

THE MONEY MARKET

by

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I USE the expression 'money market' to describe those institutions in the City of London who are active in borrowing and lending money for short periods, from a single day to perhaps 5 years at the most. From being a tight circle centred on the Bank of England, the discount houses, and the clearing banks the money market has now grown to include, as active investors, public corporations, local authorities, merchant banks, overseas banks, hire-purchase companies, building societies, trustee savings banks and Lloyd's syndicates. In addition, institutions with long-term liabilities, such as insurance companies and pension funds, will occasionally have business to transact in short-dated securities, an example being the profitable employment of funds earmarked for the purchase of real property in a few months' time. In any event, it is worth while to remember that the long term consists of a series of short terms.

Before turning to the investors and their requirements I have described briefly the main media available.

INVESTMENT MEDIA

Treasury bills

The shortest marketable British Government securities are Treasury bills. They are a form of short-term Exchequer financing, have a life of 91 days (or occasionally 63 days), and are issued by tender, in multiples of £5,000, every Friday, for payment on any weekday of the following week. The amount of tender bills on offer varies from week to week; currently it is of the order of £200-£250 million, with a total outstanding at 2 December 1967 of £2,930 million. Anyone, including the Bank of England itself (which manages the tender), may tender for Treasury bills and there are generally 'public' applications for a substantial part of the issue. The discount houses

(p. 255) have an agreement with the Bank of England that they will tender for the whole issue of bills; a price, expressed as, say, £98. 3s. per £100, is agreed by the London Discount Market Association on Friday morning, and individual houses bid at this price for a quota of the available bills, this proportion being related to the size of an individual house's capital and reserves and to its turnover in bills at the time (some years ago) when it was fixed. A certain amount of flexibility is allowed to an individual house: a house may tender for up to 15% of its quota at a price 2d. higher than the Association bid (if, for example, it was particularly short of bills), or conversely it may tender for up to 15% of its quota at a lower price than the Association bid, in which case this part of its tender is unlikely to be accepted, and hence it will receive fewer bills. By convention, the clearing banks do not tender for bills on their own behalf (though they may for their customers) but buy them from the houses, as required, when they have run for at least 7 days. In addition to 'market' Treasury bills there are 'tap' Treasury bills which are issued directly to Government departments. They do occasionally come into the market but not usually in great quantity.

In considering at what level to tender the houses consider primarily the likely level of bank rate during the life of the bills, together with such factors as gold reserve figures and exchange rates. After the tender, the average price at which bills have been allotted is announced, together with the price at which the Association made its bid and the proportion of the Association bid which was successful in securing bills. 'Bill rate' is simply the 3-months discount multiplied by four, that is a price of £98. 3s. gives a bill rate of 7.40 per cent, the price being either the average price or the Association bid price. The corresponding rate of interest is higher than the rate of discount by $4/(4-d)$, e.g. $i = .0754$ for $d = .074$.

Commercial bills

A bill of exchange is a written order, signed by the drawer, requiring the addressee to pay (on demand, or at a fixed or determinable future time) a certain sum to a specified person (or to his order, or to bearer). When the addressee 'accepts' the bill by signing on the face of it, he substitutes his credit for that of the drawer, and if the acceptor's name is sufficiently good (as a debtor who will pay) then the bill becomes marketable among persons having money to lend for the period of the bill (typically 3 months). Many bills are

drawn by persons who have supplied traders with goods; they are simply accepted by the trader and form documents recording 'trade credit', but are marketable if the acceptor's standing is sufficiently good. Some bills are accepted by the clearing banks or the 'accepting-houses' for a commission (p. 259).

Many bills are drawn in connexion with overseas trade, particularly in timber, wool, sugar, tobacco, and petroleum. Some relate to trade which never comes to the UK, yet the bills are accepted here to make them discountable in London. There is no advantage, of course, in having a bill accepted in London if it is to be discounted in some other international financial centre.

A bill of exchange accepted by a British bank or accepting house is eligible security (if the bill has one other British name on it) even at the Bank of England, and has therefore the highest degree of liquidity after Treasury bills and short-dated Government stock. Because of the certainty of payment, such a bill commands the lowest rate of discount available for any non-Government security, and is described as a 'bank bill'. 'Bank rate' is the rate of discount at which a discount house can sell such a bank bill to the Bank of England.

British Government stock (short-dated)

The prime characteristics of British Government stock are security (in money terms) and marketability. Short-dated stock (i.e. with a life of 5 years or less to the last redemption date) is more secure than longer-dated stock, though in normal times (that is, when there is an upward-sloping yield curve) the yield is less; short-dated stock is also much more marketable, as the following figures indicate.

£ million	Government securities			
	Amount outstanding 11 December 1967	London Stock 1965	Exchange 1966	turnover 1967
0-5 years' life	6,762	10,594	10,580	16,524
Over 5 years' life	14,752	5,402	6,026	11,448

It will be seen that the total issue of short-dated stock is turned over two or three times a year, compared with a turnover in a normal year of less than half of the total issue of longer-dated stock. Various factors contribute: there is the great activity of the banks and discount houses, who are taxed (as dealers) alike on income and capital profits, and are not so inhibited from switching by capital gains tax liabilities as are, for instance, some insurance companies. There is

also the lower level of brokers' commissions which, under the rules, are at their discretion: $\frac{1}{4}\%$ on nominal value is the usual maximum on substantial amounts, compared with $\frac{1}{8}\%$ (or occasionally $\frac{1}{16}\%$) on longer-dated stock; on an exchange between short-dated stocks, $\frac{1}{4}\%$ commission on one side only (either the purchase or the sale) is usual.

A further factor contributing to marketability is the activity of the Government broker. He will usually be a buyer of the next Government stock due to mature, so that as much as possible is already held by Government departments on the redemption date, thus spreading over a period the supply of cash to the private sector. In addition, the Government broker will be a seller of one or more 'tap' stocks. These are usually new issues (or issues of a new tranche of an existing stock) for which public applications were invited. Only a small amount is generally subscribed by the public and the remainder is taken up by Government departments; sales by these departments, through the Government broker, are one method by which the level of the market can be officially controlled.

At the end of 1967 there were two tap stocks among short-dated. $6\frac{1}{4}\%$ Exchequer 1972 had been available since February 1967 and $6\frac{1}{2}\%$ Treasury 1971 since July 1967, the latter as a result of purchases of the former steel company loans and stocks immediately before nationalization and of purchases of the stock itself in the first few days after its issue as compensation. It is of interest that on the Monday evening following devaluation the Government broker announced, through the jobbers, his selling prices for certain stocks, including $6\frac{1}{4}\%$ Exchequer 1972, and inviting from brokers an indication of what quantity of stock they would wish to purchase at these levels. The prices were so attractively low, and the buying interest so great, that the tap prices were raised three times before the market even opened on Tuesday morning, 21 November 1967, and in this way the gilt-edged market (particularly the short-dated) was given an impetus which sustained it for the following fortnight or so. This activity is reflected in the turnover for November 1967 (£1931 m.) which was the highest in short-dated stocks since October 1966. Supplies of the two tap stocks mentioned ran out in February 1968, and a new tap stock, $6\frac{3}{4}\%$ Exchequer 1973, became available.

Short-dated gilt-edged are dealt in on the basis of a firm price plus or minus accrued interest at the coupon rate, this interest being calculated on the basis of (actual days)/365. For instance 3%

Funding 1959/69 (interest 15 April, 15 October), dealt in on 11 December for settlement on 12 December would have plus 58 days accrued interest, amounting on £50,000 nominal to $£50,000 \times (58/365) \times 3\%$ or £238. 7s. 1d. Similarly an ex dividend stock is dealt in minus accrued interest, e.g. 3% Transport 1967/72 (interest 1 January, 1 July) for settlement on 12 December might have a price of 84 *xd* minus 20 days accrued interest. Although described as 'accrued interest' this addition to the price is not normally regarded as interest for tax purposes, but rather as part of the capital price paid for the stock. On the other hand, some institutions value short-dated gilt-edged on the basis of the firm price for balance sheet purposes, taking the accrued interest into the revenue account.

