The financial behaviour of the UK personal sector, 1976–85

The financial behaviour of the personal sector has important implications both for the real economy and for monetary policy. For example, movements in wealth influence households' consumption and saving decisions, which, in turn, affect aggregate demand. Moreover, the demand for money, the stability of which is a central issue in implementing monetary policy, is an integral part of the portfolio allocation decision between liquid and illiquid assets.

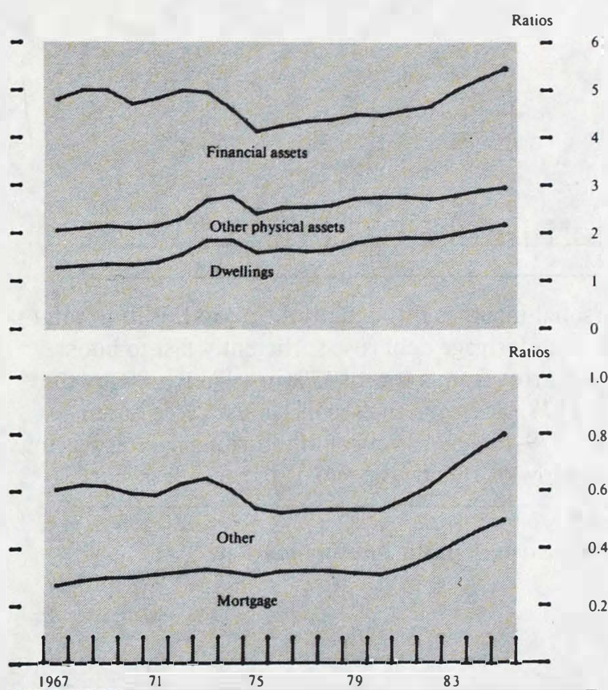
This article[1] examines developments in the financial behaviour of the personal sector over the period 1976–85, considering the various factors which have been important in shaping the sector's balance sheet and in changing its composition over time. The issue of whether or not the strong growth in the value of personal sector holdings in the life assurance and pension funds (LAPFs) has influenced households' behaviour is also discussed.[2] Finally, the article considers some implications of developments within the balance sheet, with particular regard to the build-up of personal sector debt and the possibly growing interest rate sensitivity of the personal sector's financial behaviour.

Trends in the personal sector's balance sheet over the past two decades

During the late 1960s gross physical assets of the personal sector grew at broadly the same rate as disposable income, so maintaining the ratio of tangible wealth to income[3] at close to 2. With gross stocks of financial assets averaging close to three times income and total liabilities just 60%, this left the ratio of net wealth to income around 4½ (Charts 1 and 2).

During the first half of the 1970s rapid inflation did much to change this picture, eroding the real value of both stocks of financial assets and personal sector debt. Although the measured saving ratio rose by more than half between 1971 and 1975, from 8% to 12¾%, this was insufficient to prevent the ratio of gross financial assets to income falling from 2.7 to 1.7 over the same period, (illiquid financial assets having also been hit by the collapse in the stock market[4]). Rapid house price increases helped boost the value of tangible assets, partly offsetting this decline, but in total the ratio of gross wealth to income fell from close to 5 in the early 1970s to just above 4 in 1975. Inflation also had the effect of rapidly eroding the real value of personal sector liabilities. Moreover, rationing in the mortgage and credit markets meant that households could not build up new debt quickly, with the result that both capital gearing[5] and the ratio of debt to income fell sharply. Overall, these changes resulted in a fall in the ratio of net wealth to income, from 4.2 in 1971 to 3.6 in 1975.

Chart 1
Ratios of personal sector assets and liabilities to disposable income



The second half of the 1970s witnessed a gradual recovery in the personal sector's net wealth ratio even though a further bout of inflation reduced the real value of net financial assets in 1979 and 1980. Again this resurgence of inflation was accompanied by a sharp rise in the measured saving ratio. Liabilities remained a constant proportion

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(2) The personal sector includes households, unincorporated business, non-profit-making bodies and the life assurance and pension funds (LAPFs).

(3) Throughout this section 'income' refers to annual personal disposable income (*not* adjusted for the inflation wedge between nominal and real interest rates).

(4) The FT-Actuaries index of industrial ordinary shares was above 500 during the summer of 1972, but had fallen to 160 by the end of 1974.

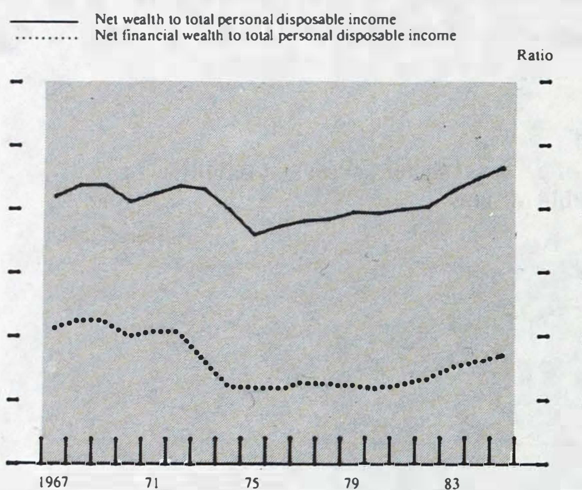
(5) Capital gearing is defined as the ratio of the outstanding stock of mortgage debt to the value of the owner-occupied housing stock.

Table A
Financial assets and liabilities of the personal sector

£ billions, nominal	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	Percentage changes: Over whole period	Percentage changes: Average annual rate
Gross physical assets	218	248	294	371	443	482	517	573	636	708	225	14.0
of which.												
Dwellings	*142*	*158*	*188*	*246*	*302*	*334*	*362*	*407*	*460*	*522*	*268*	*15.6*
Gross financial wealth	146	176	203	237	273	318	369	449	514	588	303	16.8
Gross wealth	364	424	497	608	716	800	886	1,022	1,150	1,296	256	15.2
Gross liabilities	45	52	61	73	86	100	118	141	165	192	325	17.4
Net financial wealth	101	124	142	164	187	218	251	309	349	396	293	16.4
Net wealth	319	372	436	535	630	700	768	882	986	1,104	247	14.8
As a ratio of personal disposable income											Changes in ratio over whole period	
Gross physical assets	2.5	2.5	2.6	2.7	2.7	2.7	2.7	2.8	2.9	2.9	+ 0.4	
Gross financial wealth	1.7	1.8	1.8	1.7	1.7	1.8	1.9	2.2	2.3	2.4	+ 0.8	
Gross wealth	4.2	4.3	4.3	4.5	4.4	4.5	4.6	4.9	5.2	5.4	+ 1.2	
Gross liabilities	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.7	0.7	0.8	+ 0.3	
Net financial wealth	1.2	1.3	1.2	1.2	1.2	1.2	1.3	1.5	1.6	1.6	+ 0.5	
Net wealth	3.7	3.8	3.8	3.9	3.9	4.0	4.0	4.3	4.4	4.6	+ 0.9	
Saving ratio (per cent)	*11.9*	*11.4*	*12.5*	*13.2*	*15.1*	*13.4*	*12.9*	*11.6*	*12.1*	*11.4*	*− 0.5 percentage points*	
Adjusted ratio (per cent)	*-6.0*	*-4.3*	*-1.2*	*-0.2*	*0.2*	*-1.9*	*-0.1*	*0.2*	*1.3*	*0.6*	*+ 6.6 percentage points*	

