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OPEN MARKET OPERATIONS

TECHNICAL ASPECTS AND MONEY MARKET EFFECTS

Your discussion leader has indicated that you are interested in the mechanics and techniques as well as the money market aspects of Federal Reserve Bank open market operations. As you know, the term "open market operation" has reference to the purchases, sales and redemptions of various credit instruments by the Federal Reserve Banks under the statutory authority of the Federal Reserve Act and in accordance with regulations and directions of the Federal Open Market Committee. Since open market operations are for all practical purposes currently concerned almost wholly with United States Government securities, it has seemed best to start these remarks with a short review of the more salient facts with respect to Treasury debt -- its size, growth and principal features. I shall follow this with comments on the structure and operational mechanics of the market in which United States Government securities are traded. This will give a convenient point of departure for a more detailed look at the operations themselves and a clearer picture of the techniques and problems involved in their execution.

I. NATURE OF THE PUBLIC DEBT

Growth and Importance

United States Government debt is one of the most significant features of American economic life. In the past decade the total United States interest-bearing debt has increased six-fold. At the end of 1929 it amounted to $18 billion or 9 per cent of outstanding private debt*; by the close of 1939 it was $50 billion or 32 per cent of private debt*. At $256 billion#, the Federal debt now exceeds the total private debt* of the nation; it is about equal to the gross national product and several times the value of all stocks on the New York

* Including state and municipal obligations.
\# Including matured and non-interest bearing debt.

Stock Exchange. Clearly, as a result of its phenomenal growth over the past decade, it has assumed a wholly new place in our national economy. It has become the principal readily shiftable investment medium for most financial institutions and individuals and as such exercises a dominant force in the determination of monetary and credit developments.

Form

The public debt is the most frequently cited aspect of the postwar monetary problem, because of the size, broad ownership and its acceptance as a liquid or readily shiftable asset. Of major importance also but less frequently emphasized as an important problem in determining debt management and credit policies, is the form and structure of the debt. The composition of the debt as of February 28, 1950 is given in the attached Table No. 1.

Marketable Treasury obligations amount to some $154 billion or 61 per cent of total interest-bearing debt, with Treasury bonds ($103 billion) predominating. These are composed of bank-eligible taxable and partially tax-exempt bonds and ineligible restricted bonds, having maturities running from several months to seventeen years and nine months (call date for the 2 1/2's of December 1967-72). Certificates of Indebtedness (maturities of twelve months or less) rank second in size at $24 billion, followed by Treasury notes (maturities of one-to five-years) at $15 billion, and Treasury bills (maturities of ninety-one days or less) at $12 billion. At present rates, the return on marketable Treasury obligations ranges from 1.15 per cent on ninety-one day Treasury bills and 1.17 per cent on nine-month certificates* to 2.35 per cent on the longest term Treasury bonds (a differential of 1.18 per cent for seventeen years). Rates on these issues rise as the maturity

* Longest maturity outstanding.

increases thus forming a well-defined and fairly smooth curve of yields, the level and slope of which is subject to constant change, depending on the particular influences at work at any given time.

Although our interest lies mainly in marketable debt, there should be cited here the Treasury's exposure, as a borrower, to the uncertain claims of holders of some $65 billion of Savings Bonds and Savings Notes because these obligations are an element of great potential significance with a direct bearing on the marketable segment of the debt. They are held chiefly by the non-professional investing public and while they are not negotiable, they are redeemable and, to that extent, constitute a demand obligation of the Treasury. The fixed terms of these issues, with their penalties for premature redemption, are closely related to the going market rate so that the stability of their ownership depends, among other things, upon the prevailing rate structure of the marketable debt. Fixed redemption provisions are scaled so that redemption before maturity is penalized by a smaller interest return while a reward for non-redemption increases with the passage of time. In this way ownership tends to be encouraged and a wider area is created for fluctuations in market rates before the redemption of non-market securities becomes profitable. Leaving aside the element of psychology and viewing the matter purely in terms of the arithmetic of the redemption schedule, it would probably take an appreciable increase in the going market rate on comparable maturities to discourage sales and invite shifts out of non-market into market debt or into cash.

Non-market debt has increased modestly in the postwar years due to the Treasury's efforts to promote ownership in those issues. Any reversal of this trend would mean that the Treasury would have to draw on its cash balances to meet redemptions and, under present budgetary conditions, market borrowing

for cash through the banking system would be necessary to meet the public's cash claims. It is evident then that while these bonds and notes require no direct market support, continuity of ownership is related in part to the action of intermediate and long maturities of marketable Treasury bonds. They can thus be a limiting influence on basic rate changes on the marketable debt and a factor to be reckoned with by those with a direct or indirect administrative responsibility for market conditions in United States Government securities.

