B EC(88)G2
(A'-2' A²-D²)

H M Treasury
Parliament Street London SW1P 3AG
Switchboard 01-270 3000
Direct Dialling 01-270 4360

Sir Peter Middleton KCB
Permanent Secretary

Covering SECRET

P Gray Esq
10 Downing Street
LONDON
SW1

7 July 1988

Dear Paul

TREASURY ECONOMIC FORECAST

... I enclose two copies of this year's summer forecast, one for the
... Prime Minister and one for Brian Griffiths. I also enclose a note on the effects of a faster rise in interest rates than that assumed in the forecast. As usual, these copies are on a personal basis for the Prime Minister, Brian Griffiths, Nigel Wicks and yourself only.

Yours ever,
Stephen

S D H SARGENT
Private Secretary

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TREASURY FORECAST : EFFECTS OF A FASTER RISE IN INTEREST RATES

The June forecast assumed a gradual rise in base rates, of ½ per cent per quarter, to reach 10½ per cent in April 1989. This note sets out the implications for activity, inflation and MO growth of a quicker rise than this.

2. Table 1 shows the interest rate assumptions for both the main forecast and for a variant assuming a quicker rise in base rates. This exercise assumes that the higher interest rates between now and the beginning of next year go with the same exchange rate path as in the main forecast.

TABLE 1 : INTEREST RATES

	June Forecast		Variant	
	Base rate	Mortgage rate	Base rate	Mortgage rate
1988				
July	9	9¾	9½ then 10	9¾
August	9	10½	10½	11¾
September	9	10½		
October	9½	10½		
November	9½	11		
December	9½	11		
1989				
January	10	11		
February	10	11½		
March	10	11½		
April	10½	11½		
May	10½	12		
June	10½	12		

3. It is worth bearing in mind that base rates at 10 per cent are already 1 per cent higher than the level assumed in the forecast for the whole of the third quarter. The short term prospects for the mortgage rate and RPI inflation are therefore already less favourable than in the June forecast, even before the effects of a further rise in base rates, to 10½ per cent, are considered.

(i) Activity effects

4. Because the difference between the two cases is in the timing of the rise in base rates the overall economic effects are fairly

modest. With the higher interest rates consumers' expenditure and real GDP are approximately ¼ per cent lower in 1988. The effects on the current account and the PSDR come through after a short lag, so that most of the effects are in 1989, when both the current account deficit and the PSDR are between £¼-½b. lower (on the assumption that the exchange rate is fixed).

(ii) Inflation effects

5. With the exchange rate path the same as in the main forecast and little change in activity, the effect on the RPI of the faster rise in short term interest rates therefore depends critically on the behaviour of the mortgage rate. (The RPI less mortgage interest payments is little changed in the variant.)

6. The current level of mortgage rates is not sustainable and lenders have now begun to announce increases. With base rates at 10 per cent some large societies' mortgage rates are now below base rates compared to a normal positive differential of 1¼-1½ points. The reason for this is clear; changing rates is costly and societies have been waiting for further developments. But even without another rise in base rates those societies which have not already done so, are likely to announce changes in rates to existing borrowers effective from August 1. With no further rise in base rates from 10 per cent our judgement, based on informal contacts with the Bank and earlier with the Building Societies Association, is that mortgage rates will probably rise by around 1½ points. Should a further rise in base rates to 10½ per cent occur before 1 August, or be considered probable during August, mortgage rates would probably move by two points. This is the assumption in the variant This compares with the June forecast, which had mortgage rates reacting, with one month lags, to half point rises in base rates occurring on the first day of each quarter. (The final level of 12 per cent for mortgage rates in the June forecast, reached in May 1989, is ¼ point higher than that in the forecast variant. This is because the establishment of the full 1½ point differential between base and mortgage rates embodied in the June forecast is not thought likely in the light of the latest information.)

7. Table 2 shows the monthly path for RPI inflation. With the earlier rise in the mortgage rate in the variant, inflation reaches

5¾ per cent in the third quarter of 1988 (including the crucial uprating month of September) and goes above 6 per cent in the first quarter of 1989. But the boost to RPI inflation also drops out more quickly than in the June forecast. By the Autumn of 1989 the monthly profile is lower in the variant than in the June forecast. From the second quarter of 1990 the two inflation paths would be identical.

TABLE 2 : RPI INFLATION

	June forecast	Variant
1988		
August	5.1	5.7
September	5.1	5.7
October	5.0	5.5
November	4.8	5.2
December	5.6	5.9
1989		
January	5.6	5.9
February	5.9	6.2
March	5.9	6.2
April	6.1	6.1
May	6.2	6.2
June	6.3	6.3
July	6.4	6.4
August	6.0	5.3
September	6.0	5.3

(iii) Effects on MO

8. Table 3 shows monthly profiles for MO growth through 1988-89 on the basis of the June forecast and on the alternative basis of a quicker rise in base rates. Note, however, that the June outturn for MO appears likely, on latest data, to be around 0.4 per cent higher than assumed in the forecast. This provisional outturn has been incorporated in table 3, and the 0.4 per cent uplift has been projected forward throughout the whole of 1988-89.

9. Table 3 shows that the effect of a quicker rise in base rates is to reduce annual MO growth by about ¾ percentage point by the end of 1988-89, with the annual rate falling to 3¾ per cent in March 1989 compared to 4½ per cent under the June forecast.

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TABLE 3

MONTHLY MO FORECASTS

(percentage change on year earlier, seasonally adjusted data)

	JUNE FORECAST	QUICKER RISE IN BASE RATES	DIFFERENCE (col.1-col.2)
1988			
June*	7.3	7.3	0.0
July	6.4	6.4	0.0
August	6.3	6.3	0.0
September	5.7	5.6	0.1
October	5.2	5.0	0.2
November	5.2	4.9	0.3
December	4.7	4.2	0.5
1989			
January	4.7	4.1	0.6
February	5.0	4.3	0.7
March	4.5	3.8	0.7

*provisional data

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TREASURY ECONOMIC FORECASTING EXERCISE

JUNE 1988

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TREASURY ECONOMIC FORECASTING EXERCISE

The forecast covers the period to 1990 (1990-91 for public finances), embracing two of the three years of the Public Expenditure Survey. For the first time it assesses the implications of the reforms of Local Authority finance, including the introduction of the Community Charge.

2. Table 1 summarises the forecast. The annex compares the main results with the average of outside forecasts.

(i) 1988 should see growth of **real GDP** of 4 per cent and **money GDP** of almost 10 per cent, as in 1987. Both real and money GDP growth fall in 1989 and 1990.

(ii) **Domestic demand** growth rises from the 4 per cent recorded for 1987 to almost 6 per cent in 1988. It falls thereafter as the investment boom eases and as assumed tighter monetary conditions and lower cuts in personal taxation than in recent years restrain consumers' expenditure.

(iii) Following the small recorded deficit for 1987, the **current account** deficit widens to £9½b. (2 per cent of GDP) in 1988 and £10b. in 1989. There is a small fall in the deficit thereafter as domestic demand decelerates.

(iv) **RPI** inflation rises to 5 per cent in 1988Q4 and 6¼ per cent in 1989Q2. Much of this rise is the result of the assumed increases in base and mortgage interest rates over the next year. RPI inflation excluding mortgage interest payments remains at between 4½ and 5 per cent from mid-1988 to mid-1989, before falling back.

(v) With activity very buoyant the **PSDR** (public sector debt repayment) in 1988-89 rises to £7½b. (1½ per cent of GDP). With the stylised assumption that the PSDR stays at this level in subsequent years there is scope for a reduction in the basic rate to 23 pence.

or higher increases in thresholds

or - the best option - a lower PSDR

(1) MAIN RESULTS

The World economy

3. Growth of **world trade and output** picked up strongly in the second half of 1987, and the signs are that this buoyancy continued in the first half

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TABLE 1 : SUMMARY OF FORECAST

	AUTUMN STATEMENT 1987	JANUARY 1988	FSBR 1988	JUNE 1988
A THE WORLD ECONOMY				
1. GNP (MAJOR 7 EXCLUDING UK) (per cent change on a year earlier)				
1987	2½	2.8	2.8	2.8
1988	2	2.5	2.6	4.0
1989		1.7	2.4	2.8
1990			3.1	2.7
2. DOMESTIC DEMAND (MAJOR 7 EXCLUDING UK) (per cent change on a year earlier)				
1987	2¾	3.0	3.1	3.1
1988	2	2.8	2.5	4.0
1989		1.8	2.1	2.7
1990			2.8	2.6
3. WORLD TRADE IN MANUFACTURES (per cent change on a year earlier)				
1987	3¾	5.3	5.5	6.0
1988	4	6.0	4.9	10.0
1989		4.1	4.3	5.0
1990			6.6	5.2
B UK ACTIVITY AND DEMAND				
4. GDP VOLUME (non-North Sea in brackets) (per cent change on a year earlier)				
1987	4(4½)	4.3(4.7)	4.3(4.8)	4.3(4.7)
1988	2½(3)	3.1(3.6)	3.2(3.6)	3.9(4.3)
1989		2.4(2.7)	2.6(3.0)	2.9(3.2)
1990			2.5(3.0)	2.0(2.3)
5. VOLUME OF DOMESTIC DEMAND (per cent change on a year earlier)				
1987	4	3.9	4.2	4.1
1988	3½	4.3	4.2	5.8
1989		2.6	3.3	3.1
1990			3.1	1.6
6. UNEMPLOYMENT (UK S.A. EXCLUDING SCHOOL LEAVERS million)				
1987 Q4	2.73	2.66	2.66	2.64
1988 Q4	2.71	2.41	2.41	2.32
1989 Q4		2.34	2.41	2.24
1990Q4			2.45	2.32

	AUTUMN STATEMENT 1987	JANUARY 1988	FSBR 1988	JUNE 1988
C INFLATION AND MONEY GDP				
7. MONEY GDP (MARKET PRICES) (per cent change on a year earlier)				
1987-88	8½	9.9	9¾	9.8
1988-89	7¼	7.5	7½	10.0
1989-90		7.0	6½	7.9
1990-91			6	6.1
8. RPI (excluding mortgage interest payments in brackets) (per cent change on a year earlier)				
1987 Q4	4(3.7)	4.1(4.0)	4.1(4.0)	4.1(4.0)
1988 Q4	4½(4.4)	4.0(3.8)	4.0(3.9)	5.0(4.5)
1989 Q4		4.4(4.2)	3.0(2.7)	5.6(4.5)
1990 Q4			3.4(3.5)	4.1(3.6)
9. GDP market price deflator (per cent change on a year earlier)				
1987-88	4¼	5.0	5	5.1
1988-89	4½	4.8	4½	5.7
1989-90		4.6	4	5.2
1990-91			3½	4.0
D PUBLIC FINANCES				
10. PSBR - £ billion				
1987-88	1.0	-2.8	-3.1	-3.5
1988-89		-3.4	-3.2	-7.4
1989-90		-3.7	0	-7.4 not enough
1990-91			0	-7.4
11. PSBR - % OF GDP				
1987-88	¼	-¾	-¾	-¾
1988-89		-¾	-¾	-1½
1989-90		-¾	0	-1½
1990-91			0	-1½
12. ANNUAL FISCAL ADJUSTMENT - £ billion				
1988-89		4.0	0	0
1989-90		2.4	3.7	2.7
1990-91		0.5	0.7	0.7

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	AUTUMN STATEMENT 1987	JANUARY 1988	FSBR 1988	JUNE 1988
E MONETARY CONDITIONS				
13. SHORT TERM INTEREST RATES (per cent))				
1987 Q4	9.5	9.2	9.2	9.2
1988 Q4	9.5	9.5	9.0	9.5
1989 Q4		9.5	8.8	10.5
1990 Q4			8.4	10.5
14. MO (per cent change on a year earlier)				
1987-88	4.9	5.1	5	4.9
1988-89	4.3	5.0	1-5	5.1
1989-90		3.0	1-5	1.9
1990-91			0-4	0.9
15. STERLING INDEX (1975=100)				
1987 Q4	72.5	74.9	74.9	74.9
1988 Q4	72.5	77.4	75.5	76.7
1989 Q4		76.0	74.4	74.3
1990 Q4			74.1	72.9
16. £/DM EXCHANGE RATE				
1987 Q4	2.95	2.99	2.99	2.99
1988 Q4	2.94	2.96	3.00	3.05
1989 Q4	2.87	2.88	2.92	2.90
1990 Q4			2.87	2.80
17. RELATIVE UNIT LABOUR COSTS (1980=100)				
1987	75.1	75.5	76.5	76.7
1988	75.4	79.8	79.5	82.1
1989		80.5	80.4	80.8
1990			80.7	80.1
F TRADE AND CURRENT ACCOUNT				
18. VOLUME OF NON-OIL EXPORTS OF GOODS (per cent change on a year earlier)				
1987	6¾	7.0	6.8	6.7
1988	3	4.3	4.2	2.8
1989		3.6	3.6	6.5
1990			5.4	5.0
19. VOLUME OF NON-OIL IMPORTS OF GOODS (per cent change on a year earlier)				
1987	7	7.9	8.5	8.4
1988	4¾	6.4	6.4	9.5
1989		3.3	4.4	6.1
1990			4.9	3.2
20. CURRENT BALANCE £ billion				
1987	-2½	-2.5	-1.7	-1.6
1988	-3½	-4.6	-3.9	-9.3
1989		-5.3	-4.6	-10.1
1990			-4.3	-9.0

1988. Output and demand have not accelerated as a result of any discretionary loosening of fiscal policy, though real interest rates have fallen and there has been a large rise in international liquidity. While commodity prices continue to rise sharply, consumer price inflation remains low.

4. Even with some slowdown from now on, year on year growth in 1988 will be high, with Major 7 GNP growing by 4 per cent and world trade in manufactures by 10 per cent. Growth should slow in later years, but remain in line with potential. Only a small rise in consumer price inflation is likely. The current account imbalances of the US, Japan, and Germany fall further, though they remain large. The real exchange rates of the major currencies are assumed to remain unchanged. The main risk to this forecast is that growth and inflation could be somewhat stronger in the near future and fall off rather more thereafter.

UK activity

5. Large discrepancies within the national accounts and distortions to trade data make interpretation of recent movements in output and demand difficult. During the last two years the expenditure measure of GDP has grown much more slowly than the output or income measures, and the residual error has increased by 2 per cent of GDP. There are as well massive discrepancies - or "balancing items" - within the sectoral financial accounts, which for both the personal and the industrial sectors amount to between 4 and 5 per cent of GDP. The introduction of the single administrative document (SAD) probably distorted the data for visible trade at the beginning of the year.

6. The tentative conclusions that can be drawn from the statistical fog are as follows.

(i) Trade and production data suggest some moderation in output growth, particularly in manufacturing, during the latter part of 1987 and the beginning of 1988. CBI survey results are consistent with some, though not much, slowdown in growth in manufacturing over this period, but in general suggest more buoyant output than the official statistics. It is more difficult to know what has been happening to manufacturing output since the apparent moderation in growth at the turn of the year. Growth could be picking up in the middle of 1988, notwithstanding fears of capacity shortages and the sharp fall in net exports.

(ii) **Domestic demand** growth was very strong between the first and second halves of 1987, and appears to have grown more strongly in the first half of 1988 than envisaged at budget time. The available indicators show that consumers' expenditure has continued to grow briskly and investment growth has picked up.

7. Domestic demand is expected to grow by just under 6 per cent in 1988. This would be well up on the FSBR forecast for 1988 and recorded growth for 1987, and the highest rate since 1973. DTI and CBI surveys point to investment growth of 10 per cent or more. Consumers' expenditure is forecast to rise by 6 per cent, boosted by budget tax cuts and sustained consumer confidence. There are no signs that the personal sector is yet taking steps to raise the savings ratio from the low levels recently recorded. Even with a significant fall forecast for net exports in 1988 the strength of domestic demand is such that GDP should grow by 4 per cent. If net exports were to fall by even more than forecast in 1988 growth would be below 4 per cent, even with the strong forecast for domestic demand.

8. Growth of domestic demand and output should moderate in 1989 and 1990, though it is not possible to be confident about the precise timing. Consumption growth eases, though the lagged effects of the 1988 tax cuts and the assumed further cut in the basic rate to 23p in the 1989 budget keep RPDI growth high by historical standards. Investment growth falls after 1988, while net exports make little contribution to growth.

<u>The balance of payments</u>

9. The underlying **current account deficit** has almost certainly widened over the last eighteen months. The deterioration of measured competitiveness and high domestic demand growth together contributed to the sluggish underlying growth of export volumes over the turn of the year, at a time when world trade was growing rapidly. Because output in the tradeable goods industries has continued to rise, albeit at a slower rate, this moderation of export growth probably reflects some switch of sales to the more profitable home market rather than serious capacity constraints. Nevertheless booming domestic demand has led to a very strong rise in import volumes. Strong domestic growth and less favourable competitiveness have adversely affected the balance of trade in services.

10. The forecast discounts a good deal of the poor first quarter performance. Nevertheless the underlying current account deficit widens further from now on as domestic demand continues to grow rapidly and as the lagged effects come through of the recent loss of measured competitiveness - now close to its level before the oil price fall in 1986

d the associated sterling depreciation. The current account deficit is forecast to be £9½b. in 1988 and £10b. in 1989, after which it falls slightly as domestic growth moderates. By 1989 imports are about 20 per cent higher than exports so that exports have to grow by 1½ per cent more than imports just to keep the visible trade deficit constant.

Financial Conditions

11. At the moment sterling remains strong despite a widespread recognition that current account prospects have deteriorated. Indeed strong capital inflows have probably contributed to the deterioration in the current account through the strong exchange rate and the resulting deterioration in measured competitiveness over the last year. The forecast assumes that some of sterling's present strength is temporary, and envisages a fall to DM3.00 by mid 1989 and DM2.80 by end 1990. This produces an exchange rate index of just under 73.0 at the end 1990. The effect of this fall in the exchange rate on the overall monetary stance is more than offset by assumed rises in base rates to 10½ per cent over the next year. These contribute to slower growth in domestic demand and prices, and cause MO growth to fall towards the lower half of the MTFS ranges. The assumed pattern of interest rates and exchange rates allows the current account deficit to be financed by a combination of reduced net direct and portfolio outflows, and by substantial increases in overseas sterling bank deposits.

Inflation and money GDP

12. RPI inflation excluding mortgage interest payments has edged above the monthly profile consistent with the FSBR forecast. With the rise in mortgage rates assumed over the next year total RPI inflation rises to 5 per cent in 1988Q4 and 6¼ per cent by 1989Q2 (4 per cent for both periods in the FSBR). Excluding mortgage interest rates RPI inflation is 4½ per cent in 1988Q4 and 4¾ per cent in 1989Q2.

13. With earnings growth a little higher than in 1987, unit labour costs in manufacturing rise by 2-2½ per cent in 1988 and 1989, and somewhat faster thereafter, as productivity growth moderates. Profit margins are expected to rise at about the same rate in 1988 as in 1987, to be virtually flat in 1989, and to fall in 1990 as costs increase and activity slows down.

14. Growth of the GDP deflator has been revised up to 5 per cent for 1987-88. The forecast is for growth of 5¾ per cent in 1988-89 and 5¼ per cent in 1989-90, above the MTFS assumptions for both years. (The recent rise in the exchange rate does not have the short run moderating effect on

the GDP deflator as it does on RPI inflation.) High (and in 1988, rising) earnings growth, and the effect of the investment boom on prices of capital goods (notably for construction) are important factors behind the higher rises than in the 1988 MTFS. The revisions to output and inflation imply much higher than expected **money GDP** growth - 10 per cent in 1988-89 and 8 per cent in 1989-90 (7½ and 6½ per cent respectively in the MTFS).

Public finances

15. Stronger demand and activity together with the first monthly data suggest that the **PSDR** in 1988-89 could be greater than forecast at budget time. Central government revenues are well up, the forecast outturn for the planning total excluding privatisation proceeds is in line with plans, and there could be an extra £1b. privatisation receipts. With a PSDR of £7½b. there would be a small public sector financial surplus (ie a negative PSFD) for the first time since 1970-71. (The FSBR forecast a small deficit for 1988-89.)

16. The higher forecast level of activity has important implications for public finances in 1989-90. Profits appear still to be growing rapidly. Corporation tax receipts in 1989-90 should therefore be a good deal higher than previously forecast. With upward revisions to those revenues that depend on current demand and activity **the pre-fiscal adjustment tax burden** should continue to rise. But these effects may have worked through by 1990-91, leaving the pre-fiscal adjustment tax burden flat.

17. It is particularly difficult to assess the prospects for **public expenditure** in 1989-90 and 1990-91. Recent forecasts of public expenditure have, if anything, tended to be a little too high, while money GDP has been underestimated, hence unexpectedly large falls in the share of public expenditure in GDP. On the other hand the pressures for additional public expenditure over the next two years appear to be extremely powerful. Even after allowance for the downward pressure on demand-led expenditure from the strong projections for economic activity, the forecast projects overruns on the current plans for 1989-90 and 1990-91 of £2½ billion and £5½ billion respectively (planning total excluding privatisation proceeds). These still leave the share of GGE (excluding privatisation proceeds) in GDP falling over the forecast period from a lower 1988-89 base than in the FSBR.

18. Even with a large planning total overrun the rise in the pre-fiscal adjustment tax burden means that tax cuts are feasible in 1989-90. Assuming that the PSDR in 1989-90 stays close to its forecast outturn for 1988-89 - 1½ per cent of GDP - there is a **fiscal adjustment** of £2¾b,

= a 5ye PSDR

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sufficient for 2p off the basic rate. The non-North Sea tax burden is roughly stable after this assumed cut. With the PSDR, by assumption, kept at the same high level in 1990-91 there is no further cut in the basic rate, but even so the tax burden does not rise.

19. The ex post fiscal stance - as measured by the general government financial deficit, the only internationally comparable indicator - has continued to tighten in the UK relative to the rest of the G7 and is now probably tighter even than in Japan.

TABLE 2 : GENERAL GOVERNMENT FISCAL DEFICITS (per cent of GDP)

	1986	1987	1988	1989	1990
UK*	2.6	1.0	0	-½	-½
G7 (less UK)	3.1	2.5	2½	2¼	2

*Financial years.

(2) THE WORLD ECONOMY

20. The fall in stockmarkets in October has had little apparent effect on world activity so far. In the major industrialised countries output grew particularly strongly in the second half of 1987, with no loss of momentum in the first quarter of 1988. Growth of business investment, exports, and industrial production has been especially rapid. The upswing in investment is expected to be shorter and less strong than previous upswings because the preceding weakness of activity was only modest. Even so, the projected year-on-year real GNP growth rate of 4 per cent in 1988 for the major seven (excluding the UK) has been exceeded only once in the last ten years (in 1984).

TABLE 3 : G7 (EXCLUDING UK) GROWTH AND INFLATION

Percentage changes on a year earlier	1987	1988	1989	1990
Real GNP	2.9	4.0 (3)	2.8 (2½)	2.7
Domestic demand	3.1	4.0 (3)	2.7 (2½)	2.6
Industrial production	3.1	6.5	4.4	3.8
Consumer prices	2.5	3.0 (3)	4.1 (3¼)	3.6

Note: Figures in brackets are OECD published forecasts for G7 including UK.

21. Non-oil commodity prices are rising very rapidly - spot prices, measured in SDRs by the Economist Commodity Price Index, rose almost 50 per cent in the last year. But they had previously fallen to historically low levels in real terms, so their recovery is expected to give only a modest boost to consumer price inflation. There is, however, the possibility that activity will be stronger than forecast and higher pressure of demand could mean faster inflation.

22. The recent strengthening of activity appears to have been world wide and total world trade picked up sharply towards the end of 1987 and is forecast to continue to grow strongly in 1988. World trade in manufactures could grow by as much as 10 per cent in 1988 if imports by the SE Asian NICs continue to expand strongly and other developing countries' imports recover as expected.

TABLE 4 : THE VOLUME OF WORLD TRADE IN GOODS (IMPORTS)

Percentage changes on a year earlier	(Share of 1986 imports)	1987	1988	1989	1990
Total world trade	(100)	5	9 (8)	5 (6)	5
of which:					
- Major seven	(54)	6	9 (8)	4 (5)	4
- OPEC	(5)	-10	7 (-1)	1 (4)	2
- NICs	(6)	23	18 (26)	12 (21)	12
- Other NODCs	(9)	-	7 (5)	4 (6)	4
Total world trade in manufactures		6	10 (8)	5 (7)	5

Figures in brackets are latest OECD forecasts.

(3) TRADE AND THE BALANCE OF PAYMENTS

23. The latest estimates of the current account show a deficit of £2¾ billion in the first quarter of 1988, and a cumulative deficit of nearly £3½ billion in the first four months, compared with a deficit of £1½ billion in the whole of 1987. The deterioration in the visibles balance during 1987 continued into early 1988, and the preliminary estimate of invisibles in the first quarter shows a sharp fall in the surplus to £1.2 billion compared with a quarterly average of £2.0 billion in 1987.

