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Over-valued pound responsible for schizophrenic economy

Excess money growth still worrying for medium-term inflation outlook

Poor survey from the CBI

The latest *Monthly Trends Enquiry* from the Confederation of British Industry was a shocker. It gave the worst reading on the state of manufacturing since the last recession. The output expectations question had a negative balance for the first time since December 1992, while the prices question identified 15% more companies planning to cut prices than to raise them. This is the highest negative balance ever and confirms that there are no upward pressures on inflation in manufacturing at present.

But money growth remains high and unemployment is still falling

Meanwhile broad money growth continues to run at almost 10% a year, with financial sector money soaring at an annual rate of over 20% a year. (See our research paper on pp. 2 - 12 for further discussion.) The excess money balances are sustaining high asset prices and are a key reason for the buoyancy of domestic demand. The precise degree of buoyancy recently is a matter of judgement, since comprehensive national accounts data are not yet available. So far in 1998 unemployment has been going down. This both contradicts the recession-mongering from the National Institute and others, and points to at least trend growth in national output as a whole. As exports are undoubtedly growing more slowly than imports, domestic demand appears to be increasing at an above-trend rate.

Over-valued pound is the cause of the imbalance,

The UK's schizophrenic economic situation - with net exports (i.e., exports minus imports) deteriorating and domestic demand in semi-boom - is the result of the over-valued pound. In the long run the exchange rate reflects trends in the relative money supplies of different nations. (If the quantity of pounds rises indefinitely by 20% a year and the quantity of deutschemarks by 10% a year, and if the demand for real money balances grows at the same rate in the UK and Germany, the pound should fall in value by almost 10% a year.) But in the short run all sorts of strange things happen in foreign exchange markets. The pound is protected for the time being by a favourable interest rate differential (of almost 400 basis points against the DM) and by strong capital inflows, particularly from the USA, to purchase UK assets. So excess money growth is not hitting the inflation rate; instead the consequent positive wealth effects on domestic demand are causing a marked widening in the current account deficit on the balance of payments.

with risk that buoyant domestic demand will lead to a payments deficit and devaluation

Eventually, perhaps as late as next year or even in 2000, the pound will have to adjust. The inflationary damage from the excessive money growth will then take a very different form from the current pattern of asset price froth and high wage increases in service industries. The official 2 1/2% inflation target will only be viable on a medium-term basis when broad money growth has been halved from its present 10% annual rate.

Professor Tim Congdon — 2nd June, 1998

Summary of paper on

"When will UK broad money growth slow to 5% a year?"

Purpose of the paper

In the UK, as in other countries, the evidence is overwhelming that in the long run the demand to hold real money balances is a function predominantly of real variables. So 10% broad money growth cannot be reconciled indefinitely with the official 2 1/2% inflation target. The research paper analyses when a deceleration to 5% broad money growth might occur.

Main points

* **Upturn in UK broad money growth since early 1995 - roughly from a 5 % annual rate to a 10% annual rate - has been largely due to the stronger capital position of the banks and their consequent desire to expand their balance sheets. (See pp. 6 - 7.)**

* **As inflation in goods and services has remained moderate, the excess money has been concentrated in the financial system. This has been a key causal influence on the asset price inflation of the last three years. (See pp. 4 - 5.)**

* **It is a misunderstanding to interpret the concentration of money in the financial system as a response to asset price inflation, as has been done by the Bank of England in its latest *Inflation Report*.**

* **A slowdown in money supply growth will depend mostly on reduced credit expansion. An interesting feature of the current cycle has been a highly positive external influence on money growth, largely due to buoyant sterling lending overseas. (See p. 10 and p. 12.)**

* **Mortgage demand in early 1998 has been the strongest so far in this cycle. Higher short-term interest rates have not discouraged it, because gilt yields (and so the cost of fixed-rate mortgages) have fallen. (See p. 11.)**

This paper was written by Professor Tim Congdon. Mr. Brendan Baker helped in the preparation of the charts.

When will UK broad money growth slow to 5% a year?

Link between money and asset prices emphasizes need for slower money growth

Broad money growth in double digits is too high

The central message of this paper is simple and can be readily summarized. Broad money growth in the UK is running at a double-digit rate: it is too high to be consistent, over the medium term, with the Government's inflation target of 2 1/2%. Further, the interest rate rises implemented by the Bank of England since last May have failed - so far at least - to deter credit demand. Given the high profitability and strong capital position of British banks (and indeed of foreign banks competing for sterling business), monetary restraint will be needed to reduce the annual rate of broad money growth from its current 10% to a figure of around 5%. Annual broad money growth of around 5% is probably consistent with 2 1/2% inflation. If instead broad money growth stays at roughly 10% a year, the UK's inflation performance - already unsatisfactory compared with its European neighbours - will deteriorate further.

Clear break in money growth trend in 1995

The starting-point of this analysis is the clear break in the trend rate of broad money growth in early 1995. (See chart on p. 6.) UK banks had restored their capital positions after the traumas of the early 1990s and were once again keen to expand. As mortgage demand was quiescent, the best growth opportunity was to lend to companies to finance expansion by acquisition. A spate of takeover deals were announced in 1995 and 1996, with the Glaxo/Wellcome bid in February 1995 being both the first and the largest.