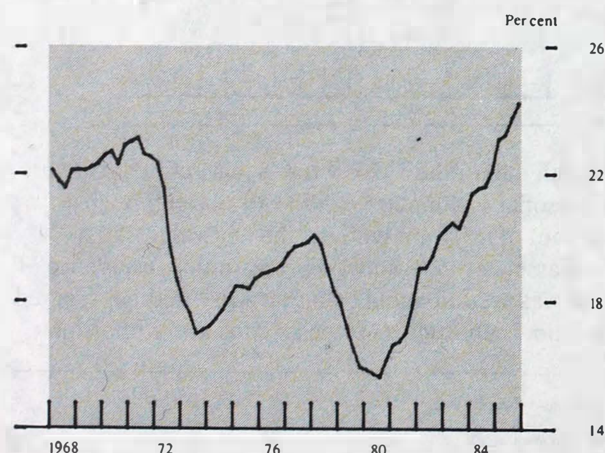
Source: *Financial Statistics.*

Chart 2
Ratios of personal sector wealth to disposable income



of personal incomes throughout the period. Within total liabilities, mortgage debt rose sufficiently fast to boost capital gearing from a low of 17% in 1973 to 20% by the end of 1978. However, the second house price boom during 1979–80 had the effect of returning capital gearing to a new low of 16% by the end of the decade (Chart 3).

Chart 3
Capital gearing[(a)] in the housing market



(a) The ratio of the outstanding stock of mortgage debt to the value of the owner-occupied housing stock.

The 1980s have been a period of rapid financial change and innovation. This has made it possible for the personal sector to restructure its balance sheet much more quickly than in the past. Despite falls in the saving ratio, the ratio of total gross assets to income rose from 4½ in 1980 to 5½ by 1985, mainly as a result of strong revaluation gains. The ratio of debt to income rose by about a half, to around 0.8 by 1985, thus permitting capital gearing to exceed levels reached in the late 1960s. Despite the faster rate of growth of liabilities than of assets, the net financial position of the personal sector as a whole continued to improve. By 1985, the ratio of net wealth to income exceeded 4½ for the first time, with the ratio of net financial wealth to income, at 1.7, at its highest level since the early 1970s, when it was close to 2.

Personal sector financial behaviour over the past decade

Most of the developments in the personal sector's financial behaviour during the last decade can be seen as responses to factors which are largely external to the sector itself. Perhaps the single most important factor has been the slowdown in inflation. During the 1970s, bouts of high inflation severely eroded the real value of personal sector holdings of financial assets and debt; the measured saving ratio rose sharply as individuals tried to maintain liquid balances. In recent years, inflation has fallen and the saving ratio has declined.

A second major factor behind movements in the personal sector's balance sheet during the last decade has been deregulation of the financial markets. This has led to a period of intense competition which has affected the markets in deposits of, and loans to, the personal sector. Competition has also led financial institutions to widen the spectrum of assets available for personal sector funds and to make possible new means of borrowing and of making transactions.

In part these developments reflect a conscious aim of policy to bring market forces to bear in the housing and mortgage markets. Policy has also played an important role in determining movements within the personal

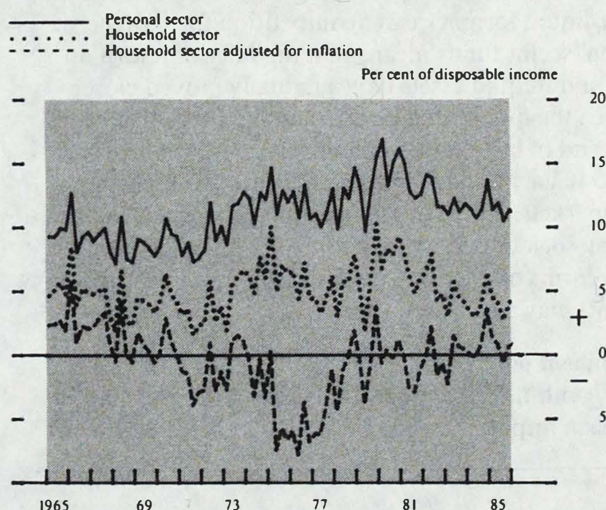
sector's balance sheet. The attractiveness of certain asset categories has been affected through, for example, their tax treatment, rates of return and availability, particularly of government securities. Funding policy will have affected not only gilts but also local authority debt and national savings. Other policies, such as the sale of council houses, will have had an impact on both personal sector capital expenditure and the mortgage market, while the privatisation programme has encouraged, inter alia, wider share ownership. Interest in shares will have been stimulated by the sharp rise in stock markets, both at home and abroad, which has led to large revaluation gains for personal sector equities in the past (both for those held directly by individuals and for those in the LAPFs). Prospects of future capital gains will have been an important factor when persons considered relative rates of return on various assets (both real and financial) and when they made their savings decisions.

The impact of inflation

The effects of credit rationing during the 1970s were sharply accentuated by bouts of high inflation, which reduced the real value of personal sector stocks of debt and liquid assets. This will have been a particularly important factor in explaining persons' demand for that element of money[1] which is held in the form of notes and coins and non-interest-bearing accounts, since the inflation rate represents the (negative) rate of return on money held.

If households wish to maintain the *real* value of their non-interest-bearing financial wealth then it is necessary for them to increase savings when the inflation rate rises. To illustrate the effect inflation may have had on households' behaviour, a saving ratio can be constructed using inflation-adjusted measures of households' income.[2] These adjustments remove the erosion of the real value of persons' holdings of net liquid assets by inflation.[3] This 'adjusted' ratio moved broadly in line with the traditional household measure during the 1960s, when the inflation rate was generally below 5%. In the early 1970s, however, the sharp acceleration in prices coincided with a fall in the adjusted ratio to −6% by 1976, from 1% in 1970. This was in a period when the unadjusted measure actually rose almost 5 percentage points. Thus, although the traditional measure indicates that the saving ratio was rising during this period, in practice it was not rising to anything like the extent necessary to maintain the real value of households' wealth during a time of high inflation (Chart 4). Subsequently, as the inflation rate fell during the second half of the 1970s, the adjusted ratio began to rise, nearing zero by 1979. During the early 1980s, however, as inflation picked up, it fell again. In more recent years households have generally stopped dissaving as inflation has moderated once more.

Chart 4
Household[a] and personal sector saving ratios



(a) The household sector is here taken to equal the personal sector *minus* the LAPFs. It thus includes individuals, unincorporated businesses and non-profit-making bodies.

Relative movements in the two measures of the household saving ratio emphasise the importance of accounting for inflation in the interpretation of personal sector financial behaviour. Although the unadjusted (traditional) saving ratio has fallen sharply over the last five years it appears that this is almost entirely counterbalanced by a smaller erosion (via inflation) of personal sector holdings of liquid assets.

It is not only rapid growth of consumer prices that has affected households' financial behaviour. The two house price booms during the early and late 1970s led to sharp falls in capital gearing, reflecting the fact that nearly all mortgage debt is nominal. Much of the rise in personal sector debt during the 1980s thus reflects the restoration of households' capital gearing to the levels reached in the late 1960s. In addition demand for borrowing will have been boosted by the growth of owner-occupation. At the end of 1975 around 10½ million dwellings were owner-occupied; by the end of 1985 this figure had risen to over 13 million.

