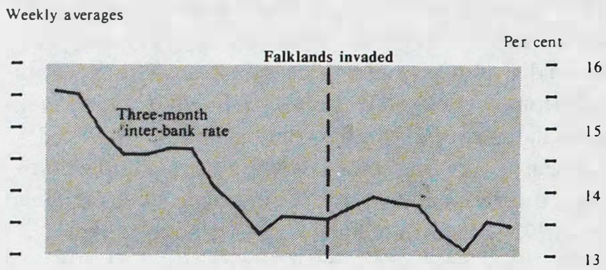
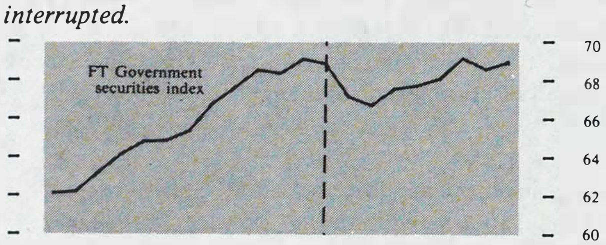
Operation of monetary policy

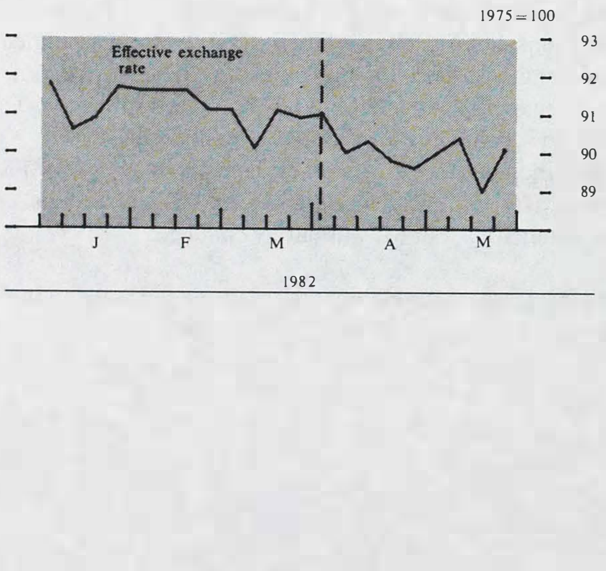
Downward pressure on **short-term interest rates** *was interrupted by the Falklands crisis.*



A sharp rise in **gilt-edged prices** *was similarly interrupted.*



But **sterling** *was less affected.*



Review

The onset of the Falklands crisis on 2 April came roughly half-way through the three banking months with which this review is mainly concerned (mid-February to mid-May).[1] In the six weeks up to that date, sentiment in the financial markets had generally been good. The Budget, on 9 March, was well received. Short-term interest rates had fallen significantly, with base rates down by 1% to 13%, and gilt-edged prices had continued the sharp rise begun in January. Sterling, apart from a temporary dip in mid-March, remained strong despite fears that some favourable influences [2] were ending and that short-term interest rates were again about to rise in the United States. Domestic news was generally encouraging, with further evidence of subdued monetary growth through the winter and increasing confidence that the annual rate of retail price inflation could soon fall—and stay—below 10%. The authorities, for their part, accepted that a decline in short-term interest rates was appropriate. They continued to sell sizable amounts of debt but, with the central government's financial position unexpectedly strong in March, the immediate need to sell debt to restrain the growth of broadly defined money was less than for some time.

When the Falkland Islands were invaded on 2 April and the domestic political uncertainties became apparent, the initial response of the main markets was very nervous, with gilt-edged prices falling particularly sharply. Thereafter, when prospects for a satisfactory settlement rose, sentiment became bullish; for example on one occasion at the end of April, when an unexpectedly hopeful development was reported late in the day, gilt-edged prices rose within minutes by up to 4%, only to fall back again on the next working day. These periods alternated with days of considerable unease. The authorities sought to encourage stability, intervening to a limited extent in the foreign exchange market, seeking to avoid major fluctuations in short-term interest rates and holding back from pressing stock on the gilt-edged market.

After allowing for the effects of the Falklands crisis, underlying sentiment remained firm, helped by further encouraging statistics. In April these included, notably, an improvement in the 1981/82 public sector borrowing requirement (PSBR) of nearly £2 billion from the forecast given in the Budget, and further good price and wage statistics. In the United States the money supply rose less rapidly than had been feared, and the lower interest rates which resulted tended to weaken the US dollar and help sterling.

From late April, these considerations, together with hopes of an early and satisfactory settlement of the Falklands crisis, generated sufficient optimism for a rally in shares and (more modestly) in gilt-edged prices. Short-term interest rates also began to fall as sterling remained fairly strong in effective rate terms. But the

(1) All subsequent references are to calendar months, unless otherwise specified.

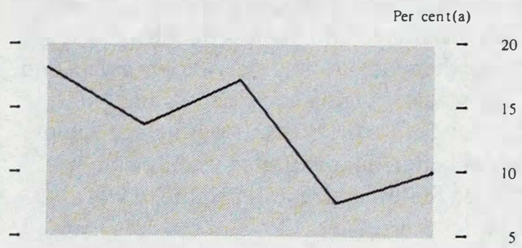
(2) Notably the tax revenue season, the need for oil companies to pay heavy taxes on 1 March, and a rebate to the United Kingdom from other members of the European Community (as part of the EC budget arrangements). All these factors would have tended to support demand for sterling during the first quarter of the year.

authorities considered it advisable to keep interest rates steady while the outcome of the crisis remained uncertain. Market pressure for a fall in rates was never particularly strong, and when in mid-May hopes of a peaceful settlement of the crisis faded and there were renewed doubts over the immediate course of short-term US interest rates, nervousness quickly reappeared.

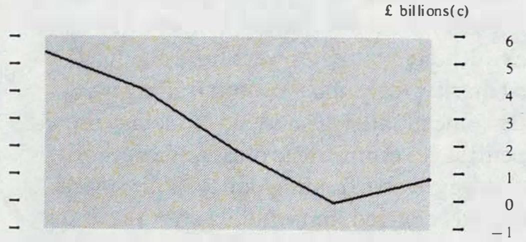
Later, the markets regained confidence and short-term interest rates fell; on 8 June base rates were reduced by ½% to 12½%.

Overall, despite erratic movements from time to time, the financial markets remained relatively unmoved by the Falklands crisis.

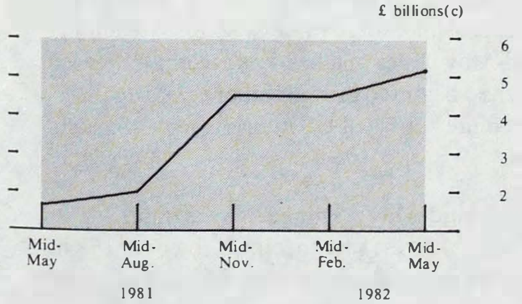
The growth of **sterling M3** *slowed during the winter but then quickened.*
Seasonally adjusted



The **PSBR**(b) *followed a similar pattern.*



Bank lending *to the private sector remained high.*



(a) Increase during previous three months at an annual rate.
(b) Strictly, the PSBR *less* public corporation and local authority borrowing from the non-bank private sector.
(c) Total during previous three months.

The sequence of main events

All the main markets opened with a good underlying tone. Sizable official sales of gilt-edged stocks were possible, aided by hopes of a decline in interest rates abroad and at home, and sterling was strong. Short-term interest rates fell sufficiently for the banks to reduce their base rates by ½%, to 13½%, on 24 February following a similar fall, to 16½%, in US prime rates. Sterling, however, weakened modestly after a realignment of EMS currencies and on suggestions that North Sea oil prices might need to fall to match depressed world prices.

