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A case for over-riding money in the interest rate decision

Odd international background justifies pragmatism in policy-making

Satisfactory conditions in main industrial economies have not guaranteed a healthy world economy in 1998

1998 has been a peculiar period for both the world and the UK economies. In normal circumstances the behaviour of the world economy is so dominated by that of the large industrial economies (i.e., the USA, Japan and Europe) that there is no need to make an allowance for demand in developing countries. But 1998 has been different. Above-trend or trend growth in domestic demand in the USA and Europe has not been associated with a healthy world economy, partly because of the Japanese recession but also, and much more importantly, because of 10% - 25% contractions in domestic demand in such countries as South Korea, Thailand and Indonesia. Meanwhile international capital movements have been perverse, with flows away from the troubled periphery (where asset prices are depressed and exchange rates under-valued) towards the stable core (where asset prices are high and exchange rates over-valued).

Manufacturing badly hit by global trends and over-valued pound,

As the UK is regarded as part of the stable core, it has received a fair proportion of the capital inflows. The pound - which jumped on the foreign exchanges in late 1996 - has been and remains very over-valued. In the accompanying *Research Paper* the over-valuation against the DM and the US dollar is estimated at almost 25%. Too much weight should not be placed on the precision of this calculation, as other analysts using different methods tend to have lower figures. But it agrees with the results of the Confederation of British Industry's surveys and is consistent with a clear deterioration in the UK's current account position since early 1997. Indeed, recent surveys from the CBI report an extraordinarily high proportion (about 40%) of UK companies as having cut export prices in recent months. Price-cutting on this scale has not been previously recorded in the post-war period.

so that a drop in base rates seems sensible

The situation is so odd, and the external pressures on UK manufacturing so severe, that the Bank of England is justified in over-riding the interest rate message of still excessive money supply growth. With the annual change in the RPIX (i.e., retail prices, excluding mortgage costs) index likely soon to dip beneath the official 2 1/2% target, it will anyhow be under strong public pressure to reduce interest rates. In the medium run it will remain necessary to bring the annual rate of M4 growth back towards 5%. (These remarks may seem inconsistent with previous emphasis in this *Review* on the need to maintain high interest rates. But an exchange-rate over-ride was explicitly mentioned as an adjunct to money supply targetting in the author's proposals in November 1992 for "An economic programme for the 1990s". See pp. 9 - 10 of the November 1992 *Monthly Economic Review*.)

Professor Tim Congdon

18th September 1998

Summary of paper on

"Measuring the pound's over-valuation"

Purpose of the paper

With ample evidence from manufacturing that the pound is over- valued against other currencies, the Confederation of British Industry has urged that interest rates be cut to bring it to a more reasonable level. The purpose of the research paper is to assess the extent of the pound's over-valuation.

Main points

* **The purchasing-power-parity value of the DM/£ exchange rate is estimated by Lombard Street Research as 2.34 and of the $/£ exchange rate as $1.34. (See p. 5.)**

* **Many different ways of calculating PPP are available. The 2.34 DM and $1.34 figures use a 25-year base period. Shorter base periods would give higher PPP rates of, roughly, 2.50 DM - 2.70 DM and $1.40 - $1.50.**

* **Partial confirmation that Lombard Street Research's calculations are right comes from a comparison of the PPP estimates with the results of CBI survey questions on export prices. (See pp. 6 - 7.)**

* **Evidence of significant over-valuation is also provided by**

  i. the behaviour of export volumes, as these stopped growing in the second quarter of 1997 (i.e., about six months after the pound's surge began) (see p. 8), and

  ii. the impact of trade on the national accounts, with net exports being negative in every six-month period since Q1 1997 (see p. 9).

* **The pound's strength since late 1996 is difficult to explain and does not appear to have a clear correlation with the differential between interest rates in sterling and other currencies. (See pp. 10 - 11.) The UK's foreign exchange reserves are small by international standards. (See p. 12.)**

This research paper was written by Professor Tim Congdon, with help from Mr. Brendan Baker in the preparation of the data and charts.

Measuring the pound's over-valuation

At almost 2.90 DM, the pound is more than 20% over-valued

The pound's severe over-valuation

One of the most unwelcome by-products of the financial turmoil in developing countries has been upward pressure on the pound. Capital flows towards the UK have been motivated by its image as a "safe haven" in a confused and unstable world economy. Before the middle of 1997 the pound was regarded as over-valued. The over-valuation is even more severe now. The purpose of this *Research Paper* is to assess the degree of over-valuation and to consider some possible consequences.

Lombard Street Research's purchasing-power-parity estimates say pound is 25% "too high"

In its *Portfolio Strategy* publication Lombard Street Research prepares estimates every month of the purchasing-power-parity value of the pound against both the deutschemark and the dollar. In principle, the purchasing-power-parity value of an exchange rate is that which equalizes the prices of traded goods in the countries of the two currencies under review. It can be interpreted as the "fair value" of the currency. According to our estimates, the PPP value of the pound against the dollar is $1.34 and against the DM it is 2.34. In other words, at $1.685 and 2.84 DM (the rates at the time of writing, 17th September 1998), the pound is over-valued by 25% against the US currency and over 20% against the German. (See p. 5.)

