

'Real' national saving and its sectoral composition: a supplementary note

This note presents revised and updated estimates of sectoral saving and financial balances adjusted for the effects of price inflation on net monetary assets and liabilities, using the methodology set out in the Bank's Discussion Paper No. 6, *'Real' national saving and its sectoral composition* by C. T. Taylor and A. R. Threadgold.

In the discussion paper, it is argued that, to achieve a more complete inflation adjustment, measures of saving and income should reflect the effects of inflation on the real value of monetary assets and liabilities fixed in nominal terms.⁽¹⁾ In periods of high inflation, nominal interest rates tend to rise to compensate creditors, even if only partially, for the fall in the real value of their assets. Thus, actual interest payments comprise both an inflation compensation element, equivalent to the partial redemption of a loan, and a true or real interest payment, which, given that movements in nominal interest rates tend to reflect price changes only incompletely, is frequently negative. In line with the discussion paper, this note defines 'real' income to be the value which an individual could consume without any change in the real value of his net monetary assets. Accordingly, measures of income which include net interest receipts are adjusted to reflect real, rather than nominal, rates of interest, thereby reducing the measured income of net creditors and increasing that of net debtors. 'Real' saving is the difference between 'real' income and actual consumption.

Saving at 'current cost'

As an important preliminary, measures of saving are modified to allow for the cost of maintaining inventories and fixed-capital assets. Table A shows recent levels of saving, after providing for capital consumption at replacement cost and stock appreciation (at current cost in accounting terminology). The adjustment to constant prices using the implied consumers' expenditure deflator is crude, but provides a rough measure of saving in terms of the volume of consumption forgone. The results suggest that the volume of total national saving at 'current cost' was little changed between 1977 and 1978 and rose in 1979. Within the total, personal sector saving rose strongly in both 1978 and 1979, reflecting higher real disposable income and an increased tendency to save out of income. Partly offsetting this, there was greater dis-saving by general government, especially in 1978. After rising in 1978, saving by industrial and commercial companies fell sharply

in 1979, as the share of their total income accounted for by dividend payments, interest payments, and profits due abroad rose, largely reflecting, respectively, the abolition of dividend controls, higher interest rates and increased profits from North Sea oil. In contrast, financial institutions remained modest savers. Public corporations' dis-saving was small.

Adjustment for effects of inflation on monetary assets and liabilities

The method used in both the discussion paper and this note for calculating the size of the necessary adjustment is to apply the actual rate of inflation to the nominal value of the outstanding stock of net monetary assets⁽²⁾ and to adjust the conventional measures of saving and income by this amount. The price index used is the implied consumers' expenditure deflator (adjusted for exchange rate changes in the case of assets and liabilities denominated in foreign currencies).⁽³⁾ This provides a rough adjustment for the effects of general inflation only. No allowance is made for changes in the relative prices of different assets (non-monetary as well as monetary) or for changes in the market value of assets due to changes in real interest rates. A further problem is that the real interest rates implicit in these calculations are *ex post* figures which change abruptly with the rate of inflation, whereas an ideal measurement of income and capital would incorporate subjective expectations about the course of real interest rates, which probably evolve more smoothly over time. For these and other reasons, the figures for individual years should be treated with caution; the averages for periods of years are probably a more reliable guide.

Interpretation of the adjusted figures

The results of this process are shown in Tables B, C, D and E. These show that the United Kingdom as a whole has continued to benefit from the effects of inflation on its net external monetary liabilities. This was particularly so in 1977 and 1979, when, in addition to the effects of a rate of domestic price inflation in double figures, exchange rate appreciation eroded the sterling value of foreign currency monetary liabilities. 'Real' net external indebtedness⁽⁴⁾ has been reduced slightly since 1976.

The personal sector, a very large holder of net monetary assets, has persistently suffered from the erosion of their real value. In the years before 1976, persons were 'real' dis-savers. Since then, in contrast, personal sector

(1) See also the supplementary note on profitability and company finance, page 191.