Extra money concentrated in financial system leading to asset price inflation

The extra loans were matched on the liabilities side of the balance sheet by extra deposits, leading to the acceleration in broad money growth. The main recipients of the proceeds of the takeover loans were financial institutions (i.e., the former shareholders of the companies acquired), whose money holdings began to grow at an annual rate of over 20% a year. There is good evidence that these non-bank (or "other") financial institutions (OFIs) have raised their liquidity ratios since the end of 1994 (see p. 3 in our *Portfolio Strategy* publication for a monthly update), presumably because they view asset prices in general as "too high" relative to long-run norms. But the negative effect on asset markets of this shift in their liquidity preferences has been overwhelmed by the positive effect of extraordinarily rapid growth in their liquidity holdings. The excess liquidity has been accompanied by asset price inflation, notably in the stock market.

But Bank of England seems to believe that asset price inflation due to other influences and caused the increase in OFI money

The broader implications of the surge in the financial sector's money holdings are a matter of debate. The Bank of England devotes over a page to the subject (pp. 6 - 7) in its latest *Inflation Report*. It states, uncontroversially, that OFIs' "desired money holdings are based on the overall value of [their] balance sheets and the rate of return on money holdings relative to the returns on other financial assets". It then interprets the rise in asset prices as being "associated with a rise in money holdings, as OFIs attempt to maintain the share of broad money within their portfolios". While this is a little ambiguous about the direction of causation, the idea seems to be that OFIs have raised their money holdings as a response to the increase in asset prices. A complex discussion follows, in which at some points the Bank attributes the increase in OFIs' money to their concern about the over-valuation of equity markets (i.e., the OFIs' liquidity preference has *increased*) and at other points the Bank identifies "portfolio rebalancing" as part of the "bidding up of asset prices not only in the UK but also in continental Europe" (i.e., OFIs' liquidity preference has *decreased*).

A muddle about the direction of causation

The analysis in the *Inflation Report* is important, as a sign that the Bank recognises a connection of sorts between the money supply and asset prices. However, there is a muddle about the direction of causation. This muddle stems from a failure to distinguish between, on the one hand, *the attempts of individual financial organizations to change their money holdings* and, on the other, *the consequences of such attempts for the financial system as a whole*. The author of the key passages seems to have forgotten that *any one individual organization's purchases or sales are matched by another organization's sales or purchases, and do not change the aggregate quantity of money.*

If OFIs' liquidity preferences stable,

One way of clarifying the matter is to make two simplifying assumptions. First, assume that - in all circumstances - OFIs want to maintain a constant ratio ("the institutional liquidity ratio") of money to total assets under management. In other words, their liquidity preferences are stable. Secondly, assume that, once money is held by OFIs, it can never move to another part of the economy, such as the personal or corporate sectors. Given these two assumptions, what happens in the event of a sudden once-for-all jump of 20% in OFIs' money holdings?

asset price movements are plainly a response to changes in money holdings

In the first instance asset prices are unchanged, and each and every OFI must have "too much money" relative to its desired level. (If the extra money is evenly distributed among the OFIs they all have 20% too much.) Every individual institution believes that it can get rid of excess liquidity by buying more stock. *But this is not possible for the system as a whole, because one institution's purchases are another's sales.* (If institution A has less money in the bank because of purchases, institution B has more money in the bank because of sales. By assumption, we have a closed circuit of payments.) "Equilibrium" is restored only by a rise in asset prices because that leaves the liquidity ratio of all institutions, taken in the aggregate, the same as before. Of course, if OFIs' money goes up by 20%, and asset prices also go up by 20% because of re-pricing in the course of the multitude of transactions between the OFIs, the liquidity ratio is the same as at the start.

A number of points follow. Most obviously, the change in asset prices can be seen as the consequence of two influences,

i. the change in OFIs' money holdings, and

ii. the change in OFIs' liquidity preferences.

It is not OFIs' liquidity preferences alone which are at work, as the Bank at times seems to think. The idea can be readily stated in algebra. If A is the value of all assets held by OFIs, M is their money holdings and M/A is the ratio of their money to their assets ("the liquidity ratio"), then

$$A = A/M \cdot M = (1/M/A) \cdot M$$

and, $$dA = (1/M/A) \cdot dM - M \cdot d(M/A)$$

In the real world, data are available for OFIs' money holdings, but not for their assets. But in the UK data are available for the money holdings and the asset values of the two principal types of financial institution, the pension funds and the life assurance companies. (See p. 9 for more discussion.) The main type of asset price under consideration here is the level of equity prices.

With aggregate money stock given, OFI money is a residual of other sectors' money holdings

Admittedly, this is a rather naive "model" of asset price determination, but it is a fairer and more even-handed description of the link between money and asset prices than the Bank's account in the *Inflation Report*. This leaves unresolved the question of whether OFIs adjust their money holdings to their asset values or whether their asset values adjust to their money holdings. At the individual level, it may often seem that they adjust money holdings to asset values. But, in the aggregate, this is not really so. If the aggregate quantity of money is given, the OFI sector as a whole can attract more money to itself only at the expense of money held by the personal and corporate sectors.

High money growth has caused asset price inflation

What purpose has this discussion served? The central argument is that the asset price inflation in the UK over the last three years should be seen as the result of high broad money growth. The Bank is confused about the direction of causation; it seems to think that *the upturn in the growth of OFIs' money is a consequence of more asset price inflation* and, by extension, wants to believe that the higher rate of money growth has been caused by asset price inflation. *The truth is that the asset price inflation has been caused by the higher rate of money growth.* Moreover, while high broad money growth persists, buoyant asset prices will continue to give positive "wealth effects" to expenditure. But this cannot last for ever. In due course, output will move well above its trend level, and inflation will spread from assets to goods and services. In the end the normal long-run relationship between the prices of assets and goods will be restored (i.e., there will be a bear market in equities), and the rate of inflation in goods and services will rise to match the higher trend rate of money supply growth.

