The Financing of Government Securities Dealers*

The United States Government securities market is one of the key financial markets in this country. In this market, the United States Treasury raises new money for Government operations and refinances outstanding securities. The Federal Reserve uses the market as the vehicle for its conduct of open market operations, one of the major instruments of monetary policy. And many groups of private investors use the Government securities market as a means of making adjustments in their liquidity positions and as an outlet for investment funds. In 1963, trading volume in United States Government securities totaled \$429 billion (excluding direct acquisitions of new issues from the Treasury and redemptions of Treasury issues, which also run in the hundreds of billions of dollars).

The bulk of the transactions in this market is effected through a group of dealers (including both banks with dealer departments and nonbank dealer firms) who make markets by buying and selling securities for their own accounts. For such a market to function effectively, dealers must be willing and able to maintain large inventories of securities and thus to accommodate customers when there are no immediate offsetting transactions. With Government securities as collateral for loans, the dealers are able to rely very heavily on short-term borrowings to finance their inventories. Since the nonbank dealers' positions are carried largely on borrowed funds, the cost of financing is a major determinant of profits. The search for relatively cheap sources of financing is, therefore, a key aspect of the dealers' daily work. In fact, without access to a country-wide and financially attractive supply of borrowed funds, the dealers' ability to carry an inventory and make markets in Government securities would be seriously impaired and the Government securities market could not function as it does today.

A large portion of the dealers' borrowings are arranged on a day-to-day basis. The daily routine of arranging new loans and repaying outstanding loans has several important consequences. It influences (and is in turn influenced by) the terms on which banks and other lenders and borrowers adjust their liquidity positions. In addition, it redistributes bank reserves, provides a link between sectors of the money market, and helps transmit the effects of monetary policy throughout the country. Yet, the daily task of financing dealer inventories of Government securities is carried out so smoothly and unobtrusively that few persons are aware of the significance of these financing arrangements for the money market. To provide some perspective on the impact of dealer financing on the money market, this article describes dealer financing arrangements and the major sources of funds for dealers in the early 1960's.

The statistics used include all short-term financing of United States Government and Federal Agency securities arranged by bank and nonbank dealers who report to the Market Statistics Department of the Federal Reserve Bank of New York.[1] These statistics cover collateral loans (a type of financing under which the dealer retains title to the securities but transfers them to the lender or his agent as collateral for the term of the loan), repurchase agreements (an arrangement under which the dealer actually sells the securities but simultaneously commits himself to repurchase them at a price fixed at the time of the initial transaction), and "own bank funds" (money allocated to the dealer department of a dealer bank by the bank itself).

In response to changes in the relative cost and availability of funds, the nonbank Government securities dealers shift their financing among a wide variety of lenders, including New York City banks, other banks, nonfinancial corporations, agencies of foreign banks, state and local governments, insurance companies, and a number of other financial institutions. In addition, the Federal Reserve makes repurchase agreements with nonbank dealers when open market policy considerations make such contracts desirable. Bank dealers, on the other hand, tend to rely primarily on internal funds but may also utilize repurchase agreements

* Louise Freeman had primary responsibility for the preparation of this article.

[1] Since mid-1960 the Government securities dealers have been cooperating in a statistical program that has included the daily reporting of their positions, financing, and transactions. Some of the dealers had previously reported to the Securities Department of the New York Federal Reserve Bank. Most of the statistics in the article are released regularly by the Federal Reserve Bank of New York and published in the *Federal Reserve Bulletin*.

to attract low-cost funds from corporations and other lenders, as well as to accommodate their customers by providing them with an investment for temporarily idle funds.

The total volume of the dealers' daily financing requirements is large and highly volatile. Total dealer financing outstanding grew from a daily average of $2.7 billion in 1961 to $3.6 billion in 1963. In addition, the actual daily level of dealer financing ranged from a low of $1.7 billion to a high of $5.4 billion between September 1960 and December 1963. These sizable short-run variations in total

