Recent sectoral financial behaviour

In past years the Bulletin *has contained an annual article describing the financial flows between the various sectors of the economy in the most recent year for which data have been available. The present article discusses developments in 1988 and the first half of 1989 and attempts to relate them to the underlying stock positions of the main sectors. Despite problems affecting the measurement of financial transactions,*[1] *a number of important developments are highlighted:*

- *The public sector moved into financial surplus in 1988—for the first time since the early 1970s. The full-fund policy resulted in a contraction in the gilt market.*
- *The personal sector was in financial deficit by the latter part of 1986, and increasingly so in 1987 and 1988. This was in part the result of attempts to unlock some of the increase in housing (and other) wealth seen over the 1980s. Consequently, borrowing from banks and building societies increased sharply (but so too did deposits).*
- *Industrial and commercial companies (ICCs) also moved into substantial financial deficit in 1988, reflecting higher dividend payments and investment. Following the stock market crash, ICCs relied less on the equity market as a source of funds, and saw their net liquidity deteriorate as their borrowing rose. Takeover activity rose to new peaks, both domestically and overseas.*
- *Non-bank financial institutions reduced their gilts holdings as the market contracted. Instead, they resumed investment in overseas securities.*

Background

The period under review began in the shadow of the stock market crash of October 1987. Amid concern that the crash could have widespread and damaging effects, monetary policy was eased in the United Kingdom (and elsewhere), with the result that short-term interest rates fell steadily from early in 1988, reaching a temporary trough of around 7½% by May of that year.

The strength of domestic demand was not fully appreciated in the early part of 1988, but latest data, incorporating revisions to 1988 and 1989, suggest that growth in domestic demand and output was then at its peak. The growth in demand was too rapid to be met from domestic output, with capacity utilisation rising to exceptionally high levels: consequently the current account of the balance of payments deteriorated significantly. Another manifestation of the surge in demand was the inflationary pressure arising in the labour market, where earnings growth rose as unemployment declined markedly, amid growing evidence of skilled labour shortages.

As the strength of demand became clearer, policy was tightened in an effort to ease the inflationary momentum. By November, nominal short-term interest rates had risen to 13%, although long-term rates had barely changed (the redemption yield on 20-year gilts, for example, rose from only 9.1% to 9.3% between April and November). The effective exchange rate remained broadly constant. By the end of 1988 there were tentative signs that the policy tightening was taking effect, reducing the rate of growth of both demand and output to more sustainable levels. However, the momentum in the economy (and the lags in response to policy) were such that there were no immediate signs of any reduction in inflation: indeed, owing to the method of calculation of the RPI, the rise in interest rates contributed to the growth in measured inflation. The current account deficit continued to increase.

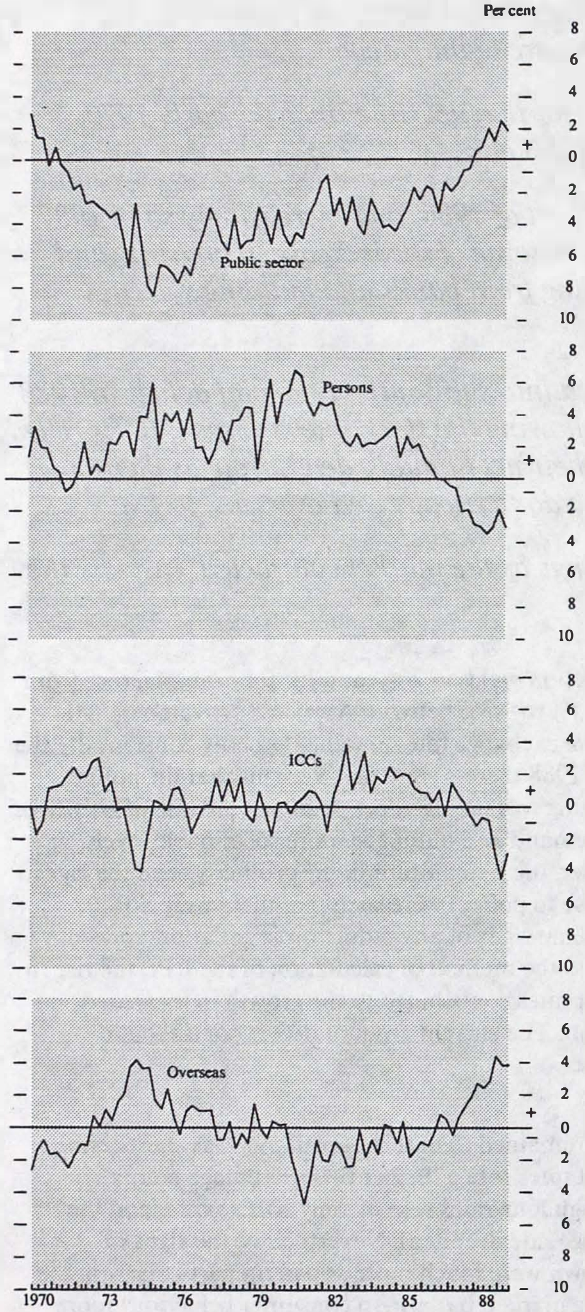
Policy remained tight throughout 1989, as short-term interest rates rose a further two percentage points (although long rates rose by only half a point, and the exchange rate declined). Nevertheless, the signs of slowdown were much more apparent, particularly in the housing market, but also in consumer behaviour more generally. Survey evidence indicated a slowing in the rate of growth of corporate expenditure, but also suggested that capacity and labour shortages had eased. Although it is still too early to be certain, there is also some indication that the current account deficit had reached its peak in mid-year, but it is less clear that the rise in underlying inflation had ended.

(1) Described in detail in the appendix.

Financial balances[1]

Sectoral financial balances offer perhaps the most convenient starting-point for a consideration of sectoral financial developments (although only in an accounting sense since current, capital and financial expenditure decisions are likely to be made simultaneously). Chart 1 presents the financial balances of four key sectors over a fairly long time-span, to highlight the atypical nature of recent developments. The balances are measured from income and expenditure statistics and are presented as a proportion of nominal GDP (in this case, the expenditure measure at factor cost).

Chart 1
Financial balances



In broad statistical terms, it is apparent that the shifts towards surplus in the overseas sector (ie the emergence of the current account deficit) and the public sector are the counterparts of the shift to deficit in the private sector. The exceptional nature of both the overseas surplus and the personal sector deficit are clear.

While the shifting pattern of deficits and surpluses is clearest after 1986, the chart suggests that the trends were established rather earlier, and simply accelerated in the most recent period. The personal sector surplus, for example, peaked in 1981, at roughly the same time as the current account surplus, while the ICCs' surplus peaked the following year. These particular peaks and troughs are clearly associated with the 1980–81 recession, but the trends thereafter are more probably linked with the financial liberalisation that followed the abolition of exchange controls in 1979.

The personal sector (Table A)

The extraction of housing equity by the personal sector became easier in the 1980s, owing to the increased competition between banks and building societies. Individuals entering the housing market, and those trading up, were generally able to obtain larger multiples of their salary, or loans representing a greater proportion of the value of their house, than they would have in the past. While some funds leaked out of the housing market directly (ie individuals used mortgage borrowing to realise housing equity), there was also a leakage via last-time sellers.