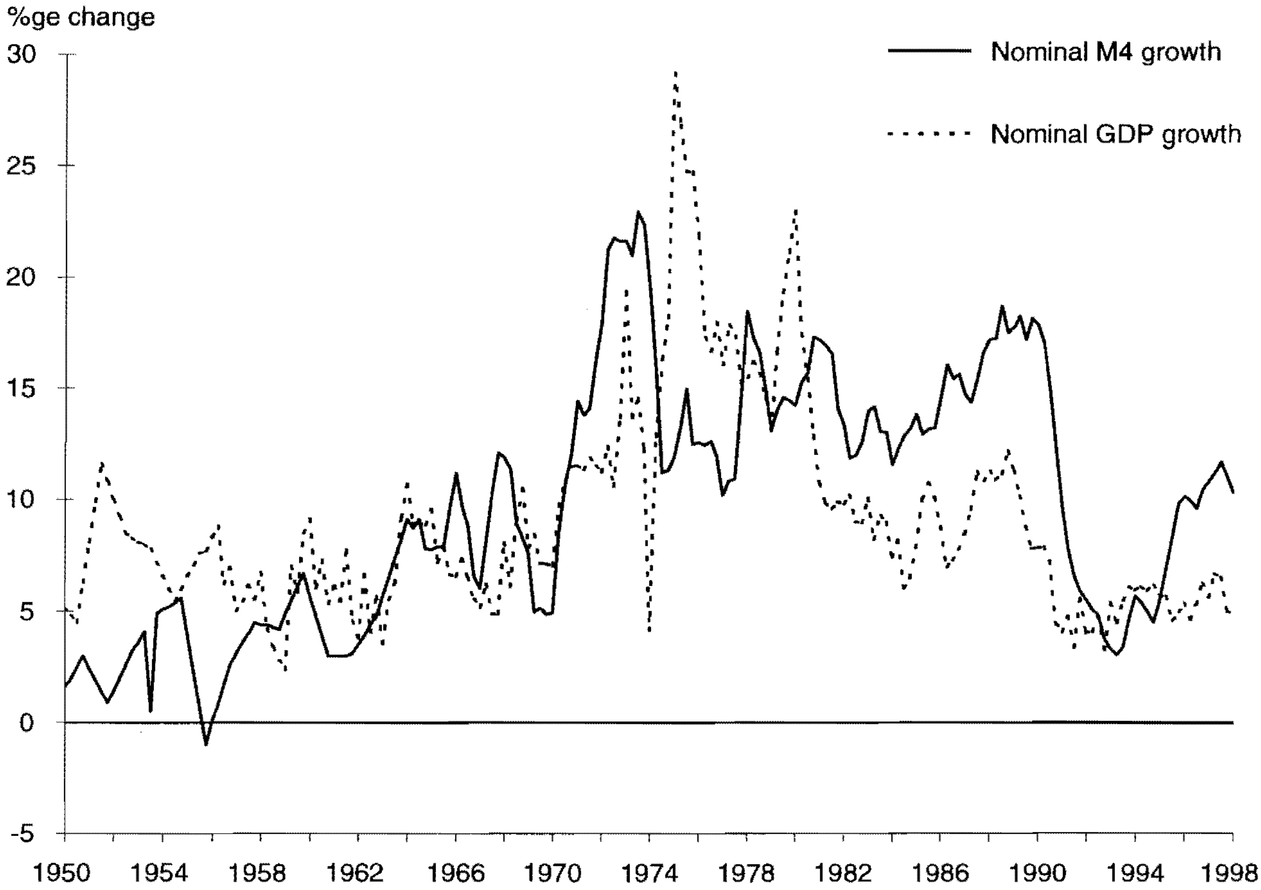
Broad money growth must be reduced to nearer 5% annual rate

Sooner or later the Bank of England must reduce broad money growth to an annual rate of 5%, if it is to limit inflation to the Government's 2 1/2% target. Analysis of the credit counterparts of money growth (see p.10) shows that external influences have been one reason for the buoyancy of money growth. This may be a by-product of the current froth in international capital markets and so prove transient. (See p. 12.) It is more worrying that the rise in interest rates since last May has so far failed to moderate mortgage demand. (See p. 11.) A period of monetary restraint lasting several quarters still lies ahead.

Clear acceleration in money growth since 1995

Higher interest rates so far ineffective in curbing money growth

Chart shows annual percentage growth rates of nominal M4 and nominal GDP, using seasonally-adjusted quarterly data.