24. Underlying trends in export and import volumes have been particularly hard to discern in recent months. Since December the recording of exports has been affected by the change to new Customs procedures on 1 January.

Also, the suspicion that there is residual seasonality in the published figures for both exports and imports has been strengthened by the recorded falls in trade volumes in the first quarter of 1988, an established pattern over the last few years. Both factors have probably reduced recorded trade volumes below their underlying levels in the first quarter. The net effect on the current account is probably small, but the published first quarter figures may slightly overstate the size of the deficit.

TABLE 5 : ADJUSTMENTS FOR RESIDUAL SEASONALITY AND FOR TIMING DISTORTIONS

(£b. 1980 prices)

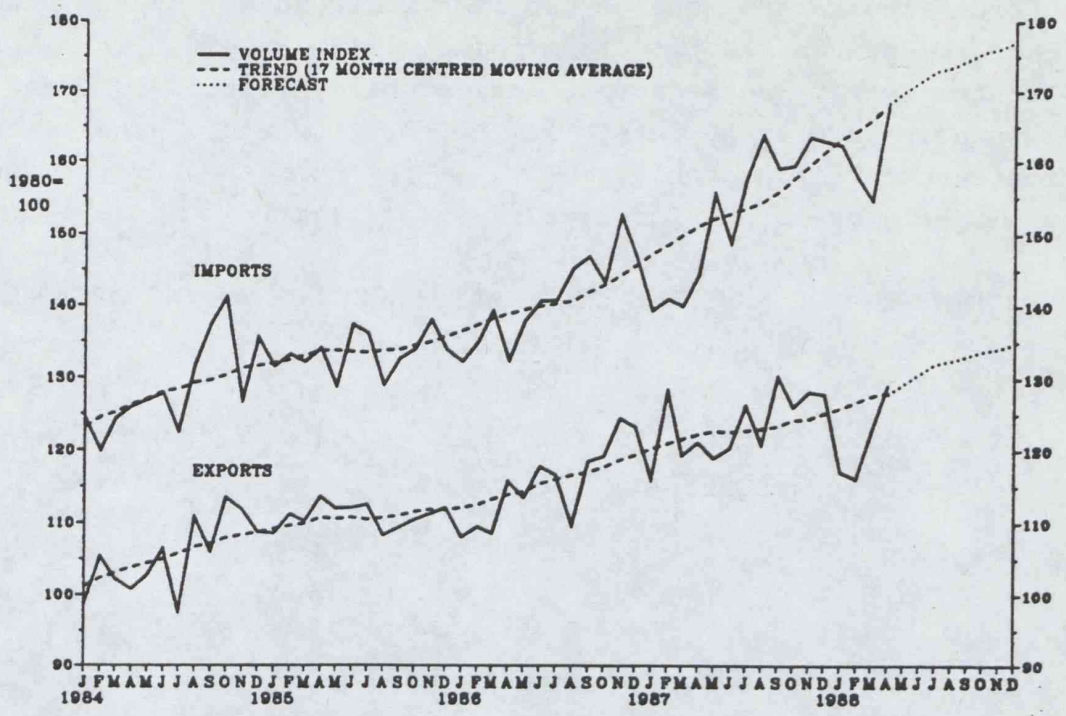
		Non-oil exports				Non-oil imports		
		Published	Adjustments for Customs 88	Adjustments for Season-ality	Under-lying	Published	Adjust-ment for season-ality	Under-lying
1987	1	12.4		+0.1	12.5	14.0	+0.2	14.2
	2	12.3			12.3	14.9	+0.05	15.0
	3	12.9			12.9	16.0	-0.15	15.8
	4	13.1	-0.3	-0.1	12.7	16.2	-0.1	16.1
1988	1	12.2	+0.3	+0.1	12.5	15.8	+0.2	16.0

25. Allowing for these distortions, it appears that the growth of export volumes has slowed since the autumn, despite the very rapid growth of world trade. This conclusion is supported by data for manufacturing output in the first quarter, which show slower growth, especially in engineering industries where the fall in exports has been largest. Responses to CBI surveys - in particular to the question on export optimism - are also now pointing to slower growth in exports.

	Percentage balances, seasonally adjusted					
	1987				1988	
	Jan	Apr	July	Oct	Jan	Apr
Optimism about export prospects over next 12 months	18	17	29	17	-8	-11

This suggests that the steady deterioration in cost competitiveness has begun to have a significant effect on exports. The recent fall in imports can probably be accounted for almost entirely by seasonality; the trend still seems to be strongly upwards.

CHART A : TRENDS IN NON-OIL EXPORT AND IMPORT VOLUMES



26. Against a background of rapid UK domestic demand growth and the worsening in competitiveness since last year, some further deterioration in the underlying non-oil visible balance is forecast through the rest of 1988. The oil surplus is expected to fall as a result of a lower sterling oil price and lower oil production. The forecast of the invisibles surplus in 1988 heavily discounts the first quarter outturn, but still shows a fall of around £1 billion compared with 1987. The current account deficit in 1988 is therefore forecast to be £9½ billion.

27. In 1989 the current account deficit is forecast to widen further to £10 billion, as domestic demand continues to grow faster in the UK than in other countries. In later years a slowdown in UK domestic demand growth, following the projected rises in interest rates, and increases in the invisibles surplus are sufficient to bring about a small reduction in the deficit. While this forecast has much larger current account deficits than in earlier exercises, the increases are accounted for by higher domestic demand and less favourable measured competitiveness. The underlying supply performance is no worse than assumed in earlier exercises.

N

BLE 6 : UK CURRENT ACCOUNT (£ billion)

	Visibles balances			Total visibles	Invisibles	Current balance
	Manufactures	Oil	Other			
1986	-5.3	4.1	-7.2	-8.5	8.6	0.1
1987	-6.5	4.2	-7.3	-9.6	8.1	-1.6
Recent quarterly data						
1987 1	-0.7	1.2	-1.6	-1.2	2.2	1.0
2	-1.6	1.0	-1.8	-2.3	2.1	-0.2
3	-2.1	0.9	-1.9	-3.1	2.2	-0.9
4	-2.1	1.1	-1.9	-3.0	1.6	-1.4
1988 1	-2.9	0.9	-2.0	-4.0	1.2	-2.8
Forecast						
1988	-11.7	3.1	-7.7	-16.3	7.0	-9.3
1989	-13.2	2.8	-8.4	-18.9	8.8	-10.1
1990	-13.2	2.5	-8.5	-19.3	10.3	-9.0

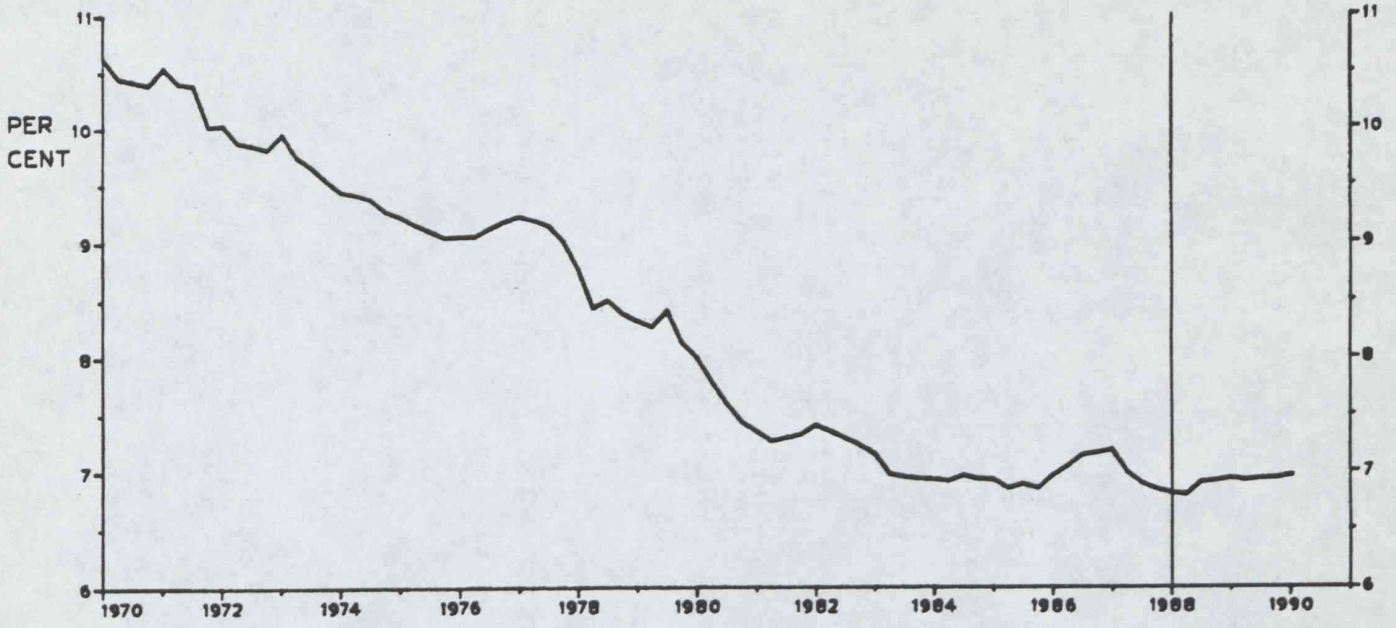
Non oil visible trade

28. The volume of manufactured exports rose by 8½ per cent during 1987 as the lagged benefits of improved competitiveness in 1986 helped UK manufacturers gain an increased share of world trade. However, in the year to the first quarter of 1988, when world trade was growing particularly strongly, recorded manufactured exports were flat. The forecast has given considerable weight to the possibility that the recent sluggishness of exports partly reflects erratic data, and assumes a strong recovery in the second quarter of 1988, in line with the latest monthly data. Nevertheless, with competitiveness expected to be 7 per cent less favourable in 1988 than in 1987 and world trade forecast to grow by less than 5 per cent through 1988, manufactured export volume growth is expected to slow to 4½ per cent in 1988. This implies a substantial loss of world trade share in 1988.

TABLE 7 : COMPETITIVENESS

	Relative unit labour costs	
	1980=100	Per cent change on a year earlier
1985	85.0	1.9
1986	78.5	-7.6
1987	76.7	-2.3
1988	82.1	7.1
1989	80.8	-1.6
1990	80.1	-0.9

CHART B:SHARE OF UK EXPORTS IN TOTAL WORLD TRADE IN MANUFACTURES



29. The volume of imports of manufactures rose sharply during 1987, reflecting strong growth of domestic demand, the loss of competitiveness and, possibly, in recent months the effects of tightening capacity. As a result the annual growth rate for imports of manufactures is expected to rise from 10 per cent in 1987 to 12½ per cent in 1988. However, through 1988, and in 1989 and 1990, import growth slows as domestic demand growth eases.

TABLE 8 : DOMESTIC DEMAND AND TRADE VOLUMES
(per cent change on previous year)

	Domestic demand volumes		Non-oil trade volumes		Manufactures trade volumes	
	G7 less UK	UK	Exports	Imports	Exports	Imports
1986	3.7	3.8	4.0	5.7	3.1	5.7
1987	3.1	4.1	7.1	8.4	8.5	9.8
1988	4.0	5.8	3.8	10.4	4.3	12.5
1989	2.7	3.1	7.1	6.8	7.3	8.1
1990	2.6	1.6	5.4	3.4	5.6	4.3

30. The appreciation of sterling over the past year is likely to contribute to an improvement in the terms of trade in 1988. Little further change in the manufactures terms of trade is expected over the forecast period, despite the steady projected depreciation of sterling. This is consistent with the broad stability of the manufactures terms of trade since 1981.

31. The manufactures trade deficit is expected to widen to £11½ billion in 1988, compared with £8½ billion at an annual rate in the second half of

87, as the rapid growth of import volumes relative to export volumes more than offsets the expected improvement in the terms of trade. Although import growth slows in the later years, and is lower than export growth in 1990, this is insufficient to reduce the manufactures deficit. By 1989 the deficit is forecast to have widened to nearly 20 per cent of manufactured exports, compared with 10 per cent in 1987 and 5 per cent in 1985.

32. The deficit on trade in **non-manufactures** was little changed at £7¼ billion in 1987, as falls in world prices of food and basic materials offset the effect of strong growth in the volume of imports relative to exports. The rapid rises in commodity prices forecast for 1988 and 1989 are likely to lead to a rise in the deficit over the next two years, especially in 1989 when the projected depreciation of sterling contributes to the worsening in the non-manufactures terms of trade.

Oil trade

33. The **oil trade surplus** rose slightly in 1987 as a rise in the oil price and a fall in UK demand for oil more than offset the decline in North Sea output. The surplus is forecast to fall steeply in 1988, largely as a result of a lower sterling oil price, though falling production and a recovery in demand for oil also contribute. The surplus falls further in 1989 and 1990 reflecting a continuation of the trends in demand and production.

TABLE 9 : NORTH SEA OIL

	Average North Sea oil price		N Sea output	Oil trade balance	N Sea* taxes
	$/barrel	£/barrel	mm tonnes	- £ billion -	
1986	14.2	9.7	127	4.1	4.8
1987	17.9	10.9	123	4.2	4.7
1988	16.5	9.0	120	3.1	3.6
1989	17.0	9.3	115	2.8	3.7
1990	17.7	9.8	110	2.5	3.4

* Financial years.

Invisibles

34. Latest estimates show a very sharp deterioration in the **invisibles balance** between the third quarter of 1987 and the first quarter of 1988. This is largely accounted for by a decline in the services surplus, reflecting a fall in the surplus on financial and other services, as net insurance earnings have fallen back, and a rise in the travel deficit reflecting high expenditure overseas by UK residents. Net IPD earnings in

the first quarter of 1988 were close to their average level in 1987, but the transfers deficit was erratically large.

35. The low outturn for invisibles in the first quarter of 1988 means that, even with a strong recovery forecast for the rest of the year, the invisibles surplus for 1988 as a whole is likely to be around £1 billion lower than in 1987.

TABLE 10 : INVISIBLES £ billion

	Services	Oil IPD	Non-oil IPD	EC transfers	Other transfers	Total invisibles	Estimated net overseas assets (end-year)
1986	5.7	-1.3	6.3	-0.7	-1.5	8.6	113
1987	5.8	0.5	5.3	-1.8	-1.6	8.1	92
1988	4.7	0.7	4.9	-1.4	-2.0	7.0	92
1989	5.7	1.4	5.5	-1.8	-2.0	8.8	94
1990	6.4	1.7	5.9	-1.8	-2.0	10.3	95

36. The **services surplus** is forecast to recover during the remainder of 1988, but only to around the average quarterly level in 1987. There seems little prospect of any substantial further improvement before 1990. High RPDI and favourable relative prices should lead to continued rises in holiday expenditure abroad, and there may be associated increases in expenditure on foreign airlines. The levelling out in net insurance earnings points to slower growth in the financial surplus than in recent years.

37. Net oil IPD earnings should continue to rise, as the fall in production reduces payments abroad by North Sea oil companies. However, the surplus on non-oil IPD seems likely to fall a little in 1988 largely as a result of the appreciation of sterling, which reduces the sterling value of earnings. In 1989 and 1990 the non-oil IPD surplus is expected to recover, in part because the forecast depreciation of sterling helps offset the effect on net overseas assets of the current account deficits. As a result **net overseas assets** are forecast to remain close to their end 1987 level of £90-95 billion throughout the forecast period. (In SDRs net overseas assets fall.) **Net transfers** abroad are expected to remain at around £3½ billion in 1988, but to rise slightly in 1989. This includes a forecast of EC transfers which takes account of the Brussels agreement.

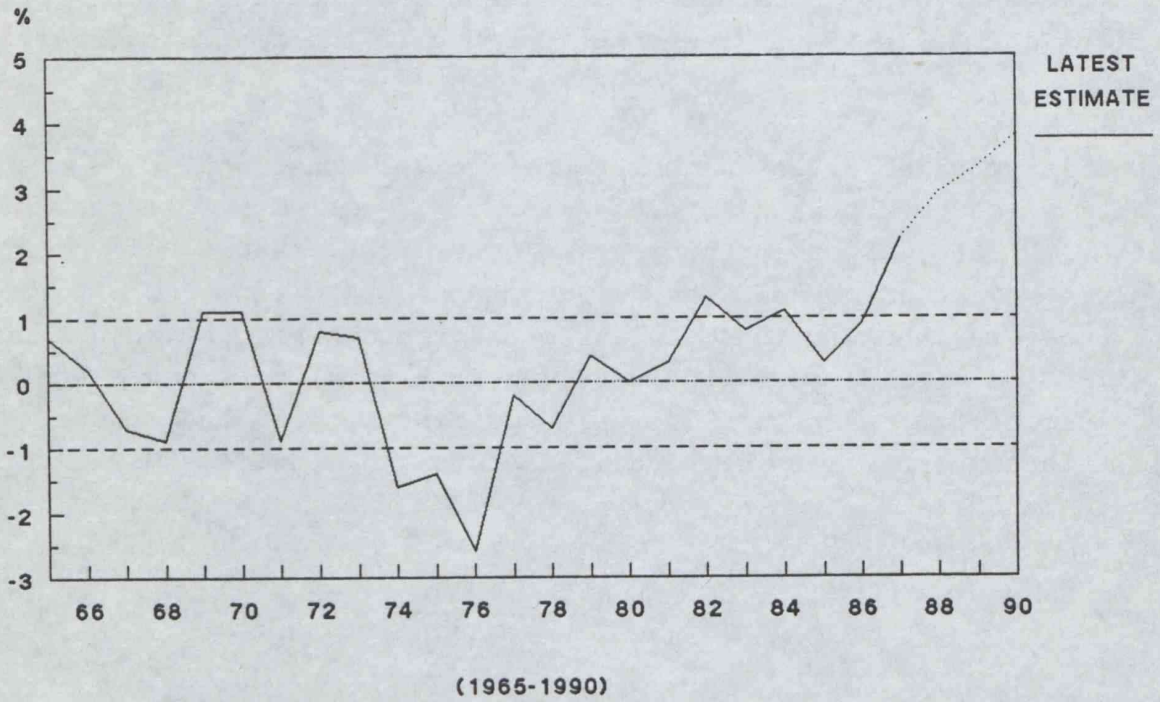
DOMESTIC DEMAND AND ACTIVITY

The State of the National Accounts

38. The forecast incorporates latest estimates for GDP in 1987 and first estimates for 1988Q1, published on June 21. (These are the last to be based on 1980 prices; the 1988 Blue Book and estimates for 1988Q2 will incorporate volume estimates at 1985 prices.) The latest data confirm the increasing disarray in the national accounts. The general incoherence of recent statistics presents considerable difficulties in interpreting economic developments, and increases the margins of error around the forecast. Some of the more acute difficulties are discussed here.

39. The difference between the current price income (GDP(I)) and expenditure (GDP(E)) measures of GDP is the **residual error**. Over the last three years, nominal GDP(I) has grown considerably faster than nominal GDP(E), continuing a trend since the late 1970s. The residual error has risen from around ½ per cent of GDP(E) in 1985 to around 2½ per cent at the start of 1988.

CHART C: RESIDUAL ERROR AS A PROPORTION OF GDP(E)



(1965-1990)

40. There are analogous problems with real GDP estimates. The average measure of GDP (GDP(A)) has been the principal indicator of overall economic activity. The difference between GDP(A) and GDP(E) is the **compromise adjustment**. However, the disparities between GDP(A) and the

other measures of GDP have become particularly acute over the last three years. (See Table 11 and Chart D.) Recorded GDP(E) volume growth over the year to 1987Q4, was around 2 per cent lower than the income and output estimates. There is no sign that the discrepancies have begun to narrow. First estimates for 1988Q1 show that the compromise adjustment has widened further. There must be a strong presumption that real expenditure growth, especially domestic demand, has been much stronger over the last two years than official statistics reveal.

The residual error and compromise adjustment in the forecast

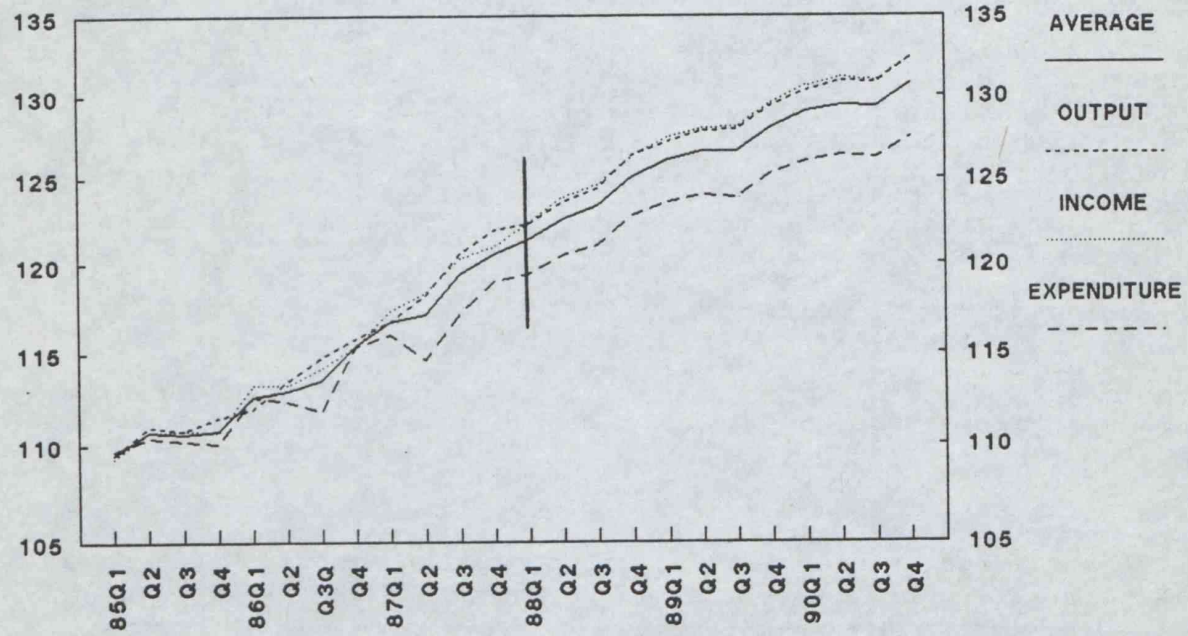
41. Previous forecasts have extrapolated the **residual error** as a constant proportion of nominal GDP(E). This convention would imply a sharp slow down in growth of income in 1988 relative to expenditure, a striking reversal of behaviour over the last three years. Most of this relative slow down in income would arise solely from the judgement on the residual error, since the total of expenditure components is forecast to grow at broadly the same rate in 1988 as in 1987. Among other things, slower income growth would involve gross trading profits growing substantially more slowly in 1988 than over the last three years, despite the fact that profit margins continue to rise in the forecast, and demand and activity remain buoyant. The forecast has, therefore, broken with previous conventions and has extrapolated some increase in the residual error. (See Chart C).

42. A similar problem arises with the **compromise adjustment.** The forecast has usually assumed that all three measures of real GDP will grow broadly in line with the expenditure measure over the future, ie that the compromise adjustment would be a constant proportion of GDP(E). The present forecast, however, has projected a rising compromise adjustment in line with the trend over the 1980s, about ¼-½ per cent per annum. This partly discounts the particularly rapid widening between the measures over the last three years. If anything, therefore, the forecast may understate the growth in GDP(A).

Table 11: GDP GROWTH per cent change on a year earlier

		GDP(O)	GDP(I)	GDP(E)	Average measure of GDP(A)	Compromise adjustment (% of GDP(E))
	1984	3.3	2.1	1.8	2.5	0.6
	1985	3.8	3.2	4.0	3.6	0.3
	1986	2.9	3.5	2.6	3.0	0.6
	1987	4.8	4.6	3.3	4.2	1.5
	1987Q4	5.4	5.0	3.2	4.4	1.3
	1988Q1	4.8	4.4	2.9	4.0	1.8
Forecast	1988	3.9	4.4	3.5	3.9	1.9
	1989	3.3	3.3	2.8	3.1	2.2
	1990	2.4	2.3	1.9	2.2	2.5

CHART D: REAL GDP - OUTPUT, INCOME, EXPENDITURE AND AVERAGE, 1980=100



Sectoral financial data

43. The national accounts measures sectoral financial deficits and surpluses (or net acquisitions of financial assets - NAFA) from income and expenditure data. Separate and independent estimates of the deficits/surpluses are derived in the financial accounts from analysis of financial flows. Table 12 shows that the two methods produce very different pictures. The national accounts show the personal sector moving into very

large deficit in 1987, while the company sector has built up a large surplus in recent years. The financial accounts suggest that the personal sector position has been a good deal stronger (with a significant surplus in 1987, though lower than in previous years), and that the industrial and commercial company sector was actually in deficit in recent years.