Throughout the second half of February, there were heavy cash shortages in the money market, and the prospect that these would be increased by the massive oil tax payments due on 1 March kept some short-term interest rates up. In the event, although the cash shortages in first two days of March totalled £2 billion, there were no major problems in dealing with them. Thus, with sterling fairly stable (despite the announcement of a cut in North Sea oil prices on 2 March) and with hopes of a favourable Budget, downward pressure on interest rates reappeared. In the week to 5 March, the Treasury bill tender rate fell by ¾%; but the authorities did not accept significantly lower rates in their bill purchases in this period, judging this to be premature until the market had been able to assess the Budget.

The most immediate market reaction to the Budget on 9 March was a considerable initial change in the relative prices of particular types of gilt-edged stocks; the price of index-linked stocks rose particularly sharply following the abolition of restrictions on eligibility to hold such stocks. However, the Budget—and the encouraging monetary statistics released at the same time—was also seen as compatible with falling short-term interest rates, and on 11 March the clearing banks announced a further ½% cut, to 13%, in their base rates. The next day, the building societies announced a 1½% reduction, to 13½%, in their mortgage rate, effective from 1 April.

In the second half of March there was a gradual improvement in sentiment, although there were few significant market movements. Sterling recovered in effective terms to its end-February level, despite periodic weakness against a strong US dollar. Prices of conventional gilt-edged stocks rose modestly, but there were heavy falls in index-linked stocks (reversing part of the immediate post-Budget rise) after the results for the tender for the new index-linked stock issued on 19 March. In the money markets, no clear trend in rates emerged, but cash shortages were regularly larger than forecast as net government revenue generally exceeded projections. In offsetting these shortages, the Bank's total holdings of commercial bills rose to unprecedented levels. (See page 200.)

The Argentine invasion of the Falklands on 2 April and the resignation of the Foreign Secretary on 5 April caused considerable nervousness. In the first two working days after the invasion, sterling fell by more than $1\frac{1}{2}\%$ in effective terms, and gilt-edged prices declined very sharply (by up to $4\frac{1}{2}\%$ for long-dated stocks and by half that for short-dated stocks). In the money markets the uncertainty pushed longer rates up but very short rates down (as lenders seeking high liquidity switched into overnight and very short-term funds). Encouraging wholesale prices figures were largely ignored but the resilience of sterling before and after the Easter holiday helped to lay the basis for a partial recovery of confidence.

For the rest of calendar April the markets remained highly vulnerable to news or rumours about the Falklands. Domestic news was generally good: there were indications after Easter that the PSBR in 1981/82 had been substantially less than had been forecast and there were further encouraging statistics on prices and wages. Sterling was fairly stable, ranging between 1% and $1\frac{1}{2}\%$ lower in effective terms than before the crisis. It was helped against the US dollar by a series of better-than-expected weekly money supply figures in the United States, which lessened the risk of a renewed rise in interest rates there.

Towards the end of the month, the flow of good domestic news and developments in the United States—together with new hopes of a satisfactory settlement of the Falklands crisis—brought an improvement in markets. In the money market, longer inter-bank rates began to fall back, although bill rates were little changed. Prices in the gilt-edged market rose modestly, but trading was generally thin and after some months of subdued monetary growth, heavy debt sales and central government surpluses, the authorities had no need to pursue an aggressive funding policy. Share prices recovered the falls that had occurred immediately after the invasion of the Falklands.

These trends continued into May, with sterling strengthening against an easier US dollar. Short-term inter-bank rates fell below their early April levels; gilt-edged prices rose further and modest official sales were again possible; share prices also rose, reaching new peaks. But by mid-May hopes of an early peaceful settlement of the Falklands crisis had begun to fade and there were again doubts about the immediate course of US interest rates. Markets again became nervous.

Over the three months to mid-May sterling fell by around 2% in effective terms; short-term interest rates declined (by over 1% in the case of the three-month inter-bank rate), and gilt-edged yields fell by 1% or more.

Table A
Growth of the monetary aggregates

Percentage increases (annual rates); *seasonally adjusted*

Banking months	Mar. 81– Apr. 82	Sept. 81– Nov. 81	Dec. 81– Feb. 82	Mar. 82– May 82
Wide monetary base (M_0)	1.4	− 0.3	6.9	− 7.2
Non-interest-bearing M_1	3.5	− 4.7	2.8	0.6
M_1	7.2	8.1	8.5	0.2
Sterling M_3	13.0	17.1	7.5	9.7
M_3	16.6	18.8	3.0	14.4
PSL_1	13.5	14.1	9.0	11.3
PSL_2	11.9	10.1	9.2	10.1

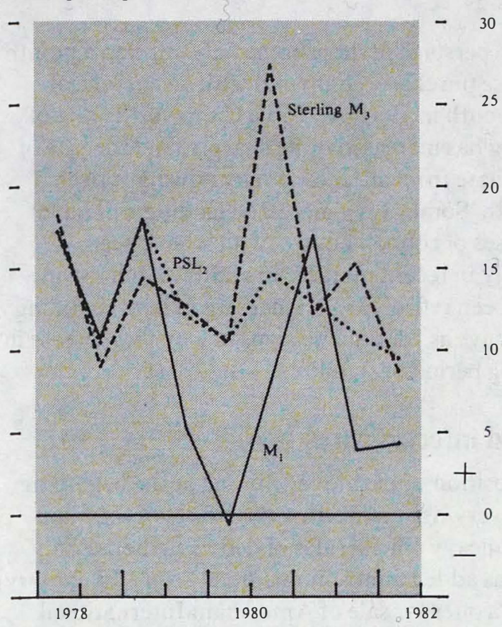
Monetary aggregates

Three months to mid-May

The broad sterling monetary aggregates continued to increase moderately in the three months to mid-May, although the growth, particularly in May, was a little faster than during the winter. The narrow aggregates were subdued. Of those aggregates for which the Chancellor set a target range of 8%–12% growth (annual rate) for the fourteen months to mid-April 1983, sterling M_3 and PSL_2 grew

Short-term changes in the main monetary aggregates

Percentage change at annual rate(a)



(a) Annualised percentage change over six months to mid-May and mid-November.

Table B
Sterling M_3 and its counterparts

£ millions (rounded); *seasonally adjusted*

Banking months	Mar. 81– Aug. 81	Sept. 81– Nov. 81	Dec. 81– Feb. 82	Mar. 82– May 82
Central government borrowing requirement	+8,800	+1,300	– 100	– 100
Purchases(–) of central government debt by non-bank private sector	–6,700	–2,900	–2,500	–2,400
of which:				
Gilt-edged stocks	*–4,600*	*–2,300*	*– 800*	*–1,700*
National savings	*–2,300*	*– 600*	*–1,100*	*– 800*
Other public sector(a)	+ 700	+ 500	—	+ 900
Sterling lending to UK private sector	+3,600	+4,500	+4,600	+5,100
External and foreign currency finance(b)	– 200	– 400	– 100	– 900
Net non-deposit liabilities (increase–)	– 700	+ 100	– 400	– 600
Sterling M_3	**+5,500**	**+3,100**	**+1,500**	**+2,000**

(a) The contribution to the public sector borrowing requirement of public corporations and local authorities, *less* their borrowing from the non-bank private sector.

(b) Includes bank lending in sterling to overseas.

at about 10% per annum in the first three months of the period, while M_1 was virtually unchanged. Three months is, however, too short a period to be sure of the trend.

As for much of the last two years, the narrow measures of money grew more slowly than gross national income or consumers' expenditure.(1) On the basis of traditional relationships, movements in short-term interest rates account for only a limited part of this slow growth. But it may be that people have been tending to change their methods of payment, so reducing in particular the demand for currency in relation to income or expenditure. For example, to the extent that employers are changing to payment of wages through the banking system rather than by cash, the monetary base, and possibly M_1, will be reduced. Nevertheless, the most recent movements in the narrow aggregates, taken by themselves, are such as to suggest an underlying picture of continued monetary restraint.