Table A
Personal sector[(a)] financial transactions

£ billions
Increase in assets/
decrease in liabilities +

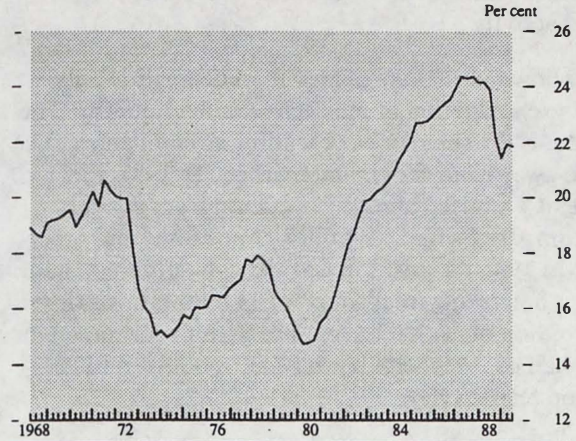
	1984	1985	1986	1987	1988	1989 H1
Financial surplus/deficit	+8.8	+7.5	+2.8	-6.5	-14.5	-5.9
of which:						
Net claims on life assurance and pension funds	+18.5	+19.0	+19.5	+20.8	+21.8	+12.7
Deposits with building societies	+13.2	+13.3	+11.8	+13.6	+20.2	+8.6
Deposits with UK banks	+3.3	+5.1	+8.4	+8.4	+16.9	+9.3
Public sector debt	+4.3	+0.8	+4.4	+3.4	-0.3	-2.4
UK company securities	-5.6	-6.0	-3.1	+0.5	-2.0	-1.0
Borrowing for house purchase	-17.0	-18.5	-26.3	-29.1	-39.7	-15.8
of which, from building societies	*-14.5*	*-14.1*	*-18.8*	*-14.6*	*-23.2*	*-10.8*
Borrowing from UK banks(b)	-4.2	-6.7	-5.2	-8.7	-12.9	-7.3

(a) Includes individuals, private non-profit-making institutions and unincorporated businesses.
(b) Other than for house purchase.

Consequently there was a rise in persons' capital gearing (ie a fall in the proportion of the housing stock unencumbered by debt). This is illustrated in Chart 2, which demonstrates the extent of the rise between the 1980 trough (around 15%) and the peak in 1987 (just over 24%). However, this trend was reversed in 1988, despite record growth in borrowing for house purchase of almost £40 billion (compared with just over £29 billion in 1987)

(1) The overall financial positions of the sectors are calculated from the national income and expenditure accounts and are shown in line 5 of the flow of funds matrix (see the appendix).

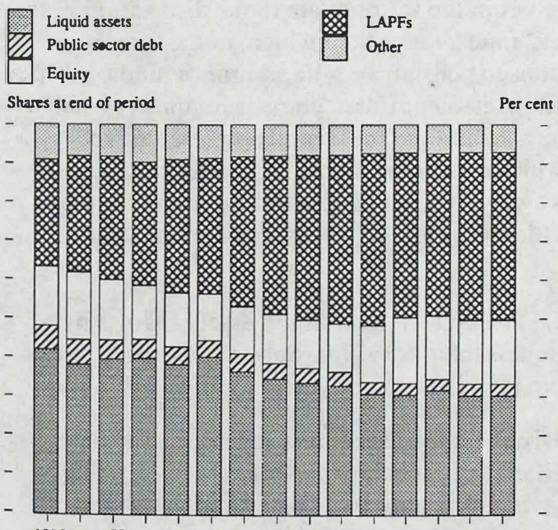
Chart 2
Personal sector capital gearing



and a further £16 billion in the first half of 1989.[1] The increase in the sector's housing wealth reflects the remarkably rapid growth of house prices over the period.

In the wake of the stock market crash, equity extracted at the time of the housing boom found a ready home in high-yielding liquid assets. In addition, innovation by both banks and building societies made deposit accounts (current and savings) more attractive, and thus the rate of growth of bank and building society deposits increased. In 1988, for example, personal sector deposits with banks and building societies rose by over £37 billion, after rising by £22 billion in the previous year. This remarkable growth continued into the first half of 1989, when deposits rose by another £18 billion. Despite the switch towards liquidity, the share of floating-rate assets in the personal sector's portfolio has remained relatively constant, at around 30%, rather lower than in the mid-1970s (see Chart 3). At the same time, because of the even more rapid increases in floating-rate liabilities, persons have remained net floating-rate debtors (a situation which first began in 1985), although the recent trends appear to have moderated the rate of deterioration.

Chart 3
Personal sector assets



Among the sector's other financial transactions there was a steady increase in contributions to life assurance and pension funds (LAPFs). To some extent this may be the counterpart of persons' investment directly in UK company securities, which has declined in all recent years other than 1987 although as a share of their portfolio it has risen slightly.

Industrial and commercial companies (Table B)

The rapid growth in domestic demand in 1988 provided a very favourable environment for industrial and commercial companies. Profitability was at its highest since the 1960s and the funds generated were used to finance a rapid expansion of both current and capital spending: dividend payments, for example, rose by 42% and expenditure on fixed investment by 24%, both reflecting the strength of corporate optimism. As a result, however, the sector moved into a financial deficit of some £6¼ billion for 1988 as a whole, the first such deficit since 1979.

Table B
Selected transactions of industrial and commercial companies

£ billions

	1984	1985	1986	1987	1988	1989 H1
Financial surplus/deficit	+6.3	+5.4	+1.8	+1.9	-6.2	-8.5
Selected financial transactions requiring financing (increase +)						
Trade investments, mergers	+4.2	+3.8	+2.6	+2.5	+9.4	+3.6
Long-term investments overseas	+4.1	+4.7	+6.1	+13.8	+9.7	+6.8
Balancing item	—	+2.5	-0.2	+7.0	+16.7	+5.9
Net financing requirement (-)	-3.3	-6.1	-10.0	-23.6	-46.5	-24.3
Selected financing items (increase -)						
Bank and other borrowing	+7.4	+8.0	+10.0	+13.3	+33.3	+18.0
Capital issues	+1.7	+5.1	+7.8	+17.9	+9.1	+4.3
Investment from overseas	-2.7	-0.3	+3.0	+2.9	+3.6	+6.7
Bank deposits	-1.4	-4.8	-11.0	-8.5	-6.4	-7.2

The deficit continued to widen in 1989, totalling £15 billion in the first nine months alone. The factors underpinning the increase are largely those which caused the deficit to emerge, for while profits in the first nine months of 1989 stood over 10% higher than in the same period a year earlier, fixed investment was up by 17%, dividends by 32% and interest payments by 66%.

In 1988, ICCs' net borrowing requirement was further increased by a very high level of acquisitions. Gross expenditure on domestic acquisitions was slightly above £22 billion, more than 40% higher than the previous peak (in 1987); however, owing to the changing method of payment—ie the shift towards cash following the stock market crash—the net drain of funds from the sector, at over £9 billion, was almost four times as large as in 1987, and more than twice the previous peak (1984). On the other hand, expenditure on long-term investments overseas—which includes an element of overseas acquisitions—declined by around £4 billion relative to 1987 (although remaining well above any previous figures), and investment *from* overseas increased by

(1) All figures quoted are seasonally adjusted unless otherwise stated.

