

THE TREASURY AND THE MONEY MARKET



**Federal Reserve Bank
of New York**

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FOREWORD

This booklet is the third of a series of publications of the Federal Reserve Bank of New York designed to furnish the student of banking with information, not readily available elsewhere, concerning various aspects of the national money market and factors affecting it. The articles in this booklet deal with financial operations of the Government, including public debt transactions, and their effects on the money market.

All of these articles first appeared in the *Monthly Review of Credit and Business Conditions* of the Federal Reserve Bank of New York, and have been revised to bring them up to date.

We shall be glad to make additional copies of the booklet available for classroom use and for similar purposes.

ALLAN SPROUL,
President.

NEW YORK CITY,
May 1954.

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THE TREASURY AND THE MONEY MARKET

by

H. C. CARR

THE immense growth of the Federal Government budget, and of the Federal debt, over the past two decades has made Treasury operations the largest, and most nearly continuous, of all influences upon the flow of funds through the money market. The Federal Reserve System, in its continuing effort to control bank reserves and the net availability of money market funds in keeping with the general aims of credit policy, must take account of the cross currents set in motion by debt transactions, tax collections, and other operations of the Government. The impact of a given amount of public debt transactions or of tax receipts, however, is not always the same. The effects on the money market depend on how payment is made for securities sold, or for taxes due; in the final analysis, they depend on what happens to bank reserves.

For example, a Treasury offering of new securities for maturing securities ordinarily has little direct effect on bank reserves, but it may give rise to changes of ownership of Treasury securities and to shifts of funds between banks. Furthermore, if it results in an increase or decrease in bank holdings of Treasury securities, it may cause an increase or decrease in bank deposits and a corresponding change in the banks' reserve requirements. Even securities sold for cash may have differing effects on bank reserves, the results depending on the form of payment required or permitted by the Treasury. Nor is the collection of taxes necessarily an automatic drain on bank funds, since different taxes may be collected through different procedures, and the procedures may be varied from time to time.

Some of these considerations are touched upon in the various articles appearing in this pamphlet. This article is an introductory summary of the effects of the Treasury's cash operations on the money market.

THE FLOW OF FUNDS THROUGH TREASURY ACCOUNTS

The proceeds of taxes and of borrowing operations are originally collected either into Treasury accounts at some 11,000 commercial bank depositaries, or through direct payments into the Treas-

ury's accounts at the Reserve Banks; but with minor exceptions all Treasury disbursements are made out of funds held on deposit in the Reserve Banks. Thus, nearly all the cash operating receipts and expenditures of the Government—over 70 billion dollars during fiscal 1953—and the receipts and expenditures connected with the debt sooner or later flow through the Treasury's accounts with the twelve Federal Reserve Banks. Each payment from the public into a Reserve Bank account involves a reduction of member bank reserves; each disbursement by the Treasury from a Federal Reserve account causes an equal increase in member bank reserves. Clearly, the magnitude and the timing of the flow of funds through the Treasury's accounts at the Reserve Banks must inevitably be of major importance to the money market.

The impact of these money flows could be held to a minimum if the Treasury's operating balances in the Reserve Banks were kept at a constant figure, and if each day's inflow of funds were approximately offset by a corresponding amount of disbursements. While such a situation could represent a goal, the vast scale of the Government's operations, the diversity in the sources and uses of its funds, and unavoidable seasonal or mechanical characteristics of payments make such a neat balancing impossible. The likelihood of abrupt changes, resulting in intense stringency or sudden ease in the money market, can be lessened by the Treasury's current practice of initially funneling a considerable part of its receipts into its deposit accounts (known as Tax and Loan Accounts) at commercial bank depositaries. In this way, the transfer of funds into Treasury accounts at the Reserve Banks can be regulated, within the limits permitted by expenditure requirements, so that reserves are withdrawn from the commercial banks for the briefest practicable period prior to their subsequent replacement through Treasury disbursements. To the extent it proves practicable to handle Treasury receipts in these two steps, that is, original collection in Tax and Loan Accounts, followed by scheduled transfers to Federal Reserve accounts, the Treasury can large-

ly neutralize the money market impact of the flow of funds through its accounts, or at least regulate the impact of Treasury operations on the money market in a way that will be least disturbing, taking into account the various other factors that influence the magnitude of bank reserves.

Treasury Outlays

Under present practices the Treasury has little control over day-to-day timing of disbursements from its balances with the Reserve Banks. The Government's suppliers of goods and services or its creditors have some potential discretion to delay or to speed up the presentation of their Treasury checks or redeemable debt instruments for payment, but as a practical matter the cashing of checks is rarely postponed.

Checks which are collectible at any Reserve Bank or any Reserve Bank branch—and at the Treasury Department—are used to pay for nearly all Governmental operating expenditures. Some outlays do pass through accounts maintained with commercial banks for the convenience of certain disbursing officers, such as a paymaster for a military post, but disbursements made in this way are relatively small in proportion to the total.

On the other hand, only a small fraction of the expenditure connected with the debt involves the use of checks. Instead, banks obtain more speedy payment in the form of a direct credit to their accounts with the Reserve Banks upon presentation of redeemable bearer securities. Such maturing marketable issues are ordinarily forwarded by banks directly to their District Reserve Bank, sometimes by mail, sometimes by messenger. Some of the forwarded securities belong to the banks themselves, others belong to correspondent banks in outlying sections of Federal Reserve Districts for which the banks are acting as agents. Still others belong to nonbank customers for which the banks also act as agents so as to obtain the deposits and to render a service to their customers.

Notwithstanding the fact that all nonmarketable bonds are registered in the name of the owner, many of them do not require the issuance of a check by the Treasury when they are redeemed. Series A to E Savings bonds may be redeemed (prior to cancellation of registration) by nearly 17,000 paying agents of the Treasury—mostly banks—located

throughout the country; these agents are reimbursed by the Treasury from its accounts with the Reserve Banks upon presentation of the securities. In the fiscal year 1953, 98 per cent of the redemptions of Series A to E Savings bonds were handled in this fashion. Series F and G bonds, and their alphabetical descendants (Series H, J, and K), on the other hand, can be cashed only at Federal Reserve Banks and branches (and in Washington by the Treasurer of the United States); thus, a check on the Treasury's Reserve Bank account is involved. Savings notes and investment series bonds redeemed for cash also require a check in most instances. Savings notes that are tendered in payment of taxes, however, obviously do not.

Most expenditures for interest on the debt are also made without the use of checks; the banks present the interest coupons on bearer securities directly to the Reserve Bank. As in the case of securities being redeemed, the coupons are presented by the banks not only for their own account but also for the account of their customers.

In one sense, the distinction between Governmental expenditures made by check and those made without the use of checks is artificial. In both cases, the reduction of the Treasury's account with the Reserve Bank, when the instrument is presented for collection, is immediate. The corresponding rise in some other Federal Reserve account, nearly always member bank reserve balances, is also immediate. There is no deferred availability schedule for Treasury checks; they are immediately available funds. From the standpoint of the individual banks, however, there are real differences between payment by check and direct presentation of obligations. By direct action, the banks realize the advantages of speedier collection of funds, because this procedure eliminates the travel time involved in the journey of a check from the Treasury to the debt holder, thence to the bank, and finally to the Federal Reserve. The banks also have the assurance of obtaining the deposit. For the Treasury, such action means that the drain on its balances takes place sooner.

Treasury Receipts

As was indicated earlier, the Treasury's inability on any appreciable scale to quicken or slow down at will the flow of disbursements through its Reserve

Bank balances does not extend to receipts. Through the Tax and Loan Account device much of the Government's revenues, as well as the proceeds of its sale of securities, may be diverted into a reservoir of funds with commercial banks to be tapped when the occasion demands. Obviously then, eligibility of receipts for credit to Tax and Loan Accounts is of considerable importance in determining the degree of control over the impact of receipts on Treasury accounts with the Federal Reserve and on member banks' reserve accounts. Were all the Treasury's funds to come directly into its Reserve Bank accounts, the build-up frequently would bring serious drains on bank reserves. At times, when the expenditure rate was rapid, the subsequent fall might also cause serious distortions in reserve positions. How great these distortions would be may be seen from a comparison of the variations in the movements of the two types of Treasury accounts shown in the chart on the following page. The variations in Reserve Bank accounts are already sizable, but, if the variations in the Tax and Loan Accounts were superimposed, it is easy to see how much greater they would be.

Payment for Treasury debt sold to the public for new money may usually be made with credits to Tax and Loan Accounts. Proceeds of nonmarketable securities absorbed by the public are uniformly eligible for credit to such accounts. Marketable issues also are ordinarily, but not always, sold for Tax and Loan Account credit. The principal exceptions to this rule are the 91-day Treasury bills, which are rarely sold for book credit. Eligibility for credit to Tax and Loan Accounts does not guarantee that all payments will be made in this fashion but a large proportion of them are. Of the close to 18 billion dollars of new money issues—marketable (other than weekly bills) and nonmarketable—bought by the public in 1953, 85 per cent was paid for by Tax and Loan Account credits.

Not all securities sold to the public by the Treasury are new issues; sometimes the Treasury sells in the market limited amounts of already outstanding issues. These securities, usually held for the account of some Treasury trust fund, are always paid for by credit to the Treasury's Reserve Bank account. The Treasury occasionally also sells very short-term securities—special certificates of indebtedness—di-

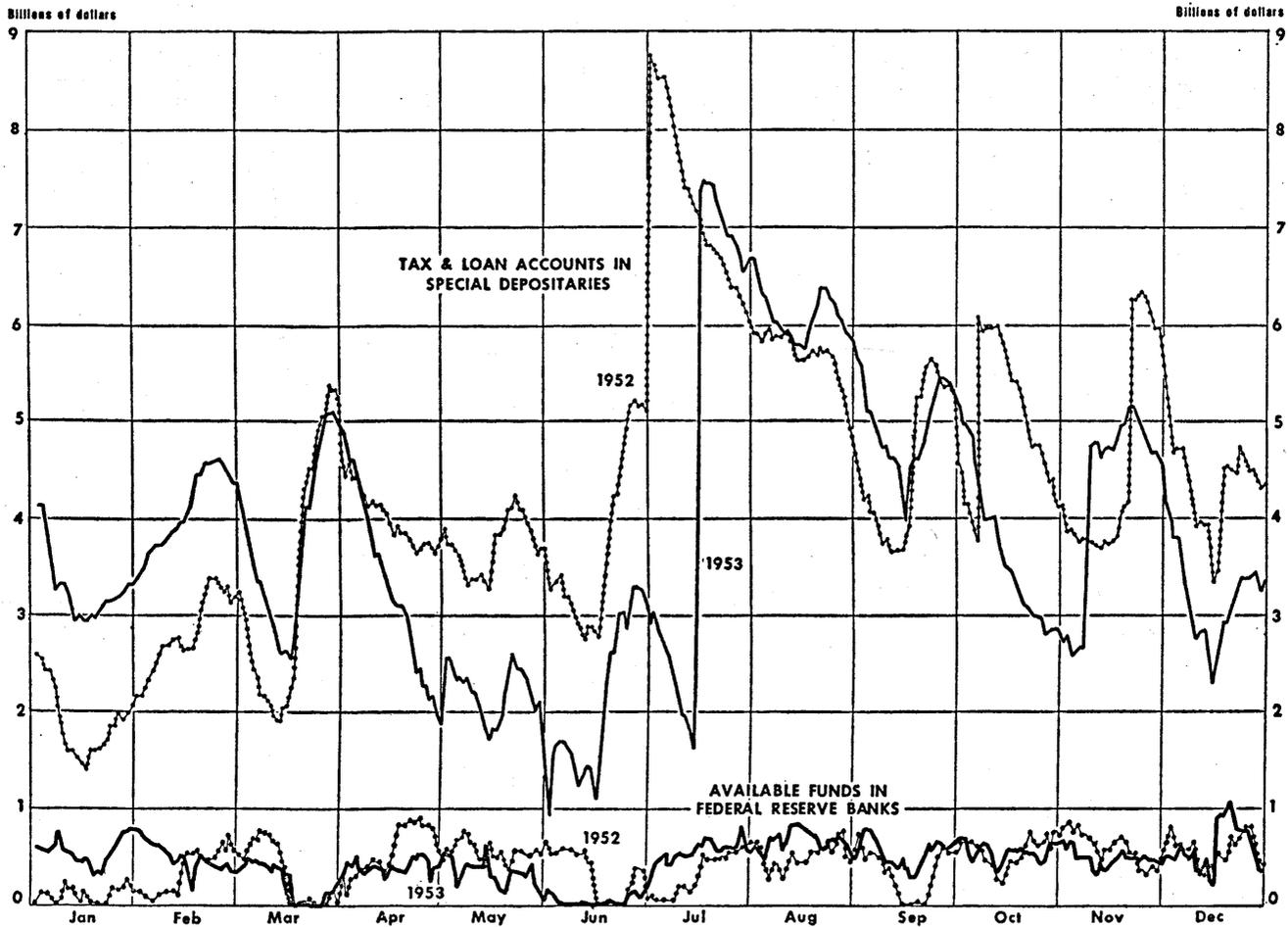
rectly to the Federal Reserve System. The temporary funds involved are "created" by the Federal Reserve Banks and are credited to the Treasury's Reserve Bank account; they do not come from the public.

In contrast to debt proceeds, many types of taxes flow directly into the Treasury's balances with the Reserve Banks, because these taxes are regular in their flow and individually are small relative to total receipts. Others, however, arrive only after a sojourn in the Tax and Loan Accounts of commercial banks. Dollarwise, the relatively few types of taxes eligible to flow first into Tax and Loan Accounts constitute the bulk of the Government's revenues, but banks are not always in a position to exercise their option of receiving these taxes into Treasury accounts on their books (since the taxpayers sometimes send their payments directly to the Director of Internal Revenue). Withheld income taxes, most social security taxes, and some excises can be and are largely retained by the banks until the Treasury specifically calls for them by a withdrawal from Tax and Loan Accounts, and a sizable portion of corporate taxes—in most quarterly months—are returned to the banks under an arrangement through which the proceeds of income tax checks of 10,000 dollars or more are returned to the banks on which they are drawn for credit to the Treasury's account in those banks. The latter credits are referred to as the "X" balances in the Tax and Loan Accounts. A modest amount of non-withheld individual income taxes also comes under the "X" account procedure. During 1953, over 70 per cent of the eligible tax payments were credited originally to Tax and Loan Accounts.

THE INFLUENCE OF TREASURY OPERATIONS ON THE MONEY MARKET

The influence of Treasury operations on member bank reserves and the money market depends upon the combined effect of the flows of receipts and expenditures through the Treasury's balance with Reserve Banks. If the flow of receipts is greater than the outgo, the Treasury's balance obviously goes up and member bank reserve balances are reduced. At times, such an increase occurs as a result of "natural" influences; that is, the rise takes place because cash collections through the Treasury's Federal Reserve accounts exceed cash disbursements without the withdrawal of funds from the Treasury's Tax

TREASURY DEPOSITS IN FEDERAL RESERVE BANKS AND SPECIAL DEPOSITARIES 1952 AND 1953



Note: Closing daily balances; Sundays and holidays omitted.
Source: U. S. Treasury Department

and Loan Accounts in the commercial banks. Such occasions are few in number and they are short-lived. Before the rapid rise in defense expenditures after the outbreak of the Korean conflict, and before the introduction of the Mills plan for collection of corporate taxes (which resulted in setting up the "X" balance procedure in March 1951), these "natural" excesses of cash receipts occurred during January, March, June, September, and December, starting about the 17th or 18th of the month and lasting for approximately a week. Now, they seldom occur.

On balance then, and increasingly so since defense expenditures increased greatly, the Treasury's receipts which come directly to its Reserve Bank balances fall short of the amounts which must be paid out. As a result, more or less continuous transfers from Tax and Loan Accounts to the Reserve Banks must be made. It thus becomes generally possible, by withdrawing the right amounts from Tax and Loan Accounts, to prevent material changes in the Treasury's balance at the Federal Reserve and thereby to minimize the corresponding effect on bank reserves which those changes exert. How much to "call" from the commercial banks must be gauged in accordance with estimates of how large the needs of the Treasury are likely to be. This requires a calculation involving a forecast of the daily receipts and expenditures which flow in and out of the Reserve Bank balance of the Treasury. In order to make these forecasts, detailed studies are made of many individual categories of receipts and expenditures by both Treasury and Federal Reserve staffs. Withdrawals from Tax and Loan Accounts are normally announced twice a week, Monday and Thursday, and at these times the estimates, made independently by each of the two staffs, are compared. After any differences are resolved (the Treasury, of course, making the final decision), the schedule of calls is fixed and notices are sent to the banks.

The Treasury may at times, because of changes in the scale of its operations or for other reasons that are generally of a long-range character, find it necessary to alter the desired level of its working balances at the Reserve Banks. If the Treasury wishes its balance unchanged, of course, withdrawals from Tax and Loan Accounts are made with an eye toward matching the net outgo from accounts at the Reserve Banks. When the Treasury's balance has,

for any reason, fallen below the level required for operating convenience and it is desirable to restore it to a somewhat higher position, the withdrawals from Tax and Loan Accounts are scheduled so as to exceed the rate of net disbursements for all operations. When the Treasury's balance may have become too large at the Reserve Banks, or when the aim is to anticipate a subsequent rise in the Treasury's balance, the withdrawal of balances from commercial banks is slackened or suspended so that the Treasury's balance at the Reserve Banks may decline. At times, thought has also been given, within the limits permitted by all other considerations, to calling funds for transfer to the Treasury's balances at the Reserve Banks in such a way as to offset to some extent the effects of other factors influencing the volume of funds being placed at the market's disposal. In practice, however, very little range has been found for this kind of purposeful variation in Treasury calls, and attention has necessarily centered on minimizing the disturbing money market effects of these calls.

Depending on what needs to be achieved, devices other than Tax and Loan withdrawals may also be used. Special certificates of indebtedness may be purchased from the Treasury by the Reserve Banks under authorization of the Federal Open Market Committee if it is deemed desirable in a period of heavy tax payments to engage in a "smoothing-out" operation. These purchases enable the Treasury temporarily to make disbursements in excess of its current receipts, thus providing the banks with additional reserves in advance of a later, unavoidable drain. Such an operation is consistent with a general policy of maintaining Treasury balances as nearly level as possible, if the special certificates are purchased shortly in advance of a period when Treasury receipts, without calls, will exceed expenditures. Under such conditions, it may be desirable to reduce or suspend withdrawals from Tax and Loan Accounts, even though Treasury deposits with the Reserve Banks may already have been exhausted, so that the later pouring-in of receipts will not build the Treasury accounts with the Reserve Banks to an undesirably high level.