Deregulation and financial innovation

One of the most important factors behind movements in the personal sector's balance sheet during the last decade has been change within the financial system, which has led to a weakening of the liquidity constraints which previously restricted households' choice. Prior to the 1980s, the demand for mortgage borrowing was periodically restricted through the societies' use of informal rationing schemes. In addition, direct monetary controls and guidance limited the amount of bank lending to households. This made it necessary for households to run down liquid assets in order to meet expenditure, rather than increase borrowing, with the result that the ratio of gross liquid assets to income fell steadily during the second half of the 1970s. The sharp rise in both

(1) Throughout this article 'money' is taken to mean £M3.
(2) Although termed a 'household' measure only the LAPFs have been removed from the personal sector. Hence, this 'household' sector includes unincorporated business and non-profit-making bodies.
(3) For a fuller discussion of the effects of inflation on saving see 'Real national saving and its sectoral composition' by C T Taylor and A R Threadgold, Bank of England *Discussion Paper* No 6.

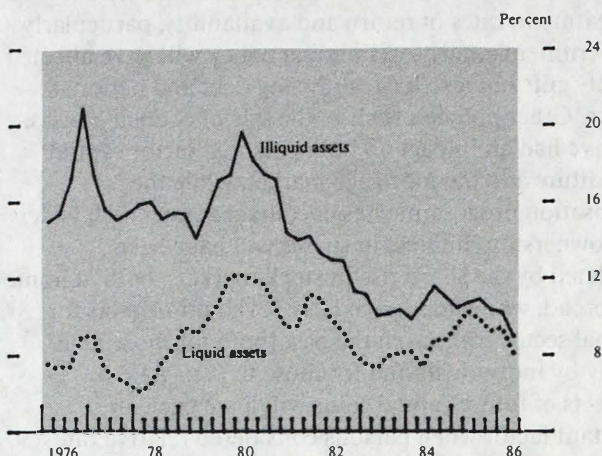
personal sector borrowing and liquid assets during recent years has coincided with a period of rapid structural change and innovation in the financial markets, following a number of measures aimed at liberalising the market and encouraging competition. The first of these changes to have a major impact was the abolition of the 'corset' in 1980, followed by the ending of hire purchase controls and the break-up of the building societies' interest rate cartel. It was the banks' successful re-entry into the market during 1982 which led to the major shift in the societies' behaviour. Since then the societies have attempted to meet the demand for mortgage funds, taking the structure of interest rates as given, rather than try to protect existing borrowers from rises in the mortgage rate. As a result, mortgage queues have almost disappeared and, instead, interest rates are allowed to clear the market for funds. The increased competition has also led societies to lend higher multiples of income and to lower deposit requirements. Typically, multiples were around 2½ during the 1970s, but have now risen to 3½.[1]

An important constraint on would-be house purchasers is the price of houses relative to earnings. Historically, the house price to earnings ratio[2] has generally kept close to 3½, (with the exceptions of the two house price booms in 1973–74 and 1979–80) reflecting, amongst other things, the fact that societies have usually set maximum loan-to-income multiples for borrowers around 2½ and maximum loan-to-value ratios below 1. During the 1980s, however, increased competition has meant that lenders have relaxed these requirements. The house price to earnings ratio has risen from below 3¼ in 1982 to 3⅗ in the fourth quarter of last year.

A second factor behind the growth in mortgage lending is likely to have been the sharp rise in net cash extraction, or equity withdrawal.[3] Attempts to disaggregate net cash extraction[4] suggest that the largest flows out of the housing market in recent years have been payments to last-time sellers; this category includes beneficiaries of dead householders and elderly people who have gone to live with someone else. Nevertheless, it is likely that some cash extraction has occurred through owner occupiers trading down or 'topping up' their mortgages. The recent removal of mortgage lending guidance[5] could increase this type of borrowing, particularly if building societies decide to advertise the potential cost advantages to individuals of switching existing debt to this form.

The abolition of hire purchase restrictions has further stimulated innovation in the personal loans market. New institutions have entered both this and the mortgage market, and new products have been launched. This has

Chart 5
Nominal rates of return on financial assets(a)



(a) The nominal rate on liquid assets is based on a weighted average of the pre-tax rates available on personal sector holdings of time deposits, interest-bearing sight deposits, national savings investments and building society shares and deposits. The nominal rate on illiquid assets is based on a weighted average of the rate available on long-term (20-year) government stock and the earnings yield on industrial ordinary shares. The appropriate weights are taken from the personal sector's balance sheet.

been accompanied by massive investment in new technology and heavy advertising, with much interest having been generated in new payment mechanisms, so that, for example, Barclaycard increased the number of its cardholders from 5 million at the end of 1979 to 8½ million by the middle of last year.

Since households (and homeowners in particular) now have much better access to long-term credit, there is less need for them to run down liquid assets in order to meet expenditure. As a result, the velocity of gross liquid assets has fallen throughout the 1980s. Although households can now borrow more easily in order to finance expenditure, implying a lower desired stock of liquid assets for transactions purposes, the demand for financial assets has been boosted by the fact that households no longer need to hold past accumulated wealth in the form of houses, since the easing of credit constraints means that they can now choose to keep a share of these 'savings' in a more liquid form. Greater competition for short-term personal sector funds means that the rates of return on liquid and illiquid assets have gradually moved closer together, the differential being around 1 percentage point by the end of last year compared with 6 percentage points in 1980 (Chart 5). This mainly reflects movements in stock markets, although competition between banks and building societies, as evidenced by the heavy promotion of new forms of deposit (such as the high-interest chequing account) may also be relevant.

Government policy
Clearly both the reduction of inflation and deregulation have been important elements of government policy

(1) An income multiple is the *maximum* advance-to-income ratio a building society will consider. In practice, *average* advance-to-income ratios are considerably lower (at close to 2 in 1986).

(2) Here calculated using the Department of the Environment's mixed-adjusted house price index and the Department of Employment's index of whole-economy average earnings.

(3) Defined as the difference between the net increase in the stock of loans for house purchase and the private sector's net expenditure on additions to the stock of owner-occupied houses, including improvements. For a fuller discussion see 'The housing finance market: recent growth in perspective' in the March 1985 *Bulletin*, pages 80-91.

(4) See A E Holmans, 'Flows of funds associated with house purchase for owner-occupation in the UK, 1977–1984', Government Economic Service Working Paper No 92 (December 1986).

(5) These were issued in January 1982 and asked banks, building societies and licensed deposit-takers to ensure, when making mortgage finance available on exchange of residential property, that, where the borrower was increasing the size of his mortgage, the bulk of the unencumbered proceeds of the sale were applied to the acquisition or improvement of the new purchase.

