THE MANAGEMENT OF MONEY DAY BY DAY

The responsibilities of the Bank of England include the management of the money market and, as the Bank are the Government's bankers, of the Exchequer accounts also. This article describes the way in which the two tasks impinge upon each other—being in many ways indeed opposite sides of the same coin—and how they are discharged from day to day.

It is first necessary to define some terms. The title " Exchequer " is used in this article to cover a group of accounts in the books of the Banking Department of the Bank of England. These are the Exchequer in the formal sense, the revenue Departments, the Paymaster General (including the Exchange Equalisation Account) and the National Debt Commissioners. Paradoxically, it is convenient to include also in this group the Issue Department—although it is constituted as a part of the Bank of England—because of the nature of its transactions in government debt, as will appear below. The Exchequer Group is not synonymous with the total of " Public Deposits " shown in the weekly Bank of England Return which includes numerous other balances at the Head Office and branches, as well as the working balances maintained by Government Departments.

The term " Bankers " corresponds to " Other Deposits: Bankers " in the weekly Return, except in so far as these Deposits are held with the Bank's branches. It will be used to describe what is in effect the London money market, in a broad sense. Transactions by the Exchequer or by the Banking Department (including the issue and payment of bank notes) will generally result in a credit or debit to the account of a bank or a discount house at the Head Office of the Bank of England : and these are the main transactions that cause a change in the total of Bankers' balances. There remains the group of the Bank's customers other than the Exchequer Group and the Bankers, referred to as " Customers ", the most important of which are other central banks.

The working balances of Government Departments are kept to a minimum each day, any surpluses being transferred or lent overnight to the account of the Exchequer proper. This account, with the complementary account of the Paymaster General, is also operated as far as possible so that, after taking account of such transfers and the rest of the day's payments and receipts, no large idle balance is left overnight; the objective is a balance of £2 million between the two accounts, a small figure in relation to the huge total of daily government payments and receipts which may amount to some hundreds of millions of pounds. The flow of these payments and receipts is, of course, distinctly uneven from day to day and from one time of the year to another. It is the Bank's task, working closely with H.M. Treasury, to ensure that finance is available to meet each day's spending; at the same time it is necessary to see that large surpluses do not remain unemployed but are used each day to buy back Treasury Bills from holders outside the Exchequer Group, so minimising the net cost of the service of the National Debt.

The other main objective, the management of the London money market, is linked to the management of the Exchequer accounts since the net flow day by day of government payments to and receipts from the Bankers is the main cause of ease or stringency in that market. On a day on which the banks need, for example, to pay over large sums of tax monies to the Exchequer, they are likely to be drawing upon the most liquid reserves among their assets, notably their money lent at call to the London discount houses and similar institutions. The discount houses find themselves short of funds in consequence, and unless the Bank take steps to relieve the shortage—usually by buying Treasury Bills either from them (the so-called ' direct ' method of giving help) or from the banks (the ' indirect ' method)—they may be forced to borrow from the Bank at Bank Rate or over. The enforcement of such borrowing increases the average cost of the houses' total borrowings and is one of the main ways (short of a change in Bank Rate) in which the Bank of England exert an influence on short-term interest rates and particularly on the rate at which the discount houses may be expected to bid for Treasury Bills at the following Friday's tender.

If the Bank are to operate effectively, therefore, it suits them if there is an initial shortage of funds in the market which they may then at their discretion relieve with or without the penalty of forcing houses to borrow at the Bank. If the market has a surplus, the Bank do not have this choice. They may sell Treasury Bills to the market to provide employment for surplus funds, and this may also be helpful for smoothing purposes in putting Bills into the market's hands which will mature on days when its funds are expected to be particularly short; but the market cannot be expected to straiten itself by buying Bills in such quantities as to bring the risk of having to borrow at the Bank later in the day. In these circumstances the Bank's influence lies largely in their discretion as to the rate at which they offer to sell the Bills.