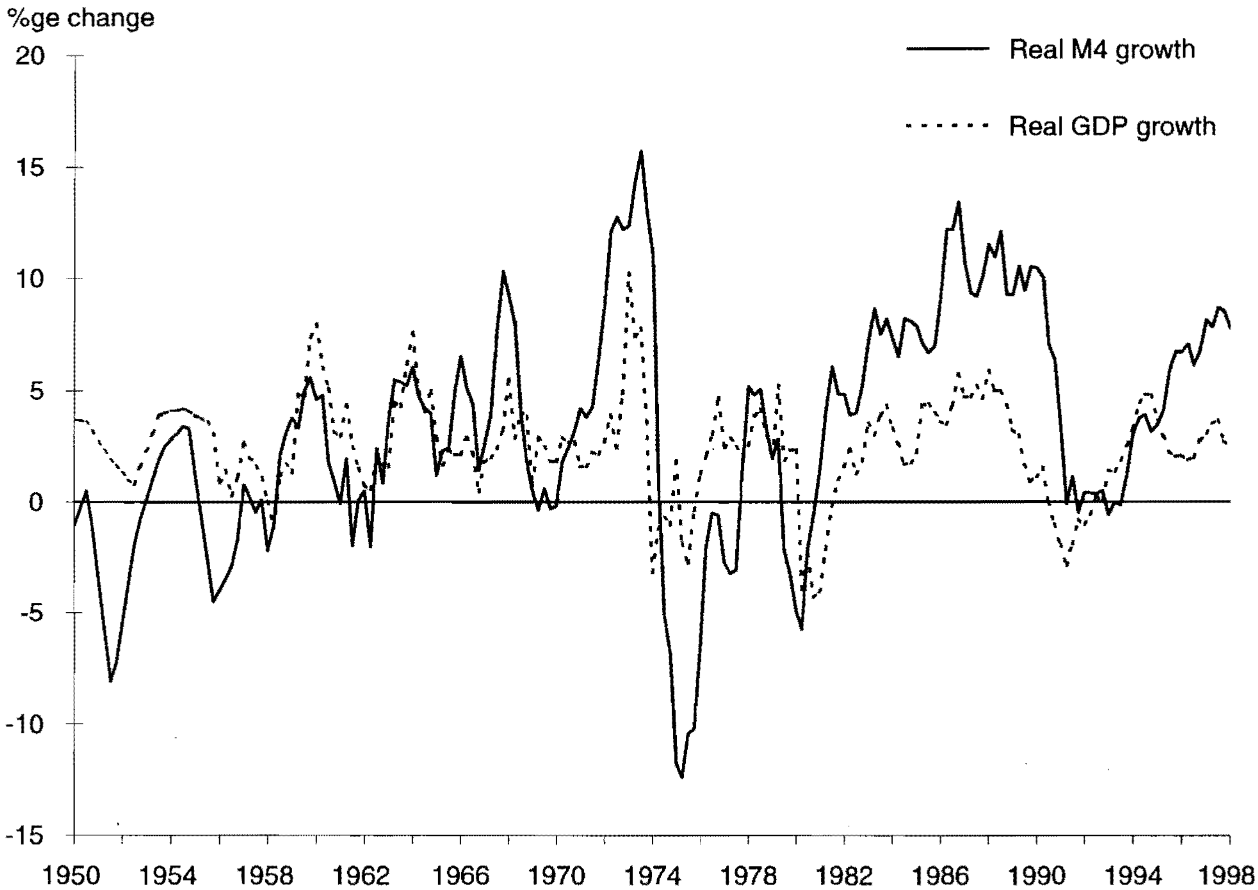
Sources: ONS and Bank of England Monetary and Financial Statistics.

In the 1950s and 1960s UK broad money growth was usually under 10% a year, and the annual inflation rate only occasionally exceeded 5%; in the 1970s and 1980s UK broad money growth was above 15% a year for much of the time, and inflation was in double digits for most of the 1970s and again for a few months in late 1990. Given the general endorsement of the proposition that inflation is "a monetary phenomenon", policy-makers ought to be concerned at monetary trends in the last three years. Broad money growth has run at an annual rate of roughly 10%, a clear break from the early 1990s when it was routinely under 5% a year. The rise in interest rates - from base rates of 6% last May to 7 1/4% now - has so far failed to curb monetary expansion.

Upturn in money growth persists into 1997 and 1998

Real money quite a good lead indicator for domestic demand

Chart shows real annual percentage growth rates of M4 and GDP, using seasonally-adjusted quarterly data. Nominal M4 deflated by GDP deflator.