It is clear, however, that management of the Treasury's Reserve Bank balance, so as to avoid large changes in bank reserves, is dependent on

rather precise use of the various methods of accomplishing that purpose, and there are definite limitations to such methods. First among these limitations are those set by operating considerations. For example, although full freedom to vary the balance may demand that all receipts be made eligible for credit to Tax and Loan Accounts, it is not practicable to do so. Take the case of declarations of estimated income taxes filed by individual taxpayers. In the first quarter of every year about five million of such declarations are filed. Probably no more than 50,000 of these are accompanied by checks in amounts of 10,000 dollars or more. It would be an enormous, unrewarding task to attempt to return the huge volume of smaller checks to the banks upon which they were drawn, although this is done with the larger checks credited to "X" accounts. Thus, flexibility—the power to vary at will the level of the Treasury's balance with the Federal Reserve Banks—is circumscribed by the limits imposed by considerations of practicability.

Another operating consideration relates to the fact that there are certain minimum levels needed in Tax and Loan Accounts to keep the system working. Were the Treasury consistently to hold only small balances in Tax and Loan Accounts, such accounts would become unprofitable and unattractive to the banks. Thus, the Treasury cannot allow its balances in those accounts to remain very low. On the other hand, operating considerations also call for the maintenance of a certain amount of funds with the Federal Reserve Banks. If less than 200-250 million dollars is kept in its General Account balance, the Treasury is exposed to the necessity of frequent shifting of funds among Reserve Banks, and its staff is compelled to pay undue attention to the regional pattern of receipts and expenditures so that sufficient balances are available in each Federal Reserve District to cover expenditures in that District. A balance of 400-500 million gives a margin of safety. The carrying of a balance of some size is also needed in order to avoid unnecessary borrowing from the

Federal Reserve Banks in the event that the estimates go awry.

In fact, the margin of error in the estimates permits only an imperfect control over the Treasury's balance for the purpose of neutralizing disturbances that result from the large and variable flow of funds through the Treasury's accounts. Despite the earnest efforts of the various staffs engaged in making such estimates, the margins of error are at times sizable. The problems of estimating collection of tax checks during March may illustrate the reasons for the miscalculations. The volume of daily income tax receipts at such a time depends not only on the amount of taxes due but also on the Revenue Service's ability to process the returns and to forward checks to the Reserve Banks; this ability has varied greatly. Whether the taxpayer will take refunds on the previous year's liability in the form of a credit on the current year's bill or in the form of a refund check, whether the corporate taxpayer finds it more advantageous to use Savings notes or tax anticipation issues for payment or to sell marketable securities and pay the bill by check, whether the bank wishes an "X" balance credit, indeed, whether a taxpayer uses more than one check in payment (thus bringing each check under the 10,000 dollar minimum for credit to "X" accounts) are also important factors bearing on the reliability of estimates. So long as the behavior of the taxpayer is relatively stable, the forecasts may be fairly good; sometimes, however, taxpayers have shown considerable deviation from their "normal" practices.

CONCLUSION

The range of variation in the Treasury's balance with the Reserve Banks may at times be large enough to introduce undesirable changes in the volume of bank reserves. The increased attention given to the management of the Treasury's cash balances in recent years, however, has materially reduced accidental or sudden swings in member bank reserves that would otherwise arise in the normal course of the Treasury's collecting and disbursing operations.

MANAGING THE TREASURY'S CASH BALANCES

by

HELEN J. COOKE

THE working cash of the Treasury, like that of any business, consists of bank accounts and currency, but unlike private concerns, the Treasury keeps its active cash mainly in deposit accounts at each of the Federal Reserve Banks and their branches. Large balances are built up in the Treasury Tax and Loan Accounts maintained at "Special Depositories" (qualified commercial banks and other banking institutions), but these balances are not drawn upon directly for Treasury disbursements. Daily average balances at the Reserve Banks in recent years have ranged from around 1.4 billion dollars in 1948 to an average of about 450 million in 1953. The amount on deposit in the Tax and Loan Accounts, on the other hand, increased from an average of nearly 1.8 billion dollars in 1948 to 3.8 billion in 1953. The rise in the latter accounts reflected not only the rise in the Treasury's cash receipts in this period but also the Treasury's increasing use of the Tax and Loan Account technique, since March 1948, as a means of spacing out the impact of its large cash receipts on the reserves of the banking system.

Relatively small amounts (around 500 million dollars) of the Treasury's funds are also held in insured domestic banks designated as "General Depositories," and in insular, territorial, and foreign depositories. Accounts are maintained in these various types of depositories, in areas at some distance from Federal Reserve Banks or their branches, to provide agents of the Federal Government with convenient facilities for depositing funds collected and in a few cases to permit disbursing officers to make payments in local funds. At any given time, the balances in these depositories are fixed in proportion to the volume and character of the Government business transacted, and any excess is transferred daily to the District Federal Reserve Bank. In many cases General Depositories qualify as Special Depositories as well. The Treasury also maintains a "Cash Room" in Washington where currency may be obtained or Treasury checks cashed, but the flow of funds through the Cash Room is relatively insignificant.

In addition to these bank accounts and cash balances, the Treasury has an additional cash asset referred to as "free gold" (excess of gold bullion over specific gold liabilities) and some "free" silver bullion, which for the most part could be used to cover general operations. These are not properly included, however, in a description of the routine banking of the Treasury's funds.

FUNDS IN THE SPECIAL DEPOSITARIES

"Treasury Tax and Loan Accounts" (formerly known as "War Loan Deposit Accounts") are maintained at nearly 11,000 designated banking institutions in the continental United States. By allowing funds to accumulate in the Tax and Loan Accounts and withdrawing them through calls only as desired, the Treasury can achieve a measure of control over the flow of cash into its accounts at the Federal Reserve Banks, and the potential disturbance to the money market and to bank reserves can be held to a minimum. The reserves which banks lose through calls can be immediately or very shortly returned through Government disbursements, if calls are planned to coincide closely with out-payments, whereas if all Treasury receipts were deposited immediately at the Reserve Banks, reserves would frequently be drained off long before the Treasury could be in a position to disburse them, and the ability of the banks to meet the credit needs of their customers would be impaired. Although the Tax and Loan deposits are payable on demand, the Treasury gives several days' notice by calling for the funds before payments are due.

Classification of Depositories

In order to permit some differentiation between larger and smaller deposit accounts, the Treasury has classified its Special Depositories into two groups. The present classification places in Group A those banks whose Treasury Tax and Loan Account balances on February 16, 1954 were 150,000 dollars or less; those with larger balances on that date are in Group B. This classification does not apply, however, to the "X" balances, which may be accumu-

lated by depository banks in the quarterly tax months, if the Treasury decides to return all or some fraction of the larger checks to the banks on which they are drawn, for credit in the Treasury's account at these banks, instead of collecting them for immediate credit in the Treasury's account at the Federal Reserve Banks. The "X" balance arrangements are made for payments of nonwithheld income and profits tax checks when all the funds are not needed immediately by the Treasury.

Calls on "B" depositories and on "X" balances are usually announced on Monday or Thursday and payments may be scheduled for any working day of the week; the Monday calls ordinarily require a transfer of funds into the Treasury's account at the Reserve Banks on the following Friday and on Monday of the next week; calls on Thursday usually are made for payment on Tuesday, Wednesday, and Thursday of the following week. Calls on "A" depositories are made less frequently, usually once a month. The Treasury may call for funds from individual banks without regard to any classification, but this has been done only on rare occasions. Individual calls, for example, were made in 1952 from particular banks which obtained unusual increases in their Treasury Tax and Loan Accounts as a result of switching by their depositors out of an old series of Savings notes into a new series.

Creditable Receipts

Until 1948, funds flowed into the Special Depository accounts only as a result of Treasury borrowing operations. But early in that year the Treasury decided to permit withheld income taxes to be credited to its accounts in the depository banks. Other selected taxes were added subsequently and by August 1953 payroll taxes under the old-age insurance program, taxes on carriers under the Railroad Retirement Act, and the payments of certain excise taxes, as well as withheld income taxes, were regularly eligible, while large payments of nonwithheld corporate and individual income taxes in the quarterly months were declared eligible whenever the funds were not immediately needed by the Treasury (a more detailed historical review and description of current procedures is given in the subsequent article).

In 1953, roughly three fifths of the Treasury's cash receipts (including cash borrowing) from the

public were creditable initially to the Treasury Tax and Loan Accounts. In 1947, when only the proceeds of sales of Savings bonds and notes were payable into the War Loan Deposit Accounts (as they were then called), the maximum flow of funds into the Special Depositories was only 17 per cent of aggregate Federal cash receipts.

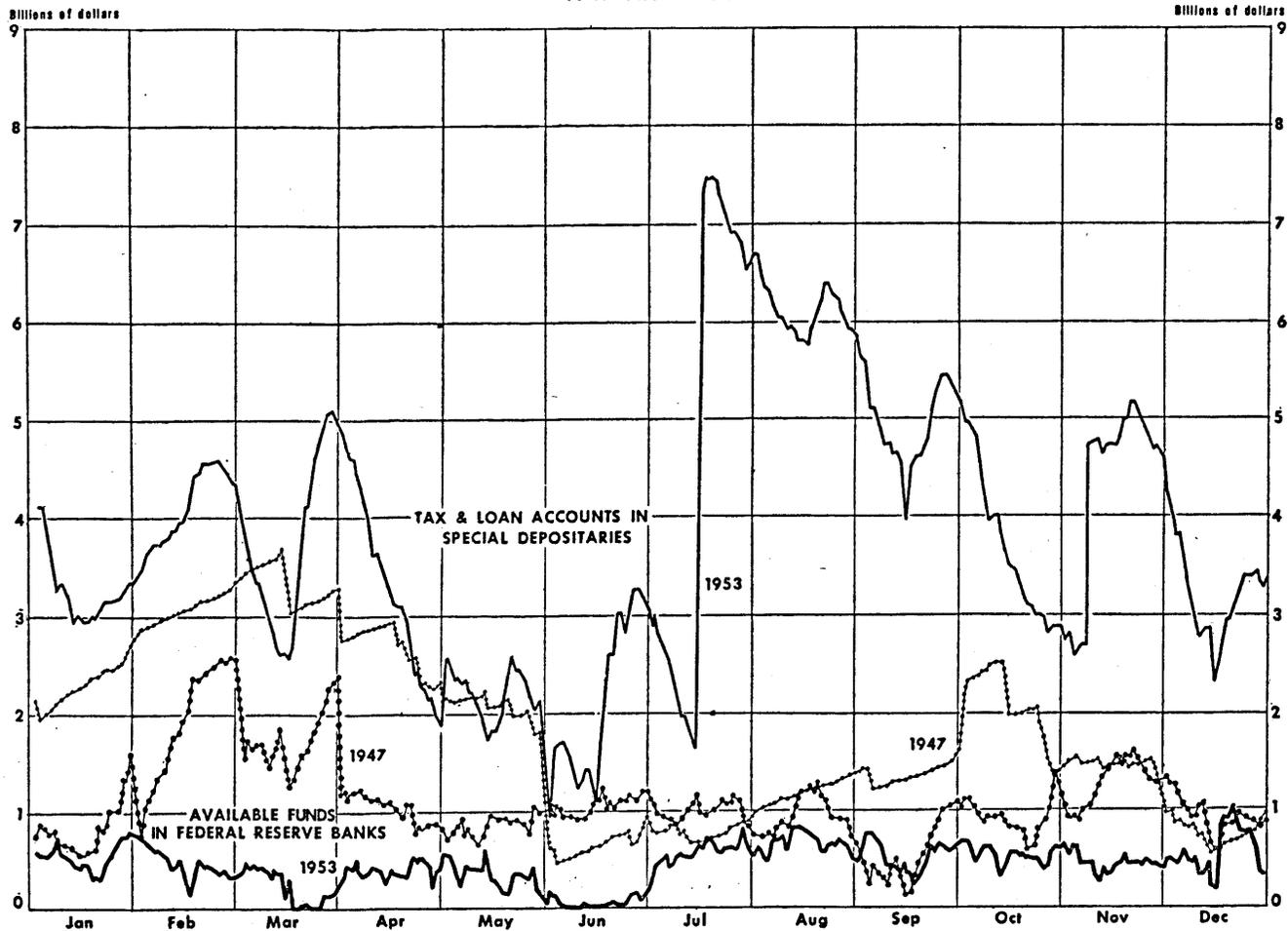
Not all of the creditable receipts pass through accounts held with the Special Depositories, but a large share of them do. In 1953, about three fifths of the receipts from Savings bonds, withheld income taxes, and eligible social security and excise taxes were credited to these accounts, and practically all of the eligible quarterly payments of nonwithheld income and profits taxes and all of the proceeds of Savings notes and new money issues went into Tax and Loan Accounts.

Fluctuations in Receipts

The monthly flow of funds into the Special Depositories from the several eligible sources has shown marked fluctuations, as shown in the accompanying chart. And within any given month, the receipts from the several eligible taxes have tended to be concentrated around the final payment date for the respective taxes, while purchases of Savings bonds and notes tended to be distributed throughout the month, with some concentration of sales of Savings notes on and after the fifteenth of the month (the issue date of each monthly series). Receipts from the sales of Savings bonds, except for the special sales, have been highest in the first three months of the year and in July and December, whereas receipts of withheld taxes are customarily low in the first month of each quarter, high in the second month, and moderate in the third as a result of technical characteristics of the payment schedule. The major changes in sales of Savings notes during the postwar period until October 1953, when sales were discontinued, apparently paralleled the changes in market rates of interest.

A growing proportion of the receipts from the quarterly income and excess profits taxes has been received in March and June. Under the Mills plan, enacted in 1950, corporate tax collections are being gradually brought forward, so that in 1955 all corporate taxes on income earned in 1954 will be payable within six months after the end of the year. Formerly, corporations paid their taxes in approxi-

TREASURY DEPOSITS IN FEDERAL RESERVE BANKS AND SPECIAL DEPOSITARIES 1947 AND 1953



Note: Closing daily balances; Sundays and holidays omitted. Data for deposits in Federal Reserve Banks through August 1947 include a small amount of uncollected items, which were not reported separately at that time.
Source: U.S. Treasury Department.

mately equal instalments in the four quarterly periods following the end of their tax year (which for most corporations is December 31). In each of the five years beginning with 1951, the proportion of taxes due in the first two quarters of the following year was increased by five percentage points and the proportion in the last two quarters lowered by five percentage points. In 1953, for example, 40 per cent of the tax liability of most corporations for 1952 income had to be paid in March; an additional 40 per cent was due in June; and 10 per cent was payable on each of the two remaining quarterly "tax dates." By 1955 half of a corporation's tax liability will be due in the third month after the close of its fiscal year, and the remaining half before the end of the following quarter.¹ Because the fiscal years of some corporations differ from the calendar year, and because certain amounts of "back" taxes are paid throughout the year, a small proportion of corporate income and profits taxes has continued to be collected in the intervening months and in the last six months of a year.

If all of these tax collections were allowed to flow directly into the Reserve Banks, as had been the case prior to 1948, the banks would at times face an extremely difficult task in maintaining their reserves at the required levels. Record payments of taxes have been made in recent years for several reasons, including unparalleled incomes and profits, higher ordinary tax rates on both corporate and individual income, the enactment of a corporate excess profits tax law (which expired at the end of 1953), and the acceleration of corporate tax payments under the Mills plan. In the same period, the banks could no longer rely upon as ready a market as in former years for the Government securities which

¹ Much of the half-yearly swing in tax payments by corporations would be gradually offset by a pay-as-you-go measure in the 1954 "tax revision bill" but large intra-monthly fluctuations will remain nevertheless. The new plan, applying to incomes earned in the first fiscal year ending on or after December 1955, calls for the payment by large corporations within the last four months of the year in which the income is received. That is to say, most of these corporations will make their first instalment on taxes due on 1955 incomes on September 15 of that year, when 5 per cent of their estimated annual tax will be due. The payments will be stepped up gradually until 1959 and thereafter when 25 per cent of the current year's estimated tax liability will be due on September 15 and also on December 15 of that year and the remainder (with any adjustment for errors in the original income estimate) in two equal instalments on March 15 and June 15 of the following year.

they might have had to sell to cover the losses of reserves entailed in paying tax funds into the Treasury's deposits at the Federal Reserve Banks.

The contrast in the amount of fluctuations which would have occurred in the Treasury deposits at the Federal Reserve Banks without the use of the Tax and Loan Accounts can be seen by comparing, as shown in the chart on page 9, the fluctuations in 1953 in the Tax and Loan deposits with the changes in that year in the Federal Reserve deposits. Also, it can be seen that the fluctuations in the deposits in the Reserve Banks in 1953 would then have been greater than in 1947 when all tax collections flowed directly into the Reserve Banks. For example, the increases in the Tax and Loan Accounts in the quarterly months in 1953, reflecting the collection of income and profits taxes, were substantially larger than the comparable 1947 increases which at that time occurred in the Treasury's deposits in the Reserve Banks. Likewise, the increases in Tax and Loan Accounts during the third week of February, May, August, and November, reflecting for the most part the receipt of withheld income, old-age, and railroad retirement taxes, were far larger than the comparable 1947 increases in the deposits at the Reserve Banks. The other bumps in the 1953 Tax and Loan deposits reflected new money borrowing on May 1, June 3, July 15, and November 9.

DEPOSITS AT THE FEDERAL RESERVE BANKS

The Treasury's accounts at the Federal Reserve Banks have fluctuated basically with the Treasury's needs, reflecting the Government's cash income and outgo (both operating and debt transactions). But the precise level, above the operational minimum, has normally been determined with reference to the influence on the money market of a shift of funds into (or out of) the Federal Reserve Banks. The minimum level must be adequate for expected daily cash needs, and must also provide for the appropriate distribution of the funds for operating convenience among the 12 Federal Reserve Banks and their 24 branches. When the aggregate volume of receipts and expenditures is increasing, larger errors may be made in estimating the daily needs, and consequently a somewhat higher minimum level is necessary.

Because of the wide range of influences at work—the varying tax dates, changing levels of taxable incomes, seasonal and cyclical influences on outlays, changes in the schedule of callable and maturing debt, as well as changes in Government programs—it is not a simple problem to manage the Treasury's balances. The special collection arrangements introduced in a series of steps since March 1948, however, have, through expanding the use of the Special Depository technique, materially lessened the severity of the impact upon the money market of fluctuations in the Treasury's cash position.