Unlike longer-dated gilt-edged, short-dated have no 3-week period in which it is possible to deal both cum dividend and ex dividend before a stock goes officially ex dividend. There is therefore a welcome absence of the Stock Exchange restrictions which apply to long-dated and which are designed to prevent tax avoidance through 'bond washing'. One restrictive rule, however, (Finance Act 1959 secs. 23-25 and sch. 6) is that a fund which has bought cum dividend and sells ex dividend within a calendar month will be taxed on the dividend; the rule applies even to gross funds, such as charities and pension funds. Discount houses and jobbers are exempted to the extent that any profits made in this way are simply regarded as part of their dealing profits.

As indicated above, bargains in gilt-edged are, in the ordinary course, for settlement on the next business day. This means that a client buying stock should be prepared to let his broker have a town clearing cheque for the contract total in time for the broker to bank it by 3 p.m. on the business day after his purchase; a client selling stock should similarly deliver his certificate and a signed transfer in good time the business day after his sale.

The mechanism of delivery is as follows. The client who has bought stock receives a contract note next morning setting out the total cost of his purchase, that is, firm price *plus* (or *minus*) accrued interest *plus* commission *plus* contract stamp (this last being never more than £2). Meanwhile the broker has passed to the jobber the 'shapes' of the purchase (for one bargain with the jobber may have been for two or three different clients) and the amount of the consideration money (firm price *plus* (or *minus*) accrued interest). The jobber's stock is held not in certificates, but in the form of an account with the Bank of

England. The jobber therefore delivers to the broker a transfer certified by the Bank of England (as being backed by stock in the jobber's account) and the broker pays the jobber on receipt of this transfer. The client may then pay the broker (1) on receiving this certified transfer, with a view to registering it himself or (2) on verbal or written notification from the broker that the transfer has been received and will be registered by the broker in the client's name or (3) on sight of the certified transfer, which is then returned to the broker for him to register. Method (2) is obviously the most speedy, but implies greater trust in the broker, and is not appropriate where the stock is immediately required as collateral, e.g. by a discount house.

On presentation of a certified transfer for registration at the Bank of England there is a delay of, at present, 3 days before a transfer receipt is issued and 14 days before a certificate is available. If the transfer is in respect of a stock which has not yet been transferred to the Bank's computer system, these delays are about 8 days and 10 days, so that the manual system at present produces certificates more quickly. It is obvious that a purchaser may be without evidence of title for a week or so, so that if a purchase has been made with a view to a quick resale, and the broker is aware of this, it is better to delay the registration.

A similar system operates for sales by a client. With his contract note he receives a transfer form, completed with the name of the stock, the consideration money, and (if the broker is sure of it) the exact name appearing on the client's certificate. The client signs or seals this transfer and returns it with his certificate to the broker, who then makes payment to the client, and receives payment from the jobber on delivering the same documents.

Jobbers and discount houses (and a few others) are in a privileged position in that they enjoy so-called 'Z' facilities at the Bank of England. This entitles them to same-day registration of transfers and enables the discount houses, in particular, to obtain an immediate certificate which they can lodge as security against loans.

'Z' facilities are also enjoyed by the money brokers. These are three old-established firms of stockbrokers who borrow stock from insurance companies, merchant banks, and others and 'lend' it to jobbers to enable them to make immediate settlement in a particular stock of which they may have sold short until such time as they are able to buy it back again. The jobber deposits as security the money

he receives from the buying broker. Conversely, the jobber may be short of money to pay for stock he has bought. He then borrows money from a money broker, depositing as security the stock he has bought, together with a margin in cash or stock of 5%, this margin being provided from his own resources. Money deposited by a jobber may be lent to another jobber or to a discount house, against security of stock, and this stock may then be lodged by the money broker as security with an institution lending another stock. The money broker makes his profit by the difference between the rate at which he borrows money from banks and the rate at which he lends to jobbers; and by the difference between the rate he pays to a jobber depositing money and the rate at which he lends this money, out of which he pays a rate to an institution which lends stock.

Purchases for delayed settlement are allowed (1) if there is expected to be delay in the transmission of documents; (2) if a client is making a sale of (say) ordinary shares, where the proceeds will not be available until Account Day, and reinvesting in gilt-edged; or (3) when a client is recalling a loan to a local authority, where the proceeds will not be available for up to 14 days, and reinvesting in gilt-edged. Apart from a special firm price, the purchaser will have to pay the extra days of accrued interest to the delayed settlement date. On a sale for delayed settlement, however, the seller does not receive extra days of accrued interest, so that such a sale is generally an unattractive proposition. When switching in short-dated stocks, the finest terms are only likely to be available for the usual 'next day' settlement, and thus a client outside London who wishes to be active in switching will generally arrange for his stock to be held by a City bank and for them to sign transfers on receipt of a duplicate contract note and to make payment to the broker. Prompt payment for straight purchases of stock is no problem, as a local bank manager can always arrange for an immediate credit to the broker's bank account in London.

Jobbers are surprisingly tolerant about delays in delivery, provided they have sufficient warning of them, but any unforeseen delay is likely to cut substantially into their 'turn' and similarly a day's delay by a client in payment to a broker is likely to cost him, if he has had to pay the jobber promptly for stock, more in interest charges than the commission he has earned.

Annex 1 shows the prices and yields on the Government short-dated stocks as at 14 December 1967. Almost every one of the sixteen

stocks has some special characteristic of its own. Those marked (a) are free of tax to residents abroad; 3% Funding, marked (b), has a sinking fund, and this accounts for the apparent abnormally low yields on this stock; eight of the stocks have a 'neutral zone' for capital gains tax purposes. As mentioned on page 240 there are two 'tap' stocks, 6½% Treasury 1971 and 6¼% Exchequer 1972. 3% Transport 1967/72, because of the small amount in issue, is not easily marketable. Coupons range from 3% to the 6¾% of Exchequer 1971; the high coupon stocks are popular with the discount houses, as they are profitable to run against borrowed money. This is one of the few cases in which flat (interest) yield is of importance; generally redemption yield is a better guide.

Annex 1 shows redemption yields on four bases: gross redemption yield applies (a) to funds not taxed at all, as pension funds and charities and (b) to funds taxed as dealers, equally on capital and income, as banks and discount houses; redemption yield (net of tax at 37½% on interest and 30% on capital gains) is broadly appropriate to many life assurance funds; grossed-up redemption yield (net of tax at 40% on interest and capital gains) is appropriate to industrial companies, building societies and general insurance funds, and differs from gross redemption yield in that allowance is made for the 'neutral zone'; the final column of redemption yields is appropriate to individual investors and can be adjusted by the '1s. change' factors for differing rates of income tax and surtax. Redemption yields for periods over a year on all British stocks are assumed to be convertible half-yearly.

The considerable turnover in gilt-edged (p. 239) would not be possible without the willingness of investors to sell one stock and buy another on a large scale in the hope that they will thereby obtain a better return than they would by simply retaining their original holdings until maturity. There is now a fair amount of actuarial literature describing principles and practice of gilt-edged 'switching', in which switches are broadly divided between 'jobbing' and 'policy', and where the techniques are developed from a consideration of price and yield differences or ratios. These techniques are not entirely relevant at the short-dated end of the gilt-edged market. Redemption yield, for instance, is not necessarily the most important factor. Such a stock as 6% Conversion 1972, which at a price of $94\frac{15}{82} + 2.005 = 96.474$ is approaching its neutral zone of 97½ to 100, will be 'popular' because of the prospect of gains-tax free dealings in the neutral zone.

Another tool of gilt-edged switchers, the 'yield curve', is too sophisticated for use at the short end of the market. The gross redemption yields of Annex 1 indicate a downward-sloping yield curve, starting at 7.95% for a $\frac{1}{4}$ -year term, falling to 7.70% at a $\frac{1}{2}$ -year term, and continuing more or less flat at around 7.65% from 1 year to 5 years. But the variations of individual stocks from this pattern are so great as to be an unreliable guide for switching. In times of a more normal upward-sloping yield curve, with yields of perhaps 5.00% at 1 year, 5.375% at 2 years, 5.625% at 3 years, the ideal is to 'slide down the yield curve', for example to buy a 3-year stock on a yield of 5.625% and to sell it a year later on a yield of 5.375%, realizing a yield over that year of 6.073%. Of course, if the yield curve has changed its level or shape over that year, the realized yield may be substantially more or less than was expected.