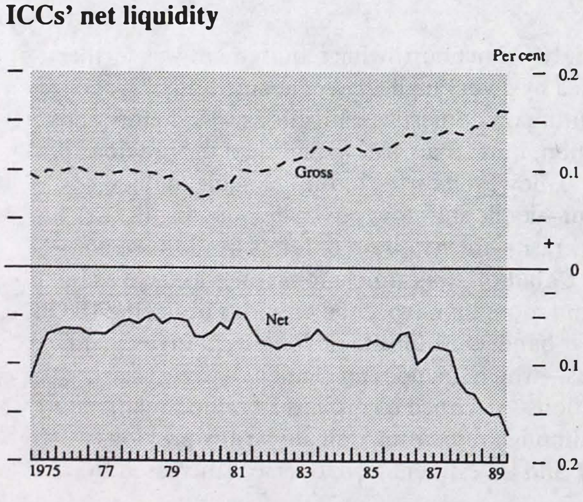
around £¾ billion. Thus the company sector financed around £2 billion more of such expenditures in 1988 than in the previous year.

In the first half of 1989, expenditure on domestic acquisitions stood at £3½ billion, while long-term investment overseas and overseas investment in the United Kingdom both amounted to around £6¾ billion. After contributing around £15½ billion to the borrowing requirement in 1988, 'acquisitions-related' expenditures thus contributed only around £3½ billion in the first half—an especially important development given the deterioration in net liquidity implied by bank financing of such large flows. However, data for the third quarter show takeover activity on a substantial scale.

Given the large-scale finance that ICCs' activities in 1988 and 1989 demanded, it is not surprising that their net liquidity position deteriorated rapidly (Chart 4). Prior to the stock market crash in 1987, there had been a period of relative stability, during which bank deposits and borrowing had grown very much in line (in nominal terms). Although this would appear to imply that individual companies were building up both sides of their balance sheets simultaneously, the data may simply represent the activities of different groups of companies. Cash-rich companies may have placed their earnings on deposit (at high real rates of interest) awaiting profitable investment opportunities, while others may have raised (and retained) new finance from the capital markets as well as obtaining funds from retentions. On the other hand, smaller or less well-established companies may still have been forced to fund expansion largely by borrowing from the banks.

Post-crash, and with the sudden expansion in domestic demand, some of the funds held on deposit must have been turned towards investment and acquisition opportunities. Hence the growth in bank deposits slowed in 1988, to around £6½ billion; however, the first half of 1989 witnessed a rather sharp recovery in deposits (of

Chart 4
ICCs' net liquidity



around £7¼ billion), although there appears to have been a decline in the third quarter, probably associated with takeover activity.

The slowdown in the rate of growth of deposits is only part of the explanation of the decline in net liquidity. The remainder is the surge in bank lending as companies switched away from the capital markets. In 1987, for example, ICCs raised almost £18 billion from capital issues, compared with £13¼ billion from banks and other sources. In 1988 the position was radically different: bank and other borrowing totalled over £33 billion, as against only £9 billion of capital issues. The pattern continued in the first half of 1989, with figures of £18 billion and £4¼ billion respectively.

Other financial institutions (Table C)(1)

The diversity of the range of institutions included in this sector (outlined in the notes at the end of this article) hampers analysis of their behaviour. This problem is compounded by the fact that, until the second quarter of 1989, data for securities dealers were incomplete. Nevertheless, a number of important developments emerge.

Table C
Other financial institutions' sources and uses of funds

£ billions

	1984	1985	1986	1987	1988	1989 H1
Sources of funds						
Bank borrowing	-6.4	-4.2	-14.1	-16.6	-10.0	-11.8
Life assurance and pension funds	-17.8	-18.4	-18.8	-20.2	-20.9	-12.4
Unit trust units	-0.6	-1.1	-2.2	-3.5	0.5	—
Capital issues	-0.2	-0.6	-3.3	-3.6	-6.0	-4.3
Other sources	-0.7	-4.3	-2.9	-3.0	-2.6	-2.2
Total	-25.7	-28.5	-41.2	-47.0	-39.0	-30.7
Uses of funds						
Liquid assets	+6.5	+4.9	+8.7	+18.7	+13.0	+11.6
British government securities	+5.5	+5.2	+3.2	+0.8	-1.7	-6.6
UK company securities	+5.0	+8.3	+9.3	+17.1	+12.4	+7.3
Overseas securities	+2.4	+7.0	+17.5	-7.6	+6.0	+9.3
Lending for house purchase	+0.7	+0.6	+2.8	+4.7	+5.8	+1.5
Other uses	+1.9	-0.1	+0.7	+3.9	+3.3	+1.8
Total	+21.9	+25.9	+42.1	+37.6	+38.8	+24.9
Net identified financial transactions	**-3.9**	**-2.6**	**+1.0**	**-9.4**	**-0.1**	**-5.8**

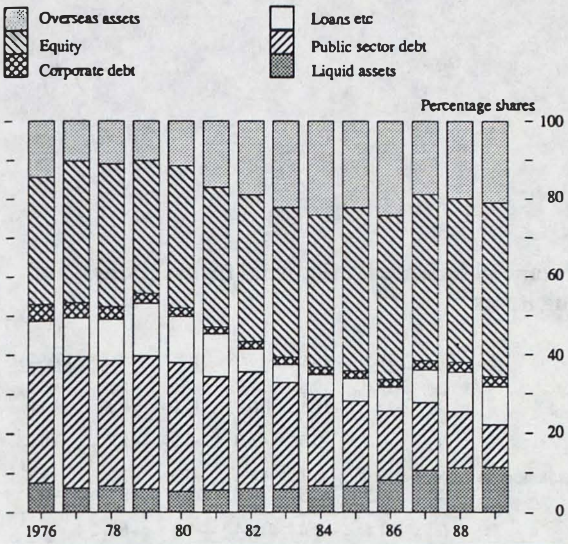
The key issues in the sector relate to the disposition of the institutions' funds, the bulk of which, in the form of contributions to pension and life assurance funds, but also to unit and investment trusts, come from the personal sector. The allocation of these funds is presented in Chart 5, which clearly highlights the recent switch in portfolios away from public sector debt, mainly towards securities (domestic and overseas) but also to liquid assets.

In 1988, OFIs increased their liquid asset holdings by £13 billion, less than in 1987 (around £18¾ billion), but rather more than in previous years.

Interestingly, the rate of accumulation appears to have accelerated in the first half of 1989 (£11½ billion). The build-up in liquidity appears to be related to two factors: initially, uncertainties regarding the stock market,

(1) Financial institutions other than banks and building societies.

Chart 5
OFIs' assets



and subsequently, the strongly downward-sloping yield curve which emerged during 1988.

The increase in the rate of growth of liquid assets in 1989 coincided with a decline in the proportion of funds allocated to UK equities. The £12½ billion invested in UK company securities by the institutions in 1988, for example, fell some way short of the peak attained in 1987 (£17 billion); furthermore, the flow in the first half of 1989 continued to be relatively low (£7¼ billion). Nevertheless, the share of domestic equity in the institutions' portfolios has still recovered from post-crash levels, reflecting the rapid increase in equity prices in the preceding months.