TREASURY TAX AND LOAN ACCOUNTS AT COMMERCIAL BANKS

by

HELEN J. COOKE and KATHLEEN N. STRAUS

IN order to minimize the disruptive effects that Treasury operations might have on the money market, the Treasury resumed during the Second World War the extensive use of the War Loan Accounts in commercial banks which had, to a considerable extent, fallen into disuse in preceding years. These accounts, which are now known as the Treasury Tax and Loan Accounts, had originally been employed to facilitate the financing of the First World War. More recently, the accounts have been used to reduce the money market disturbances arising from the payment of certain taxes as well as from the transfer of funds for the purchase of new money issues sold by the Treasury.

Treasury Tax and Loan Accounts are Treasury accounts at banking institutions that qualify as "Special Depositories." Upon pledging certain specified securities as collateral, and upon recommendation of the Federal Reserve Bank in its District, any incorporated bank or trust company may be designated by the Secretary of the Treasury as a Special Depository. At the end of June 1953, there were about 11,000 Special Depositories in the United States. As noted in the preceding article, these depositories are divided into two classes, depending on the amount of deposits held on a given date.

HISTORICAL BACKGROUND

The system of "Special Depositories" originated during the First World War. The First Liberty Loan Act of 1917 authorized banks purchasing Government securities (issued under terms of that Act) for their own or their customers' accounts to make payment for such securities by crediting the amount of the subscriptions to special accounts, called "War Loan Deposit Accounts." Several provisions made the holding of War Loan deposits attractive to commercial banks. From the time of their inception until 1935, War Loan deposits were exempt from reserve requirements. While the banks holding War Loan deposits were originally required to pay interest to the Treasury, the stipulated rate of 2 per cent was considerably lower than market rates then

prevailing. The interest rate was lowered in the early 1930's and was eliminated entirely, along with interest payments on other demand deposits, under the provisions of the Banking Act of 1933. War Loan Accounts were not very active during the thirties, as receipts from the sale of Government securities were then relatively small. During the inter-war period the number of depository banks declined sharply.

As the Treasury's needs for financing expanded greatly during World War II, an encouragement to banks to open War Loan Accounts was given in 1943 by suspending again, for the duration of hostilities plus six months, reserve requirements against War Loan deposits and by exempting them from insurance assessments for the Federal Deposit Insurance Corporation. Thus, when banks subscribed to Government securities for their customers' accounts, their regular deposits decreased and their required reserves declined, although their total deposits remained unchanged. When banks subscribed for their own account, they received interest on the securities from the time of the purchase and did not lose funds until the Treasury made withdrawals from these accounts. Even though reserve requirements and insurance assessments were reimposed after June 30, 1947, banks continued to maintain War Loan Accounts. It was still profitable for banks to retain such accounts, although the advantages accruing to depository banks were not so marked as during the war period. The deposits are not drawn down and reserves are not lost (although required reserves may be increased) until the Treasury withdraws funds to meet its current expenditures.

Since the end of World War II, the Treasury has been expanding the use of the War Loan Accounts. Starting in March 1948, banks were permitted to credit to the War Loan Accounts their receipts of withheld income taxes, which formerly they had had to turn over to the Federal Reserve Banks as soon as the amount in their (separate) withheld tax account reached 5,000 dollars, and at

the end of each month regardless of the balance.

Effective January 1, 1950, the Treasury Department revised the system under which banks accepted deposits of income taxes withheld from wages and salaries and extended this system to include deposits of payroll taxes for the old-age insurance program. The renaming of War Loan Accounts as "Treasury Tax and Loan Accounts" accompanied the transformation of what had initially been a wartime emergency measure into a permanent instrument of Treasury operations. Within a short time, other appropriate taxes were made eligible for deposit in the Tax and Loan Accounts. Under a special arrangement, large payments (checks of 10,000 dollars or more) of corporate income and profits taxes in the quarterly months beginning March 1951 became eligible for deposit in the Tax and Loan Accounts when, and to the extent that, the funds are not immediately needed by the Treasury. Large payments of individual taxes beginning June 1951 were included in that arrangement. Payments of the railroad retirement taxes beginning July 1951 were included in the withheld tax system, and, finally, the system for the payment of certain excise taxes was revised beginning July 1953 and the payments were made eligible for deposit in the Tax and Loan Accounts.

CURRENT PROCEDURES

Withheld Taxes

Under the new collection system for withheld taxes, employers have the option of paying withheld income, old-age insurance, and railroad retirement taxes either to the Federal Reserve Banks or to banking institutions which qualify as Depositories for Federal Taxes. Only banks which have qualified also as Special Depositories of Public Moneys may credit taxes to Treasury Tax and Loan Accounts.¹ Employers must deposit withheld individual income, old-age insurance, and railroad retirement taxes on a monthly basis by the middle of the following month. For the last month of a quarter, however, deposits are not required to be made at

¹ Initially, Special Depositories were permitted also to credit to their Treasury Tax and Loan Accounts the equivalent of checks drawn on them but sent directly by employers to the Federal Reserve Banks. Since most of the taxes were deposited directly with the depository banks, the Treasury discontinued this aspect of the new system on September 1, 1950.

depository banks until the end of the following month. The employer receives a validated receipt each month and forwards these receipts to the Director of Internal Revenue (along with a return) every quarter.²

Banks that qualify as Depositories for Federal Taxes must accept deposits of these Federal taxes without compensation. However, part of the clerical work involved in processing old-age insurance, railroad retirement, and withheld income taxes is undertaken by the Federal Reserve Banks. The forms filed by employers are forwarded on the day of receipt by the depository banks to the Federal Reserve Banks, which send directly to each employer a validated receipt for the tax payment he has made. Prior to January 1, 1950, banks were compensated for handling withheld income taxes by being entitled to buy special depository bonds, but on February 28, 1950, the Treasury redeemed the 2 per cent Depository Bonds, Second Series, which had been issued to depository banks since September 10, 1943 to compensate them for the work involved in processing withheld income taxes.³ Some 96.9 million dollars of this series of Depository Bonds were redeemed. The funds for purchasing these Depository Bonds had been provided in some cases by a Treasury time deposit; depository banks which instead elected to invest their own funds (as over half of them in the New York District did) had been allotted twice the amount. Purchases were related to a bank's depository activity (as measured by the average monthly dollar amount and number of tax receipts, adjusted semiannually).

The depository banks affected by the new proce-

² However, the taxes may be paid directly to the Director. A single card form (the Federal Depository Receipt) and a single return cover the payment of income and old-age insurance taxes by the employer. Another card form (the Railroad Retirement Depository Receipt) covers the retirement taxes paid by railroads. If the employer withholds no more than 100 dollars a month of the combined withheld income and old-age insurance taxes or of the Railroad Retirement taxes, payments of the respective taxes may be made quarterly rather than monthly.

³ The First Series of 2 per cent Depository Bonds, issued since June 28, 1941 to banks acting as Depositories of Public Moneys and of which around 300 million dollars were outstanding at the beginning of 1950, was unaffected by this move. The amount of First Series bonds that depository banks are entitled to purchase is related to other services rendered by the banks. Along with other specified issues, Depository Bonds may be pledged as collateral to meet the requirement that banks must pledge collateral security against Government accounts in excess of 10,000 dollars.

dures lost the 2 per cent return on Second Series Depository Bonds, but the net loss of income was reduced to the extent that they reinvested their own funds in other securities, and also, under the new system, Special Depositories earn a return on the temporary investment of the old-age insurance and railroad retirement tax funds until the Treasury makes "calls" from Tax and Loan Accounts.

Quarterly Income and Profits Taxes

Under procedures initiated in February 1951, the Treasury announces shortly before each quarterly income tax payment date whether or not the large payments of income and profits taxes in that month will be eligible for deposit in the Tax and Loan Accounts. The taxes are returned to the banks under a special procedure. Although the Treasury could at any time select a different dividing line, it has thus far, for reasons of clerical simplicity, considered as "large" all checks in dollar amounts of five or more digits. Checks of 10,000 dollars or more received during a specified period are separated by the Directors of Internal Revenue and deposited in the Federal Reserve Banks, which prepare daily a special form of cash letter, with an attached certificate indicating the amount of the checks eligible for credit in Treasury Tax and Loan Accounts. The Special Depositories, wishing to avoid any immediate loss of reserves through these tax payments, execute and return the certificates to the Reserve Banks, thereby indicating they have credited the funds to the Treasury's accounts on their books. Through 1953, the Treasury had permitted "credit" payments equal to 100 per cent of the amount of checks shown in the cash letter in all but four of the quarterly months.

The funds accumulated from these large quarterly tax checks are known as the "X" balances. At the outset, the Treasury called the funds in the "X" balances before calling other funds in the Tax and Loan Accounts but this tended to concentrate calls on the relatively few banks with customers making large tax payments. In September 1951, the procedure was changed to allow withdrawals from either or both balances as necessitated by the Treasury's financing needs and the condition of the money market.

Excise Taxes

Under procedures introduced in July 1953, the payment of eligible excise taxes is handled in much the same manner as that employed for withheld taxes. Payments must be made by the end of the month following the month in which the tax liability accrues and may be made either to a Federal Reserve Bank or to a qualified depository bank. The payments eligible for credit to the Tax and Loan Accounts consist for the most part of manufacturers', retailers', service, and facilities excise taxes. Altogether, these taxes accounted for about half of the "miscellaneous internal revenue" collected in fiscal 1953.⁴

VOLUME OF FUNDS

The volume and activity of funds in War Loan Accounts rose sharply during World War II, and during 1944 withdrawals reached a peak of over 43 billion dollars. In 1947, only a little more than 9 billion dollars of Treasury funds passed through these accounts. With the crediting of withheld income taxes to the War Loan Accounts (late March 1948), the flow of Treasury funds through the commercial banks increased, and in 1949 calls exceeded 15 billion dollars. After the outbreak of the Korean conflict (June 1950), calls again rose sharply, as a result of both the rise in the Treasury's cash receipts and the addition of other creditable taxes. In the calendar year 1953, nearly 42 billion dollars of Treasury funds were called from the Tax and Loan Accounts. In that year over 6 billion dollars of Savings bonds and notes were sold through banks and credited to Treasury Tax and Loan Accounts.

⁴ When payments are made at a commercial bank, the covering deposit card forms (Depository Receipt for Federal Excise Taxes) are sent by the banks to a Federal Reserve Bank. The cards are forwarded daily, along with any of the two other depository cards the banks have received from taxpayers making deposits either of old-age insurance and withheld income taxes or of railroad retirement taxes. The three cards are then validated by the Reserve Bank and returned directly to taxpayers. For the third month of a quarter, however, excise taxes may be remitted directly to the Director of Internal Revenue (along with a return filed quarterly under the revised system instead of monthly) or deposited as in the other two months. In the latter case, the validated receipts for the full quarterly payments are filed with the Director of Internal Revenue, along with the quarterly return, which in this case is not due until 10 days after the month-end due-date for returns with direct payments (to allow time for the processing of the third-month receipt). If the excise tax liability is less than 100 dollars a month, payments may be made quarterly instead of monthly.

In addition, over 9.6 billion dollars from the sales of other public issues and nearly 25 billion dollars of Federal taxes were credited to these accounts. The credits represented practically all of the collections of eligible quarterly payments of nonwithheld income and profits taxes and of the proceeds of the new money issues and of sales of Savings notes, and about three fifths of the total sales of Savings bonds and of the collections of the eligible withheld and excise taxes.

TREASURY FUNDS AND BANK RESERVES

During both World Wars, the use of the War Loan Accounts in paying for new issues of Government securities provided an effective mechanism for smoothing out the impact of Government financial operations on the banking system. To the extent that this method of payment for Government securities was used, total bank reserves were not immediately reduced when new Government securities were issued. Calls for the War Loan deposits were issued when the Treasury required funds to meet Government expenses, so that corresponding amounts of Government checks were soon deposited with the banking system. Of course, the amount of War Loan withdrawals and of new deposits did not necessarily balance, even roughly, for each individual bank. Nevertheless, if the banks made adequate use of this procedure, they could to a large extent prevent any severe disturbances to their reserve positions during periods when the Government sold securities in large volume, as during the War Loan drives of World War II.

If the special depository system had not existed, there would have been periodic, heavy drains on bank reserves during times of large-scale Government financing, followed by considerable gains of reserves, with disruptive effects on the money mar-

ket and particularly on the Government securities market. If the banks had had to pay for new issues purchased for their customers' and their own accounts by drawing down their reserves to transfer funds to Treasury accounts at the Federal Reserve Banks, the Federal Reserve System would have had to extend credit to them in large amounts in order to prevent widespread liquidation by the banks of Government securities previously held. Then, as the proceeds of the new issues were spent by the Government, they would have been deposited by the customers of banks and thus bank reserves would have been built up again. The Federal Reserve System would then have had to absorb the resulting excess reserves.

Since the end of World War II the Treasury has continued to sell substantial amounts of Savings bonds and notes (although offerings of notes were stopped, at least temporarily beginning in October 1953) and, since mid-1951, the Treasury has also made several sizable offerings of other new money issues.⁵ In addition, tax collections and other cash operating receipts have exceeded 40 billion dollars annually; in 1953, more than 70 billion dollars were collected. Disruptive effects on deposits and reserves resulting both from seasonal movements in tax payments and in sales of Savings bonds and Savings notes (that are unrelated in timing to the needs of either the Treasury or the money market), and from the offering of large individual issues are thus ironed out through the operation of the Tax and Loan Accounts.

⁵ The Treasury covered part of its new money needs by increasing its weekly bill issues, but these securities were sold on a "cash" basis; the proceeds could not be credited to Tax and Loan Accounts. On the other hand, payments for the special tax anticipation issues and other "new money" issues could be made by credits to the Tax and Loan Accounts.

CASH BORROWING OF THE UNITED STATES TREASURY: NONMARKETABLE ISSUES

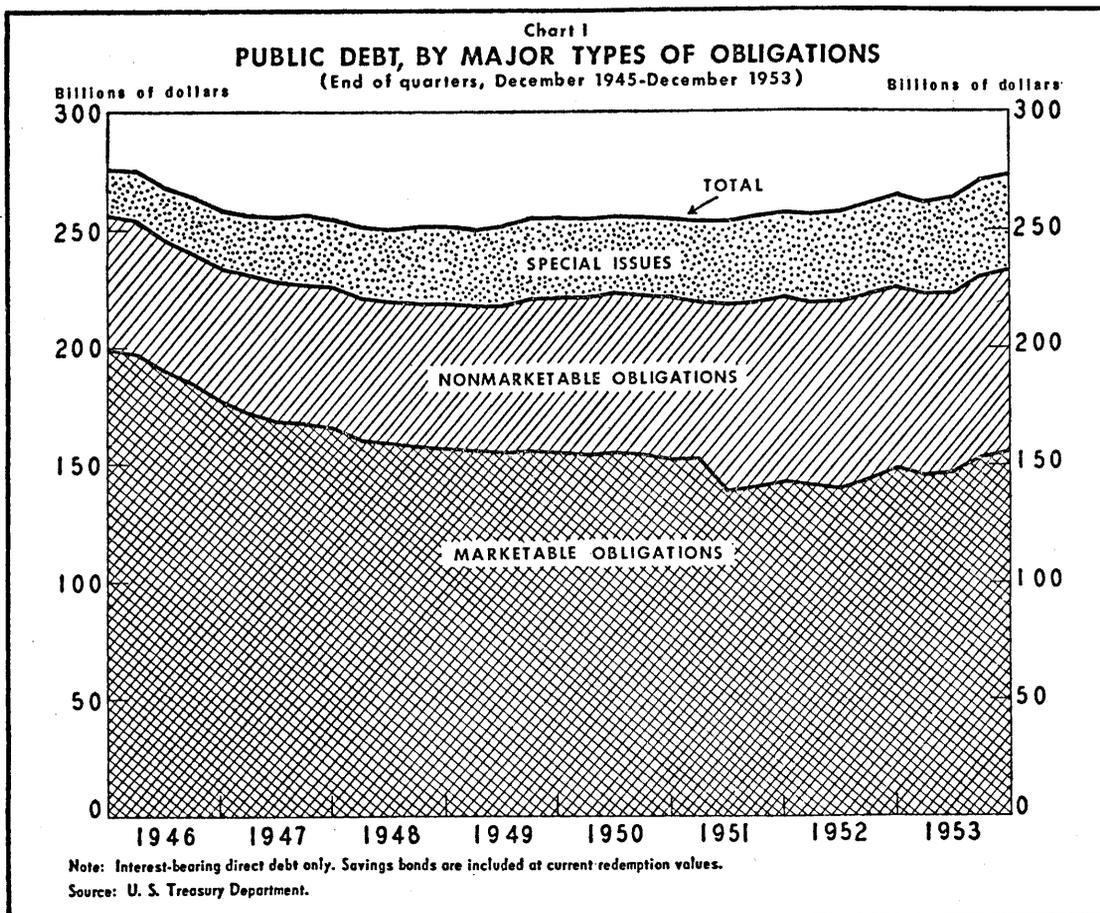
by

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IN borrowing the money necessary to finance the operations of the Federal Government, the Treasury has resorted to a variety of debt instruments. Currently, more than 100 different interest-bearing Federal debt issues are held by the public. They differ with respect to interest rates, maturities, tax exemptions, redeemability, and freedom of purchase. Most of these issues can be bought and sold freely in the market by investors, but a substantial portion cannot be sold by investors although they may, on demand or on short notice, be redeemed for cash or, in one case, converted into an intermediate-term marketable issue. The negotiable issues are

known as marketable issues and the nonnegotiable securities as nonmarketable issues. This article will be confined to the nonmarketable public issues.¹

¹ In addition to the interest-bearing public issues, the Treasury has outstanding a substantial volume of "special issues" sold only to the various Government trust funds and agencies and a large amount of nonmarketable non-interest-bearing special notes issued to the International Monetary Fund as part of our subscription to that agency, as well as a small amount of matured public issues and other debt bearing no interest. In the calculation of Treasury cash borrowing in the *Treasury Bulletin*, most of the transactions leading to the issuance or redemption of the special issues are not considered part of the Treasury's cash debt operations. For an analysis of the relationship of these debt transactions to the cash transactions, see the article on "The Nature and Significance of the Treasury's Cash Transactions" in the February 1952 issue of the *Monthly Review* of this Bank.