There remain 'jobbing' and 'policy' switches. Most jobbing switches are probably made on the basis of absolute yield differences, and their history at different levels of interest rates, or on the basis of other investors' likely reactions when, for example, a stock is about to go ex dividend. They consist in taking a short-term view of the level of a particular stock or of a pair of stocks.

The most profit in the gilt-edged market will be made by taking a correct view of the course of interest rates and going as short or as long as possible with the maximum part of a portfolio. For an insurance company this would lead to an unmatched position, even if it were possible to deal in such substantial amounts of gilt-edged among the longer-dated stocks; for a discount house, however, such 'policy' switches are both likely and practicable. It is clear that several houses were invested in near-cash immediately before devaluation; after devaluation and the rise in Bank Rate to 8% they invested heavily in the longest short-dated stock, namely 6 $\frac{1}{4}$ % Exchequer 1972.

Other short-dated stock

Apart from short-dated British Government stocks, there are the short-dated issues of British corporations and public boards (such as the Electricity Board of Northern Ireland and the Port of London Authority) and of Commonwealth governments and municipalities. Of these latter, the stocks of Australia and New Zealand have the highest status. The amounts in issue are small compared with British Government issues and the poorer marketability which this implies is

reflected in a slightly higher yield. It does occasionally happen that it is possible to switch from a corporation stock to a British Government stock of similar term, and obtain a greater yield; such chances do not persist for long.

Local authority negotiable bonds

It was with considerable diffidence that I mentioned these bonds when presenting this paper in Manchester, for the City Treasurer, Sir Harry Page, was responsible for first issuing them and has since written much on the various points that have arisen as their use developed. However, the existence of these bonds is still not widely known outside the circles of the local authorities who issue them and the rather restricted list of financial institutions who buy and sell them, and so I thought it worth while to set out something of their history.

Local authorities have always borrowed by way of mortgage on their rates and revenues, and since 1955 have borrowed extensively, particularly for shorter periods, by way of temporary borrowing on a deposit receipt (p. 252). These mortgages and deposits were, however, until 1 August 1967, subject to stamp duty on transfer, which effectively reduced the possibility of making a market in them, just as industrial debenture stock is not very marketable once initial dealings have finished and it becomes subject to stamp duty. The local authority required to be certain that the loan would not be recalled for a fixed period and the lender required a marketable security, so that he might realize his investment before its maturity if necessary. The negotiable bond, where the local authority compounded for stamp duty with the Inland Revenue on issue, so that subsequent transfers were free of duty, met these requirements.

Manchester, as in so many things, took the lead, in February 1964, largely because it was one of the few authorities having power at this time, under its local Acts, to issue such bonds. These first bonds, at $4\frac{1}{2}\%$ for 1 year, to a total of £ $\frac{1}{2}$ m, gave a return to the lenders only a few pence per cent better than the return on comparable Government stock; furthermore, Bank Rate was raised the same week, so that the lenders, two discount houses, had an immediate capital loss on their investment. From March until July 1964 Manchester made further bond issues, one each month, at 5% or 5.0875% (which was generally about $\frac{1}{4}\%$ more than on Government stock of comparable term), until they had issued £4 $\frac{1}{2}$ m of bonds. These bonds were issued by Warburgs and placed almost exclusively

with discount houses. Because interest rates were rising, the original lenders could only sell their bonds at a loss, and the bonds changed hands infrequently.

None of these bonds had been quoted on the Stock Exchange, but the coming into effect, on 8 July 1964, of the Local Authority Bonds Regulations 1964, enabled almost any local authority to issue negotiable bonds. The Stock Exchange was anxious to provide as good a market in these bonds as the discount houses offered, and streamlined its issue procedure so that a grant of quotation could be obtained and dealings could begin in a bond issue within 48 hours of the terms being fixed. On 10 July 1964 the first quoted issues were made, including two for terms of 2 years and 4 years, rather than the more usual 1-year term. Further issues followed until by September 1964 there were £26.7m quoted and £13.85m unquoted bonds in issue, and at this date the prevailing rates were $5\frac{1}{4}\%$ for 1-year bonds, $5\frac{3}{4}\%$ for 2-year bonds, $5\frac{7}{8}\%$ for 4-year bonds.

In 1964 there was the usual 'autumn crisis', with Bank Rate rising from 5% to 7% on 23 November, and no further bond issues were made until 12 February 1965. Although interest rates were then higher, negotiable bond borrowing had become more attractive to local authorities. Since 1955 they had been encouraged to borrow on the open market, and the Public Works Loans Board had been very much a lender of last resort. Now they were being encouraged to borrow for longer periods, and any local authority which had made a long-term issue (defined as one for more than 364 days and naturally including a negotiable bond issue) could obtain a quota, based on its long-term borrowing, from the PWLB on less onerous terms than the normal. Issues were made in February 1965 at $6\frac{7}{8}\%$ for 1 year, and this high coupon was popular with the discount houses, as the bonds were profitable to run against borrowed money. By the end of 1965 there were £71.25m quoted and £17m unquoted bonds in issue, and the market in them was reasonably active.

The total amount in issue in December 1967 had grown to £194.8m quoted and £63.8m unquoted, but the character of the market has been changing. Discount houses were prepared to buy these bonds because (a) they gave a better yield than Government stock; (b) they offered the possibility of 'sliding down the yield curve'; and (c) they were acceptable as security against loans from the banks, within certain limits. But recently (a) the yield margin between negotiable bonds and Government stock has been small, indeed

occasionally it has been possible to sell bonds and buy Government stock of similar term with an increase in yield; (b) interest rates have risen in the last 6 months of 1967, causing a capital loss on bonds already held and reducing the houses' willingness to sell; and (c) many houses held the maximum amount of bonds which the banks would accept as security. Fortunately for the development of the market in these bonds many investors other than discount houses, notably banking institutions, have come to realize their attractions, and it is not now impossible for a new issue of bonds to be placed entirely outside the discount houses. These bonds are often a suitable investment for private individuals, professional societies, or social organizations who wish to invest a few thousand pounds for a year or two to give a return at least comparable with that from, say, building society shares.

The special merit of these negotiable bonds is that it is possible to buy a bond or bonds to mature within 7 days or so of any given date up to about 18 months distant, maturities longer than 18 months being rather more widespread and the longest currently available being just over 3 years. With maturities of about £5m each week it is generally possible to deal in £250,000 to £1m of a particular week's issue or issues without difficulty. An investor wishing to buy these bonds would ask his own stockbroker who would enquire of the gilt-edged jobbers what the market might be. The jobber will not himself carry more than a small range of different maturities; if he cannot supply the stock himself, he will approach one of the stockbrokers who specialize in these bonds, and he in turn will approach potential sellers. By approaching a specialist stockbroker or a discount house direct, an investor has access to both quoted and unquoted bonds but it is not possible to deal in unquoted bonds *via* the jobbers. It is this additional marketability (and hence security) of quoted bonds, reflected (in theory rather than in practice) in a lower yield, which, among other factors, makes local authorities willing to pay the additional costs (admittedly small) in making a quoted rather than an unquoted issue.

Bonds are dealt in on a yield basis, the price (a firm price *plus* or *minus* accrued interest, as on p. 240) being calculated later. Thus a buyer might indicate an interest in June 1968 bonds to give £7 17s. % or a discount house might quote a 'price' of £7 16s. to £7 14s. in £50,000. In the early days of dealing in bonds, there was much argument in the calculation of yields, centring around such points as

(a) whether to ignore variations between 181 and 184 days in a 'half-year', at any rate for longer terms; (b) whether to allow for a day's delay in the receipt of redemption moneys, if the redemption date fell on a Sunday and (c) at what point to change from bankers' interest to compound interest, i.e. how far $(1 + ki)$ is acceptable instead of the true $(1 + i)^k$, where k is a fractional period of a half-year. At an annual rate of 7 per cent the difference between $(1 + \frac{1}{2}i)$ and $(1 + i)^{\frac{1}{2}}$ ($i = .035$), for instance, is .00014, or roughly $\frac{1}{4}$ in the price (%) of a bond. Fortunately, a firm of stockbrokers agreed with the London Discount Market Association to publish a daily list of yields on all local authority bonds; this is available to all who deal in these bonds and is the accepted standard for determining prices from yields. A specimen yield calculation is shown in Annex 2.