As noted above, public sector finances moved into surplus in 1988, and remained so in 1989. Coupled with the full-fund policy (by which debt sales were set to ensure the public sector had a neutral impact on the liquidity in the economy), this resulted in a significant reduction in the volume of government debt outstanding. This can be clearly seen in the fact that OFIs ran down their holdings of public sector debt by around £1¾ billion in 1988, following a modest rise in 1987 (£¾ billion). The decline in their holdings continued into 1989, with a fall of some £6½ billion in the first half. The share of public sector debt in their portfolio, after having declined from around 30% in 1979 to under 16% by end-1987 (a decline which partly reflects the increase in the market value of their other assets), thus fell to around 10% by mid-1989.

In contrast with the other asset categories, the flow of institutional funds overseas increased sharply in 1988 relative to the previous year. Following a decline in their holdings of overseas securities of over £7½ billion in 1987 (mainly in the final quarter of the year, when they withdrew from world equity markets after the crash), the institutions invested around £6 billion in 1988. This figure looks set to be easily exceeded in 1989, with further investment of over £9 billion in the first half alone. As a result, the share of overseas assets in OFIs' portfolios rose to over 21%, which is nevertheless still well below the 25% figure seen at the end of 1984.

The overseas sector (Table D)

With a large, and increasing, current account deficit (overseas sector surplus), and a continuing net drain of certain capital account items (eg OFIs' acquisition of overseas securities, and ICCs' direct investment overseas), large amounts of foreign capital have had to be attracted into the United Kingdom. A significant proportion has come in the form of overseas take-up of UK securities (through either direct or portfolio investment). However, equally important have been the flows through the banking system, in response to high and rising UK interest rates.

Table D
Selected overseas sector financial transactions

£ billions
Increase in assets/ decrease in liabilities +

	1984	1985	1986	1987	1988	1989 H1
Net identified financial transactions (a)	-7.9	-7.9	-9.9	-6.2	+4.2	—
of which:						
UK direct investment in overseas securities	-2.7	-3.1	-6.1	-6.9	-5.8	-3.1
UK portfolio investment overseas	-9.9	-19.4	-23.1	-3.3	-9.9	-14.7
Total UK take-up of overseas securities (b)	-13.4	-23.2	-29.7	-3.7	-16.1	-18.0
Overseas direct investment in UK securities	+0.9	+5.5	+6.0	+7.6	+6.0	+2.5
Overseas portfolio investment in the United Kingdom	+0.3	+0.8	+1.5	+3.1	+3.3	+2.5
Total overseas take-up of UK securities (c)	+1.2	+6.3	+7.5	+10.7	+9.3	+5.1
Net deposits with UK banks (d)	+10.4	+7.4	+11.2	+1.5	+14.3	+6.6

(a) Line 39 Table F.
(b) Line 32 Table F.
(c) Line 31 Table F.
(d) Lines 21+24 Table F.

This is seen in Table D, where the net flows of such funds to and from the overseas sector are presented along with the net flow of lending to UK banks. In 1988, for example, the net outflow resumed (at around £7 billion), following the inflow of £7 billion in 1987 resulting partly from the repatriation of OFIs' overseas assets noted above. Although the 1988 figure was rather modest by the standards of earlier years, data for the first half of 1989 suggest that the outflow was gathering pace: despite the fact that direct investment flows were continuing at the same rate as in previous years, portfolio investment overseas amounted to almost £15 billion (compared with £10 billion in the whole of 1988), while identified overseas take-up of UK company securities was only around £5 billion (compared with over £9¼ billion in 1988).

Net banking inflows in 1988 were thus sharply up on the previous year (over £14 billion as against only £1½ billion), but also rather higher than the figures in earlier years. This trend continued into the first half of 1989, with the increase in the banks' net external liabilities exceeding £6½ billion.

Appendix

Sources and implications of measurement error

In principle, the financial transactions of each sector represent the funding of a deficit or the deployment of surplus funds accruing to that sector by virtue of its combined current and capital account transactions. The overall financial position, calculated by accumulating all the estimated current and capital receipts and payments in the national income and expenditure accounts, is shown for each sector in line 5 of the flow-of-funds matrix. If these receipts and payments were fully represented by the statistics, and if the accompanying funding and investment transactions in the financial accounts were likewise identified in full, the sum of the financial transactions (line 39 in the matrix) would be equal to the recorded financial surplus or deficit. The effect of errors and omissions in the identification of any part of a sector's transactions is measured in line 40, the 'balancing item'. This figure is conventionally placed as the final item in the entries for each sector, and thus appears adjacent to the financial transactions accounts, although the errors and omissions it reflects are not necessarily concentrated there.

The difference between the income and expenditure measures of GDP at factor cost also features in the accounts. It is known as the residual error and can be derived by adding together the financial surplus or deficit for each sector of the matrix, which otherwise would sum to zero. The financial flows (aggregated in line 39) are, however, constrained to sum to zero across all sectors (frequently by defining one sector as a residual); the same residual error accordingly appears as the sum of the sectors in line 40.

Table E gives the scale of the balancing items for the separate sectors over the past five years. It shows that while the balancing item is for some sectors (eg central government) small relative to the total transactions recorded, in others (eg the personal sector) it actually *exceeds* the recorded total transactions in recent years. Efforts are continuing to improve the data in both the current and capital accounts and in the financial accounts using new data sources. These efforts do not in all cases actually reduce the balancing items. Nonetheless, significant revisions have been made possible since the last in this series of articles was published in November 1988, and, although there are a few notable exceptions, balancing items for 1986 and 1987 have generally been reduced. Furthermore the residual error has fallen significantly for both these years.

Table E
Sector financial balances[a], financial transactions[b] and balancing items[c]

£ billions

		1984	1985	1986	1987	1988	1989 H1
Public sector	(a)	-13.0	-9.6	-7.7	-4.0	+6.0	+3.8
	(b)	-13.1	-10.1	-10.7	-5.0	+4.3	+3.6
	(c)	+0.2	+0.5	+3.0	+0.9	+1.7	+0.2
Financial institutions(d)	(a)	-0.9	-0.1	+4.3	+5.3	+2.2	+2.1
	(b)	+0.7	+0.3	+7.7	-2.0	+8.2	+0.7
	(c)	-1.6	-0.4	-3.4	+7.3	-6.0	+1.4
Industrial and commercial companies	(a)	+6.3	+5.4	+1.8	+1.9	-6.2	-8.5
	(b)	+6.3	+2.9	+2.0	-5.2	-22.7	-14.4
	(c)	—	+2.5	-0.2	+7.0	+16.5	+5.9
Personal sector	(a)	+8.8	+7.5	+2.8	-6.5	-14.5	-5.9
	(b)	+14.0	+14.8	+10.9	+18.4	+6.3	+10.1
	(c)	-5.2	-7.4	-8.1	-24.9	-20.8	-16.0
Overseas sector	(a)	-2.0	-3.2	—	+3.8	+14.7	+9.7
	(b)	-7.9	-7.9	-9.9	-6.2	+4.2	—
	(c)	+5.9	+4.7	+9.9	+10.0	+10.5	+9.7
Residual error		+0.7	—	-1.2	-0.4	-2.1	-1.2

(a) Financial surplus +/deficit -. Line 5 Table F.
(b) Financial transactions. Line 39 Table F.
(c) Balancing item. Line 40 Table F (= Line 5 - Line 39).
(d) Banks, building societies and other financial institutions.