FINANCING OF GOVERNMENT SECURITIES DEALERS*

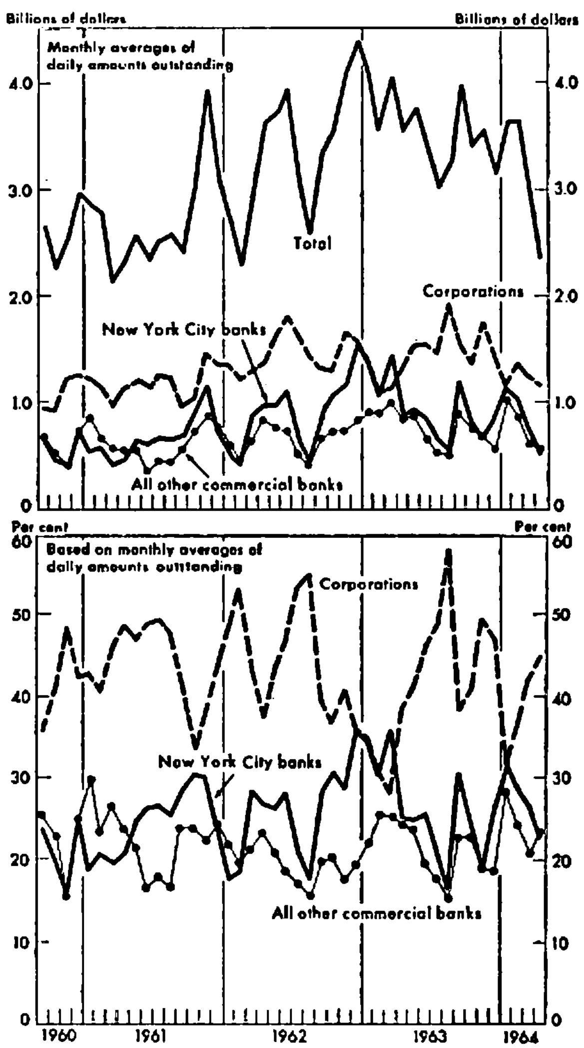
1961-63; annual averages of daily data

Distribution of financing	Amount outstanding (millions of dollars)			Share of total borrowing (per cent)		
	1961	1962	1963	1961	1962	1963
Total	2,712	3,364	3,558	100.0	100.0	100.0
By source of funds:						
New York City banks	671	890	941	24.7	26.5	26.4
Other banks	612	656	763	22.6	19.5	21.4
Nonfinancial corporations	1,171	1,462	1,467	43.2	43.5	41.2
Federal Reserve	49	59	114	1.8	1.8	3.2
Other†	208	297	274	7.7	8.8	7.7
By type of instrument:						
Repurchase agreements	1,716	2,132	2,242	63.3	63.4	63.0
Short‡	901	1,065	1,308	33.1	31.7	36.8
Long§	815	1,067	934	30.1	31.7	26.3
Collateral loans and own bank funds	996	1,232	1,316	36.7	36.6	37.0
By type of dealer:						
Bank‖	502	605	714	18.5	18.0	20.1
Nonbank	2,209	2,759	2,844	81.5	82.0	80.0

Note: Because of rounding, figures do not necessarily add to totals.
* Includes short-term financing for United States Government and Federal Agency securities.
† Includes mainly state and local governments, agencies of foreign banks, insurance companies, and other financial institutions.
‡ Repurchase agreements maturing in fifteen days or less.
§ Repurchase agreements maturing in sixteen days or more.
‖ Includes funds raised through repurchase agreements by dealer departments to finance their positions as well as "own bank funds".

THE FINANCING OF GOVERNMENT SECURITIES DEALERS

September 1960-April 1964



Note: Financing provided by the Federal Reserve and miscellaneous lenders is excluded. The amount supplied by these sources did not exceed $330 million and $420 million, respectively, in any month shown in the chart.

financing are illustrated in the top panel of the accompanying chart, although the chart in fact smooths the fluctuations since monthly averages of daily data rather than actual daily figures are plotted. The variation in total financing that is shown in the chart reflects increases and decreases in dealers' positions, mainly in Treasury bills.

As a result of the sharp changes in total dealer financing and the constant search for lower costs by dealers and for better yields by lenders, the sources of dealer financing change from day to day. The greatest variations have occurred in financing supplied by New York City banks; the actual daily level of such financing has ranged from $2.3 billion to $179 million. On the same basis, financing from nonfinancial corporations also has fluctuated a good deal—from as much as $2.2 billion a day to as little as $620 million, while borrowing from banks outside New York City has fluctuated between $1.5 billion a day and $174 million. This variation in the three largest sources of funds for dealers is also reflected in the monthly averages of daily data shown in the chart.

In the early 1960's, however, the short-run shifts among various sources of financing have tended to even out over a year. During the 1950's there had been a gradual shift in dealer financing away from New York City banks to other lenders and away from loans to repurchase agreements, as dealers gradually developed new sources of financing. This process was largely completed by the end of the decade. Thus, when annual averages of daily data are calculated, the distribution of dealer financing by source, by type of instrument, and by type of dealer is found to have been relatively stable during 1961-63 (see table). Among the major sources of funds, nonfinancial corporations provided over 40 per cent of the dealers' financing requirements in each of the three years; the New York City banks furnished roughly 25 per cent; other banks supplied around 20 per cent; and the Federal Reserve and other lenders contributed the rest. In each year, repurchase agreements accounted for about five eighths (or \$1.7 billion to \$2.2 billion per day) of all funds raised by dealers, while collateral loans and internal funds of bank dealers together averaged about three eighths (or \$1.0 billion to \$1.3 billion per day). About four fifths of the total represented financing of nonbank dealers and one fifth the financing of bank dealers.