A stockbroker will quote a yield net of commission, even if acting only as an agent. This is a sensible convention in a market in which most dealers are acting as principals. Thus if he knows of a source which will sell bonds on a yield of £7 14s., he might quote a yield of £7 13s. 9d to a potential buyer. This yield difference of 3d. would be roughly equivalent to 1d. per £100 on a 4-month bond, 3d. per £100 on a 12-month bond, and 5½d. per £100 on a 2-year bond. Even if the broker is responsible for matching buyer and seller he will (if dealing in a quoted bond) approach a jobber with a view to arranging a 'put-through', whereby the stock is sold to the jobber at one price and bought back at a slightly higher price. The jobber's 'turn' in such a put-through might be of the order of 1d. per £100 for each year of unexpired term; i.e. a 6-month bond might be put through for ½d. to the jobber, leaving the broker with ½d. net commission. In dealings in ordinary shares, for example, the 'turn' to the jobber in a put-through is occasionally criticized as an added expense, from which the only benefit is a guarantee that the business is being done at a fair price. In a put-through in bonds the jobber may well be thought to earn his money by the part he sometimes plays in the settlement of bargains (as mentioned on page 250, the broker often settles direct); in addition, the jobbers have an agreement with brokers issuing bonds that they will take up 25% of any issue at $\frac{1}{16}\%$ under the placing price to the public.

The price of a bond is calculated from the daily list on the basis of a yield net of commission. The only other expense to a buyer or seller is the contract stamp, which is never more than £2 a bargain, all bonds of the same coupon and due for redemption on the same day being

aggregated on one contract note, irrespective of which local authority issued them. The margins on which business is transacted are so fine, however, that the cost of the contract stamp must be taken into account when dealing in smaller amounts of shorter-dated bonds; for instance, the cost of the contract stamp on a purchase of £50,000 2-month bonds would reduce the yield by about $6d\%$.

Bonds are transferable in multiples of £1,000; it would not be possible for Registrars to offer their services at such a modest fee (p. 266) if the bonds were transferable in smaller multiples. It is an essential feature of negotiable bonds that the Registrar should be in the City of London and should be able to offer 'same-day' registration facilities.

Settlement (due the next business day after dealing) is rather simpler than for Government stock. Where a broker has acted for both parties to a transaction (even if the stock has been 'put through') the selling client will receive a set of transfers (one for each individual security). These should be signed or sealed and returned with the relevant certificates to the broker by 12 noon on settlement day, and the broker makes payment on their receipt. The broker then completes the transfers with the buyer's name, delivers them with the certificates to the Registrar who supplies new certificates 'over the counter', and the broker receives payment on supplying the new certificates to the buying client before 3 p.m.

A similar system is in operation where the jobbers deliver bonds, except that they supply transfers certified by the Registrar instead of certificates.

The issue procedure for negotiable bonds is described on page 264.

Local authority bills

A certain number of authorities have borrowed regularly by bills, similar in nature to Treasury bills, generally for comparatively small amounts and for capital purposes only, rather than in anticipation of revenue. The Treasury are now apparently prepared to allow authorities to include in any private legislation which they may be promoting the power to issue revenue bills, up to an amount related to the size of their rate revenue, with a provision that for 2 months of the year there must be no bills in issue. A recent bill issue by the Greater London Council attracted support (on a yield only about $2s.\%$ better than that on Treasury bills) from the discount houses and other investors; for a local bill issue the clearing banks are not precluded

from tendering on their own behalf. The advantage to the local authority is that the costs of issue are negligible in proportion to the sum raised, being perhaps £22 per £1m.

Temporary loans to local authorities

There has always been participation by local authorities in the borrowing of money for less than a year, but from about 1959 onwards this participation developed to such an extent, as industrial companies and others became more aware of the advantages of local authority loans over bank deposits, that the Government's ability to control the capital market (particularly through Treasury bills) was in danger.

The growth of temporary borrowing is shown by the following table (in which the figures are not wholly consistent):

UNITED KINGDOM									
Year to 31									
March	1959	1960	1961	1962	1963	1964	1965	1966	1967
PWLB loans (%)	52	48	45	41	38	34	33	35	37
Mortgages (%)	22	24	25	25	29	30	28	30	32
Stock (%)	9	9	9	9	12	12	12	11	12
Negotiable bonds (%)	—	—	—	—	—	—	0	1	2
Temporary loans (%)	11	12	15	18	17	19	22	18	14
Other (%)	6	8	6	6	5	5	5	4	3
Total (£6,167)	5,859	6,617	6,557	7,151	8,221	8,966	9,916	10,903	11,445

Although temporary borrowing had, on average, reached nearly 20% in 1964, the figure for individual authorities varied from practically nothing to over half. Government proposals were made, to be effective from 1 April 1964, limiting (from 1 April 1968) a local authority's temporary borrowing to 20% of its outstanding debt, and its temporary borrowing of less than 3 months' term to 15% of its total debt. Local authorities were to be enabled to obtain a proportion of their long-term needs from the PWLB at preferential rates, this proportion starting at 20% in 1964/65 and rising to 50% in 1967/68. To help smaller authorities, every local authority would be immediately allowed to raise the first £50,000 of its long-term needs (irrespective of its total debt) from the PWLB and this free access limit would be raised to £100,000 in January 1965. On the other

hand, the minimum term for loans from the PWLB would be raised from 7 to 10 years.

In practice these proposals have been modified. The quota was raised, as envisaged, to 30% for 1965/66. But it remained at 30% for 1966/67 (except for less 'prosperous' regions, where it was raised to 40%); for 1967/68 it was raised to 34% (44% for less prosperous regions) but the quota was then to be based on net capital spending rather than on long-term borrowing. Further, authorities whose temporary debt was still in excess of 20% on 1 April 1968 might borrow from the PWLB 30% of the amount of any funding carried out to reduce their temporary debt to 20%, and the date by which this had to be completed was postponed to 1 April 1969.

Thus we are still some way from the position where 50% of borrowing will come from the PWLB, and equally some authorities seem to be in no hurry to bring their temporary debt down to 20% of the total. There is obviously a continuing demand for temporary borrowing. To a certain extent local authorities may try to arrange this through one of their own number, who may have one or two staff engaged full-time in running a 'loans bureau' for neighbouring authorities. But probably a substantial part of the business goes through brokers in London, ranging from the stockbroker who may occasionally lend money on behalf of one or two clients to a local authority, to those (whether stockbrokers or others) who have large departments engaged whole-time in arranging loans to local authorities from a wide range of lenders. Rates vary widely with the term of the loan; with the size of the loan (parcels smaller than £25,000 obtaining rather lower rates); and to a small extent with the status of the authority, with rural district councils perhaps finding it more difficult to borrow than a county borough.

Settlement is simple. The lender asks his local bank manager to instruct his head office in London to make payment to the London head office of the local authority's bank. The local authority's bank will issue a temporary receipt for the money and the local authority will soon afterwards issue a 'deposit receipt'. This deposit receipt often includes an undertaking that the local authority will complete and issue a mortgage deed for the loan if required or repay it; this undertaking is demanded by certain lenders, notably building societies. In practice the local authority would probably repay the loan rather than complete the deed. The expenses of temporary borrowing to the local authority include a charge of about £1 by its

bankers for each transaction (borrowing or repayment) and a commission of about $\frac{1}{8}\%$ per annum to the broker arranging the transaction. The advantage of using a 'loans bureau' is that the commission is smaller, but from time to time the bureau may itself have to turn to London brokers to find or place temporary loans.