(2) A 'natural' gearing adjustment in the terminology of company sector accounts. See the supplementary note on profitability and company finance.

(3) See the Discussion Paper No. 6 for a fuller discussion of the rationale for such adjustment and of the methodology.

(4) Monetary liabilities net of monetary assets. See 'An inventory of UK external assets and liabilities: end-1979', page 166, for a description of the total net external position of the United Kingdom in this period.

nominal saving has slightly more than compensated for the effects of inflation on the real value of the sector's stock of net monetary assets. The high rate of inflation in recent years may have made individuals more aware of the effect of general price rises on the value of assets fixed in nominal terms, and hence more assiduous in maintaining the real value of their monetary holdings.

On the other hand, the public sector, as a net debtor, has benefited from the effects of inflation on its monetary liabilities, especially as the major part of public sector debt takes the form of fixed-interest securities with fixed redemption values. Public corporations were the main beneficiaries from the effect of sterling appreciation on the sterling value of foreign currency liabilities in 1977 and 1979, although for the public sector as a whole this was at least partly offset by the fact that general government held net foreign currency assets in those years. Overall in recent years, this sector has been a large 'real' saver.

If the general government borrowing requirement (measuring the excess of payments over receipts on current and capital account, together with net lending to other sectors) is adjusted for the notional gain on the real value of general government debt (see Table F) and the adjusted figures are then taken as a proportion of national income, general government appears as a more important borrower in the years between 1976 and 1979 than in the previous four years; this is the opposite conclusion to that suggested by the unadjusted borrowing figures, but the adjusted percentages are, throughout the period, small.

The company sector as a whole has benefited from the effects of inflation on the real value of monetary liabilities, but these gains are small by comparison with those of the public sector. Within the total, financial institutions, as net asset holders, made a notional loss, but this was more than offset by the notional gain on the net liabilities of industrial and commercial companies.

Tables to this article appear overleaf.

Table A
Saving by domestic sector: 1977-1979

£ billions

	Personal sector			Industrial and commercial companies			Financial institutions			Public corporations			General government			Total		
	1977	1978	1979(a)	1977	1978	1979(a)	1977	1978	1979(a)	1977	1978	1979(a)	1977	1978	1979(a)	1977	1978	1979(a)
Saving	12.8	15.9	21.0	13.6	15.1	16.7	1.9	2.7	3.6	3.3	3.7	3.8	1.0	-1.2	0.7	32.6	36.2	45.8
less:																		
Capital consumption	4.3	5.5	6.3	6.2	7.4	8.6	0.5	0.6	0.8	4.1	4.7	5.0	1.8	2.0	2.2	16.8	20.2	22.9
Stock appreciation	0.8	0.8	1.2	3.8	3.0	6.9	—	—	—	0.3	0.3	0.6	0.1	0.1	0.1	5.0	4.2	8.8
Saving after providing for capital consumption and stock appreciation	7.8	9.6	13.6	3.6	4.7	1.1	1.4	2.1	2.8	-1.1	-1.3	-1.8	-0.8	-3.2	-1.6	10.8	11.9	14.0
Saving at 'current cost' deflated by the consumers' expenditure deflator to 1975 prices	5.8	6.7	8.4	2.7	3.2	0.7	1.0	1.5	1.7	-0.9	-0.9	-1.1	-0.6	-2.2	-1.0	8.1	8.2	8.6
Net capital transfers	0.1	0.3	0.1	0.3	0.4	0.3	-0.1	-0.1	-0.2	0.4	0.5	0.5	-0.6	-1.1	-0.8	-0.3	-0.8	-3.6
Residual error																		
Total saving after providing for stock appreciation and depreciation plus net capital transfers(b)	7.8	9.9	13.7	3.9	5.0	1.5	1.3	2.1	2.6	-0.7	-0.8	-1.3	-1.5	-4.3	-2.4	10.5	11.1	10.3

(a) Provisional and/or Bank estimates.