THE CHARACTERISTICS OF DEALER FINANCING IN 1963

In deciding where and how to finance his position, a dealer has to consider several characteristics of the loan. What type of funds will be provided? When will the loan mature? Will he have the right of substitution of collateral? What will it cost him?

TYPE OF MONEY PROVIDED. There are two types of money that Government securities dealers can borrow: Federal funds and New York Clearing House funds. When a dealer obtains a Federal funds loan, he receives a draft on the reserve balances of the lender's bank at its Federal Reserve Bank. A transfer of reserve balances occurs on the same day as the loan, and the dealer therefore can use the money immediately. If the dealer obtains a loan in Clearing House funds, on the other hand, he receives a certified check on a New York City bank. This check must be presented at the New York Clearing House, and payment out of reserve balances of the drawee bank is not effected until the next day. Hence, the funds cannot be used until that day, except in transactions requiring settlement in Clearing House funds.

Before the mid-1950's, New York City banks made collateral loans to nonbank dealers only in Clearing House funds, but three of the five major New York City banks making dealer loans now regularly extend both Federal funds loans and Clearing House loans. In recent years, Federal funds loans outstanding have accounted for over half of the total collateral loans of New York City banks. Moreover, the daily change in Federal funds loans usually has been much larger than the change in Clearing House loans. Similarly, agencies of foreign banks in New York City make dealer loans in both Federal funds and Clearing House funds. On the other hand, virtually all loans or repurchase agreements with other lenders holding deposits in New York City are made in Federal funds. Almost invariably, borrowings from out-of-town lenders (both banks and corporations) are Federal funds loans, because the funds are transferred the same day over the Federal Reserve wire facilities. Repurchase agreements with the Federal Reserve always involve Federal funds.

The use of both Federal funds loans and Clearing House loans arises from the fact that both types of payment are used in United States Government securities transactions. The more recent practice of paying for short-term securities in Federal funds arose in part because it facilitates immediate adjustments in bank reserve or portfolio positions. Naturally, it is convenient for a dealer to do his financing by the same method by which the securities transaction is settled. Nevertheless, it is possible to use a Clearing House loan to finance purchases settled in Federal funds (and conversely). This usually involves the dealer in a purchase and sale of Federal funds as well as in the loan arrangement, but sometimes actual or expected rate differentials between rates on Clearing House and Federal funds loans or between present and future rates on Federal funds make this extra work worthwhile.[2]

MATURITY. Dealer loans also differ with respect to maturity. Most loans and some repurchase agreements (particularly repurchase agreements with banks outside New York City) are day-to-day or demand obligations that have no specified maturity and can be terminated at

[2] In order to finance a Federal funds purchase with a Clearing House loan, the dealer must buy Federal funds with the Clearing House check received in the loan. In other words, he exchanges the Clearing House check for another New York City bank's draft on its reserve balance at the Federal Reserve Bank of New York. Of course, in this case the dealer has to pay for the Federal funds at the market rate, as well as for the dealer loan. This extra cost, however, is usually offset when the loan is repaid, if the Federal funds rate has not changed. When the dealer sells the securities, he normally receives Federal funds, which he also sells; and he uses the Clearing House check received in the sale of Federal funds to repay the Clearing House loan.

any time by either borrower or lender. The New York City banks, however, rarely make use of this right on collateral loans, preferring instead to discourage loan renewals by raising their loan rates. Other lenders and the dealers do reduce demand loans at their discretion, although the other party to the transaction is usually given notice early in the day.

Collateral loans with specified maturities of several days are sometimes available, especially during Treasury financings; and many repurchase agreements (particularly those with corporations) have specific maturity dates ranging from one day to several months. The statistics on repurchase agreements, however, provide only two maturity categories, those with a current maturity of fifteen days or less and those maturing in sixteen days or more.[3] Long repurchase agreements—those with sixteen days or more to maturity—have constituted between one quarter and one third of total dealer financing during the three complete years for which such data are available (see table). The rest of dealer financing, consisting of short repurchase agreements, collateral loans, and own bank funds, has almost always had a maturity of fifteen days or less. Most of the long repurchase agreements have been with nonfinancial corporations; a few have been with banks and other lenders.

The Federal Reserve makes repurchase agreements with nonbank dealers for specified periods, ranging from one to fifteen calendar days. United States Government securities which mature in two years or less are acceptable collateral for such contracts, and the dealer cannot substitute collateral.[4] The Federal Reserve determines the original maturity of the repurchase agreement; either party may terminate the contract before maturity. In practice, the Federal Reserve seldom exercises its right to terminate repurchase agreements before maturity. In contrast, other lenders ordinarily do not allow the dealers to terminate repurchase agreements with specified maturity dates before maturity, but substitution of collateral may be permitted.

RATES. The basic rate in the cost structure of nonbank dealers is the rate (or rates) on collateral loans at New York City banks. Every morning each of the five New York City banks regularly making dealer loans posts at least two dealer loan rates: one for renewals and one for new loans.[5] On any given day the rates may vary from bank to bank, and occasionally a bank may change its rate during the day. These rates are available to nonbank Government securities dealers on loans secured by United States Government securities or by other collateral (such as Federal Agency securities, negotiable time certificates of deposit, and bankers' acceptances) as stipulated by each bank at any given time.