Inter-bank lending

For many years the London banks (other than clearing banks) have had an active market in lending to and borrowing from each other. These loans may be for any period from overnight to 5 years, though loans for longer than a year are less usual. The minimum amount is £25,000–£50,000, and sums of £ $\frac{1}{2}$ m–£1m are more usual. The loans are unsecured, the money simply passing by cheque, and hence the status of the borrower is all-important. An individual bank will have its own rules as to the total amount it will lend to any other particular bank, or may even restrict its loans to a small circle of banks which it regards as of the highest standing. Banks in this market have no inhibitions against dealing with each other direct, but as there are perhaps fifty or sixty banks involved they often find it less time-consuming to deal with a broker specializing in this market. Rates of interest vary widely according to term, amount of the loan, and the status of the borrower; where a broker is used he charges $\frac{1}{32}\%$ per annum commission to both borrower and lender.

Deposits with finance houses

Finance houses' business consists in borrowing money from the public and lending it for periods of perhaps 6 months to 3 years for consumer credit purchases, or for rather longer periods for business purchases of durable equipment. There are hundreds of smaller finance houses, but a substantial proportion of the business is done by the 41 members of the Finance Houses Association, of which 13 have close links with the clearing banks.

It is for minimum deposits of £50,000 that the larger houses offer the best terms and the rates vary with the period of notice; at present they might be $8\frac{7}{8}\%$ for money at 1 month's call, $8\frac{3}{8}\%$ at 3 months' call, and 8% at 6 months' call—in general they are about $\frac{1}{4}\%$ higher than the local authority rate. Where deposits are obtained through brokers, a commission of $\frac{1}{8}\%$ per annum may be paid. Deposits are also obtained from the public in small amounts; the rate offered on these might be 1% lower than the rates for £50,000 deposits.

Euro-dollars

The Euro-dollar market is another short-term money market in which banks borrow and lend dollars. The transactions, however, take place outside the United States; one bank lends dollars (in the form of deposits with American banks and represented by deposit receipts) to another bank for fixed periods, commonly of 1, 3, 6 or 12 months or occasionally, under the name of Euro-bonds, for longer terms. The minimum deposit is of the order of \$1m and no collateral is required.

The market is used (a) for trade finance; (b) for borrowing dollars in order to switch into a bank's own domestic currency where the domestic capital market might be undeveloped; or (c) for American bank borrowing and American industrial lending on better terms than were allowed or obtainable in the U.S. market. Until 1964 British interest was chiefly as a broker, but then British and foreign banks began to borrow dollars to switch them into sterling (often with a view to lending the funds to local authorities) and the Bank of England intervened in the forward exchange market to make the cost of exchange cover relatively cheap. Thus dollars were attracted to London, with a net U.K. liability of some £250 m. In 1966, however, the U.S. government attempted to stem the outflow of capital and by the end of the year the U.K.'s net Euro-dollar liability had fallen to £100m. In 1967 it rose again to around £250m.

The active market in Euro-dollars in London is one indication that London's position as a financial centre does not depend on the use of sterling as a reserve currency. It is commonplace for a transaction between, say, two Italian banks to be carried through in London rather than in Italy. The broking is done by the foreign exchange departments of banks rather than by their money department partly because a deposit transaction may be linked with an exchange transaction and partly because, as in the domestic inter-bank market, the status of the borrower is all-important, and the foreign exchange department may be in a better position to judge this in relation to an overseas bank. The usual broker's commission is $\frac{1}{32}\%$ per annum to both borrower and lender.

London dollar certificates of deposit

Just as local authority negotiable bonds grew out of local authority temporary borrowing (p. 246) so there grew a demand for a negotiable instrument in the Euro-dollar market—in addition to deposits for a

fixed period. From 1961 American banks had issued domestic certificates of deposit in which a secondary market was made by certain American corporations as principals; this secondary market had grown by 1966 to such an extent as to dwarf the market in U.S. Treasury bills. The First National City Bank of New York obtained the consent of the British authorities to issue London certificates of deposit, and the first issue was made in May 1966. Exchange control restrictions on the holding of these certificates are no more severe than on transactions in Euro-dollar deposits; U.K. residents, of course, can buy them only for approved purposes or with investment dollars.

Many banks (including a subsidiary of the Midland) now issue these certificates. They are issued in multiples of \$1,000 (minimum of \$25,000) and are for, generally, 30, 60, 90, 120, 150 or 180 days, with occasional issues of up to 5 years. Interest rates are fixed by the issuing banks daily (in general they are about $\frac{1}{8}\%$ lower than corresponding Euro-dollar deposit rates) and interest is calculated on a 360-day basis. The secondary market is provided by several firms of brokers, including some discount houses; the brokers make their profit by quoting a spread of about $\frac{3}{16}\%$ between the yields on which they will sell and buy certificates.

One restriction on the expansion of the secondary market is that U.S. citizens cannot obtain these certificates directly, at any rate officially. If they were able to take a more active interest, these certificates would be more sought after, and a really free market in London could develop.

INVESTORS IN THE MONEY MARKET

The discount houses

Commercial bills were mentioned briefly on page 238 and at the beginning of the 19th century, before there was a national banking system, bill finance was more widespread and bill-brokers acted as intermediaries between merchants in one part of the country and local banks in another. The use of the domestic commercial bill declined as the century continued, but foreign bills, for financing trade, became more important. During World War I the Treasury bill (introduced in 1877 but little used) became an important source of Government borrowing and until 1962 it was the bill-brokers' chief asset. An important step was taken in the years before World

War II. The clearing banks agreed to reduce their minimum lending rate to the bill-brokers, or discount houses, and they agreed not to tender for Treasury bills on their own account; the houses agreed to limit the size of their individual tenders for bills and to submit them at an agreed price. There was thus less competition for Treasury bills and it led to a rise in the yield on them. Since World War II the houses have turned much more to holding and dealing in short-dated Government stock, as giving a more profitable return than Treasury bills.

Many discount houses had been private companies or partnerships but amalgamations had taken place from time to time, and after the war several private companies became public, so that by 1962 there were twelve houses with facilities at the Bank of England (some having had this privilege since 1830), all of these being public quoted companies. As a measure of their standing in investors' eyes, the dividend yields on their ordinary shares currently range from 3.9 to 6.2%.

The discount houses are banks, and as such borrow and lend money—with one recent exception (p. 259) always in sterling as they are not allowed to take exchange risks. Probably over half the money borrowed comes from the clearing banks, but other sources include the Scottish banks, accepting houses, London branches of overseas banks, other London banks, foreign banks (with sterling balances) and industrial companies with money to lend for periods as short as one night. The discount houses pay the clearing bank deposit rate (normally 2% below Bank Rate) on overnight money to outside lenders, and $\frac{1}{4}$ % over this rate for money on 7-day call. Money lent to the houses is fully secured and is used to buy Treasury or commercial bills, short-dated Government stock, local authority negotiable bonds, or small amounts of corporation or Dominion stocks. The assets bought are lodged as security with the lenders or kept in safe custody; Treasury bills lodged as security must amount to 101 $\frac{1}{2}$ % of the value of the loan, and other securities must amount to 105%, the excess over the amount borrowed being known as the margin. In valuing stock, market prices to the nearest $\frac{1}{2}$ point under are used. Banks vary widely in their requirements as to the composition of securities lodged; all require a high proportion of Treasury bills, and the Bank of England and Scottish banks will not accept local authority bonds.

Most money is lent on overnight call; 'basic money', varying in

amounts, is money lent by clearing banks at a rate which remains fixed from one Bank Rate change to the next. With Bank Rate at 8% the rate is $6\frac{1}{4}\%$. 'Fresh money' is a new loan and 'privilege money' (which is not given by all banks) is similar to an overdraft facility, and is used to make final adjustments to balances each day, since money cannot be borrowed from the Bank of England after 2.30 p.m.