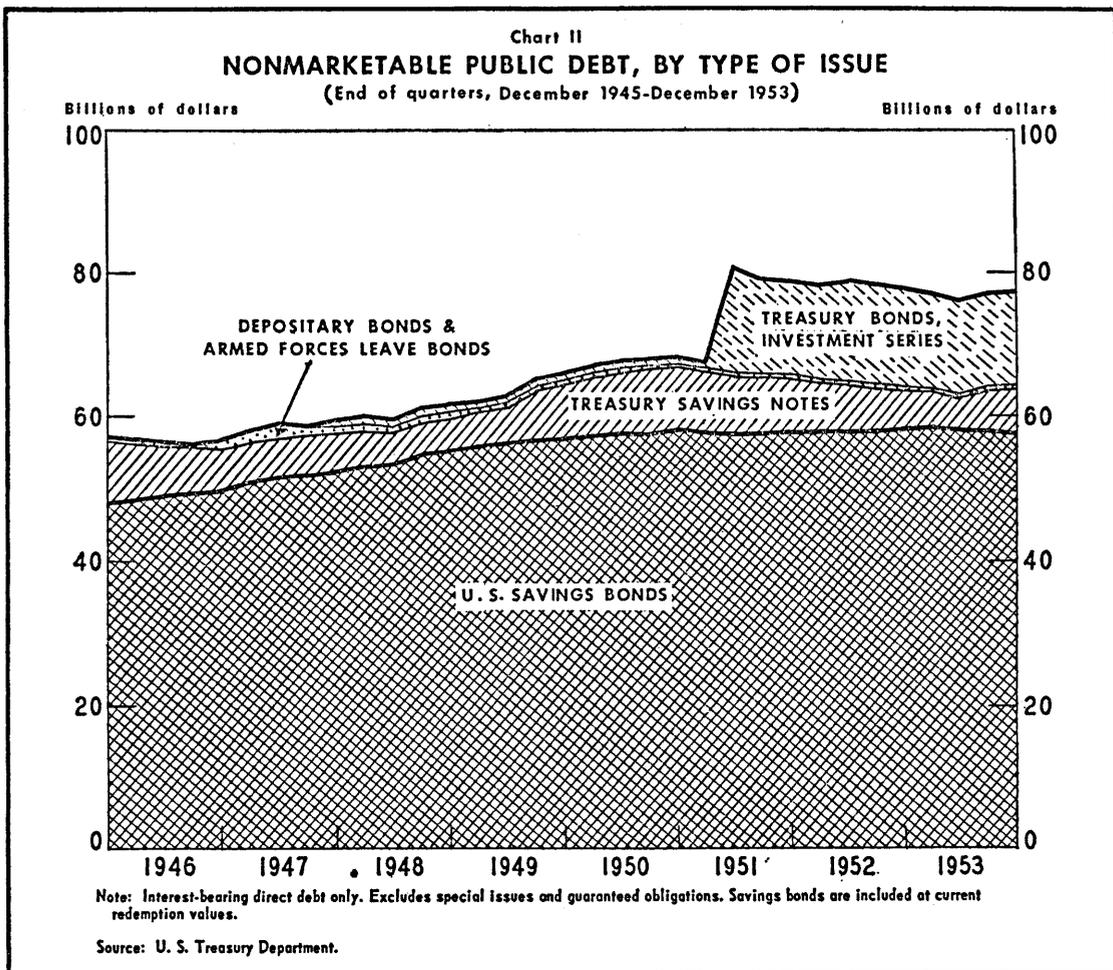


CHANGING ROLE OF NONMARKETABLES

For various reasons, greater emphasis has been placed on nonmarketable issues over the past two decades. Prior to the middle thirties there were no such securities, but by the time of our entry into World War II, they had grown to constitute 14 per cent of the gross direct and guaranteed debt. Shortly after the close of the Victory Loan Drive, when the debt stood at a peak of over 279 billion dollars (on February 28, 1946), nonmarketable public issues represented over a fifth of the total Federal debt, as shown in Chart I. By the beginning of 1954, the Federal Government had reduced its total public issues by some 25 billion dollars from the peak of its borrowings (despite a rise of 14 billion dol-

lars in net new public borrowings since the spring of 1949). On the other hand, nonmarketable public issues had shown an almost uninterrupted rise to a peak of almost 81 billion in May 1951 and by the beginning of 1954 were only slightly lower at 77 billion dollars, or 28 per cent of the total Federal debt and over 33 per cent of the public issues.

Currently, there are three important types of nonmarketable public issues—Savings bonds, Savings notes, and Investment Series bonds, as shown in Chart II. These several types were introduced at different times, and their terms have been changed from time to time in line with changes either in investors' needs, or in competitive borrowing condi-



tions, or in general fiscal and credit policy. Other nonmarketable public issues are generally small.²

SAVINGS BONDS

The Treasury has made offerings of Savings bonds in order to encourage individual thrift and enlarge the ownership of debt by small investors. To cover the Treasury's requirements for more funds than could be raised from small investors alone, individuals of larger means and institutional investors have also been invited to subscribe to certain Savings bond issues, and on occasion special sales to commercial banks and other investors have been made. Individuals, however, are by far the largest holders of Savings bonds, accounting for 85 per cent of the present investment of almost 58 billion dollars (redemption value). Institutional investors, with their staffs of market-wise portfolio and loan managers, find small need for these securities and ordinarily are narrowly limited by the Treasury in the amounts they may purchase.

To encourage purchases of Savings bonds, the Treasury has endeavored to make them attractive by: (1) setting the yield at maturity higher than rates on marketable issues of comparable maturity (at least at the time when the yields were fixed), (2) making the bonds redeemable at any time prior to maturity after a short specified investment period, and (3) protecting the bonds against a general drop in security prices through the provision of a fixed redemption schedule. To encourage retention, the yield is scaled upward according to the length of time the bonds are held.

Currently, there are four series of Savings bonds on sale, the E, H, J, and K bonds. These several series may be differentiated in three ways: first, according to whether the bonds are discount or current income bonds, *i.e.*, whether the interest is accrued

² These issues include Savings stamps, which are ultimately converted into Savings bonds; depositary bonds, which, as explained on page 13, are sold only to banks acting as depositories for the Treasury in order to provide these banks with an income which will cover the expense of handling certain Government transactions; and certain other minor noninterest-bearing or matured obligations. As defined in the calculation of cash borrowing in the *Treasury Bulletin*, the Treasury also raises some cash or at times pays out cash to the public through the purchase or redemption of special issues by the Postal Savings System to cover the normal deposits or withdrawals of funds by depositors and at times to cover the sale or purchase of Treasury issues in the market.

over the life of the bond or paid semiannually; second, according to the rate of interest, maturity, and restrictions on purchases; and third, according to the length of the period before the bonds become redeemable. Under the first distinction, the Series E and J bonds can be grouped together, both being discount bonds sold at a price below maturity value. Interest is accrued, on a rising scale, every six months to produce the redemption values of these securities at any given period in their life and is not paid to investors until the bonds are redeemed.³ Thus, when the bonds are redeemed before maturity, a penalty is involved since lower yields are paid than would be paid at maturity, the effective yield depending on the length of time held. Series H and K bonds, in contrast, are current income bonds sold at par and the interest is payable semiannually. Interest payments on the H bonds are graduated upward, whereas payments on the K bonds are made at a constant given rate; but if the K bonds are redeemed before maturity, an investor receives less than par, which, in effect, refunds part of the interest and thus his effective yield is reduced for the shorter investment period.

In terms of the second standard of comparison, the Series E and H bonds are companion bonds. They are designed primarily for the small saver and draw approximately 3 per cent if held to maturity—nine years and eight months; purchases of each type are limited to 20,000 dollars (maturity value) annually and may be made only by natural persons.⁴ An investor, thus, may purchase up to 35,000 dollars (issue price) of Series E and H bonds in any one year—15,000 dollars of E bonds and 20,000 dollars of H bonds. If the bonds are purchased in

³ While the interest on E and J bonds is not paid until the bonds are redeemed, it is credited semiannually by the Treasury and is accumulated into the redemption value of these bonds. In other words, the liability for the interest is considered to be a current budget expenditure of the Government, but the Treasury, in effect, postpones the cash payment and borrows the interest as the redemption value of the bonds increases. The interest is ultimately paid in cash (along with the initial purchase price) when the bonds are redeemed and at that time the interest is included in the calculations in the *Treasury Bulletin* of regular cash operating outlays of the Government (and not in the estimate of the Government's cash debt transactions).

⁴ Early in 1954, the Treasury relaxed this rule to permit trustees of certain types of employee's payroll savings plans to purchase bonds in a new denomination of 100,000 dollars (maturity value) but the individual annual limit on purchases made by any one employee remains at 20,000 dollars (maturity value).

co-ownership additional holdings are permitted, as the annual limit per person may be apportioned among the purchasers. The J and K bonds, in contrast, pay approximately 2.76 per cent if held twelve years to maturity, but combined annual purchases of up to 200,000 dollars (issue price) may be made by all investors except commercial banks.

On the third basis of comparison, according to the required investment period before the bonds are redeemable for cash, the Series E bonds are unique. They may be redeemed as early as two months after issue date without notice, and, since the issue date is the first of the month in which purchased, this period actually can be as short as a month and a day. However, no interest is payable until six months after issue date. Series H, J, and K bonds are not redeemable until six months after issue date, and a notice of redemption must be given one month before the end of the waiting period. Like E bonds, the H, J, and K bonds do not provide any interest until six months after issue date.

Savings bonds have undergone several major changes to meet changing conditions and to reflect changing concepts since they were first offered for sale in March 1935. Originally, only one series was sold to investors; now four series are sold concurrently to meet the needs of investors both for small or large purchases and for current or accrued income. In the same way, purchase limits have been changed several times to meet the changing requirements of both the Treasury and investors. For example, until March 1948 investors could buy no more than 3,750 dollars (issue price) of E bonds in any one year; then the annual limit was raised to 7,500 dollars and now it stands at 15,000 dollars, while another 20,000 dollars of the companion H bonds may also be purchased. Other important changes have also been introduced to meet the redemption problem on maturing issues and to restore the competitive attractiveness of Savings bonds, especially for the large investor, in the recent period of rising market yields from other securities. The last such move, made in the spring of 1952, increased to four (from three) the issues on sale and raised the interest rates both on new issues and on E bonds held beyond maturity. An earlier change had extended the life of the maturing Series E bonds for another ten-year investment period and had pro-

vided for higher yields in the early years of the re-investment period.

Altogether, Savings bonds now represent over a fifth of the total Federal debt and almost a quarter of the public issues. At the beginning of 1954 there were fourteen annual issues of E bonds (including two issues for 1952, one for the old type of E bonds and the other for E bonds sold after April) and eleven annual issues each of F and G bonds (the predecessors of the current J and K bonds), the first issues sold in 1941 having matured in 1953. The amounts of these issues which were outstanding totaled roughly 36 billion, 3.5 billion, and 17 billion dollars, respectively. There were also two issues each of the new H, J, and K bonds outstanding in the combined amount of nearly 1.4 billion dollars. Since these securities were sold on a continuous basis and were dated as of the first of the month in which sold, over 450 different monthly issues were outstanding at the beginning of 1954.

SAVINGS NOTES

Savings notes are used mainly for the investment of short-term corporate funds being accumulated for tax reserves and other purposes. They may be used without notice for payment of taxes two months after issue date at purchase price plus accrued interest, and they are redeemable for cash four months after issue. The notes last on sale in October 1953, Series C, provide an annual yield, if held to maturity (two years), of 2.2 per cent; the annual yield on this issue is graduated upward from 1.56 per cent for an investment of less than six months and accrues monthly. Commercial banks receive interest on Savings notes only if these issues are presented in payment of taxes.

Over the years, the terms of the Savings notes have been changed, like those of the Savings bonds, to meet changing conditions and concepts. Introduced in August 1941 as Treasury Tax notes to provide a regular investment medium for tax reserves being accumulated to pay the greatly increased defense income tax liabilities, the notes were revised within a short time to make them acceptable for the payment of estate and gift taxes as well as income taxes and to provide an instrument for the investment of other short-term funds. Few short-term Government issues were available in 1941 and they were selling at low yields. When the requirements

for tax reserves changed, a change was made in the number of issues. Originally, there were two series to cover reserves for both small and large tax payments, but in 1943, with the beginning of the collection of individual income taxes through withholding at the source, the need for the small tax payment series disappeared. The series for large tax reserves and other short-term investments was continued, and the securities were renamed Treasury Savings notes. Similarly, to meet changing competitive market conditions, the rate on Savings notes was changed on four occasions in recent years. The first change, made in September 1948, raised the yield from 1.07 per cent (Series C) to 1.40 per cent (Series D) annually, if held three years to maturity; the second, in May 1951, increased it further to 1.88 per cent (Series A); the third, in May 1953, raised it to 2.47 per cent annually, if held two years instead of three years to maturity (Series B); and the fourth, in October 1953, cut the two-year yield back to 2.21 per cent (Series C). Sales of this last series were suspended after about three weeks, and no Savings notes are now being issued. At the beginning of 1954, there were outstanding one annual interest-bearing issue of the earlier Series D, three issues of the Series A notes, and one each of the latest issues of B and C notes.⁵ The Series B issue sold from May through September 1953 is by far the largest currently outstanding issue of Savings notes, accounting for all but 1.6 billion dollars of the 6.0 billion invested in these securities at the start of 1954. Altogether, Savings notes represent less than 3 per cent of the Federal debt.

INVESTMENT BONDS

The third important type of nonmarketable security—the Investment Series bonds—represents a post-war innovation adopted by the Treasury mainly to reduce or hold down the volume of long-term marketable debt. The first series was sold in the fall of 1947 as part of a policy of dampening the upward movement of Government bond prices, while the second was first offered in March 1951, at the time

⁵ Beginning May 1951, Savings notes were pre-dated as of the fifteenth of the month for purchases through the 14th of the following month. Previously, they were pre-dated as of the first of the month in which purchased. The change was made to bring the monthly interest period in line with the tax payment dates on the fifteenth of the month. Since August 11, 1949, the purchaser has paid the accrued interest from the issue date to the date of purchase.

of the "accord" with the Federal Reserve System, and was reopened in May 1952 for subscription as part of a deficit-financing program. The first series, which was offered to institutional investors in a single sale, was a new type of long-term current income bond, redeemable after six months on short notice but not negotiable. This issue, designated Investment Series A, was adapted from the Series G Savings bonds but had higher purchase limits, and commercial banks were permitted to buy restricted amounts. It was sold to yield 2.5 per cent, if held to maturity on October 1, 1965; a penalty for cashing before maturity was imposed through a below-par redemption schedule. At the beginning of 1954, investors held over 910 million of this series, or only about 55 million less than originally purchased.

The second series of Investment bonds—Series B-1975-80, paying an annual return of 2.75 per cent in current income—was first issued by the Treasury on April 1, 1951. In this case, the bonds were not sold for cash but were offered in exchange for the two longest bank-restricted marketable bonds. Unlike the other nonmarketable issues, the Series B bonds may not be redeemed for cash; but to cover unforeseen requirements of investors, the Treasury added a novel feature permitting investors at their initiative to exchange the new bonds, without any penalty against interest already received, for a five-year marketable note yielding 1.5 per cent, which could in turn be sold in the market at whatever the prevailing prices for such securities might be. Almost 13.6 billion of the bonds were issued through this exchange (including nearly 5.6 billion to the Federal Reserve Banks and the Treasury investment accounts) out of a potential maximum of 19.7 billion dollars.

Finally, in May 1952, the Treasury reopened subscriptions to the Series B Investment bonds but for a combined cash and exchange subscription as part of a program to raise new nonbank money to cover the current rearmament deficit. In this offering, the Treasury required a minimum 25 per cent cash subscription, or one dollar of cash for every three dollars of exchangeable bonds, and the four longest marketable bank-restricted bonds were eligible for the exchange. Payments could be made in four instalments. The combined cash and exchange subscriptions to the second offer amounted to less than

1.8 billion dollars as many investors shunned a non-marketable issue at a $2\frac{3}{4}$ per cent rate of interest at that time, despite the fact that the $2\frac{1}{2}$ per cent issues eligible for the exchange were quoted at below-par prices in the market. Apparently, many investors did not favor a nonmarketable issue as such and found the conversion privilege unattractive. Only 450 million dollars in cash subscriptions were obtained, and of this, 132 million dollars represented subscriptions by Government investment accounts. The exchange subscriptions amounted to slightly over 1.3 billion out of a potential of 14.8 billion dollars.

At the beginning of 1954, less than 700 million dollars of the Investment Series B bonds had been converted into marketable five-year notes by private investors; however, the Federal Reserve Banks had, by conversions from time to time, gradually converted the entire 2.7 billion dollars of their holdings. Together, the two series of nonmarketable bonds amounted to over 12.9 billion dollars at the beginning of 1954 and represented almost 5 per cent of the total Federal debt. Private investments in these issues alone amount to 9.4 billion dollars; they are held largely by those institutional investors that could so plan their long-term portfolios as to allow the investment of part of their funds in these nonmarketable issues in return for a relatively high yield on Treasury obligations at the time of issue.

HOW NONMARKETABLES ARE SOLD AND REDEEMED

Savings bonds were first issued in over-the-counter sales for cash at the post offices, but within a short time provision was made for mail order sales through the Treasury of the United States and the Federal Reserve Banks and their branches. When plans for the defense issues were developed, private banking institutions offered their services for the program, and it was decided to designate generally all organizations meeting certain qualification standards as sales agencies with authority to issue Series E bonds. Currently, there are around 21,000 qualified issuing agencies, including companies operating payroll savings plans, building and savings and loan associations, credit unions, and others, as well as commercial banks and a few post offices.⁶ These

⁶ At the end of 1953, the Treasury withdrew Savings bonds from sales at post offices where other sales outlets exist.

agencies sell the bonds without any direct reimbursement except for postage and registry fees. In contrast, Series J, K, and H bonds, like their prototype F and G bonds and Savings notes and Investment bonds, are issued only at the Federal Reserve Banks and their branches and at the Treasury Department in Washington. Regardless of the issuer, commercial banks and trust companies which have qualified as special depositories are permitted to credit the proceeds of their sales of Savings bonds and notes, when the latter were sold, to the Tax and Loan Accounts which the Treasury maintains with them. Similarly, payments for the Investment bonds, when issued for cash, were creditable to the Tax and Loan Accounts. As a matter of fact, the bulk of the sales of the nonmarketable public issues has been handled through the special depository banks since they first became qualified Series E selling agencies. Funds from E bond sales received by other agents are sent directly to the Federal Reserve Banks for immediate collection.