(b) Identified sector saving fails to add to the total because of the unallocated residual error.

Table B
Notional loss/gain on real value of net monetary assets/liabilities by sector: 1967-1979

£ billions

	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979(a)
Sectoral net monetary assets (+)/liabilities (-) mid-year estimates													
Personal sector	34.9	36.0	37.8	39.7	41.3	43.1	47.6	53.4	58.1	60.1	68.0	76.0	90.1
Company sector	- 3.8	- 4.6	- 5.3	- 6.1	- 6.2	- 5.5	- 5.8	- 8.4	- 8.4	- 6.9	- 6.1	- 4.0	- 4.6
Public corporations	- 8.9	- 9.9	- 9.9	- 11.2	- 12.2	- 12.9	- 13.7	- 15.4	- 17.8	- 21.0	- 23.5	- 24.9	- 26.3
General government	- 26.7	- 28.3	- 28.8	- 28.4	- 27.6	- 28.4	- 29.0	- 31.4	- 37.4	- 46.3	- 51.7	- 57.4	- 66.2(b)
Total domestic sector	- 4.5	- 6.8	- 6.2	- 6.0	- 4.7	- 3.7	- 0.9	- 1.8	- 5.5	- 14.1	- 13.3	- 10.3	- 7.0
Overseas sector(c)	..	4.4	4.7	4.8	3.6	3.0	4.2	6.3	7.3	10.0	10.9	7.9	9.3
Total (errors and omissions)	..	- 2.4	- 1.5	- 1.2	- 1.1	- 0.7	3.3	4.5	1.8	- 4.1	- 2.4	- 2.3	2.3
Change in consumers' expenditure deflator (Q4-Q4) (per cent)	2.3	5.7	5.0	7.1	7.9	7.6	10.0	20.0	23.5	14.1	12.4	8.3	15.3
Notional loss on net monetary assets (gain on net monetary liabilities)(d)													
Personal sector	- 0.8	- 2.0	- 1.9	- 2.8	- 3.3	- 3.3	- 4.7	- 10.7	- 13.7	- 8.5	- 8.4	- 6.3	- 13.8
Company sector	..	0.2	0.3	0.4	0.5	0.3	0.4	1.7	1.8	0.7	0.9	0.3	0.8
Public corporations	0.2	0.6	0.5	0.8	1.0	1.0	1.3	3.1	3.9	2.1	3.2	2.0	4.5
General government	0.6	1.6	1.4	2.0	2.2	2.3	3.0	6.3	8.9	6.5	6.2	4.8	9.6
Total domestic sector	..	0.3	0.3	0.4	0.4	0.4	..	0.4	0.9	0.8	1.9	0.9	1.2
Overseas sector:													
By residual	..	- 0.3	- 0.3	- 0.4	- 0.4	- 0.4	..	- 0.4	- 0.9	- 0.8	- 1.9	- 0.9	- 1.2
By calculation	..	- 0.1	- 0.2	- 0.3	- 0.3	- 0.1	- 0.2	- 1.2	- 0.9	1.0	- 2.0	- 0.6	- 2.2

.. not available.

(a) Bank estimates.

(b) Until end-March 1979, gold in the official reserves was included within general government monetary assets; since that date, when the method of valuation was changed to take account of market prices, gold is treated as a non-monetary asset.

(c) Net portfolio investment overseas (except for related trade credit) is treated as a non-monetary item.