Table B
Shares in the personal sector's financial portfolio
Financial assets as a percentage of gross financial wealth

	Liquid assets					Illiquid assets						
	Money(a)	National Savings	Building society deposits	Other(a)	**Total**	Shares	Gilts	Life assurance and pension funds	Domestic trade and other credit	Overseas assets	Other	**Total**
1976	16.9	5.7	16.9	2.3	**41.8**	16.5	5.6	26.5	5.4	1.4	2.7	**58.2**
1977	15.1	5.4	16.5	2.2	**39.1**	17.6	6.5	27.9	5.2	1.2	2.4	**60.9**
1978	14.5	5.3	16.9	2.3	**39.0**	16.7	5.2	30.6	5.1	1.2	2.3	**61.0**
1979	14.7	4.9	16.7	2.4	**38.7**	15.0	5.0	33.1	5.0	1.0	2.2	**61.3**
1980	15.3	4.2	16.8	2.9	**39.2**	14.3	4.9	33.3	5.1	1.0	2.2	**60.8**
1981	14.8	5.3	16.9	2.3	**39.3**	13.0	4.6	35.3	4.9	1.0	1.9	**60.7**
1982	15.5	5.5	16.7	0.4	**38.1**	12.0	4.7	37.7	4.6	1.1	1.8	**61.9**
1983	14.0	5.2	16.1	0.4	**35.7**	12.7	4.2	40.1	4.5	1.2	1.6	**64.3**
1984	12.7	5.1	16.6	0.4	**34.9**	12.1	4.1	41.7	4.5	1.1	1.6	**65.1**
1985	11.9	5.1	16.6	0.4	**33.0**	12.3	4.0	42.8	4.3	1.1	1.6	**66.0**
1986(b)	11.1	4.5	15.6	0.3	**31.5**	13.7	3.4	45.1	3.8	1.0	1.5	**68.5**

Source: *Financial Statistics*.

(a) There are breaks in these series between 1981 and 1982 due to the transfer of trustee savings banks and other deposit-taking institutions from the other financial institutions sector to the new monetary sector at the beginning of 1982.

(b) First three quarters only.

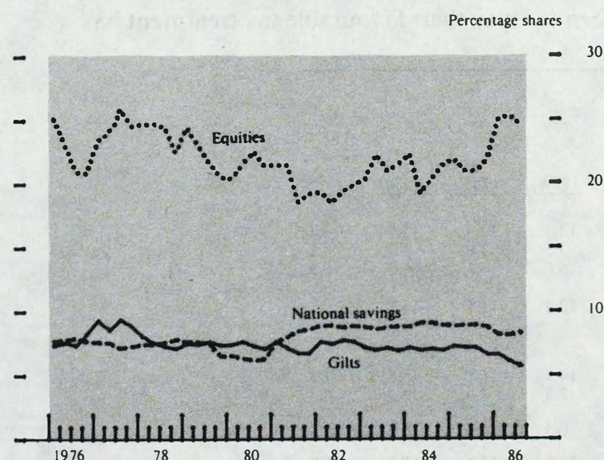
during the 1980s. However, other policies will also have affected the composition of the personal sector's balance sheet. The most direct effects are likely to have come through a tighter fiscal policy coupled with the decision in recent years that the public sector borrowing requirement should be fully funded rather than overfunded. The main effect of this policy will have been to reduce the supply of gilt-edged securities (although national savings could also have been affected).

The value of gilt-edged securities[1] held by the personal sector has risen at an average rate of only 1¼% per annum in real terms over the past ten years. Compared with most other asset categories this represents a particularly slow rate of growth, with the result that the share of gilts in total personal sector assets has declined from 6%–7% in the mid-1970s to only 4% in 1985 (Chart 6). The demand for government securities will obviously depend upon the differential between the rates of return available on gilts and those on other assets. Hence, the experience of the late 1970s is likely to have reflected the narrowing of the gap between rates of return on gilts and those on bank deposits. More recently, this process will have been affected by the government's success in reducing its borrowing, and thus the supply of gilts.

By adjusting the interest rate paid on the various national savings instruments relative to those available on other assets, the government can also influence the demand for these deposits by the personal sector. Movements in the share of national savings in the personal sector's portfolio are closely correlated with changes in interest rate differentials.

One further aspect of government policy which affects the personal sector is the sale of council houses. 'Savings' includes both capital expenditure[2] (mainly housing investment and purchases from other sectors, but also investment by unincorporated businesses) and the net acquisition of financial assets (NAFA), although, in practice, a balancing item is necessary to reconcile the data. Whereas the NAFA reflects the broad flows into and out of the personal sector's financial balance sheet, capital expenditure (which in 1985 accounted for more than 60% of savings) covers both housing investment (in new dwellings and improvements) and net purchases of land and existing buildings. The latter has risen from close to zero a decade ago to nearly £4 billion in 1985, with sales of council housing being responsible for more than a quarter of the increase. The remaining elements of personal sector capital expenditure, which account for broadly 40% of the total for the decade as a whole, mainly comprise investment by unincorporated businesses and non-profit-making bodies. Movements in these elements largely reflect investment trends in the economy as a whole.

Chart 6
Shares of gilts, national savings and equities[a] in household sector financial wealth[b]



(a) Personal sector holdings of equities *less* those held in the LAPFs; similarly for gilts and national savings.

(b) Personal sector gross financial wealth *minus* the value of holdings in the LAPFs.

Stock market changes
The stock market's strong performance in recent years has led to fairly rapid growth in the real value of

(1) Here taken to include both public sector long-term debt and the very small element of local authority temporary deposits. Holdings of gilts by the personal sector are calculated by residual and are therefore particularly subject to error.

(2) Here taken to include capital transfers (net receipts) and the increase in the value of both stocks and work in progress.

individuals' holdings of shares[1] (here taken to include debenture and loan stock, ordinary and preference shares and unit trusts, but *not* LAPF holdings), which has more than reversed the decline that occurred in the late 1970s and early 1980s. The share of equities in personal sector gross financial wealth has, if anything, been rising since 1982 (following a long period in which it tended to decline) even though individuals have continued to sell equities at a rate of between £2 billion and £3 billion per year on average throughout the past decade. Within the total, unit trusts more than doubled in value in real terms over the nine years to 1985, despite having depreciated by 10% during the second half of the 1970s; nevertheless, as a share of the personal sector's financial portfolio, they still represent only 1½% of total gross assets. The main reason for the change in trend has been the effect of revaluations on equity holdings. However, the privatisation programme has also helped to broaden share ownership in recent years.

Table C
Personal sector equity in life assurance and pension funds
£ billions

	Net receipts of LAPFS (1)	Revaluations (2)	Change in value (1 + 2)
1977	6.9	3.4	10.4
1978	8.3	5.2	13.5
1979	10.5	6.1	16.6
1980	12.3	0.5	12.8
1981	13.3	7.6	20.9
1982	14.3	13.8	28.0
1983	15.4	24.7	40.0
1984	17.2	16.4	33.7
1985	18.0	20.9	38.1
Cumulative total	**116.2**	**97.8**	**214.0**

Source: *Financial Statistics*.

The strong stock market has also been the single most important factor behind the growth in value of assets held by the LAPFs. In the ten years to December 1985 the share of LAPF holdings in the total personal sector portfolio has risen from around 26% to over 42%. Growth has been fairly consistent, with just one year (1980) during which there was a slight fall in the real value of assets, followed by a sluggish recovery in 1981. Otherwise the annual rate of growth has always been above 10% (in real terms) reaching almost 20% between 1981 and 1983.

The growth in the value of LAPF holdings can be split between net inflows (due to contributions, premiums and investment income exceeding payments) and revaluations (due to changes in the price of assets held in the LAPFs' portfolios). Over the past decade, revaluations have accounted for nearly 45% of the rise in the value of LAPF holdings (Table C), although during the past five years this fraction has been closer to 50%, reflecting the strong growth in equity values both at home and abroad. High net inflows have occurred despite a rapid rise in the amount of benefits paid out as the funds have matured and in administrative costs. More than one third of the rise in gross annual inflows (of nearly £34 billion) can be attributed to higher contributions, three quarters of which came from employers, and around one quarter is the result of the increase in individual premiums. The remaining element, covering various sources of investment income, has grown at an average rate of close to 20% per annum over the decade in nominal terms. This alone was equal to three quarters of the rise in benefits paid out. Net inflows increased by a factor of four over the period, reaching £18 billion in 1985.