Estimates use 25-year base period,

These numbers are open to debate, as several different methods of calculating PPP could have been adopted. The base period for the Lombard Street Research calculation is the whole of the latest 25-year period, while producer price indices have been used in the adjustment for relative inflation rates. The calculation has the crucial characteristic that the sum of the deviations of the PPP exchange rate from its actual rate in this 25-year period is nil. This is a sensible approach, as the notion of under- or over-valuation would have hardly any meaning if it could persist over a time-frame as extended as a generation.

which may be too long

But perhaps 25 years is too long. Arguedly, a 25-year period allows time for the structural determinants of competitiveness to change, because of (say) the discovery of a major natural resource such as oil or a trend improvement in the rate of productivity growth in the traded goods sector (i.e., in manufacturing, mostly). If the period were shortened from 25 years to 20 years (i.e., starting-point were 1978 instead of 1973), the degree of the pound's over-valuation would be reduced, particularly against the dollar. The "fair value" rate against the dollar may be nearer $1.45 - $1.50 than $1.34, implying an over-valuation of less than 15% rather than over 25%.

But LSR method is consistent with results of CBI surveys

However, the Lombard Street Research estimate of the pound's over-valuation against the DM can be checked by comparing the PPP calculation with survey data from the Confederation of British Industry. Every quarter since 1972 the CBI's *Industrial Trends Survey* has asked companies what has happenend to their export prices in the last four months. (See p. 6.) An equation was estimated between these answers and the deviation of the actual DM/£ exchange rate from its PPP rate for the period from the first quarter (Q1) 1972 to Q3 1995.

The equation was then put to work beyond the end of the sample period (i.e., from Q4 1995 onwards), with the deviation of the actual rate from PPP used to estimate the CBI survey responses. The responses estimated in this way by the equation were close to the actual responses in the survey. (See p. 7.)

Equation on relationship between PPP estimates and CBI results works out of sample

The out-of-sample success of the equation is important in at least two respects. First, when manufacturers say that they are suffering severely from an over-valued pound, they are not bluffing. In this context one very striking point needs to be emphasized. The balance of companies which cut export prices in the April and July CBI *Industrial Trends Surveys* was the highest ever, at 43%. In the previous periods of significant over-valuation and manufacturing recession (i.e., late 1980 and 1981, and 1991 and early 1992), the proportion of companies cutting export prices exceeded those raising them, but not to anything like the same extent. Secondly, some optimism was expressed early last year that the pound's sharp appreciation in late 1996 was a reward for the rehabilitation of British manufacturing under the Conservatives. The growth rate of manufacturing productivity in the 1980s and early 1990s was undoubtedly well ahead of the previous historical average and at the top of the international league tables. It was hoped that, because of the "supply-side miracle", British manufacturing could cope easily with the pound's apparent over-valuation. The analysis here argues that such hopes were and remain unjustified.

Six months after the pound's steep rise the growth of export volumes came to a halt

The implausibility of the "supply-side miracle" hypothesis is demonstrated clearly by the charts on pp. 8 - 9. The chart on p. 8 shows that export volumes were growing well in the four years to early 1997, but that the growth stopped in the second quarter of last year. This was about six months after the pound's steep climb on the foreign exchanges, which implies that - allowing for a lag for orders to be completed - British products were too expensive compared with their foreign equivalents. The chart on p. 9 looks at the growth of domestic demand and the change in net exports as influences on the UK's GDP growth since 1990. The change in net exports (i.e., exports minus imports) has been a negative influence in every six-month period since Q1 1997.

which is unsustainable

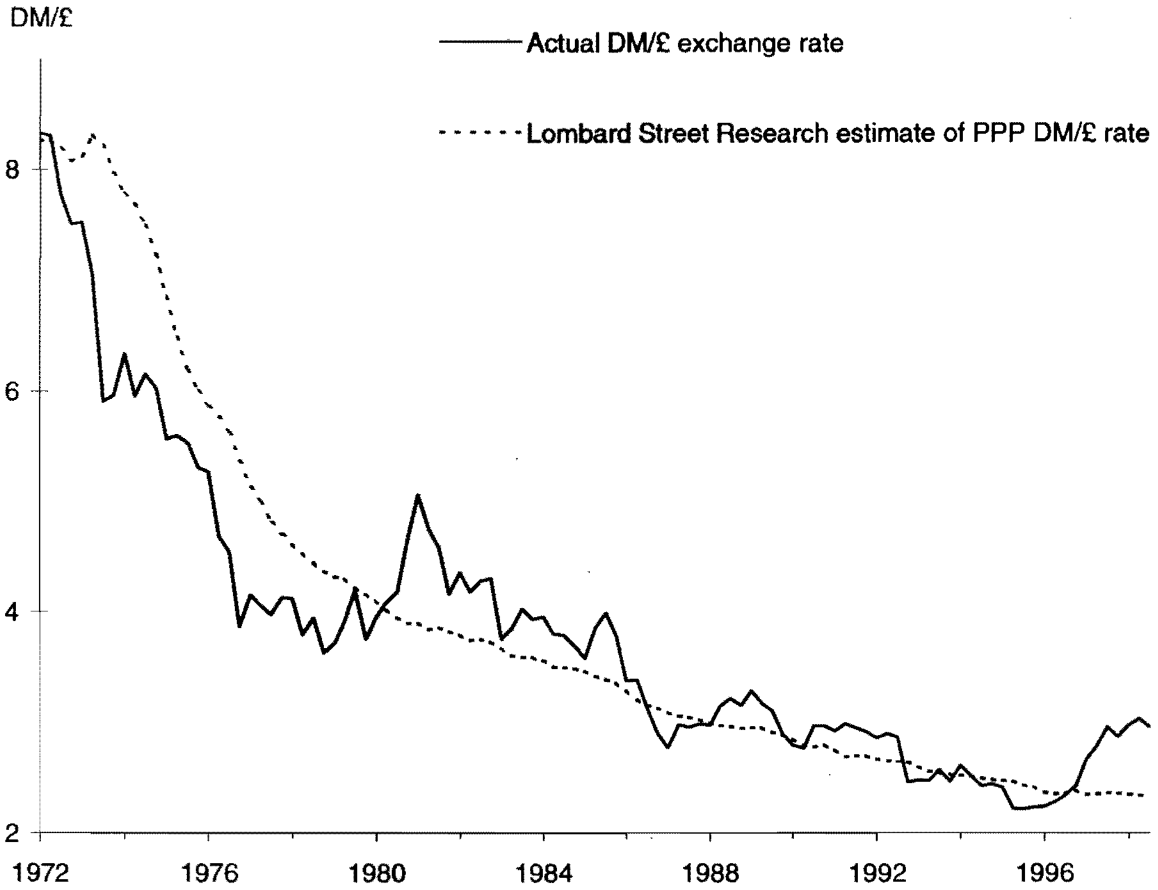
The adverse trend in net exports cannot continue indefinitely. At some point the exchange rate must fall. The question arises of why has the pound been so strong since mid-1996. Part of the explanation is that the pound offers higher interest rates than the currencies of other industrial countries. But this cannot be the whole story, because UK interest rates were also relatively high in late 1995 and early 1996 when the pound was weak. (See p. 10.) An alternative view is that the pound and the dollar have tended to move in tandem since 1992, and the pound has therefore been swept upwards by the dollar's strength since 1995. (See p. 11.) The puzzle here is why the pound should be better correlated with the dollar than other European currencies. A warning needs to be given that - if capital flows became unfavourable to the pound - the UK's foreign exchange reserves are meagre. In fact, they are much less than Hong Kong's and even less than South Korea's, two countries at present enjoying a disproportionate amount of hostile attention from international currency operators. (See p. 12.)