TABLE 12 NET ACQUISITIONS OF FINANCIAL ASSETS (NAFA)* (£billion)

		1985	1986	1987	1988	1989	1990
Persons	National Accounts	6.5	0.7	-6.7	-11.9	-14.9	-14.7
	Financial Accounts	16.6	16.4	13.3	5.6	4.0	5.3
	Balancing Item	-10.1	-15.7	-20.0	-17.5	-19.0	-20.0
ICCs	National Accounts	6.1	6.4	12.2	8.0	8.3	10.9
	Financial Accounts	- 0.1	- 0.5	- 4.5	- 2.0	- 2.7	- 1.1
	Balancing Item	6.2	6.9	16.7	10.0	11.0	12.0
FCs	National Accounts	1.5	5.3	6.6	7.7	9.7	10.4
	Financial Accounts	1.4	6.7	- 3.2	- 6.8	- 5.9	- 8.0
	Balancing Item	- 0.1	- 1.4	9.8	14.5	15.6	18.4
Total Prvt Sector	National Accounts	14.1	12.4	12.1	3.8	3.1	6.6
	Financial Accounts	17.9	22.6	5.6	- 3.2	- 4.5	- 3.8
	Balancing Item	- 3.8	-10.2	6.5	7.0	7.6	10.4
Public Sector	National Accounts	-10.1	- 8.8	- 5.1	+ 1.9	+ 2.3	+ 2.3
	Financial Accounts	-10.3	-9.5	- 5.9	+ 5.1	+ 1.3	+ 1.3
	Balancing Item	0.2	0.7	0.8	- 3.2	1.0	1.0
Overseas Sector	National Accounts	- 3.3	- 0.1	1.6	9.3	10.0	9.0
	Financial Accounts	- 7.8	-12.3	1.4	2.0	5.0	4.0
	Balancing Item	4.5	12.2	0.2	7.3	5.0	5.0
GDP Residual error	(Sum of balancing items)	0.8	2.7	7.5	11.0	13.7	16.4

* Table not completely consistent : following publication of national accounts estimates, CSO will not be providing fully reconciled sectoral accounts until 27 June.

44. These separate estimates of personal sector NAFA have markedly different implications for the personal savings ratio. National accounts data show that recorded growth in personal sector spending has persistently outstripped growth in recorded personal disposable income over the last eight years. The savings ratio has fallen from an average of 14 per cent in 1980 (a post-war peak, after a steady upward trend since the 1940s) to 4½-5½ per cent over the second half of 1987 and early 1988. The fall in the savings ratio has been especially steep over the last two years, which runs counter to long run historic experience. The savings ratio normally rises when growth in RPDI is above trend.

45. The financial accounts estimates, however, cast some doubt on the extent of the recorded fall in the savings ratio. If they are more correct, there are probably substantial unrecorded income flows (or, though this is less likely, lower spending) for the personal sector, and the savings ratio will have been rather higher than official estimates show.

46. The financial accounts suggest the opposite for the company sector, namely that spending (on investment and stocks) has probably been higher than the national accounts indicate. Company income could also be lower, though given recent corporation tax receipts, this, too, is less likely.

47. It is impossible to say which set of accounts are nearer the truth. For some sectors, where the procedures for recording income and expenditure are known to be poor (and the public sector is a good example), the financial data almost certainly give a better idea of the outcome. The opposite could well be the case with the personal sector. In the financial accounts the personal sector is the residual sector, so that all errors and omissions in the other sectors' financial accounts wash up here. Moreover they contain a potentially serious anomaly in that they include the transactions of some UK dealers in UK equities and gilts. On this latter account, at least, the financial accounts probably overstate the personal sector surplus.

48. For the forecast, it has been necessary to use the national accounts estimates. Nonetheless, the balancing items are projected to grow broadly in line with recent trends. This effectively gives some weight to the measures based on financial data.

Indicators of activity in the first half of 1988

49. Data for the first few months of 1988 present something of a conundrum. **Net exports** have probably fallen, even after making considerable allowance for distortions, and recorded **manufacturing output** flattened out between 1987Q3 and 1988Q1. Provisional estimates for manufacturing output in April show a marked pick-up, to the highest level since 1974. Some seasonal adjustment problems may have depressed the early numbers in 1988. Certainly they are lower than recent CBI output indicators and general optimism among manufacturers would suggest. On the other hand, the sluggish output figures in 1988Q1 are consistent both with developments in exports and, much more tentatively, with evidence from manufacturing employment.

50. Depressed manufacturing output contributed to a marked slow down in

growth in GDP(O) in the first quarter. It rose by ¼ per cent in 1988Q1, compared to 1 per cent in 1987Q4 and 1½-2 per cent in both 1987Q2 and Q3. Within the total, **construction output** is estimated to have risen 5½ per cent between 1987Q4 and 1988Q1, after 3½ per cent growth in each of the previous two quarters. This strong growth in construction is consistent with both evidence on housing starts and buoyant business investment in new buildings and works. The growth in construction by itself accounts for the growth in total GDP in 1988Q1.

TABLE 13 : LATEST INDICATORS OF ACTIVITY

	Manufacturing output (1980=100)	Retail sales volumes (1980=100)	New car registrations (000's)	Private sector housing starts (000's)
1980Q3	111.2	131.7	532.5	48.1
Q4	112.5	133.4	527.4	50.1
1988Q1	112.5	135.3	527.8	56.3
April	114.8	136.4	498.4[1]	52.8[1]
May	N/A	136.7	N/A	N/A

[1] At a quarterly rate.

51. **Domestic demand**, on the other hand, continues to be fairly buoyant. **Consumer spending** rose by around 1½ per cent in 1988Q1, the same as in 1987Q4, though a touch slower than the average 2 per cent in 1987Q3 and Q4. **Retail sales** volumes for April and May suggest the spending boom has continued into the second quarter of this year. **New car registrations** in the three months to April were lower than at the turn of the year, but still 10 per cent higher than a year ago. **Investment** has also picked up sharply. It rose by 3 per cent in the first quarter, after 4½ per cent growth in 1987Q4.

52. The conjunction of buoyant domestic demand, depressed exports and apparently slowing output growth present problems of interpretation, which are obviously exacerbated by the difficulties with the national accounts. If the output estimates and the depressed net export figures are broadly correct, then the supply side performance of the economy may have been worse than expected. This might imply that capacity constraints and overheating were emerging. If, on the other hand, output estimates understate actual growth (and, for manufacturing at least, CBI evidence suggests that they may), then depressed export growth may indicate that, while domestic demand growth is continuing apace, competitiveness pressures (associated with sterling appreciation) are depressing net exports.

5

53. The forecast puts more weight on the latter interpretation. There is little evidence of widespread capacity constraints. Recent CBI surveys point to very high capacity utilisation, but also report the view of companies that capacity is adequate to meet expected demand in 1988. In addition, with an investment boom already underway, capacity should not be a significant problem. Nor is there evidence of any strong pick-up in inflation, which has emerged on previous occasions of high capacity utilisation.

54. There are rather more signs that competitiveness may be inhibiting exports and output. In the manufacturing sector, the output of the investment goods sectors fell sharply in 1988Q1, (partly as a result of industrial disputes) despite strong investment. There was, however, some recovery of output in April. Car production fell and imports rose in the first few months of 1988, with both Ford and Vauxhall substituting imports for domestic production for competitiveness reasons, decisions possibly accelerated following earlier industrial disputes.

The Forecast

Personal Income and Expenditure

55. **Consumer spending** has grown faster than expected over the past three years. The most likely explanation is that lower inflation expectations, and increased wealth (especially increased housing wealth), have both reduced the perceived need for saving relative to income and increased the borrowing capacity of the personal sector. There has been increased demand for (and supply of) credit, following financial deregulation and greater competition among financial companies. With house prices expected to rise substantially through 1988, and a big increase in RPDI following the 1988 Budget tax reductions, the forecast has faster growth of consumer spending this year (6 per cent) than last (5 per cent). The recorded savings ratio is expected to fall slightly. With smaller tax reductions assumed for the 1989 Budget, a slow down in the growth of house prices, higher interest rates and slower growth in real earnings, consumer spending growth should moderate markedly in 1989. The savings ratio should then begin to pick up, though only slightly.

TABLE 14 : PERSONAL INCOME, EXPENDITURE AND SAVING

	Real personal disposable income	Real consumer' expenditure	Personal savings ratio
1985	2.4	3.8	9.4
1986	3.4	6.0	7.2
1987	3.3	5.2	5.4
1988	5.6	6.1	5.0
1989	3.2	3.8	4.4
1990	2.5	2.5	4.4

56. **Persons' investment in dwellings** is estimated to have increased considerably faster than personal disposable incomes in 1986 and 1987. Continued buoyancy in the housing market, now reflected in upward revisions to investment estimates for late 1987/early 1988, along with recent data on housing start and completions, point to a further substantial increase (14½ per cent) in 1988. However, higher mortgage rates and slower increases in RPDI are expected to lead to a slowdown in housing investment in 1989 and beyond.

Company Income and Expenditure

57. **Recorded business investment** was sluggish in 1987, rising by only 4½ per cent, after a fall of 3 per cent in 1986. But there are now distinct signs of a pick-up in investment around the end of 1987 and early-1988. The forecast for 1988 and 1989 is based largely on the June DTI Intentions Survey. This suggests a rapid increase in manufacturing investment in 1988 (about 16 per cent) with a further, but smaller, increase in 1989 (6½ per cent). The DTI Survey also points to fairly strong growth (about 11 per cent) in investment by the construction, distribution and selected service (including financial) industries in 1988, after a similar increase in 1987. Growth in these sectors slows to 5 per cent in 1989.

TABLE 15: GROSS DOMESTIC FIXED CAPITAL FORMATION (percentage changes on previous year)

	1986	1987	1988	1989	1990
Business	- 3.2	4.7	11.1	4.4	0.5
of which:					
North Sea	-15.1	-21.6	7.9	8.0	12.3
Manufacturing	- 5.4	4.3	16.4	6.2	- 3.6
Other business*	- 2.2	6.9	9.3	2.8	1.1
Private dwellings	4.9	6.7	10.3	- 0.5	0.1
General government	6.8	- 4.5	8.4	- 0.1	3.2
Total Investment	- 0.3	3.9	10.6	2.8	0.7

* Includes public corporations

Though stockbuilding was very high in 1987H2, it increased only slightly in 1987 as a whole. The forecast assumes that the long run decline in stock-output and stock-sales ratios continues. This gives stockbuilding of £1-1¼b. (1980 prices) in both 1988 and 1989.

59. Non-North Sea industrial and commercial companies' profits net of stock appreciation showed further strong growth (about 20 per cent) in 1987. Since 1984 profits growth has averaged 26 per cent a year. With buoyant domestic demand and output growth in 1988 allowing some further growth in margins, 1988 should be another good year for profits with growth of 17-18 per cent. Profits may grow more slowly in 1989 and beyond as economic activity slows down. Margins are expected to rise only slightly in 1989 and to fall back a little in 1990. Despite the rise in company sector spending, ICCs net acquisition of financial assets remains in comfortable surplus throughout the forecast. Net company income, which approximates the Corporation Tax base, grows more slowly in 1988 and 1989 than in the previous two years.

TABLE 16: THE FINANCIAL POSITION OF COMPANIES

(a) Profit shares and rates of return

(per cent)	Total	Non-oil	Non-oil (excl privatised) companies	Rate of return on assets, non-oil ICCs*
1973-85 average	13.5	10.4	10.4	5.5
1986	17.2	14.7	13.5	9.0
1987	18.8	16.1	14.4	10.3
1988	19.2	17.3	15.5	11.8
1989	20.0	18.2	16.2	12.1
1990	20.2	18.5	15.8	11.9

(b) Growth of profits and net income (per cent change on a year earlier)

	Non-North Sea Industrial and Commercial Companies*		Financial Companies
	Gross Trading Profits**	Net Income	Net Income
1986	22.7(23.0)	27.0	24.6
1987	20.3(16.5)	30.4	18.8
1988	18.4(18.4)	17.3	17.4
1989	13.9(13.4)	10.3	11.1
1990	8.0(3.7)	4.5	6.9

* Figures in brackets show growth of profits adjusted to exclude the effect of newly privatised companies being included in the sector.

** Net of stock appreciation.

Sectoral surpluses and deficits

60. The forecast of sectoral surpluses and deficits, on a national accounts and financial accounts basis, is shown in Table 12. Continued fast growth in house prices in 1988 (over 20 per cent in 1988, slowing to around 10 per cent in 1989), sustained high levels of investment in dwellings and only small increases in the saving ratio mean that the **personal sector's net acquisitions of financial assets,** on a national accounts basis, will be in even larger defict in 1988 than in 1987 and remain in deficit throughout 1989-90. This is unprecedented since the 1950s. The company sector is expected to run persistent surpluses. The overseas sector reflects the forecast pattern of persistent current account deficits.

Aggregate Demand and Output

61. **Domestic demand** growth is likely to be substantially higher in 1988 than 1987. But GDP growth is expected to remain at 4 per cent in 1988 (4½ per cent excluding oil) due to weaker net exports of goods and services. GDP growth is likely to fall to 3 per cent (3½ per cent excluding oil) in 1989, and slow further in 1990.

TABLE 17: EXPENDITURE AND OUTPUT
(percentage changes on previous year)

	1986	1987	1988	1989	1990
Domestic demand	3.8	4.1	5.8	3.1	1.6
Export of goods and services	3.2	5.7	1.9	5.3	3.9
Import of goods and services	6.3	7.6	9.0	6.2	3.3
Compromise adjustment	0.3	1.0	0.5	0.3	0.3
GDP(A)	**2.9**	**4.3**	**3.9**	**2.9**	**2.0**
Non-oil GDP	2.9	4.7	4.3	3.2	2.3
Manufacturing	0.2	5.4	5.0	3.2	1.8

(5) PRICES AND EARNINGS

Producer Prices

62. **Producer prices (excluding food, drink, and tobacco industries)** rose by 4.8 per cent in the year to 1988Q1 with continued strong growth in profit

margins augmented by slowly rising unit labour costs. Producer price inflation is unlikely to ease significantly over the rest of this year. Domestic demand remains strong, so that margins continue to rise through 1988, though a little more slowly than through 1987. In addition, import costs are expected to increase as a result of strong growth in world commodity prices, and nationalised industry charges are expected to increase, after falling through 1987.

63. Producer price inflation is expected to be around 4¾ per cent by end-1988. It may fall back to about 4 per cent by end-1989, mainly because of an assumed slight squeeze on margins, as output and demand growth slows. Other upward pressures on producer prices through 1989 are quite strong, especially import prices and unit labour costs. (The latter are pushed up by a slowdown in productivity growth, as output growth itself moderates.)

TABLE 18 : COSTS AND PRICES IN MANUFACTURING
(percentage changes on previous year)

	Unit labour costs	Costs of materials and fuels	Estimated total costs	Domestic producer output prices*
1986 Q4	0.7	- 5.6	0.1	3.9
1987 Q4	1.6	5.8	1.3	4.9
1988 Q4	1.8	6.1	2.0	4.7
1989 Q4	3.9	3.1	4.6	4.0
1990 Q4	3.1	3.4	3.4	2.4

* Excluding food, drink and tobacco.

Retail Prices

64. RPI inflation is expected to pick up to 5 per cent by end-1988, as a result of higher mortgage rates and nationalised industry prices. It should rise further to around 6 per cent by mid-1989, with mortgage interest rates again the main impetus, though local authority rent and rate increases also contribute to the rise.

65. Thereafter, RPI inflation abates as mortgage interest rate increases introduced through 1988 and early 1989 drop out of the calculation.

TABLE 19 : COMPONENTS OF THE RETAIL PRICE INDEX

	1986Q4	1987Q4	1988Q4	1989Q4	1990Q4
Food prices	3.2	3.4	3.1	3.4	4.2
NI prices	3.6	2.3	7.2	5.7	4.5
Housing costs	7.1	7.0	10.8	14.2	8.5
Other prices					
- petrol	-12.6	1.3	2.0	3.7	2.7
- other items	3.9	4.0	3.8	4.0	2.8
Total RPI	3.4	4.1	5.0	5.6	4.1
RPI excluding Mortgage Interest payments	3.4	4.0	4.5	4.5	3.6

66. Table 20a sets out the detailed changes in nationalised industry prices assumed for domestic consumers over the year to 1987Q4 and 1988Q4, and table 20b gives real price increase over a run of financial years.

TABLE 20 NATIONALISED INDUSTRY PRICE INCREASES FOR CONSUMERS

(a) Nominal increases

(per cent)	Year to 1987 Q4	Year to 1988 Q4	Year to 1989 Q4	Year to 1990 Q4
Post	3.0	6.1	1.5	6.1
Rail	5.7	6.6	7.3	6.2
Electricity	- 0.5	8.6	5.2	4.1
Coal and coke	0.6	3.1	2.8	0.4
Bus	6.7	4.6	6.9	5.4
Water	6.9	8.1	7.6	6.2

(b) Real increases

(percent changes on previous financial year; weighted average for consumers and industry)

	Average 1983-84 to 1985-86	1986-7	1987-88	1988-89	1989-90	1990-91
British Coal	0.9	- 3.1	- 3.1	- 1.7	- 2.4	- 3.4
Electricity	- 3.1	- 2.0	- 3.8	2.9	0	0
BSC	- 1.4	- 2.0	- 2.9	- 3.2	- 2.4	- 2.4
Post Office	- 3.0	- 2.1	- 0.3	- 1.2	- 1.5	- 0.5
Water	1.9	4.5	2.3	2.7	2.0	2.0
LRT	- 6.1	2.2	2.1	4.6	2.6	1.5
British Rail	- 3.1	2.7	1.5	0.7	- 0.1	0.6

67. Increased nationalised industry prices will, by themselves, raise RPI

inflation in 1988Q4 by ¼ per cent compared with inflation in 1987Q4. Other influences underlying the RPI inflation outlook to 1988(4) are:

(i) **Gas prices** rose by 6 per cent in April after a 4½ per cent fall in 1987. (The difference is worth about ¼ per cent on total RPI inflation).

(ii) An 8½ per cent rise in average **domestic local authority rate poundage** this year, compared with 7¾ per cent last year (the difference is worth less than 0.1 per cent on inflation).

(iii) **Mortgage interest payments** add ½ per cent to inflation in 1988Q4.

68. All the above factors put upward pressure on inflation in the year to 1988Q4. They are only partially offset by a slow down in inflation in **other private sector prices**, which are projected to rise by 3¾ per cent in the year to 1988Q4, compared to 4½ per cent in the year to 1988Q2. There was a step increase in the rate in 1988Q2, mainly due to Budget measures. Other private sector price inflation edges up to 4 per cent by end-1989, largely because of rising import prices.

69. Table 21 below sets out the monthly RPI inflation path over the next twelve months, together with the path from the FSBR. Mortgage interest rate increases dominate the outlook. The profile assumes that the next rise in interest rates occurs in August, and at the beginning of each quarter up to 1989Q2. This pushes up the total from 4.7 to 5.1 per cent (excluding mortgage interest payments, inflation is constant). As in the FSBR, non-housing inflation is expected to rise to a plateau in the summer. The factors pushing it up in the short term are sharp increases in nationalised industry and gas prices, and a recovery in petrol prices. Petrol price inflation has been negative this year, but this is unlikely to last beyond June.

TABLE 21 MONTHLY PATH OF RPI INFLATION (annual percentage changes)

	All items RPI		RPI excluding mortgage interest payments	
	FSBR	June	FSBR	June
1988 Apr	3.6	3.9	3.9	4.2
May	3.9	4.2	3.9	4.4
Jun	4.2	4.5	4.1	4.7
July	4.2	4.7	4.2	4.9
Aug	4.3	5.1	4.2	4.9
Sep	4.2	5.1	4.2	4.9
Oct	4.0	5.0	3.9	4.6
Nov	3.8	4.8	3.7	4.4
Dec	4.2	5.2	3.8	4.4
1989 Jan		5.6		4.5
Feb		5.9		4.9
Mar		5.9		4.9

The GDP deflator

70. Recent revisions to the data have pushed up the market price GDP deflator for 1987-88 to 5.1, compared with 3.3 per cent in 1986-87. The low figure for 1986-87 was mainly accounted for by the collapse in oil prices during 1986. Latest estimates suggest a rise of 5.1 per cent in the year to 1988Q1. Given general domestic price and costs inflation prospects, it now looks as if the FSBR projections for GDP price inflation in 1988-89 are on the low side; the outturn could be over one point higher at about 5¾ per cent (6 per cent non-oil) compared with 4½ per cent in the FSBR (5 per cent non-oil). It is likely to be about 5¼ per cent in 1989-90, before moderating subsequently as demand slows down.

TABLE 22 : GDP DEFLATOR AT MARKET PRICES
(percentage change on previous year)

	1986-87	1987-88	1988-89	1989-90
MTFS				
Total	3.2	4.9	4.5	3.9
non-oil	6.0	4.3	4.9	3.6
June forecast				
Total	3.3	5.1	5.7	5.2
non-oil	5.9	4.6	6.0	5.1

W

Earnings

71. **Private sector settlements** averaged 5¼ per cent in the 1986-87 round, about ½ per cent lower than the previous round. In the manufacturing sector settlements were, on average, ¾ per cent lower than in the previous round. But settlements were clearly on an upward trend through the year to August 1987, and this upward trend seems to have continued. It seems most unlikely that total private sector settlements will turn out at less than 6½ per cent in the current round (their average at the end of the previous round). That is the forecast for 1987-88. But a small fall is expected in the 1988-89 pay round.

72. Overtime in manufacturing increased steadily through 1987. By January 1988 it was at record levels, contributing some 1 per cent to the 8¾ per cent growth in **private sector earnings** over the year. Since then overtime has come down as manufacturing output has slowed. But bonus payments and other drift contributed to an increase of 8¾ per cent in **manufacturing earnings** in the year to May 1988. Earnings growth should slow down towards the end of 1988 as output growth itself moderates. For 1989, the continued slow down in activity should lead to slower settlements and earnings increase.

TABLE 23 : PRIVATE SECTOR SETTLEMENTS AND EARNINGS

(Contributions to changes between third quarters of successive years)

	1986-87	1987-88	1988-89
Settlements	5¼	6½	5¾
Drift	2¼	2	2
Overtime	½	0	- ¼
Increase in average earnings	8	8½	7½

73. In the year to August 1987 **local authority earnings** grew rather more slowly than the private sector. Over the year to August 1988 they are more likely to grow a good deal faster. Teachers were paid 7½ per cent, as the second step of their 1987 settlement, from October and received another 1 per cent in April from restructuring. They received an increase of 4¾ per cent in April. Local authority manuals settled on a 10½ per cent increase. Other local authority workers face varied prospects. Overall, local authority earnings are likely to rise by 11½ per cent in the 1987-88 pay round (compared to about 8½ per cent in the private sector), and 8 per cent in the following round. They rise slightly faster than private sector settlements thereafter.

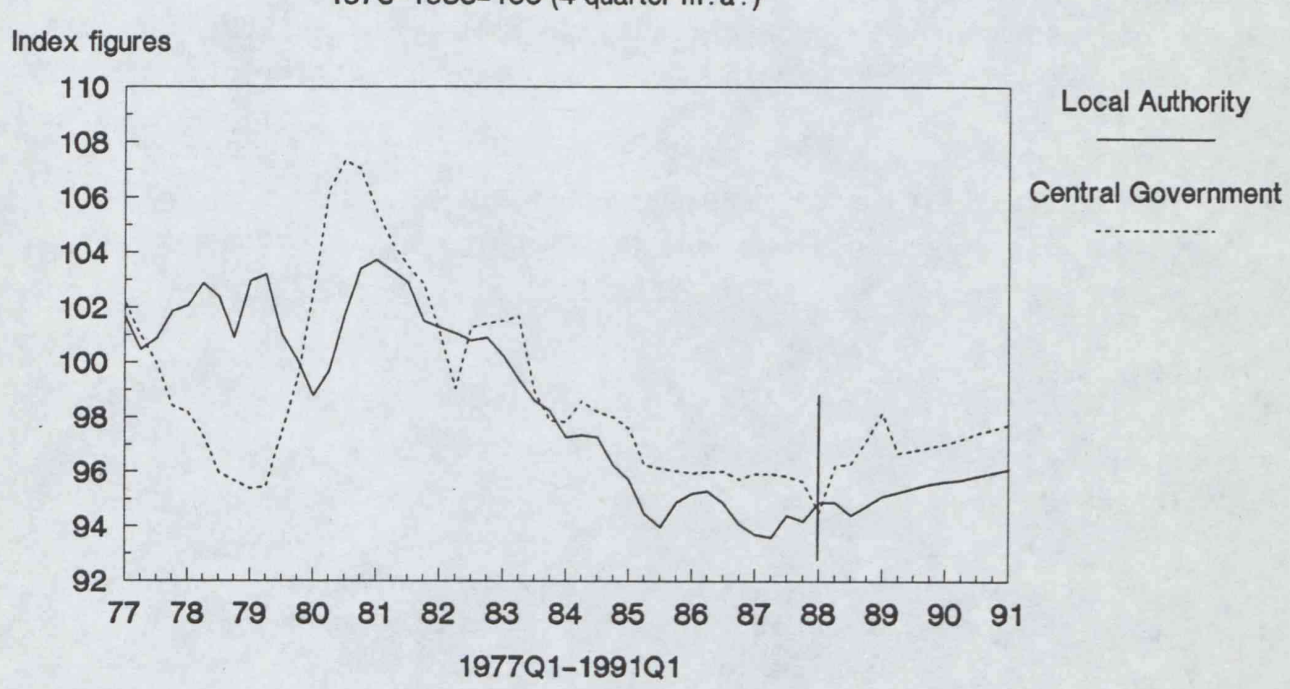
74. **Central government earnings** grew more slowly (7¼ per cent) than the private sector in the 1986-87 pay round, though nurses and some other health workers fared notably better. For central government earnings as a whole, we forecast increases of 9½ and 8 per cent for the 1987-88 and 1988-89 pay rounds, a little above the average for the private sector.