In contrast to the other broad aggregates, total M_3 accelerated quite sharply during the three months, reflecting the fact that UK residents' foreign currency deposits increased by nearly £1,300 million, having been run down by £800 million in the preceding three months.

A number of factors influenced the behaviour of sterling M_3 during the three months. First, the public sector's finances, which had been a strongly contractionary factor early in 1982, had returned to a more normal position by banking May. After seasonally adjusted surpluses on the PSBR(2) in banking March and April (aided by rebates from the European Community and by substantial collections of tax delayed by the Civil Service dispute(3)), there was a sizable deficit in banking May. Local authorities and public corporations also borrowed particularly heavily from banks in the three months. Second, the onset of the Falklands crisis checked demand in the gilt-edged market; gross official sales of stock in the first six weeks of the crisis were much lower than in the preceding six weeks. The crisis also interrupted the downward movement of short-term interest rates, and this left national savings—particularly the new certificate announced during April—unusually uncompetitive. As a result, net purchases of central government debt by the non-bank private sector fell away during the period, although over the three months as a whole net purchases were at much the same monthly rate as over the winter (Table B).

The rate of increase of bank lending to the private sector remained high, averaging around £1$\frac{3}{4}$ billion a month, or about 30% per annum. Of this, about £$\frac{1}{2}$ billion a month is thought to have been lent to persons and the remaining £1$\frac{1}{4}$ billion to the business sector. The reasons for the continued rapid increase in lending to the business sector are not wholly clear. Some of the lending will have been to finance tax payments delayed by the civil servants' dispute last year, and a further part will have been connected with the apparent resumption of stockbuilding in the first quarter of this year. In addition, it may be that some large companies increased their borrowing in order to build up their liquid asset holdings. The available evidence suggests that this was done not so much for

(1) Most econometric studies of the demand for narrow money find a fairly close positive correlation over time between these aggregates and nominal income or expenditure, and, in the case of M_1 at least, also a negative correlation with changes in short-term interest rates.

(2) Strictly, the PSBR *less* public corporation and local authority borrowing from the non-bank private sector.

(3) In both banking April and May, receipts of delayed tax were probably less than £$\frac{1}{4}$ billion, against £$\frac{3}{4}$ billion in banking March.

Table C

Lending for house purchase

£ millions; *not seasonally adjusted*

	Quarterly rates			
	1981		1982	
	H1	H2	Q1	Q2
Building societies	1,700	1,400	1,300	1,900(a)
Monetary sector(b)	300	900	950	..
Other lenders	200	300	..	..

.. not available.

(a) April and May, at a quarterly rate.
(b) Excludes trustee savings banks.

reasons of immediate profit (the profitability of 'bill arbitrage' is discussed on page 207) as to restore gross liquidity and ensure the ready availability of funds.

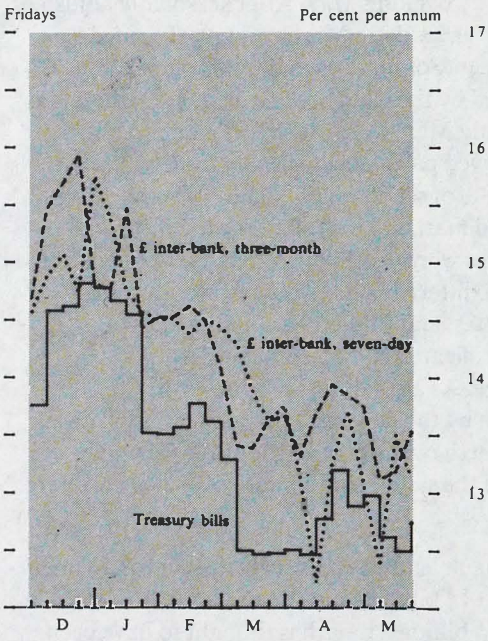
Within bank lending to persons, perhaps some £350 million a month may have been for house purchase, compared with an average of under £200 million a month in 1981. As Table C shows, the rate of building society lending has increased quite sharply, and the rate of lending for house purchase from all sources may now have risen above £1 billion a month. Some of the increased lending will have been to finance purchases of council houses, which have been proceeding more rapidly in recent months; in addition, the rise in lending seems to have been reflected in an increase in housebuilding activity, though there have as yet been no signs of a major increase in house prices after a long period of stability.

Money markets and interest rates

Banking March

The underlying cash position of the money market at the beginning of banking March was very tight, reflecting the effects of the main tax revenue season and heavy official sales of debt. Further, if only temporary, pressure was added almost immediately (on 18 February) when the Government's offer for sale of Amersham International was heavily oversubscribed. Around £1½ billion was paid over to the Bank and held for about a week until allocation. The Bank provided the bulk of the funds necessary in this week by lending directly to the discount market and by buying bills for resale on the day that oversubscriptions were repaid. In addition, to help banks cope with the drain on their short-term liquidity, the Bank reduced for a week the minimum ratio of secured deposits which eligible banks are required to hold with the discount market, from 4% to 3% of eligible liabilities. (The 6% average ratio, which applies over a six or twelve-month period, was not reduced.)

Short-term interest rates in London



At the start of the period, interest rates were fairly steady and the yield curve for maturities of up to one year was nearly flat at around 14⅝%. Longer inter-bank rates then began to fall as optimism grew in the wake of lower eurodollar rates and encouraging US money figures. The Bank accepted lower yields offered on bills on 22 February (with declines ranging from $\frac{1}{16}$% in bands 1 and 2 to ¼% in band 4) [1] and, although short rates in the money market stayed firm in the face of continuing prospective cash shortages, the clearing banks announced cuts of ½% in their base rates, to 13½%, on 24 February. The Bank again accepted lower yields on bills on 25 February.

Nervousness over sterling, mainly caused by talk of a sharp fall in North Sea oil prices, temporarily halted any further decline in rates. But the Bank accepted modestly lower yields on band 4 bills on 1 March, when petroleum revenue tax fell due; and gross cash shortages of £3 billion in the week beginning 1 March were offset without major upward pressure on very short rates by a mixture of large outright purchases (mostly of short-dated bills) and substantial purchase and resale agreements.

Expectations of a further cut in base rates were stimulated by suggestions that the Budget would be well received and by the publication of good weekly US money figures on 5 March. There were falls in eurodollar and longer sterling money market rates. Ahead of the Budget, the Bank felt it appropriate to confine its

(1) There was a further fall of $\frac{1}{16}$% in band 2 rates on 23 February. Full details of the Bank's operations are given in Table 10 of the statistical annex. Band 1 = up to 14 days maturity; band 2 = 15–33 days; band 3 = 34–63 days; band 4 = 64–91 days.

operations to purchases of short-dated bills at its ruling rates, and to purchase and resale agreements; when these channels proved insufficient on 8 and 9 March, the shortfall was made up by lending to the market at 14% (compared with the Bank's band 1 bill buying rate of $13\frac{5}{8}$%).

After the Budget, which was well received by the market, the Bank once again, on 10 March, accepted offers of bills for all maturities up to three months at around the prevailing market rates. This involved reductions from the Bank's previous dealing rates ranging from $\frac{3}{8}$% in band 1 bills to $\frac{7}{8}$% in band 4 bills. (The Bank had not dealt in band 3 or 4 bills since 1 March.) On 11 March the clearing banks announced a further cut of $\frac{1}{2}$%, to 13%, in their base rates, a move which had already been fully discounted. Subsequently, however, longer money market rates rose, in sympathy with US rates. Very short rates also moved up in response to renewed large shortages of cash (caused by the unexpected strength of net government receipts and by bills maturing in the Bank's hands) and the prospective unwinding of over £1 billion of purchase and resale agreements in the week beginning 22 March. The Bank's bill dealing rates remained unchanged.