The UK has quite low foreign exchange reserves

Measuring the pound's over-valuation 1.

An estimate of the purchasing-power-parity rate

The chart shows the DM/£ exchange rate and Lombard Street Research's estimate of the purchasing power parity (PPP) DM/£ exchange rate, calculated using producer price indices, using quarterly data.



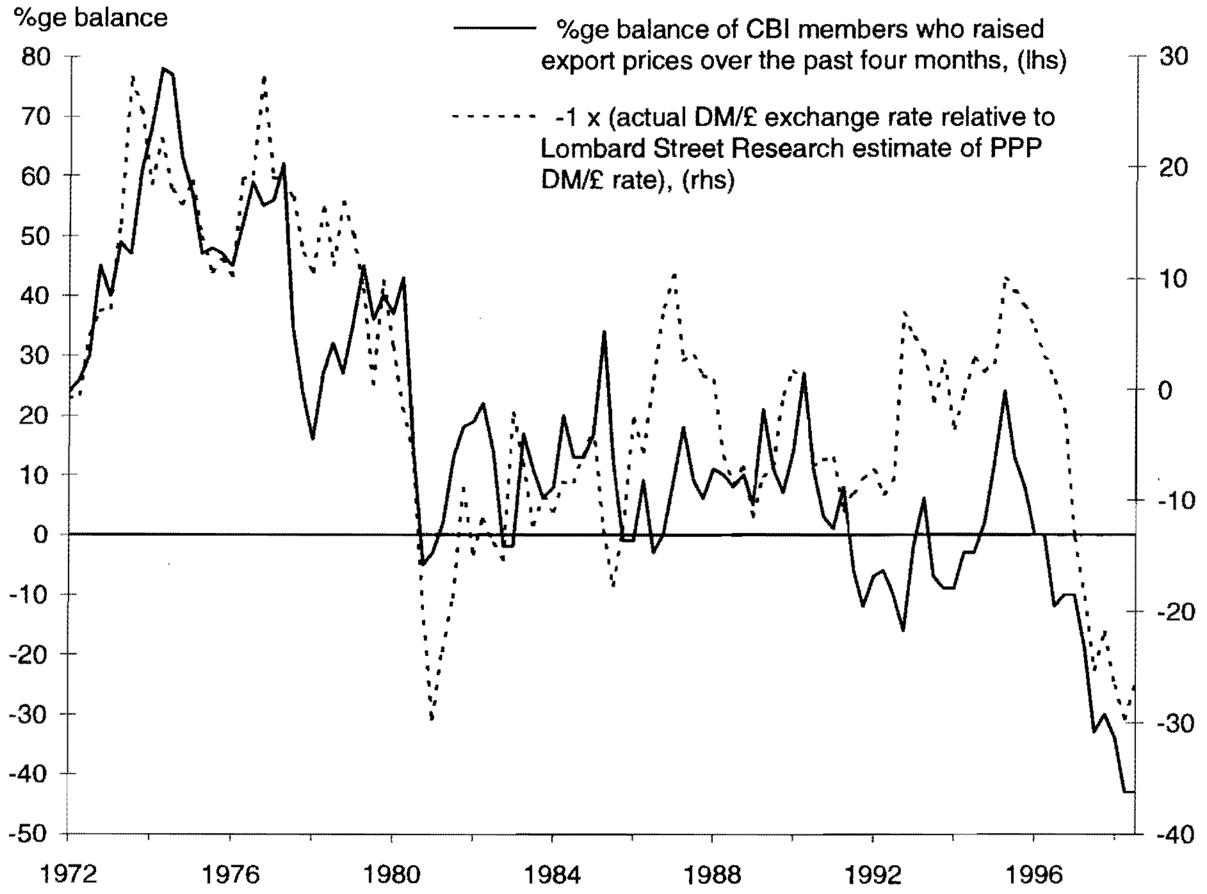
Sources: ONS, Financial Times *and Lombard Street Research*

A good measure of a currency's "fair value" ought to have the characteristic that, when used in assessing data from the past, phases of under-valuation are matched by phases of over-valuation. Lombard Street Research's estimate of the purchasing-power-parity exchange rate between two currencies has this characteristic over a period of 25 years. As can be seen from the chart, one result is that the pound appeared to be continuously under-valued from 1973 to 1979. Some economists might protest that such a long period of under-valuation is implausible. With a base period of 25 years, the pound is over-valued against the DM by about 25%; if the base period were 20 years instead, the degree of over-valuation would be reduced by over 5%, but it would still be severe.