In practice the normal operation of the weekly Treasury Bill tender will usually create such an initial shortage of funds. This is because the number of Bills which is put on offer at the tender each Friday, to be paid for day by day in the following week, is calculated so as to cover the Exchequer's estimated needs with, if anything, a small margin to spare; and the authorities can be sure that this total will be taken up because of the understanding that exists that the members of the London Discount Market Association will, between them, always bid for something close to the full amount of Bills offered. They thus accept an informal responsibility to underwrite the total issue although, in practice, there are normally many other tenders for Bills besides their own. Over the week as a whole, therefore, there will be a potential net movement of funds from Bankers to the Exchequer.

To go into a little more detail, the appropriate size for the tender is decided broadly as follows. Towards the end of each week H.M. Treasury forecast Exchequer receipts and disbursements for some weeks ahead. These figures are combined with the amount, which is known, of Treasury Bills maturing each week in the hands of the market and the Banking Department of the Bank of England, *i.e.*, all Bills other than those held by the Exchequer Group. And the two, taken together, give the main indication of the amount of new Bills which will need to be issued each week. In its simplest form, the sum for a particular week might be as follows :

£ millions

1. Expected net Exchequer deficit on receipts and disbursements		− 40	
2. Maturing Bills held outside the Exchequer Group :			
Banking Department	10		
Other	175	−185	−225
3. *Add* Bills for which tenders are to be invited, say			+230
			+ 5

The figure of +£5 million is the measure of the Exchequer's estimated net cash receipt during the week in question. As virtually all Exchequer receipts and payments must represent transactions either with Bankers or with the Banking Department of the Bank of England, the Bankers' position in that week in relation to the Exchequer can be estimated by taking out of the calculation those maturing Bills (£10 million) the proceeds of which will accrue to the Banking Department and not to Bankers (and the amount, if any, of the new Bills that may be allotted to, and paid for by, the Banking Department) and reversing the sign of the remainder. The Bankers' position for the week is then seen to be a deficit of £15 million, assuming that the Banking Department does not tender for any new Bills. The spread of this deficit over the days of the week will usually be uneven and particular days may well show a surplus. This is partly because of the uneven flow of Exchequer receipts and payments and partly because the market's tender for Treasury Bills can be divided between the days of the week at its discretion.

In practice, the calculation is a little more elaborate. Allowance is also made, for example, for the likely course of official transactions in government stocks and in foreign exchange; and for Treasury Bill business or other transactions by overseas central banks and other private customers of the Bank of England. Transactions by Customers—like transactions by the Banking Department itself—will affect either Bankers or the Exchequer individually without producing an opposite impact upon the other. Other items may also need to be brought into the calculation, as will become clear later when the daily work is described.

The number of Bills to be offered each Friday is always announced a week ahead, on the preceding Friday afternoon, when the results are published of that day's tender. But it is still possible on the day of the tender to 'take the top off the tender', *i.e.*, allot less than the full amount of Bills on offer. Alternatively, the authorities may lessen the effect of the tender on Bankers—but this time without reducing the amount accruing to the Exchequer—by putting in an application on behalf of the Banking Department. It is not possible to increase the number of Bills on offer beyond that already announced.

Attention may now be drawn to the two-page table at the end of this article, which is a simplified version of a working sheet used in the Bank. The figures are illustrative only and shown in round £ millions.

Bankers and Exchequer each have half of the sheet, several of the entries in the two halves representing transactions between the two and thus giving rise to the same entries but with the sign reversed; and each half of the sheet primarily serves one of the two main objects, namely, the management of the money market (Bankers) and the Exchequer accounts. The Banking Department intervenes as necessary in either half, as explained below.

Taking the Bankers' section first, the "Actual Balance" in the last column relates to the total balances held at the close of business on the drawing accounts at the Head Office of the Bank of England of the banks and discount houses which make up the greater part of the London money market. The "Bankers' target", which appears above the table, is the total of these same balances which it is estimated they would wish to hold at the close of business on the current day. This target is estimated each morning (and altered, if need be, as the day proceeds) partly by projection and partly—for the banks whose balances are most likely to change—by direct enquiry. Balances at the Bank of England are regarded by the commercial banks as part of their cash base (along with their notes and coin), and each bank sets as its target the figure which, after taking into account the business expected during the day, will ensure that at the close of business the desired ratio of total cash to deposits, usually about 8% for the clearing banks, is broadly maintained.