The timetable of a working day might be as follows. At 9.30 a.m. the house receives details of opening prices in short-dated Government stocks. From 10.15 to noon, the house's representatives are visiting London banks; the banks will be calling back money to cover their commitments, since even if they know that they will be receiving money later in the day, they are unwilling to lend it until payment is actually made. The deficit figure of money recalled is passed to the Bank of England's bill-broker, to give him some idea of the whole market's position. From noon until 2.20 p.m. the house endeavours to borrow money to replace money recalled; if the deficit is too large to be covered by the money which normally becomes available between 2.30 and 3 p.m. then a director of the house must go to the Bank of England to borrow before 2.30 p.m. There is no limit to the amount which can be borrowed against security, though the Bank can require the loan to be longer than the usual 7 days, or may charge more than Bank Rate.

By 3 p.m. the house should have found sufficient money to balance its book. If there is a surplus, the house is paying interest unnecessarily; to enable an exact balance, 'privilege money' will be used. By 3.40 p.m. cheques for payments received must be paid in before the final bank clearing. From then until 5 p.m. the house may be attending to correspondence or dealing in Government stock, local authority bonds, or bills. The security for loans will also have to be physically lodged with the lenders; fortunately for the messengers' safety, the securities are not in bearer form. Any unpledged securities are put in the 'box' and the house may take unsecured loans up to the amount of them.

The Bank of England operates in the money market in several ways in order to effect a particular monetary policy of the authorities. If the clearing banks are making an unusually heavy payment to the Bank of England (e.g. in respect of taxation) the result is likely to be a severe shortage of money. If the shortage is not relieved, so that the market has to borrow heavily from the Bank of England, it is interpreted as an official attempt to prevent a fall in interest rates;

similarly the Bank of England might charge more than Bank Rate for its loans to the houses. If a shortage is to be relieved, the Bank of England's bill-broker may buy Treasury bills from the houses for cash at market rates ('direct help') or he may buy bills from the clearing banks who pass on the money received to the houses ('indirect help'). If there is a surplus of money, the Bank of England's bill-broker may sell Treasury bills for immediate cash ('mopping up'). The Bank of England may also request the houses to co-operate in a particular policy and it has, for example, restricted the development of local authority negotiable bond borrowing by declining to accept such bonds as collateral against loans. In May 1965 the Bank asked the houses to limit the growth of their commercial bills.

The aggregate balance sheet of the discount houses as at September 1967 is shown below:

Liabilities	(£ million)	Assets	
Capital and reserves	89*	Treasury bills	564
Funds borrowed:		Commercial and other bills	368
Bank of England	39	British Government stock:	
Clearing banks	913	short-dated	441†
Scottish banks	95	others	11†
Other domestic banks	34	Other assets	204
Accepting houses and overseas banks	275		
Other sources	143		
	<u>1588</u>		<u>1588</u>

* estimated

† nominal values

It will be seen that the 'margin' of security required by a lender is provided by a house's capital and reserves, and the size of these restricts the total holding of investments. A house's profit is made by the difference between the rate of interest paid for its funds and the rate of interest earned on its assets, taking into account any capital gains or losses on the investments. From the description of their operations it will be realized that discount houses rely largely for their existence on the goodwill of the clearing banks, who are unlikely to encourage them towards adventurous policies. It seemed in July 1967 that discount houses might be allowed to bid the market rate of interest for deposits and on 3 July the largest discount house published an advertisement to this effect; unfortunately there had been a misunderstanding with the clearing banks and the freedom was short-

lived—the few loans taken were repaid the next day. Despite such setbacks, the discount houses have extended their interest in the last 2 years. Clive Discount acquired control of a firm of inter-bank and local authority brokers; Gerrard & Reid acquired an interest in two firms of inter-bank and local authority brokers; Cater Ryder began to act as brokers in dollar certificates of deposit, acquired a firm of foreign exchange brokers, and formed a subsidiary to act as inter-bank and local authority brokers; Jessel Toynbee acquired a substantial interest in a firm engaged in foreign exchange, inter-bank and local authority broking. Several houses have now obtained exchange control permission to act as principals in transactions in dollar certificates of deposit.

It is worth while to repeat the conclusion of the Radcliffe report. 'It would not be beyond human ingenuity to replace the work of the discount houses; but they are there, they are doing the work effectively, and they are doing it at a trifling cost in terms of labour and other real resources.' Few would disagree, but it seems likely that the houses will not remain contented with the unexciting record of profits which their traditional activities provide.

Disclosed profits of discount houses (1959 = 100)

1959	1960	1961	1962	1963	1964	1965	1966	1967
100	88	92	120	153	129	113	135	180

The accepting houses

Certain financial institutions in the City of London are loosely described as 'merchant bankers', reflecting their original business of the buying and selling of goods. Over the years they have come to offer a wide variety of financial services, one of the most advertised being portfolio management. Sixteen of them (broadly those with the largest resources) have made the acceptance of bills of exchange a large part of their business. As mentioned on page 239, a bill accepted by one of these sixteen houses is eligible security at the Bank of England, is described as a 'bank bill', and commands the lowest rate of interest. It is obvious that the Bank of England will require to be continuously satisfied of an accepting house's capital strength, liquidity, and general reputation.

The accepting house charges a commission for accepting a bill, in addition to the discount. Commissions are competitive, but might be of the order of $1\frac{1}{4}$ –3% according to the creditworthiness of the

borrower; clearly a borrower will consider whether bill finance is likely to be cheaper than a bank overdraft.

All the accepting houses do some or all of the following business: domestic banking, issuing house work, bullion dealing, foreign exchange, merchanting, trustee work, merger negotiations, and investment advice. It is because of this latter, involving the management of substantial funds, that their influence is far greater than the size of their own balance sheets suggests.

Building societies

Building societies are a typically English social organization. The first ones, dating from about 1775, actually built houses. A group of tradesmen or workers would come together and form a club into which each paid so much a week. When sufficient had been subscribed, the club bought land and built a house. The right to purchase it was balloted for or auctioned. A large part of the purchase price was lent by the society and the member's repayments helped to swell the funds for the next house. So the club continued until all its members had obtained a house. Building clubs multiplied; and a fillip to their growth was given by the Reform Bill of 1832: property meant a vote, and a vote meant freedom. These early clubs were 'terminating' but by 1850 they had taken on a more permanent character. Investors did not themselves have to be home-seekers and in their turn the societies had to charge interest as more people came to receive loans. In 1869 the Building Societies Association was formed and the societies acquired legal recognition (combined with a measure of control by the Chief Registrar of Friendly Societies) under the Building Societies Act 1874.

The building societies are middlemen or brokers. Their investors require the highest interest possible; their borrowers seek the least. When interest rates rise, building societies must sooner or later raise their rates or investors' money would drain away—there is far more competition for it than there is for mortgage business. Investors' money comes not, on the whole, from 'big business' but from the man in the street, and is lent to those seeking to buy houses to live in; building societies have to see fair play and their 'shareholders', despite the name, have no interest in their profits, which go to increase the reserves for expansion.

Building societies offer investors the choice of deposits or shares. Deposits are secured, depositors being creditors of the society, and

carry a lower rate of interest than shares, which form by far the largest part of money lent to societies. The ordinary industrial company pays dividends from which income tax at the standard rate is deducted before payment; a shareholder in such a company, if he pays little or no income tax, may reclaim part or all of it from the tax authorities. In early days, most building societies' investors paid little tax, and rather than be faced with a host of claims for repayment of tax, the tax authorities agreed that building societies should pay share interest after deducting tax at a reduced rate. Where investors paid tax at less than this reduced rate, no claims for repayment would be admitted; where investors paid tax at more than the reduced rate, the interest would be regarded as having borne tax at the standard rate so there would be no additional liability for income tax (but there would still be liability for surtax, if appropriate). The amount of this reduced rate is determined by statistical investigations from time to time into the average level of tax paid by building society investors, and is known as the composite rate. At present it is 6*s.* 3*d.* in the £ (with the standard rate at 8*s.* 3*d.*) as a result of the last investigation made in 1963/64, and with building society investors tending to become higher taxpayers it is likely to be higher in relation to standard rate after the next statistical investigation due in 1967/68.