Measuring the pound's over-valuation 2.

Can companies raise export prices?

The solid line shows the percentage balance of CBI members who raised export prices in the past four months. The dotted line, on the right-hand scale, is the excess of the actual DM/£ exchange rate over its purchasing power parity (PPP) rate multiplied by -1.



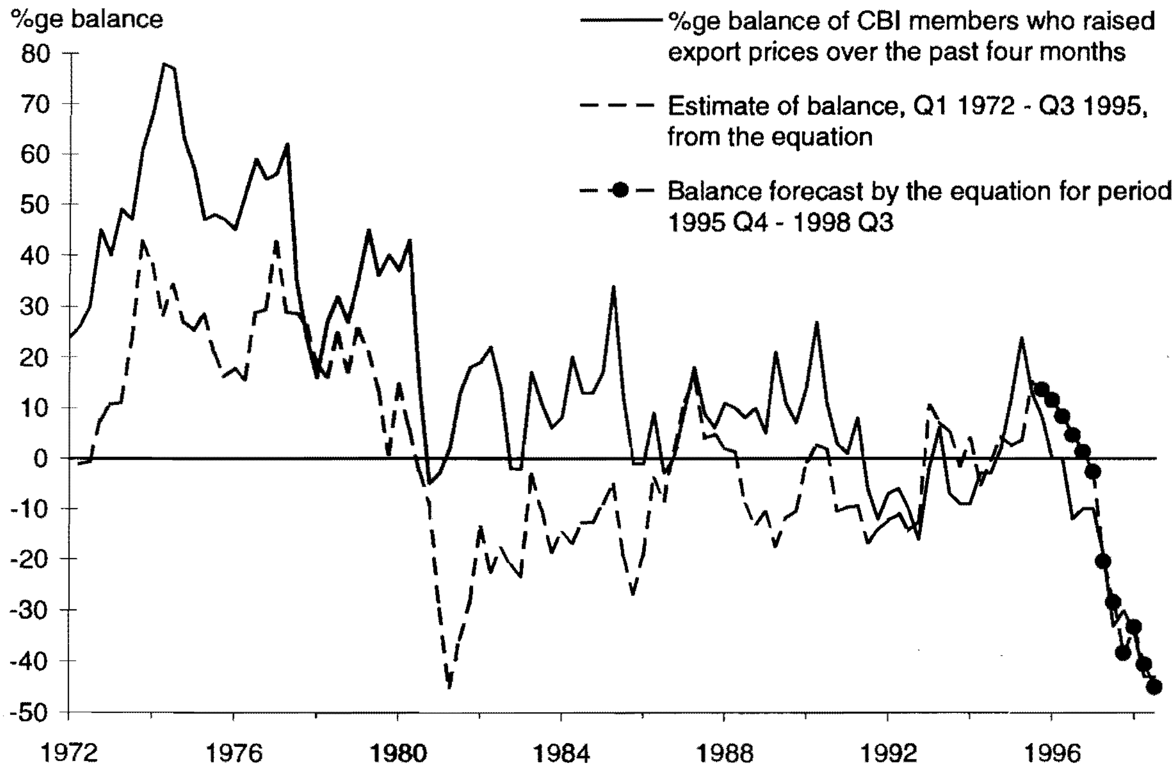
Sources: CBI, ONS, Financial Times *and Lombard Street Research*

Survey data provide a cross-check on calculations based on theoretical models. In trying to judge fair value for the pound, the CBI's quarterly survey is particularly useful because it has measured industrialists' attitudes towards export prices since 1972. Two points are striking. First, UK companies evidently had little difficulty increasing export prices during the 1970s, which agrees with the PPP assessment on p. 5 that the pound was continuously under-valued in the mid- and late years of that decade. Secondly, the pricing environment has been much tougher in the 1990s - and especially over the last year - than at any previous point since the move to floating exchange rates in 1971. Indeed, there is no precedent in the 1970s and 1980s for a large number of companies having plans to cut export prices. This suggests that the LSR estimate of the pound's current over-valuation is broadly correct.

Measuring the pound's over-valuation 3.

Survey data corrobate the PPP estimate

The chart uses an equation based on data in the chart on p. 6. The equation estimates the relationship between the CBI export prices question and the deviation from PPP, with deviations from PPP as the independent variable, over the period from Q1 1972 to Q3 1995. Values of CBI export prices question from Q4 1995 are then forcast from the actual values of the deviations from PPP. The closeness of the actual values of the answers to the CBI export prices question and those forecast by the equation shows that the equation works well outside the sample period. It is corroborative evidence of the over-valuation estimated by our PPP calculation on p. 5.