(d) The notional loss or gain is not equal to the product (sign reversed) of sectoral net monetary assets/liabilities and the change in the consumers' expenditure deflator, because of the different deflator used for assets/liabilities denominated in foreign currencies. The rate of change of the consumers' expenditure deflator is taken net of the percentage change in the effective exchange rate (expressed in terms of foreign currency per unit of sterling). The resulting series used was:

	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Change in deflator (per cent)	- 5.0	- 3.2	5.5	6.8	8.6	- 2.0	1.3	19.5	10.4	- 8.4	18.2	7.4	24.1

Table C
'Real' saving and financial balances of UK domestic sectors: 1968-1979

£ billions

	Annual averages			1977	1978	1979(a)
	1968-1971	1972-1975	1976-1979(a)			
A Personal sector						
Saving(b)	1.4	4.4	9.6	7.8	9.9	13.7
less:						
Notional loss on real value of net monetary assets	-2.5	-8.1	-9.2	-8.4	-6.3	-13.8
'Real' saving	-1.1	-3.6	0.4	-0.6	3.6	—
Net acquisition of financial assets	0.8	3.7	9.3	7.4	9.7	13.3
less:						
Notional loss on real value of net monetary assets	-2.5	-8.1	-9.2	-8.4	-6.3	-13.8
'Real' net acquisition of financial assets	-1.8	-4.4	0.1	-1.0	3.4	-0.4
B Company sector						
Saving(b)	2.1	2.8	5.1	5.1	7.1	4.1
plus:						
Notional gain on real value of net monetary liabilities	0.4	1.1	0.7	0.9	0.4	0.8
'Real' saving	2.5	3.9	5.8	6.0	7.4	4.9
Net acquisition of financial assets	-0.2	-1.0	-1.8	-1.6	0.1	-4.9
plus:						
Notional gain on real value of net monetary liabilities	0.4	1.1	0.7	0.9	0.4	0.8
'Real' net acquisition of financial assets	0.1	—	-1.1	-0.7	0.4	-4.1
C Public corporations						
Saving(b)	-0.3	-0.7	-0.9	-0.7	-0.8	-1.3
plus:						
Notional gain on real value of net monetary liabilities	0.7	2.3	2.9	3.2	2.0	4.5
'Real' saving	0.5	1.6	2.1	2.5	1.2	3.2
Net acquisition of financial assets	-0.8	-1.5	-1.6	-1.2	-1.1	-1.8
plus:						
Notional gain on real value of net monetary liabilities	0.7	2.3	2.9	3.2	2.0	4.5
'Real' net acquisition of financial assets	-0.1	0.8	1.4	2.1	0.9	2.6
D General government						
Saving(b)	2.6	0.3	-2.6	-1.5	-4.3	-2.4
plus:						
Notional gain on real value of net monetary liabilities	1.8	5.1	6.8	6.2	4.8	9.6
'Real' saving	4.4	5.4	4.2	4.8	0.5	7.3
Net acquisition of financial assets	0.8	-2.9	-5.7	-4.6	-6.9	-5.4
plus:						
Notional gain on real value of net monetary liabilities	1.8	5.1	6.8	6.2	4.8	9.6
'Real' net acquisition of financial assets	2.6	2.2	1.1	1.7	-2.1	4.2
E Total domestic sector						
Saving(b)	5.8	6.8	11.3	10.8	11.9	14.2
plus:						
Notional gain on real value of net monetary liabilities	0.3	0.4	1.2	1.9	0.9	1.2
'Real' saving	6.2	7.2	12.4	12.7	12.8	15.3
Net acquisition of financial assets(c)	0.6	-1.3	-0.7	-0.2	0.9	-2.4
plus:						
Notional gain on real value of net monetary liabilities	0.3	0.4	1.2	1.9	0.9	1.2
'Real' net acquisition of financial assets	1.0	-0.9	0.4	1.7	1.8	-1.3

(a) Provisional and/or Bank estimates.

(b) After providing for stock appreciation and capital consumption at replacement cost, and plus net capital transfers.

(c) The sum of net acquisitions by individual sectors includes the residual error between national income and expenditure.