Banking April

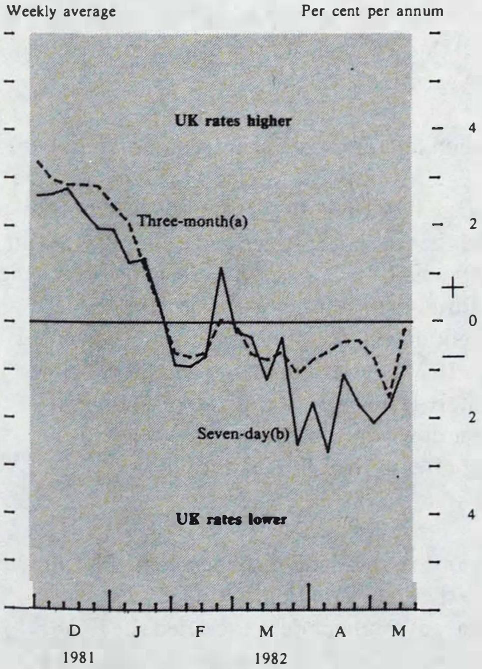
Over the first week of banking April, short-term money market rates eased on balance. The Bank offset the regular sizable shortages of cash without much difficulty — mostly by outright purchases of bills — although again on most days the Government's net revenue position was better than projected. Very short rates continued to fall, despite further unexpected improvements in net revenue. Longer rates, however, drifted upwards again on fears that the weekly US money supply figures in April would, at least temporarily, drive US rates higher.

In the first two days of calendar April, inter-bank rates generally declined (three-month rates, for example, falling by $\frac{1}{4}$% to around $13\frac{3}{8}$%). However, the invasion of the Falklands and the domestic political repercussions rapidly reversed this movement. The three-month inter-bank rate quickly rose towards 14% before easing a little, and the rate at which some discount houses offered longer-term bills to the Bank rose by up to $\frac{1}{8}$% for band 3 and 4 bills in the week before Easter. (The Bank's dealing rates had previously been unchanged since the downward adjustment after the Budget.)

Lenders also quickly sought to become highly liquid, and on several occasions overnight rates were pushed very low towards the end of the day. The Bank regarded such movements as unhelpful, given that sterling had fallen back after the invasion and that short-term rates in the United Kingdom were considerably lower than in the United States (as they had been since early March). On several occasions before and after Easter, the Bank's official operations therefore provided somewhat less cash than the shortage shown in its published forecasts.

Differential between UK and US short-term interest rates

Weekly average



(a) Three-month London inter-bank rate *minus* three-month New York CD rate.
(b) Seven-day London inter-bank rate *minus* overnight Federal funds rate.

On 13 April, and again on the morning of 16 April, market sentiment became uneasy over developments in the Falklands. On the second occasion, three-month inter-bank rates reached 14% and the Bank cut the allotment of Treasury bills at the weekly tender from £100 million to £60 million, to dampen the tendency for rates to rise. As further reassurance, the Bank also accepted offers of band 1 bills at $13\frac{1}{8}$% (against $13\frac{1}{4}$% previously) after a period of ten days in which the market's offers in this band had been rejected as too low. Despite an extremely large weekly increase in US M1 announced on 16 April (which revived fears of an increase in short-term US rates), longer UK rates again fell towards the end of the banking month.

Banking May

Further nervousness on 23 and 26 April over developments in the Falklands reversed this decline. But with sterling remaining fairly strong against the US dollar (although down to 89.5 in effective terms) and renewed hopes of an imminent fall in US interest rates, sentiment improved again by the end of April.

During the first week of May, sterling rose further against the dollar, while on 6 May the Bundesbank eased its monetary stance by reducing the cost of some of the rediscount facilities available to West German banks. These factors, together with optimism about an early settlement of the Falklands dispute, brought longer money market rates down; and the average Treasury bill tender rate on 7 May was nearly $\frac{3}{8}\%$ lower than a week earlier.

On Monday 10 May, sterling strengthened further and the downward pressure on short-term rates continued. The authorities, however, considered it preferable to exercise a steadying influence over rates, in view of the great uncertainty over the course of the Falklands crisis. Therefore, despite a large prospective shortage of cash that day, the Bank maintained its existing dealing rates and rejected nearly all of the 'first round' offers of bills.[1] This was sufficient to produce enough bids acceptable to the authorities at the second round for the bulk of the shortage to be offset by bill operations.

The next day, a similar pattern prevailed, although this time the Bank provided a large part of the necessary cash by sale and repurchase agreements rather than by outright purchases. The authorities' actions were sufficient to influence a still nervous market, and the downward pressure on rates eased for the rest of the week. The average Treasury bill tender rate on 14 May was only $\frac{1}{8}\%$ lower than previously (but this was sufficient to bring the rate close to that ruling before the Argentine invasion).

By this time, there was again talk of US short-term rates tending to rise in the period ahead. To this, early the next week, was added the increasing likelihood of a breakdown in the UN peace initiative on the Falklands dispute and the prospect of renewed difficulties within the European Community when, on 17 May, new farm prices for the Community were voted through on a majority basis against the wishes of the United Kingdom and two other members. By the end of the banking month (on 19 May) sterling had again fallen below an effective rate of 90, and short-term interest rates were again rising. As in the face of the earlier downward pressure, the authorities maintained stable dealing rates in their bill operations.

Table D
Influences on the cash position of the banking system

£ millions (rounded); *not seasonally adjusted*
Increase in banks' cash +

Banking months	June 81– Aug. 81	Sept. 81– Nov. 81	Dec. 81– Feb. 82	Mar. 82– May 82
Money market influences				
CGBR	+4,900	—	−1,300	+1,100
All other(a)	−3,200	−2,700	−2,100	−2,800
Total	+1,700	−2,700	−3,400	−1,700
Official operations affecting cash				
Net increase (+) in Bank's holdings of eligible bank bills(b)	—	+1,600	+2,900	+1,300
Net increase (−) of Treasury bills in issue	−1,300	+1,000	+ 100	+ 200
All other(c)	− 300	—	+ 400	+ 200
Increase (+) in banks' balances at the Bank	+ 100	− 100	—	—

(a) Change in note circulation, sales of Government debt, change in the official reserves, etc.
(b) By the Issue and Banking Departments of the Bank.
(c) Changes in official holdings of local authority bills, discount window lending, etc.

Cash and liquidity

Over the three banking months, the Bank provided some £$1\frac{3}{4}$ billion (net) of additional cash to the money market (Table D), largely because net sales of central government debt exceeded the CGBR by around £$1\frac{1}{4}$ billion. As during the winter, the main cash injection came from official purchases of eligible bank bills. With these purchases, the Bank's holdings of eligible bank bills rose to a new peak, of over £8 billion, against a maximum of £$3\frac{1}{2}$ billion in 1980/81.

(1) See the March *Bulletin*, page 92.

'Overfunding' and money market operations

In 1976 the authorities introduced a target range for the rate of growth of M_3; from 1977 the target was expressed in terms of sterling M_3. For much of the period since then this aggregate has tended to grow faster than targeted. The main expansionary counterpart to the growth of sterling M_3 has been bank lending in sterling to the private sector. In the fourteen months to mid-April this year (for which the target growth rate for sterling M_3 was 6%–10% per annum, equivalent to an increase of between £5.2 billion and £8.8 billion) lending to the private sector increased by £16.7 billion, and sterling M_3 by £11.4 billion.