Part of the growth in the net receipts of the LAPFs might be thought to reflect increased popularity of the schemes. However, the coverage of total employees in employment rose only modestly, from 49% in 1975 to 52% in 1983, and the total number of members of pension schemes *fell* by close to half a million between 1979 and 1983. The rise in contributions is a result of both higher contribution rates and strong growth in earnings. That said, much the most important factor behind the buoyancy of LAPFs' incomes has been the strong rise in dividends. In addition, high real interest rates will have boosted other investment income.

Perhaps the key factor behind the growth of the LAPFs has been the way their favourable tax treatment has

Table D
Income and expenditure of the LAPFs
£ billions

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
Inflows											
Employers contributions	4.1	5.2	6.0	7.1	8.3	9.9	11.7	12.3	12.9	12.9	13.4
Employees contributions	1.3	1.5	1.7	2.0	2.4	2.8	3.2	3.5	3.8	4.1	4.1
Individual premiums	1.8	2.1	2.4	2.7	3.4	4.0	5.1	6.0	7.5	9.2	10.5
Rent, dividends, interest receipts and other income	2.7	3.2	4.0	4.8	6.4	7.8	8.8	10.4	11.7	13.9	15.7
Outflows											
Pensions and other benefits paid	4.4	5.2	5.9	6.8	8.1	10.1	13.0	14.9	16.9	18.8	21.1
Administrative costs	1.0	1.1	1.2	1.4	1.8	2.1	2.4	2.8	3.4	3.9	4.3
Transfers to the state pension scheme	—	—	—	—	0.1	0.2	0.2	0.3	0.3	0.3	0.3
Net inflows(a)	**4.5**	**5.7**	**6.9**	**8.3**	**10.5**	**12.3**	**13.3**	**14.3**	**15.4**	**17.2**	**18.0**

Source: United Kingdom National Accounts.

(a) The sum of inflows minus the sum of outflows.

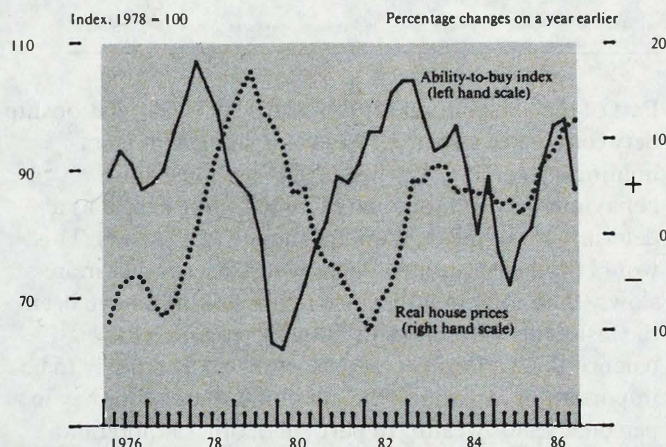
(1) As with gilts, personal sector equity holdings are calculated by residual and so subject to error.

interacted with changes in the coverage and structure of income tax. Since both employers' and employees' contributions benefit from tax relief, saving in this form has tended to be encouraged as the coverage of income tax has widened. The terms for contracting out of SERPs has given employers further incentives to offer workers increased pensions rather than higher pay. If it becomes easier for individuals to gain access to funds which have been promised for some time in the future,[1] further growth of such tax efficient schemes may be expected.

Relative rates of return

High real rates of return will have encouraged households to forgo consumption in order to increase savings—hence the personal sector's demand for all types of financial assets will have been raised. Nevertheless, still higher returns from investing in housing may have reduced the incentive to hold more liquid assets. Recently, house prices have risen particularly rapidly in London and the South East, where rapid real income growth and restrictions on the availability of building land[2] have respectively boosted demand and restricted the supply of new housing (Chart 7).

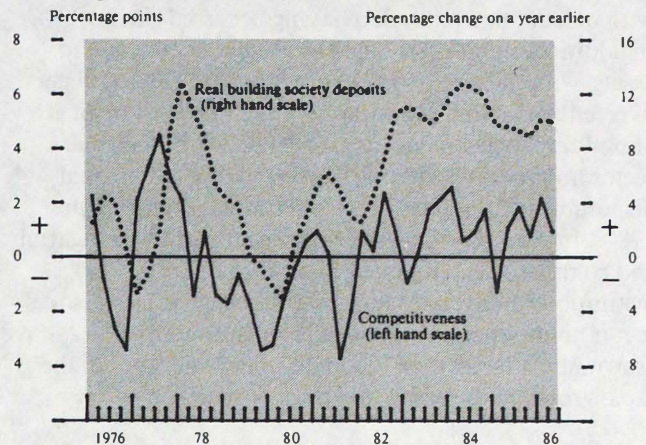
Chart 7
Real house prices and the ability to buy[a] of first-time buyers



(a) The NHBC's index based on 1978 = 100. For details of how it is consulted see 'Forecasting housing booms and slumps' by Hall and Richardson (Housing Research Foundation 1979).

Recent years have witnessed a substantial convergence of the rates of return available on liquid and illiquid assets (Chart 5). Movements in this relative return are a result of both stock market changes and the greater competition for personal sector short-term funds (with heavy promotion of new forms of deposit by the banks and the building societies). Demand for building society deposits has risen steadily throughout most of the last decade, with personal sector holdings of their share accounts and deposits increasing by nearly 70% in real terms between 1976 and 1985. Since 1980 the real rate of growth of deposits with building societies has accelerated sharply, although there are indications of some (limited) tailing off recently as banks have begun competing more vigorously. Much of this increase in the growth

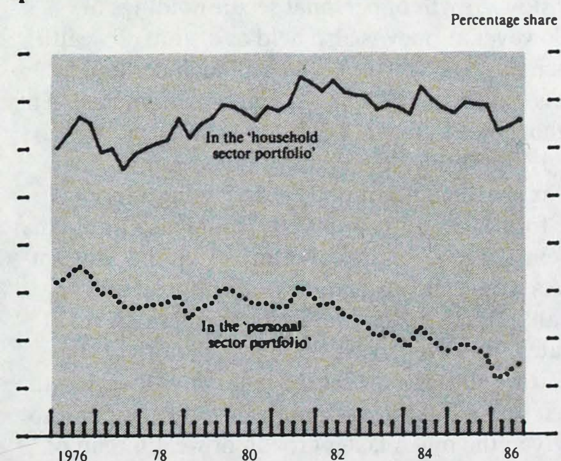
Chart 8
Building society deposits and competitiveness[a]



(a) Defined as the gross equivalent weighted average share and deposit rate *minus* the local authority 3-month deposit rate.

rate appears to reflect an increased effort by societies to offer investors a better deal on their deposits—through a greater choice of accounts, improved flexibility in their operation and, most importantly, more competitive interest rates (Chart 9). As a result, building society deposits still account for around 16½% of persons' gross financial wealth, a share that has remained stable throughout the last decade. Moreover, societies have managed to raise their share of total *liquid* assets from a little over 40% in 1976 to nearly 50% by the end of 1985. Despite the strong rise in building society deposits, the share of liquid assets as a whole in the personal sector's financial portfolio has declined from more than two fifths in 1976 to around one third in 1985 (Chart 9). This is mainly a consequence of the failure of personal sector holdings of £M3 to maintain a growth rate in line with the rest of the personal sector's portfolio although it is also a result of buoyant stock markets boosting the value of equity holdings.