Redemptions of Series E bonds are likewise made for the most part by qualified banking institutions, numbering over 16,500, which receive a small reimbursement for the service. The redeemed bonds are sent to the Federal Reserve Banks where the Treasury's general account is charged and the reserve account of the paying bank or its correspondent bank is credited. Other types of Savings bonds, as well as Savings notes and Investment Series A bonds, can be redeemed for cash only at the Federal Reserve Banks and their branches or at the Treasury Department, where a check is issued to the registered holder. Savings notes redeemed for taxes, on the other hand, are presented to the District Director of Internal Revenue for credit against tax liabilities. The latest issue (Series C), however, may be deposited with a Federal Reserve Bank or branch and the receipt obtained therefrom forwarded to the District Director. The taxes must equal or exceed the combined value of par and accrued interest to the tax date.

RECENT CHANGES IN INVESTOR ACCEPTANCE OF SAVINGS BONDS

When the period of war financing ended with the Victory Loan, a total of 48.6 billion dollars was invested in Series E, F, and G Savings bonds. By the outbreak of the Korean conflict in mid-1950,

investors had added almost 9 billion dollars to the value of their holdings of Savings bonds but nearly half of this increase reflected the net accumulation of accrued interest on outstanding bonds. In the past three and a half years, the effects on sales of renewed emphasis on the payroll savings plan and of a substantial rise in savings have been largely offset by redemptions, especially of matured issues, and there has been only a small net increase in these issues. After June 1950, sales generally ran below redemptions and exchanges of maturing issues into marketables, but the ensuing net retirements of these issues (measured in terms of issue price) were somewhat less than the nearly 2.4 billion dollar increase in value arising from the excess of accrued interest over interest paid on redemptions.⁷

Since the end of the war, it is interesting to note, the behavior of the smaller denomination E bonds has been in marked contrast with that of the larger E, F and G bonds, and their alphabetical successors, J and K bonds, and the new H bonds. Generally speaking, over the postwar period sales of the lower denomination E bonds (maturity value of 25 and 50 dollars) were less than redemptions, and the Treasury paid out money to these investors, although net redemptions in the early postwar years were less than had been commonly anticipated. By contrast, until the fiscal year 1951, sales of the higher denomination E bonds (100, 200, 500, and 1,000 dollar maturity value) and of the F and G bonds (including the special sales) exceeded redemptions and accounted for most of the increase in that period in the outstanding volume of publicly held nonmarketable securities (exclusive of the net interest accruals). In the fiscal years ending June 30, 1951 and 1952, however, sales of the larger bonds declined and redemptions increased, so that on balance the large investors (along with the investors in the lower denomination E bonds) withdrew cash from the Treasury. This shift apparently reflected in part (at least after the Korean

⁷ The interest accrued on Savings bonds has risen steadily as a result mainly of the growing volume of outstanding issues which receive the higher yields payable after several years of holding. In each of the past four fiscal years, the interest provision for these bonds has exceeded one billion dollars. The interest paid in cash on redeemed securities has also risen, from less than 100 million dollars in the war years to a high in fiscal 1953 of almost 550 million dollars. On balance, therefore, interest accruals have added to the outstanding value of Savings bonds.

war-inspired consumer buying spree had subsided in the spring of 1951) the desire for other investments. It should be noted, however, that in fiscal 1952, for the first time since the end of the war, sales and redemptions (at issue price) of the lower denominations were almost in balance. The marked improvement in the lower denomination bonds reflected several factors, including the general increase in savings as well as an expansion of payroll savings plans and the adoption of the automatic extension plan for matured Savings bonds.

After the revision in Savings bond terms which became effective in May 1952, some improvement in sales occurred and in fiscal 1953 sales were only 500 million less than redemptions for cash (at issue price), as compared with net redemptions of 700 million in the preceding fiscal year. The smaller denomination E bonds remained in balance as a rise in redemptions was offset by an increase in sales. Sales of the higher denomination Series E bonds and the new H bonds increased while redemptions lagged, but the net gain from these issues was partly offset by the increase in the net cash redemptions of Series F and G bonds. Sales of the new J and K bonds were less than the combined sales of F, G, J, and K bonds in the preceding year, while redemptions of these issues increased, partly reflecting the maturity of the first annual issues of F and G bonds beginning May 1953. The Treasury in April 1953 offered to exchange $3\frac{1}{4}$ per cent marketable bonds of 1978-83 for the F and G issues maturing through December 1953, and investors holding nearly two fifths of the maturing issues accepted the offer, leaving about 700 million in cash maturities from May through December 1953.

FLUCTUATIONS IN SAVINGS NOTES

By the end of World War II, corporations and other investors held over 10 billion dollars of Savings notes. In the following three years through the end of fiscal 1948, investors reduced their holdings by nearly 6 billion dollars as funds were withdrawn to cover the postwar industrial expansion, and later for investment elsewhere as the rise in market rates made the notes relatively less attractive. In fiscal 1949 and especially in fiscal 1950, however, investments in Savings notes increased sharply as the rate on Series D notes, which had been set in the fall of 1948 to bring these securities in line with

the then-prevailing market rates, became considerably more attractive to investors than rates on comparable marketable securities, which had fallen with the onset of the inventory recession of 1949.

By the end of June 1950, investors held nearly 8.5 billion dollars of Savings notes. With the firming of market rates after the middle of 1950, Savings notes again appeared less attractive as an investment medium, despite the issuance of a new higher-rate note from May 1951 and the substantial rise in the accruals of corporate tax liabilities. Redemptions for both cash and taxes exceeded sales in most months, and by April 1953 less than 4.8 billion dollars of these securities were outstanding. A small further decline in the volume of Savings notes occurred in June despite the further rise in rates on the new issue of notes beginning May 1953, but with the subsequent softening of market rates purchases revived and in September moved ahead rapidly. By the end of that month, more than 5.6 billion in Savings notes were outstanding. To keep demand for them within practicable proportions in view of the then impending approach to the debt ceiling, and to reduce the interest cost of the prospective deficit financing in line with the lower market rates then prevailing, the Series B issue was withdrawn on September 25. But despite the sale of the lower-yielding Series C note from the beginning of October, sales continued at a high level and the issue was withdrawn from sale within roughly three weeks. By the beginning of 1954, slightly more than 6 billion of Savings notes were outstand-

ing. By far the largest investments in Savings notes have been made by nonfinancial corporations. Freedom from the risk of price fluctuations and the relative ease of purchase and redemption have probably had some influence in making Savings notes attractive to many corporate investors.

CONCLUSION

Public issues of nonmarketable Treasury securities now represent 28 per cent of the total Government debt and currently account for about a third of the budgetary debt service charges. Since the end of World War II, these issues have increased by nearly 20 billion dollars, but less than 4 billion dollars, or only about a fifth, of this rise has come from net cash sales to the public. Prior to the outbreak of the Korean conflict the net cash sales had amounted to nearly 8 billion, but net redemptions in the past three and a half years have drawn down this total. This experience has apparently suggested, first with respect to Savings notes and later to Savings bonds, that in periods of strong competitive demands for funds some improvements in interest yield and in selling techniques are needed if redemptions of nonmarketable issues are to be minimized and new sales encouraged. This experience also indicates that some demand exists for Savings bonds and notes among individuals, pension funds, and corporations for a part of their investment needs, as long as the yields on these issues are moderately attractive. On the other hand, there is little evidence of any significant demand by institutional investors for nonmarketable issues.

MARKETABLE ISSUES OF THE UNITED STATES TREASURY

by

HELEN J. COOKE

THE cash borrowing of the Treasury through nonmarketable public issues was described in the preceding article. This article is a companion study of the marketable public issues, in terms of their different characteristics and of the maturity and ownership pattern of the outstanding issues.

At the beginning of 1954, marketable securities amounted to nearly 155 billion dollars, or about 56 per cent of the total direct and guaranteed Federal debt. In the past two decades, however, and especially since the end of World War II, marketable issues have shown a marked decline in relative importance in the debt structure. In the early thirties, virtually all of the Federal debt was in marketable issues, but after 1935, with the establishment of the social security trust funds and the introduction of Savings bonds, special issues and nonmarketable public issues showed a substantial growth. By the time of our entry into World War II, marketable issues had already declined to three quarters of the Federal debt and to about 84 per cent of public issues. During the war, marketable issues were used in about these same proportions and, when the debt reached its peak on February 28, 1946, marketable securities amounted to about 71 per cent of all Federal securities. Until mid-1951, marketable issues lost ground almost steadily as the outstanding volume declined while nonmarketable public and special issues increased, as shown in the chart on page 16. With the reviving emphasis on such issues in recent Treasury deficit financing, marketable issues increased from a low of 54 per cent of the total debt at the end of June 1951 to somewhat over 56 per cent by the beginning of 1954.

At the peak of Federal borrowing related directly to World War II (February 28, 1946), marketable issues amounted to almost 200 billion dollars. This was 154 billion dollars more than the amount outstanding before Pearl Harbor. By the beginning of 1954, however, marketable issues were 45 billion less than at the peak of borrowing in February 1946 (despite an increase of almost 17 billion since June 1951). Over the same period, the total Fed-

eral debt in contrast was reduced by less than 5 billion dollars.

TYPES OF ISSUES

Currently, the Treasury has outstanding four major types of marketable issues—Treasury bills, certificates of indebtedness, notes, and bonds.¹ In general, the different issues have been used as required to meet both the Treasury's needs and investors' preferences for different maturities. Bills and certificates of indebtedness, which are used for the shortest borrowing periods, are required by statute to mature within a year or less from the time they are issued. Notes are used to borrow funds for a period of more than one year and less than five years, while bonds are used for longer-term borrowing (although bonds could be issued legally for any borrowing period). There is no limit on the amount which the Treasury may issue of the various types of issues, although there is a statutory limit, apart from minor exceptions, on the total amount of Federal debt, now set at 275 billion dollars.

The relative importance of these four types of securities at the present time reflects, in part, the long-term borrowing of both World War II and the prewar period and, in part, the Treasury's choice of issues since the end of World War II. In the postwar period, the Treasury relied largely on short-term issues, and in 1951 and 1952 afforded investors an opportunity to shift a substantial segment of long-term marketable bonds into nonmarketable Investment bonds, convertible into marketable notes. Consequently, marketable bond issues by the beginning of 1954 amounted to slightly over 77 billion dollars, having dropped 45 billion dollars from their level at the peak of Federal borrowing on February 28, 1946, as shown in Chart I. Certificates and notes, together, at the beginning of 1954 totaled almost 58 billion dollars (including a 5.9 billion issue of tax anticipation certificates), about 3 billion dollars less than at the borrowing peak. Bill issues outstanding at the beginning of 1954,

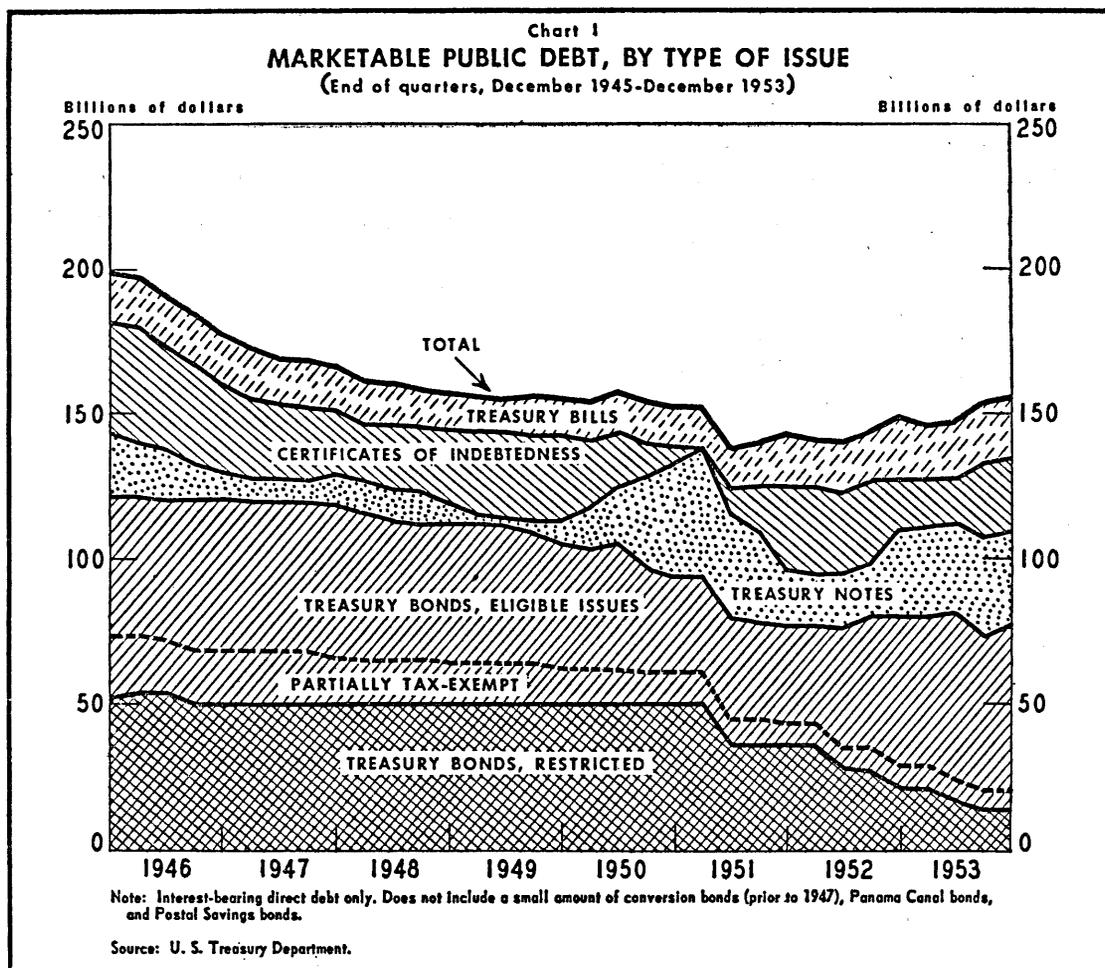
¹ Small amounts of other marketable issues, including the Panama Canal loan, Postal Savings bonds, and guaranteed Government corporation debt, are also outstanding.

at over 19.5 billion dollars, were 2.2 billion below the record level of the year before (when 4.5 billion in tax anticipation bills was outstanding), but they were almost 2.5 billion dollars higher than at the 1946 peak of the Federal debt. Bond issues at the beginning of 1954 represented half of the marketable issues and only 28 per cent of total Federal debt, whereas at the peak of World War II borrowing, bond issues were more than 60 per cent of marketable securities and almost 44 per cent of total debt. Bills, certificates, and notes together now represent 50 per cent of the marketable debt and 28 per cent of the total Federal debt, compared with about 40 per cent of the marketable issues and roughly 28 per cent of Federal debt at the peak of borrowing.

CHARACTERISTICS OF ISSUES

While the four types of marketable issues differ

mainly in the varying length of the original borrowing periods, there are other important distinguishing features of the currently outstanding marketable issues. These include such characteristics as whether the issues are (1) fully marketable or ineligible for bank purchase, (2) fully taxable or partially tax-exempt, (3) discount or fixed-rate securities, and (4) payable only at maturity or redeemable before maturity upon call by the Treasury. Other differences which also influence investor preferences include acceptability for tax payments, eligibility for payment in the form of tax and loan credits at the time of issuance, transferability of ownership, and interest payment dates. Some of these features are a result of differences in the Treasury's borrowing customs, while others are a result of legislative changes and shifts in emphasis on certain terms by the Treasury over the past two



decades. The detailed characteristics of each issue are given in the formal offering circular, and once the issue is sold the Treasury may not change the original terms (under most conditions) or retire the issue before the stipulated redemption or call dates. However, if the Treasury should desire for any reason to replace an outstanding issue, it could offer the holders a voluntary exchange or it could purchase, within the limit of available funds (which might involve the sale of a new issue), whatever part of the old issue investors were willing to sell in the market.

By far the major portion of the outstanding marketable issues are fully taxable securities and are readily transferable. Altogether, such issues at the beginning of 1954 amounted to 134.5 billion dollars, or 87 per cent of marketable obligations. The remaining marketable Treasury securities—all bond issues—were of two types. There were five issues, amounting to 6.7 billion dollars, sold before February 1941 which were partially tax-exempt and eligible for bank purchase, and there were four issues, amounting to 13.4 billion dollars, sold after May 1, 1942 which were taxable but not eligible for bank purchase until a specified date, except in limited amounts.

Bank Ineligibility

The feature of ineligibility for purchase by commercial banks was introduced by the Treasury after April 1942 as a part of the World War II financing policy of restricting bank purchases of bonds with a maturity of over ten years and bearing more than 2 per cent interest.² Normally, commercial banks are not interested in more than limited amounts of

² All long-term bonds sold after April 1942 were originally ineligible for bank purchase, but beginning with the Fourth War Loan (January 1944), commercial banks were permitted to subscribe for new issues of restricted bonds in amounts related to their time deposits, and since May 1946 they have been permitted to own a limited amount of restricted issues for the purpose of servicing customers. Bonds purchased by banks during the War Loans, if sold, may not be repurchased by banks except to cover their trading account requirements.

The 2½ per cent bonds issued from May 1942 to June 1945 were not made available freely for commercial bank purchase until after a lapse of ten years from issue date, irrespective of maturity, but beginning with the Seventh War Loan (June 1, 1945), this provision was changed so that the later issues of 2½ per cent bonds were ineligible for commercial bank purchase until the time remaining to maturity should be ten years. Similar but shorter restricted-purchase periods were used for 2¼ per cent bonds.

long issues, but under the fixed-interest-rate pattern that prevailed during the war financing a tendency to reach out for higher returns appeared inevitable. Altogether, over 53 billion dollars of bank-restricted issues were sold, but in 1951 and 1952 almost 14.9 billion of these bonds were converted into nonmarketable Investment bonds. Prior to 1952, only one issue of less than 4 billion dollars in 2¼ per cent bonds had become fully marketable (in September 1946). In 1952 and 1953, however, 13.7 billion and 7.6 billion, respectively, of the previously restricted bonds became eligible for bank purchases, and in 1954 another 7.7 billion dollars of these bonds will become eligible. The remaining 5.7 billion in two issues of restricted bonds will not become eligible until 1962.

Taxability

The partial tax exemption of Government securities was eliminated on new issues under the Public Debt Act of 1941 at the request of the Treasury in connection with a move to finance the defense program on a widespread basis. For some time, it had been felt that the tax exemption accorded preferential treatment to subscribers who paid income taxes. Also, exemption from normal income taxes favored corporate investors because they paid higher normal taxes than individuals.