In order to mitigate the effect of rapidly rising bank lending to the private sector on the growth of sterling M_3, it has been necessary to sell large amounts of public sector debt to UK non-banks. It is helpful here to define the *net funding position* as net purchases of public sector debt by the UK non-bank private sector *less* the public sector borrowing requirement (PSBR)—both elements seasonally adjusted. When this difference is positive, as was the case in 1977/78 and again in 1981/82, *overfunding* is said to have occurred. (Other definitions of overfunding are possible but this one is most relevant to the control of sterling M_3.)

The table shows that, notwithstanding overfunding in 1977/78 and 1981/82, overall in the last five years there was very modest net underfunding: the PSBR exceeded net purchases of public sector debt by UK non-bank residents by £1/2 billion. In the same period bank lending to the UK private sector rose by around £40 billion.

In the past, a consequence of overfunding has been the repayment of short-term Government borrowing from the banking system by reducing the outstanding total of Treasury bills. More recently, with the banks' holdings of liquid claims on the Government already at a low level, the consequential money market operations following from overfunding have predominantly taken the form of purchases of bank acceptances by the Issue Department of the Bank from the banking system, and the withdrawal by Issue Department of Ways and Means advances to the Government.

Statistically, purchases of bank bills appear as the acquisition by the public sector of claims on the non-bank private sector. This statistical presentation does not, however, imply that in substance the transactions are any different from other forms of money market operations which involve the buying back of public sector debt; their substance is precisely the same. In each case the object of the transaction is solely to relieve the cash shortage which has arisen in the money market as a result of the raising of government finance in another market for the purpose of influencing the rate of growth of the money supply.

The Bank needs to provide cash to the money markets when payments by the banks to the Exchequer exceed the cash flowing in the other direction. The factors giving rise to these flows, and the ways in which the Bank offsets them, were described in detail in the March 1982 *Bulletin*, page 86.

Two of the most important influences on the cash position of the money market—the central government borrowing requirement (CGBR) and government debt sales—are also key elements of the net funding position. A rise in the CGBR will, in many circumstances, entail an increase in the PSBR and, other things being equal, in the banks' cash holdings. On the other hand, official sales of central government debt to UK non-bank residents will reduce the banks' cash holdings.

The link between the net funding position and the net amount of money market operations which are necessary is not a simple one. For example, a rise in the CGBR will not always entail a corresponding increase in the PSBR. Thus a public corporation may borrow from the central government and repay borrowing from banks; this will increase the CGBR but leave the PSBR unchanged, will add to the cash in the money markets (because money has flowed from the Exchequer), but will not affect the net funding position.

Another example is a purchase by UK non-banks of central government debt from banks or from the overseas sector. Other things being equal, this will increase net funding without altering the cash position of the money markets (because no additional cash has gone to the Exchequer). Again, banks or the overseas sector may buy central government debt from the authorities. This causes cash to flow to the Exchequer but does not affect net funding.

Furthermore, net funding is generally calculated in *seasonally adjusted* terms, but the cash position of the money markets inevitably has to be considered in actual terms. At times (such as the main revenue season in January and February) the actual and seasonally adjusted positions differ markedly.

Two other factors may affect the amount of official money market operations needed at any time. An increase in the *note circulation* raises the money market's need for cash, because the banks have to obtain the additional notes from the Bank, which debits the banks' operational balances. Second, transactions by the authorities in the *foreign exchange market* can change the cash position of the money market; a fall in the reserves (as happened during 1981/82) means that the Government is selling foreign currency and acquiring sterling, which reduces the market's sterling cash balances.

The net funding position in any period is only one factor, although often important, in determining the scale of the Bank's money market operations. The table shows that the PSBR was overfunded by £2½ billion in 1981/82; but market operations were required on the much larger scale of some £4¾ billion. The main reasons for the difference were that the CGBR was over £1 billion smaller than the PSBR, the reserves fell and there were net sales of gilt-edged stocks by the banks.

Sterling M_3 and overfunding

Seasonally adjusted

	1977/78	1978/79	1979/80	1980/81	1981/82
	Percentage increases at annual rates				
Target set for sterling M_3(a)	9–13	8–12	7–11	7–11	6–10
	£ billions				
Actual growth in sterling M_3	6.2	5.3	6.4	10.7	10.0
Increase in bank lending to UK private sector	3.7	6.3	9.2	9.2	14.5
PSBR	5.5	9.3	10.5	13.1	8.6
UK non-bank residents' net purchases of public sector debt	6.9	8.4	9.1	11.0	11.1
Net funding (overfunding +, underfunding −)	**+1.4**	**−0.9**	**− 1.4**	**− 2.1**	**+ 2.5**

(a) The periods for which ranges were published often did not correspond exactly with financial years; for example, a range of 6–10% per annum was published in March 1981 for the period mid-February 1981 to mid-April 1982; this range is shown for 1981/82.

The flow of funds between the Government and the market with which the Bank had to deal during the three months was very uneven. In banking March, the combination of massive tax payments and heavy official sales of debt drained nearly £2$\frac{1}{4}$ billion from the money market. This was followed by further pressure on the market's cash position late in calendar March and again towards the end of April. From early April, however, with the central government's finances returning to a more normal pattern, it became increasingly common for the daily cash shortages to be more than accounted for by the maturity of eligible bank bills already held by the Bank. In offsetting shortages from this cause, the Bank was doing no more than rolling over its existing portfolio of bills; indeed, between mid-March and mid-May, its holdings of eligible bank bills fell by over £$\frac{1}{2}$ billion.

The funding programme

Before and immediately after the Budget, there were large official sales of gilt-edged stocks and national savings. Sales of national savings fell away sharply early in banking April, after the withdrawal of the twenty-third issue of conventional certificates. In the three months to mid-May, sales of national savings raised £0.8 billion. Sales of gilt-edged stocks were also subdued after the invasion of the Falklands; even so, gross official sales totalled £2 billion in the three months. Redemptions and official buying-in of next maturities accounted for £$\frac{3}{4}$ billion, but there were net sales by banks and overseas; UK non-bank residents bought a net £1$\frac{3}{4}$ billion of gilt-edged stocks in the period.

With the public sector in surplus (seasonally adjusted) in both banking March and April, UK non-bank purchases of central government debt substantially exceeded the PSBR[(1)] in this period, as they had for some time previously.

The gilt-edged market

Banking March

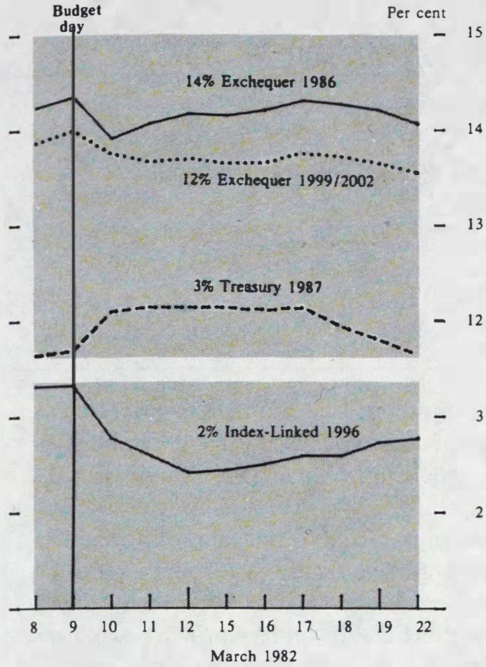
The market opened the period quietly firm. On Friday 19 February more substantial demand emerged in the wake of lower short-term dollar interest rates and a strong US bond market: a large amount of the short tap, 13$\frac{1}{4}$% Exchequer 1987 'A' (issued on 8 February), was sold at £20$\frac{1}{8}$ to £20$\frac{1}{4}$ (£20 paid), together with amounts of other stocks. After the weekend, further enthusiasm was generated by a fall in the US money supply and lower short-term sterling interest rates. The short tap was exhausted at £21 and a substantial amount of the low coupon tap, 3% Treasury 1987, was sold at £64$\frac{7}{8}$. At the end of the day, gains ranged from £1 for shorts to £2 for longs. On the next day the remaining supplies of the low coupon tap (issued on 7 January) were exhausted at £65, but the market lost momentum and profit-taking was evident during the rest of the week.