Chart 9
Liquid assets in 'household' and personal sector portfolios[a]



(a) In the 'household' sector's portfolio, liquid assets are measured as a ratio of personal sector gross financial wealth *minus* the value of holdings in the LAPFs. In the personal sector's portfolio, liquid assets are measured as a ratio of gross fincancial wealth.

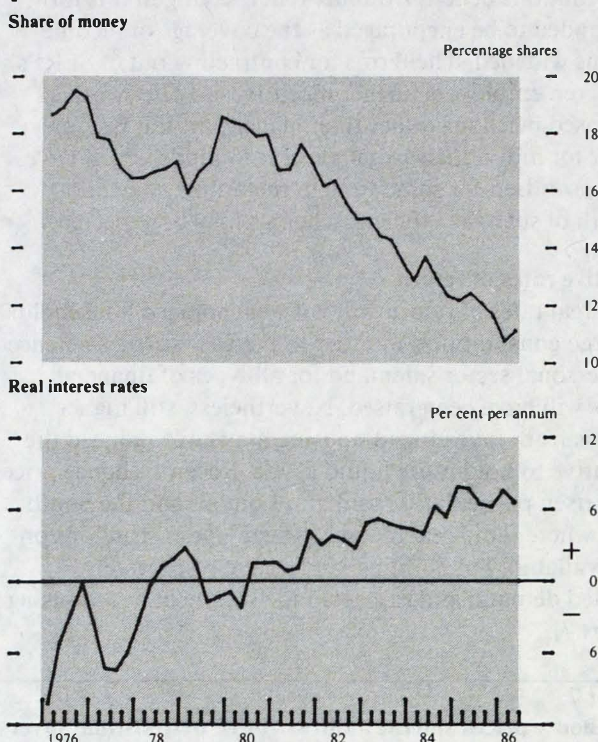
(1) For example, by taking out a pension mortgage.
(2) Restrictions on the supply of land appear to be a factor only outside London. Hence, private sector housing starts rose by more than 40% in Greater London between 1985 and 1986, but fell by 2% in the remainder of the South East.

Over the last decade the share of personal sector £M3 in gross financial wealth fell from close to 17% to just 11%, with most of this reduction having occurred since 1980. In addition, money has fallen as a share of total *liquid* assets, with the rate of decrease again having been faster in recent years (mainly because of the quicker rate of growth of building society deposits). The velocity of personal sector holdings of £M3 (measured relative to personal disposable income) has been fairly constant during the 1980s, in marked contrast to the velocity of the industrial and commercial companies' and other financial institutions' holdings. Moreover, in recent years personal sector holdings of liquid assets, as measured by PSL2, have grown much faster than incomes, mainly because of the rapid growth of building society deposits.(1)

Some evidence on the reasons for the slow growth of the personal sector's holdings of £M3 is available from the various demand for money studies. There have been numerous attempts over the past two decades to find a stable demand for money function, most of which have concentrated on total private sector demand, rather than simply the personal sector component. Nevertheless, the results may be of relevance in analysing movements in the personal sector's holdings of money.

The main implication of recent empirical work is that movements in total final expenditure (TFE), or wealth, combined with interest rate and price changes, can provide a good statistical explanation of personal sector money demand during the past decade. Other measures which might also be important but are rarely included are the variances of expenditure, interest rates, and inflation. Between 1976 and 1985 the real stock of money held by the personal sector rose by less than 10%.(2) During the same period, TFE rose by some 20% in real terms, while total personal sector gross wealth grew by close to 75%. However, real interest rates also rose sharply (Chart 10). If TFE is used as a measure of the transactions demand for money, then, to the extent that transactions holdings are non-interest-bearing, the rise in real rates of return on alternative liquid assets might explain the relatively slow growth of personal sector holdings of money. However, money is also held as a store of wealth and an increasing proportion of it, although perhaps slightly less liquid, carries its own real rate of interest. This suggests that gross financial wealth may have an increasingly important role to play in determining the demand for money, since money is becoming a more attractive form of holding wealth. It would also imply that the differential between rates of return on money and on other assets would then become a more appropriate determinant of money demand than the overall level of interest rates. However, using these explanatory variables, it would appear that the relatively slow growth of personal sector holdings of money is rather difficult to explain, given the much faster growth of wealth than of expenditure and the relatively small changes in interest rate differentials that have occurred over the past decade.

Chart 10
Real interest rates(a) and the share of money in personal sector wealth



(a) Proxied by banks' base rate *minus* the annual percentage rise in the consumers' expenditure deflator over the previous year.

Part of the explanation for the relatively weak relationship between wealth and money may be that LAPF asset holdings may have very little effect on households' behaviour and so should be excluded from wealth as a determinant of the demand for money (see below). This would produce a scale variable which rises rather more slowly than total wealth, since LAPF holdings have been the fastest growing element in the personal sector's balance sheet. However, other factors are also likely to be important in explaining the fall in the share of money in personal sector wealth. In particular, other liquid (and even illiquid) assets may be becoming better substitutes for money because of liberalisation and the competition that has ensued. One implication of the increasing convergence between the services offered by banks and building societies is that it may be better to look at a broader aggregate than £M3 in examining the personal sector's demand for 'money'. In other words, the fall in the share of money, as defined by £M3, may largely reflect the increased 'moneyness' of other liquid, and even illiquid, assets since 1980.

The LAPFs' influence on households' financial behaviour

As noted above, one of the most significant changes in the personal sector's balance sheet over the last decade has been the continued rise in the share of LAPF holdings in gross financial wealth (Table B). Much of this has come

(1) For a fuller discussion of the contrasting behaviour of 'money' across sectors see 'Financial change and broad money' in the December 1986 *Bulletin*, pages 499–507.
(2) Here money is taken to include £M3 plus savings bank deposits, because of the break in £M3 at the beginning of 1982 (see Table B).

Table E
Shares in the household sector's financial portfolio(a)
Financial assets as a percentage of gross financial wealth

	Liquid assets					Illiquid assets					
	Money	National savings	Building society deposits	Other	**Total**	Shares	Gilts	Domestic trade and other credit	Overseas assets	Other	**Total**
1976	23.1	7.8	23.0	3.1	**56.9**	22.5	7.7	7.3	1.9	3.7	**43.1**
1977	20.9	7.4	22.9	3.0	**54.2**	24.4	9.1	7.2	1.7	3.4	**45.8**
1978	20.9	7.6	24.4	3.3	**56.2**	24.0	7.5	7.3	1.7	3.3	**43.8**
1979	21.9	7.3	25.0	3.7	**57.9**	22.4	7.5	7.5	1.5	3.2	**42.1**
1980	22.9	6.4	25.2	4.3	**58.8**	21.4	7.4	7.7	1.5	3.2	**41.2**
1981	22.9	8.2	26.1	3.5	**60.7**	20.1	7.1	7.6	1.6	2.9	**39.3**
1982	24.8	8.8	26.8	0.6	**61.1**	19.2	7.6	7.4	1.7	2.9	**38.9**
1983	23.4	8.7	26.8	0.6	**60.0**	21.2	7.0	7.5	2.0	2.7	**40.0**
1984	21.8	9.0	28.4	0.6	**59.8**	20.8	7.0	7.7	1.9	2.8	**40.2**
1985	20.8	8.8	29.1	0.7	**59.4**	21.4	7.0	7.5	1.9	2.8	**40.6**
1986(b)	20.3	8.2	28.4	0.6	**57.4**	24.9	6.1	7.0	1.8	2.7	**42.6**