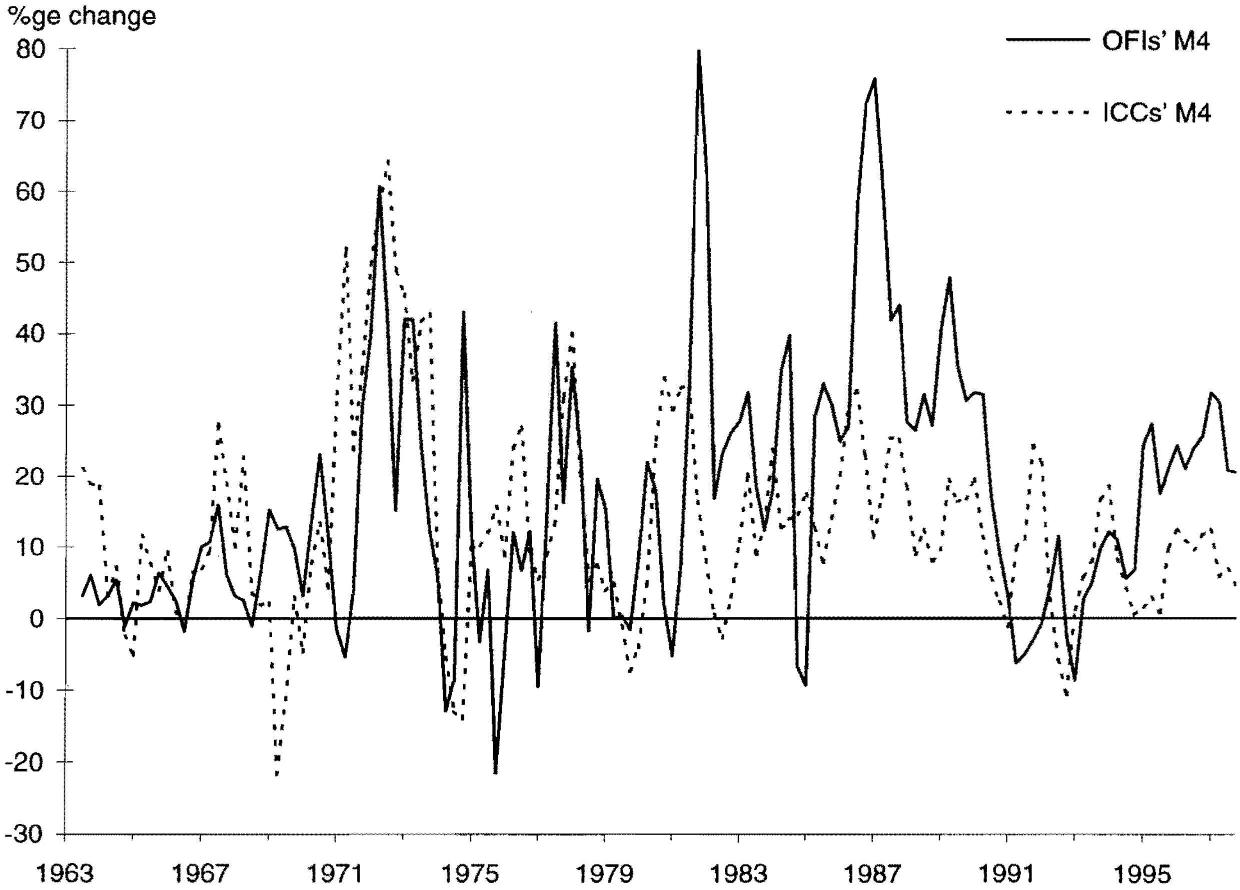
Sources: ONS and Bank of England Monetary and Financial Statistics.

Because of the evidence that the long-run demand to hold real money balances is a stable function of a small number of real economic variables, large fluctuations in real money growth are always important to the macroeconomic outlook. In fact, real broad money is quite a good leading indicator for economic activity, although care has to be taken to allow for institutional changes in the financial system. A further complication is that excess real money balances held by UK residents are relevant to spending by UK residents, not foreigners. In other words, a sharp upturn in the growth of real broad money - of the kind seen since 1995 - implies strength in domestic demand, but not necessarily in the economy as a whole.

Excess money concentrated in financial system

Marked volatility in non-personal money holdings again in this cycle

Chart shows annualised six-monthly percentage growth rates of the non-bank financial sector's (OFIs) and, industrial and commercial companies' (ICCs) holdings of M4.



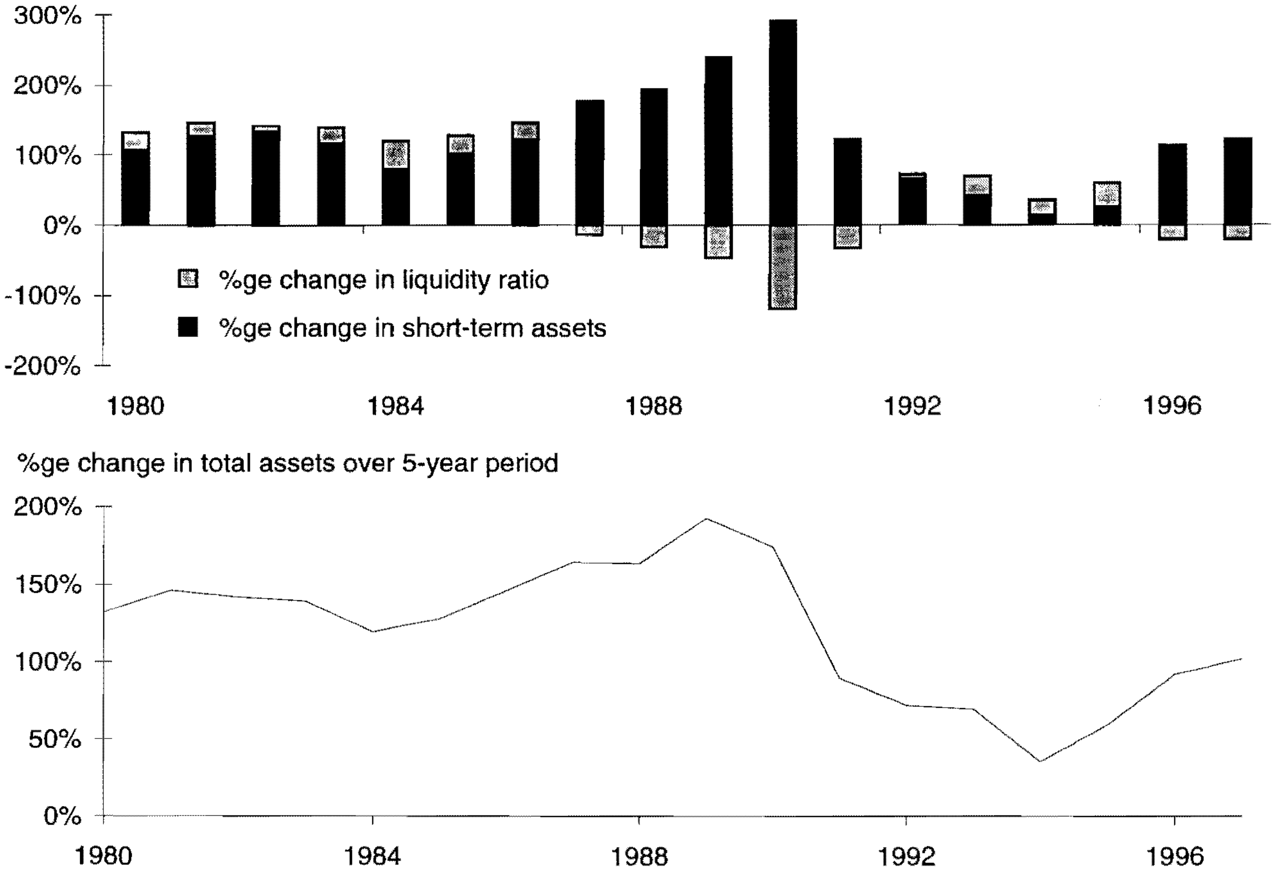
Sources: Bank of England Monetary and Financial Statistics.