The usual rate charged to borrowers is at present 7½%, and the rate offered on shares is generally 4¼%. A typical profit and loss account in respect of £100 lent and borrowed might be:

RECEIPTS			PAYMENTS		
	£	s. d.		£	s. d.
7½% on £100 lent	7	2 6	4¼% on £100 borrowed	4	5 0
			Composite tax of 6 <i>s.</i> 3 <i>d.</i> in £	1	18 8
			Management expenses		11 6
			Corporation tax at 40% on 7 <i>s.</i> 4 <i>d.</i>		2 11
			Surplus to reserves		4 5
	<u>7</u>	<u>2 6</u>		<u>7</u>	<u>2 6</u>

A society would appear comfortably placed on this basis. But, for one thing, it will pay interest on the money borrowed from the day of its deposit, whereas it may not receive interest on the money lent for some time while the legal formalities of mortgages are being completed. For another, a building society is in the usually precarious position of borrowing short and lending long. It must therefore retain

a proportion of its assets in short-dated investments (which may earn less than mortgages), and the minimum proportions have been determined from time to time by the requirements of the Building Societies Association, or of the Building Societies (Designation for Trustee Investment) Regulations 1959 or of the Building Societies (Authorized Investments) Order 1962.

For shares and deposits in a society to be eligible as Trustee securities (a) its assets must exceed £500,000; (b) liabilities other than to shareholders must not exceed two-thirds of the amount of mortgages; (c) liquid funds (basically cash *plus* investments at lower of cost and market value *plus* accrued interest *less* loans and other liabilities) must be at least 7½% of net assets; (d) liquid funds must be at least one-third of loans, deposits and overdrafts; (e) free reserves must be at least 2½% of net assets up to £100m and 2% of net assets over £100m.

Authorized investments are divided as follows. Part I includes tax reserve certificates, National Development Bonds, Treasury bills, gilt-edged (including local authority quoted bonds) of 5 years life or less, local authority mortgages or unquoted bonds of 6 months life or less, and local authority temporary money of 3 months life or less. Part II includes gilt-edged of 5–15 years life and local authority mortgages or unquoted bonds of 6 months to 2 years life. Part III includes gilt-edged of 15–20 years life and local authority mortgages or unquoted bonds of 2–5 years life. Part I assets must form at least 7½% of a society's total assets; up to a further 7½% of total assets may be invested in Part II assets; thereafter investment may be made in Part III assets. It will be seen that a society may always switch shorter, but it may be restricted in switching longer, and certainly it will not be possible to make recommendations concerning the gilt-edged without also looking at the holdings of local authority bonds and mortgages.

It is not the business of a building society to be an investment trust, and a society which failed to lend on mortgage the bulk of the money invested with it would be under pressure from the Chief Registrar to do so speedily. The Hardie report, published in November 1967, suggested that the liquidity ratios of larger societies could be lower than they were, and that such societies could safely run their liquid assets down rather than interrupt a steady flow of mortgage advances. The report also suggested that the minimum size of assets for trustee status should be £1m and that minimum reserve

ratios should be on a graduated scale, falling from about $4\frac{1}{2}\%$ on £1m, through $3\frac{1}{2}\%$ on £100m, to just over $2\frac{1}{2}\%$ on £500m assets.

Trustee Savings Banks

These organizations were started in the early years of the 19th century by public-spirited men with the aim of improving facilities for thrifty saving, provided they were compatible with sound administration and the greatest security. They were first regulated by an Act of 1817 and are still under the control of the Chief Registrar of Friendly Societies. At the end of 1966 the various banks, with 1,405 offices, held funds of £2,386m in 11.7m active accounts.

The facilities offered are similar to those of the Post Office Savings Bank with which the TSBs have been in competition since 1861. The ordinary branch offers easy withdrawals and $2\frac{1}{2}\%$ interest (the first £15 of POSB and TSB ordinary branch interest, taken together, being free of income tax); the special branch offers a rate of interest tied to market rates (currently about 6%) but investors must have a minimum balance in the ordinary branch and withdrawals require greater notice. Certain Government stocks may be bought through TSBs and when they are held in this way on the TSB register the interest on them is paid without deduction of tax. TSBs offer facilities for safe custody of valuables and for obtaining foreign currency or travellers' cheques; many TSBs offer current accounts which may be drawn on by cheque; and from 1968 the TSBs will be running their own unit trust, with over-the-counter purchases of units.

Savings received in the ordinary branch are invested with the National Debt Commissioners, who pay the $2\frac{1}{2}\%$ interest together with a further percentage to cover the TSB's management expenses; savings in the special branch may be invested in gilt-edged and related stocks, with the curious restriction that each purchase or sale must be approved by the National Debt Commissioners. Regulations to be made under the Trustee Savings Banks Act 1968 are expected to provide slightly wider investment powers.

Local authorities

Local authority finance is a complex subject and I will only outline the methods of borrowing for capital purposes. These are (a) from revenue, which is likely to be only a temporary expedient; (b) by overdraft, which again is likely to be only in the nature of bridging finance, and may be relatively expensive; (c) by bills (revenue or

capital), again short-term, and subject to the restrictions mentioned on page 250; (d) temporary borrowing; (e) the PWLB; (f) mortgages or local bonds; (g) stock issues; (h) local authority negotiable bonds.

'Stock' is taken to mean an issue of £3m upwards for a term of at least seven years, to be quoted on the Stock Exchange. The queue of would-be borrowers by stock issues is carefully regulated by the Bank of England, and an authority might have to wait many years before being allowed to make such an issue. At present an authority would probably have to offer a redemption yield of at least $7\frac{1}{2}\%$ on such a stock; bearing in mind the minimum term of such an issue and the costs (of underwriting and quotation) involved, it is not surprising that few authorities are willing to make stock issues at present.

'Mortgages' is taken to mean a loan for a fixed period exceeding a year, where the evidence of title is a sealed mortgage deed. Until 1 August 1967 such mortgage deeds had to be stamped on issue and on transfer. It was not surprising that there was little market in them, but it was, and still is, always possible to sell such mortgages through the Stock Exchange, even in quantities of a few hundred pounds, the current basis being on a yield of about $8\frac{1}{2}\%$ (for terms of up to 5 years) to the buyer. Many authorities have now dispensed with the formal deed and issue what amount to mortgages on an over-the-counter basis under the title of 'local bonds', where the evidence of title is a document resembling a share certificate. Rates for such bonds are generally well advertised in the local and national press, and apply for amounts from £50 upwards. Mortgages for larger amounts (£25,000 upwards) may be negotiated through brokers at finer rates.

Mortgage borrowing is flexible, as shown by the introduction of 'escalator' mortgages. These were designed to induce the lender to leave his money with the council for a longer period while giving him the right to earlier repayment. A typical arrangement might be a 3-year mortgage, with interest of $7\frac{3}{8}\%$ for the first year, $7\frac{1}{2}\%$ for the second year, and $7\frac{5}{8}\%$ for the third year, with the right to the lender to repayment after the first year.

Negotiable bonds have been mentioned, from an investor's viewpoint, on page 246. Because of their novelty, it seems worth while to set out some of their features from a local authority's viewpoint, and to describe the mechanics of issue. Until recently the amount of negotiable bonds in issue by one authority was limited to £1m; now authorities with a net loan debt of over £10m may make larger issues,

of a size related to their loan debt, with a maximum issue of £5m for an authority whose loan debt exceeds £100m. Thus for the largest authorities negotiable bonds are not likely to form a substantial part of their total debt, and must be regarded as simply one of many available methods of borrowing, to be employed in preference to others if the interest rate after expenses is lower. For a small authority, say a rural district council, whose borrowing is mainly by mortgages in comparatively small amounts and which is suddenly faced with the cost of a sewerage or drainage scheme (resulting perhaps in an increase of 25–50% in its debt) a negotiable bond issue may be the only practical answer.