Since the last article was published, the Central Statistical Office (CSO) has compiled a set of balanced accounts for the years 1985, 1986 and 1987. The results of this exercise were published in the February 1989 issue of *Economic Trends*. The purpose of the exercise was to reduce all balancing items and the residual errors to zero by allocating them to component parts of the accounts on the basis of estimates for identified deficiencies in the data and estimated error ranges for all series. The results of the exercise are not intended to represent a 'better' set of accounts, and indeed some inconsistencies remain. Nonetheless they provide a useful alternative scenario and contribute to the debate on possible explanations of the existing problems.

One final point that should be noted is that the CSO now make regular annual and quarterly adjustments to their estimates of GDP.[1]

Public sector

A high degree of accuracy is maintained in statistics for the public sector, not least because use can be made of data available as a necessary tool in the management of government finances.

(1) Full details of the adjustments are given on pages 9–11 of the press notice CSO(89)148 on GDP in the third quarter 1989.

Personal sector
The personal sector includes not only individuals, but also trusts, charities and unincorporated businesses. There is very little direct collection of data for the sector; in some cases figures are derived through counterparty reporting (eg bank and building society lending to persons) and in others the sector is treated as a residual. There is clear scope for very substantial errors to arise, frequently accumulating errors in other sectors.

The personal sector balancing item has increased from an average surplus of around £5 billion per annum in the early 1980s to a deficit of almost £25 billion in 1987 and around £21 billion in 1988. The balanced accounts exercise made adjustments to current transactions (mostly raising income estimates) increasing the surplus to more normal levels in 1986 and significantly reducing the deficit in 1987. The exercise also suggested a change in the financial transactions, moving the sector in 1987 from substantial investment in securities (mainly overseas) to substantial disinvestment.

Industrial and commercial companies
As with the personal sector, there are considerable difficulties of measurement in the industrial and commercial company sector. Athough direct collection of data through enquiries and surveys is extensive, it remains incomplete. Statistics for this sector are also frequently derived by residual, or based on counterparty data.

The industrial and commercial company sector balancing item was moderate through most of the 1980s, except in recent years: in 1987, for example, the figure rose to £7 billion, from virtually zero in the previous year. The discrepancy widened still further in 1988, to £16½ billion, although it appears to have diminished a little in the first half of 1989.

The balanced accounts exercise for 1986 and 1987 increased estimates for stocks and work in progress, but also indicated a significant reduction in the series for gross profits and other trading income. In addition, in recent years, there have been frequent, often large, revisions to published statistics for gross fixed capital formation. By comparison with adjustments to current and capital expenditures, the balanced accounts exercise made relatively small amendments to the financial transactions, the most notable of which was to increase investment in securities by some £4 billion in 1987.

Financial institutions
The balancing item for financial institutions is small in comparison with those of other sectors. Since 1987 financial transactions of building societies have been shown separately, but capital account data are not at present published separately for the individual groups of institutions. It is accordingly not possible to identify the balancing item for banks, building societies or other financial institutions independently.

Statistical reporting by UK *banks and building societies* is fairly comprehensive, not least because of the needs of supervisors and statutory reporting requirements.

The coverage of the *other financial institutions* sector has been improved to include estimates for securities dealers, factoring companies and venture capital companies (for a list of institutions covered see the notes at the end of this article). The balancing item of the financial sector as a whole has fallen as a result of these enhancements, but full reporting by securities dealers only began in the second quarter of 1989, and the amendments made to earlier data are estimates derived mainly from data reported in the dealers' published accounts.

Overseas sector
The balancing item for the overseas sector (following adverse revisions to 1987) has been close to £10 billion in each of the last three years. The balancing item itself is constrained to the balance of payments, and to ensure that total financial transactions (line 39) plus the sector's financing requirement (line 5—itself the current account surplus or deficit in the balance of payments) sum to line 40, 'miscellaneous overseas instruments' is made the column residual.

Table F
Flow of funds: annual matrix 1987
£ millions

	Line	Central government	Local authorities	Public corporations	Public sector	Banks	Building societies	Other financial institutions	Industrial and commercial companies	Personal sector	Overseas sector	Residual error
Capital account												
Saving	1	-2,056	+2,942	+5,093	+5,979		+13,825		+40,294	+15,912	+3,822	
Taxes on capital and capital transfers	2	-76	-3,779	+676	+973		-283		-371	-319	–	
less:												
Gross fixed capital formation at home	3	-3,319	-3,779	-4,512	-11,610		-8,250		-32,253	-21,278		
Increase in value of stocks and work in progress	4	+498		+124	+622		–		-5,793	-821		
Financial surplus+/deficit–	5	**-4,953**	**-464**	**+1,381**	**-4,036**		**+5,292**		**+1,877**	**-6,506**	**+3,822**	**-449**
Changes in financial assets and liabilities												
Assets: increase+/decrease–												
Liabilities: increase–/decrease+												
Notes and coin	6	-1,089		+18	-1,071	+264	+61	+2	+65	+640	+39	
Sterling Treasury bills	7	-1,852	–	–	-1,852	+171	+55	-28	+551		+1,103	
British government securities	8	-4,609	+23	+29	-4,557	-923	-1,192	+786	-290	+1,614	+4,562	
National savings	9	-2,551	–	+7	-2,544		+13	+25	+172	+2,334		
Certificates of tax deposit	10	+527		+42	+569	+99	-410	–	-330	+72		
Net government indebtedness to Banking Department	11	-281			-281	+281						
Northern Ireland central government debt	12	+8			+8	-5	–	–	+5	-8		
Government liabilities under exchange cover scheme	13	+147	-8	-108	+31				-31			
Other public sector financing:												
Non-marketable debt	14.1	-215		+244	+29	–	–	–	-29			
Short-term assets	14.2		+611	+244	+29		-39	-564	-7	+5	+19	
Issue Department's transactions in bills	15	-5,735			-5,735	+953		+883	+2,827		+1,072	
Government foreign currency debt	16	+161			+161	-263	–	–	–		+102	
Other government overseas financing	17	+69			+69						-69	
Official reserves	18	+12,012			+12,012						-12,012	
Local authority debt	19	+5,124	-3,344	-138	+1,642	-373	-539	+374	-33	-1,174	+103	
Public corporation debt	20	-444	+46	+767	+369	-110	–	+42	–	-34	-267	
Deposits with banks:												
Sterling sight	21.1	-127	+547	+85	+505	-16,844	–	+4,451	+4,721	+7,167		
Sterling time	21.2	-14	+1,324	+294	+1,604	-19,000	+5,902	+6,115	+4,323	+1,056		
Foreign currency	21.3	+74	-3	+90	+161	-6,906	–	+7,148	-573	+170		
Banks' net external transactions	21.4					-1,480					+1,480	
Deposits with building societies	22					+407	-15,221	+290	-19	+13,635	+908	
Bank lending (excluding public sector):												
Foreign currency	24.1					+10,419	–	-7,069	-3,210	-140		
Sterling	24.2					+30,326	-504	-9,568	-11,740	-8,514		
Credit extended by retailers	25			–	–				+359	-359		
Identified trade credit:												
Domestic	26.1	-5		-43	-48			+260	-169	-43		
Import and export	26.2	–		-34	-34			–	+243		-209	
Loans for house purchase:												
Building societies	27.1						+14,886		-264	-14,622		
Other	27.2	+60	-431	-11	-382	+10,112		+4,721		-14,451		
Other public sector lending	28	+186	+41	+8	+235	–	–	–	-120	+11	-126	
Other lending by financial institutions	29			–	–		+94	+1,209	-446	-857		
Unit trust units	30							-3,526		+3,526		
UK company securities	31	-5,930	+163	-139	-5,906	-2,093	-17	+13,534	-16,773	+531	+10,724	
Overseas securities	32	–		–	–	-561	–	-7,601	+7,099	+4,807	-3,744	
Life assurance and pension funds	33	-617			-617			-20,194		+20,811		
Miscellaneous domestic instruments	34	+14	-210	+210	+14	+367	+222	+353	-1,935	+483	+496	
Direct and other investment abroad	35					-389	–	+499	+11,662	-20	-11,752	
Overseas direct and other investment in the United Kingdom	36					-59		+21	-4,671	-290	+4,999	
Miscellaneous overseas instruments	37	-429		+6	-423	+1	–	+433	+3,602		-3,613	
Accruals adjustment	38	+993	-363	-139	+491	-46	-321	-1,978	-147	+2,001		
Financial transactions	39	**-4,523**	**-1,604**	**+1,163**	**-4,964**	**+ 4,348**	**+ 2,990**	**- 9,382**	**- 5,158**	**+18,351**	**- 6,185**	
Balancing item	40	-430	+1,140	+218	+928		+7,336		+7,035	-24,857	+10,007	-449