The remaining entries in this section represent transactions which it is known or estimated will occur during the day and which will affect the "Actual Balance". For example, the take-up or maturity of Treasury Bills day by day will be known in advance, and the Exchequer's receipts and disbursements can be estimated. In the other columns, too, known figures or estimates will be entered in advance whenever it is at all reasonable to do so (as, for instance, in foreign exchange or stock transactions which are customarily settled a day or two after the deal is done); and throughout each day additions or amendments are being made to the table as information becomes available from the Treasury or from the different offices of the Bank. More detailed explanations of the items included are given in the footnotes to the table.

At any time in the course of the day the net total of the day's entries—entered in column 11—can be applied to the previous night's "Actual Balance" to give an estimate of the new day's closing balance; and this in turn can be compared with the "Bankers' target" at the top of the sheet to give a measure of the shortage or surplus of funds in the market. On this understanding, the table shows a prospective market shortage on Tuesday of £29 million, that is £206 million (237—31) compared with the target of £235 million.

At the same time as they are collecting this information the Bank are keeping in touch with the money market both by direct contacts and through consultation with their Bill brokers. Market reports may or may not tell quite the same story as the figures: information on one side or the other may not be quite complete; some transactions may have been a little delayed, leading the market to believe itself perhaps shorter of funds than it will prove to be later; or, within the market, surplus funds seeking employment may not yet have found the points of shortage. In such circumstances some judgment is needed in assessing the true situation.

If we assume, however, that the indicated shortage of £29 million in the illustration is unchanged in the early afternoon shortly before the day's business must be completed, and assuming again that market reports are broadly in line with this estimate, various courses are open to the Bank. The first is to do nothing, in which case one or more of the discount houses will almost certainly be forced to borrow from the Bank at Bank Rate or above in order to balance their books. In the table, the appropriate ' plus ' entry would be made in column 10. If, on the other hand, it is not desired to force the market into the Bank—or to do so only to a limited extent—the authorities will give help, usually by instructing their brokers (the ' special buyer ') to buy Treasury Bills in the market. These purchases, which are made at market rates, put cash into the market's hands; at the same time, by choosing to buy Bills of particular maturities, the Bank can do something to shorten the market's cash either later in the same week or in some future week in which the Exchequer forecasts suggest that this is appropriate.

Because a shortage of funds in the market will often be accompanied by a surplus in the Exchequer Group, such purchases will usually be made by the Issue Department, acting for the Exchequer Group. On the working sheet, they will give rise to a ' plus ' entry in column 4 and, if the Bills purchased are due to mature later in the same week, a ' minus ' entry of the same amount on the appropriate day. Similar entries, but with signs reversed, must be made in the Exchequer half of the sheet in column 16.

Cash is always available for the Issue Department to make such purchases. This is because the Department's assets are so disposed as to ensure that a number of Treasury Bills or other loans to the Exchequer mature each day. Should the proceeds of these maturities not be required, they are re-lent to the Exchequer at the end of the day.

If the Exchequer Group has not a sufficient surplus of funds, some or all of the Treasury Bills in question may be bought by the Banking Department, giving rise to similar entries in the Bankers' section of the sheet, but in column 3; since the Exchequer is not affected, no entry is required in that section. If the Bank are buying Bills for Customers (notably, in this context, overseas central banks), limited help can also be given to the market by placing these ' special orders ' in the market (a ' plus ' in column 8).

A note on the day's timetable may help to make these operations clearer. The large banks do not usually seek to withdraw call money from the discount market after 12 noon; but their ' calling ' by this time will be on a large enough scale to provide for their estimated cash needs at the end of the day. If, therefore, there is a general shortage of funds in the market on a particular day, this will be the time when it appears most acute. From then until the close of business at 3 p.m. funds will continue to become available and there will be a progressively narrowing gap between the market's needs as reported by itself and as indicated in the Bank's figures, which relate to the position as it will be at the end of the day. In the ' early afternoon ' of the illustration, shortly after 2 p.m., when the Bank's operations in the Treasury Bill market are being concluded, it can generally be assumed that the discount houses will be able, if in need, to find before the close of business between £10 million and £30 million more money from the market than has so far become available : the amount can only be estimated, and is one of the matters referred to earlier as calling for judgment according to the circumstances of the day. Thus, if the figures at this time of day indicated, as in the illustration, a shortage of £29 million, it would not necessarily be inconsistent with this if market reports suggested that the discount houses were still looking for anything up to twice that amount.