A Treasurer who proposes to make a negotiable bond issue should first obtain the Council's approval in the form of a resolution, which will also include the appointment of a Registrar (who may well be the London Registrar of his local branch bank) and issuing agents (London brokers or a bank). The issuing agents will then place the Council's name on the Bank of England's waiting list, since the timing and terms of issue of negotiable bonds are controlled by the Bank, partly to ensure an orderly market, partly to ensure conformity with Government financing policy. The Council will probably receive only 7–10 days' notice that it is being given the opportunity of making an issue; the issuing agent will then indicate the terms of issue which are likely to be acceptable both to the Bank of England and to the lenders. If the Treasurer thinks these terms of issue are unacceptable, he can decline the opportunity and be replaced on the waiting list, and another Council would be approached. If he wishes to go ahead with the issue, then the issuing agent sends a timetable, specifying the action to be taken on various days by the Treasurer, Registrar, and agent. It will gradually become usual for a Treasurer to receive his money and for first dealings to begin in the negotiable bonds on a Wednesday. The previous week the Treasurer will have made arrangements to recall (if required) any temporary borrowing on a 7-day call (to be replaced by the proceeds of the bond issue) and will also have made sure that he knows where to find the chairman of his finance committee, if his agreement is required, when the terms of issue are due to be fixed. Meanwhile the Registrar will be arranging for the printing of proofs of the bond certificates and the agent will be sending preliminary notification to the Stock Exchange (if it is a quoted issue) and will book space in two national newspapers for an advertisement giving details of the issue. On the Monday,

the terms of issue will be finally fixed after agreement between the Bank of England, the agent, and the Treasurer, and up to this point the Treasurer has freedom of choice to alter the amount of the issue (between the maximum his council's resolution will allow and a minimum of £250,000), to vary its term between 1 and 5 years, or to abandon it altogether.

Within a few minutes of the fixing of the terms, the agent will begin to place the bonds with lenders. More strictly, this is a pre-placing, the formal placing being when the lenders acknowledge the agent's placing letter and give details of the names in which the bonds are to be registered. The jobbers (if the issue is to be quoted) will also be informed of their allocation, and they will offer this on to other brokers, 'subject to permission to deal'. The Treasurer will send to the agent three forms required by the Stock Exchange: (a) Form A6, much of which is irrelevant, but undertaking, for example, to notify the Stock Exchange when interest on the bonds is due to be paid (which the Registrar will do on the Treasurer's behalf); (b) a certified copy of the Council's resolution; and (c) a proof of the newspaper advertisement, signed as authorized for publication. The same day (Monday) the agent will send to the Council for signature (over a 6d. stamp) a simple letter of agreement, whereby the agent undertakes to subscribe or procure subscribers for the bonds and the Council undertakes to furnish any documents required by the Stock Exchange and to pay the agent a commission. On the Tuesday the advertisement will appear in two national newspapers; later in the day the Stock Exchange will give permission to deal in and grant quotation for the bonds; and the Registrar will receive details of the names in which the first certificates are to be made out. On the Wednesday dealings begin on the Stock Exchange in the bonds, and the Registrar hands over the bond certificates against payment by the lenders and makes payment to the Council's bankers of the total proceeds of the issue.

The expenses to the Council are comparatively modest. For a 1 to 2 year issue, the agent's commission is 1s. 3d. for each £100 nominal of bonds and out of this he pays his own expenses and (for a quoted issue) 1s. 3d.% to the jobbers on the 25% of an issue for which they agree to subscribe. The Registrar's charge is generally 6d.% per annum, plus the cost of printing the bond certificates (perhaps £25). The only other cost is that of the advertisement, and where several authorities share an advertisement, this might be about £75. For a

2-year £1m issue, then, the expenses would amount to an annual addition to the rate of interest of about 1s. 4d. %.

Provided the interest rate itself is competitive, it is not surprising that the low expenses and simple administration make negotiable bonds attractive to many Treasurers, particularly to those of the smaller authorities. For not only do they receive a sum at one time which it might take months to raise piecemeal, but the rural district council or sewerage board borrows on exactly the same terms as the largest city and the Stock Exchange jobbers have refused to differentiate between different authorities who have bonds of the same coupon issued on the same day and maturing on the same day. This contrasts with temporary borrowing, where lenders occasionally decline to lend to authorities smaller than a county council or borough.

CONCLUSION

I realize that I have left much unsaid. I have, for instance, barely touched on the activities of the clearing banks, which if not directly, at any rate through their overseas and hire purchase subsidiaries, are continually enlarging their interests in the money market. But I hope that I have said sufficient to give some idea of alternative short-dated investments to suit particular problems and of the directions in which some recent developments have been made.

BIBLIOGRAPHY

- ALFORD, R. F. G. London's Money Brokers. *The Banker*, June 1959.
 ALLEN, HARVEY & ROSS LIMITED (1966). *This is Bill-broking*.
 EINZIG, PAUL (1967). *The Euro-Dollar System* (3rd edition).
 GRANT, A. T. (1962) Switching of British Government securities. *JSIA* 3.
 KING, WILFRED and OTHERS (1962). The London Discount Market Today (Ernest Sykes Memorial Lectures). *Institute of Bankers*.
 MARSHALL, J. B. (1952). British Government securities. *TFA* 22.
 PAGE, H. R. (1966). The Prospect before us. *IMTA*.
 PEPPER, G. T. (1963). The selection and maintenance of a gilt-edged portfolio. *JIA* 90.
 Report of the Committee on the working of the Monetary System (1959) (Cmd. 827)
 SAYERS, R. S. (1968). GILLETS in the London Money Market, 1867-1967.

ANNEX 1

Yields on British Government Securities

14 December 1967 for settlement 15 December 1967

[illegible]

ANNEX 2

To calculate the firm price on 29 November 1967 (for settlement on 30 November 1967), to yield £7 17s.%, of a 6½% Local Authority Negotiable Bond due 17 July 1968, issued on 13 January 1967. Interest payable half-yearly on 13 January and 13 July, except that a final interest payment of £3 3s. 10d.% will be made on 17 July 1968 (i.e. 4 extra days' interest).

17 July 1968	value of capital	100
	value of interest	3·1917
		103·1917

Discount for 186 days, 13 January 1968–17 July 1968, at 7·85% i.e. divide by $(1 + (·0785) \times (186/365)) = 1·040002$

13 January 1968	value ex dividend	99·2226
	value of interest	3·1250
	value cum dividend	102·3476

Discount for 44 days, 30 November 1967–13 January 1968, at 7·85% i.e. divide by $(1 + (·0785) \times (44/365)) = 1·00946$

30 November 1967	101·3885
less accrued interest 13 July–30 Nov. 1967	
(140 days)	2·3973
	98·9912

firm price, say £98 19s. 10d.

The use of compound interest (7·85% convertible half-yearly) would produce discounting factors of 1·040018 and 1·009325, giving a firm price of £99 0s. 1½d.

ANNEX 3

Representative rates in the London money market—28 December 1967

	On call	2 days	7 days	1 month	2 months	3 months	6 months	12 months	18 months	2 years	3 years	5 years
Treasury bills				7.19	7.25	7.31						
Bank bills				7.65	7.65	7.65	7.65					
Fine trade bills				8.62	8.62	8.62	8.62					
British Government stock						7.56	7.64		7.66	7.61	7.60	7.63
Local authority stock								8.05			7.92	7.85
Australia/New Zealand stock								8.05	7.82	7.82	7.91	7.82
Local authority negotiable bonds			8.12	8.10	8.00	7.87	7.82	7.75	7.75	7.75	7.75	
Local authority bills				7.44	7.50	7.56						
Local authority temporary loans			8.75	8.43	8.00	7.88	7.75					
Local authority mortgages/local bonds	8.37	8.62						7.75	7.62	7.62	7.62	7.50
Inter-bank lending	8.00	8.50	8.50	8.50	8.25	8.12						
Finance house deposits				8.88		8.44	8.00					
Euro-dollars			7.10	6.32	6.50	6.50						
London dollar CDs			7.00	6.25	6.37	6.37	6.50	6.44			6.65	6.87

Bank rate 8% (18 November 1967); Bill rate 7.53% (22 December 1967)
 £/\$ exchange rate (22 December 1967): spot 2.4022, 3 months forward 2.3742; U.S. bill rate (18 December 1967) 5.13%.

The rates for 7 days and less are somewhat artificial, in view of the closeness of the year end.