The excess money balances created by banks and their customers since 1995 have been concentrated in the financial system. The financial sector's money holdings have been climbing at an annual rate of over 20% for three years, whereas between 1991 and 1993 they were virtually static. The contrast here goes a long way to explain the dramatic change in asset markets, including the stock market and the market in commercial property, between the early 1990s and today. In the current cycle - as in previous cycles - the amplitude of fluctuations in the growth of non-personal money holdings has been far greater than in the growth of personal money holdings. At some point, probably in late 1999 and 2000, excess money holdings will have to be replaced by a mild liquidity squeeze to prevent a substantial rise in inflation.

Money and asset prices

Quantity of money vs. liquidity preferences in asset price determination

Upper chart shows the effect of changes in the relative size of money holdings and liquidity preferences on the growth of life assurance and pension fund assets over five-year periods. Lower chart shows percentage change in value of total assets over five-year peirods. Both end year data, 1997 Lombard Street Research estimate.



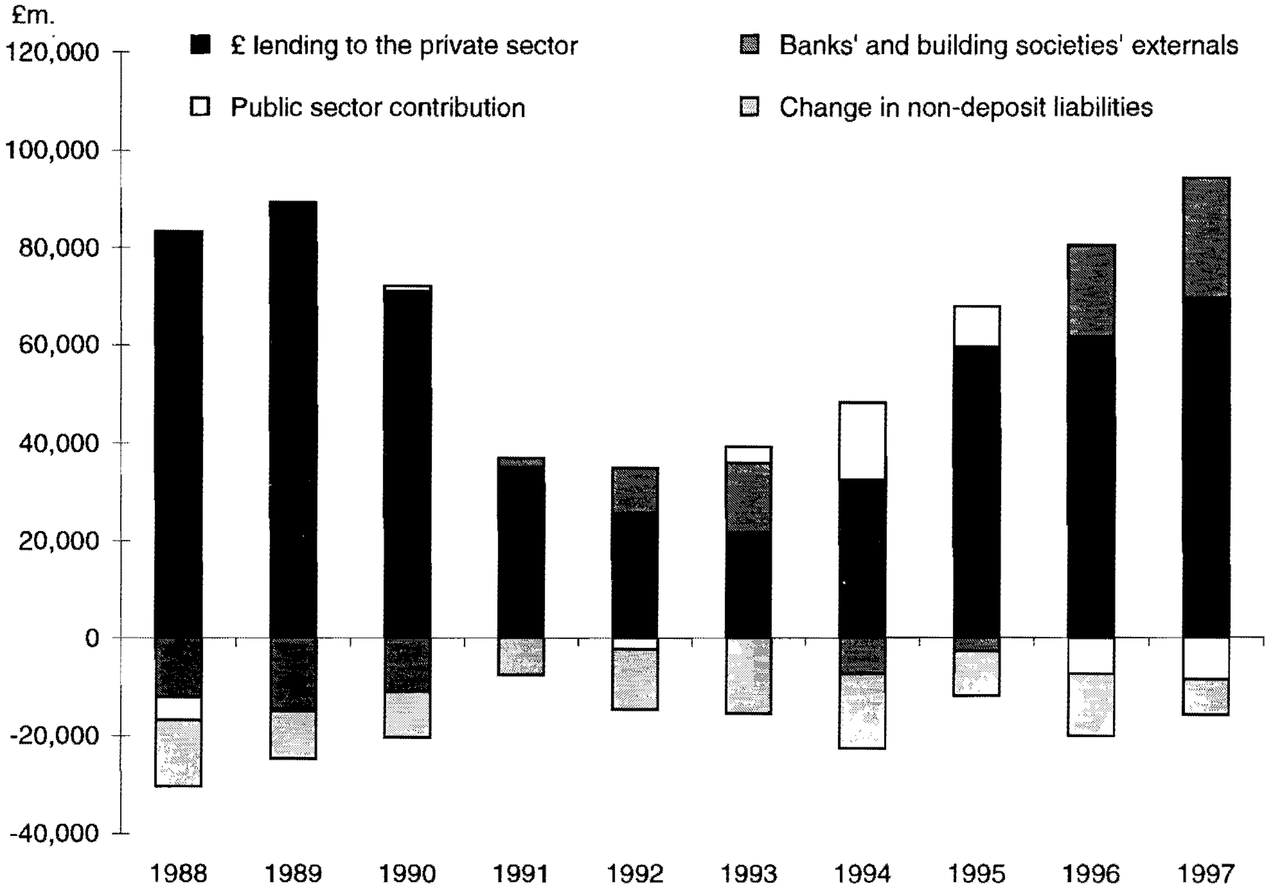
Source: ONS.