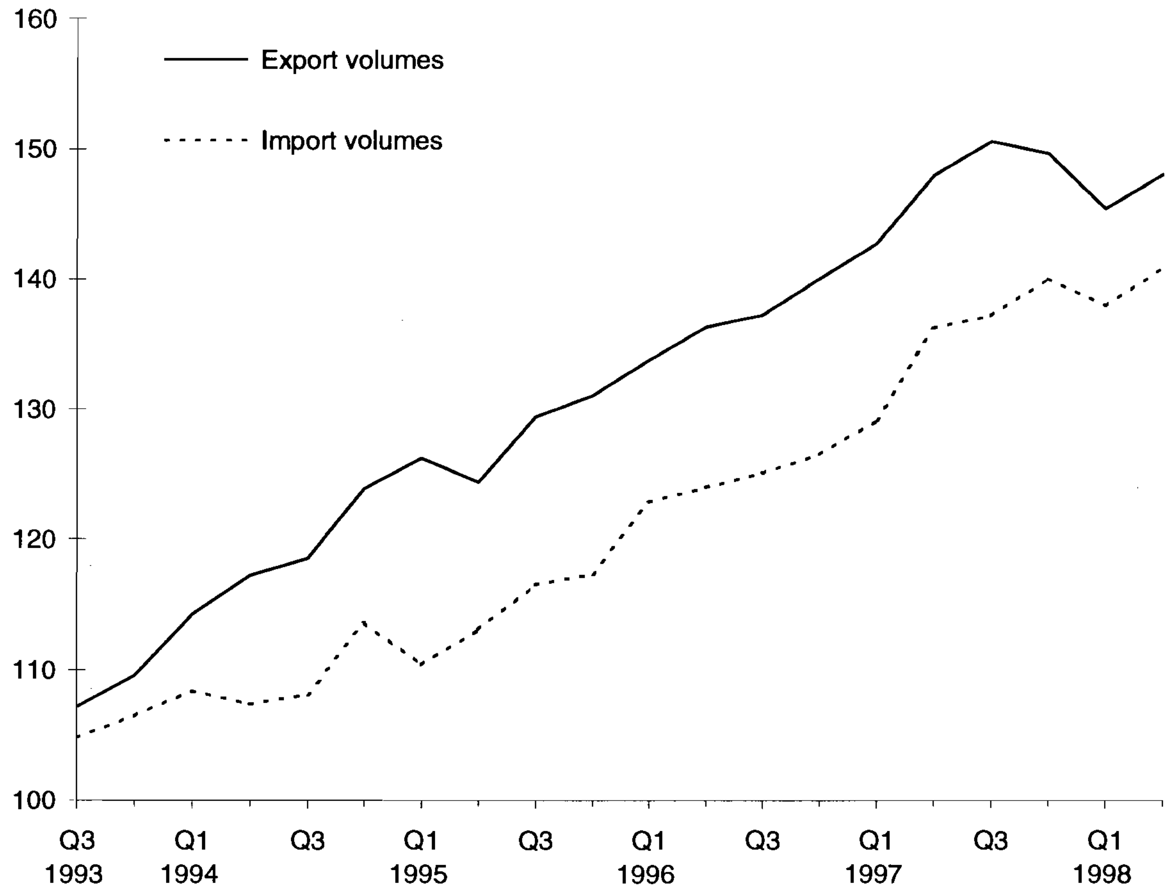
Sources: CBI, Financial Times *and Lombard Street Research*

The purpose of this chart is to tighten the conclusion suggested by p. 6. In essence, the best-fitting equation on the relationship between the PPP estimate and the CBI export prices answer from 1972 to Q3 1995 worked well when tested out of sample from Q4 1995 onwards. The success of the out-of-sample analysis confirms that the PPP calculation is correct. On this basis the degree of over-valuation today is at least as great as in 1981 and much greater than in the early 1990s. After the first over-valuation episode the pound's value in terms of DM fell from a monthly peak of 4.921 in February 1981 to 4.372 (a drop of 11.2%) in February 1982 and 3.717 (24.5%) in February 1983, before recovering in the mid-1980s; after the second episode it slid from 3.816 in August 1992 to 2.362 (a fall of 16.1%) in February 1993 and (21.2%) in April 1995.

Export growth has stopped

Clear impact of the pound's rise since mid-1996

Chart shows import and export volumes in constant price terms (1990 = 100), using seasonally-adjusted quarterly data.