The fully taxable securities are subject to all Federal income taxes and to both Federal and State inheritance, estate, gift, or other excise taxes, but they are exempt from all taxation now or hereafter imposed on principal or interest by any State, possession, or any local taxing authority. The partially tax-exempt securities, in contrast, are subject only to estate or inheritance taxes (both Federal and State) and to Federal graduated additional income taxes, commonly known as surtaxes, and excess profits and war-profits taxes; holdings up to 5,000 dollars, however, are exempt from these taxes.³

Discount or Fixed-Rate Securities

The only marketable securities that the Treasury in recent years has sold at a discount on a competitive basis have been Treasury bill issues—both the

³ Interest on larger holdings of "tax-exempts" by individuals, thus, is now exempt from the 3 per cent individual normal tax, while that of corporations is exempt from the 30 per cent corporate normal tax.

regular weekly bills and the recently introduced tax anticipation bills. The other issues have been offered to investors at par at rates stipulated by the Secretary of the Treasury, although the Treasury, since February 1942, may sell any of the other issues at a discount on a competitive basis.⁴ Until recently, the rates were usually stipulated when the new issue was formally offered and the books were opened for subscriptions (generally not later than two weeks in advance of the issue date). At times, however, the Treasury sought to forestall a rise in interest rates by making preliminary announcements giving the rate and maturity of prospective issues up to a month or more in advance of the opening of the subscription books. Since the summer of 1952, the Treasury, in an effort to make marketable issues competitive in a free market, has delayed the announcements of the terms of refunding offers until a few days before the opening of the subscription books, and in the case of new money issues, has initially made a preliminary general announcement and has not set the exact terms until the market has indicated the appropriate rate and maturity.

Callable Issues

Bond issues, being long-term and thus more likely to carry a rate which may ultimately vary from the going market rates, are usually sold with an optional redemption date as well as a maturity date. The optional redemption date, which is also known as the "call" date, indicates the earliest time the Treasury may elect to redeem the particular issue. The Treasury must notify holders of a redeemable issue four months in advance of an actual redemption before maturity; if the first call date is passed, the issue may be redeemed, upon four months' notice, at any subsequent interest date until maturity. At the

⁴ Originally only bills could be issued on a discount basis and sold through competitive bidding, but in 1934 the Treasury was authorized to sell any obligation with a maturity of one year or less on this basis, and finally under the Public Debt Act of 1942, the Treasury was given complete discretion as to the sale of marketable securities on a competitive or other basis and their issuance on an interest-bearing or discount basis, or on a combination basis, at whatever price or prices the Secretary may prescribe. There is no statutory limit on the rate that may be paid on bills, certificates, or notes, but there is a limit of $4\frac{1}{4}$ per cent on the coupon rate for Treasury bonds. A detailed analysis of the "Marketing of Treasury Bills" is given in the following article.

beginning of 1954, all presently outstanding Treasury bonds—except three intermediate-term issues sold in 1952 and 1953—had been issued with a call option. At issuance, these optional redemption dates varied from two to five years ahead of the maturity date. When market rates are below the issue rate, the call feature permits the Treasury to refund ahead of maturity and take advantage of the current low rates. The Treasury did this throughout the period of falling or low rates from the early thirties until September 1951; all redeemable issues were refunded, or in some instances retired, at the earliest possible date.

Acceptability for Tax Payments

Of all the marketable issues outstanding at the beginning of 1954, only 5.9 billion dollars in tax anticipation certificates were acceptable at maturity for the direct payment of Federal income and profits taxes.⁵ However, all of the outstanding Treasury long-term bond issues sold from May 1942 through the end of 1945 during the World War II financing drives and the recent issue of $3\frac{1}{4}$ per cent bonds of 1978-83, are acceptable before maturity at par and accrued interest for the payment of Federal estate taxes; when so used, the redeemed bonds must not exceed the taxes due and must constitute part of the deceased owner's estate at the time of death.

The tax anticipation issues have been either bills or certificates. They have been sold in the past three years in a move to counteract the seasonal fluctuations in tax receipts which had become accentuated under the Mills plan for the payment of corporate taxes. The tax anticipation issues are intended to anticipate, in the second half of the calendar year when corporate tax payments decline, part of the funds which the Treasury will receive in taxes in the subsequent spring. In 1951 and 1952, two issues were sold each year, one dated to mature about March 15 and one about June 15 of the following year. In 1953, however, when tax collections in the early months fell below requirements, a small short issue was sold in June to mature about September 15; in the interim, funds were raised for a longer period by the sale in July of a sizable issue of tax anticipation certificates to mature in March 1954.

⁵ The Treasury may designate bills, certificates, or notes as acceptable in payment of income and profits taxes.

The tax anticipation issues may be redeemed for cash or taxes; they are sold to mature a few days after the quarterly tax payment dates but the full interest is earned when they are presented earlier in payment of taxes, making the issues especially attractive to taxpayers. As used thus far, presentation of such issues for payment of taxes has accounted for about half of the redemptions. Thus, investors other than those intending to use them for tax payments (chiefly banks) supply part of the funds.

Payments Through the Tax and Loan Accounts

To reduce the impact of sizable new money borrowings on the money market as payment is made, the Treasury generally permits qualified bank depositaries, instead of paying cash immediately into Treasury accounts at the Reserve Banks, to make payments for themselves and their customers by crediting the Treasury's Tax and Loan Accounts maintained on their books. In such offerings, commercial banks are permitted to submit subscriptions for the account of their customers as well as for their own account and these need not be accompanied by a "deposit" or partial payment at the Reserve Banks, although the bank's customers are required to submit a deposit to commercial banks with their subscriptions. These deposits are held in a suspense account by the commercial banks. Subscriptions by others, which are submitted directly to the Reserve Banks, require a specified deposit when submitted, and when allotments are made the remaining full amount must be covered by the actual date of issue by cash payments (which represent a transfer of bank reserves to the Treasury's account at the Federal Reserve Banks). Upon allotment, commercial banks initially have to provide only enough funds to cover the reserves required against the increase in Treasury deposits on their books. These deposits, of course, must be fully collateralized by pledged specified securities, including Treasury issues. When the funds placed at the Treasury's disposal in Tax and Loan Accounts are needed by the Treasury, they are withdrawn and deposited in the Treasury accounts at the Reserve Banks. This is generally done with the briefest practicable interval before the funds are to be spent by

the Treasury and thus returned to the commercial banks.⁶

Transferability of Ownership

Treasury bills, certificates, and notes are issued payable to the bearer, while Treasury bonds are issued in either bearer or registered form as requested by the subscriber. Coupons covering the payment of interest are attached to notes and the bearer bond issues and since September 1953 to certificates,⁷ while interest checks are sent by the Treasury to the owners of registered bonds on record one month prior to each interest date. Bonds may be shifted from bearer to registered form and back again as desired. The bearer issues are readily negotiable for resale in the market and are also easily convertible into smaller denominations (when a holder desires to sell only part of his investment), whereas some delay for the clearance of ownership is experienced in the sale and conversion of registered securities. Because of this delay, the registered issues generally sell in the market slightly below the price of the bearer issues. The discount allows for the fact that the buyer must make payment to the seller of registered issues within a day of the sale, even though he does not obtain a clear title immediately. Less than 9 billion dollars of marketable issues were registered securities on June 30, 1953 (the latest data available).

Interest Payment Dates

Interest payment dates for the four types of issues differ considerably. The return on Treasury bills, because they are sold as discount obligations, is included in their maturity value; that is, the difference between the sale price and the maturity value provides the return to the investor. Holders of certificates, since August 1947, also receive their return when the issue matures, but in this case the interest payment is in addition to the maturity value of the security. Holders of notes and bonds, on the other hand, receive interest payments semiannually.

⁶ For more detailed analysis, see "The Treasury and the Money Market" in this pamphlet.

⁷ The interest on certificates sold since August 1946 has been paid at maturity; thus a separate coupon was not attached until September 1953, when some uncertainty arose over the application of the premium amortization provisions of the Internal Revenue Code.

INTEREST RATES

There are substantial differences in the rates of interest on the various outstanding issues of marketable obligations, reflecting in part the differing conditions in the money and capital market at the time of issuance and in part the several characteristics discussed previously. Issuing rates, of course, must be closely related to yields of comparable securities in the market at time of issue. Actual market yields on outstanding issues are determined by the current forces of supply and demand at any given time, so that effective yields may vary widely above or below the original issuing rate during the life of any outstanding obligation. At the beginning of 1954, as the table below shows, the average rates on Treasury bills, regular certificates, and notes at the time the securities then outstanding were issued were 1.510, 2.476, and 1.765 per annum, respectively, while the average rate on all outstanding bonds was 2.393 per cent. The yields at market prices, however, were quite different, especially for the certificates.

The differentials in rates at any one time on issues of differing maturity and other characteristics are referred to as the "pattern of rates," or in terms of market prices, "the yield curve." During World War II, there was a fixed pattern of rates on new issues (all of which were fully taxable) running from 0.375 per cent per annum for Treasury bills, 0.875 per cent for one-year Treasury certificates, 2 per cent for bank eligible ten-year bonds, to 2.5 per cent for the longest term bank restricted bonds maturing in 1972. This pattern held until July 1947 when the fixed rate policy was modified.

In June 1953, when rates hit their record highs since the early thirties, the issue rate on bills (issue of June 4) stood at 2.416 per cent while the rate on the nearest certificate (June 1) was 2.625 per cent. The increase from mid-1947 to the peak in issuing rates on the short end had amounted to 2.041 percentage points per annum for bills (issue of June 4) and 1.750 percentage points for certificates. No long-term bonds comparable to those outstanding were issued between mid-1947 and mid-1953, but the increase in yields on the longest outstanding issues amounted to only 1.05 percentage points on the bank eligible issue and 0.87 percentage points on the bank restricted issue. In other words, the spread

Average and Coupon Rates on Selected Marketable Treasury Issues, December 31, 1953

Type and date of issue	Period to maturity at issuance		Rate of interest on issuance
	Years	Months	
Treasury bills, average*	—	3	1.510
Certificates (regular), average	—	12	2.476
Certificates (tax anticipation series)	—	8 $\frac{1}{4}$	2.500
Treasury notes, average	3	5 $\frac{7}{8}$	1.765
Dec. 15, 1949	4	3	1.375
Mar. 15, 1950	5	—	1.500
Dec. 15, 1950	5	—	1.750
Sept. 15, 1953	3	6	2.875
Dec. 1, 1953	1	1 $\frac{1}{2}$	1.875
Conversion issues†	5	—	1.500
Treasury bonds, average†	18	2	2.393
Issued, 1935-59			
Mar. 15, 1935	25	—	2.875
Sept. 15, 1936	23	—	2.750
Dec. 15, 1938	27	—	2.750
Issued, 1940-49			
Oct. 20, 1941	30	11	2.500
Nov. 15, 1945	27	1	2.500
July 22, 1940	15	10 $\frac{3}{4}$	2.250
Nov. 15, 1945	17	1	2.250
Oct. 7, 1940	14	8 $\frac{1}{4}$	2.000
Dec. 1, 1944	10	1 $\frac{1}{2}$	2.000
Issued, 1950-53			
Mar. 1, 1952	7	1 $\frac{1}{2}$	2.375
July 1, 1952	5	11 $\frac{1}{2}$	2.375
Feb. 15, 1953	5	10	2.500
May 1, 1953	30	11 $\frac{1}{2}$	3.250
Nov. 9, 1953	7	10 $\frac{1}{4}$	2.750

* The average sale price of these discount issues is converted to a yield on a true discount basis (365 days a year).

† Notes issued after April 1, 1951 at a set rate in exchange for Investment Series bonds.

‡ The issues shown are the first and last issue at the same rate. SOURCE: The Treasury Department.

between the rates on short and long issues narrowed, and the "rate curve" leveled off as it moved up. The greater increase in rates on short issues in this period reflects in part the relative increase in the volume of these issues outstanding.

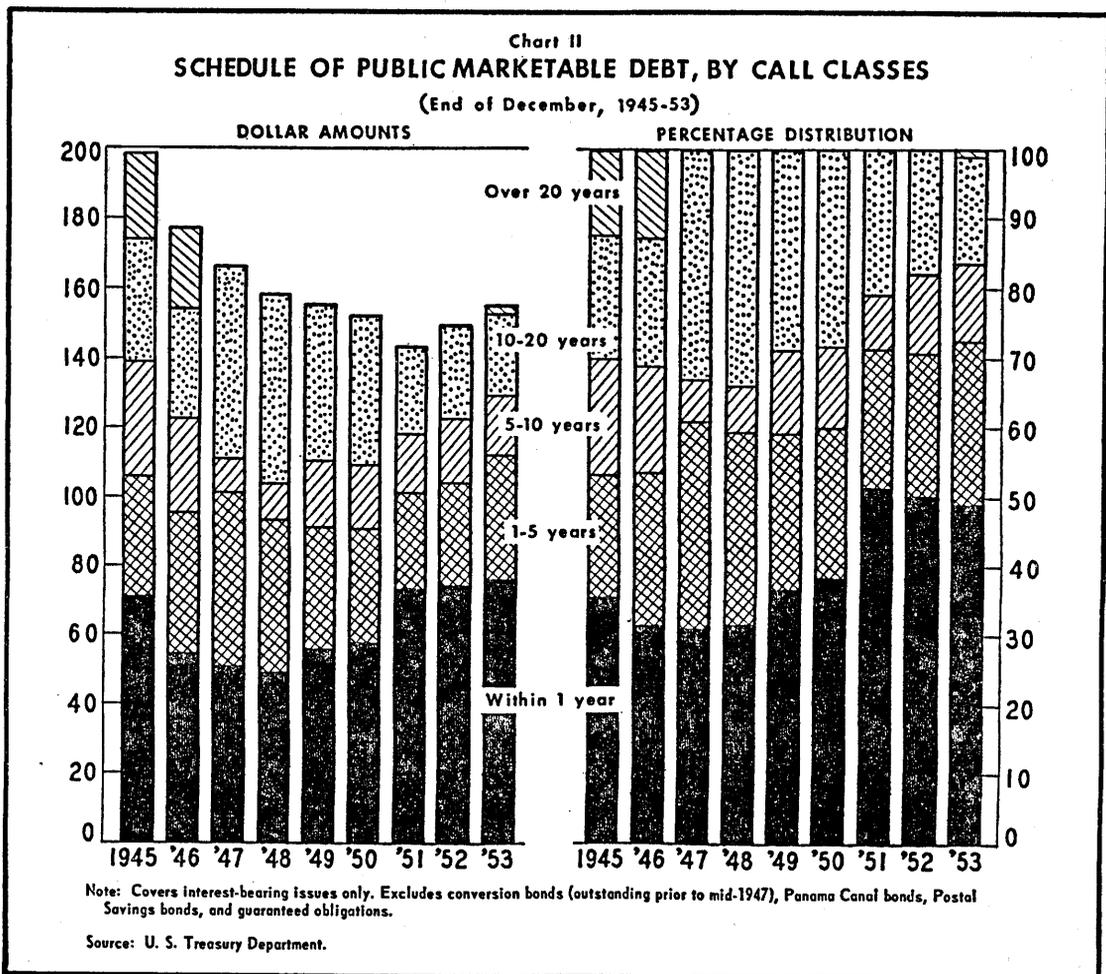
MATURITY PATTERN

Because of the type of refunding and exchange policy pursued since early 1946, the average maturity of outstanding marketable issues has shortened. At the beginning of 1954, 47 per cent of the marketable issues—amounting to 73 billion dollars—were due to mature within a year. Issues amounting to nearly 112 billion dollars, or 72 per cent of the outstanding marketable issues (including the one-year maturities), were to mature or were redeemable within the next five years through 1958, as shown in Chart II, while over 17 billion dollars, or around 11 per cent, were redeemable in the subsequent five years through 1963 and about 25

billion dollars, or only 16 per cent, after 1963. The longest Treasury marketable issues outstanding at the beginning of 1953 were redeemable in fifteen years and were to mature in twenty years (that is, issues dated 1967-72). On May 1, 1953, however, a new 30-year 1½-month, 3¼ per cent issue of bonds, in the amount of over 1.6 billion dollars, was sold by the Treasury as a first move toward lengthening the debt.

The change in the maturity pattern of marketable issues has been marked since the Victory Loan that shortly followed the end of World War II. In contrast to the 72 per cent of the marketable issues outstanding at the beginning of 1954 that were callable or were to mature within the next five years ending with 1958, less than 55 per cent of the

Treasury marketable issues fell into this less-than-five-year group at the peak of the Federal debt on February 28, 1946. Issues maturing or callable within from five to ten years then amounted to about 16 per cent, and those maturing or callable in over ten years represented over 30 per cent of the total marketable debt. From the end of 1947 until May 1953, all marketable Treasury issues were redeemable in less than twenty years. At the peak of the debt, long-term issues redeemable in more than twenty years amounted to nearly 10 per cent of the total marketable issues. Over the period from February 28, 1946 to the beginning of 1954, the average maturity of the outstanding marketable issues declined from nine years and two months to five years and two months.



OWNERSHIP PATTERN

In a broad sense, the distribution of marketable issues of various maturities among different groups of investors reflects the characteristic needs of those investors. Commercial banks, which hold over a third of the marketable issues and are by far the largest single investor group among the types of holders, require relatively liquid assets and are restricted as to their holdings of certain of the longest issues. At the beginning of 1954, they held around a third of the outstanding Treasury bills, certificates, and notes and almost three fifths of the short and intermediate-term bonds. In contrast, insurance companies and mutual savings banks, which hold about 7 and 5 per cent, respectively, of the marketable issues, maintain predominantly medium and long-term investment portfolios. Together, at the end of 1954, they held about one third of the long-term bonds (redeemable after ten years), and only a very small proportion of the other types of issues. Other private investors have shown a similar tendency to concentrate their holdings of the Treasury marketable issues in segments of the maturity range particularly suitable to their needs. For example, nonfinancial corporations, which have been the most rapidly growing investor group in the Government security market in recent years, require mainly short-term investment outlets. They hold a large share of the Treasury bill issues. At the other extreme, private pension funds (also an increasingly important investor group) and large individual investors have most of their holdings in, and account for a substantial share of, the longer-term bonds.

Investments by the Federal trust funds and other Government agencies, which hold about 2 per cent of the marketable issues, are concentrated in long-term bond issues. Like private investors, Federal agencies hold securities according to their needs, but their needs are much more narrowly controlled by statutory regulations. These regulations generally require that their investments yield a certain return related to their actuarial requirements and usually special securities covering these needs are issued to the trust funds.