This chart develops the argument on pp. 4 - 5 about the two influences on asset prices, the quantity of money held by financial institutions and their liquidity ratio. The line measures the increase in life offices' and pension funds' total assets over five years; the two slices in the bars show the separate effect on this increase in assets of the quantity of LAPFs' money and the change in their liquidity ratio. As can be seen, the quantity effect is positive in every five-year period. By contrast, the ratio effect - due to changing liquidity preferences - is sometimes positive and sometimes negative, and is almost always smaller than the quantity effect. In the long run liquidity preference is fairly stable and asset prices are driven much more by the quantity of money.

Lending growth still still not back to 1980s' levels

Unusually, external influences on money are very positive at present

Chart shows the credit counterparts to broad money (M4) growth. Annual data.



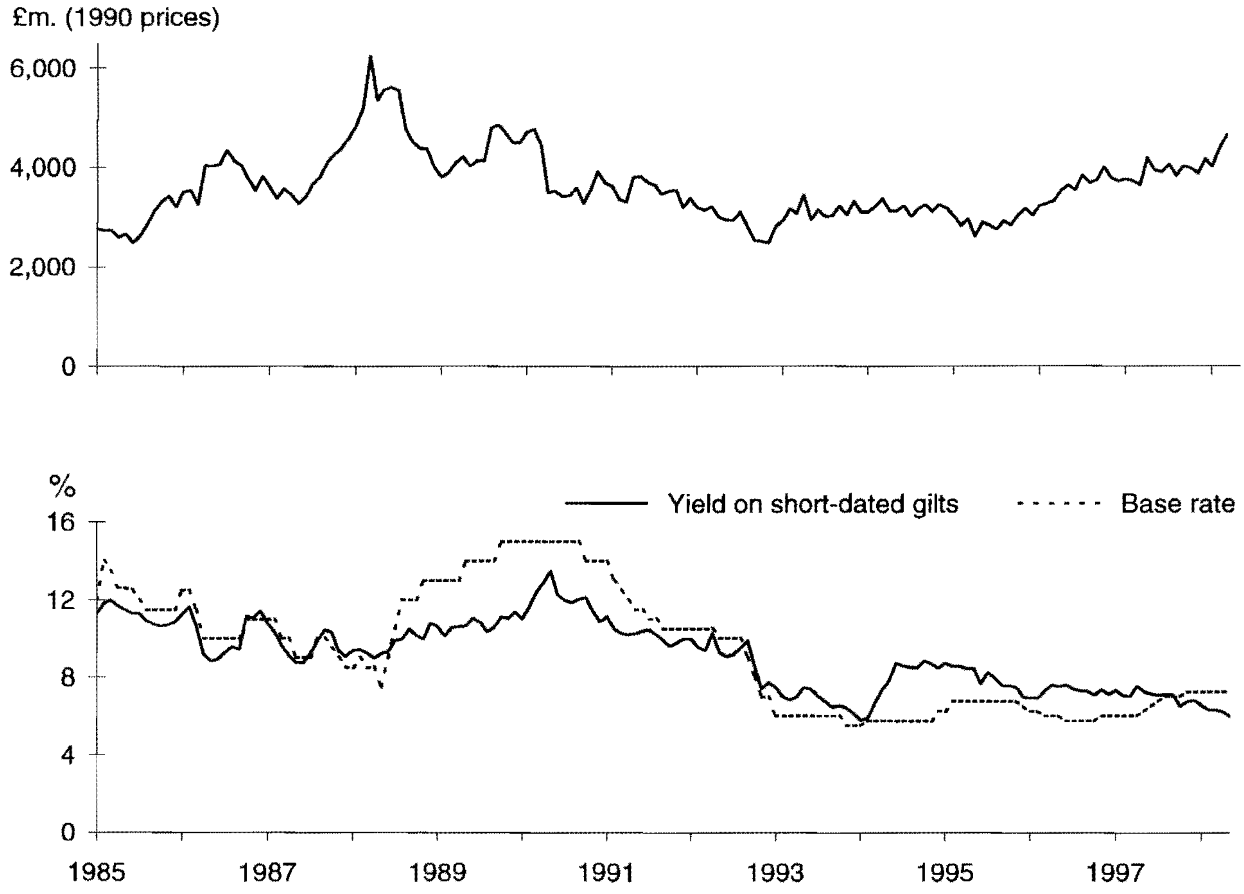
Sources: Bank of England Monetary and Financial Statistics.

The credit counterparts arithmetic is interesting as a guide to the possible causes of monetary expansion. Usually bank lending to the private sector is the dominant element in the story. As the chart shows, bank lending in 1997 was over three times its level in 1993, but it still had not recovered to the figures seen in the late 1980s. A striking feature of the last two years is the positive effect of "banks' and building societies' externals". This apparently very technical item reflects UK banks' sterling lending overseas, sometimes to foreign banks. The foreign banks may then use the sterling to make loans to foreign corporates, often American, in order to finance acquisitions in the UK. When the British shareholders sell to the foreigners, their bank deposits (i.e., M4) are increased. (See p. 12.)