Table F *continued*
Flow of funds: annual matrix 1988

£ millions

	Line	Central government	Local authorities	Public corporations	Public sector	Banks	Building societies	Other financial institutions	Industrial and commercial companies	Personal sector	Overseas sector	Residual error
Capital account												
Saving	1	+7,425	+1,653	+5,769	+14,847		+14,753		+43,445	+13,393	+14,672	
Taxes on capital and capital transfers	2	+779	-2,243	+787	+1,949		-403		-210	-1,336	—	
less:												
Gross fixed capital formation at home	3	-3,714	-2,243	-4,882	-10,839		-12,167		-40,062	-25,451		
Increase in value of stocks and work in progress	4	+322		-276	+46		—		-9,409	-1,101		
Financial surplus+/deficit-	5	**+4,812**	**-207**	**+1,398**	**+6,003**		**+2,183**		**-6,236**	**-14,495**	**+14,672**	**-2,127**
Changes in financial assets and liabilities												
Assets: increase+/decrease-												
Liabilities: increase-/decrease+												
Notes and coin	6	-1,476		-3	-1,479	+270	+120	+4	+94	+945	+46	
Sterling Treasury bills	7	-1,277	+2	+120	-1,155	+1,185	+10	+4	-70		+26	
British government securities	8	+5,032	+25	-4	+5,053	-2,365	+560	-1,674	-420	-1,996	+842	
National savings	9	-1,536	—	+48	-1,488		+5	+1	+73	+1,409		
Certificates of tax deposit	10	+1,034		+63	+1,097	-313	-379	—	-434	+29		
Net government indebtedness to Banking Department	11	-138			-138	+138						
Northern Ireland central government debt	12	+8			+8	—	—	—	-5	-3		
Government liabilities under exchange cover scheme	13	-188	-6	+179	-15				+15			
Other public sector financing:												
Non-marketable debt	14.1	-450		+450	—	—	—	—	—			
Short-term assets	14.2		+1,081	+450	—		-759	-247	-70	-5	—	
Issue Department's transactions in bills	15	+435			+435	+657		-677	-596		+181	
Government foreign currency debt	16	+449			+449	+172	—	—	—		-621	
Other government overseas financing	17	+73			+73						-73	
Official reserves	18	+2,761			+2,761						-2,761	
Local authority debt	19	+4,860	-3,404	-34	+1,422	-445	-402	+214	-96	-681	-12	
Public corporation debt	20	+716	+47	+114	+877	-523	—	-30	—	-13	-311	
Deposits with banks:												
Sterling sight	21.1	+83	-108	+107	+82	-12,095	—	+1,959	+1,895	+8,159		
Sterling time	21.2	+94	+1,734	+879	+2,707	-27,508	+4,543	+7,426	+4,293	+8,539		
Foreign currency	21.3	-99	+8	+3	-88	-2,768	—	+2,380	+254	+222		
Banks' net external transactions	21.4					-14,342					+14,342	
Deposits with building societies	22					+403	-21,153	+200	-92	+20,165	+477	
Bank lending (excluding public sector):												
Foreign currency	24.1					+9,650	—	-1,028	-8,333	-289		
Sterling	24.2					+44,134	-391	-8,927	-22,163	-12,653		
Credit extended by retailers	25			—	—				+260	-260		
Identified trade credit:												
Domestic	26.1	+7		-1,106	-1,099			+300	+823	-24		
Import and export	26.2	—		-32	-32			—	+320		-288	
Loans for house purchase:												
Building societies	27.1						+23,593		-415	-23,178		
Other	27.2	+153	-313	-9	-169	+10,893		+5,804		-16,528		
Other public sector lending	28	+254	+40	-2	+292	—	—	—	-124	+21	-189	
Other lending by financial institutions	29			—	—		+280	+1,122	-759	-643		
Unit trust units	30							+540		-540		
UK company securities	31	-6,192	+118	-74	-6,148	-2,379	-2,889	+6,370	-2,254	-2,046	+9,346	
Overseas securities	32	—		—	—	+1,734	—	+5,952	+5,553	+2,904	-16,143	
Life assurance and pension funds	33	-869			-869			-20,927		+21,796		
Miscellaneous domestic instruments	34	—	-88	+88	—	-123	+257	+1,968	-3,385	-276	+1,559	
Direct and other investment abroad	35					-552	—	+428	+9,549	-30	-9,395	
Overseas direct and other investment in the United Kingdom	36					-339		+24	-3,541	-445	+4,301	
Miscellaneous overseas instruments	37	-174		+49	-125	-39	—	+781	-3,445		+2,828	
Accruals adjustment	38	+1,306	-276	-225	+805	-47	-499	-2,101	+162	+1,680		
Financial transactions	39	**+4,866**	**-1,140**	**+ 611**	**+4,337**	**+ 5,398**	**+ 2,896**	**- 133**	**-22,911**	**+ 6,258**	**+ 4,155**	
Balancing item	40	-54	+933	+787	+1,666		-5,978		+16,675	-20,753	+10,517	-2,127

Notes on definitions and seasonal adjustment

Introduction

A complete set of financial transactions tables and accompanying notes appears in the *Bulletin* only annually.[1] Annual flow of funds matrices accompany this article; the notes that follow relate particularly to these matrices. The quarterly matrix and financial transactions of the public, industrial and commercial companies, personal, overseas, building society, banks and building societies combined and other financial institutions sectors are updated in each issue and are numbered 19.1 to 19.8. In addition, a table of all financial institutions, numbered 19.9, is shown annually.