TABLE 24 : PUBLIC AND PRIVATE SECTOR UNDERLYING AVERAGE EARNINGS

(percentage changes over years to August)

Pay rounds	Central Government	Local authorities	Private sector
1986-87	7¼	7½	8
1987-88	9½	11½	8½
1988-89	8	8	7½

CHART E: RATIO OF LOCAL AUTHORITY AND CENTRAL GOVERNMENT EARNINGS TO PRIVATE SECTOR EARNINGS (FOUR QUARTERS MOVING AVERAGE)



Labour Costs

75. Manufacturers' unit labour costs are likely to rise more quickly over the next two years than in to 1987. Earnings growth picks up in the next year, and productivity growth falls back to more normal rates as output growth moderates

X

TABLE 25 : LABOUR COST INCREASES IN MANUFACTURING
(percentage increases on previous year)

	UK	Major 7 (less UK)
1986	4.5	2.1
1987	0.6	0.5
1988	2.0	-0.3
1989	2.6	1.8

(6) EMPLOYMENT, UNEMPLOYMENT AND PRODUCTIVITY

76. Employment rose sharply throughout 1987; in the fourth quarter it was 500,000 higher than a year earlier. Seasonally adjusted adult unemployment has continued to fall in the first five months of 1988, though at a slower rate than in the second half of 1987. It has fallen by nearly 800,000 since the peak in July 1986. Recent developments mainly reflect strong growth in output.

TABLE 26 : CHANGES IN UK ADULT UNEMPLOYMENT
(seasonally adjusted, 000s, Q2 to Q2)

	Unemployment	Effects of employment and training measures, restart and availability testing	Underlying unemployment
1984-1985	+ 166	- 6	+ 172
1985-1986	+ 85	- 63	+ 148
1986-1987	- 242	- 162	- 80
1987-1988	- 560	- 84	- 476
1988-1989	- 158	- 53	- 105

77. Employment should continue to rise through 1988 and 1989, though more slowly than over the past year, because of the slow down in growth of output. Adult unemployment could fall to 2.32m in 1988Q4 and to 2.24m in 1989Q4. The labour supply is expected to grow by 300,000 over the three years to 1990Q4, but the working population remains broadly unchanged.

78. Manufacturing productivity rose 6.0 per cent in the year to 1988Q1. Productivity in the private non-manufacturing sector rose by 3

per cent in the year to 1987Q4. Some of the increase in productivity was undoubtedly due to the cyclical strength of output and increased overtime working. But there also seems to have been an increase in trend productivity growth and we expect this to be sustained. Actual productivity, on the other hand, slows down between 1988 and 1990 with the deceleration in activity.

TABLE 27 : LABOUR PRODUCTIVITY GROWTH
(per cent per annum)

	1964-73	1973-79	1979-87	Forecast 1987-90
Manufacturing	3¾	¾	4	4½
Private non-manufacturing	3	½	1½	2¼
Non-North Sea	2¾	½	2	2½
Whole Economy	2¾	1¼	2	2¼

79. Table 28 shows the implications of trend productivity growth and labour supply projections for productive potential.

TABLE 28 : PRODUCTIVE POTENTIAL GROWTH
(per cent per annum)

	Trend non-North Sea productivity growth	Labour Supply	Non-North Sea productive potential	Contribution to North Sea	Whole economy productive potential
1973-79	¾	½	1¼	½	1¾
1979-87	2	½	2½	¼	2½
1987-90	2½	½	3	- ½	2½

(7) FINANCIAL CONDITIONS

80. The forecast assumes that part of the recent strength of sterling is the result of temporary pressure. With a large current account deficit emerging and money GDP growing more quickly than in the 1988 MTFS, the forecast has a gradual fall in the nominal exchange rate and a rise in base rates to 10½ per cent by mid-1989. The assumed falls in the nominal exchange rate involve a small fall in the real exchange rate from its current level.

Y

TABLE 29: EXCHANGE RATES
(End year rates)

	US dollar index	Sterling index	$/£	DM/£
1984	141.7	75.1	1.22	3.72
1985	128.8	79.8	1.44	3.71
1986	110.5	68.2	1.43	2.87
1987	97.0	74.9	1.75	2.99
June 21	94.4	76.5	1.79	3.14
1988	92.7	76.6	1.89	3.05
1989	91.1	74.3	1.81	2.90
1990	89.3	72.9	1.81	2.80

81. The increases in domestic interest rates should widen differentials with US and average world interest rates, despite some rise in interest rates worldwide. Mortgage rates are forecast to move broadly in line with base rates, rising to 12 per cent by 1989 quarter 2. Long rates have been roughly stable since the budget, notwithstanding moves in base rates. Providing long run inflationary expectations do not change dramatically, long rates should not react much to future base rate rises. The rise in base rates is thus not accompanied by any rise in long rates and a downward sloping yield curve emerges. The level of gross gilt issues will give gilts a scarcity value that should offset any upward pressure on yields.

TABLE 30 : INTEREST RATES

End year levels	3 month rates			20 year gilt rate	Mortgage rate
	Euro-dollar	average world	sterling LIBOR		
1987	8.0	6.8	9.2	9.5	11.0
June 21	7.7	n/a	9.2	9.3	c9.8
1988	8.2	6.8	9.5	9.5	10.8
1989	9.7	7.5	10.5	9.5	12.0
1990	9.4	7.2	10.5	9.5	12.0

82. MO growth is currently over a point above its target range. Recent and assumed further increases in interest rates are estimated to bring MO growth within its range during the Autumn. Without these it is probable that growth would remain above 5 per cent for the rest of the year.

TABLE 31 : MONETARY AGGREGATES AND CREDIT

(per cent change on a year earlier)

	Money GDP		MO		M4	£ Lending by Banks Building Societies	House prices
	Forecast	(MTFS)	Forecast	(MTFS)			
1987-88	9.8		4.9	(2-6)	15.4	19.6	18.8
May	n/a		6.2		15.7	22.2	23.2
1988-89	10.0	(7½)	5.1	(1-5)	15.6	20.4	20.4
1989-90	7.9	(6½)	1.9	(1-5)	12.1	15.1	7.6
1990-91	6.1	(6)	0.9	(0-4)	11.1	13.1	0.4

83. **House prices** are expected to rise by around 20 per cent in 1988, while mortgage demand remains strong. Some of the higher mortgage borrowing will be for the purposes of 'equity withdrawal'. Despite rises in interest rates, there seems little prospect of significant falls in the rate of growth of consumer credit while growth of personal disposable income remains high. Household indebtedness may thus grow by as much as 20 per cent in 1988. In later years the forecast of modest growth in personal disposable income and considerably slower growth in house prices is likely to temper personal sector borrowing. The **burden of debt service** should at some stage reinforce the desire to increase borrowing less rapidly. The forecast does not envisage a major problem with debt service. If house prices were to decelerate more than forecast (after previous house price booms there have been periods of falling prices) and interest rates remained high persons could adopt a more cautious approach to additional borrowing than forecast.

84. **Lending to companies** may also increase as debt finance replaces equity finance in the wake of the stock market crash. But with industrial and commercial companies enjoying large reserves of liquidity, built up from pre-cash equity issues, this is unlikely to prove a cause for concern. Outside corporate finance the crash has had surprisingly little effect. Individuals have switched new investment away from equity linked products - notably unit trusts - to liquid assets, but there is little evidence of significant selling and, as the Treasury/Stock Exchange survey showed, the number of share owners has hardly altered. Wealth effects on spending do not seem to have materialised, probably because the crash only wiped out gains made over the first half of 1987.

2

85. The forecast assumes that there is a full fund of the PSBR outside banks and building societies. National savings raise around £1b. over each of the next two years. With some defensive intervention this leaves large net repayments of gilts, particularly in 1989 and 1990, which will necessitate some buying in. The resultant shortage of gilts will be a contributory factor behind the inverted yield curve discussed above, and institutions will probably turn to overseas government bonds and domestic corporate bonds to maintain desired portfolio shares.

TABLE 32 : PSBR AND FUNDING
(£ billion)

	PSBR	Gilt sales to nbnbsps*	Nat Savs	Reserves	Other overseas finances†	Other debt to nbnbsps	Over-fund+	Net gilt sales to banks and b.socs	Gross gilt sales to all sectors
1985-86	5.7	3.5	2.1	-2.4	4.3	-1.6	0.2	-0.7	11.7
1986-87	3.4	3.6	3.4	-3.8	5.5	-1.7	3.6	-1.2	14.6
1987-88	-3.5	2.4	2.1	-11.1	4.3	0.2	1.3	-0.6	13.4
1988-89	-7.4	-7.4	1.0	1.0	-0.2	-1.4	0.4	-0.5	0.1
1989-90	-7.4	-9.0	1.0	2.0	-0.8	-0.7	0.0	-0.5	1.5
1990-91	-7.4	-8.6	0.5	2.0	-0.8	-0.5	0.0	-0.5	-2.6

* non-bank non-building society private sector

† includes foreign currency finance

\+ overfund on M4 definition

86. The financing of the current account deficit occurs through several channels. Direct and portfolio investment inflows are expected to increase markedly and direct investment outflows to fall back from previous high levels. Against this, the overseas sector does not continue to buy large quantities of gilts. After a large repatriation of overseas portfolio assets in 1987, outward portfolio investment is expected to resume as institutions purchase, inter alia, foreign government bonds. The resulting shortfall in financing of the current account is met by a marked increase in overseas deposits with UK banks. Clearly, for the exchange rate path assumed for the forecast, an inflow on this scale would probably require reasonably high differential between domestic and overseas interest rates.

TABLE 33 : NET EXTERNAL CAPITAL FLOWS
(£ billion)

	Direct invest-ment	Other private non bank	Banks' foreign currency	Banks' sterling	General Gov't liabi-lities	Official reserves	Balancing item	Current balance
1986	-7.3	-8.0	2.8	-0.4	3.4	-2.9	12.2	0.1
1987	-10.0	14.0	-0.9	3.9	6.3	-12.0	0.2	-1.6
1988	-5.7	-0.9	4.3	5.2	-0.2	-0.2	7.3	-9.3
1989	-6.0	1.8	3.2	5.1	-1.0	2.0	5.0	-10.1
1990	-5.9	2.4	3.2	3.3	-1.0	2.0	5.0	-9.0

(8) PUBLIC FINANCES

87. Table 34 compares the forecast with the FSBR and internal January forecast.

TABLE 34 : PUBLIC SECTOR EXPENDITURE, REVENUE, AND BORROWING
(£ billion)

	1988-89			1989-90			1990-91	
	January Fore-cast	FSBR	June Fore-cast	January Fore-cast	FSBR	June Fore-cast	FSBR	June Fore-cast
General Government Expenditure	183½	183	181	194½	193	194½	201½	205½
General Government receipts	185½*	185	187½	198*	195	204	205	216
Assumed cuts in personal taxes (cumulative)				0*	3½	2½	4½	3½
GGBR	-2½	-2	-6	-3½	1	-7	1	-7½
Public corporations' overseas and market borrowing	-1	-1	-1	-½	-1	-½	-1	0
PSBR	-3½	-3	-7½	-3½	-3½	-7½	0	-7½
(per cent of GDP)	(-¾)	(-¾)	(-1½)	(-¾)	(0)	(-1½))	(0)	(-1½)

* adjusted to post-1988 budget tax rates

A2

1988-89

88. The PSDR in 1988-89 is forecast to be £7½ billion, compared with £3 billion in the FSBR. The more buoyant forecast for economic activity increases tax receipts and reduces some items of expenditure. On the assumption that BSC is privatised this year, privatisation proceeds are likely to be closer to £6 billion than the £5 billion assumed in the FSBR. Table 35 summarises the revisions.

TABLE 35 : MAIN CHANGES SINCE THE FSBR IN THE PSBR FORECAST FOR 1988-89

	£ billion
Higher General Government Receipts	
- higher North Sea revenues from a higher North Sea oil price;	0.3
- higher ACT reflecting higher dividend payments;	0.5
- higher stamp duty reflecting higher house prices and stock market turnover;	0.6
- higher VAT and specific duties mainly reflecting higher consumer spending;	1.0
- higher interest receipts (largely reflecting removal of presentational adjustments in Budget forecast);	0.7
- higher ECGD trading deficit on the assumption of no refinancing of loans;	-0.6
TOTAL	2.5
Lower General Government Expenditure	
- lower departmental spending	-0.3
- higher privatisation proceeds	-0.9
- lower debt interest payments	-0.2
- changes to other adjustments	-0.3
TOTAL	-1.7
TOTAL CHANGE IN PSBR FORECAST	-4.2

(b) Public Expenditure

89. With the planning total (excluding privatisation proceeds) in 1988-89 forecast to be close, in cash terms, to that in the 1988 PEWP, the higher forecast inflation squeezes expenditure in real terms (see table 36). But higher forecast real growth of expenditure in 1989-90 and 1990-91 produces a forecast level of spending in 1990-91 in real terms that is above the plans.

TABLE 36 : PLANNING TOTAL EXCLUDING PRIVATISATION PROCEEDS

	1987-88	1988-89	1989-90	1990-91
£ billion current prices				
1988 FSBR	151.0	161.8	172.1	181.1
Forecast	151.0	161.5	174.6	186.9
Real growth %				
1988 FSBR	¼	2½	2¼	1¾
Forecast	0	1	2¼	2¼

90. Table 37 compares the forecast of the planning total in cash terms with the PEWP. Local authority current spending accounts for the largest claims on the reserve. Taking defence and health together, about three-quarters of the overspend in cash terms on existing plans is attributable to pay. Forecast overspending on other central government programmes is consistent with some future increase in provision for investment in roads, prisons etc.

B2

TABLE 37 : FORECAST ADDITIONS TO EXPENDITURE PLANS

£ billion

	1988-89		1989-90		1990-91	
	PEWP 1988	Forecast Claims on Reserve	Survey Baseline	Forecast Claims on Reserve	Survey Baseline	Forecast Claims on Reserve
Allocated to programmes						
1. Social Security (including HB)	46.9	0.1	49.5	0.9	52.0	2.6
2. Defence	19.2	0.3	20.0	0.5	20.6	1.0
3. Health	21.8	1.0	22.9	1.9	24.0	2.8
4. Net EC	0.8	0.2	1.5	0.4	1.3	0.3
5. Other CG	29.3	0.5	31.1	1.1	32.0	1.7
6. LA current (excluding HB)	34.9	1.3	35.2	3.8	36.2	6.2
7. LA capital	4.0	-	3.9	0.4	3.8	0.7
8. Nationalised industries	0.7	-0.2	-	0.5	-0.4	1.0
9. Other PCs	0.8	-	1.0	-	1.2	-
10. Total programme	158.3	3.2	165.1	9.5	170.7	16.2
11. Privatisation proceeds	-5.0	-0.9	-5.0	0.0	-5.0	0.0
12. Expenditure met from existing reserve						
(i) allocated to programme baseline	0.0	2.3	0.0	7.0	0.0	10.5
(ii) unallocated	3.5	0.0	7.0	0.0	10.5	0.0
13. Underspend (-) Required Addition to Reserve (+)	0.0	-1.2	0.0	2.5	0.0	5.7
PLANNING TOTAL	156.8	155.6*	167.1	169.6*	176.2	181.9*

*Forecast of the planning total outcome

91. General government gross debt interest payments are forecast to be only a little lower in 1988-89 than in 1987-88 because the need to finance the rise in the foreign exchange reserves has continued to push up the gross stock of debt outstanding. After 1988-89, with large net repayments of debt by general government and a partial unwinding of the rise in the reserves assumed, gross interest payments fall sharply, particularly in 1990-91.

92. The ratio of GGE (excluding privatisation proceeds) to money GDP is forecast to be about one percentage point below that in the FSBR in 1988-89. It is forecast to fall further in 1989-90 and 1990-91 and to remain below the FSBR path.

TABLE 38 : RATIO OF GGE EXCLUDING PRIVATISATION PROCEEDS TO MONEY GDP (per cent)

	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91
1988 FSBR	44½	43¾	41¼	41¼	40¾	40
June forecast	44½	44	41¼	40	39¾	39½

93. Table 39 compares the forecast of GGE excluding privatisation proceeds with earlier internal forecasts, successive PEWPs and the 1988 FSBR. The forecast for 1988-89 is a little lower in both cash and real terms than in the last internal exercise in January. The forecast for 1989-90 is broadly unchanged in cash terms but lower in real terms.

TABLE 39 : PAST AND CURRENT FORECASTS OF GGE EXCLUDING PRIVATISATION PROCEEDS (£ billion)

	1987-88		1988-89		1989-90		1990-91	
Forecast	Current Prices	Real Terms*	Current Prices	Real Terms*	Current Prices	Real Terms*	Current Prices	Real Terms*
PEWP 1986	174	168	179	168	-	-		
June 1986	177	170	186	171	-	-		
PEWP 1987	179	172	185	172	193	174		
June 1987	170	170	190	171	203	174		
PEWP 1988	178	170	188	173	198	176		
Jan 1988	177	169	188	171	200	173		
FSBR 1988	177	169	188	171	198	174	207	175
June 1988	177	169	187	168	200	171	210	173

* 1986-87 prices

(c) Receipts

94. The forecast of total taxes and national insurance contributions (NICs) in 1988-89 is some £2 billion higher than in the FSBR. Even so because the level of money GDP is also higher the total and non-oil tax burdens are expected to fall in 1988-89, compared with no change in the FSBR. Before taking account of fiscal adjustments the non-oil burden is forecast to rise by about ½ percentage point in 1989-90 and to be broadly flat in 1990-91. The rise in 1989-90 is more than accounted for by a rise of over 20 per cent in non-North Sea corporation tax which in turn reflects forecast continued strong profit growth into 1988.

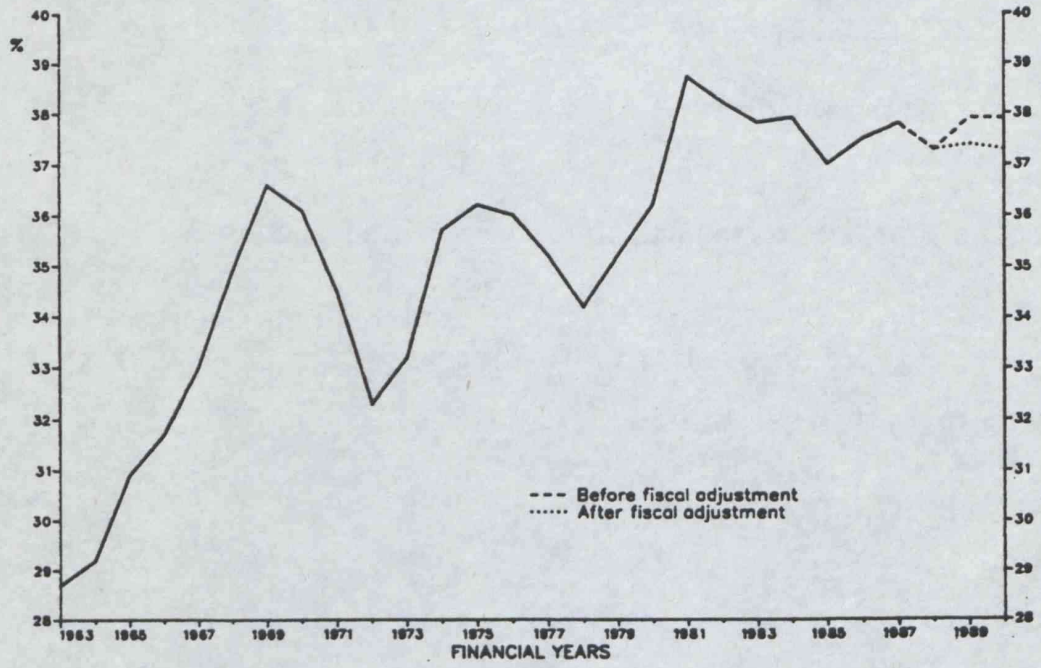
95. Table 40 shows that the assumed tax cuts are sufficient to hold the non-oil tax burden roughly flat.

C2

TABLE 40 : NON-OIL TAXES AND NICs AS A PERCENTAGE OF NON-OIL GDP

	1986-87	1987-88	1988-89	1989-90	1990-91
MTFS					
(a) pre-fiscal adjustment	37.5	37.7	37.7	37.7	
(b) post-fiscal adjustment	37.5	37.7	37.7	36.9	36.6
Summer Forecast					
(a) pre-fiscal adjustment	37.5	37.8	37.3	37.9	37.9
(b) post-fiscal adjustment	37.5	37.8	37.3	37.4	37.3

CHART F : THE SHARE OF NON-NORTH SEA TAXES AND NICs IN NON-NORTH SEA GDP



(d) Local authority finances and the LABR

96. The assessment of LA finances is particularly hazardous on this occasion because of the uncertainties associated with the introduction of the local government finance reforms, in 1989 in Scotland and 1990 in England and Wales. The forecast is crucially dependent on assumptions on:

- the growth of LA current expenditure;
- the proportion of expenditure financed by central government grant.

97. Local authorities' budgets for 1988-89 indicate that overspending (compared with PEWP provision) on current expenditure will be lower than previously forecast - current expenditure might rise by 1 per cent in real terms compared with 3½ per cent in 1987-88. Upward pressure on spending is likely to re-emerge from next year on as a result of the costs of implementing the community charge (CC) and the introduction of other initiatives such as the national curriculum. Real increases in current spending of around 4 per cent a year are forecast for 1989-90 and 1990-91.

98. The outturn **central government grant percentage** is assumed to fall slightly in 1989-90. In 1990-91, the first year of the CC in England and Wales, a one per cent rise in the outturn grant percentage is assumed (after continuous falls in the 1980s). This is equivalent to holding the percentage constant at its level in 1989-90 before deduction of grant penalties for overspending which will cease to exist in the new regime.

99. Against this background total income from **domestic rates and the CC** may fall a little in real terms in 1990-91 (see table 41).

TABLE 41 : LOCAL AUTHORITY CURRENT EXPENDITURE AND INCOME

	% increases in real terms			
	1987-88	1988-89	1989-90	1990-91
Total current expenditure	3½	1	4	4½
Income from:				
Central government grant	4	-2½	3	6½
Business rates	2½	3½	7	4
Domestic rates and CC	2½	3½	5½	-1

100. The **LABR** is forecast to be in the £1½-2 billion range throughout the forecast period. (It was £1½ billion in 1987-88.)

D2

ANNEX : COMPARISON WITH OUTSIDE FORECASTS

	JUNE FORECAST	AVERAGE OF OUTSIDE FORECASTS (JUNE)
A. ACTIVITY		
1. GDP VOLUME (per cent change on year earlier)		
1988	3.9	3.2
1989	2.9	2.2
2. UNEMPLOYMENT (UK, sa, excluding school leavers in millions)		
1988Q4	2.32	2.38
1989Q4	2.24	2.37
B. INFLATION		
3. RPI (per cent change on year earlier)		
1988Q4	5.0	3.8
1989Q4	5.6	4.7
C. PUBLIC FINANCES		
4. PSBR (£ billion)		
1988-89	-7.4	-3.0
1989-90	-7.4	-1.9
D. MONETARY CONDITIONS		
5. SHORT TERM INTEREST RATES (per cent)		
1988Q4	9.5	8.7
1989Q4	10.5	9.5
6. STERLING INDEX (1975=100)		
1988Q4	76.7	76.4
1989Q4	74.3	73.1
E. CURRENT ACCOUNT		
7. CURRENT BALANCE (£ billion)		
1988	-9.3	-5.2
1989	-10.1	-6.8

World Financial Markets

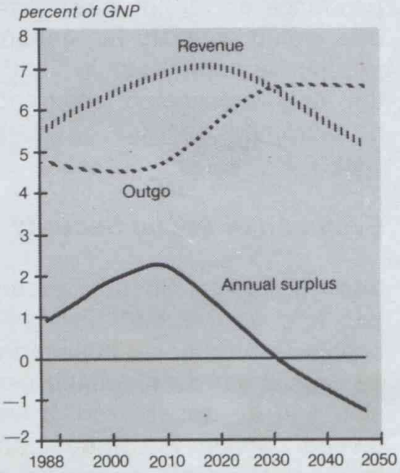
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Chart 1

*The Social Security surplus**



*Projections by Social Security trustees based on current law and intermediate demographic and economic assumptions (variant IIB). Both revenue and surplus include interest earned on the trust funds.