(a) In constructing this portfolio, the LAPFs' holdings have been excluded from the personal sector portfolio.
(b) First three quarters only.

about because buoyant stock markets have led to large revaluation gains and high net receipts, boosted by strong investment income. Nevertheless, demand for money studies suggest that the rise in the value of assets held by the LAPFs appears to have had little effect on households' behaviour.[1] This may partly reflect the fact that employees' contributions take the form of contractual savings which are likely to be difficult (and costly) to change in the short run. Moreover, most funds are established by employers to pay out pensions which are based on employees' final salaries. Hence, if the stock market is buoyant, producing higher-than-average returns, this need not lead to higher benefit levels, particularly if the gains are expected to be only temporary. Only in the situation where firms decide to cut employees' contributions might an immediate effect on households' incomes be expected. The benefit to households which will ultimately arise (whether through higher pensions, dividends, or wages) is likely to be somewhat remote from the actual change in the funds' wealth which caused it. Thus, neither the timing nor the size of changes in the wealth or net receipts of the LAPFs are likely to be very good indicators of changes in households' perceptions of their wealth.

Such an analysis suggests that it might be instructive to exclude LAPF assets from the personal sector portfolio (Table E). In such a portfolio the share of illiquid financial assets *declined* during the late 1970s and early 1980s, from around 46% in 1977 to 39% in 1982, although since then they have recovered somewhat (Chart 9), accounting for almost 43% of 'household'[2] assets by the end of 1985. This recovery has occurred despite the fact that the gap between the rates of return on liquid and illiquid financial assets has narrowed, so encouraging investors to switch a greater share of their portfolio into more liquid form.[3] Of course, other factors that are important in explaining the growth of personal sector holdings of illiquid assets may obscure the picture. For example, the abolition of exchange controls in 1979 will have encouraged the growth of overseas assets. More importantly, large revaluations associated with changes in the price of illiquid assets hide the fact that, in terms of *flows*, the personal sector has been moving its portfolio into more liquid forms, but *not* at a sufficiently fast rate to compensate for the rise in the value of its illiquid assets.

Implications of changes in the personal sector balance sheet

Does the personal sector have too much debt?

The near doubling in the real stock of liabilities held by the personal sector during the last decade has given rise to concerns that the household sector is now becoming overextended. Of course, the lifting of credit constraints in the early 1980s was certain to lead to a rise in borrowing, since the personal sector was clearly rationed in both the mortgage and consumer credit markets during the 1970s. Nevertheless, the speed at which the aggregate debt indicators have risen has led to assertions that lenders are acting imprudently. Those who argue that the personal sector as a whole is not accumulating too much debt, too rapidly, point to the rise in net wealth as a factor justifying more borrowing. This growth has come about despite the fact that the personal sector has been building up the liability side of its balance sheet faster than the asset side, because the stock of assets (including physical assets) has on average been more than seven times larger than the stock of debt (Table A). However, these aggregate trends may conceal divergent movements within different parts of the personal sector. The people building up debt are, in general, unlikely to be the same as those that are stocking up assets. Thus, the Family Expenditure Survey reveals that in 1985 only 2% of gross normal weekly income came from investments for those owner-occupied households in the process of purchase, while the comparable figure for households that already owned their properties outright was 11%. Similarly, annuities and pensions (other than social security benefits) provided just 1½% of income for households with a mortgage, but more than 13% for

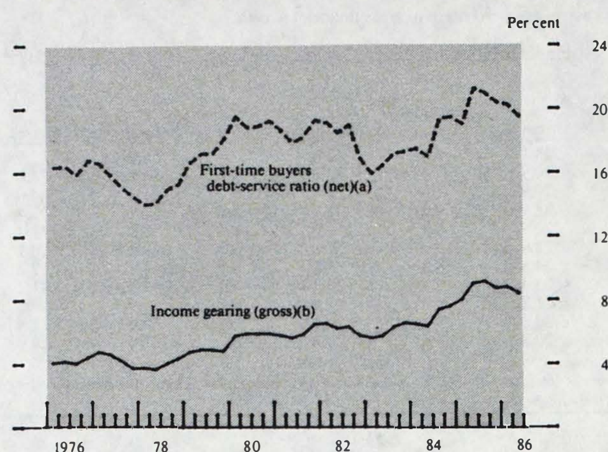
(1) Similarly, studies of the consumption function suggest a much stronger effect from liquid than from illiquid assets (such as LAPFs' holdings and housing).
(2) Note that 'household' here includes unincorporated business and non-profit-making organisations.
(3) Although it should be emphasised that rates of return on equities has been measured using earnings yields, so excluding capital gains. Also, the difference between *ex post* and *ex ante* returns on illiquid assets is likely to be an important factor, but one which is hard to measure.

Table F
Shares in the personal sector's financial portfolio
Liabilities as a percentage of gross liabilities

	Bank lending	Hire purchase	Domestic trade and other credit	Lending for house purchase				Overseas	Other
				Total	Public sector	Banks	OFIs		
1976	13.2	3.9	15.5	61.2	*7.8*	*3.0*	*50.4*	0.4	5.7
1977	13.1	4.5	16.0	60.6	*6.9*	*2.8*	*50.9*	0.5	5.3
1978	13.4	4.7	15.7	60.2	*5.8*	*2.7*	*51.6*	0.6	5.4
1979	14.4	4.9	15.5	58.6	*5.2*	*2.9*	*50.6*	0.7	5.9
1980	15.6	4.9	14.7	57.8	*5.2*	*3.1*	*49.5*	0.9	6.0
1981	17.0	4.5	13.7	58.1	*5.0*	*4.0*	*49.1*	0.9	5.8
1982	19.7	2.4	12.7	59.9	*5.0*	*7.4*	*47.4*	0.9	4.4
1983	19.9	2.4	12.0	60.8	*4.3*	*9.4*	*47.1*	0.9	3.9
1984	19.6	2.4	11.8	61.8	*3.5*	*9.7*	*48.6*	0.8	3.5
1985	19.8	2.4	11.4	62.3	*2.8*	*10.0*	*49.5*	0.7	3.3
1986(a)	19.7	2.4	10.5	63.2	*2.3*	*10.5*	*50.3*	0.7	3.5

(a) First three quarters only.

Chart 11
Measures of the household sector debt burden



(a) Debt-service costs (interest plus capital repayments) as a ratio of income, for first-time buyers, assuming a 25-year annuity mortgage, net of tax relief. Average advances and incomes of first-time buyers who have taken mortgages from the building societies are used in these calculations.

(b) Interest payments as a ratio of householders' disposable income, before tax relief, calculated using aggregate data. The denominator thus includes income of those households without debts.

those already owning their homes outright. This implies that it is mainly younger households that hold debt and older households that hold assets. Inland Revenue surveys of personal income provide further evidence on the distribution of assets and liabilities, indicating that deductions for building society and other mortgage interest represent a smaller fraction of income for the richest households. Their surveys suggest that it is younger and poorer households that face the highest debt-service ratios, so that much of the increase in the aggregate measures is likely to reflect decisions by such households to take on more debt (some encouraged by the government through their being offered the chance to buy council houses).