Further notes on the accounts, including information on sources, are provided bi-annually in the CSO's *Financial Statistics Explanatory Handbook.*

Definitions

Central government
Government departments, bodies and accounts (including Northern Ireland government departments), national insurance and other social security funds, the Exchange Equalisation Account, and the Issue Department of the Bank of England.

Local authorities
Public authorities and bodies making returns under the Local Government Acts.

Public corporations
Public enterprises, including the nationalised industries, which have a substantial degree of financial independence. A list of the bodies included in the sector is given in the CSO's publication *United Kingdom National Accounts* and in the CSO booklet 'Sector classification for the National Accounts'.

Banks
As in Table 6.1 in the statistical annex. This sector was known as the 'monetary sector' until mid-1989. It includes all offices in Great Britain and Northern Ireland of institutions authorised under the Banking Act 1987, together with those institutions in the Channel Islands and Isle of Man which have opted to come within the Bank's monetary control arrangements, and the Banking Department of the Bank of England.

Building societies
Institutions authorised under the Building Societies Act 1986.

Other financial institutions
Insurance companies; pension funds; investment trust companies; unit trusts; property unit trusts; non-bank credit companies; specialist finance leasing companies; securities dealers; venture capital companies; factoring companies; mortgage finance companies and other miscellaneous and specialist finance institutions — including those banking institutions in the Channel Islands and the Isle of Man which are not classified as banks above, bullion dealers not classified as banks, and certain institutions which lend abroad but do not take deposits from the public.

Industrial and commercial companies
All corporate bodies other than public enterprises, banks, building societies and other financial institutions.

Personal sector
Individuals, unincorporated businesses, and private non-profit-making bodies serving persons.

Overseas sector
Non-residents as defined for the balance of payments estimates.

Lines 1–4[2]
As defined in the national income and expenditure accounts.

Line 5
The sum of the financial surpluses/deficits for all sectors equals the residual error in the national accounts. For the overseas sector, the entry is the counterpart of the current account surplus or deficit in the UK balance of payments.

Line 6
Changes in Bank of England notes and in coin (both treated as liabilities of the central government) and in banks' liabilities on account of issues of Scottish and Northern Irish notes, other than changes in notes and coin held by the Banking Department, which are included in line 11. Changes in holdings of notes and coin by the private sector other than banks and building societies are divided in the ratio 1 : 10 between industrial and commercial companies and persons after adjusting to remove the estimated effect of the day of the week on which each quarter ends.

Line 7 and 8
The entries for Treasury bills under industrial and commercial companies are residuals and include any changes in personal and unidentified overseas holdings. Likewise, the entries for government securities under persons are residuals and include unidentified changes in holdings by industrial and commercial companies and by overseas residents. ECU-denominated Treasury bills are included in line 16.

Line 9
Deposits with the National Savings Bank and net sales of certificates and bonds including national savings certificates and premium bonds. (See also notes to Table 7 of the statistical annex.)

Line 10
Certificates of tax deposit.

Line 11
The Banking Department's holdings of government debt and bank notes, less its deposit liabilities to the National Loans Fund and the Paymaster General.

Line 12
Ulster savings certificates and Ulster development bonds (including accrued interest outstanding), and advances from banks. Northern Ireland borrowing from the European Investment Bank is in line 16.

Line 13
Entries here represent differences between the sterling originally obtained by local authorities and public corporations through foreign currency borrowings under the exchange cover scheme (ECS) and the sterling cost to the reserves of repayments at current market rates, which are treated as reductions in central government liabilities to local authorities and public corporations. Where certain of these public corporations were privatised subsequent to obtaining the ECS guarantee, the entry is attributed to the industrial and commercial companies sector.

Line 14
Line 14.1 includes deposits by the British Gas Corporation and British Airways with the National Loans Fund up to their privatisation in December 1986 and February 1987 respectively. Line 14.2 includes local authority liquid claims on industrial and commercial companies, other financial institutions and persons, plus public corporations' liquid claims on industrial and commercial companies, other financial institutions and overseas.

Line 15
Market transactions by the Issue Department of the Bank of England in commercial bills, ECGD backed paper and DTI shipbuilding scheme lending. Represents changes in central government claims on industrial and commercial companies, banks, other financial institutions and overseas

(1) 1990 February issue, 1988 November issue, 1987 August issue, prior to 1987 June issue.
(2) Line numbers refer only to Table F and Table 19.1 of the statistical annex.

residents. Such claims in respect of commercial bills are allocated by sector in proportion to total bank acceptances granted to each sector.

Line 16
Foreign currency borrowing by the central government from banks in the United Kingdom or from overseas under eurodollar facilities and from central monetary institutions abroad (including foreign currency deposits), transactions in British government foreign currency bonds, floating-rate notes and ECU-denominated Treasury bills, drawings from the IMF, and borrowing by the Northern Ireland Government from the European Investment Bank under the exchange cover scheme.

Line 17
All transactions with overseas which finance the central government borrowing requirement and which are not included elsewhere. This line includes sterling borrowing from governments or central monetary institutions with a sterling counterpart invested in Treasury bills, changes in IMF holdings of non-interest-bearing notes (other than those arising from drawings or subscriptions), allocations of special drawing rights and part of 'official short-term transactions' in the balance of payments.

Line 18
The sterling equivalent of changes in the gold and convertible currencies and special drawing rights held in the Exchange Equalisation Account, together with changes in the UK reserve position in the IMF.

Line 19
Temporary borrowing is money originally borrowed for less than twelve months, but includes all bills and bank overdrafts. Foreign currency borrowing includes lending by UK banks and overseas residents (both under the exchange cover scheme and non-guaranteed borrowing) including bonds. Sterling securities comprise local authority listed stocks and bonds. Other sterling debt includes borrowing from local authority pension funds, 'over-the-counter' bonds, mortgages, syndicated loans and borrowing from the Public Works Loan Board.

Borrowing from central government largely comprises loans from the Public Works Loan Board but also includes transactions in local authority debt by the Issue Department of the Bank of England and by the National Insurance Fund. Borrowing from public corporations is mainly temporary deposits. Banking transactions are generally based on banks' statistical returns but these do not provide a breakdown of market loans between temporary debt and other; figures for their transactions in temporary debt are from local authority returns and are thus suspect, for they may include transactions by banks acting as agents. Figures for industrial and commercial companies exclude any transactions in sterling securities. Transactions by the personal sector are residuals.

Line 20
Figures for the central government include public corporations' payments for the redemption of government-guaranteed stocks as well as central government lending to public corporations.

Line 21
Changes in sterling sight and time deposits and in foreign currency deposits of UK and overseas residents with banks. The entries for banks and industrial and commercial companies have been adjusted by deducting 60% of the change in total sterling net debit transit items. Transactions in certificates of deposit and other paper of not more than five year's original maturity issued by banks are included here. In the quarterly seasonally adjusted matrix (Table 19.1), line 21.4 consists of overseas deposits with banks less banks' lending to overseas, excluding banks' transactions in overseas securities.