On Monday 1 March quietly firm conditions were re-established, with further downward pressure on short-term interest rates. Over the rest of the week the Financial Times Government Securities Index rose by 1$\frac{1}{2}$ points and closed at 68.36, its highest since 1 May 1981.

On Monday 8 March the firm conditions continued following good US money supply figures, but the market turned easier on Budget day as the US bond market fell back and on caution ahead of the Chancellor's statement. Short-dated stocks, however, recovered

(1) Strictly, the PSBR less public corporation and local authority borrowing from the non-bank private sector.

Gross redemption yields[a] on selected gilt-edged stocks after the Budget



(a) At close of business.

ground after the publication of provisional money figures for February which indicated no growth in sterling M_3 during the month.

The Budget ended all eligibility restrictions on holders of the three index-linked stocks already issued and a new derestricted issue, 2% Index-Linked Treasury 1988, was announced for tender on 19 March.

On the following day, the market adjusted to this and other Budget news. The index-linked stocks were traded actively and closed with net gains of £7 to £9; conventional stocks rose by £2 to £2$\frac{1}{4}$ at the longer end with shorts up £$\frac{7}{8}$ to £1$\frac{1}{4}$. Low coupon stocks were marked down by up to £1$\frac{1}{2}$, on the view that derestriction reduced their relative attraction. At the close of business, the issue of five £100 million tranchettes of existing stocks (ranging in maturity from 1992 to 1996) was announced (Table E), to provide the Bank with some conventional stock to sell in the event of heavy demand, ahead of the tender for the new index-linked stock. On 11 March, the cuts in clearers' base rates helped improve sentiment at the longer end of the market after a somewhat easier opening, but profit-taking the next day brought an easier tone in conventional stocks. However, indexed stocks continued to improve on both Thursday and Friday to show net gains of around £12 over the week.

After the weekend the market opened firm despite a rise in the US money supply, but by the end of the banking month it had turned quiet and slightly easier. Index-linked stocks encountered some selling, falling by up to £2.

Banking April

Declines in short-term rates in West Germany and Switzerland on 18 March provided a moderately encouraging background for the tender of the new index-linked stock. But as with the then restricted stocks issued in July 1981 and January 1982, a number of bids implied yields far higher than those ruling on the existing stocks. As before, the Bank exercised its right to set a minimum price (in this case £97$\frac{1}{2}$, giving a yield of 2$\frac{1}{2}$% in real terms), rejected lower bids and stated that it would not sell the balance of the stock in the market below the minimum price. On the same day, it was announced that retail prices had been unchanged in February—the best monthly outcome for twelve years. Together with the limited interest shown at the tender this news produced falls of £1$\frac{1}{2}$ to £2 over the day in the existing index-linked stocks.

On the following Monday and Tuesday conventional gilt-edged stocks advanced strongly, encouraged by news on inflation, but indexed stocks were again marked down. Thereafter concern about the course of US interest rates re-emerged, with consequences for sterling, and the market turned easier in quiet trading. Indeed, on 29 March, the US dollar reached its highest for six months against sterling and the deutschemark. But sterling remained stable in effective terms at around 91, and from 30 March demand for gilt-edged stocks picked up again, especially for low coupon stocks. Index-linked stocks did not share in this recovery.

On 2 April the Falklands were invaded and on 5 and 6 April—the first two working days thereafter—prices fell sharply, with losses on conventional stocks of between £2 for short-dated and £4$\frac{1}{2}$ for long-dated stocks; index-linked issues were marked down by £1$\frac{1}{2}$–2. A recovery in sterling on 7 April and growing hopes of a diplomatic settlement brought a rally, but on each side of the Easter holiday the market was very quiet.

Table E
Issues of gilt-edged stock

Stock	Total amounts issued (£ millions)	Date announced	Date issued	Date exhausted	Price per £100 stock (£)	Payable per £100 stock: On issue (£)	Payable per £100 stock: Further instalments (£)	Redemption yield (per cent)
$13\frac{1}{4}$% Exchequer 1987 'A'	750(a)	8/2	8/2	22/2	93.25	20	35.00 on 8/3 38.25 on 5/4	15.22
2% Index-Linked Treasury 1988	750	9/3	19/3	—	97.50(b)	50	47.50	2.5
$12\frac{1}{4}$% Exchequer 1992	100(a)	10/3	10/3	—	—	—	—	—
$13\frac{1}{2}$% Exchequer 1994	100(a)	10/3	10/3	—	—	—	—	—
$12\frac{1}{2}$% Exchequer 1994	100(a)	10/3	10/3	—	—	—	—	—
12% Treasury 1995	100(a)	10/3	10/3	—	—	—	—	—
14% Treasury 1996	100(a)	10/3	10/3	—	—	—	—	—

(a) Issued to the Issue Department of the Bank.
(b) See text.

After Easter, with sterling holding steady, gilt-edged prices showed some resilience in the face of otherwise discouraging Falklands news and were helped by the announcement of a lower-than-expected outturn for the CGBR in 1981/82. On 15 and 16 April, however, the market again turned easier, apart from a brief spurt of demand in after-hours trading on 16 April when there were rumours that a settlement of the Falklands crisis was possible. Over the weekend, the news was less encouraging but, late on 19 April, hopes of peace pushed prices up. The resulting firm conditions were maintained on 20 and 21 April and, although trading remained very light, prices of long-dated stock were up to £$2\frac{1}{4}$ higher over the two days, and those of short-dated stocks £1 higher.

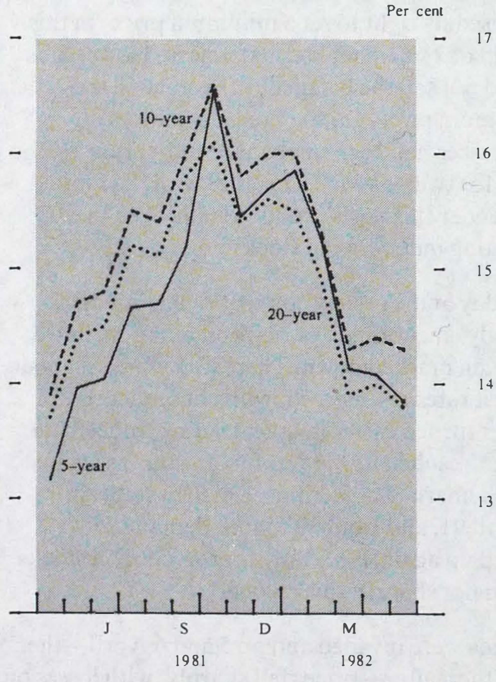
Banking May

For the rest of April, trading remained light and, while the prices of conventional stocks rose slightly on balance, sentiment was volatile and dominated by news of developments in the Falklands. On 30 April, there was a late report that Argentina had agreed to withdraw and prices rose very sharply in after-hours trading[1]. But these gains were almost wholly lost after the weekend, when prospects for an early settlement had again faded.

Early in May, the underlying tone improved somewhat on the strength of sterling and with hopes for a fall in US and UK interest rates. The market was sufficiently strong on Monday 10 May for modest official sales of stock to be made. But this movement was not sustained as the scope for rapid falls in US or UK interest rates was seen to be limited, and as peace initiatives on the Falklands dispute failed to make progress. Towards the end of the banking month, prices of conventional stocks began to fall back as the Falklands crisis worsened. Only index-linked issues held their ground and the Bank met small demands for several of these stocks.