U.S. Social Security surpluses: pitfall or opportunity?

The burgeoning surplus of the U.S. Social Security system has come to the fore this year as the latest temptation to procrastinate on decisive measures to cut the federal budget deficit. Under current law, the system surplus should rise from a projected $37 billion in the current fiscal year to almost $500 billion by 2015 — over 2% of GNP at that time (see Chart 1). More immediately, the projected $25 billion increase in the surplus between FY1987 and the new fiscal year beginning this October more than accounts for the $15 billion narrowing expected over the period in the federal budget deficit (unified basis). Further, the increase in the Social Security surplus alone should provide more than one-third of the $150 billion budget deficit reduction targeted by FY1993 under the Gramm-Rudman-Hollings (GRH) legislation.* Beyond FY1993 — assuming GRH compliance — there should be a large and growing budget surplus (see Table 1). That alluring prospect, so different from today's dreary deficit reality, already is inspiring some members of Congress to rush forward new spending schemes.

The Social Security outlook is not the only source of complacency on the budget issue. April's drop in the U.S. trade deficit, to below $10 billion CIF, plus the upgrading of mainstream forecasts for U.S. real GNP growth this year, to above 3.5%, suggest that the external imbalance is on its way to correction with no sacrifice of growth. To date, growth and trade adjustment also have been consistent with a fairly stable underlying inflation rate since the economy's resources have not been unduly pressured. Now, however, the combination of strong external and domestic demand has brought the economy close to full employment and full capacity utilization in a number of sectors. From here on, substantial further trade correction, which will have to be mainly export-driven, requires domestic demand re-

*The GRH targets are based on the "unified" budget — that is, they include the "off-budget" expenditures and receipts of the Social Security system, as well as "on-budget" items such as defense, income taxes, and Medicare.

Table 1

Social Security and the Gramm-Rudman-Hollings federal budget targets

billions of dollars

	Balances		
	Target, unified basis	Social Security	Implied on-budget
Fiscal years			
1987	—150	20	—170
1988	—144	37	—181
1989	—136	44	—180
1990	—100	54	—154
1991	—64	62	—126
1992	—20	70	—90
1993	0	78	—78
1996	120	120	0*

*Assumes the 1989-93 trend in on-budget cuts continues.

Table 2

The payoff from saving

	Net domestic saving, percent of GNP	Real GNP growth per capita, percent per annum
Actual, 1980-87	3.1	1.3
Projected, 2000-2020		
*Official projection**	6.0	1.4
*Optimal policy***	8.5	2.0

*Implied by intermediate growth assumptions of the Social Security trustees.
**GRH compliance, Medicare solvency, and productive investment of Social Security surpluses.

straint to free up resources.

The financial markets plainly crave enlightenment on just how the next Administration and Congress will seek to remedy the twin deficits within the next presidential term. The burden cannot be off-loaded onto the Federal Reserve, for while monetary restraint can in principle force down the trade deficit, it would be at the cost of economic growth and employment. Instead, as detailed in the last issue of this publication,* the constructive answer lies through resolute fiscal action, assisted if need be by easier monetary policy to keep the dollar competitive. This course would make room, and provide the incentive, for noninflationary trade correction.

In light of the twin deficit connection, the temptation to squander the looming Social Security surpluses for immediate gain must be strenuously resisted. That the temptation is strong is apparent from the pressure for increased spending, notably on "Medicare" health insurance for the elderly. Yet the federal budget already is absorbing almost half of net private savings, leaving net domestic saving at an average of just 3% of GNP in the 1980s so far, and an improvident 1.9% in 1987. To splurge on Medicare or otherwise fall short of the GRH budget targets would leave the savings shortfall unattended, plunge the nation deeper into foreign debt, heighten financial risks, and undermine U.S. standing around the world.

Longer term, the path of profligacy would defeat the whole purpose of Social Security. Spending the surplus would leave the U.S. economy underinvested and ill-prepared to face the massive retirement and health care burden that will arise in the 21st century as today's baby-boom generation exits from the workforce. Social Security would turn out to be a mere paper promise.

Instead, with careful husbandry, Social Security surpluses present an unequaled opportunity to boost the U.S. net savings and investment rates, perhaps to as much as 8% of GNP — a level not achieved since the mid-1960s but necessary to provide for the future prosperity of both retirees and the working population (see Table 2). This requires compliance with the GRH targets, effective containment of Medicare entitlements (especially for future beneficiaries), and productive investment of Social Security surpluses. A partial privatization of the Social Security system could help, lest the incipient surpluses be frittered away or mismanaged. Wisely handled, Social Security surpluses could make a dramatic difference for U.S. economic prospects. Higher domestic saving not only would help eliminate the trade and current account deficits, and the associated dependence on foreign saving, but also would build up the nation's productive capital stock. That is the only convincing assurance of retirement security.

*"Reducing the twin U.S. deficits," *World Financial Markets*, 1988 issue 2.

Evolution of Social Security

The U.S. Social Security system has had a turbulent history of changing priorities. Launched in 1935 as a narrowly defined pension and insurance plan, it was placed outside the budget and its receipts were supposed to be held in trust for future beneficiaries. Thus, like a private pension plan, the system was to pay contributors a fair rate of return and be fully funded.

Chart 2

Payroll tax rates

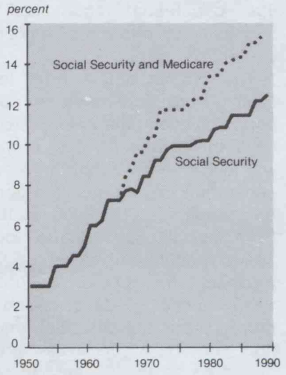
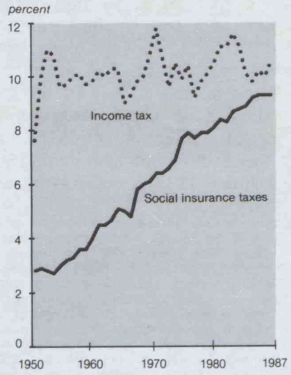


Chart 3

*Average personal tax rates**



*Collections divided by personal income. Social insurance taxes include Social Security and Medicare, as well as contributions to the federal employee retirement funds.

Almost from its inception, however, the system was changed to a "pay-as-you-go" basis, with current workers' tax payments funding the benefits of retirees. The switch reflected broadened objectives. First, to preclude fiscal drag, it was decided that funds drawn out of the economy should be immediately returned to the spending stream. Second, benefits were extended to many who had not contributed, including the first generation of retirees who were "grandfathered" into the system. Thereafter, over time, benefits were extended to many workers not initially covered, to the disabled, and to a variety of dependents; retirement eligibility rules were loosened; and, in 1972 benefits were indexed to the cost of living. In addition, 1966 saw the introduction of "Medicare" health insurance, which is closely associated with Social Security in its means of financing and beneficiary class but is treated separately for budgetary purposes.

Social Security and Medicare payroll taxes under the Federal Insurance Contributions Act (FICA) have increased in step with benefits. The original law called for a tax on wage and salary income of 1% each on employee and employer. Today, the employee tax is made up of a 6.06% tax for Old Age Survivors and Disability Insurance (OASDI) and 1.45% for Medicare, with the employer contributing a like amount to yield a total tax rate of 15.02% (see Chart 2). Moreover, the payroll tax base has been steadily increased, with levies on labor income up to a ceiling currently set at $45,000 per annum — a near-sixfold increase since 1970. Altogether, the system's expansion has meant that the payroll tax now generates nearly as much revenue as the federal income tax (see Charts 3 and 4), while Social Security and Medicare outlays exceed the defense budget.

Amid the current reports of growing surpluses it is easy to forget that the system was close to bankruptcy five years ago. The rapid expansion of benefits and taxes proved workable as long as the labor force was growing relative to the overall population and the economy was robust. By 1981, however, the slowdown in the economy and the pickup in inflation had cut payroll tax collections sharply relative to outlays. As a result, the OASDI trust funds had fallen to the brink of insolvency.

The system was rescued in 1983 through a series of reforms proposed by a special commission headed by Alan Greenspan. The Greenspan Commission recommended a mix of benefit cuts and revenue enhancements. On the revenue side, the payroll tax was increased — it will reach 15.3% by 1990 — and half the benefits were made taxable for middle- and upper-income recipients. On the expenditure side, the annual cost-of-living increase was permanently delayed by six months and the retirement age for full benefits was set to rise to 67 by the year 2027. These adjustments have led to the current surpluses.

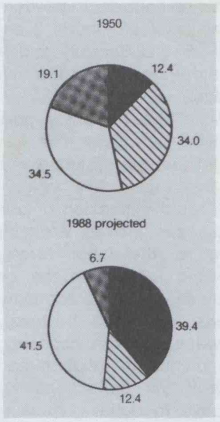
The need for surpluses

The Greenspan reform not only put the system back on its feet, but also aimed to keep it solvent for the next 75 years. The system

Chart 4

*Shares of gross federal receipts**

percent of total



*NIPA basis.

Table 3

Social Security surpluses

percent of GNP

	1980-85	1986
United States	0.1	0.5
Canada	0.8	0.6
Japan	2.8	2.8
Germany	0.2	0.5
France	0.4	—0.3
Italy	0.1	0.1
United Kingdom	0.1	0.1
Denmark	1.2	1.4
Sweden	2.9	2.5*

*1985.
Source: OECD.

has moved away from the pay-as-you-go basis on which it had previously relied and on which other industrial countries with a few exceptions continue to rely (see Table 3). While most of the U.S. payroll tax will continue to support current retirees, a growing portion will be accumulated as reserves of the Social Security trust funds. By 2030, under current law, the accumulated reserves could reach almost $12 trillion. Thereafter, they would run down to the point of exhaustion around mid-century.

The need for these reserves stems from powerful demographic forces shaping the long-term U.S. outlook. Early in the next century, the labor market will be squeezed from two directions: not only will the retired population swell as baby boomers reach retirement age, but the working population will shrink as the "baby-bust" generation begins to dominate the labor force. As a result, the ratio of retirees to working age population will almost double (see Chart 5). In the period 2010 to 2030 Social Security outlays will grow 40% faster than the payroll tax base.

Social Security may be likened to a benevolent "Ponzi" (pyramid) scheme. Each new generation pays for the older generation's retirement, relying on subsequent generations to do the same. Furthermore, each generation receives more than it pays in as long as the newer groups are willing to "up the ante." But any pyramid scheme will unravel if the pool of contributors fails to expand sufficiently fast. This could well be the case with Social Security. Chart 6 shows how the share of the adult U.S. population in various age groups is expected to evolve over time. This population pyramid shows an increasingly top-heavy structure as the prime-age population (aged 25-54) shrinks relative to the older population.*

The system differs from the classic Ponzi scheme in one important respect, the enforcement mechanism. Sheer voting power will tend to ensure that the older generation can enforce the contract implicit in Social Security. Even so, to support the top-heavy population structure in prospect, the Social Security system itself needs a credible prop. That is the essential function of the surpluses programmed by the Greenspan reform.

Policy courses to avoid

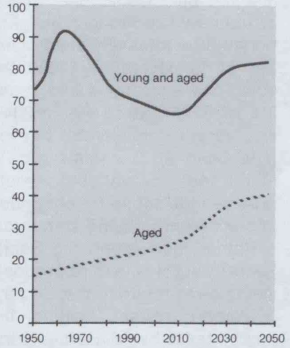
Inasmuch as Social Security surpluses are set to siphon off increasing amounts of spending power, they pose at least a theoretical risk of "fiscal drag." Critics of the surpluses go so far as to warn that the surpluses could cripple the economy, and thus be self-defeating.

In fact, the fiscal drag allegation is a red herring that can only distract policymakers from the real issues. The seemingly huge numbers involved are actually quite small when put in proper context. Although the surplus could climb as high as $500 billion in 2015, it would represent

*In principle, increased immigration could offset the decline in the prime-aged population. But unless the immigration is specially tailored to highly productive, young workers, it is unlikely to help much. Estimates in the Greenspan report suggest that an additional 100,000 immigrants per year would strengthen the long-run balance of the system by 0.1% of the taxable payroll. To make a significant dent in the Social Security problem would require more than doubling immigration — legal and otherwise — to over 1.5 million per year. At this rate most U.S. population growth would be due to immigration.

Chart 5

*Young and aged as percent of working-age population**

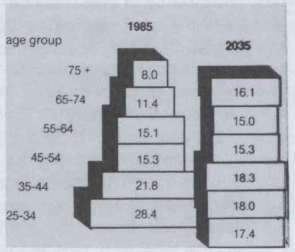


*Young, age 0-19; aged, 65+; working-age, 20-64.

Chart 6

The population "pyramid"

percent of population aged twenty-five and over



only 2.1% of that year's GNP. To be sure, if the on-line federal budget is balanced at that time, the cumulative tightening of the federal position would amount to some 5.5% of GNP relative to the current stance. In determining the possible drag on GNP growth, however, the cumulative change in the fiscal position is less important than the annual change. The annual change associated with the Social Security trend would never exceed 0.2% of GNP, far short of the approximately 0.9% annual cuts required to meet the GRH targets. Besides, any short-run difficulties in recycling the surplus can be overcome with a proper mix of monetary policy and investment incentives. Furthermore, the government still would be free to use temporary deficits in the on-line budget to counter swings in the economy.

Although the fiscal drag related to Social Security poses no serious risk to the economy, it does help justify politically motivated "solutions" to the surplus. Three proposals have been made: the surplus could be used to fund higher government spending, pay for the growth in Medicare, or cut the payroll tax. These solutions would eliminate the fiscal drag problem but ultimately would jeopardize the Social Security system and the future health of the economy.

The politically tempting solution also would be the most damaging. As the surplus accumulates over the next twenty years, Congress could give in to pressure to fund new, more generous benefits. This use of the surplus could drive the average replacement rate — the ratio of benefits to previous income — almost 30% higher than under the current policy.

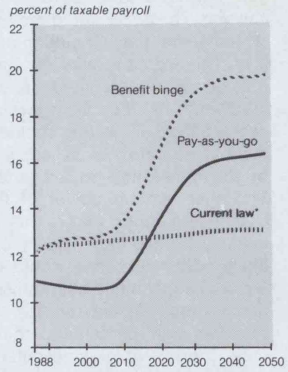
Such a benefit binge, however, would create unmanageable problems once baby boomers begin retiring around 2010. Conceivably, balance could be restored at that time by cutting outlays. This would require not only rescinding the assumed benefit increases of the next twenty years, but also lowering replacement rates below those enjoyed by the generation retired today. The sheer voting power of the baby-boom cohort makes this an unlikely outcome. The more likely policy response would be a mix of unpalatable alternatives: jacking up the payroll tax as much as eight percentage points (see Chart 7) or running outsize deficits.

At the extreme, suppose that that GRH mandate is not carried out; the Social Security surplus is used to fund a benefit binge or other programs which become built into the system; and no efforts are made to reform Medicare. The consequential rise in borrowing could absorb more than half of net private saving by 2010, with both the on-line budget and the Medicare trust fund in deficit (see Table 4). Twenty years later, the situation would be out of control: in the absence of new taxes or spending cuts the government deficit actually could exceed private saving.* With the labor force stagnant and no net investment,

*For simplicity, these projections assume that, over a long period, there are no sustained capital inflows or outflows and that net private saving continues at its historical rate of about 6%. In reality, saving patterns are sensitive to demographic changes. Baby boomers, who are now entering their thirties and forties, are prone to save more as they leave behind the initial cost of forming new households and begin to prepare for their children's education and their own retirement. Most of the increase in saving by baby boomers, however, is likely to be offset by the reduced saving of a growing number of retirees.

Chart 7

Social Security revenue requirements



*Includes a small flow of revenue from the income tax on benefits.

real GNP growth could grind to a halt.

Awareness of this long-term peril probably will keep the United States from adopting so profligate a course. Even so, the presence of a rising Social Security surplus is prone to spawn compromises falling short on the implicit GRH target for the on-line accounts. Already, Congress has been considering a number of proposals for expanding Medicare (see next article) and will be tempted to use the Social Security surplus to fund them. The outcome might leave the unified budget in deficit by $50 billion or so in FY1993, deferring elimination of the deficit till near the end of the decade and achieving at best modest surpluses during the early years of the next century.

Such a policy of borrowing from Peter's savings to pay Paul's medical bills would create almost the same financing problems as a benefit binge. Were growth in Medicare outlays to exceed current-law projections by 2.2 percentage points annually over the next fifteen years, and were such growth to be financed by the retirement fund, the combined systems would start accumulating deficits with a vengeance beyond 2010. New higher medical bills would pile on top of unfunded retirement benefits, burying the relatively small number of taxpayers. By 2020 the combined shortfall would reach 3% of GNP, rise to 4% in 2040, and further accelerate beyond (see Chart 8). Economic growth might not cease, but would provide little scope for continued improvement in living standards.

Rather than spend the Social Security surplus, a third proposal would be to return to the old pay-as-you-go system, cutting the payroll tax to avoid accumulating a surplus. By 2010, when the demands on the system begin to escalate, the payroll tax could be increased step-for-step. The cumulative increase to cover retirement benefits could be as much as 6 percentage points. Were the tax also increased to expand Medicare entitlements, the tolerance of the working population would be sorely strained.

It would be a serious mistake to defer until the next century the hard budget choices necessary to deal with the retirement and health care burden. Spending cuts or tax increases then would have to be undertaken amid slowing economic growth, thanks to drastically reduced labor force growth (see Table 5). Middle-of-the-road estimates by the Social Security Administration show labor force growth declining from a current rate of 1.5% to about 0.5% in 2010. That could depress real GNP growth below 2% annually. Even that figure could be optimistic, given that the official projections assume significant rebounds in both the fertility rate and real wage growth relative to the experience of the last twenty years (see Table 6). Neither rebound can be taken for granted.

Table 4

*Sources of net U.S. saving**

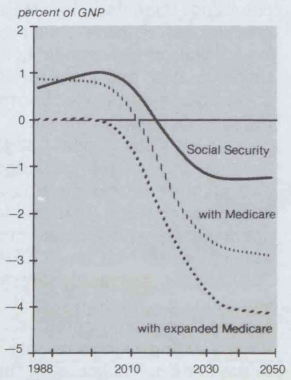
percent of GNP

	Private	Federal government			Total
		On-budget	Social Security	Medicare	
Actual 1980-87	7.1	—4.2	0.1	0.1	3.1
Policy choices					
Benefit binge					
2010	6.0	—3.0	0.0	—1.0	2.0
2030	6.0	—3.0	—4.0	—2.5	—3.0
Compromise					
2010	6.0	—2.0	2.0	—2.0	4.0
2030	6.0	—2.0	—2.0	—4.0	—2.0
Optimal					
2010	6.0	0.0	2.5	0.0	8.5
2030	6.0	0.0	0.5	0.0	6.5

*Social Security and Medicare projections account for feedback between the budget and the economy. "Private" includes state and local government surpluses.

Chart 8

*Combined operating surpluses**



*Tax revenue minus outgo; excludes interest paid on trust fund assets and liabilities.

Table 5

*Official U.S. economic assumptions**

percent change

	1990	2010	2030	2050
Working-age population	0.9	0.6	0.2	0.0
Real GNP	2.9	1.9	1.7	1.6
Consumer prices	4.3	4.0	4.0	4.0
*Interest rate***	8.9	6.0	6.0	6.0
(percent per annum)				

*Projections of the Social Security trustees under current law with intermediate assumptions ("II B").
**Rate earned on assets of the Social Security trust funds.

Saving for investment: the bottom line

The prospective growth shortfall highlights the fundamental problem with most "solutions" for the Social Security problem: their implications for saving, investment, and GNP growth. When the economy is operating at or near full employment, government deficits draw savings out of the private sector, either "crowding out" private investment or requiring that it be financed by net capital inflows from abroad. U.S. net private saving was 4.3% of GNP last year, but government borrowing of 2.4% cut the net domestic savings rate to only 1.9%. Net domestic investment was considerably higher, at 5.3% of GNP, thanks to the capital inflows that covered the nation's $154 billion external deficit on current acount. It is unlikely, for both economic and political reasons, that this high pace of net foreign inflows could be sustained through coming decades. In any case, foreign inflows increase foreign claims on future U.S. output. Inadequate domestic saving therefore would hurt future U.S. generations by reducing the stock of productive assets they inherit.

For that reason, the ultimate objective of a well-conceived Social Security policy is not merely to provide for retirement financing, but also to set aside real resources for the future. After all, the larger the economic pie as a whole, the easier it should be to assure the next century's retirees the increasing slice that their numbers and intergenerational equity will demand.

More than anything, a larger pie requires higher investment. The dramatic improvement that an effective domestic saving and investment effort can make is evident in the "optimal" policy scenario (see Tables 4 and 7). This would avoid all the mistakes of the "benefit binge" or "compromise" scenarios: GRH targets would be met on schedule, reforms in Social Security and Medicare would be implemented keeping the combined system solvent, and an overall budget surplus equal to the Social Security surplus would be productively invested.

With this optimal policy the unified budget would swing from a deficit of 3.4% of GNP in FY1987 to a peak surplus of 2.4% in 2010, pushing up the overall net domestic savings rate to over 8% of GNP in 2000-2020. Thereafter, saving would decline upon the reemergence of Social Security deficits. Nevertheless, with the budget under control, the net savings rate would remain above its 1987 level, in turn engendering a "virtuous circle." Increased investment would lift real GNP and tax revenues, making a still larger surplus available for investment. Conservative estimates show that GNP growth would be boosted an average of 0.6 percentage points annually relative to the official projection of the Social Security trustees. Taxable incomes would be higher in consequence, increasing the assets of the trust funds and making possible, if so desired, higher benefits to retirees. Altogether, there would be a larger economic pie to share among growing demands — provided the Social Security surplus is productively invested.

Table 6

Sensitivity of Social Security tax to assumptions

percent per annum

	Fertility rate*	Real wage growth	Inflation-adjusted interest rate
Actual			
1960-73	2.8	1.5	1.7
1974-79	1.8	0.3	—0.2
1980-87	1.8	0.9	5.3
Long-term projections			
Official	1.9	1.4	2.0
Alternative	1.6	0.9	3.0
*Impact on payroll tax rate in 2010***	1.0	0.5	—0.5

*Average number of children born to women who reach reproductive age.

**Percentage point change to yield same revenue as projected on the middle-of-the-road official assumptions.

Table 7

Policy payoffs

	Year in which Social Security	
	Goes into deficit	Runs out of money
Policy choices		
Official projection	2030	2048
Benefit binge	2008	2013
Compromise	2010	2015
Optimal	2036	2051

	Annual average real GNP growth	
	Rate	Per capita
Actual, 1980-87	2.3	1.3
Projected, 2000-2020		
Official projection	1.9	1.4
Benefit binge	1.0	0.5
Compromise	1.5	1.0
Optimal	2.5	2.0

Investing the surplus

How to assure productive investment of the U.S. Social Security surplus has received scant attention in the popular debate, yet is an issue crucial to the viability of the system.

The simplest investment options carry the greatest risk. Under current law, the surplus must be invested in government securities. However, this does not constitute productive investment if it merely encourages the government to "borrow" from Social Security to cover on-line budget outlays, except to the extent that these outlays themselves constitute productive investment. Obviously, with a change in the law, the U.S. surplus could be used to fund public investment directly. This would parallel practice in Japan, whose sizable and long-standing social security surpluses finance investments by public corporations. Going one step further, the U.S. surplus might even be used to support an expanded "industrial policy," targeting loans for investment by deserving private businesses.

Would such public or publicly directed investment be productive? The federal government already engages in a host of lending activities. Certainly too, the United States could use more infrastructure such as better roads and bridges as well as nursing homes and hospitals. The risk in such projects, however, is that the funds may be used inefficiently, either poorly managed or diverted to current spending. Any shortfall in the return on these projects would have to be made up in the future through higher taxes.

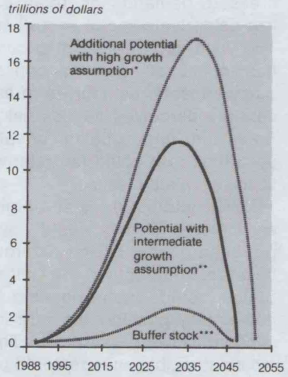
These risks, which apply to all public capital programs, cast doubt on current proposals to divide all federal government accounts into distinct capital and operating budgets. This is the practice of private business, lower levels of government in the United States, and most foreign governments. Typically, borrowing is considered permissible to cover part of the capital budget, but not the operating budget. The problem is that there is an ever-present temptation to hide maintenance and consumption outlays in the capital budget. Furthermore, the aura of virtue surrounding "capital" outlays shields them from rigorous scrutiny, resulting in a poor rate of return in many instances. In sum, earmarking the Social Security surplus to finance public capital items would do little to ensure its productive investment.

The danger that the surplus will be dissipated bolsters the case for removing all or part from the political arena through some form of privatization. Of course, purely voluntary, private provision for retirement is a political nonstarter. It would require an enormous "buy-out," running to several trillions of dollars, to preserve benefits to current retirees. Besides, unlike a private pension, Social Security provides an income maintenance system for low-income retirees. Much of the payroll tax constitutes a form of forced saving for people who otherwise would make inadequate individual provision for retirement. Plainly, private saving alone cannot meet the objectives of Social Security.