If a discount house borrows from the Bank, it must do so by 2.30 p.m., at which time it must make its own estimate, based on experience, of what other funds may yet become available to it in the next half hour. Allowing for these funds, it will then borrow from the Bank the minimum which will be required to balance its books. Occasionally, of course, money expected will not materialise, and in such circumstances the house in question must make what arrangements it can with the commercial banks to balance its books.

With these operations concluded, there is still time for some of the entries in the table to alter before the final balances are struck, although substantial changes are unlikely. In particular, the estimates of receipts and disbursements in column 2, despite revision earlier in the day, may prove to have been a little off the mark, and there may be late transactions of one kind or another to be put through the Bank's books after the formal close of business. The true day's movement in the note circulation entered in column 9 may also differ somewhat from the earlier estimate. Amendments are made as new information becomes available, and in due course the actual total of " Bankers' Balances " as at the close of business can be entered in column 12. There will usually be a small discrepancy (shown in brackets in column 11) between the recorded changes totalled in column 11 and the true change now revealed in column 12. This arises mainly from the rounding of the figures (in practice a number of entries are made to the nearest £$\frac{1}{4}$ million), and from incomplete recording of the transactions by Customers shown in column 8. There are some Customers' accounts which rarely throw up any sizeable net movement on the day and, to save unnecessary complication, transactions on these accounts are not all recorded on the working sheet; large transactions by such customers can be, and are, allowed for.

The Exchequer section of the sheet is used in much the same way as the Bankers'. It may be recalled that the objective here is to leave the accounts of the Exchequer and Paymaster General with a combined balance of approximately £2 million at the end of each day. As with the Bankers', the final right-hand column records the previous day's finishing position, whether as being on target or as a surplus or shortfall on the £2 million. And this is the starting point for the day's work. The earlier columns show the various transactions, whether with Bankers or the Banking Department, which will affect the Exchequer Group in the course of the day, the total change being shown in column 20. Transfers within the Group such as, for example, sales of stock between the Issue Department and the National Debt Commissioners, can be ignored.

Looking at the illustrative figures for Tuesday, the Exchequer has in prospect a surplus of £35 million (36 less 1 needed to repay outstanding Ways and Means Advances). At the same time, as we have already seen, Bankers face a shortage, compared with their target, of £29 million on the day and need help if it is not intended to force the discount market to borrow from the Bank.

If the Issue Department gives this help by purchasing exactly £29 million of Treasury Bills from the market, with entries in columns 4 and 16 such as have already been described, the Exchequer still has a prospective surplus of £6 million to dispose of. This it does by purchasing Treasury Bills from the Banking Department (a ' minus ' entry in column 15). Again, so far as possible, Bills will be chosen of maturities which will smooth operations either later in that week or in the weeks ahead. Conversely, if on any day the Exchequer should appear short of funds after allowing for all other known transactions, this can be remedied by selling Treasury Bills to the Banking Department.

These purchases or sales of Treasury Bills are made by the Issue Department, which is thus used either to spend a net surplus of the Exchequer Group as a whole, or to cover a net deficit by selling its Bills and lending the proceeds to the Exchequer.

For practical reasons the final ' switch ' of Bills between the Banking and Issue Departments has to be made before information about the transactions of the Exchequer Group is complete and, as with Bankers, some small late amendments to the figures must usually be expected. To the extent that these could not be foreseen and allowed for in the ' switch ', the Exchequer will end the day with a surplus which it will be the object to employ the next day, or with a debt to the Banking Department in the form of overnight Ways and Means Advances which are made, in multiples of £250,000, to restore the Exchequer balance to the desired minimum.

