, and by end-1999 to 45.2%. So sales of demutualisation shares are likely to have provided funds for household spending.

Windfall payments were a highly visible, permanent and to some degree unexpected shock to wealth, received by a wide variety of households. And some windfalls would have been paid to credit-constrained households, who are less likely to smooth consumption. In the Bank's 1997 *Inflation Report* forecasts it was assumed that windfall payments would have different effects on consumption than other wealth.

The Bank and MORI conducted research into the use of windfalls in 1997.⁽²⁾ This suggested that around 26% of the windfalls would be spent in 1997–98, of which 16 percentage points was spending that would not otherwise have taken place. This is around ten times more than would have been spent out of a normal revaluation to equity wealth, according to standard

consumption function coefficients. Windfall payments were assumed to continue to fund additional consumption in 1999. It is difficult to isolate the effects of windfalls on total consumption, although durables spending was strong following the windfall payments (and there was a fall in gross saving in 1998—see Chart 4). It does seem likely that windfalls have had a negative impact on saving over the past three years, although perhaps less than was assumed originally. And to the extent that they widened share ownership, these windfalls may increase the future responsiveness of consumption to wealth changes.

Housing wealth

Housing wealth differs from financial wealth in several important respects. It is, for example, less liquid and there are high transactions costs associated with selling property—though it is visible and can be used as collateral. But most importantly, housing acts both as a store of wealth and as a source of housing services. These services, measured by imputed rents, are included in consumption, which means that housing wealth will affect nominal household consumption but not necessarily real consumption.

In particular, house price increases may not make the household sector much better off in aggregate. Owner-occupiers who want to realise any house price gains have to sell their current property and either purchase a cheaper property or rent in order to continue to consume housing services. If the aggregate real housing stock is unchanged, there is no overall increase in consumption of real housing services. But homeowners can borrow against price rises without selling the property, which indirectly may affect consumption, as discussed in the article on [pages 100–03](#).

The sources of capital gains

The effect of any wealth revaluation partly depends on its cause. The capital gains or losses on wealth reflect both physical additions to the underlying capital and revaluations from factors such as changing long-term interest rates, expected profits and risk premia (and in the case of the housing market, increased relative demand for housing services).

Some of the changes in measured wealth do not involve increased resources and so may not lead to

(1) This could also be related to other differences between the two groups.

(2) See the box on page 20 of the November 1997 *Inflation Report*.

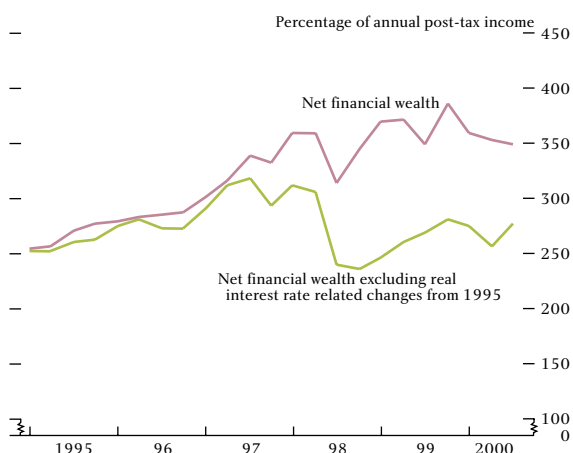
higher consumption.⁽¹⁾ If a company's share price has risen because its assets have become more productive then future resources are higher and this should be counted as saving. But if the share price goes up due to a shift in preferences, such as changes in discount rates or risk premia, then this is not saving, as the capital gain has not contributed to future income or production.⁽²⁾ So the wealth change should have less of a direct effect on current consumption though the discount rate change (or other preference shift) may itself affect consumption. In addition, there may be indirect effects, for example, through improved collateral for borrowing.

Similarly for housing, if the housing stock rises due to the building of new dwellings or improvements to existing dwellings—this is a resource gain. But to the extent that most changes in house prices represent changes in preferences rather than increases in resources, gains in housing wealth will not necessarily lead directly to increased future consumption (except of nominal housing services), though there may again be indirect effects.

For financial wealth, it is unlikely that future productive capacity varies as much as implied by the capital gains shown in Chart 9. It is difficult to create a measure that captures just that part of capital gains. But it is possible to get a crude measure by stripping out real interest rate changes from bond and equity prices changes using the dividend discount model. This isolates the part of equity and bond price changes associated with real interest rate changes (in this case ten-year index-linked gilt yields) and subtracts them from household financial wealth.⁽³⁾ The resulting series shows how financial wealth may have evolved in the absence of real interest rate movements since 1995 (see Chart 10).

The gains in the late 1990s can to a large extent be accounted for by falls in real interest rates, and may not represent future resource gains.⁽⁴⁾ Although other non-productive factors could offset these falls in real rates somewhat, this does illustrate that non-productive

Chart 10
The impact of real interest rate changes on financial wealth



gains may be a significant proportion of total capital gains.