The rates charged by the New York City banks are usually higher than the rates available from other lenders. Rates charged by these banks also are frequently above the yield the dealers are earning on the collateral, so that dealers have a so-called "negative carry". This situation also occurs occasionally, but to a lesser degree, with regard to funds obtained from other sources.

The rate on funds obtained through repurchase agreements with private lenders is a matter of negotiation between dealer and lender. Rates are not posted, nor are they published anywhere. Both lenders and dealers, however, can get some idea of the market by "shopping around", and the dealers also get a feel for the market as lenders accept or reject the rates they offer. Moreover, the money market framework within which rates on repurchase agreements are set—the Federal funds rate, the dealer loan rates at New York City banks, and yields on Treasury bills—is known to all market participants.

A nonbank Government securities dealer can usually satisfy his credit needs from the New York City banks as a group at their posted rates, although the volume of loans he can obtain from any one bank will be limited. Accordingly, the maximum rate a nonbank dealer would pay to another lender on a demand, or one-day, repurchase agreement depends on the dealer loan rates at New York City banks minus the additional costs involved in obtaining the loan elsewhere (see section on "Other Costs"). For a bank dealer, the maximum rate would usually be the discount rate. The minimum rate a dealer would find is, of course, the yield the lender could obtain on alternative investments. For commercial banks this alternative is the sale of Federal funds. For business corporations there are few, if any, suitable alternative one-day investments; but for slightly longer periods they can buy short Treasury bills, finance company paper, or similar securities.

Within these limits, the rates paid by a dealer on repurchase agreements of the same maturity may differ on any given day because of the size of the loan, the lender's willingness to accept longer term collateral or to allow substitution of collateral, the time of day the loan is arranged, or the other business the lender has to distribute. From one day to the next, the relationship of the rate on day-to-day repurchase agreements to the basic

[3] The dividing line between short and long repurchase agreements is arbitrary; this division was selected in part because all repurchase agreements with the Federal Reserve mature in fifteen days or less.

[4] The Federal Reserve also makes repurchase agreements (with a maximum maturity of fifteen days) with nonbank dealers on bankers' acceptances maturing in six months or less.

[5] Sometimes a bank may post two rates for new loans, one for Clearing House loans and the other for Federal funds loans.

money market rates will vary with the dealers' financing requirements and the supply of funds available from lenders. In periods when the dealers expect the costs of day-to-day money to remain unchanged, the rate offered for a repurchase agreement of a few days' duration may be the same as that for a demand, or one-day, agreement.

Rates on longer repurchase agreements with specific maturity dates—agreements that are made primarily with corporations—are usually based on the yield on Treasury bills with a maturity close to that of the repurchase agreement. The rate on a long repurchase agreement would almost invariably be lower than the dealer's yield on the bills serving as collateral, since the dealer would prefer to finance securities involving a negative carry on a day-to-day basis so that they can be sold readily. The spread between the rate on the repurchase agreement and the return on bills of comparable maturity mainly depends on the yield accruing to the dealer on the collateral, his expectations regarding yields and borrowing costs, the supply of loanable funds, and the dealer's financing requirements. If the dealer is not allowed to substitute collateral, the rate paid the lender would probably be lower than otherwise.

The rate charged by the Federal Reserve on repurchase agreements with Government securities dealers is usually equal to the discount rate—it may not be lower than the discount rate of the New York Reserve Bank or the issuing rate on the latest issue of three-month bills, whichever is lower; there is no prescribed maximum.[6] A rate other than the discount rate of the Federal Reserve Bank of New York has, in fact, been charged on only fifty-three days between 1955 and 1963.

The rates dealers pay on collateral loans with domestic commercial banks outside New York and New York agencies of foreign banks are somewhat below rates charged by New York City banks, but are probably higher than rates on repurchase agreements. The procedure varies for charging dealer departments of commercial banks for own bank funds and for the proceeds from repurchase agreements. Such charges, if allocated, probably would not exceed the Federal Reserve discount rate.

OTHER COSTS. In addition to interest, the dealers have a number of other expenses in arranging financing, including costs of locating funds and clearing charges. Usually they also have to meet margin requirements.

Most of the nonbank dealers channel their securities transactions through a clearing bank. This bank accepts and makes payment for the securities purchased by the dealer and, in effect, makes a temporary (or day) loan to the dealer until he is able to arrange overnight financing. If the dealer arranges a Clearing House loan when he in fact needs Federal funds, the clearing bank may also provide him with the necessary Federal funds. Similar services are provided when the dealer sells or refinances securities. Generally, the fee for these services is a flat dollar amount per million dollars of securities delivered. This clearance fee—which is imposed each time securities are delivered—applies to outright sales, repurchase agreements, and some collateral loans with out-of-town banks, but not to collateral loans with New York City banks. For any one dealer the fee varies with the type of securities involved (lowest for bills and highest for bonds). The fee also varies among dealers, essentially because of differences in the cost of servicing the accounts; dealers with the largest dollar volume of trading pay the least per dollar of transactions. In the case of a one-day repurchase agreement or loan these fees add a substantial amount to the cost of financing, but they decline as a percentage of carrying costs, of course, as the maturity of the repurchase agreement increases.