£ millions

BANKERS	1	2	3	4	5
	Treasury Bills	Exchequer receipts / disbursements	Treasury Bills		Stocks
			Banking Department	Issue Department	
Monday	−19	−10	+6	+21	−2
Tuesday	−17	−24			+8
Wednesday	+ 5	+ 3			

EXCHEQUER	13	14	15	16	17
	Treasury Bills (inc. Banking Department)	Exchequer receipts / disbursements	Issue Department (Treasury Bills) with		Stocks
			Banking Department	Market	
Monday	+16	+10		−21	+2
Tuesday	+17	+24			−8
Wednesday	−10	− 3			

Column 1. The net cash figure resulting from the market's subscriptions for new Bills (arising out of the weekly tender) less its receipts from maturing Bills.

2. All government receipts and disbursements, other than those specified elsewhere in the table [receipts are (−)].

3 and 4. Transactions in Treasury Bills with the market by the Banking and Issue Departments, purchases from the market (which put cash into the market's hands) being (+) to Bankers.

5. Transactions in gilt-edged stocks between the market on the one hand and the Issue Department or the National Debt Commissioners on the other. Purchases from the market are (+) to Bankers. As deals are usually done for settlement the next day, the day's total is usually known the previous evening.

6. Subscriptions by Bankers for Tax Reserve Certificates [always (−)]. The forecasts of government receipts included in column 2 take account of estimated surrenders of these Certificates in payment of tax.

7. The change in the sterling assets of the Exchange Equalisation Account resulting from the sale of foreign currencies to Bankers or purchases from them. A purchase of foreign currency by the Exchange Equalisation Account will be paid for in sterling, appearing here as a receipt (+) by Bankers. Most deals are done for value one or two days ahead, allowing reasonably accurate forecasting.

8. The net total of transactions between Bankers and the Bank of England's principal other private customers, notably overseas central banks.

9. The movement of notes between the Banking Department and the commercial banks. If notes in circulation outside the Bank are increasing, the accounts of the commercial banks at the Bank of England will be debited [a (−) entry in this column] to pay for the notes passing from the Banking Department's reserve. The week's movements are estimated in advance.

Bankers' target 235

6	7	8	9	10	11	12
Tax Reserve Certificates	Foreign exchange	Customers	Note circulation	Market advances	Bankers' Balances	
					Estimated + or −	Actual
						Saturday 241
−1	+9	−2	−5		− 3 (−1)	237
	+3	+1	−2		−31 ( )	
	+1	+2	−1	−5	+ 5 ( )	

18	19	20	21
Tax Reserve Certificates	Foreign exchange	Total + or −	Surplus + or Ways and Means Advances −
			Saturday +1
+1	−10	− 2	−1
	+ 3	+36	
	− 2	−15	

Column 10. Advances at Bank Rate or over made by the Banking Department to the London discount market. Advances are usually made for seven or eight days, and repayments are known beforehand (as on Wednesday in the illustration).

11. The total change in Bankers' Balances as estimated in columns 1 to 10. The difference between this total and the actual change is shown in brackets: the causes of this difference are explained in the text.

12. The total balances at the Head Office of the Bank of England at the close of business of the London clearing banks and other financial institutions which, broadly, comprise the London money market (see text).

13. Column 1 with sign reversed, adjusted to include Treasury Bills taken up by, or maturing to, the Banking Department or Customers. The subscription accrues to, and the Bills are a liability of, the Exchequer, although Bankers are not affected.

14. Column 2 with sign reversed.

15. Transfers of Treasury Bills between the Issue and Banking Departments. These are made either to put the Exchequer in funds or to employ a surplus (see text).

16 and 17. Columns 4 and 5 with sign reversed.

18. Usually column 6 with sign reversed; but an addition is necessary if the Banking Department buys Tax Reserve Certificates on its own account.

19. Column 7 with sign reversed, adjusted to include foreign exchange transactions by the Bank's customers.

20. The total of columns 13 to 19.

21. The total surplus on the Exchequer and Paymaster General accounts at the close of business, as compared with the desired balance of £2 million (see text), or the Banking Department's Ways and Means Advances to the Exchequer.