Maturity Distribution and Ownership

A classification of Treasury marketable debt, according to maturity or first-call date, shown in attached Table No. 2 provides some idea of the term structure of the debt and points up the concentration of maturities in the next five years. In the next year alone the Treasury must refund eight separate issues totaling $32 billion (exclusive of weekly roll-overs of Treasury bills, outstanding in the amount of $12.3 billion).

Investment needs of investor groups vary widely and their combined influence on supply and demand shapes the general character of the market and creates a set of sub-markets within the whole. Although investors have come to regard United States Government securities generally as little different from cash, there still exists a well-defined set of divergent maturity preferences which influence the ownership and trading activity in different areas of the market and conditions the whole debt management problem for which the Treasury and the System have a joint responsibility.

The general maturity and rate structure of the debt at any given time have a direct bearing on ownership distribution and hence on volume and the character of market activity. To the extent that rates and types of issues are not kept in conformity with the interests and requirements of investors, elements of instability in ownership are created. Of course, the positions of

various investor groups are constantly changing and portfolio adjustments are a normal daily occurrence. But shifts in ownership, if carried too far in too short a space of time, may lead to disorderly markets and may thus force the System to undertake open market operations for market stabilization purposes with a limiting influence on their effectiveness as a credit control weapon. The major investor groups which, in the broad sense, constitute the market for United States Government securities, and their general maturity preferences are indicated in the attached Table No. 3.

These few facts provide a rough idea of the character of the Treasury debt and suggest some of the ramifications of the debt management problem. The existence of a fairly broad and homogeneous body of Government debt provides an effective medium through which open market operations can be used in the expression of central banking policy. At the same time, the form of the debt is such that the Treasury, faces a formidable and complicated problem of refunding successfully maturing issues, both marketable and non-marketable, in the next three years; this problem will tend to place limits on the System's range of operations in its efforts to carry out appropriate and effective credit policies. The future scope for open market operations will depend to a large extent on the need for the System "to make a market" for Treasury obligations at the expense of credit considerations. This need, in turn, will depend on the supply of and demand for investment funds and whether refunding offerings meet the requirements of the market.

It seems appropriate at this point to examine the market in which the vast body of Government debt is traded and the mechanics that exist for effecting ownership changes.

II. STRUCTURE OF MARKET FOR UNITED STATES GOVERNMENT SECURITIES

Over-the-counter-Market

The market for United States Government securities is known as an "over-the-counter" market. There is no formally organized central meeting place or exchange in the sense that there is for stocks, bonds and commodities. The market exists and is given substance through the operations of a relatively small group of security dealers specializing in the purchase and sale of Government securities. While only one element in the market, they perform a unique function in creating and maintaining an active market over an extensive network of telephones and private wire systems thus providing a focal point of activity. It has been suggested that a more apt name would be the "over-the-telephone" market since the bulk of the business is done by telephone calls between security dealers and customers. Trading is centered in the hands of a relatively small number of dealers and dealer-banks. It is the function of these dealers to bring together buyers and sellers and facilitate ownership changes by standing ready to match the demand and supply at a given price. While it is true that a market for Treasury bonds exists on the New York Stock Exchange, it is little more than a pale reflection of the over-the-counter market for trading and even on active days turnover on the Exchange is a microscopic fraction of the volume of trading in the unlisted market.

All the larger dealers have their principal offices in New York City and Chicago but they do business of a national scope partly through the medium of branch offices, representatives or other security firms. Many local investment firms throughout the country handle Government security business which they pass on to the large Government security houses for a commission. These

dealer and investment house facilities are materially supplemented by the activities of many bank institutions throughout the country with trading departments. Many other banks encourage their correspondent banks and other clients to place orders through them. All of the facilities existing outside of New York City for trading in Government securities are operated on the basis of the New York market, both with respect to quotations and breadth. Except for a small amount of orders which are matched off by bank and investment firms in local markets, the trading is done ultimately with or through the offices or branches of the Government security dealers and dealer-banks in New York City and Chicago.