In all financing arrangements, except for the occasional unsecured loan, the dealers transfer collateral or securities to the lenders. In fact, the dealers usually provide the lenders with collateral valued at more than the amount of the loan—i.e., they provide margin—and thus tie up some of their capital. Margin requirements on collateral loans vary among banks, but at all banks they increase with the maturity of the collateral. On loans at New York City banks, for example, the margin is zero or close to zero on the shortest securities, while even on the longest bonds the dealers rarely put up margin of more than 3 per cent.

The margin provided to private lenders on a repurchase agreement probably tends to be less than that on collateral loans with New York City banks. Indeed, some corporations value Treasury bills at par for repurchase agreements, which in effect gives them a negative margin since bills are discount securities and trade below par. Other corporations require no margin and value bills at market prices. When margin is provided, it tends to increase with the maturity of the security sold under repurchase agreement. The Federal Reserve always requires margin for repurchase agreements with dealers.

REPURCHASE AGREEMENTS WITH CORPORATIONS

Nonfinancial corporations, one of the most important sources of financing for Government securities dealers,

[6] For the latest published reference, see the "continuing authority" directive of the Federal Open Market Committee in the 1963 *Annual Report* of the Board of Governors, pp. 48-49.

supply funds almost entirely through repurchase agreements. In 1963, funds provided by corporations averaged $1.5 billion a day, or 41 per cent of all financing of bank and nonbank dealers, as shown in the table. To corporations, repurchase agreements with Government securities dealers are a liquid asset peculiarly adapted to certain of their needs. To the dealers, repurchase agreements with corporations are a relatively cheap source of financing, which also provides their corporate customers with a desirable asset.

REASONS WHY CORPORATIONS MAKE REPURCHASE AGREEMENTS. Corporations hold cash and interest-bearing liquid assets for a number of reasons. First, they need cash or liquid assets that can readily be converted into cash to meet income and other taxes, dividends, payrolls, and other scheduled business expenditures. Since the timing and the approximate amount of many of these payments are known well in advance, corporations can accumulate assets in anticipation of the payments as income is earned. Corporations may also accumulate liquid assets in periods when their net cash flow is large, thus building up a general liquidity reserve against unspecified needs.[7] Sometimes the proceeds of bond or stock issues may be temporarily invested in liquid assets until the funds are needed in the business. In addition, interest rates may influence decisions to hold liquid assets in a number of ways. For example, relatively high interest rates may induce corporations to hold more of their liquid assets in the form of earning assets; interest rate differentials may influence their choice among earning assets; and expectations of rising rates may cause them to shorten maturities or increase cash holdings.

Corporations may hold repurchase agreements for any of these reasons, but repurchase agreements have advantages over other assets which make them an especially suitable form in which to accumulate funds for specific payments.[8] First, the maturity of the repurchase agreement can be tailored to the corporation's payment schedule, thus eliminating the market risk implicit in holding liquid assets that would have to be sold. This factor is especially attractive when a corporation expects prices of money market assets to fall. Second, repurchase agreements can be arranged whenever the corporation has the funds. Finally, they may provide relatively attractive yields.

Direct purchases of Treasury securities are sometimes less desirable than repurchase agreements, because a corporation cannot always obtain a maturity date which fits its schedule of payments. To be sure, tax anticipation bills —which can be turned in for payment of Federal income taxes—are usually available for March and June tax dates and occasionally also for September and December tax dates; special bills maturing on the fifteenth of January, April, July, and October were available in the period under review; and a new series of bills with month-end maturities was introduced in August 1963. The regular weekly Treasury bills, however, mature only on Thursdays. Furthermore, a corporation in need of an investment outlet may not always be able to buy bills with desirable maturities at going rates in the secondary market.

Finance company paper, another alternative short-term investment, has some of the advantages of repurchase agreements. For example, the corporation can select the maturity date, within the range offered by the finance companies. Moreover, corporations can obtain finance company paper whenever wanted, since finance companies prefer to regulate the volume of paper by adjusting their rates rather than by refusing to sell paper. Also, the yields on finance company paper are higher than those on repurchase agreements except when finance companies are trying to discourage corporations from buying paper. There is, however, a modest increase in credit risk with finance company paper and, in contrast to repurchase agreements, short maturities (less than five days) are seldom available.