The best solution could be to privatize just the surplus portion of Social Security revenues, perhaps along the following lines. Until 1990 the surplus would continue to be invested solely in government securities, building up a buffer stock holding of about $300 billion. Starting in 1990 Social Security contributors would be allowed to divert, say, 2 percentage points of their payroll tax to individual investment accounts. The percentage point diversion would be redetermined periodically in light of experience with the take-up rate; the intent would be to maintain the official buffer stock holding at a level on the order of one year's outgo, enough to cover any unanticipated shortfall in the system. This partial privatization would continue until the system stops running large surpluses, which is projected to occur around 2020.

Chart 9

Privatization potential of Social Security assets



* With optimal saving, investment, and growth perfomance as projected in Tables 4 and 7.

** Under assumptions of the Social Security trustees.

*** Prudent minimum to be retained in official fund; set at one year's system outgo through 2030, thereafter drawn down in step with total assets.

For the typical taxpayer the diversion would amount to about $500 to $1000 per year, measured in 1987 dollars. The funds would be restricted to pre-approved investment accounts, similar to today's Individual Retirement Accounts (IRAs) but subject to tougher tests of investment suitability and tighter restraints on early withdrawals. Upon retirement, the individual would receive public benefits lower than under current law but would supplement them by drawing on the private accounts.*

This privatization scheme would ensure that most of the Social Security reserve is productively invested. For example, based on official projections the total reserve should reach about $9 trillion in 2020. Under privatization about 80% of the total would be diverted to private accounts. And a substantially greater sum would be held in the private accounts were the high-growth "optimal" policy scenario also to be followed (see Chart 9). By taking most of the assets out of government hands, this scheme would help depoliticize Social Security. It would not only reduce the risk that the funds would be diverted to other uses, but also help assure future retirees that some of the benefits the system promises today will be forthcoming at their time of need.

*Each individual's public benefit would be lowered by an actuarially determined figure based on the amount of payroll tax diversion plus interest this would have earned had it remained in the trust fund. To the extent that the private accounts earn a higher yield, the individual would receive greater benefits through privatization. For an individual contributing regularly and earning one percentage point additional yield, the value of a private account after thirty years would be about 10% higher than that of the government alternative.

Financial market implications

Beyond their consequences for U.S. economic growth and living standards, the budget decisions made — or not made — in the years ahead will have profound implications for both domestic and international capital markets.

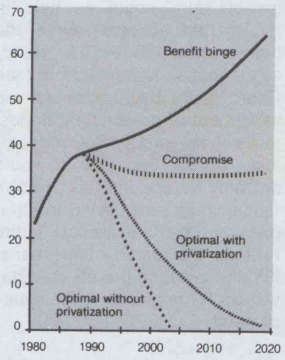
If the federal government adheres to the Gramm-Rudman-Hollings deficit targets, holds the line on new programs, and invests the Social Security surplus as current law requires, the ramifications are startling.

For example, the trust funds could absorb all outstanding federal debt by the year 2005. That would force a change in the way U.S. monetary policy is conducted. With few or even no government bonds available to buy on the open market, the Federal Reserve could not maintain its present operating procedure. This need be no calamity, since the authorities have other means to exercise monetary control. Among them are changing reserve requirements and discount window policy. Both these tech-

Chart 10

Publicly held federal debt

gross, excluding Federal Reserve holdings
percent of GNP



niques have the disadvantage of rather limited flexibility. Instead, there should in principle be no objection to conducting open market operations through purchase or sale of liquid commercial paper and other private debt instruments. The Federal Reserve did this earlier in its history and it is today a normal practice on the part of the Bank of England, the Bank of Japan, and the Bundesbank.

Of course, sustained fiscal discipline is hardly certain. More likely, political compromise will eventually yield something approaching a balanced federal budget on a unified basis. In that event the government securities market will shrink in relation to both the private capital market and U.S. GNP (see Chart 10) — the more so if foreign official reserve policies effectively lock up U.S. Treasury issues.*

The relative decline in the market for government obligations would be matched by growth in the private capital markets. The increased availability of funds for private investment would place downward pressure on real interest rates. How far rates might fall is a matter of controversy. The highest estimates offered in the literature on the "crowding out" of investment by government borrowing suggest that full implementation of the GRH budget targets would cut long-bond rates by more than 100 basis points, with another 100-point cut possible if the Social Security surplus develops as projected. To take the place of the reduced stock of government securities, there also may be increased demand for relatively low-risk private-sector securities. The yield curve for such securities could steepen in consequence insofar as short-term assets are perceived as less risky. Rates on high quality private securities also could fall relative to lower quality issues.

Lower interest rates and higher domestic saving would have profound effects on the external balance. In particular, the United States could again become a net lender, pushing the current account toward surplus. The most noticeable change could be in U.S. trade with Japan. Demographically, Japan is about twenty years ahead of the United States. Whereas the ratio of the over-65 population to the workforce will remain roughly constant in the United States until 2010, it will more than double in Japan; the working-age population in Japan will be in outright decline, as already is the case in Germany. Therefore, during this period when the U.S. population would be well advised to step up capital formation, the Japanese may begin drawing on their accumulated capital. Reflecting the shift in relative savings behavior, net capital flows between the two nations, and the associated trade and current account imbalances, could reverse by the turn of the century, completing the adjustment already under way.

Do the demographic forces portend a higher or a lower real exchange market value of the dollar over the long term? Conflicting forces will be at work. If U.S. labor productivity growth matches that of other industrial countries, the relatively fast increase of the labor force points to higher growth in economic activity in the United States than elsewhere. In itself, the correspondingly higher U.S. import demand at any given level of the exchange rate would suggest difficulties in achieving balance, let alone surplus, in the external accounts.

Yet a strong dollar often is inspired by a strong U.S. economy, particularly if productivity- and competitiveness-boosting investment can become the engine of U.S. growth as a result of budget surplus. By contrast, during the next twenty years the faster-aging populations of Japan and Germany may become much more consumption-oriented.

This strong dollar environment, however, is a long way off. The dollar's recent run-up, seemingly in response to U.S. monetary tightening and somewhat better trade results, still should be viewed as temporary. The dollar will hold firm on a permanent basis only when much more progress on the twin deficits has been achieved. Yet, for the time being the dollar's present level substantially eliminates the relative cost handicap borne by U.S. industry during the first half of the 1980s. Industry now has the opportunity to compete on price to recapture domestic and global market share. With its resources almost fully stretched, the open and growing U.S. economy is unlikely to see an absolute rollback in imports. Instead, decisive narrowing of the trade and current account deficits will depend on boosting exports 15%-20% annually for several years ahead.

To that end there is pressing need to expand the nation's productive capacity. This is a matter of raising and sustaining the U.S. net savings rate well above its average of the past twenty years. Higher saving is the fundamental rationale for steadfast implementation of the Gramm-Rudman-Hollings budget targets and for the productive investment of the Social Security surplus. By these means, domestic saving and investment should rise strongly enough to put the economy in good shape to carry the demographic burden of the next century.

Controlling Social Security and Medicare

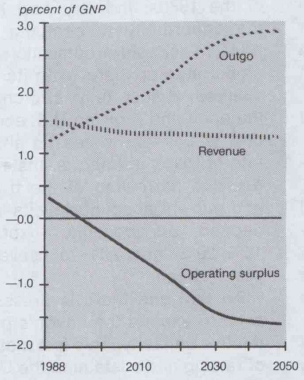
Barring unforeseen misfortune, the accumulation and investment of the Social Security surplus should keep the system on its feet for the next 75 years. Nonetheless, there are considerable downside risks to this promising outlook, risks that warrant further streamlining of the Social Security retirement system. In addition, projections show Medicare going into the red in 1998, exhausting its trust fund by 2005, and incurring a deficit of 3% of taxable payroll by 2030. Reforms to Medicare therefore are needed if it is to meet its current obligations, let alone incorporate the host of new programs being debated in Congress. So long as current retirees and the elderly poor are protected, Social Security and Medicare should not be immune to cutback.

The Social Security system is intended to provide adequate protection for the elderly and disabled. With the growth of both

*Speculation has arisen that, given the shrinkage of the deficit, the government soon will stop issuing new 30-year bonds. This speculation has little logic as a matter of sound debt management. As long as the market demand is there, and the government has to refinance the federal debt, issues spanning the whole range of maturities should continue to be sold for the foreseeable future.

Chart 11

*The Medicare outlook**



*Projections by Hospital Insurance trustees based on current law and intermediate assumptions (variant IIB).

public and private pension plans, however, the elderly no longer are poor relative to the population as a whole.* Furthermore, in the future, as current public and private plans take full effect, the position of the elderly is likely to continue to improve. Admittedly, the elderly are particularly vulnerable to economic and health problems, so that holes in the Social Security and Medicare safety net need repair. It does not follow, however, that the elderly as a group deserve a larger slice of the economic pie than their numbers warrant.

Two reforms of future retirement benefits would significantly alleviate the potential burden on contributors and, by lowering expected benefits, would encourage higher private saving. The first reform would reduce future benefits to middle- and upper-income recipients. The formula for calculating benefits could be made more progressive. Alternatively, with appropriate protection for the low-income elderly, benefits could be fully taxed as ordinary income, raising revenue by about 1% of taxable payroll per year.

The second reform would be to increase further the retirement age at which full benefits are paid. Under the current law that age is to rise gradually to 67 by the year 2027. Instead, the phase-in could be accelerated and the age pushed up to 68 or 69, for a saving in outlays of 1%-1.5% of taxable payroll per year. Later retirement would be consistent with demographic trends toward longer and healthier lives, such that many people likely will wish to work longer, although not necessarily in their primary working-life occupation. Besides, faced with the likely labor shortage of the next century, firms will be less keen to encourage the early retirement of seasoned employees. This would reverse the tendency of the last two decades when slower economic growth and a rapid increase in the labor force have made early retirement attractive.

Medicare warrants urgent attention. Under current law, Medicare outlays are projected to rise an average 10% annually over the next 40 years, even using assumptions on health-cost inflation that are optimistic relative to recent experience. The Medicare trust funds are projected to run deficits reaching 1.5% of GNP by the end of the same period (see Chart 11) and will be prime suitors for "borrowing" from the Social Security surplus. Such borrowing would not be a permanent solution; taken together, the Medicare and Social Security trust funds could be exhausted by 2030.

Regaining Medicare solvency will require a combination of creativity, realism, and restraint to address both financing arrangements and the costs of care. Ideally, Congress and the Administration would address the long-run funding problems of the current system before succumbing to pressures for expanded benefits. Recent bills before Congress have sought coverage for long hospital stays, large doctors' bills, prescription drugs, and both nursing and private home care.

Most of the proposed bills have been advertised as "self-financing," relying primarily on insurance premiums and taxes levied on the elderly. These are favored over payroll tax financing, since the group receiving the increased benefits pays the associated costs. Initially the costs would be fairly modest. For example, the Congressional Budget Office estimates the price tag on the catastrophic health costs bill at $7-$11 billion in 1992. By itself this would represent no more than a 12% increase in Medicare outlays over the next four years. More ominous would be the accelerating growth in the covered catastrophic costs — to above 10% per annum in 1992 and still faster thereafter. There is a limit to how high taxes on the elderly can go before pressure mounts to shift the burden onto the general population. Were the costs of the more generous new health care proposals to be assumed by the payroll tax, the Medicare portion, now 2.9%, could triple by the time the baby boomers retire.

Before this happens, it would make sense to reconsider the potential role of private sources of funds. With about $2 trillion in assets, the elderly as a group can afford to continue paying substantial medical bills, given well-conceived private financing options. For example, at individual premiums of some $350 annually, the more comprehensive "Medigap" insurance policies, which fill gaps in Medicare coverage, protect against catastrophic costs much better than any of the proposals considered by Congress. For nursing home care, by contrast, the private insurance market leaves much to be desired. Nor have the private markets yet evolved widely available and appropriate mechanisms to mobilize the near-50% of the elderly's assets that are tied up in home equity. One attempt is seen in the "reverse annuity" mortgage instruments that some banks now offer, whereby the bank pays the retiree homeowner a lifetime income in exchange for a full or partial equity claim following the homeowner's death. Unfortunately, wider use of such instruments is inhibited by their unfamiliarity, illiquidity, and, in some states, unacceptability to regulators.

Value for money should be the other priority concern in health care. In 1984 the U.S. health industry consumed 10.7% of GNP, a higher percentage than anywhere else in the industrial world (see Table 8). U.S. spending was significantly above that of the next highest spender, Sweden, and double that of the United Kingdom. At present, the preponderance of passive, third-party financing in the U.S. health care system militates against cost-consciousness. This failing can never be adequately addressed by ever-increasing regulation. Getting more care for less money is a matter of creating effective incentives to both patients and providers to choose and develop cost-sparing solutions. Strengthening the role of provider competition is crucial for a more satisfactory outcome. So too is acceptance of the hard reality that, one way or another, health care cannot be exempt from demand restraint.

Table 8

Health care spending

1984, percent of GNP

	Public	*Total*
United States	4.4	10.7
Canada	6.2	8.4
Japan	4.8	6.6
Germany	6.4	8.1
France	6.5	9.1
Italy	6.1	7.2
United Kingdom	5.3	5.9
Denmark	5.3	6.3
Sweden	8.6	9.4

Source: OECD.

*In 1967 30% of people over 65 had incomes below the poverty line, more than double the rate for the rest of the population. Today the opposite is true: average incomes and wealth of the elderly exceed those of the population as a whole. Furthermore, the poverty rate among the elderly is below 15%, a lower incidence than among the rest of the population.

Statistical appendix

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Chief economist, Rimmer de Vries, Senior Vice President
Publications manager, Sorca E. McFadden, Assistant Vice President
Statistics manager, Elizabeth A. Lue de Grof, Assistant Vice President
Principal authors of this issue, Ethan S. Harris, Vice President; D. K. Hargreaves, Vice President

Effective exchange rates — industrial countries

Index numbers, 1980-82 average=100.

	United States	Canada	Japan	Australia	France	Germany	Italy	United Kingdom	Austria	Belgium	Neth-erlands	Spain	Swit-zerland	Den-mark	Norway	Swe-den
Nominal against 15 other industrial-country currencies																
1983	114.2	100.8	107.8	92.0	87.3	107.5	90.3	91.6	103.6	90.0	105.0	78.4	111.5	96.4	99.5	82.2
1984	122.3	97.3	112.9	94.2	84.4	107.3	86.7	88.1	103.6	88.9	103.9	77.4	110.5	93.9	97.8	84.3
1985	127.0	92.8	115.9	76.3	85.5	107.8	82.1	88.2	104.2	89.6	104.0	75.6	109.5	95.1	95.6	83.9
1986	106.0	87.6	150.1	61.4	87.4	116.1	82.9	80.7	107.8	92.9	110.3	73.4	118.1	99.7	89.2	81.6
1987	94.1	89.6	164.4	58.3	87.1	122.0	82.3	79.0	110.8	95.6	114.6	73.1	123.1	102.8	85.7	80.1
1987																
June	94.8	88.8	164.7	59.9	87.1	121.6	81.8	79.1	110.2	95.6	114.3	71.9	122.7	103.4	86.5	80.5
July	96.0	90.0	159.1	60.0	87.2	121.4	81.6	79.2	110.2	95.4	114.2	72.5	122.2	102.4	87.2	80.4
August	95.7	90.0	162.7	59.8	86.8	121.3	81.5	78.9	110.1	95.2	114.1	73.6	122.6	101.3	87.3	80.2
September	93.9	90.3	165.4	60.5	86.9	121.5	81.8	79.6	110.1	95.3	114.4	74.6	122.7	101.0	87.4	79.7
October	93.4	90.7	165.1	58.9	86.7	121.3	81.7	80.0	115.7	95.1	114.5	75.9	122.3	101.3	87.0	79.6
November	90.0	89.3	171.2	54.3	86.7	123.6	81.2	81.5	110.9	95.6	115.9	75.6	125.4	102.5	85.2	79.2
December	87.4	89.4	178.6	55.1	87.0	123.8	81.4	81.9	110.8	95.8	115.9	75.2	126.9	103.0	83.5	78.9
1988																
January	87.4	91.0	179.8	55.1	87.2	123.4	81.3	81.2	110.7	95.6	115.8	74.8	126.5	103.0	84.6	79.1
February	88.2	92.6	179.3	56.0	86.8	122.9	81.0	80.8	110.7	95.4	115.6	75.0	125.1	102.8	85.4	79.7
March	86.8	93.7	180.7	57.0	86.3	122.8	80.5	83.5	110.7	95.2	115.4	75.5	123.9	102.3	85.1	79.9
April	85.8	94.6	183.2	57.5	85.9	122.6	80.1	85.2	110.6	94.9	115.3	76.2	123.6	101.5	86.1	80.1
May	86.1	94.5	183.7	60.0	86.1	122.1	79.7	85.4	110.4	94.8	115.0	76.0	122.2	101.2	87.1	80.4
May 6	85.9	94.7	183.4	59.0	86.0	122.6	79.8	84.9	110.6	95.0	115.2	76.2	122.6	100.9	87.0	80.4
13	85.8	94.6	183.7	59.3	86.1	122.3	79.8	85.7	110.4	94.8	115.0	75.9	122.6	101.0	87.1	80.3
20	86.3	94.5	183.4	59.9	86.0	121.9	79.7	85.7	110.3	94.8	114.9	75.9	122.0	101.2	87.2	80.4
27	86.3	94.3	184.3	61.3	86.2	121.7	79.6	85.5	110.2	94.8	114.8	75.9	121.6	101.4	87.3	80.4
June 3	86.9	95.1	183.4	62.9	86.2	121.8	79.5	84.1	110.2	94.7	114.7	75.8	121.8	101.6	87.2	80.3
10	86.6	95.7	183.5	62.6	86.2	122.0	79.6	83.6	110.3	94.8	114.8	76.0	121.9	101.9	87.2	80.2
17	87.0	96.5	183.8	63.2	86.1	121.6	79.5	83.6	110.1	94.5	114.5	75.7	121.4	101.7	87.1	80.2
Real against 15 other industrial-country currencies																
1983	112.7	102.6	96.8	101.8	94.7	101.0	101.1	93.1	102.0	88.6	100.8	88.8	105.1	100.4	102.0	90.8
1984	119.6	101.2	97.8	106.4	97.0	98.0	101.8	90.2	103.0	85.9	97.8	91.0	100.1	99.2	100.5	96.0
1985	121.7	96.3	99.0	88.9	100.4	96.6	100.2	92.8	103.2	85.2	96.5	92.3	97.9	101.2	99.3	96.8
1986	100.8	93.3	122.1	78.3	103.6	104.1	102.3	87.2	106.1	84.4	101.1	93.7	105.2	107.2	96.8	95.8
1987	90.1	96.4	127.8	80.3	105.0	107.2	103.3	87.3	109.8	84.1	104.1	95.6	109.1	111.4	100.2	95.1
1987																
December	84.2	97.0	136.7	77.8	104.3	108.5	103.7	90.9	109.5	83.0	104.3	100.2	112.0	112.2	98.8	94.6
1988																
January	84.5	99.1	137.0	78.0	104.3	108.1	104.1	90.7	109.3	82.8	102.0	100.3	111.1	112.0	100.5	95.5
February	85.3	100.2	136.0	79.8	103.7	107.5	104.6	90.5	109.1	82.2	102.1	101.0	109.7	112.4	101.7	96.5
March	84.1	101.5	136.6	81.6	103.4	107.3	103.3	93.8	109.2	81.7	102.4	99.8	108.9	112.2	101.3	97.1
April	83.4	102.7	137.5	82.7	102.8	107.2	103.2	96.1	108.7	81.3	101.6	100.7	108.1	111.4	103.0	97.2
May	83.8	102.7	137.4	86.7	103.0	106.6	103.1	96.5	108.6	81.0	101.0	101.0	107.0	112.2	104.8	97.0
Real against 18 other industrial-country and 22 LDC currencies																
1983	114.9	104.6	100.4	102.0	94.4	100.6	100.8	93.1	102.1	88.2	99.5	89.2	105.1	100.3	101.9	91.0
1984	120.8	102.6	102.4	106.7	96.4	96.8	101.0	89.7	102.6	85.0	95.9	91.2	99.8	99.0	100.5	95.8
1985	123.3	99.0	104.2	89.6	99.9	95.6	99.7	92.2	102.8	84.5	94.7	93.0	97.7	101.1	99.7	96.7
1986	106.3	94.3	126.7	80.2	104.1	105.2	103.7	87.9	106.9	84.9	101.0	96.2	107.1	107.7	97.6	96.5
1987	96.2	96.5	131.5	81.8	106.1	109.5	105.8	88.8	111.3	85.3	105.0	99.1	112.1	112.2	101.1	96.4
1987																
December	90.2	96.3	139.5	79.4	105.5	111.0	106.5	92.7	111.3	84.4	105.4	104.1	115.1	113.0	99.8	95.9
1988																
January	90.4	98.4	139.8	79.5	105.3	110.4	106.7	92.4	110.9	84.0	103.0	104.0	114.1	112.8	101.5	96.7
February	90.6	99.5	138.7	81.1	104.5	109.4	106.9	92.0	110.6	83.2	102.9	104.4	112.4	113.1	102.7	97.6
March	89.5	100.7	139.2	83.0	104.1	109.2	105.6	95.3	110.6	82.7	103.1	103.0	111.4	113.0	102.3	98.2
April	88.7	101.8	140.0	84.2	103.5	108.8	105.3	97.5	110.0	82.2	102.2	103.9	110.5	112.2	104.0	98.3
May	89.1	101.9	139.9	87.9	103.5	108.1	105.1	97.8	109.7	81.8	101.4	104.0	109.1	112.9	105.7	98.1

Real effective exchange rates — developing countries

Index numbers, 1980-82 average=100.