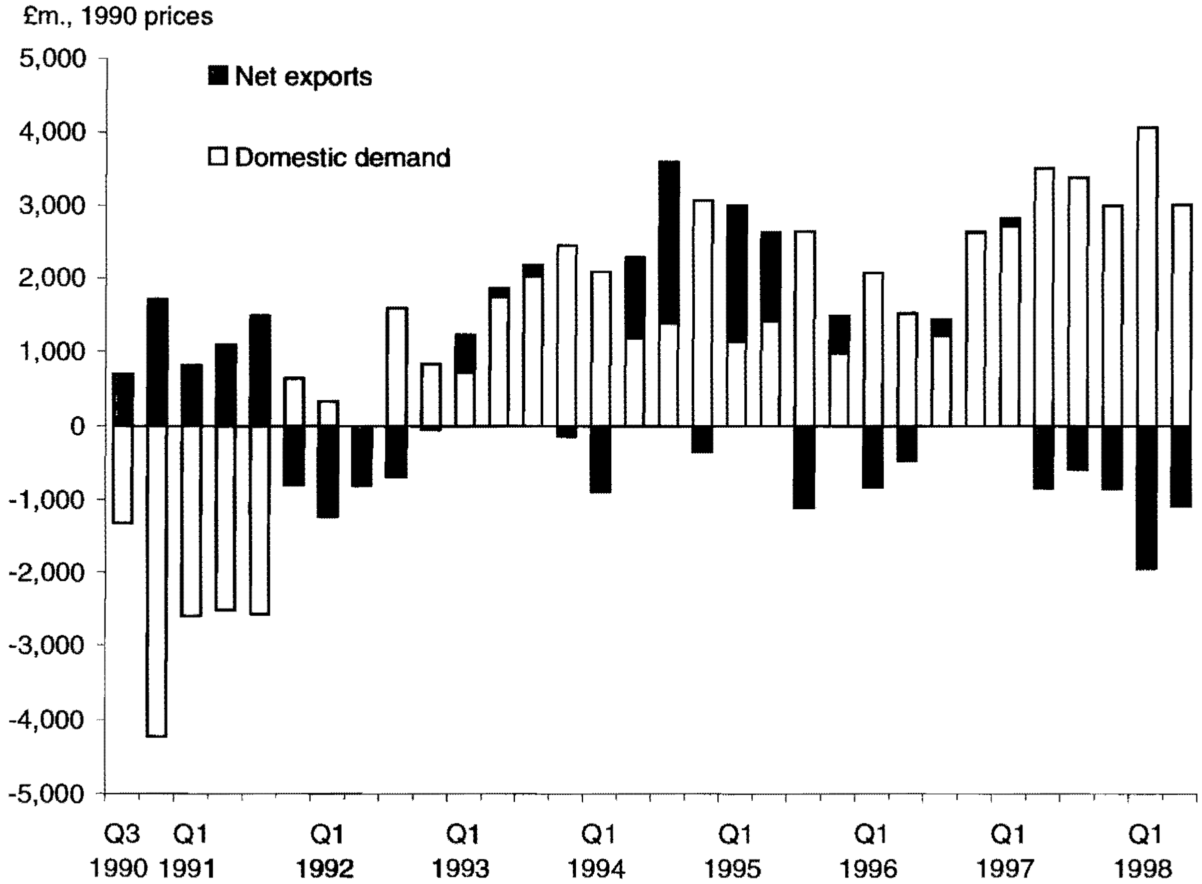
Source: ONS

In early 1997 the growth of export volumes appeared not to have been hit by sterling's sharp appreciation, which had begun in August 1996. Later figures show that any complacency on this score was misplaced. Export volumes in early 1998 were lower than two years earlier, even though the world economy grew satisfactorily in 1996 and 1997, and is still growing in 1998 despite the Asian crisis. Meanwhile imports have continued to expand and the trade account has moved heavily into the red. A conspicuous feature is that the over-valuation has hit exports of semi-manufactures worse than finished manufactures. In the two years to Q2 1998 the value of exports of semi-manufactures fell from £11.6b. to £10.6b., whereas the value of manufactures actually rose from £23.7b. to £24.7b.

Imports out-pacing exports for over a year

Unsustainable patterns in the national accounts

Chart shows the influence on growth of domestic demand and net exports (i.e., exports less imports). Bars shows changes in last two quarters (i.e., Q1 to Q3, Q2 to Q4, etc.), using seasonally-adjusted data.