Public sector borrowing requirement
Lines 6 to 21 are transactions financing the public sector borrowing requirement, so their total is equal to the PSBR.

Line 22
This covers shares, deposits, and receipts of SAYE by building societies, and represents receipts by the societies, together with interest credited, less withdrawals. Transactions in certificates of deposit and other paper of not more than five years' original maturity, issued by building societies are included here as are time deposits, on which interest is paid gross.

Line 24
Banks' advances and overdrafts, market loans and transactions in commercial bills; excludes ways and means advances (by the Banking Department, line 11), loans for house purchase (included in line 27), lending to the Northern Ireland Government (line 12), to local authorities (line 19), and to public corporations (line 20) and holdings of sterling commercial paper (line 21 if issued by banks; line 22 if issued by building societies; line 34 if issued by other UK residents or line 37 if issued by overseas residents). Recorded advances to industrial and commercial companies are adjusted by adding 40% of the change in total sterling net debit transit items (see also line 21).

Line 25
Changes in hire purchase and certain other forms of credit granted by department stores, durable goods retailers, general mail-order houses and other general stores. The figures exclude unpaid bills (trade credit) and credit extended by other types of retailer. The figures for the public sector relate to credit granted by gas (up to their privatisation) and electricity showrooms.

Line 26
Domestic trade credit includes amounts owing on unpaid gas and electricity accounts and telephone bills, as well as credit given by central government trading bodies. Import and export credit comprises suppliers' trade credit and advance and progress payments on exports and imports and refinanced export credit. No estimates are available for other kinds of trade credit.

Line 27
New loans less repayments for house purchase and improvements, by building societies, local authorities, other public sector bodies, insurance companies, pension funds and miscellaneous financial institutions, and by banks.

Line 28
Net lending by the central government to building societies, industrial and commercial companies, persons, overseas governments and international lending bodies. It also includes net lending by public corporations to the private sector (other than for house purchase).

Line 29
Includes instalment credit and other loans and advances by finance houses and other consumer credit companies; loans made to their parent organisation by private sector superannuation funds; and loans by insurance and special finance agencies. Loans by local authority and public corporation pension funds to their parent bodies are in lines 19 and 20.

Line 30
Net sales of units to persons by authorised unit trusts.

Line 31
All transactions in UK securities (except issues by banks and building societies with an original maturity of not more than five years which are treated as deposits), including capital issues and inward direct investment in the form of securities. The central government figures include special asset sales when these take the form of company securities. The banks' figures treat certain issues of loan stock by overseas subsidiaries, the proceeds of which are immediately repatriated to the parent, as if they had been issued in the United Kingdom. The figures for the personal sector are residuals, obtained as the difference between total capital issues and aggregate transactions by all other sectors. They are therefore subject to a wide margin of error.

Line 32
All transactions in overseas securities, including UK direct investment abroad in the form of securities. The figures for the personal sector are residuals and are thus subject to considerable error.

Line 33
In the national accounts, the net income of life assurance and pension funds is treated as belonging to the policy holders and contributors, and is therefore included in personal saving, whereas the funds themselves are classified as financial institutions. The net income is thus attributed to the personal sector, and is matched by entries in this line, representing increases in net claims on the funds by policy holders and contributors. There are also entries for net personal claims on the central government in respect of increases in funds under certain public sector schemes which are contributory, but where separate funds are not maintained.

Line 34
Transactions in domestic instruments not included elsewhere. For the public sector this comprises advance receipts for oil by the British National Oil Corporation and various transferred debts. For financial institutions the entries include amounts due to and from stockbrokers, borrowing by finance houses (except in the form of deposits), property unit trust units sold to charities, sterling commercial paper (other than that issued by banks or building societies), and assets and liabilities not separately identified in the reporting forms. Transactions in shares in retail co-operative societies between persons and companies are also included.

Line 35
Private direct investment abroad (other than in the form of securities — line 32), and oil and miscellaneous investment as in the balance of payments (less identified transactions in securities), less public corporations' investment abroad (line 37).

Line 36
Private direct investment in the United Kingdom (other than in the form of securities — line 31), and oil and miscellaneous investment in the United Kingdom as in the balance of payments, less UK oil company issues (also line 31).

Line 37
Miscellaneous transactions in the balance of payments which are not allocated elsewhere; comprising part of 'other official long-term capital (net)' and 'other official short-term transactions' in the balance of payments, net lending and investment abroad by public corporations, various short-term transactions overseas by other financial institutions, and discrepancies between figures from balance of payments and other sources (entered under industrial and commercial companies).

Line 38
The differences between the figures entered in the national income accounts on an accruals basis (such as local authority rates, various royalties and taxes, subsidies and other public sector receipts and expenditure, and interest flows) and the corresponding cash payments.

Line 39
The sum of lines 6 to 38.

Line 40
One estimate of gross domestic product is obtained by adding estimated factor incomes; another is obtained by adding expenditures on goods and services. Although in concept these estimates are identical, the sources for these calculations are different, and the totals differ by what is called the residual error. In the national accounts a balance is struck for each sector between current income plus capital transfers received and current plus capital expenditure; this is the financial surplus or deficit. Transfer items net out over all sectors, so the sum of the financial surpluses and deficits in line 5 is equal to the residual error. The corresponding totals of transactions in financial assets and liabilities for each sector are entered in line 39, where they sum to zero, because the entries for each of the constituent lines (6 to 38) have been made to sum to zero. (The entries in each line frequently stem from a common source — when two sources are available and provide different figures for the same sector, the one considered to be the best source is used, and one sector is sometimes used for a residual entry.) The differences between the estimated financial surplus or deficit for each sector and its identified financial transactions are entered as a 'balancing item'. The net total of the balancing items for all sectors equals the residual error. The balancing items may arise from errors and omissions either in income and expenditures or in financial transactions, and include the results of misallocations by sector.

Money stock
In the matrix:
the change in M4 = line 6 (persons, other financial institutions and industrial and commercial companies) plus line 21.1 (persons, other financial institutions and industrial and commercial companies) plus line 21.2 (persons, other financial institutions and industrial and commercial companies) plus line 22 (persons, other financial institutions and industrial and commercial companies).

Seasonal adjustments
The adjustments allow for purely seasonal movements and certain other factors, taking full account of the data up to the end of 1988.

Purely seasonal adjustments
For each item which displays seasonality, preliminary seasonal adjustments are obtained which sum to zero over the four quarters in each calendar year. Consistent adjustments are then estimated by a system of balancing under which, in any quarter, the sum of the adjustments for all sectors in any line entry is zero, and the sum of the adjustments for all line entries in any sector is zero (ie the adjustments are constrained to obey the same accounting principles as the unadjusted data).

Other adjustments
These are made to certain series (such as notes and coin) in order to remove some recurrent variations not adequately measured by moving-average seasonal adjustments (for example, the half-yearly pattern of petroleum revenue tax payments and distortions due to the calendar (such as the effect of the particular days of the week on which a quarter begins and ends, and of the proximity of Easter to the last working day in March), and distortions due to tax changes. Unlike the purely seasonal adjustments, the other adjustments may not add up to zero over a calendar year.