The dealers' main activity is to maintain a liquid market for outstanding securities. In carrying out this function dealers engage in three operations - buying, selling and the maintenance of a portfolio. Unlike a broker, the dealer does not restrict his operations to buying and selling on orders of customers although under special circumstances the dealer may confine his activities largely to an order business. At any given time, a dealer is generally long certain issues and short certain others and, in this way, obtains some protection against changes in the general average of Government security prices. Usually, however, he is either net long or short depending on his judgment of the future course of the market.

A dealer creates a market when he is prepared both to buy and sell at the prices he quotes; he maintains a market when he continues over a period of time to state prices at which he is ready and willing to buy and sell. He maintains a substantial holding (position) in a variety of issues and normally stands ready to buy and sell in size. The size of his market is determined by many factors, including his total position, the condition of the market, the issue in question, his capital and borrowing capacity. The dealer makes his

regular income by selling at a higher price than he buys although he takes some income from the interest accrual on his portfolio in so far as it exceeds the cost of borrowing to carry his position. He also stands to have substantial capital gains or losses as a reflection of the effect of rises or declines in price on the securities in his position. At times the creation and maintenance of a market is a delicate task and can be done only by constant contact with investors, dealers and other segments of the market and estimates of current and prospective Government and Federal Reserve policy. The market trend is not determined by one dealer but by all dealers, who reflect their appraisal of demand and supply by the markets they make (their bid and offered quotations) and constantly refine through telephone calls from dealer to dealer.

Prices of Treasury bonds are quoted in multiples of 1/32 or 1/64 and usually the spread between bid and asked prices is 2/32 although at times it may widen to 1/4 of a point under abnormal conditions. This differential between bid and asked prices is "closed up" or reduced in actual trading when activity is reasonably well balanced. Most short-term issues (bills and certificates) are traded on a yield basis. Generally, transactions are for next day (regular) delivery and payment (although deferred or delayed deliveries are not uncommon), and payment is made in Clearing House funds unless otherwise specified. Cash transactions call for delivery and payment the same day. However, the Federal Reserve Bank always insists on payment in Federal funds* when it is a seller and similarly always makes payment in Federal funds when it buys. Where new issues of Treasury obligations have been offered for subscription but not yet issued, trading in such obligations is on a "when issued" basis. Most contracts are oral with written confirmation at the end of the day.

* i.e. Immediately available funds at the Federal Reserve Banks as contrasted with other types of balances such as Clearing House funds which in New York are not available until the day after their receipt in the form of checks or drafts on Clearing House banks.

III. RELATIONSHIP OF FEDERAL RESERVE BANKS TO GOVERNMENT SECURITIES MARKET -- OPERATING STANDPOINT

The Federal Reserve System occupies a unique position in relation to the United States Government security market. This stems from its statutory authority but the changing features of the American economy, with the large growth in the public debt, have widened the responsibilities of the System and brought open market operations into a position of new prominence in meeting that responsibility. Under the law the Federal Reserve Banks are authorized to buy and sell in the open market a variety of credit instruments. Actual purchases and sales are confined in practice chiefly to obligations of the United States Government although at times bankers acceptances have played an important role in the System's operations. For present purposes only United States Government securities need to be considered. These transactions, known as "open market operations" are one of the major general instruments of credit control. By the terms of Section 12A of the Federal Reserve Act, as amended, the time, character and volume of all purchases and sales of United States Government securities in the market shall be governed with a view to accommodating commerce and business and with due regard to their bearing on the general credit situation of the country. With the changes wrought by the war open market operations have increased in significance and are now the most flexible and effective instrument in the Federal Reserve System's equipment for affecting the supply, the availability and the cost of credit. The active role played by open market operations in recent years is suggested by the fact that wartime operations in United States Government securities have brought total holdings of those issues from $2 billion at the end of 1941 to a peak of $24 billion on December 31, 1945. Subsequently holdings have declined to a current level of some $17 billion.

Money Market Effects of Open Market Operations

Purchases of Government securities by the Federal Reserve Bank increase the supply of reserves available to the commercial banks while sales have an opposite effect.* To the extent that transactions are made in effect, from the portfolios of investors and corporations, deposits as well as reserve balances are affected as the funds involved are deposited in, or withdrawn from, their banks.