Negotiable time certificates of deposit (C/D's), issued by commercial banks, have been available since early 1961 either on original issue or in the secondary market. The corporation can obtain any maturity date it wishes if the C/D is purchased on original issue from a bank, but usually the rates have not been competitive with rates on close substitutes on maturities under three months or at times six months. Shorter C/D maturities can be purchased in the secondary market at better yields, but the amounts available are usually limited and the desired maturity date may be unobtainable.

That corporations do indeed use repurchase agreements as a means of accumulating funds to meet specific payments is shown by the sharp decline in repurchase agreements with corporations on the major tax and dividend dates and on other payment dates. Corporate repurchase agreements have also moved with sales of manufacturing corporations, probably reflecting the tendency for corporate outlays to vary with sales.

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[7] In the 1950's, for example, corporations built up these liquidity reserves in business recoveries when retained earnings and depreciation tended to exceed expenditures on inventories and plant and equipment. In the later stages of expansion and during recessions, when capital expenditures tended to surpass retained earnings and depreciation allowances, liquid assets were reduced to meet expenditures.

[8] It should be recognized, however, that the corporation assumes the credit risk, remote though it may be, that the dealer will fail to live up to his contract to repurchase the securities.

THE DEALERS' ATTITUDE TOWARD REPURCHASE AGREEMENTS WITH CORPORATIONS. From the point of view of the nonbank dealers the major advantage of short repurchase agreements with corporations is, of course, their low cost, compared with loans from New York City banks. Bank dealers may also at times find repurchase agreements with corporations the cheapest or most acceptable source of funds.

In the case of long repurchase agreements, the cost is sometimes less than the cost of day-to-day repurchase agreements and of collateral loans. In addition, long repurchase agreements with the privilege of substitution of collateral may be an especially attractive method of financing when dealers expect day-to-day borrowing costs to rise. There are also, however, long repurchase agreements that are not regarded as a financing method at all but rather as a transaction in which the dealer acquires securities he would not otherwise hold in order to accommodate a customer who wishes to arrange a repurchase agreement. In such a case, of course, the dealer expects to make a profit on the spread between the yield on the securities and the rate he pays the customer.

In making long repurchase agreements the dealer assumes a price risk, particularly if the repurchase agreement runs for several weeks or more, if the maturity of the collateral appreciably exceeds that of the repurchase agreement, and if substitution of collateral is not permitted. In such a case the dealer is unable to sell the collateral should its price fall, so that a loss may be inevitable. Dealers, therefore, prefer to have the right of substitution of collateral in a long repurchase agreement, which gives them the chance to shorten the maturity of the underlying collateral if they see prices declining. Even without the right of substitution, however, the dealers can sell the securities for future delivery or sell short, thus hedging against possible losses although at additional cost.

FINANCING FROM NEW YORK CITY COMMERCIAL BANKS

The commercial banking system as a whole supplies the Government securities dealers with a larger volume of funds than corporations, but the banking system is not composed of a homogeneous group of lenders. The views and actions of New York City banks in regard to dealer loans differ sharply from those of most banks outside New York City, as do the characteristics of financing provided by these two groups of banks. In addition, the impact of dealer loans from banks on the money market is not the same in the two cases. For these reasons, New York City banks and other banks are considered as separate groups of lenders. It should also be noted that the aggregate data on financing obtained from all New York City banks reflect by and large the behavior of those five banks which regularly make loans to nonbank dealers, and that of the dealer banks. (The latter groups partially overlap.)

New York City banks alone provided dealers with a daily average of $0.9 billion in 1963, as the table shows. Although this was a larger dollar volume than in 1961 and 1962, it represented approximately the same proportion of total dealer financing requirements as in those years—roughly one quarter. The funds supplied by New York City banks included collateral loans to nonbank dealers, a very small amount of repurchase agreements, and funds allocated by the New York City dealer banks to their own dealer departments.

DEALER LOANS AND RESERVE ADJUSTMENT. For commercial banks, loans to nonbank Government securities dealers are an integral part of reserve management—the task of adjusting short-term bank assets and liabilities to keep cash reserves at the desired or required levels. Member banks of the Federal Reserve System must maintain a fixed percentage of their time deposits and net demand deposits[9] in the form of either vault cash or balances at their Federal Reserve Bank. These requirements have to be covered on an average basis over a week for reserve city banks and over two weeks for other banks. Since reserve balances are constantly fluctuating, each bank must make offsetting adjustments in short-term assets and liabilities to restore the required or desired level of reserves. The means most suitable for such adjustments are Federal funds (balances at the Federal Reserve Banks), Treasury bills, dealer loans, correspondent balances, and, if and when appropriate, borrowing from the Federal Reserve Banks.