Table D
Overseas sector financial balance: 1968-1979

£ billions

	Annual averages			1977	1978	1979(a)
	1968-1971	1972-1975	1976-1979			
Net acquisition of financial assets	-0.5	1.6	0.7	+0.2	-0.9	+2.4
less: Notional loss on net monetary assets (calculated estimate)	-0.2	-0.6	-1.0	-2.0	-0.6	-2.2(b)
'Real' net acquisition of financial assets (calculated estimate)	-0.7	1.0	-0.3	-1.8	-1.5	0.2
'Real' net acquisition of financial assets (by residual from domestic sector)	-1.0	0.9	-0.4	-1.7	-1.8	1.3

(a) Provisional and/or Bank estimates.

(b) See footnote (d) to Table B.

Table E
Summary of nominal / and 'real' saving and financial balances by sector: 1968-1979(a)

£ billions

	Annual averages			1977	1978	1979(b)
	1968-1971	1972-1975	1976-1979(b)			
National income at market prices	45.8	73.5	136.0	126.0	144.0	162.6
'Real' national income(c)	46.2	73.9	137.1	127.9	144.8	163.7
Percentage of national income at market prices						
A Personal sector						
Saving:						
Nominal	6.1	10.1	11.3	10.2	11.0	12.9
'Real'	- 2.4	- 4.9	0.3	- 0.5	2.5	-
Financial balance:						
Nominal	1.7	5.0	6.8	5.9	6.7	8.2
'Real'	- 3.9	- 6.0	0.1	- 0.8	2.3	- 0.2
B Company sector						
Saving:						
Nominal	9.0	11.8	12.5	12.2	12.4	12.4
'Real'	5.4	5.3	4.2	4.7	5.1	3.0
Financial balance:						
Nominal	- 0.4	- 1.4	- 1.3	- 1.3	0.1	- 3.0
'Real'	0.2	-	- 0.8	- 0.5	0.3	- 2.5
C Public corporations						
Saving:						
Nominal	2.0	1.9	2.5	2.6	2.6	2.3
'Real'	1.1	2.2	1.5	2.0	0.8	2.0
Financial balance:						
Nominal	- 1.7	- 2.0	- 1.2	- 1.0	- 0.8	- 1.1
'Real'	- 0.2	1.1	1.0	1.6	0.6	1.6
D General government						
Saving:						
Nominal	7.4	1.9	0.1	0.8	- 0.8	0.4
'Real'	9.5	7.3	3.1	3.8	0.3	4.5
Financial balance:						
Nominal	1.7	- 3.9	- 4.2	- 3.7	- 4.8	- 3.3
'Real'	5.6	3.0	0.8	1.3	- 1.5	2.6
E Total domestic sector						
Saving:						
Nominal	24.2	25.7	26.3	25.9	25.1	28.2
'Real'	13.4	9.7	9.0	9.9	8.8	9.3
Financial balance:						
Nominal	1.3	- 1.8	- 0.5	- 0.2	0.6	- 1.5
'Real'	2.2	- 1.2	0.3	1.3	1.2	- 0.8

(a) Nominal saving here is saving *before* providing for stock appreciation and capital consumption and additions to reserves.

(b) Provisional and/or Bank estimates.

(c) National income at market prices plus the notional gain on net external monetary liabilities.

Table F
General government borrowing requirement: 1968-1979

£ billions; borrowing -

	Annual averages			1977	1978	1979
	1968-1971	1972-1975	1976-1979			
Nominal general government borrowing requirement	-1.1	-5.4	-8.4	-4.7	-9.0	-12.1
<i>As a percentage of national income at market prices</i>	-2.4	-7.3	-6.2	-3.7	-6.3	-7.4
less:						
Notional gain on net monetary liabilities	1.8	5.1	6.8	6.2	4.8	9.6
'Real' general government borrowing requirement	0.7	-0.2	-1.6	1.6	-4.2	-2.5
<i>As a percentage of 'real' national income at market prices</i>	1.5	-0.3	-1.4	1.3	-2.9	-1.5