Mortgage demand still climbing

Effect of higher short rates blunted by falling gilt yields

Upper chart shows mortgage commitments (loans agreed but not yet taken out) in constant, 1987, prices. Lower chart shows base rates and short-dated gilt yields. Monthly data.



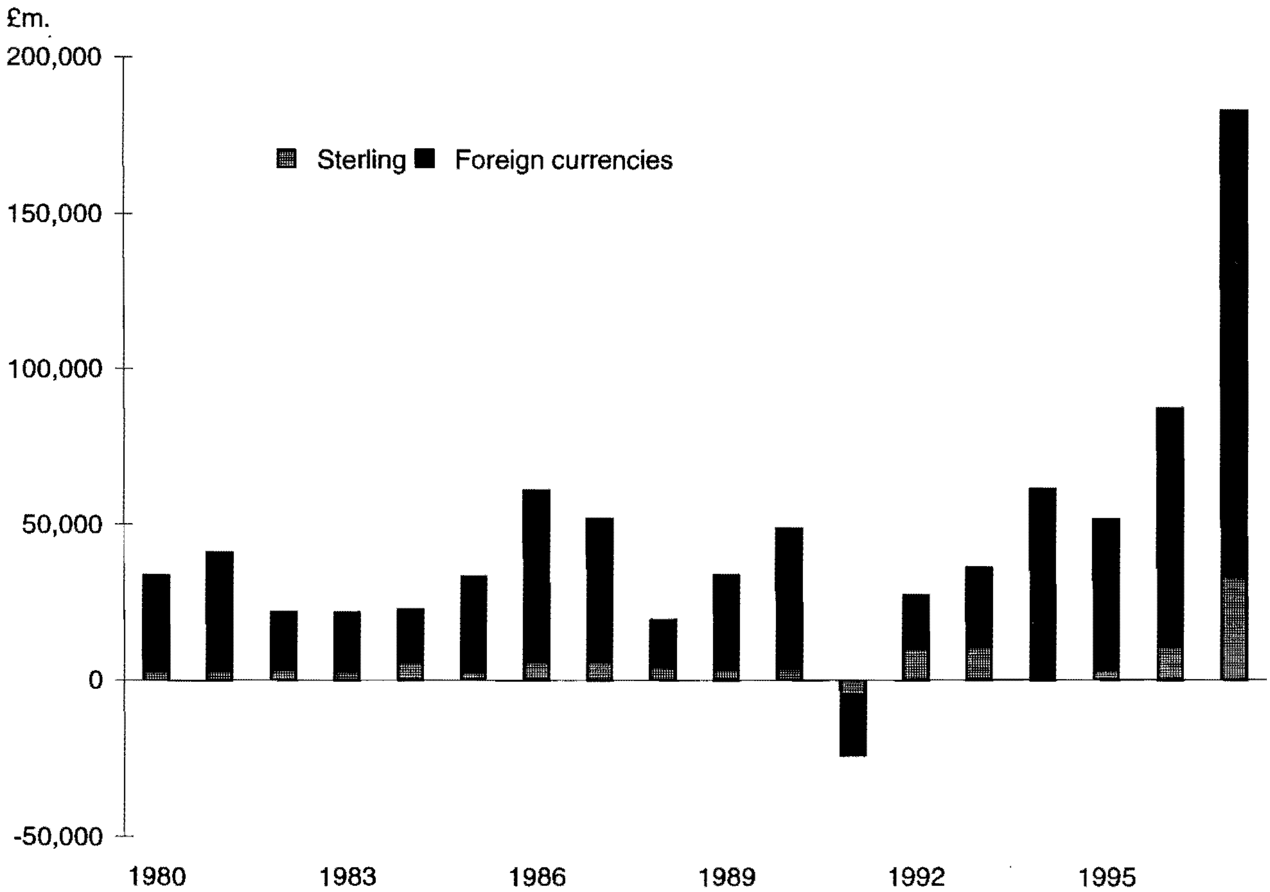
Sources: ONS and Bank of England Monetary and Financial Statistics.

These charts may come as an irritation to the Bank of England's Monetary Policy Committee. Almost half of the UK monetary system's lending assets consist of residential mortgages. (Note that "the UK monetary system" includes banks and building societies.) So a reduction in mortgage lending is an important part of monetary control. The top chart shows that the rise in base rates since last May has failed to check mortgage credit. Even more worrying, the figure for new mortgages approved in the first quarter was higher than at any time last year. The resilience of mortgage demand may be due to the fall in gilt yields and the consequent lower cost of fixed-rate mortgages. As the bottom chart shows, base rate was beneath short-dated gilt yields in early 1997, but is now above them.

Boom in international lending

Well-capitalised banks keen to expand their balance sheets

Chart shows the flow of new loans by the UK banking system, which includes foreign-owned banks. Annual data. Note that 1997 data are affected by reclassifications



Source: ONS.

The chart shows the amount of new lending done in foreign currencies and sterling by the UK banking system, which includes foreign-owned banks. The foreign-currency component is of course the "euro-currency market", which boomed in the late 1960s and 1970s, and continued to expand strongly in the 1980s. A sharp slowdown in its growth occurred in the early 1990s, as banks in the USA, Japan and elsewhere repatriated capital from the London operations in order to offset bad debts on their domestic loans and to bolster their core business. But note the dramatic boom in 1996 and 1997, as banks in North America and Europe restored profits and tried to expand their corporate loan portfolios by financing international takeovers. UK money growth has been affected by this, as British banks lend to foreigners in order to finance their acquisition activity in the UK.