The choice among these alternatives will depend on their relative costs, the length of time the surplus (or deficiency) is expected to last, the availability of the instruments, and the preference of the bank. The return on dealer loans is frequently equal to, or higher than that of, other reserve adjustment media (usually with the exception of longer maturities of Treasury bills). For banks as well as for corporations, dealer loans have the merit of being suitable for either one-day or longer term investment. In contrast, the transactions cost of buying and selling Treasury bills—reflected in the dealers' spread between bid and asked prices—discourages the use of Treasury bills for very short-run adjustments, while the

[9] Gross demand deposits minus cash items in process of collection and minus demand balances at other domestic banks.

costs of repeating paper work every day is a disadvantage of using Federal funds for reserve adjustments lasting several days. The possibility of making dealer loans, however, may be limited when dealer positions are low. Moreover, dealer loans are usually limited, in practice, to the larger banks because dealers naturally prefer arranging for a small number of large loans.

THE NEW YORK CITY BANKS' POLICIES TOWARD DEALER LOANS. When the New York City banks that are active in dealer financing seek to adjust their reserve positions through dealer loans, they do it primarily by changing their new and renewal dealer loan rates. After considering its expected reserve position, the structure of money market rates, and the dealers' probable needs for loans, each of the five major lending banks decides every morning whether to encourage or discourage dealer loans. The dealer loan rate is set accordingly: when it is well above the expected Federal funds rate, for example, dealer loans will be discouraged. (The Federal funds rate represents the cost to the bank, if it has to borrow to finance the dealers, and the alternative yield it gives up in undertaking such financing; and it also approximates the rate the dealers pay on short-term repurchase agreements with other lenders.)

Even if a bank has set rates that hopefully will discourage dealer loans, it stands ready to make loans at these rates. Some of the New York City banks may at times limit the volume of loans they are prepared to make at posted rates, but at least one bank is almost always willing to make an unlimited volume of Federal funds loans at its posted rates to the dealers as a group (while nevertheless limiting the volume of loans to any one individual dealer—as banks do with any borrower). The New York City banks, in other words, are willing to make dealer loans, even though such loans may cause reserve deficits that have to be offset by borrowing or by selling money market assets. A rise in dealer loans at the New York banks does, in fact, often result in an increase in their borrowings in the Federal funds market as reserve losses are offset. Similarly, a reduction in dealer loans frequently has the opposite effect. In such cases, the five New York City banks thus accommodate dealers "at the expense" of their own reserve positions, although at rates profitable to themselves.

NEW YORK CITY BANKS AS LENDERS OF LAST RESORT. As a result, the New York City banks as a group have come to serve as the lender of last resort for Government securities dealers. Collateral loans at New York City banks are a considerable convenience for the dealers, primarily because loans can be arranged even late in the day and because collateral is easily recovered from these banks. Indeed, to facilitate cash trading—payment and delivery on the day the contract is concluded—most dealers reserve part of their financing for New York City banks even if funds are readily available at lower costs elsewhere. In addition, as noted earlier, the transactions costs on collateral loans at New York City banks are relatively low. Nevertheless, short-term money is usually available to the dealers outside the New York City banks at rates low enough to compensate for the higher clearing costs and lesser convenience of such financing.

As a result, the normal procedure each morning is for the nonbank dealers to borrow as much as possible of the day's requirements (above a certain minimum) from lenders other than New York City banks as long as costs are below the rates charged by these banks. The residual is then financed at New York banks. Sometimes, of course, the renewal rate or new loan rate of some of the New York banks will be low enough to induce dealers to borrow from them early in the day without searching for other lenders. As a general rule, however, the New York City banks are residual lenders to whom the dealers turn when other lenders cannot provide enough money to finance a large increase in total borrowings or to offset periodic withdrawals of funds by corporations. The similarity between movements in total dealer borrowing and borrowing from New York City banks is illustrated in the top panel of the chart on page 108, while the bottom panel shows that the share of dealer financing obtained from New York City banks has been high when reliance on corporations has been low.

OTHER SOURCES OF FUNDS

OTHER COMMERCIAL BANKS. Banks outside New York City have also been a major source of funds for Government securities dealers, supplying a daily average of from \$0.6 billion to \$0.8 billion (20 to 23 per cent) of dealer financing in each of the last three years (1961-63). More than half of these funds were provided through repurchase agreements, while the remainder represented funds allocated by the Chicago dealer banks to their dealer departments and collateral loans to nonbank dealers.

The willingness of banks outside New York City to supply funds to Government securities dealers depends primarily on the reserve position of the banks and on the relative return on dealer loans. Those banks outside New York that make any dealer loans at all are usually adjusting their own positions (and hence may be termed "adjusting" banks) because they change the volume of dealer loans in order to restore reserves to the desired level. In contrast to New York City banks, these banks typically do not accommodate the dealers by increasing dealer loans if they expect such an increase to force them to borrow more heavily. There are some out-of-town banks, however, which do borrow in the Federal funds market to maintain a minimum level of dealer loans. With any given amount of short-term surplus reserves, the volume of dealer loans made by these banks will vary with the relative yield and availability of such loans, compared with other reserve adjustment media (as noted previously).