	Argentina	Brazil	Chile	Colom-bia	Mexico	Peru	Vene-zuela	Hong Kong	Indo-nesia	Korea	Malaysia	Philip-pines	Singa-pore	Taiwan	Israel	Turkey
1983	71.6	86.0	89.3	104.9	79.0	98.5	117.3	95.0	96.2	97.6	113.9	96.1	101.8	94.6	120.8	94.2
1984	80.2	85.7	90.1	99.6	91.9	105.8	85.9	99.5	96.0	96.5	119.7	107.9	102.5	97.1	119.5	89.6
1985	71.0	84.8	79.5	85.3	90.4	96.5	92.7	103.3	93.7	88.7	115.7	114.1	95.2	94.3	106.5	88.8
1986	60.8	74.2	68.4	67.4	65.0	96.3	85.4	93.2	70.6	82.0	94.0	89.7	79.8	88.3	100.7	70.5
1987	53.3	73.5	65.1	63.0	66.7	107.6	60.1	89.2	53.9	83.9	87.9	86.4	73.3	93.4	97.1	62.5
1987																
June	53.5	75.2	65.4	62.7	64.9	109.2	61.7	90.4	53.9	84.8	88.7	86.0	73.3	94.6	96.7	62.8
July	53.3	72.9	65.6	63.9	68.2	115.0	63.6	89.8	55.2	86.4	88.6	88.4	73.9	95.8	98.5	62.9
August	54.6	71.1	66.1	63.5	69.6	119.9	64.3	89.4	55.1	86.0	88.4	88.2	74.2	97.4	99.6	63.1
September	53.5	71.0	65.3	62.7	71.5	121.1	64.5	90.2	54.0	85.0	88.3	87.0	73.5	97.4	99.7	61.6
October	53.8	73.3	64.2	62.1	73.6	119.9	64.9	89.9	54.3	85.7	87.0	89.1	73.0	98.1	100.4	60.7
November	49.2	73.9	61.6	60.4	73.5	104.8	64.2	89.0	52.8	85.3	84.8	87.3	72.0	94.8	99.2	58.6
December	49.0	74.7	61.3	60.0	67.2	80.1	63.3	87.1	51.1	84.3	82.7	87.8	70.1	95.9	98.9	62.3
1988																
January	49.3	76.9	59.1	61.6	72.6	76.5	62.9	85.7	51.0	85.3	81.4	87.5	70.0	95.5	100.1	62.8
February	50.9	78.0	60.7	62.7	79.1	86.0	63.8	85.9	51.7	88.1	81.1	87.6	70.8	96.3	101.3	63.5
March	51.6	76.7	62.4	61.4	80.1	104.1	63.6	86.6	50.9	89.0	80.4	85.4	68.9	95.0	101.8	64.2
April	52.2	78.1	63.0	60.1	79.7	121.4	63.3	86.6	50.6	89.2	79.9	85.3	69.0	94.6	102.4	65.0
May	55.1	78.0	59.5	59.7	80.4	131.8	63.7	88.5	51.1	90.3	79.8	87.3	69.4	93.1	103.8	64.7

International banking market size

at end of period, billions of dollars

	1982	1983	1984	1985	1986	1987			
					Dec	Mar	Jun	Sep	Dec
Gross claims									
Eurocurrencies, on residents and nonresidents	**2 146**	**2 253**	**2 359**	**2 833**	**3 560**	**3 811**	**3 942**	**4 147**	**4 405**
On nonbanks	634	665	694	822	938	995	1 175	1 215	1 284
On banks	1 512	1 588	1 665	2 011	2 622	2 817	2 767	2 932	3 121
In dollars	1 694	1 797	1 894	2 101	2 534	2 602	2 753	2 882	2 891
In other currencies	452	456	465	732	1 025	1 209	1 189	1 265	1 515
Domestic currencies, on nonresidents	**398**	**402**	**402**	**506**	**672**	**721**	**757**	**801**	**915**
On nonbanks	132	140	142	187	209	229	236	230	222
On banks	266	262	260	319	463	492	521	571	693
In dollars	211	221	215	215	227	206	215	220	221
In other currencies	187	181	187	291	445	515	542	581	694
Total	**2 544**	**2 655**	**2 761**	**3 339**	**4 232**	**4 532**	**4 699**	**4 948**	**5 320**
On nonbanks	766	805	836	1 009	1 147	1 224	1 411	1 445	1 506
On banks	1 778	1 850	1 925	2 330	3 085	3 309	3 288	3 503	3 814
In dollars	1 905	2 018	2 109	2 316	2 761	2 808	2 968	3 102	3 112
In other currencies	639	637	652	1 023	1 470	1 724	1 731	1 846	2 209
Gross liabilities									
Eurocurrencies, to residents and nonresidents	**2 168**	**2 278**	**2 386**	**2 846**	**3 579**	**3 851**	**3 999**	**4 205**	**4 461**
To nonbanks	432	479	497	585	685	740	768	791	808
To official monetary institutions	91	88	96	112	109	125	139	151	151
To other banks	1 645	1 711	1 793	2 149	2 786	2 986	3 085	3 263	3 502
In dollars	1 741	1 846	1 950	2 147	2 553	2 648	2 785	2 936	2 924
In other currencies	427	432	436	699	1 026	1 203	1 214	1 269	1 537
Domestic currencies, to nonresidents	**250**	**260**	**280**	**377**	**494**	**556**	**580**	**638**	**782**
To nonbanks	70	73	80	114	116	134	144	176	191
To banks	180	187	200	263	377	422	436	462	591
In dollars	116	135	146	169	192	192	197	212	262
In other currencies	134	125	134	208	302	364	383	427	520
Total	**2 418**	**2 538**	**2 666**	**3 223**	**4 073**	**4 407**	**4 579**	**4 843**	**5 243**
To nonbanks	502	552	577	699	801	874	912	967	999
To banks and official institutions	1 916	1 986	2 089	2 524	3 272	3 533	3 660	3 876	4 244
In dollars	1 857	1 981	2 096	2 316	2 745	2 840	2 982	3 148	3 186
In other currencies	561	557	570	907	1 328	1 567	1 597	1 696	2 057
Net market size	**1 285**	**1 382**	**1 430**	**1 676**	**1 979**	**2 083**	**2 170**	**2 231**	**2 377**

International bond issues and bank credits

millions of dollars

	1985	1986	1987	1988			Jan-May	
				Mar	Apr	May	1987	1988
By country of borrower								
Industrial countries	**225 885**	**273 653**	**248 758**	**30 424**	**27 440**	**24 754**	**105 035**	**141 921**
Australia	14 407	19 251	11 349	1 824	1 535	1 552	4 845	6 167
Austria	2 435	3 821	4 695	569	991	180	1 974	4 069
Belgium	3 269	5 042	4 443	525	81	161	2 054	1 708
Canada	17 184	23 752	10 161	2 198	1 570	1 229	4 373	7 425
Denmark	3 589	9 813	4 774	359	691	325	3 502	2 297
Finland	1 846	3 578	3 517	779	190	880	1 967	2 581
France	18 773	20 027	16 022	2 981	2 284	2 059	7 243	13 188
Germany	3 452	12 589	10 922	1 338	729	290	5 936	4 080
Greece	1 587	1 361	1 462	350	—	119	510	469
Ireland	1 881	3 281	2 195	331	150	123	939	835
Italy	11 033	12 723	13 421	1 499	707	513	3 337	3 892
Japan	21 269	35 283	45 591	2 016	4 070	2 570	17 606	16 488
Netherlands	2 299	3 215	5 069	610	383	645	2 158	2 744
New Zealand	2 707	7 818	5 942	437	402	1 936	2 698	3 086
Norway	3 905	6 750	5 917	478	888	544	3 355	3 789
Portugal	2 382	2 503	2 159	—	362	—	1 010	1 051
Spain	3 913	7 083	1 794	434	250	82	757	1 275
Sweden	9 890	8 000	5 766	1 683	1 889	985	2 914	6 528
Switzerland	864	2 247	1 201	—	664	250	635	915
United Kingdom	25 424	24 109	33 225	5 446	4 638	5 582	15 867	26 056
United States	69 193	55 703	45 412	6 129	2 867	3 978	19 971	24 513
*Other**	4 582	5 703	13 719	440	2 099	750	1 385	8 764
Developing countries	**32 964**	**23 884**	**28 070**	**5 372**	**925**	**1 635**	**15 062**	**10 922**
Latin American countries	**8 115**	**3 395**	**10 729**	**2 635**	**94**	**130**	**8 097**	**3 988**
Argentina	3 700	17	2 110	—	—	—	—	—
Brazil	—	350	—	—	—	—	—	—
Chile	1 085	—	—	—	—	—	—	—
Colombia	1 052	240	137	—	—	—	50	1 000
Mexico	109	313	7 700	2 556	—	—	7 700	2 556
Venezuela	48	—	30	—	34	—	—	134
*Other***	2 121	2 475	753	79	60	130	347	298
Asian countries	**18 410**	**14 444**	**13 219**	**1 935**	**565**	**486**	**5 422**	**4 440**
China	3 192	3 336	4 338	515	300	192	1 676	1 252
India	818	1 795	2 156	546	82	120	905	1 133
Indonesia	451	1 343	1 745	174	—	30	620	330
Hong Kong	2 516	848	649	79	—	81	286	159
Korea	5 898	3 251	2 522	345	98	—	1 322	602
Malaysia	2 219	1 204	554	276	60	—	167	568
Thailand	1 497	1 676	463	—	—	—	169	300
Other	1 819	990	792	—	25	63	276	95
Middle Eastern and African countries	**6 439**	**6 044**	**4 122**	**802**	**266**	**1 019**	**1 543**	**2 493**
Algeria	1 450	1 344	344	153	—	—	154	333
Turkey	1 203	2 754	2 831	434	266	790	969	1 705
Other	3 786	1 945	947	215	—	228	420	455
Eastern European countries	**5 236**	**3 941**	**3 564**	**317**	**150**	**150**	**1 657**	**690**
Hungary	1 577	1 315	1 951	317	—	—	714	317
Soviet Union	1 489	1 821	864	—	50	150	662	273
*Other****	2 169	805	749	—	100	—	280	100
International organizations****	**20 635**	**19 896**	**20 013**	**3 034**	**1 624**	**1 072**	**8 051**	**8 866**
By type of instrument and currency								
International bond issues	**167 756**	**228 106**	**177 291**	**21 552**	**19 548**	**19 055**	**86 646**	**95 311**
Eurobonds	136 731	188 747	140 481	15 620	16 249	15 476	73 214	74 725
U.S. dollar	97 782	119 096	56 727	5 551	4 805	4 858	26 131	27 529
Japanese yen	6 539	18 516	23 116	694	3 098	1 961	14 562	8 058
German mark	9 491	17 127	15 518	3 256	1 413	1 873	8 645	10 693
British pound	5 766	10 585	14 997	2 713	3 184	3 215	8 006	12 622
Australian dollar	3 118	3 381	9 041	488	1 111	989	5 211	3 590
European composite units	7 038	7 057	7 423	1 163	765	927	4 569	3 621
Canadian dollar	2 822	5 067	5 891	1 224	1 196	1 306	2 820	5 751
Other	4 174	7 918	7 766	531	679	347	3 271	2 862
Foreign bonds	31 025	39 359	36 811	5 932	3 299	3 579	13 432	20 587
Swiss franc	14 954	23 213	23 976	3 048	2 148	2 118	8 789	13 329
U.S. dollar	4 655	6 782	5 911	979	356	550	1 750	2 585
Japanese yen	6 379	5 223	3 068	1 286	484	481	1 517	2 482
Other	5 037	4 141	3 856	620	311	429	1 375	2 190
International bank credits	**116 964**	**93 269**	**123 115**	**17 595**	**10 591**	**8 557**	**43 160**	**67 089**
Eurocurrency credits	110 317	84 208	112 104	16 700	10 156	8 193	39 919	65 132
Foreign credits	6 647	9 061	11 012	895	435	364	3 241	1 957
Total	**284 720**	**321 375**	**300 406**	**39 148**	**30 140**	**27 611**	**129 806**	**162 400**

*Includes multinational organizations. **Includes unallocated. ***Includes COMECON institutions. ****Includes regional development organizations.

Eurocurrency deposit rates

prime banks' bid rates, at or near end of month

	1984	1985	1986	1987		1988				
	Dec	Dec	Dec	Nov	Dec	Jan	Feb	Mar	Apr	May
Eurodollar										
overnight	8.63	12.25	22.00	6.62	6.75	6.69	6.69	6.75	6.88	7.31
one month	8.38	8.00	6.50	8.25	7.06	6.69	6.69	6.69	7.00	7.44
three months	8.63	7.88	6.25	7.94	7.37	6.81	6.69	6.81	7.19	7.63
six months	9.13	7.88	6.12	7.94	7.50	6.87	6.75	7.06	7.44	7.81
twelve months	9.81	7.94	6.12	8.19	7.81	7.25	7.12	7.44	7.88	8.31
Euro-Canadian dollar										
one month	9.88	9.00	8.00	8.56	8.00	8.50	8.25	8.25	8.44	8.81
three months	10.81	9.00	8.12	9.00	8.12	8.37	8.37	8.37	8.75	8.94
six months	10.06	9.00	8.19	9.12	8.44	8.50	8.37	8.62	8.88	9.19
twelve months	10.44	9.00	8.31	9.44	8.87	8.75	8.75	9.00	9.25	9.63
Euro-French franc										
one month	10.69	12.50	10.12	9.37	8.75	7.50	7.25	7.81	8.00	7.31
three months	10.69	13.00	10.37	9.37	9.00	8.00	7.75	8.31	8.25	7.50
six months	11.00	13.13	9.75	9.37	9.25	8.25	8.19	8.44	8.38	7.63
twelve months	11.38	12.25	8.75	9.37	9.25	8.50	8.50	8.56	8.50	8.00
Euromark										
one month	5.50	4.75	5.12	3.94	3.25	3.19	3.31	3.25	3.31	3.31
three months	5.50	4.75	4.87	3.94	3.37	3.25	3.31	3.31	3.44	3.56
six months	5.56	4.75	4.81	4.06	3.50	3.31	3.37	3.37	3.63	3.81
twelve months	5.56	4.81	4.81	4.12	3.75	3.56	3.50	3.56	3.81	4.19
Euro-Dutch guilder										
one month	5.69	5.75	6.31	4.81	4.50	3.94	3.94	3.87	3.88	3.81
three months	5.75	5.75	6.00	4.94	4.62	4.00	4.00	3.87	3.94	3.94
six months	5.81	5.81	5.87	5.00	4.69	4.12	4.06	4.06	4.06	4.13
twelve months	5.94	5.88	5.81	5.12	4.81	4.37	4.12	4.19	4.19	4.44
Euro-Swiss franc										
one month	4.44	3.88	3.94	4.94	2.50	1.25	1.37	1.62	2.06	2.81
three months	4.56	4.00	3.94	4.06	3.00	1.81	1.69	1.87	2.25	2.88
six months	4.63	4.00	3.87	4.06	3.19	2.37	2.12	2.19	2.44	2.94
twelve months	4.69	4.06	3.87	4.06	3.25	2.87	2.69	2.62	2.75	3.13
Eurosterling										
one month	9.50	11.69	11.12	9.00	8.56	8.44	9.00	8.44	8.06	7.38
three months	9.88	11.81	11.12	8.94	8.81	8.69	9.31	8.56	8.31	7.75
six months	10.00	11.81	11.06	9.00	9.00	8.87	9.50	8.69	8.69	8.25
twelve months	10.19	11.69	11.06	9.12	9.31	9.25	9.75	9.00	9.06	8.81
Euroyen										
one month	6.19	7.13	4.56	4.75	4.00	4.06	4.37	4.00	3.81	4.06
three months	6.19	6.56	4.50	4.44	4.12	4.12	4.19	4.00	3.94	4.06
six months	6.13	6.50	4.37	4.37	4.12	4.12	4.19	4.12	4.13	4.25
twelve months	6.13	6.38	4.31	4.44	4.12	4.19	4.19	4.19	4.25	4.31
European currency unit										
one month	9.25	9.63	8.56	6.94	6.62	5.87	6.12	6.19	6.13	5.63
three months	9.38	9.63	8.44	7.00	6.75	6.19	6.31	6.37	6.38	6.00
six months	9.50	9.63	8.06	6.94	6.87	6.37	6.44	6.44	6.50	6.31
twelve months	9.63	9.63	7.31	7.06	7.00	6.62	6.62	6.62	6.69	6.56

International bond yields

average yield of several actively traded, high quality issues with a maturity of 7 to 12 years at or near end of month

	1985	1986	1987					1988		
	Dec	Dec	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
United States companies										
Eurodollar	9 68	8.67	9 99	10.95	10.41	10.21	10.31	10.24	9.79	9.78
Euromark	6.73	6.62	6 82	6.87	7.04	6.74	6.69	6.54	6.27	6.33
Swiss franc	5.49	5.70	5.43	5.50	5.83	5.56	5.71	5.57	5.66	5.61
European governments										
Eurodollar	10.52	9.91	11 41	11 81	11.63	11.63	11.64	11.48	11.38	11.50
Euromark	7.03	6.77	6 65	6 76	6.61	6.61	6.21	6.23	6.07	6.06
Swiss franc	4.91	4.51	4.38	4 39	4.54	4.15	4.11	4.05	3.71	3.88
European currency unit	10.23	10.20	10.43	10.46	11.10	11.06	10.84	10.85	10.56	10.35

Central bank discount rates

at or near end of month

	1985	1986	1987	1988					Current	
	Dec	Dec	Dec	Jan	Feb	Mar	Apr	May	Jun 29 1988	effective since
United States	7.50	5.50	6.00	6.00	6.00	6.00	6.00	6.00	6.00	Sep 24, 87
Canada	9.49	8.47	8.66	8.62	8.57	8.78	9.12	9.17	9.39	Jun 23, 88
Austria	4.00	4.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	Dec 3, 87
Belgium	9.75	8.00	7.00	6.75	6.75	6.50	6.50	6.50	6.50	Mar 3, 88
Denmark	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	Oct 27, 83
Finland	9.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	May 19, 86
France	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	Aug 31, 77
Germany	4.00	3.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	Dec 3, 87
Ireland	10.25	13.25	9.25	9.25	9.25	9.25	8.50	8.00	8.00	May 30, 88
Italy	15.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	Aug 28, 87
Netherlands	5.00	4.50	3.75	3.75	3.25	3.25	3.25	3.25	3.25	Feb 5, 88
Portugal	19.00	16.00	14.50	14.50	14.00	14.00	14.00	14.00	14.00	Feb 5, 88
Spain	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	Jul 26, 77
Sweden	10.50	7.50	7.50	7.50	7.50	7.50	8.50	8.50	8.50	Apr 29, 88
Switzerland	4.00	4.00	2.50	2.50	2.50	2.50	2.50	2.50	2.50	Dec 4, 87
United Kingdom	11.31	10.81	8.37	8.37	8.87	8.37	7.88	7.38	8.88	Jun 24, 88
Japan	5.00	3.00	2.50	2.50	2.50	2.50	2.50	2.50	2.50	Feb 23, 87
New Zealand	19.80	24.60	18.55	18.05	18.20	17.80	19.70	17.15	16.90	Jun 29, 88
South Africa	13.50	10.00	9.80	9.80	9.80	10.80	10.80	11.80	11.80	May 5, 88
Argentina*	5.00	11.19	17.59	15.71	16.71	18.38	19.10	21.58	21.58	May, 88
Korea	5.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	Jul 10, 86
Philippines	11.50	9.64	9.25	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
Singapore	5.00	5.00	5.00	5.00	3.50	3.50	3.50	3.50	3.50	Feb, 88
Thailand	11.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	Sep 1, 86
Venezuela	12.94	12.79	12.49	12.89	12.93	n.a.	n.a.	n.a.	12.93	Feb, 88

*Percent per month.

Day-to-day money rates

monthly averages

	1984	1985	1986	1987			1988				
	Dec	Dec	Dec	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
United States	8.38	8.27	6.91	7.29	6.69	6.77	6.83	6.58	6.58	6.87	7.09
Canada	10.50	9.23	8.28	8.41	8.16	8.40	8.44	8.41	8.45	8.28	8.69
Austria	7.63	7.25	7.62	4.60	4.20	4.10	4.50	3.50	3.50	3.65	3.60
Belgium	9.12	6.60	5.09	4.34	5.44	5.09	5.02	4.16	5.10	5.05	4.28
Finland	15.07	11.96	11.97	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
France	10.95	9.02	7.80	7.69	8.67	8.23	7.80	7.26	7.54	7.55	7.34
Germany	5.62	4.64	5.00	3.74	3.55	3.19	3.13	3.32	3.24	3.25	3.30
Ireland	14.50	9.62	13.00	6.50	8.50	7.50	8.00	8.50	8.25	8.00	7.38
Italy	17.25	14.75	11.42	10.90	10.25	10.25	10.60	9.87	10.14	9.95	11.41
Netherlands	5.60	5.75	6.19	5.19	4.44	4.25	4.12	3.87	3.94	4.00	3.94
Norway	12.50	12.50	14.00	13.80	13.68	14.02	13.88	13.87	13.91	14.03	13.51
Spain	12.18	9.92	11.76	16.22	14.60	14.02	13.20	12.13	11.40	11.01	10.81
Sweden	11.88	11.83	8.89	8.42	8.97	8.43	8.75	9.37	9.61	9.71	9.75
Switzerland	1.50	2.00	1.12	1.25	1.50	0.50	0.50	1.00	1.25	2.13	2.25
United Kingdom	6.31	9.72	9.19	9.68	9.13	7.60	8.26	8.28	8.55	8.13	7.51
Australia	10.98	18.37	15.40	10.77	10.90	10.37	10.23	10.25	10.33	10.35	11.20
Japan	6.41	8.02	4.18	3.37	3.39	3.81	3.54	3.39	3.53	3.28	3.18
South Africa	21.13	12.50	8.50	8.64	8.45	9.76	9.75	9.25	9.85	10.00	10.90
Argentina*	17.75	4.50	7.00	9.00	9.80	14.90	16.40	14.90	17.60	18.18	19.70
Brazil	272.02	352.23	83.05	150.10	329.33	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Hong Kong	6.80	6.10	3.90	4.92	1.90	0.56	0.58	1.83	2.84	3.64	6.02
Korea	10.00	8.80	9.00	10.00	8.70	9.20	9.30	9.20	9.40	n.a.	n.a.
Philippines	15.22	15.03	9.92	12.94	14.35	22.53	n.a.	n.a.	n.a.	n.a.	n.a.
Singapore	6.01	4.53	3.51	3.55	3.40	2.57	2.73	2.93	3.01	3.08	3.56
Taiwan	8.07	4.50	4.00	3.67	3.57	4.56	5.11	5.52	5.37	5.23	n.a.

*Percent per month.

Treasury bill rates

bond equivalent yields, at or near end of month

	1984	1985	1986	1987			1988				
	Dec	Dec	Dec	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
United States	8.12	7.28	5.83	5.41	5.79	5.84	5.80	5.78	5.87	6.15	6.67
Canada	9.84	9.24	8.24	7.84	8.31	8.41	8.37	8.32	8.53	8.87	8.92
Belgium	10.90	9.89	7.50	7.25	6.95	6.84	6.44	6.24	6.18	6.18	6.18
Ireland	15.10	11.15	13.60	8.80	9.10	8.69	8.34	8.76	8.33	7.83	7.17
Italy	14.69	13.10	10.00	11.98	12.06	11.66	11.37	10.78	10.78	10.81	10.82
Netherlands	5.88	5.69	6.37	5.50	5.25	4.95	4.75	4.25	4.12	4.38	4.25
Spain	12.27	9.52	8.37	8.23	6.78	6.67	5.56	5.83	10.17	n.a.	10.25
Sweden	11.83	12.49	9.20	9.49	9.20	9.05	9.20	9.32	9.58	10.70	10.29
United Kingdom	9.33	11.49	10.79	9.07	8.67	8.38	8.38	9.01	8.26	7.98	7.28
Australia	12.27	19.40	14.91	10.47	10.34	10.06	9.92	10.44	9.83	10.40	11.60
Japan	4.91	4.91	2.89	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38
New Zealand	13.50	17.62	19.69	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
South Africa	21.94	12.99	8.84	8.68	8.64	8.85	9.49	9.55	10.51	10.97	11.61
Brazil	273.03	379.77	149.00	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Mexico	48.67	72.98	104.03	96.43	110.67	133.04	155.67	153.86	75.16	54.51	50.04
Philippines	47.14	16.45	9.55	12.97	13.18	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Singapore	2.91	2.94	2.10	3.57	3.69	3.23	2.92	2.97	2.97	3.02	n.a.

Representative money market rates

bond-equivalent yields on major short-term (mostly 3-4 month) money market instruments other than Treasury bills, at or near end of month

	1984	1985	1986	1987			1988				
	Dec	Dec	Dec	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
United States	8.49	8.02	6.64	7.58	7.80	7.21	6.90	6.77	6.90	7.20	7.75
Canada	10.00	9.40	8.35	8.50	8.70	8.90	8.65	8.55	8.65	8.94	9.32
Belgium	10.85	9.89	7.60	7.35	7.15	6.95	6.54	6.34	6.24	6.24	6.24
France	10.69	9.12	8.37	8.25	8.62	8.56	8.06	7.44	8.25	7.88	n.a.
Germany	5.75	4.80	4.85	4.10	3.80	3.65	3.23	3.28	3.40	3.55	3.60
Ireland	15.13	12.00	14.06	9.25	9.19	8.81	8.62	8.94	8.38	8.13	7.38
Italy	16.88	15.13	11.37	12.00	11.62	11.50	10.75	11.13	11.13	10.38	11.00
Netherlands	5.75	5.75	6.19	5.25	4.94	4.56	4.32	4.06	4.06	4.13	4.19
Portugal	24.57	20.71	16.07	14.66	14.30	14.34	13.97	13.43	13.03	n.a.	n.a.
Spain	12.21	10.51	11.79	15.84	14.44	13.59	12.30	12.01	11.06	10.90	11.11
Switzerland	5.00	4.75	4.50	4.06	4.06	3.56	1.69	1.81	1.88	2.13	2.75
United Kingdom	9.88	12.75	11.25	9.19	8.87	8.94	8.31	9.38	8.56	8.31	7.81
Australia	12.90	19.75	15.10	13.55	12.15	11.25	10.85	10.90	11.50	11.55	12.87
Japan	6.33	7.03	4.34	3.88	3.90	3.90	3.85	3.80	3.80	3.75	3.80
New Zealand	15.00	20.00	24.25	20.30	16.90	17.70	17.00	17.35	n.a.	17.20	15.75
South Africa	22.78	13.35	8.55	8.90	8.50	8.90	9.60	10.25	10.90	11.85	12.65
Chile	20.68	22.42	19.56	31.37	34.49	15.25	11.35	10.69	21.41	20.84	11.09
Hong Kong	8.25	6.50	4.62	6.19	4.06	1.50	3.00	3.87	4.12	5.13	7.31
Indonesia	19.00	15.00	19.50	17.37	17.50	17.50	17.00	18.50	22.50	18.50	19.00
Korea	8.00	8.00	8.00	7.50	7.50	7.50	n.a.	n.a.	n.a.	n.a.	n.a.
Malaysia	10.30	8.20	6.00	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	3.70	3.85
Philippines	33.21	14.61	8.31	11.81	n.a.	10.55	13.80	n.a.	n.a.	n.a.	n.a.
Singapore	7.00	5.88	3.94	4.50	4.00	3.25	3.13	3.13	3.19	n.a.	n.a.
Taiwan	7.85	4.10	3.87	3.23	3.13	3.09	4.12	4.47	4.23	4.48	n.a.