Over the three months, but mainly in banking March, yields in the gilt-edged market fell substantially. By mid-May, short-dated high-coupon stocks were yielding around 14% (down nearly $1\frac{1}{2}$% since mid-February), medium-dated stocks about $14\frac{1}{4}$% (down 1%) and longer stocks $13\frac{3}{4}$% (also down 1%). Yields on index-linked stocks in the same period also fell—by about $\frac{1}{4}$% in the case of the 1996 stock—having been about $\frac{3}{4}$% down immediately after their derestriction in the Budget.

Gross redemption yields on British government stocks[a]



(a) Based on yields of particular representative stocks.

Other central government debt

Net receipts of *national savings* amounted to £0.8 billion in the three months to mid-May. Most of this came in the first six weeks, with particularly heavy sales of the twenty-third issue of conventional

(1) The gilt-edged market closes officially at 3.30 p.m.

certificates. Once this issue had been withdrawn on 10 March,[1] to be replaced (five weeks later) by a new issue yielding a significantly lower rate of return, net receipts declined sharply. There was virtually no change in holdings of *certificates of tax deposit* during the period.

Table F
Other capital markets

£ millions; *not seasonally adjusted*
Net cash raised +

Calendar months	June 81– Aug. 81	Sept. 81– Nov. 81	Dec. 81– Feb. 82	Mar. 82– May 82
Local authorities				
Stocks	6	– 64	—	– 96
Negotiable bonds	– 19	– 23	– 27	– 14
UK private sector				
Loan capital and preference shares(a)	+148	– 57	—	+ 72
Equity capital(a)	+613(b)	+333	+595(c)	+197
Unit trusts	+151	+ 97	+ 88	+ 72

(a) Net issues by listed UK public companies.
(b) Including some £285 million in respect of the first call on a BP rights issue.
(c) Includes some £350 million in respect of the final instalment on a BP rights issue.

Table G
Outstanding droplock arrangements

Trigger levels (a)	Amount committed as at mid-May (£ millions)
$11\frac{1}{2}$% up to 12%	15
11% up to $11\frac{1}{2}$%	14
$10\frac{1}{2}$% up to 11%	65
10% up to $10\frac{1}{2}$%	38
$9\frac{1}{2}$% up to 10%	81
9% up to $9\frac{1}{2}$%	20
$8\frac{1}{2}$% up to 9%	20
No specified level	26

(a) Usually set with reference to the yield on high coupon, long-dated gilt-edged stocks.

Other capital markets

Three months to end-May

For most of March the *equity* market traded within a fairly narrow range. The Budget had little immediate impact. At the end of the month sentiment improved, in line with developments in the money and gilt-edged markets, but the Argentine invasion of the Falklands quickly reversed this movement. On the first two working days after the invasion, the Financial Times All-Share Index fell by over 4%. Prices moved erratically until 19 April, after which a rally recouped the early April declines in price. Further price rises in the first four days of May brought share prices on several measures above (or close to) previous peaks. A marked worsening in the Falklands crisis caused prices to fall away, but they subsequently recovered. At end-May, the Financial Times All-Share Index stood at 337.46–– $6\frac{1}{2}$% higher than at end-February.

With potential private borrowers on the capital markets as usual avoiding the period around the Budget, and from early April facing volatile conditions in the market, *new equity issues* continued at the rather subdued pace of the winter months (Table F). In the first five months of 1982, net new issues of equity—at £350 million[2]—were well down on the £460 million recorded in the same period of 1981.

New *fixed interest* issues were also reduced by the volatile conditions ruling from early April. There were two 'bulldog' issues in March—a £100 million offer for sale by the International Bank for Reconstruction and Development (the 'World Bank')[3] and a £50 million placing by Crédit Foncier—but then nothing further during the period until the end of May. Similarly, there were no *domestic stock* issues in sterling after the £100 million raised by Barclays Bank early in February; while three foreign borrowers came to the *eurosterling* market in March before new issues in this market too dried up. There was little activity in the *local authority* markets and only a modest increase in the amount of outstanding *droplock* arrangements (Table G).

Special scheme lending for exports and home shipbuilding

The margin over three-month sterling LIBOR paid by the Export Credits Guarantee Department and the Department of Industry to banks under the fixed-rate sterling finance schemes is to be reduced from $1\frac{1}{4}$% to $\frac{7}{8}$% for credit periods up to twelve years, and to 1% beyond that period. This reflects changes in market conditions since the margin was last reviewed (see March 1980 *Bulletin*, pages 56–58). The new margin will apply to all agreements to provide such

(1) Because cash from the sale of certificates is not received by central government for some days after the transaction, a significant amount of the cash relating to sales immediately before the certificate was withdrawn was not received until banking April.

(2) This figure includes £7 million of the £70 million raised by the Government's sale of Amersham International to the private sector in March. Such sales are included only to the extent that the proceeds accrue to the company rather than to the Government. Thus, when 50% of Cable and Wireless was sold by the Government in October 1981, only £35 million was recorded in the new issue statistics, although the sale raised nearly £225 million in total.

(3) Reflecting the high standing of the borrower and the performance in the secondary market of the World Bank's first 'bulldog' issue, the yield differential at issue over a comparable gilt-edged stock for this stock was only 0.4%, against 0.5% for the World Bank's earlier issue in this market, in April 1981.

finance which are entered into by banks on or after 19 July. At the same time various detailed changes will be made to the schemes, and in future interest payments to the banks covering the difference between the fixed rate paid by the borrower and the current market rate, plus the margin, will be made quarterly rather than half-yearly. This type of finance is used for exports of capital goods and home shipbuilding sales on credit terms of two years or more.

A note on money market arbitrage

Arbitrage (or 'round-tripping' as it is often known in the money market) describes the process by which economic agents take advantage of differences in price between two closely related markets. An arbitrageur buys in the cheaper market and sells in the dearer. If arbitrage occurs on a significant scale, it should reduce or eliminate the price differential which gives rise to it. It therefore forms a valuable part of the process by which markets become efficient. There are various forms of arbitrage in the money market.

Arbitrage between base rate and market related lending
It may sometimes be possible for larger companies (which can obtain the best terms) to borrow from their clearing banks on overdraft at, say, base rate + 1% and on-lend the money in the inter-bank market at a higher rate.[1] Such opportunities exist because base rates are not immediately adjusted to reflect movements in inter-bank rates, which may turn out to be temporary. But these opportunities tend to disappear again quite quickly, either because base rates rise or because inter-bank rates fall back.

Any increase in the total of outstanding bank lending caused by this sort of arbitrage is likely to be short-lived because the interest rate on the company's deposit in the inter-bank market is fixed but the cost of the lending related to base rate could rise quickly. Therefore, as soon as the arbitrage possibility disappears—and it has never lasted for more than a couple of weeks at a time—the lending will quickly unwind. Until it does, however, bank lending to the private sector and money (broadly defined) are higher than they otherwise would have been.

The scope for this form of arbitrage is now generally very limited because the clearing banks now adjust their base rates more quickly and more often when competing rates change. Also, bank borrowing facilities are now offered to a much greater extent on terms related to market rates rather than base rates.

In the Bank's view, the sums involved recently in this form of arbitrage have occasionally been sufficient to generate uncertainty in financial markets about the course of very short-term movements in bank lending and money; but otherwise it has not been significant. It is impossible to obtain statistics of the amounts involved.

Arbitrage between domestic and eurosterling deposits
After the abolition of exchange controls in October 1979, it was suggested that companies and banks were borrowing sterling in London and relending the money in the eurosterling markets where interest rates were higher.[2] Also, until its termination in June 1980, the supplementary special deposits scheme gave banks an incentive to book interest-bearing deposits offshore. There are no longer suggestions that this channel of arbitrage is important.

Arbitrage between bills and wholesale deposits
Those commentators who consider arbitrage a potentially significant influence on short-term movements in the money stock now place emphasis on so-called *bill arbitrage*. This involves a company obtaining money by drawing and discounting a bill of exchange and redepositing the funds in the inter-bank market.