Reflecting their role as the nation's central banking institution, the Federal Reserve Banks have concentrated their portfolios of marketable issues in short issues. At the beginning of 1954, bills, certifi-

cates, and notes comprised 86 per cent of Reserve Bank holdings, and almost 91 per cent of their portfolio was callable or was to mature within five years. Their total portfolio amounted to nearly 17 per cent of the total amount of marketable issues outstanding.

Since the peak of Government borrowing on February 28, 1946, there have been some changes in the general pattern of ownership; one significant change has been a shift of Treasury bills from the Federal Reserve Banks to corporations, following the rise in rates on these issues to more attractive levels. Also, the System's holdings of bonds increased, especially during the early postwar years, as a result of the support given to long-term security prices by the System at a time when savings institutions were shifting from Government bonds to other investments on a large scale. Because of the passage of time, the Treasury's emphasis on short issues in its refundings, and the Treasury exchange offers of nonmarketable investment bonds for outstanding marketable bonds, the average maturity of the marketable portfolios of all groups of private investors at present is considerably shorter than in 1946.

MARKET TRANSACTIONS BY THE FEDERAL INVESTMENT ACCOUNTS

In addition to the direct issuance or retirement of marketable issues, the Treasury may influence to some extent the supply of its issues available to the market through secondary market sales or purchases by the various Federal investment accounts. Such market transactions can be undertaken within the limits set by the statutory investment requirements of the accounts. Purchases are also limited, of course, by the amount of funds available; and sales, by the amount of marketable securities in the investment portfolios of the accounts. In the first two years after the end of the Victory Loan, around 1.5 billion dollars of marketable issues were sold by these accounts. Later, substantial purchases were made, and in total volume they roughly offset the amount of earlier sales.

THE REFUNDING PROBLEM

Each year since the end of World War II, the Treasury has faced a substantial and, at times, a formidable refunding task. Not only has the total

volume been large, but the issues have been so distributed that the Treasury has found it necessary to make anywhere from five to twelve offerings a year, aside from its regular bill offerings.

At the outset on February 28, 1946, there were over 70 billion dollars of issues maturing and callable in one year, and aside from the weekly roll-overs of bill issues the Treasury was in the market eleven months out of the twelve. By 1949, the issues refundable in a year had declined in volume to 49.1 billion dollars and the number of offerings other than bill issues had been reduced to nine issues. But by the beginning of 1954, these issues were at a new high of nearly 76 billion dollars and involved eight maturing issues and three callable issues, as well as the thirteen regular weekly bill issues and a maturing issue of tax anticipation certificates.

The fluctuations in the annual volume of the refundable marketable issues since the Victory Loan have reflected increases brought about by the passage of time (moving longer issues into the shorter-term areas) and the Treasury's almost complete reliance for several years on short-term issues in both its exchanges and new money offerings. These increases were only partly offset by reductions arising both from planned retirements in the early postwar years and from the attrition (or unexchanged portion) of maturing and called issues. Similarly, the changes in the annual number of refundable issues in this period reflected the increase in issues with the passage of time and the offsetting reductions arising from complete retirements or consolidations in refundings.

The first significant step toward lessening somewhat the increase in the annual volume of refundings was made by the offering of intermediate-term issues beginning December 1949. In all, the intermediate issues offered since that time have, in effect, postponed the refundings in whole or part of nine issues (including two new money issues) amounting to almost 30 billion dollars for periods ranging from 3½ years to nearly eight years. The first of these intermediate-maturity issues will ma-

ture in 1954. The 1954 volume of issues actually maturing that must be handled within the year came to 73 billion dollars at the beginning of the year.

Experience with Attrition

Altogether, in the period 1946-53, over 278 billion dollars of exchange issues aside from bill issues were offered, but private investors holding almost 15.5 billion of the refundable issues preferred to present their holdings for cash redemption.⁸ The attrition thus amounted to less than 6 per cent of the exchange offerings. On some offerings, the unexchanged portion was considerably higher than 6 per cent, while on others it was lower. The attrition ratio on any one issue reflected, in part, investors' reaction to the terms of the new security, as well as the holdings acquired with the intention of obtaining cash at maturity. In general, when the terms of exchange issues have been in line with current market conditions, offerings have been accepted virtually in full by commercial banks and institutional investors, while other private investors have tended to redeem part of their holdings in keeping with apparent plans to use the funds for specific purposes or to purchase securities whose maturities would coincide with expected needs for funds. After the Treasury-Federal Reserve accord of March 1951, the proportion of Federal Reserve support purchases was reduced, and cash redemptions on the whole declined as the terms of new issues were fitted to the yields determined by a relatively free market. Since October 1952, no support has been given by the System to the Treasury refundings; in the months through June 1953, when interest rates were rising and the pricing of issues was especially difficult, attrition varied from less than 2 per cent to nearly 18 per cent of the refunding offers, but in the latter half of 1953, when a sharp about-face in market rates occurred, cash redemptions were less than 4 per cent of each offer.

⁸ This does not include the close to 40 billion dollars of issues which were partially or fully retired by the Treasury according to plan.

MARKETING OF TREASURY BILLS

by

HELEN J. COOKE

THE Treasury bill was first introduced in the United States as an instrument of Government finance in 1929. Designed to attract short-term funds, through a weekly market auction as contrasted with the customary procedure of subscription and allotment for instruments bearing fixed coupon rates, the Treasury bill filled an important need in the money market. By the end of 1934, it had completely replaced the Treasury certificate of indebtedness which had formerly been the principal means of shorter-term Treasury financing. It was not until 1942, when wartime needs impelled an unprecedented growth in the public debt and made necessary the use of a wide variety of debt instruments, that the certificate of indebtedness was re-introduced. At the present time, Treasury bills, certificates, and other Government securities nearing their maturity dates constitute a dominant proportion of the money market instruments in use in the United States. The growth in these instruments has been paralleled by a shrinkage in the importance, for money market purposes, of the call loan, bankers' bill, and trade acceptance.

Because the Treasury bill is sold at auction, on a discount basis, it is uniquely suited to the needs of a highly competitive money market. During the war years, when most market rates of interest were stabilized through Federal Reserve action, and competition could not be allowed to operate in unrestricted form, most of the growing volume of Treasury bills moved into the portfolio of the Federal Reserve System. By early 1947, the System held about 90 per cent of the 17 billion dollars of bills then outstanding, as shown in Chart I. With the gradual return of a competitive climate, both in the money market and the Government securities market, bills left the System portfolio to find a key place in the secondary reserves of the commercial banks and among the liquid assets of a growing number of industrial corporations. This decline in the System's holdings continued through early 1952, when for a brief period there were no bills in the System portfolio. Some purchases were made thereafter and

beginning late in 1952 this instrument was used almost exclusively in effecting the System's open market operations. By the beginning of 1954, with roughly 19.5 billion dollars of bills outstanding, the System's holdings amounted to almost 3 billion dollars. The commercial banks held nearly 4.5 billion dollars, and nonbank investors the remainder.

This article will briefly describe the methods through which Treasury bills are initially sold, the existing market for trading in outstanding bills and other Treasury issues, and the principal sources of demand for bills, with particular reference to the role of the Federal Reserve Banks in the Treasury bill market.

SALES OF REGULAR WEEKLY ISSUES

New issues of the regular 91-day Treasury bills are obtained only by tender to the Treasury through the Federal Reserve Banks and their branches. Each week, the Secretary of the Treasury invites competitive and noncompetitive tenders for a specified amount of Treasury bills. Public announcement of offerings of Treasury bills is usually made on Thursday. Tenders are received up to 2 p.m. (Eastern time) on the following Monday, and bills are usually dated and issued on Thursday of that week. If bidders prefer to wait until the last tender day, and if distance prevents physical delivery of the tender to a Federal Reserve Bank or branch prior to the closing time, the bid or bids may be tendered by telegram, but only through a bank. Confirmation by mail, of course, is necessary. Tenders are received without deposit from incorporated banks and trust companies, and from responsible dealers in investment securities. Tenders from others must be accompanied by payment of 2 per cent of the face amount of bills applied for, unless the tenders are submitted with an express guaranty of payment by an incorporated bank or trust company.

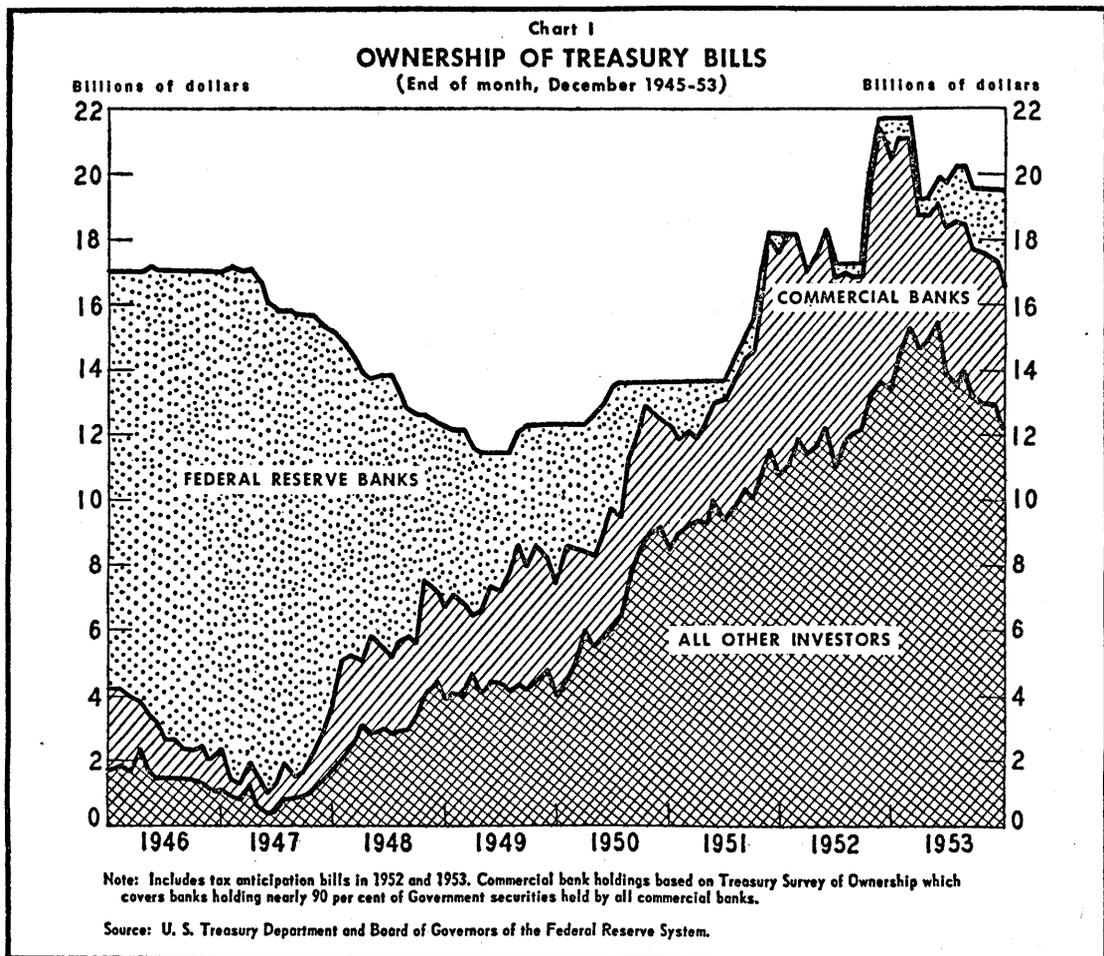
Whereas other Treasury marketable issues are sold at par to yield a specified rate of interest, bills are sold on a discount basis at prices set by the market. Noncompetitive tenders for up to 200,000 dollars from any one bidder are accepted in full

at the average price of accepted competitive bids. Competitive bids, however, cover the bulk of the new weekly issues, although noncompetitive bidding has increased notably in recent years. Tenders are made in even multiples of 1,000 dollars, on a maturity value basis, and the prices are stated on the basis of 100 (and to the third decimal place—for example, the issue dated January 7, 1954 sold at an average price of 99.668, which is equal to an annual discount rate of about 1.314 per cent).

Some bidders submit competitive tenders at more than one price and often make a noncompetitive bid as well. Noncompetitive bidding was introduced in 1943, primarily to help widen the market for Treasury bills among small banks. Beginning at that time an investor could bid for not more than 100,000 dollars of a new issue on a noncompetitive basis, and the price of these bids was set at the

posted buying rate of 99.905 (equivalent to $\frac{3}{8}$ per cent discount) then maintained by the Federal Reserve. Late in 1944, the maximum on noncompetitive bids was raised to 200,000 dollars, and since mid-1947, when the posted rate was eliminated, the noncompetitive bids have been accepted at the average price of the accepted competitive bids. In recent years, as industrial corporations and the smaller banks began to buy bills, noncompetitive bidding increased somewhat in importance, and in 1953 the noncompetitive bids represented more than 15 per cent of most of the accepted weekly tenders, whereas in 1947 they averaged less than 2 per cent of the offerings.

Upon expiration of the time set for placing bids, all tenders received at each Federal Reserve Bank are opened, the bids arranged in descending order of price named, and the details communicated by



wire to the office of the Secretary of the Treasury. Starting with the highest price, the Treasury awards bids in full until it has obtained the approximate amount of funds stated in the offering circular. Where more than one bid is made at the same price and only a part of the tenders at such price can be accepted, the amount accepted is prorated in accordance with the respective amounts for which bids have been made. The Secretary of the Treasury makes a public announcement of the results of each weekly sale of Treasury bills late on Monday after the allotments have been determined. (This announcement generally appears in the newspapers on Tuesday morning.) The Reserve Banks then advise those who have submitted tenders of the acceptance or rejection of their bids.

Settlement for accepted tenders must be made or completed at the Federal Reserve Banks by the issue date, in cash or other immediately available funds (that is, deposits at the Reserve Banks) or, since May 1947, in a like face amount of Treasury bills maturing on that date. The Treasury, however, may provide that qualified special depositories may make payment for accepted tenders (on behalf of themselves or their customers) by credit to a Treasury account on their own books, but in recent years this privilege has not been granted in connection with the sale of regular weekly issues. In the past, the Treasury on several occasions sold regular bills on a book-credit basis to lessen the strain on the money market. The last such occasions were late in 1941 and early in 1942, when the marketing of increased offerings needed facilitating at a time when member bank reserves were being subjected to severe pressures.

Currently, only a small percentage of bills are sold on an exchange basis, whereas in fiscal 1948, the first full year when exchanges were permitted, nearly 70 per cent of the new issues were sold in exchange for maturing bills. At that time, the Federal Reserve Banks held the major portion of outstanding bill issues. Commercial banks and other investors have not adopted, to any extent, the practice of using maturing issues to pay for the new bills they may be awarded. They prefer, probably for accounting reasons, to redeem the maturing bills and pay cash for the new issue. To some extent, however, the current low proportion of exchanges

may reflect a shifting of ownership among private investors; some investors redeem bills while others subscribe for and receive a larger allotment of the new issue than they hold of the maturing issue.

The new bills are delivered on the issue date according to instructions from the purchasers. The securities awarded are generally picked up by dealers and banks. The banks pick up the bills purchased for their customers' accounts as well as their own. In other cases, the investors specify how they want the new issues delivered. By means of the so-called "allotment transfers," an investor in one Federal Reserve District can enter his subscription to new issues with his local Federal Reserve Bank and have the securities delivered to his custodian or other representative in another Federal Reserve District.

OTHER TYPES OF BILL ISSUES

A special series of tax anticipation bills was introduced by the Treasury in the fall of 1951 in a move to reduce the impact on the money market of the seasonal fluctuations in tax receipts, which had become accentuated under the Mills plan for the payment of corporate taxes. Whereas in 1950 and preceding years corporation taxes were due in even quarterly payments, by 1955, 50 per cent will be due in each of the first two quarters.¹ The TABs, as the tax anticipation bills were called, were sold in two issues in the autumn of both 1951 and 1952 to anticipate part of the funds which the Treasury would receive in taxes the following March 15 and June 15. To cover an unexpected need for funds, one small issue of TABs was also sold in June 1953, to mature around September 15. In its next seasonal borrowing in July 1953, however, the Treasury shifted to tax anticipation certificates; the size of this issue made the sale of bills at auction less desirable at this time. The tax anticipation issues have been redeemable for cash or taxes; thus, investors other than those intending to use the TABs for tax payments (chiefly banks) have initially supplied part of the funds.

In earlier years, bill issues were sold with varying maturities. Beginning in February 1934, the Treasury bill maturities, which previously had been limited to three months, were extended to six months,

¹ For an explanation of this plan, see the article entitled "Managing the Treasury's Cash Balances."

and starting in February 1935, they were extended to nine months. These issues, which were sold to cover short-term requirements for funds or to roll-over maturing shorter issues of bills, gradually replaced certificates. Certain issues of bills, known as tax bills, were sold by the Treasury from October 1935 through June 1938 and again in 1941, and for a time were issued for two to five months with maturities in the quarterly tax payment periods. The longer maturities, on both tax and regular bills, proved to be less attractive to the market than three months' bills and in December 1937 the Treasury returned to the policy of issuing three months' bills regularly, with somewhat shorter or longer maturities as necessary on tax bills. The tax bills were used in those years because it was not possible under the Banking Act of 1935 to offset the impact of concentrated tax collections on member bank reserves through direct purchases of special issues by the Federal Reserve System.²

THE VOLUME OF BILL OFFERINGS

In recent years, the weekly bill offerings have not exceeded 1.5 billion dollars and at times have been as low as 800 million. Since the regular bills usually mature in 91 days, there is a 13-week cycle of these issues.³ At the beginning of 1954, the weekly maturities were 1.5 billion dollars each. At the end of World War II, there were 17 billion dollars of bills in weekly issues of 1.3 billion dollars each. The first postwar reduction in Treasury bills was made with the issue of April 17, 1947. At various times thereafter, through April 7, 1949, as funds became available, principally through surpluses, the Treasury reduced weekly new bill issues by amounts of either 200 or 100 million dollars. In these two years there was a net redemption of 5.4 billion dollars of bills, reducing the outstanding total to 11.6 billion dollars. The cash retirement of bills was concentrated in Federal Reserve holdings. Thus the Treasury, by drawing funds into its balances at the Reserve Banks and then turning them over to the Reserve

² For a detailed analysis of this device, see the article which follows on "Direct Purchases of Special Treasury Certificates of Indebtedness by the Federal Reserve Banks."