The distribution of wealth

The concentration of wealth, particularly equity wealth, may affect how wealth changes pass through to consumption. The effect on consumption of any increase in wealth will depend on how the gains are distributed and the extent to which individual wealth elasticities of consumption vary.

Changes in the distribution of wealth *per se* might not affect the wealth elasticity of consumption. However, it is likely that households with small amounts of wealth have a higher marginal propensity to spend out of wealth than do wealthier households. Hence, a wider spread of equity and property wealth may increase the sensitivity of consumption to wealth.

Although there is limited official data on the wealth distribution in the United Kingdom, the Institute for Fiscal Studies (IFS) has analysed individual wealth holdings using a variety of sources.⁽⁵⁾

Across all directly held financial assets the median net financial wealth of individuals in the NOP Financial Research Survey⁽⁶⁾ was £750 in 1997–98, and mean

(1) See Auerbach (1985).

(2) This holds for a closed economy. In an open economy, capital gains may result from a shift in domestic tastes relative to the rest of the world. So households can buy more from abroad.

(3) The equity price is given by $EQ_t = \frac{D_t}{r + r_p - g}$ where EQ is the share price, D is the level of dividends, r is the real rate, r_p is the risk premium and g is the expected future growth of dividends.

(4) There are difficulties in measuring real interest rates with index-linked gilt yields as the demand for bonds has been artificially raised by the Minimum Funding Requirement. But estimates of real rates have fallen in many countries.

(5) Banks and Tanner (1999) use information on property income from the Family Expenditure Survey (FES) to calculate changes in the percentage of households holding different types of assets and data from NOP's Financial Research Survey (FRS) to study the value of individual wealth holdings in 1997–98.

(6) Excluding pension fund wealth.

wealth was £7,136. The gap between median and mean implies that wealth is unevenly distributed.

Equity prices are the main component of aggregate financial wealth data, so it is also useful to look at the distribution of equity holdings. The percentage of households holding shares rose from 8% in 1980 to 23% in 1990. And in 1997–98 17% of households owned privatisation or demutualisation shares. But only 8% held other shares directly and 9% held shares through PEPS and ISAs.⁽¹⁾ Although privatisations and demutualisations widened share ownership, a lot of households have only small holdings and around three quarters of the population have no direct equity wealth.⁽²⁾

Wealth and consumer confidence

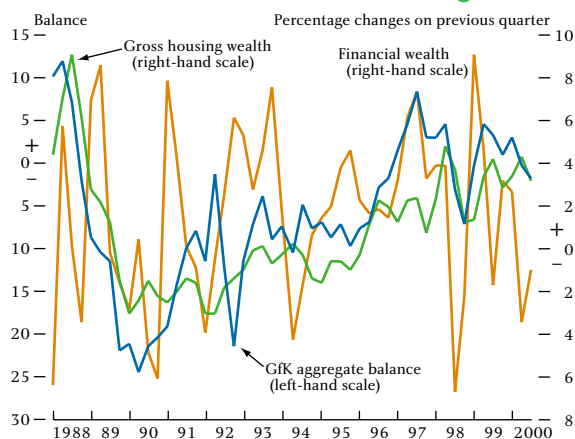
Stock market gains may also affect the non share holding population and those with a small shareholding through confidence effects.

Consumer confidence is an important determinant of households' willingness to spend. There are several surveys of consumer confidence that provide useful information about households' attitudes to their own finances and the state of the economy as a whole.

Changes in confidence are closely related to wealth, and so wealth changes may affect even non-wealth holders, in the shorter term at least. The change in housing wealth has been closely related to the GfK measure of confidence over a long period. The change in financial wealth has not been very closely correlated with confidence in the past (see Chart 11). But the link has become closer over the past three years. This is seen particularly in 1998 when the Asian crisis led to falls in both stock markets and general confidence. US measures of confidence have been closely related to equity price changes over the same period.

We may expect a close correlation between asset prices and confidence since these both change quickly and reflect current and future economic prospects. It is costly for consumers to collect large amounts of information so they may use asset prices as an

Chart 11
Consumer confidence and wealth changes



indication of the state of the economy. In general, however, it is likely that consumer and investor confidence are driven by similar perceptions of economic prospects.

Conclusions

The level of the UK household saving ratio does not seem unusually low when adjusted for changes in inflation rates over the past 30 years. But saving has fallen sharply over the past three years. A key reason for this fall has probably been the increases in wealth, particularly through increases in equity and house prices.

Equity wealth has become a more important part of household wealth in the 1980s and 1990s, partly through increased direct holdings, but also through insurance company and pension fund holdings.

Housing wealth gains in the late 1990s have also supported consumption as homeowners borrowed against these gains. But this has been less important than it was in the late 1980s.

If the strength of household consumption has been supported by increases in wealth, particularly equity wealth, then the asset price slowdown over the past year may lead households to slow their consumption growth. But equity and house prices are still well above their levels for most of the 1990s, so longer-term gains are still positive.

(1) Note that the same people may be in more than one category.

(2) The data suggest that those with pension fund assets also have higher other assets on average.

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