Concerns about the build-up of debt have also been fed by a sharp increase in the number of households facing severe debt problems in recent years.[1] Although still representing less than ¼% of all outstanding loans, the number of houses taken into possession in 1985 was nearly seven times the number repossessed in 1979. A sharp rise in the number of households with arrears problems also occurred in 1985, with close to 2½% of all outstanding mortgage loans then thought to be in arrears of at least three months. Such difficulties are not a feature of the housing market alone; for example, there has been a rise in the number of county court actions started to recover debt.

Aggregate indicators of debt confirm that many households are now having to devote a bigger fraction of their disposable income to servicing their debt than at any time in the past two decades. Hence, not only has the debt-income ratio risen sharply but household sector income gearing[2] has increased, from below 5% at the end of 1979 to around 9% at the end of 1985. Similarly a measure of the debt-service ratio for first-time buyers[3] has grown from around 18% to 20% over the same period (Chart 11). Some of the rise in the aggregate measures of debt is a direct consequence of the spread of owner-occupation, so that interest payments per owner-occupied dwelling relative to disposable incomes per dwelling (including those *not* owner-occupied) have risen from 10½% at the end of 1980 to 14% at the end of 1985—an increase of broadly one third (compared with the 50% rise in the aggregate measure). Even this adjusted indicator may exaggerate the growth in a typical individual's debt service problem, since income per owner-occupied household is likely to have grown more quickly than income of other households (because of composition effects). Further evidence on the scale of indebtedness is provided by movements in the ratio of mortgage advances to income. In particular, it seems that the ratio of average building society mortgage advances to income has yet to return to the peaks reached during 1972–74. The figures suggest that repayments (including interest) on a 25-year annuity mortgage for the typical borrower[4] would have taken up almost 27% of income before tax relief in 1985. This figure is only slightly higher than the 26% of income which the average borrower needed to devote to payments in 1980. Nevertheless, it is around one fifth higher than the comparable figure for 1976, and one quarter higher than the average for the 1970s as a whole. Moreover, the ratio of the recorded income of borrowers with a building society mortgage to average earnings in the economy as a whole has fallen sharply during the 1980s. In 1980 it stood at close to 1½, but by 1985 it was near to 1⅓. Hence the rise in the aggregate income gearing ratio of the personal sector can be viewed as the result of a combination of factors. First, more individuals are taking on debt,[5] partly because societies are now lending to those on lower incomes (mainly because of the government's decision to sell their council houses). Second, the average advance taken out by borrowers has risen as a fraction of their income. Third,

(1) Although provisional figures for 1986 indicate a fall in the number of households in arrears.
(2) The ratio of interest payments to household disposable income.
(3) The ratio of total repayments (net of tax relief) to total income, (calculated using building society data.)
(4) ie someone taking a loan equal to the average advance made by all societies that year, and with average income of all borrowers that year.
(5) Building societies made more than 1 million advances in 1985 compared with fewer than 700,000 in 1980. The number of borrowers rose from 5.4 million to 6.3 million between 1980 and 1984.

and tending to offset these factors, interest rates have fallen, by around 1¾ percentage points between 1980 and 1985.

Although real interest rates have been high by historical standards, strong growth in house prices in recent years has meant that housing investment has become a relatively more attractive proposition (especially compared with investing in other assets, as is indicated by the fact that house prices have on average been growing at much the same annual rate as the nominal return on gilts[1]). It may well be the case that expansion of the mortgage market has led to a decline in the quality of loans (especially at the margin) but societies must feel that it is 'profitable' to do this, despite the likelihood that it would lead to more defaults, or else they would not have raised loan-to-income multiples. Studies of mortgage arrears suggest that those households that do have severe problems repaying debt generally do so because of unemployment or marital problems. Although the latter may be difficult to insure against,[2] it might be feasible to provide cover against illness, accidents, redundancy and unemployment. This is a policy advocated by the National Association of Homeowners and one which could easily be made a legal necessity; however, it might prove to be prohibitively costly.

Some implications for policy

In recent years, increasing focus has been placed on the interaction between the real and financial sides of the economy. This has been seen particularly in research related to the determinants of consumer spending, where it is now generally recognised that movements in net financial wealth or net liquid assets have an important influence on consumption and hence saving. The growth of the assets side of the personal sector's balance sheet has important implications for consumption, especially when it is remembered that these assets may not be the property of the same individuals who are building up debt. If it is the case that the build-up of financial assets is a consequence of the high real interest rates of recent years, it is a possibility that if rates were to fall substantially people might choose to use these assets to finance more consumption. At the same time lower costs of borrowing would further stimulate the growth of consumer credit.[3]

The durables element of consumers' expenditure is more sensitive to financial variables than is expenditure on non-durables, in part because durables spending is often financed through borrowing. Thus, interest rates typically have a major role to play in explaining durables consumption, as do changes in mortgage lending. The latter may reflect complementarity, with many households choosing to buy furniture and other durable goods at the same time as they buy a house. Moreover, mortgage equity withdrawal also appears to be playing some part in explaining the recent growth in consumption.[4] Only small societies breached the mortgage lending guidelines when they were in force, suggesting that if the larger societies were to advertise remortgages on a large scale such lending could give a big boost to consumption. Given that typical rates on personal unsecured loans are almost double the current mortgage rate, the demand for borrowing on mortgage could rise substantially, even though a major element of any increase in this form of borrowing would represent a substitution of one form of debt for another, rather than a large rise in the overall level of debt. However, because the withdrawal of mortgage lending guidance means that some households can now offer their past records of meeting mortgage payments as a sign of their low risk of default, there may be some narrowing of the gap between rates charged on personal loans and the mortgage rate. Furthermore, although the building societies could choose to encourage those individuals who are buying houses (or who already own them) to substitute mortgage debt for other (unsecured) loans, they may find it more profitable to offer their own unsecured loans. Ultimately, much will depend on how the building societies react to new legislation designed to allow them to compete more vigorously in the markets for personal loans.

Many of the changes in the personal sector's balance sheet during the 1980s are a direct consequence of the liberalisation and innovation that have occurred in financial markets. Liberalisation has implications both for the behaviour of the economy and for the effectiveness of monetary and fiscal policies.[5] It might be argued that these changes have weakened the leverage of monetary policy, since those households that were previously liquidity-constrained are now able to maintain consumption levels more easily by borrowing. On the other hand, the existence of a heavier debt burden may mean that expenditure will be more susceptible to policy-induced interest rate changes than before. Constraints appear to have been an important influence in, for example, the personal sector's demand for money during the 1970s, but liberalisation means that households may begin to use debt increasingly to finance expenditure, rather than keep a buffer stock of liquid assets for such purposes. Reductions in liquidity constraints will also have had an important impact on the real economy, since they have permitted consumers to move closer to their desired (life-cycle) levels of expenditure. This implies that households may find it easier to borrow through periods when income is temporarily low (perhaps early in their working lives) so maintaining a smoother consumption profile over time. This could reduce the scope for 'fine-tuning' demand via, say, changes in taxation. However, since the proportion of households that are likely to react to changes in interest rates has, if anything, risen, it follows that monetary policy should have greater influence on both how the personal sector allocates financial wealth between consumption and saving and the evolution of its balance sheet.

(1) And, of course, much faster in some regions (eg London).
(2) Because of adverse selection or moral hazard.
(3) Clearly, the implications for both liquidity and borrowing would depend on the *cause* of the fall in interest rates.
(4) For example, the current Treasury model contains a consumer durables equation in which mortgage equity withdrawal has a role.
(5) Clearly, a detailed discussion of these issues is beyond the scope of this article.