Open market operations are effective as an influence on the availability of credit (as distinct from the supply) by encouraging or discouraging lending activities of the member banks and indirectly other suppliers of credit. Through their effect on the supply of reserves and availability of credit, Federal Reserve Bank transactions in United States Government securities also influence interest rates on both public and private credit, either in limited areas or throughout the whole range of the money and capital markets. The character of this latter influence can also be varied by selling one class of Government securities and buying another without a change in the total holdings of the Federal Reserve Banks. Thus, because of their flexibility and the

* As has been indicated earlier, securities which are bought and sold for the System Open Market Account pass through the hands of Government security dealers. These dealers maintain accounts with one or more local commercial banks which lend them the funds needed to finance their purchases and to carry positions. In some cases, the banks also act as clearing agents on their security transactions. In making and receiving payment on their transactions with the System Account, dealers arrange with their banks of account to make debits and credits to their respective bank's reserve accounts at the Federal Reserve Bank. For example, when a dealer delivers securities to the Federal Reserve Bank against payment, he instructs the Reserve Bank to credit payment to the Reserve Account of the member bank at which he keeps his deposit, and he receives from the Federal Reserve Bank a "certified credit advice" which he presents to that bank. Under certain circumstances, the dealer may prefer to receive payment by check on the Federal Reserve Bank in which case an officer's check is issued. Where a dealer picks up securities at the Federal Reserve Bank he must pay for them with Federal funds. To do this he may arrange with his bank to obtain either a debit to its Reserve Account or a check drawn by it on the Federal Reserve Bank. The debit to the Reserve Account will generally be in the form of a letter of authorization to the Federal Reserve Bank from the member bank to charge its Reserve Account.

tendency for credit effects to reach out into all sections of the financial structure, open market operations have an important role in any cyclical credit policy calling for alternating programs of restraint, neutrality and ease. They also serve a useful purpose in smoothing or neutralizing seasonal or short-run influences affecting reserve balances, such as ordinary gold movements and changes in currency circulation, as well as float, as distinct from basic changes in the credit base.

How Federal Open Market Policies Are Determined and Carried Out

Over the years, open market operations have passed through a number of important evolutionary stages. Early in the life of the System they were employed as a means of building up earning assets of the Federal Reserve Banks, and the individual banks bought Government securities on their own initiative without System consultation. It was soon evident that this procedure ignored the requirements of the banking system for reserve funds and resulted in a disorganization of the United States Government securities market. It became obvious that there was need for greater coordination of these operations. This situation lead to the creation in 1922 of an Open Market Committee composed of five Governors of certain Federal Reserve Banks for the purpose of recommending policies and coordinating transactions. By the spring of 1923 this Committee was reorganized to give recognition to the interest of the Federal Reserve Board in open market operations, and some guiding principles for the conduct of open market operations were adopted. At this time, a System Open Market Investment Account was also set up, and policies were formulated by the Committee for review by individual Reserve Banks. In 1933 the name of the Committee was changed to Open Market Policy Conference and its membership was expanded further to include a representative from each Reserve Bank. Further changes of a statutory nature made in the Committee under the Banking Acts of 1933 and 1935, culminated

in the present organizational arrangement. These developments in the control and use of open market operations reflected a growing recognition of their importance as an instrument of central banking policy and a recognition of the need to coordinate their conduct more completely with other policy actions and objectives.

The Banking Act of 1935, as amended, placed open market operations under the direction of the Federal Open Market Committee, composed of seven members of the Board of Governors, the President of the New York bank and the presidents of four other Reserve Banks chosen in rotation annually. The Committee meets at least four times a year and sets the general policy. It, in turn, appoints an executive committee (three members of the Board and two presidents of Reserve Banks), which meets frequently and acts to implement the broad policy laid down by the full Committee. The decisions of the Committee are final and participation can no longer be rejected by an individual bank as was the case prior to 1935.

The Federal Reserve Bank of New York as an agent for, and under direction of, the Federal Open Market Committee operates the System Open Market Account in which the twelve Federal Reserve Banks participate for the purpose of conducting open market operations in Government securities. The New York bank, subject to approval of the Federal Open Market Committee, appoints a Manager of System Open Market Account, who is responsible for translating Federal Open Market Committee policy into action, through System operations in the market.

It is through the Government security dealers* that the Federal Reserve System maintains a constant, close and intimate contact with, and influence over, the money and Government security markets. The actual purchases and sales of

* The New York Federal Reserve Bank deals only with a limited group of qualified dealers in U.S. Government securities under terms formalized by the Federal Open Market Committee. See 1944 Annual Report of Board of Governors - pp. 48-51.

Government securities for System Open Market Account are executed in the trading room of the Securities Department of the Federal Reserve Bank of New York. From this room direct wires connect with leading dealer firms in New York City and it is through those firms that our primary market contact is established and maintained. It should be emphasized at this point that the Bank always deals with "the market"; by that is meant that transactions are confined to dealers and direct transactions with banks and with non-bank investors are avoided. The Bank tries to be the residual or marginal factor in the market dealing only with the gap between supply and demand. The satisfaction of normal selling and buying desires of investors is left to the dealers who match off buyers and sellers or increase or reduce their positions. In this way the volume of System Account transactions is minimized while their effects are magnified.