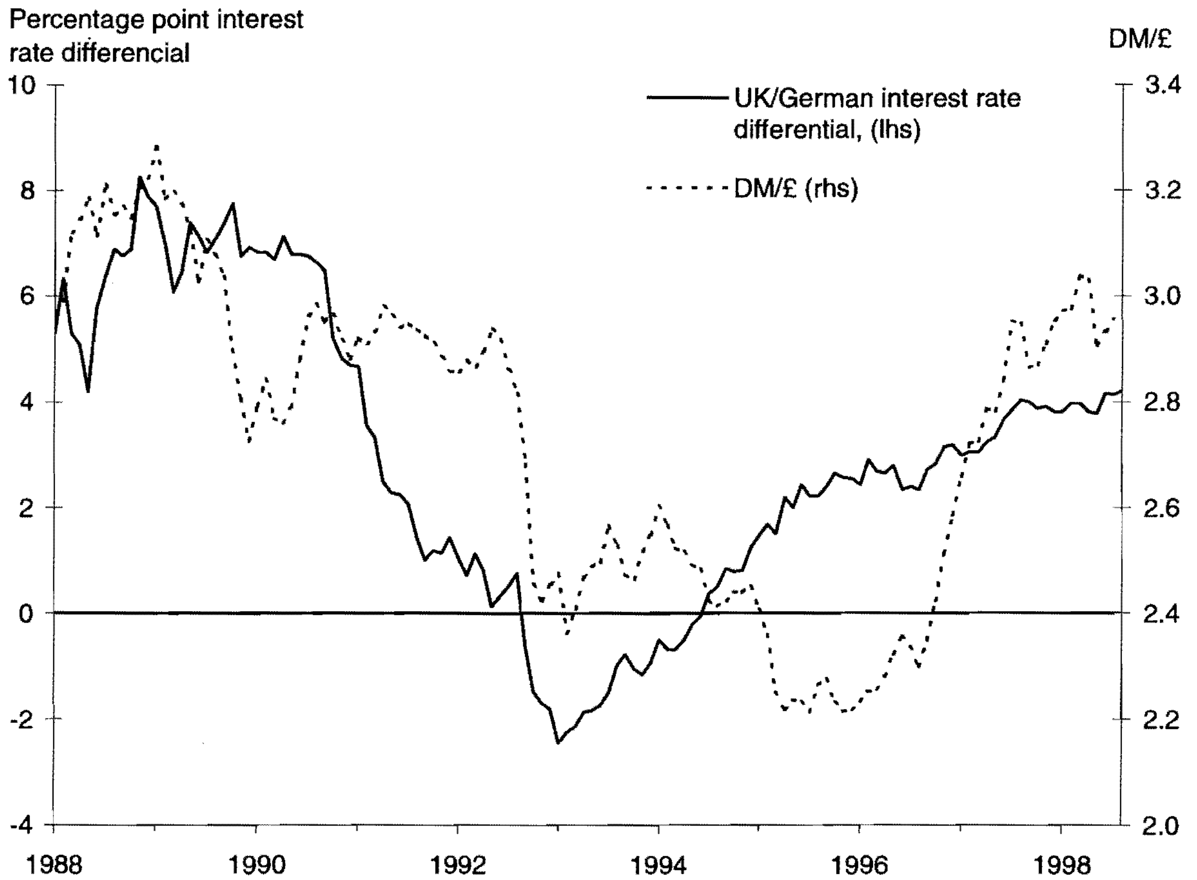
Source: ONS

Sterling's expulsion from the European exchange rate mechanism in September 1992 followed four quarters of negative net exports (i.e., of imports increasing more rapidly than exports and so withdrawing demand from the economy). The adverse trend in net exports implied that the exchange rate was inappropriate and established a large part of the case for sterling's collapse in the following six months. The chart shows that net exports were negative in the five six-month periods ending in Q2 1998, with the deterioration being greater than in the corresponding period in late 1991 and early 1992. Again, recent macroeconomic behaviour implies clear and substantial over-valuation. While a country can have imports rising faster than exports for a few quarters, at some point export and import growth have to brought back into line.

The magnet of high interest rates?

The explicable vs. the "purely erratic" in exchange rate movements

Chart shows the differential between three-month LIBOR and three-month euro-DM interest offer rate, using monthly data.



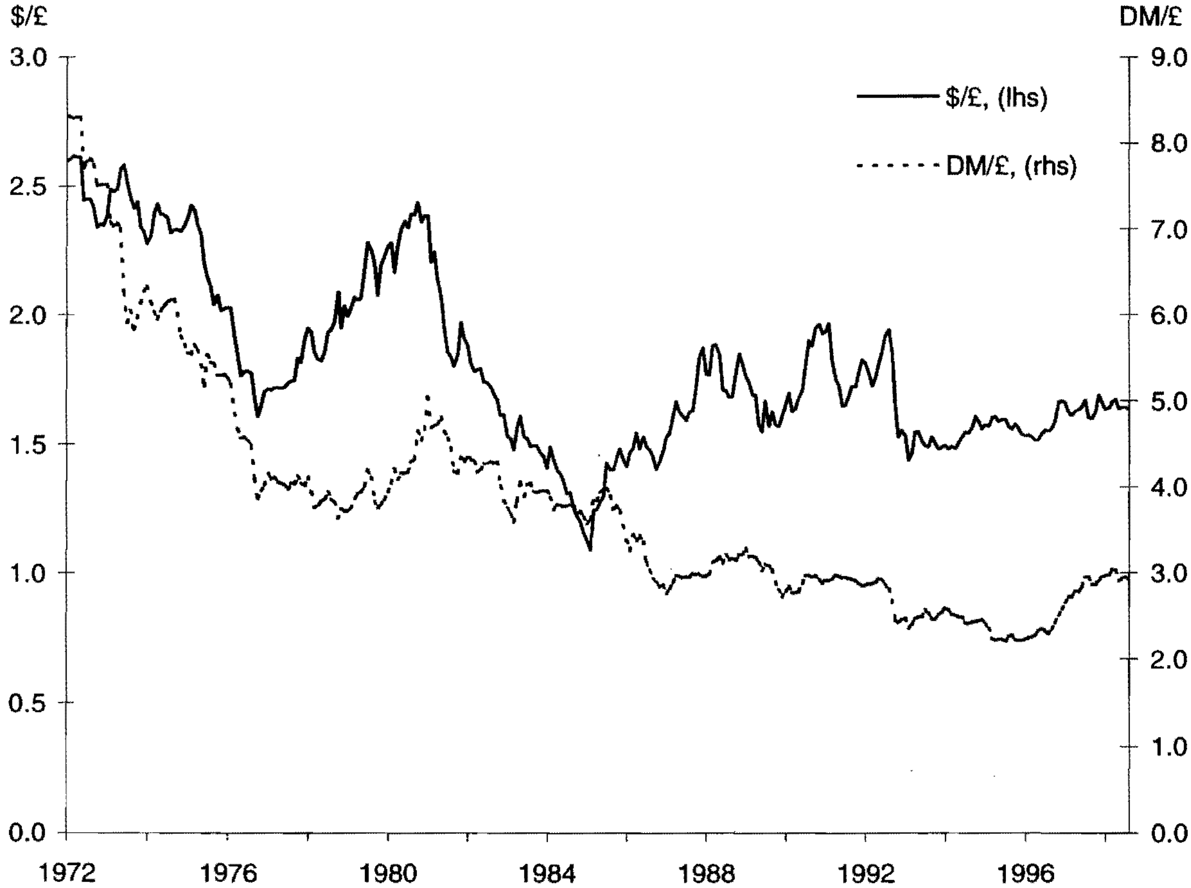
Source: Financial Times

A remarkable feature of the pound's appreciation in late 1996 was its suddenness. The pound collapsed in late 1992 and early 1993, ambled along at about 2.4 DM for most of 1993 and 1994, had another smaller fall in the middle of 1995 and stayed at the new lower level (2.20 DM - 2.30 DM) for several months. Apart from the immediate post-Black Wednesday slide, the downward movement was gentle. The subsequent rise - from a monthly average of 2.298 in August 1996 to 2.722 in February 1997 - was extraordinarily steep. It was also puzzling, because the recognized determinants of exchange rates - including interest rate differentials (as shown in the chart) - do not change so abruptly. An analysis in the February 1997 issue of the Bank of England's *Inflation Report* had to concede that part of sterling's appreciation was "purely erratic".