In some respects, bill arbitrage may have more relevance to monetary policy than other forms of arbitrage. The borrower can draw a bill and know, at the outset, exactly what the total cost of these funds will be. Thus, even if the possibility for arbitrage arises for one day only, it might be three months before the transaction unwinds. Also, under the new monetary control arrangements brought fully into effect last year, the Bank now emphasises open-market operations in bills;[3] by increasing the demand for eligible bills when there is a cash shortage in the market, the Bank's actions may tend to depress bill yields relative to other rates. It has been suggested that the operation of this system during the recent period of massive cash shortages may have opened up possibilities for bill arbitrage.

The Bank regularly monitors the possibilities for bill arbitrage and has made extensive enquiries to establish the nature and size of arbitrage transactions. For two reasons any conclusion must be tentative and provisional. First, most of the costs and benefits are the result of individual negotiations involving several parties; generally, only the drawer of the bill sees the whole picture. Second, some of the factors relevant to the various participants cannot readily be quantified.

An example
The figures which follow are illustrative but are designed to reflect a typical arbitrage possibility in March this year, when there were large cash shortages in the money market. (It is generally agreed that arbitrage possibilities are at their greatest at such times.)

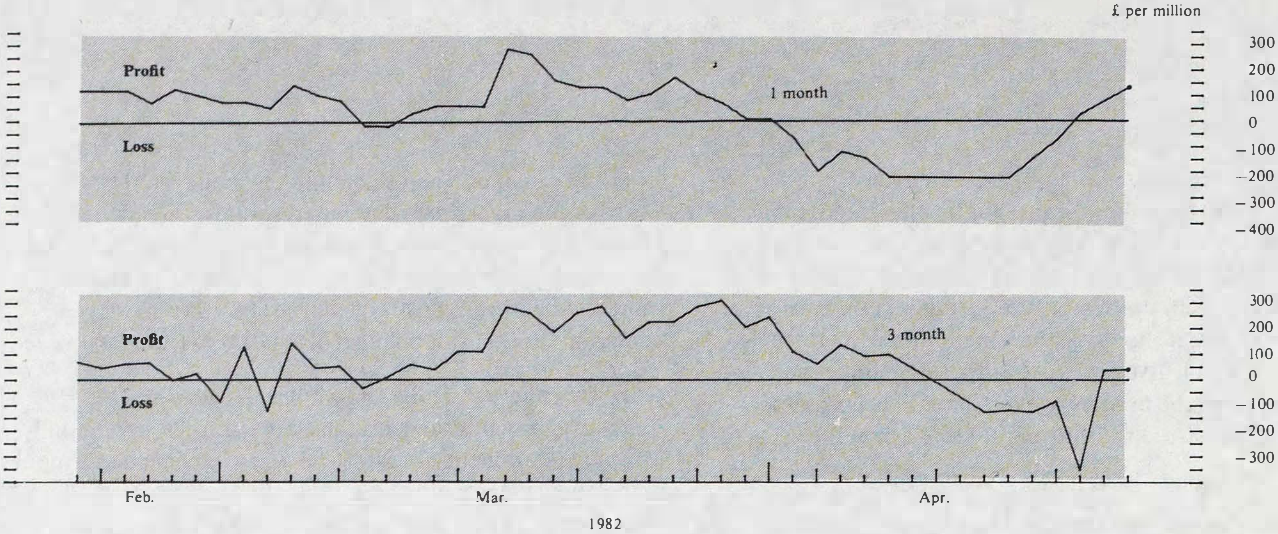
Step 1—Company X draws a bill under an acceptance facility with an eligible bank, contracting to pay £1 million at the end of one month (say thirty days). The bill is then

(1) Where the borrowing is additional to that taken before the arbitrage opportunity appeared, the round-tripping is usually known as *hard arbitrage*: it inflates the total of bank lending and of broad money. Where a company switches an existing borrowing from a bank charging a market-related rate of interest to one charging on terms related to base rates this is usually described as *soft arbitrage* and is of little economic significance.

(2) The implications for broad money of such transactions are complex. They are more likely to raise than to reduce broad money.

(3) The Bank deals in Treasury. local authority and eligible bank bills. The size of cash shortages in recent months has been such that the bulk of the Bank's operations has been conducted in eligible bank bills.

Possibilities for bill-arbitrage[(a)]



(a) The profit or loss is calculated on a drawing of £1 million (nominal) of bills and is expressed as the return in pounds per month. Account is taken of bid-offer spreads and an acceptance commission of ¼% per annum.

discounted in the market. On this day, the bill can be sold at a discount of $13\frac{3}{32}\%$. In addition, company X must pay an acceptance commission to the accepting bank; this is negotiable, but typically at the time might have been $\frac{1}{4}\%$ per annum of the face value of the bill. Company X therefore receives in cash £989,033 (being £1 million discounted for one month at a rate of $13\frac{11}{32}\%$, ie $13\frac{3}{32}\% + \frac{1}{4}\%$). This rate, discounted, is equivalent to a *yield* of roughly $13\frac{1}{2}\%$.

Step 2—Company X places the cash in the inter-bank market for one month. It receives a yield of $13\frac{13}{16}\%$, ie about $\frac{5}{16}\%$ over its 'costs' of $13\frac{1}{2}\%$. At the end of the month, it receives £1,000,261 which, after paying £1 million to redeem its bill, leaves a pre-tax profit of £261.

The chart shows that earlier this year, when the net shortage of cash in the money market was at its height, the margin between the bid rate in the inter-bank market for one and three month deposits and the bid rate for bills of a similar maturity (plus $\frac{1}{4}\%$ for commission) was never larger than £300 per month per £1 million nominal of bills drawn. The table shows that over a longer period of continuing, often sizable, cash shortages, the margin for one month bills was, more often than not, less than £100 per month per £1 million of bills drawn (and was predominantly less than £100 per month for three month bills).

Possibilities for bill arbitrage:
19 November 1981–19 May 1982

	One-month bills	Three-month bills
	Percentage of days in period	
Return(a) on £1 million of bills		
Unprofitable or profit under £100	53	84
Profit between £100 and £200	36	8
Profit over £200	11	8
	100	100

(a) The return is calculated as described in the footnote to the chart.

In deciding whether to engage in bill arbitrage, a company will consider various factors. If the line of credit (the bill facility) already exists, it will be used up for the period of arbitrage. Alternatively, if the facility is opened specifically for arbitrage reasons, it may be part of the arrangement that the line, once opened, is used fairly regularly whether or not arbitrage possibilities continue. Moreover, the company will have internal administrative costs. On the other hand, the company might be able to negotiate more favourable acceptance commissions or deposit rates than those shown above.

An acceptor also incurs costs in accepting bills. His contingent liability to honour the bills if the drawer defaults is included in the Bank's tests of capital adequacy, so the acceptance of bills will reduce the acceptor's ability to take on other business. Also the discount rate at which the market will be prepared to buy bills may be driven up if too many bills appear, either in total or from any one acceptor. Moreover, the Bank does not buy bills until seven days have elapsed from the date of acceptance. A discount house buying them immediately after acceptance therefore risks adverse movements in rates over the period before they can be offered to the Bank, and cannot be certain about the size of the Bank's demand at that time. If acceptors or drawers retain the bills until they qualify for immediate sale to the Bank, there may not then be an arbitrage margin.

As already noted, the Bank has made extensive enquiries, both among banks and among borrowers, about the amount of bill arbitrage that has occurred. While at times some has taken place, none of the evidence from these enquiries has shown it to have been on a significant scale, or to have become cumulatively more important over time. It seems likely that some of the published estimates of the scale of arbitrage have been considerably exaggerated.