As a result of the banks' attitudes toward dealer loans, combined with the dealers' readiness to borrow outside New York, dealer financing from banks outside New York has increased when the banks experienced temporary reserve gains—for example, at midmonth when float increases. In addition, funds supplied by banks outside New York have increased when the dealers' borrowing requirements rose (see the top panel of the chart). At such times the dealers intensified their efforts to locate banks outside New York City with surplus reserves, and they probably paid the banks higher rates relative to rates obtainable on other reserve adjustment media than at other times.

THE FEDERAL RESERVE. The Federal Reserve, at its own discretion, makes repurchase agreements available to the nonbank Government securities dealers when the System wants to prevent undue tightening of money market conditions in periods of seasonal pressures or to satisfy temporary reserve needs. In addition, the Federal Reserve has temporarily supplied somewhat longer term reserve needs through repurchase agreements on occasions when outright purchases of bills might have had a particularly strong downward impact on rates. When dealers' inventories are low or funds are available elsewhere at lower rates, however, the Federal Reserve may not be able to use repurchase agreements as it desires: dealers may not take the money offered or may terminate the agreements prior to maturity. On a daily average basis, the Federal Reserve supplies only a small part of dealers' needs. Such repurchase agreements were at a record level in 1963 yet averaged only $114 million a day (3 per cent) of total dealer borrowing.

OTHERS. All lenders other than those discussed so far supplied dealers with an average of $274 million a day in 1963, or slightly less than 8 per cent of their needs. About one quarter of this financing took the form of collateral loans, which probably came mostly from New York agencies and branches of foreign banks. These agencies lend to Government securities dealers when they have excess funds. Also in the category of other lenders are state and local governments, insurance companies, and other financial institutions. For these lenders, dealer loans may be an alternative to holding idle cash over a week end, a means of investing cash in anticipation of fixed payments, a temporary investment for the proceeds of a security issue, or a way of waiting out expected changes in interest rates. These considerations resemble those that influence corporations.

THE IMPACT OF DEALER FINANCING ON THE MONEY MARKET

The characteristics of the dealer financing mechanism make it a primary channel for the daily redistribution of short-term funds throughout the economy and a major link among the geographical and institutional sectors of the money market. Dealer financing results in heavy daily money market activity, since dealers change their positions —and hence their financing requirements—every day in response to Treasury financings, Federal Reserve activity, customers' needs, or their own appraisal of the market. In addition, because of the short average maturity of outstanding loans, either the dealers or the lenders can initiate a heavy turnover of outstanding loans on any given day. The fact that dealer financing activity is likely to redistribute funds among a wide variety of lenders clearly contributes to the important role of such financing in the money market. The dealers' sensitivity to costs, furthermore, insures that they will take advantage of the short-term nature of the loans and the diversity of the lenders to obtain low-cost funds, thus making the money market as a whole a more sensitive tool for both borrowers and lenders.

An illustration will help to show how dealer financing redistributes bank reserves on a daily basis. If bank reserves are flowing from the New York banks to those outside the City, the New York City banks can post relatively high rates on dealer loans, which encourage the dealers to arrange new loans or refinance existing loans with other lenders. If they succeed in arranging new financing outside New York and are therefore able to repay loans at New York City banks, a reflux of reserves into New York will be caused by dealer activity.

The process by which the dealer loan mechanism helps spread the effects of Federal Reserve open market operations throughout the banking system is very similar. For example, when the Federal Reserve sells Governments to the dealers to offset the usual midmonth expansion of bank reserves arising mainly from an increase in float, the dealers will have to finance these securities or resell them. Either action soaks up the excess funds that the Federal Reserve was seeking to absorb and transmits the impact of the Federal Reserve's sales to banks throughout the country. Furthermore, at this time the dealers may also refinance securities previously purchased with banks outside New York which hold temporary reserve surpluses.

Since dealer loans are a major outlet for excess funds, changes in the demand for dealer loans or in the supply of funds seeking temporary investment heavily influence closely related sectors of the money market, such as the markets for Federal funds and Treasury bills. A sharp increase in dealers' positions, for example, may cause an increase in the New York City banks' dealer loans even at higher lending rates, thus leading these banks to buy more Federal funds and place upward pressure on the Federal funds rate. And dealers who have unusual difficulty in finding financing may intensify their efforts to sell Treasury bills, thus perhaps producing interest rate increases in this area.

The Manager of the System Open Market Account gives close attention to developments in dealer financing in deciding what actions are necessary to implement the policy directives of the Federal Open Market Committee. Traders at the Federal Reserve Bank of New York talk to the nonbank dealers frequently throughout the day to follow their progress in meeting financing requirements. These reports on the availability and cost of money from banks and other lenders provide the Manager with one indication of the balance being struck in the money market between the demand for bank reserves and the supply of them. Altogether, the scale of Government securities dealers' financing needs and the flexibility of their financing arrangements make the dealer borrowing mechanism a factor of prime importance in influencing and reflecting the state of the money market.