Anglo-Saxon attitudes

Has the pound being shadowing the dollar?

Chart shows the the $/£ and DM/£ exchange rates, using monthly data.



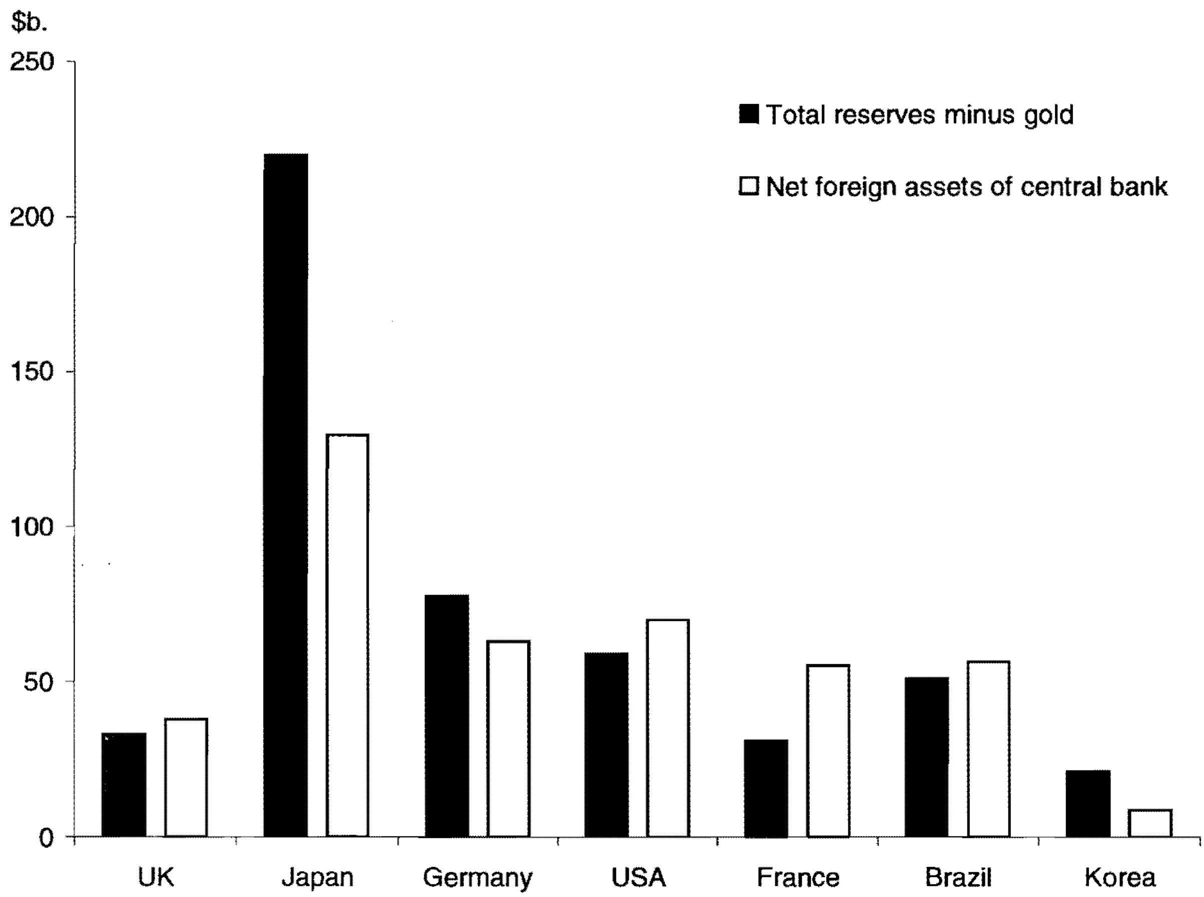
Source: Financial Times

Another of the puzzles about the pound's behaviour is that since its expulsion from the ERM it has moved more closely with the dollar than with the DM. (The coefficient of variation, i.e., the standard deviation divided by the mean, of the monthly average of spot exchange rates for the $/£ rate from Q4 1992 to Q2 1998 was 0.04; for the DM/£ rate it was 0.1.) As the UK's trade is mostly with the rest of Europe, the stability of the $/£ rate is peculiar. One explanation is that dollar and sterling money balances - with their relatively high interest rates - appeal to the same kind of international investor. Its alignment with the dollar is not necessarily good for the pound. In 1999 and 2000 the dollar will suffer from the largest US current account deficits ever seen. If the dollar slides, so will the pound.

Not much foreign exchange ammunition in reserve

UK's foreign exchange reserves low by international standards

Chart shows foreign exchange reserves, on two definitions, at end-1997. The shaded bars show total reserves minus gold. The outlined bars show net foreign assets of the central bank, after allowing for foreign liabilities.



Source: IMF

The currency turmoil of 1997 and 1998 has left the pound unscathed. The big movements have been in $/yen rate and the currencies of emerging economies, with some concern about the ability of Japan and other Asian countries to withstand the speculative pressures on their currencies. The chart shows that in one respect the UK is more vulnerable than other industrial nations: its foreign exchange reserves are low by international standards. In particular, not only are Japan's foreign exchange reserves more than five times higher, but Japan also has a massive current acccount surplus compared with the UK's deficit. Moreover, the position is changing rapidly. At the start of 1998 Korea was routinely described in the international press as "bankrupt". Today its foreign exchage reserves of over $40b. are higher than the UK's and are rising by $2b. - $3b. a month.