³ If there is a holiday on the normal date of issue or date of maturity, Treasury bills of 90 or 92 days' maturity are issued. If a holiday falls on the normal day for closing of bids (Monday), the closing is advanced to the preceding Friday.

Banks in payment for maturing bills, made it possible for the System to extinguish reserves.

Beginning in 1949, increases in the amount of successive weekly issues were made for brief periods in the spring or summer of each year. The increases varied from 100 to 300 million weekly, and raised the total of outstanding regular bills to 19.5 billion dollars by the middle of September 1953.

TRANSFERS OF OUTSTANDING TREASURY BILLS IN THE MARKET

Secondary purchases of Treasury bills and other marketable issues are made currently in most cases in the over-the-counter market, maintained in volume by fewer than twenty-five dealers and dealer banks. These dealers make a market by establishing bid and offering prices at which they are willing to buy and sell reasonable amounts of Government securities as principals; no commissions are charged. That is, they make outright purchases and acquire ownership of the securities and alternatively sell securities outright from their portfolios. Dealers obtain their reimbursement through the difference, or "spread," between their bid and offering prices. Brokers have a negligible role in this market. Aside from exchanges on tender and redemptions for cash, any changes in the Government portfolio of the Federal Reserve Banks are effected in the market by the New York Reserve Bank through dealers. However, "sales contracts" may be entered into by the individual Reserve Banks with dealers when it is desirable temporarily to lessen a strain on the money market. These contracts provide for temporary sales to the Reserve Banks, subject to repurchase within 15 days at the option of either party; the Reserve Banks make an interest charge for the period the securities are held by them. Such transactions are entered into at the discretion of the Reserve Banks.⁴

The market for Treasury issues has been broadened, and deliveries and payments have been materially aided, by the use of the "telegraphic transfer" facilities which the Federal Reserve Banks provide as fiscal agents of the United States. Beginning March 1948, the telegraphic transfer facilities,

⁴ Treasury bills were also acquired by the individual Federal Reserve Banks during World War II under a posted bill rate procedure, allowing for repurchase at the option of the seller.

which previously were available only in the case of short-term issues, were extended to include all unmatured marketable bearer securities of the United States. The transactions are commonly referred to as "C.P.D. transactions" (C.P.D. being the abbreviation for Commissioner of the Public Debt by whose authority such transactions are handled), but they may be made only when the delivery of the securities is necessary to complete a sale transaction. In the case of Treasury bills, there is no charge for this service. By use of these facilities, a sale to a dealer in New York may be completed by an investor in San Francisco, for example, without making physical shipment of the securities. Instead, in a typical case, the securities are delivered to the Federal Reserve Bank of San Francisco which then cancels them and wires the Federal Reserve Bank of New York to deliver, from its unissued stock, a like par amount against payment. When the delivery is completed, the New York Federal Reserve Bank wires the proceeds back to the San Francisco Reserve Bank and the funds are passed on to the seller.

THE SOURCES OF DEMAND

A substantial proportion of the new issues of Treasury bills is sold in the New York area. Bids in this District accounted for around 70 per cent of those submitted in 1953 and approximately two thirds of the actual sales of new bills were awarded on tenders made in New York. In most cases, nonbank investors (other than dealers) submit tenders through the large New York City banks. New York City banks also submit tenders for their own account. Small banks are not active bidders, but a growing number have been buying through the arrangement for noncompetitive bids which has been described above. Dealers constitute the other important group of private bidders. Dealers generally purchase Treasury bills for resale to nonbank investors and small banks (and also to large banks when the latter are unsuccessful in their bidding or acquire additional funds which they wish to invest). The large banks, on the other hand, may or may not find it necessary to sell their bills before maturity, depending on money market developments, but usually their bill portfolios change from week to week. Nonbank investors generally buy bills for a longer investment period and in many

cases hold them for the life of the issue. Because of the difficulty at times of setting a price on bids (for amounts greater than provided for through noncompetitive bids), some nonbank investors prefer to wait until new bills have been issued and then to purchase them in the open market from dealers and dealer banks. Secondary purchases and sales of other outstanding issues, of course, are also made by the nonbank investors as well as by banks to obtain maturities better suited to their requirements.

Nonbank investors have turned to Treasury bills as an investment medium for several reasons. Rising yields over the past several years (until the summer of 1953) have provided more income. At the same time there has been a substantial increase in the demand for short-term investment outlets in which to place growing tax reserves, and temporary accumulations of funds for dividends, capital expansion, and other uses. As long as the yields on Treasury bills are competitively attractive and tax rates and profits remain at high levels, there should be a continuing demand for these securities from nonbank investors.

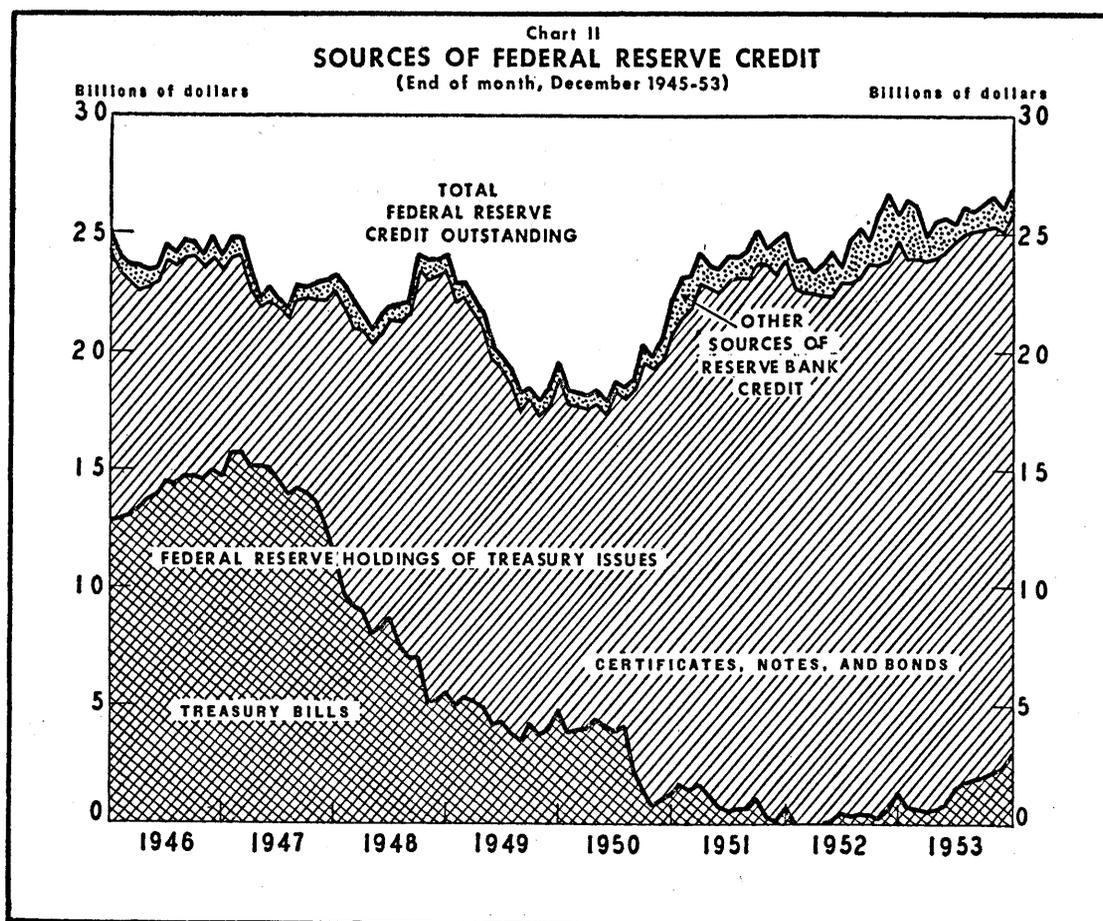
The Federal Reserve System does not submit tenders for more than the amount of maturing bills in its portfolio; consequently, an increase in the holdings of the Federal Open Market Account results only from a purchase of bills in the market. The Reserve System did not tender bids for Treasury bills until early in 1947, when the Treasury permitted maturing bills to be submitted in payment for new bills. Previously, cash payments had generally been required, and, since the Treasury customarily does not borrow directly from the Reserve Banks (except through special certificates to smooth out very temporary money market fluctuations, particularly during tax payment periods), the System acquired bills solely by purchases from others. The System Account, therefore, could only replace its maturities through market purchases, that is, from the dealers in Treasury securities. This procedure proved circuitous, and the adoption of the exchange privilege facilitated the System's operations in replacing maturing bills.

Tenders for bills are submitted for the System Account in accordance with the current policies of the Federal Open Market Committee. The System's tenders, like those of any other investor, must be

submitted before the closing hour for the acceptance of tenders, and without knowledge of other bids submitted. The System thus must compete on an equal basis with bids from all other subscribers. If it is deemed desirable to tighten the money market, bids may be placed comparatively low in an effort to allow all, or some part, of maturing holdings to run off without replacement. In this case, a larger amount of the bids submitted by others is likely to be accepted by the Treasury and a corresponding portion of the maturing bills held by the Reserve System redeemed for cash. Whenever the System reduces its holdings in this way, a direct withdrawal of money market funds occurs, since the additional allotment of bills to private investors must be paid in cash or immediately available funds at the Reserve Banks (that is, some member bank reserves at the Reserve Banks must be

transferred to the Treasury). The Treasury uses the funds to redeem the unexchanged bills of the Federal Reserve Banks.

The decline in System bill holdings beginning in 1947 provided an important means of implementing credit policy. At times, by redeeming or selling bills the System was able to bring about a reduction in the over-all amount of Federal Reserve credit outstanding. At other times, when the System felt compelled to purchase other Government securities (even though credit conditions did not call for the increase in Federal Reserve credit resulting from such purchases), System sales or redemptions of bills helped to reabsorb some of the Federal Reserve credit released by these other security purchases. Since the accord with the Treasury in March 1951, and more particularly since the Treasury's refund-



ing operations have been carried out (beginning late in 1952) without direct Federal Reserve support, changes in the System's bill portfolio have been used to effectuate credit policy decisions. The relative importance of Treasury bills as a source of Federal Reserve credit since 1946 is illustrated in Chart II. During the war years, of course, System acquisition of bills served as a principal source of Federal Reserve credit. In the prewar years, however, the System's bill holdings were relatively

small, and there were few changes in the System's bill portfolio that affected the banks' reserve positions materially.

In the less than twenty-five years since their first introduction as an instrument of Treasury finance, Treasury bills have become firmly established in a broad market among financial and nonfinancial institutions. They not only serve as an ideal money market investment but they also provide a flexibility well suited to the short-term needs of the Treasury.

DIRECT PURCHASES OF SPECIAL TREASURY CERTIFICATES OF INDEBTEDNESS BY THE FEDERAL RESERVE BANKS

by

MABEL B. WALLICH and IRVING M. AUERBACH

SINCE 1942 the Reserve System has had temporary authority to purchase directly from the Treasury up to 5 billion dollars of direct or fully guaranteed Government securities. The successive renewals of this authority by Congress have enabled the Treasury to sell special certificates of indebtedness directly to the Federal Reserve Banks for the purpose of smoothing out the impact of large Treasury transactions on the banking system, particularly at quarterly tax dates. This type of operation, the use of which is subject in each instance to arrangement between the Reserve System and the Treasury, was resorted to quite regularly during the twenties, during the Second World War, and in the past several years. In the war period from June 1942 to December 1945, special certificates were outstanding on a total of 73 days with an average daily amount of 378 million dollars. From 1946 through 1948 no special certificates were issued as the Treasury's net cash income in each of these calendar years made such operations unnecessary and the System's task of money market management was handled more conveniently without their use. However, with the return of cash deficits in 1949 and the difficult budgetary and financing problems brought on by the outbreak of hostilities in Korea on June 24, 1950, it was again found expedient at times to employ the special certificates of indebtedness. From the beginning of 1949 to the end of 1953, special certificates were held by the Reserve Banks on 75 days with an average daily level of 319 million dollars. The maximum amount outstanding at any one time since 1942 was 1.3 billion dollars on March 15, 1943, but as indicated by these daily averages, the amount of direct Treasury borrowing is seldom more than a small fraction of the 5 billion dollar maximum authorized.

The occasional use of special certificates to finance Treasury expenditures for very short periods has proved beneficial to both the Federal Reserve System and the Treasury in carrying out their respective functions. It has helped to minimize short-run fluctuations in member bank reserve positions and to

reduce pressure on the market for Government securities. The Treasury, for its part, has been able to maintain a somewhat smaller average working balance with a consequent saving in interest cost.

Primarily, the special certificate of indebtedness has been used to offset the effects of short-term fluctuations in receipts and expenditures on the Treasury's total cash needs. During the year these fluctuations result, at times, in a net accumulation of funds and, at other times, in a net drain of funds. There is a wide seasonal divergence between receipts and expenditures since the larger part of tax revenues is collected during the first half of the year. Strong intramonthly fluctuations are superimposed on these seasonal movements of longer duration, especially in quarterly tax months. In quarterly months, large disbursements for interest on the public debt, and to some extent for the cash redemption of maturing securities, are made during the first half of the month; often the concentration is actually on the fifteenth. Revenues from taxes are due on the fifteenth, but do not start to become available to the Treasury in large volume until a few days after the middle of the month because of the time consumed in processing and collection. The Treasury's balances, therefore, tend to be drawn down during the first half of a quarterly month; in the second half, as tax checks are collected, the balances tend to increase rapidly.

In order to avoid unnecessarily large accumulations of funds in its balances in the Reserve Banks, and consequent drains on bank reserves, during the tax collection periods, the Treasury usually suspends or reduces its withdrawals from Tax and Loan Accounts before the middle of the tax months and sometimes sells special certificates to the Reserve Banks for a few days to meet its disbursements. The funds released by the Treasury's disbursements at such times provide the banks with a cushion of extra reserves against prospective losses in the second half of quarterly months when the drain on bank reserves from income tax payments is often considerable. Without temporary borrowing from

the Reserve Banks, the reserves of the banking system frequently could not so readily be prepared for the tax drain, and the pressure on the banks would not be alleviated until Government expenditures again exceeded receipts after the tax period.

Furthermore, without the alternative of special certificate financing with the Reserve Banks, the Treasury would have to maintain large enough balances with the commercial banks and the Federal Reserve Banks during the first half of the month to cover its disbursements on the fifteenth with an ample margin. These balances would then increase (temporarily) in the second half. A succession of these developments over the year would result in the carrying of higher average balances than necessary. The temporary financing by the Reserve Banks permits the Treasury to anticipate tax receipts so that the effect of seasonal short-term fluctuations in receipts and expenditures on its balance is reduced.

The System's present authority to purchase securities directly from the Treasury was first obtained under special wartime legislation enacted in 1942. At the time, the authority was intended to be granted only for the duration of the war, but since the Treasury's financial needs continued to be large during the postwar period, especially after the outbreak of Korean hostilities, the legislation has been extended several times and a further renewal is now being considered. In earlier years, the Federal Reserve Banks made direct purchases of special certificates, usually of one-day maturity, under section 14(b) of the original Federal Reserve Act. This section authorized the purchase of Government securities by the Reserve Banks, but failed to specify how they should be made; consequently, it was commonly understood that this provision did not prohibit limited direct purchases from the Treasury. Between 1935 and 1942, no special certificates were purchased because the Banking Act of 1935 specifically stipulated that all Government security purchases and sales by the Reserve Banks must be made in the open market.² The restoration of the direct purchase authority under Title IV of the Second War Powers Act in 1942 was designed to meet any transitory

² During these years, Treasury bills maturing in the tax collection period were issued. The redemption of these securities was useful in offsetting the banks' losses from tax revenues.

difficulties that might be experienced in Treasury financing during the war period.

During the First World War and afterward until 1933, the New York Federal Reserve Bank, and occasionally the other Reserve Banks, at times made purchases of Treasury special certificates of indebtedness to reduce the frequency of withdrawals from War Loan Deposit Accounts in the commercial banks and at times in anticipation of receipts from the sale of securities by the Treasury in the open market. After World War I, this type of financing was limited largely to tax periods. At the same time, in order to absorb the excess member bank reserves resulting from Treasury disbursements of the proceeds of the special certificates and to provide the banks with a means of employing the funds temporarily, the Reserve Banks sold other Government securities to member banks under repurchase agreements. By the terms of these agreements, the Reserve Banks repurchased Government securities sold from their portfolios just before the middle of a month in which tax payments were due, as the banks lost reserves through income tax collections. The use of repurchase agreements was ended in 1926, however, since several Reserve Banks no longer were willing to incur the loss of earnings that resulted from the sales of high-yield Government securities against the purchase of low-yield special certificates.

Beginning in 1927, participations in the special one-day certificates were sold to member banks in the New York money market in lieu of sales of other securities under repurchase agreements. The entire transaction in each instance was handled by the Federal Reserve Bank of New York. Although the Reserve Banks continued to hold part of each issue, the major portion was placed with member banks. Participations in the special certificates continued to be sold to member banks until 1933, when the Treasury suspended the use of this form of temporary borrowing. The practice of selling participations in the issues was not resumed by the System when its authority to make direct purchases was reinstated at the beginning of the Second World War.

The first two purchases of Treasury special certificates during the Second World War were made primarily for money market purposes. They both preceded the sale of large amounts of securities by

the Treasury in the open market and thereby prepared the banks for the subsequent drain of reserves. Sufficient funds were available in Treasury accounts at the commercial banks to cover the Treasury's net disbursements on these two occasions. Calls on these balances, however, were suspended because in a matter of days funds obtained from the open-market sales of securities were transferred to the Treasury's accounts at the Reserve Banks. The direct purchase of securities by the Reserve Banks under these circumstances, of course, is analogous to the purchase of special certificates in quarterly tax months.

Aside from its use in income tax periods, the principal purpose of the Reserve Banks' authority to purchase Government securities directly from the

Treasury up to some specified maximum amount has been to provide an arrangement whereby the Reserve Banks could assist the Treasury temporarily in meeting some unforeseeable and urgent need for funds, pending the financing of the expenditures through Treasury sales of securities in the market or until the required funds could be withdrawn from Tax and Loan Accounts. So far, this emergency "stand-by" function has been used on only one occasion. This occurred in June 1951, when a large volume of cash-ins of the old Series D Savings notes to purchase the new Series A issue temporarily drained all of the Treasury's funds at the Reserve Banks until calls could be made on those Tax and Loan balances that were enlarged by the receipts from the sale of Series A Savings notes.