Commercial bank deposit rates

at or near end of month

	1984	1985	1986	1987			1988				
	Dec	Dec	Dec	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
United States	8.34	7.72	6.26	7.40	7.72	7.10	6.67	6.57	6.69	7.05	7.54
Canada	10.05	9.40	8.15	8.45	8.57	8.40	8.50	8.45	8.60	9.00	9.30
Austria	7.50	6.50	5.50	4.75	4.45	4.25	4.40	4.05	3.90	3.90	3.95
Belgium	10.63	9.63	7.44	6.60	6.66	6.69	6.31	6.25	6.19	6.00	6.06
Denmark	6.00	7.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
Finland	5.25	4.75	2.75	2.75	2.75	2.75	2 75	2 75	2.75	2.75	2.75
France	7.04	6.12	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
Germany	5.25	4.40	4.80	3.90	3.70	3.50	3.20	3.20	3.25	3.40	3.40
Ireland	14.63	11.87	13.75	8.62	9.12	8.62	8.50	8.75	8.25	7.75	7.25
Italy	11.64	13.21	10.69	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	9.50	9.50
Netherlands	5.69	5.81	6.06	5.12	4.81	4.50	4.21	3.94	4.00	4.06	4.06
Norway	12.75	12.00	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Portugal	28.00	20.00	15.00	14.00	14.00	14.00	14.00	13.50	13.50	13.50	n.a.
Spain	11.64	9.64	8.67	9.11	9.32	9.48	9.39	9.30	9.17	9.05	n.a.
Sweden	11.45	12.18	9.93	9.70	9.70	9.45	9.55	9.55	9.95	10.95	10 60
Switzerland	4.50	4.50	4.25	3.81	3.81	3.37	1.44	1.56	1.63	1.88	2.50
United Kingdom	9.88	11.75	11.19	9.12	8.81	8.81	8.75	9.25	8.37	8.13	7.63
Australia	12.75	18.80	15.56	11.25	12.28	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Japan	6.38	7.04	4.55	4.63	4.46	4.42	4.33	4.41	4.38	4.25	4.30
New Zealand	15.25	19.98	23.50	19.85	16.65	16.85	16.00	n.a.	14.60	15.50	15.50
South Africa	22.88	13.20	8.65	9.35	9.30	10.25	11.20	11.90	11.90	12.70	14.00
Argentina*	31.23	5.40	8.41	9.10	8.92	14.00	15.12	14.30	17.10	18.10	18.70
Brazil	27.00	18.00	220.00	14.00	15.00	17.50	n.a.	n.a.	n.a.	n.a.	n.a.
Chile	20.68	23.60	20.98	30.30	31.53	14.84	11.75	9.25	19.84	17.73	9.77
Hong Kong	8.25	6.50	4.62	6.19	4.06	1.50	3.00	3.87	4.12	5.13	7.31
Korea	6.00	6.00	6.00	6.00	6.00	6.00	n.a.	n.a.	n.a.	n.a.	n.a.
Malaysia	9.58	7.00	6.33	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Mexico	47.45	72.90	94.30	94.20	103.74	120.35	118.99	118.80	75.97	53.01	49.38
Philippines	31.01	12.34	7.75	8.56	9.50	11.19	9.65	9.27	10.09	n.a.	n.a.
Singapore	6.13	5.26	4.00	4.31	3.69	3.13	3.06	n.a.	n.a.	n.a.	n.a.
Taiwan	6.50	5.25	5.25	5.25	5.25	5.25	5.25	5.25	5.25	5.25	5.25
Venezuela	12.50	8.00	8.00	8.92	8.95	8.95	8.97	8.94	8.85	8.96	n.a.

*Percent per month.

Domestic government bond yields

long-term issues, at or near end of month

	1984	1985	1986	1987			1988				
	Dec	Dec	Dec	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
United States	11.61	9.49	7.79	9.04	9.10	8.95	8.42	8.39	8.82	9.07	9.31
Canada	11.66	10.04	9.23	10.21	10.50	10.34	9.74	9.61	10.13	10.36	10.38
Austria	8.03	7.61	7.33	7.26	7.13	6.89	6.83	6.80	6.71	6.62	6.61
Belgium	11.56	9.60	7.70	8.32	7.98	8.04	7.58	7.38	7.65	7.62	7.89
Denmark	14.60	9.67	11.70	12.56	11.84	12.05	11.18	10.91	11.22	11.44	n.a.
Finland	10.73	10.58	7.80	7.77	7.64	7.67	7.40	7.40	7.41	7.41	n.a.
France	12.70	11.33	9.89	10.95	10.46	10.57	9.73	9.33	9.61	9.42	9.38
Germany	7.17	6.57	6.25	6.62	6.46	6.51	6.50	6.28	6.30	6.47	6.68
Ireland	14.90	11.84	12 97	11.05	10.23	10.45	10.61	10.41	10.12	9.74	9.80
Italy	14.52	13.66	10 05	11.41	11.25	10.50	10.29	10.30	10.29	10.39	10.49
Netherlands	7.72	6.96	6 40	7.05	6.37	6.32	6.17	5.99	6.01	6.21	6.36
Norway	12.00	13 00	13.24	13.10	13.26	13 29	13.35	13.16	13.24	13.24	n.a.
Portugal	22.23	16.64	14.49	15.30	15.60	14.80	14.70	14.50	n.a.	n.a.	n.a.
Spain	13.93	12 52	10.36	14.24	13.34	13.14	12.48	11.91	11.82	11.35	11.63
Sweden	12.04	12.11	10.66	11.42	11.51	11.39	11.30	10.96	11.05	11.41	11.21
Switzerland	4.60	4.42	4 05	4.12	3.86	3.95	3.94	3.93	3.92	3.77	3.98
United Kingdom	10.25	10.35	10.17	9.22	9.23	9.47	9.26	9.10	8.96	9.14	9.17
Australia	13.50	14.85	13.40	13.65	13.30	12.85	12.40	12.30	11.90	11.50	12.30
Japan	6.47	5 92	4.61	4.58	5.00	4.88	4.23	4.36	4.43	4.45	4.60
New Zealand	16.90	17.00	16.00	15.70	14.90	14.30	14.00	13.30	13.08	13.15	13.05
South Africa	16.55	18.09	15.06	15.44	15.30	15.70	16.80	16.52	16.60	16.48	16.40
Philippines	18.54	n.t.	n.t.	n.t.	n.t.	n.t.	n.t.	n.t.	n.t.	n.t.	n.t.
Venezuela	14.00	12.00	12.00	12.50	12.50	12.50	n.a.	n.a.	n.a.	n.a.	n.a.

Commercial bank lending rates to prime borrowers

at or near end of month

	1984	1985	1986	1987			1988				
	Dec	Dec	Dec	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
United States	10.75	9.50	7.50	9.00	8.75	8.75	8.50	8.50	8.50	8.50	9.00
Canada	11.25	10.00	9.75	9.75	9.75	9.75	9.75	9.75	9.75	10.25	10.25
Austria	9.25	9.00	9.00	8.50	8.50	8.25	8.25	8.25	8.25	8.25	8.25
Belgium	14.00	11.50	9.75	8.75	8.75	8.75	8.75	8.50	8.50	8.50	8.50
Denmark	10.50	8.50	8.00	9.50	9.50	9.50	9.50	9.50	9 50	9.50	n.a.
Finland	10.68	10.37	8.81	8.97	9.02	8.99	9.03	9.05	9.07	n.a.	n.a.
France	12.00	10.60	9.45	9.45	9.45	9.45	9.45	9.45	9.45	9.45	9.45
Germany	7.75	7.25	6.75	6.25	6.25	6.25	6.00	6.00	6.00	6.00	6.00
Ireland	15.75	12.50	15.75	12.00	12.00	11.50	11.50	11.50	11.50	11.25	11.25
Italy	18.00	15.88	13.00	13.00	13.00	13.00	12.50	12.62	12.62	12.63	12.63
Netherlands	6.25	6.25	7.12	5.50	5.25	4.87	4.62	4.06	4.12	4.19	4.25
Norway	13.00	12.40	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Portugal	29.00	22.50	17.50	18.50	18.50	18.50	18.50	18.00	18.00	18.00	n.a.
Spain	15.84	14.75	14.22	16.48	16.38	16.34	16.10	15.76	15.42	15.23	14.79
Sweden	14.50	15.05	11.50	11.50	11.50	11.50	11.50	11.50	11.50	11.50	12.00
Switzerland	6.00	6.00	5.75	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
United Kingdom	9.50	11.50	11.00	9.50	9.00	8.50	8.50	9.00	8.50	8.00	7.50
Australia	14.00	21.00	18.50	14.00	14.00	14.00	13.50	13.50	13.50	n.a.	n.a.
Japan	5.50	5.50	3.75	3.37	3.37	3.37	3.37	3.37	3.37	3.38	3.38
New Zealand	14.00	21.00	23.00	22.50	19.75	18.75	18.75	n.a.	n.a.	n.a.	n.a.
South Africa	24.00	16.50	12.00	12.50	12.50	12.50	13.00	13.00	14.00	14.00	15.00
Argentina*	32.05	7.30	11.30	9.80	9.98	14.80	15.80	15.00	17.60	17.92	19.50
Brazil**	31.00	19.00	250.00	18.00	18.00	19.50	n.a.	n.a.	n.a.	n.a.	n.a.
Chile	60.82	33.34	29.13	37.33	40.20	30.99	21.22	20.51	25.49	31.64	21.88
Hong Kong	11.00	7.00	6.50	6.50	6.00	5.50	5.25	6.00	6.00	6.50	7.50
Indonesia	23.50	18.75	19.75	21.00	20.50	20.50	20.50	20.50	20.50	21.00	22.00
Korea	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Malaysia	12.00	10.50	10.00	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Mexico	47.54	65.66	95.33	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Philippines	44.00	15.00	10.50	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Singapore	9.40	7.20	6.10	6.10	6.10	6.10	5.98	5.93	5.85	5.85	5.85
Taiwan	10.00	9.50	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
Venezuela	16.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	n.a.

*Percent per month.

**Spread above monetary correction until Feb 86; nominal rate of interest until Jan 87; spread above LBC rate thereafter.

Domestic corporate bond yields

long-term issues, at or near end of month

	1984	1985	1986	1987			1988				
	Dec	Dec	Dec	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
United States	12.25	10.15	8.88	10.25	10.30	9.90	9.38	9.45	9.85	10.25	10.38
Canada	12.42	10.74	10.18	11.22	11.32	10.95	10.37	9.96	n.a.	10.97	10.86
France	12.94	11.76	10.18	11.28	10.96	10.92	10.38	9.91	10.03	9.78	9.77
Germany	7.20	6.90	6.50	7.00	6.70	6.70	6.70	6.70	6.60	6.60	6.80
Netherlands	7.51	n.t.	n.t.	n.t.	n.t.	n.t.	n.t.	n.t.	n.t.	n.t.	n.t.
Spain	18.32	14.92	13.40	17 39	17.08	16.15	15.79	14.68	14.78	12.89	12.89
Sweden	12.33	13.25	11.99	12.78	12.36	12.31	12.20	11.83	11.94	12.20	12.15
Switzerland	5.09	4.93	4.72	4.87	4.65	4.60	4.50	4.39	4.39	4.29	4.36
United Kingdom	11.64	11.47	11.71	10.75	10.59	11.11	10.76	10.82	10.66	10.55	10.69
Japan	7.10	6.79	5.93	5.95	5.59	5.32	5.06	5.03	4.99	4.93	4.95
Korea	15.00	13.60	12.80	12 50	12.90	12.80	12.80	13.20	13.70	13.90	n.a.
Venezuela	18.00	17.00	17.00	18.00	18.00	18.00	n.a.	n.a.	n.a.	n.a.	n.a.

Key to data in tables

I. International markets

Data on the *international banking market size* are based on resident and nonresident Eurocurrency (i.e., foreign currency) assets and liabilities and on nonresident domestic currency assets and liabilities of banks in nearly all European countres, the Bahamas, Bahrain, Canada, Cayman Islands, Hong Kong, Japan, Netherlands Antilles, Panama, Singapore, and the United States. All assets and liabilities of international banking facilities (IBFs) of banks in the United States are treated as Eurocurrencies.

An *international bond issue* may be either a Eurobond issue or a foreign bond issue. A *Eurobond issue* is one placed principally in countries other than that of the currency in which the bond is denominated, usually through an international syndicate. A *foreign bond issue* is one issued by a nonresident borrower on the market of a single country and denominated in that country's currency. Data on new international bond issue volume include all publicly announced issues of straight bonds, convertibles, bonds with warrants, floating rate notes, and certificates of deposit with an original maturity of three years or more (one year or more beginning in 1985), whether publicly or privately placed.

An *international bank credit* may be either a Eurocurrency credit or a foreign credit. A *Eurocurrency credit* is one denominated in a currency that is foreign to the country of the bank office extending the credit. *A foreign credit* is one extended to a nonresident borrower and denominated in the domestic currency of the country in which the bank office extending the credit is located. Data on new international bank credit volume include all publicly announced bank credits with an original maturity of one year or more (term loans, revolving lines of credit, and facilities to back up the issuance of other financial instruments such as commercial paper, short-term notes, certificates of deposit and banker's acceptances).

Data on international bond issues and bank credits through 1984 were compiled by Morgan Guaranty Trust Company. Beginning in January 1985 these data are based on figures published in the OECD's *Financial Statistics Monthly*.

II. Domestic markets

Central bank discount rates

Rates shown are the official discount rates with the exception of:

Ireland — Short Term Facility rate.
South Africa — discount rate for 90-day banker's acceptances.
United Kingdom — rate of discount for outright purchases of 15- to 33-day bank bills.

Day-to-day money rates

Argentina—7-day interbank money regulated by the central bank.
Austria — day-to-day interbank rate.
Australia — effective interest rate in the official short-term money market.
Belgium — day-to-day loan rate in the call money market.
Brazil — interbank overnight money.
Canada—chartered banks' day-to-day loans.
Finland — Bank of Finland call money.
France — interbank call money against private paper.
Germany — interbank call money.
Hong Kong — interbank 24-hour call rate.
Ireland — interbank call money.
Italy — interbank 48-hour call money.
Japan—Tokyo interbank call money, unconditional lenders rate.
Korea — overnight interbank call money.
Netherlands — open-market call money.
Norway — day-to-day interbank rate.
Philippines — interbank call loan rate.
Singapore — interbank overnight money.
South Africa — discount houses basic call rate.
Spain — day-to-day interbank rate.
Sweden — interbank call money.
Switzerland — call money.
Taiwan — private interbank overnight loan rate.
United Kingdom — call money.
United States — federal funds rate.

Treasury bill rates

Australia — 13-week Treasury notes at tender.
Belgium — new issue of 3-month Treasury certificates.
Brazil — 3-month Treasury bills.
Canada — 3-month Treasury bills at tender.
Ireland — 3-month central bank exchequer bills at tender.
Italy — 6-month Treasury bills.
Japan — 60- to 62-day noninterest-bearing discount government bills.
Mexico — 3-month Federal Treasury bills.
Netherlands — 3-month Treasury bills.
New Zealand — tap issue rate for 3-month Treasury bills until December 1984. As of January 1985, 3-month Treasury bills at tender.
Philippines — simple average of 91-day Treasury bills at tender until June 1984. Beginning July 1984 rates refer to the weighted average interest rate on 91- to 183-day Treasury bills sold to banks under negotiated basis.
Singapore — 91-day Treasury bills at tender.
South Africa — 3-month Treasury bills at tender.
Spain — 3-month Treasury bill repos reported by the Bank of Spain until January 1988. As of February 1988 secondary market yield on 3-month Treasury notes (average of quotations during the month .
Sweden — new issues of 3-month Treasury bills until June 1982. New series as of July 1982, 6-month Treasury discount notes, market rate.
United Kingdom — 91-day Treasury bills at tender.
United States — 3-month Treasury bills.

Representative money-market rates

Australia — buying rate for 90-day bank accepted commercial bills.
Belgium — 4-month Fonds des Rentes certificates.
Canada — 3-month prime finance company paper.
Chile — central bank 60-day fixed rate promissory notes (PDBC) at tender.
France — 3-month interbank money against private paper.
Germany — 3-month interbank deposits.
Hong Kong — 3-month interbank deposits.
Indonesia — 1-month interbank deposits.
Ireland — 3-month interbank deposits.
Italy — 3-month interbank deposits.
Japan — 3-month "gensaki" rate.
Korea — 3-month financial bill.
Malaysia — 3-month interbank deposits.
Netherlands — 3-month interbank deposits.
New Zealand — 90-day commercial bills.
Philippines—weighted average interest rate for 90-day promissory rates.
Portugal — average of 30- to 90-day interbank deposits.
Singapore — 3-month banker's acceptances until July 1987. As of August 1987 3-month commercial bills.
South Africa—90-day banker's acceptances.
Spain — 3-month interbank rate reported by the Bank of Spain (average of quotations during the month).
Switzerland — 3-month interbank deposits.
Taiwan — 90-day banker's acceptances.
Thailand — interbank call money.
United Kingdom — 3-month interbank deposits.
United States — 3-month prime industrial paper.

Commercial bank deposit rates

Argentina — nominal 30-day time deposits. Average of bank rates published by the central bank until August 1984. New series as of September 1984, 30-day acceptances maximum interest rate.
Austria — 3-month time deposits.
Australia — 3-month certificates of deposit.
Belgium — special maximum rate for 3-month time deposits in large amounts.
Brazil — 6-month certificates of deposit with prefixed yields until July 1982. New series as of August 1982, 6-month certificates of deposit reported as a spread above monetary correction which is set every month in relationship to inflation.
Canada — 3-month time deposits.
Chile — 30-day time deposits.
Denmark — time deposits of 3-months' notice.
Finland — time deposits of six-month notice.
France — 3-month time deposits of FF. 1,000,000.
Germany — 3-month time deposits in large amounts.
Hong Kong — negotiable 3-month time deposits of more than HK$500,000.
Ireland — 3-month deposits.
Italy — 3-month time deposits of Lit. 100 million or more.
Japan — 90-day negotiable certificates of deposit issued by the Tokyo office of Morgan Guaranty Trust Company.
Korea — 3-month time deposits.
Malaysia — 3-month time deposits.
Mexico — 3-month certificates of deposit until September 1983. New series as of October 1983, 3-month promissory notes.
Netherlands — 3-month time deposits in large amounts.
New Zealand — 6-month transferable certificates of deposit.
Norway — 3-month special term deposits.
Philippines — weighted average interest rates on 60- to 90-day time deposits of samole commercial banks.
Portugal — 90- to 180-day time deposits until May 1984. New series as of June 1984, 180-day to one-year time deposits.

Key to data in tables — continued

Singapore — 3-month certificates of deposit.
South Africa — 3-month negotiable certificates of deposit.
Spain — deposits over 6 months and less than 1 year for Pts. 1 million or more reported by the Bank of Spain.
Sweden — 3-month certificates of deposit.
Switzerland — 3-month time deposits.
Taiwan — maximum rate for 3-month time deposits.
Thailand — 3-month time deposits.
United Kingdom — 3-month time deposits.
United States — 3-month negotiable certificates of deposit issued by Morgan Guaranty Trust Company.
Venezuela — 6-month negotiable certificates of deposit for domestic depositors only.

Domestic government bond yields

Austria — Austrian National Bank average yield on all outstanding government bonds.
Australia — secondary market yield for 10-year Treasury bonds.
Belgium — Belgium National Bank secondary market average yield on central government bonds of more than 5 years' maturity quoted on Brussels Stock Exchange.
Canada — Bank of Canada average yield on all direct government bonds due or callable in 10 years or more.
Denmark — 12% serial bonds maturing 2001 until April 1983. New series as of May 1983, 10% serial bonds maturing 2004.
Finland — rate of interest at issue on central government bonds intended for public subscription, weighted by sales of bonds in the latter half of each month.
France — INSEE secondary market weighted average yield of public sector bonds with a remaining maturity of 10 years or more.
Germany — Frankfurter Allgemeine Zeitung 10-year public authority bond average.
Ireland — 15-year government bonds.
Italy — average yield on fixed-interest government bonds, not including irredeemable bonds, weighted by the amounts in circulation, for maturities of 9 years or more.
Japan — secondary market average yield on Central government bonds with a maturity of 5 years or more
Netherlands — Central Bureau of Statistics (CBS) average yield on three latest government bonds.
New Zealand — average yield on government bonds maturing after 5 years.
Norway — 5% government bond of 1996 until December 1982. New series as of January 1983, average yield of long-term government bonds.
Philippines — weighted average interest rate of outright sales on secondary transactions for central bank certificates of indebtedness.
Portugal — yield of 4% Centenary Loan of 1940.
South Africa — 25-year government bonds until August 1983; 20-year Republic of South Africa bonds until April 1984; new series as of May 1984, secondary market yield for the 13% due 2005 Republic of South Africa bond.
Spain — Bank of Spain secondary market weighted average yield of several central government issues with more than 2 years' maturity (average of quotations during the month).
Sweden — 15-year government bonds until October 1983. New series as of November 1983, 5-year government bond yield index, market rate.
Switzerland — Swiss Confederation bond average.
United Kingdom — F.T. (*Financial Times*) Actuaries 25-year government stock.
United States — Morgan Guaranty 20-year U.S. Government Bond Index until December 1986. As of January 1987 U.S. Treasury 30-year constant maturity index.
Venezuela — Banco Central average yield on public-sector bond issues.

Commercial bank lending rates to prime borrowers

Argentina — average rate on 30-day loans.
Austria — overdraft rate for prime borrowers, including commission.
Australia — overdraft rate. Maximum indicator rate applying to loans of A$100,000 or more for major trading banks.
Belgium — prime overdraft rate.
Brazil — prefixed rate applied to working capital loans until July 1982; monetary-corrected free rate applied to working capital loans from August 1982 to July 1983. New series as of August 1983, maximum legal rate reported as a spread above monetary correction which is set every month in relationship to inflation. Charges for fees and commissions are often added.
Canada — prime rate.
Chile — average prime rate of six major commercial banks.
Denmark — approximate rate for loans and advances to prime borrowers.
Finland — average rates on total commercial bank lending.
France — base lending rate, excluding a commission of .05% per month on highest debit balance during the month. A spread above base rate is often added.
Germany — approximate effective overdraft rate for prime borrowers.
Hong Kong — prime lending rate set by the Hong Kong Association of Banks.
Indonesia — prime rate for domestic affiliates of foreign companies.
Ireland — AA corporate borrowing rate.
Italy — unsecured overdraft rate for prime borrowers.
Japan — standard rate of interest on short-term loans of especially high credit standing.
Korea — prime rate.
Malaysia — Bank of Commerce Berhad base lending rate.
Mexico — base rate or average cost of money for banks determined monthly by the Banco de Mexico S.A.
Netherlands — overdraft rate for prime borrowers, including commission.
New Zealand — overdraft rate for prime borrowers.
Norway — overdraft rate, including a commission of .25% per quarter on the total line of credit until January 1983. New series as of February 1983, special rate of first class, large borrowers.
Philippines — prescribed administrative ceiling for unsecured loans with maturities of 365 days and below, including charges until December 1982. New series as of January 1983, modal rate to prime borrowers.
Portugal — maximum rate for 90- to 180-day loans.
Singapore — most common overdraft rate, major banks.
South Africa — unsecured overdraft rate for prime borrowers.
Spain — private banks' average interest rate for 1-year loans reported by the Bank of Spain.
Sweden — overdraft rate for prime industrial borrowers, commission not included.
Switzerland — unsecured overdraft rate for prime borrowers, excluding commission of .25% per quarter on average or highest outstanding debit balance in quarter.
Taiwan — maximum rate for 3- to 12-month secured loans. Rate is an indication only and may vary from actual bank lending rate which is subject to volatile interbank rates.
Thailand — prime rate.
United Kingdom — clearing bank base lending rate. A spread above base rate is often added.
United States — prime rate of Morgan Guaranty Trust Company.
Venezuela — representative rate for domestic prime borrowers only.

Domestic corporate bond yields

Canada — McLeod, Young, Weir Co. Ltd., weighted long-term bond yield index for AA corporates.
France — INSEE secondary market weighted average yield of private company bonds with a remaining maturity of 10 years or more.
Germany — Bundesbank secondary market weighted average yield of industrial bonds with a remaining maturity of more than 3 years.
Japan — secondary market yield for industrial bonds.
Korea — average of yields on corporate bonds guaranteed by local banks, with an original maturity of 3- 2- 5-years.
Netherlands — CBS average yield on three 6%-6.5% corporate bonds until December 1981. As of January 1982, CBS secondary market weighted average yield on all commercial bank issues with a quotation between 92% and 103%.
Norway — 5.75% Dalen Portland-Cement bond of 1969-1984 until December 1982. New series as of January 1983 average yield of long-term industrial bonds.
Spain — Bank of Spain seconary market weighted average yield of several corporate issues with more than 3 years' maturity (average of quotations during the month).
Sweden — Central Satistical Bureau average yield on industrial bonds.
Switzerland — average yield on outstanding bonds of four leading Swiss companies. Mixture changed as of January 1982.
United Kingdom — *Financial Times* secondary market average yield of industrial and financial company debentures and loan stocks with an average of 25 years to maturity.
United States — Salomon Brothers index of new issues yields for Aa industrial bonds with five-year call protection.
Venezuela — average of yields on 15-year bond issues of Electricidad de Caracas.

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