Guides to Day-to-Day Operations

The operations of these dealers are reported on a confidential basis to the Federal Reserve Bank of New York each day. Their reports cover long and short positions in the various classes of Government securities, the amount of securities borrowed and the amount of money borrowed to carry their portfolios. In addition, the volume of trading is reported by each dealer in terms of the total of purchases and sales for each class of security. At times when the Treasury is undertaking a financing operation in the market these dealers' reports are expanded to cover data regarding the dealer's own subscription to the new issue or issues, subscriptions purchased by him as well as purchase and sale transactions in the issues included in the operation. These data provide a continuous knowledge of the principal factors in the dealer market.

Another phase of the Federal Reserve Bank of New York's contact with the market consists of daily conferences prior to the opening of the market at

10:00 A.M. between representatives of the "qualified" dealers and those officers directly responsible for the conduct of the open market operations. Since time does not permit a daily conference with a representative of all the leading dealers, the Manager of the Account will see two or three of them each day in a rotating schedule. At these conferences the representatives review the more important developments in the market, summarize their transactions, and pass on to us any comments they wish to make, or any suggestions that they have gathered in their conversations and contact with the investing public in general. In addition, during the course of each day various dealers are in touch with us as information comes into the market, or trading tendencies develop which a dealer believes should be brought to our attention. Moreover, the tone and characteristics of the market are continually being described to us through telephone conversation.

Apart from market contacts through the dealers, the officers make a practice of maintaining fairly close contact with the portfolio managers of the large local banks, a number of large out-of-town banks, insurance companies, and savings banks, as well as with smaller security firms. The information so obtained amplifies and checks the information which is constantly being received from dealers.

The Federal Reserve Bank of New York also follows closely each day the reserve position of the money market banks in New York City, watches the clearings and wire transfers involving such banks, keeps close contact with all money market developments, including current and prospective inflow and outflow of funds, and confers with the Treasury regarding decisions as to the scheduling of calls on Tax and Loan Accounts. It is thus in a position to measure the extent of the pressure and ease in the money market and adjust operations in accordance with the general credit policy being implemented.

In spite of these varied sources of information, there are times when extraordinary developments upset the calculations and forecasts. In addition to the usual seasonal factors to be reckoned with on a short-term basis and the general Federal Open Market Committee policy being served, there are always a variety of political, economic and psychological elements affecting all security markets with which those connected with open market operations must deal. The job of handling transactions successfully is in reality a team operation in which all the talent and capacities of the System are needed and have an active, if varied, role to play. Those at the trading desk must be constantly in intimate touch with the market during the trading hours from 10:00 A.M. to 3:00 P.M. in order to determine first, whether System intervention is needed, and second, what form that intervention should take. They must also be continually prepared to adapt and re-adapt transactions in accordance with the requirements of a changing situation. There can, under these conditions, be no rigid or fixed technique to follow automatically. In fact, the operational procedures are seldom the same. A high degree of flexibility is required, for prompt action and a versatility of approach can add immeasurably to the effectiveness of policy refinements.

Execution of Transactions for System Open Market Account

As a general rule open market operations are accommodated to the different sections of the market and to the actions of investor groups which make up those sections, within the limitations of the general policy which the Bank is trying to express. Measured in terms of volume, open market transactions are predominantly in short-term Treasury obligations (one- to ninety-one day Treasury bills and three-to twelve-month certificates of indebtedness) which are largely held by commercial banks and which are the first issues to reflect a changing credit situation. Normally, activity in the Treasury bill and certificate

markets will follow the ebb and flow of funds between banks and the general course of money market forces; in the short run, operations are conducted so as to moderate extremes in the swings of such forces -- at times anticipating developments, and at times waiting for them to be reflected in price and market pressures, depending on the magnitude and duration of the forces at work and the psychology which the Bank may want to create in terms of its general policy directive. More often than not, dealers take the initiative in extending bids and making offers to the System Account on transactions in short Treasury issues. They are especially active at times when their positions are expanding rapidly or, on the other hand, when their positions have been severely depleted. In these extreme situations, they are unable to meet the demands of their customers and will make offerings or bids to the Account which it, in turn, will accept or refuse in the light of the over-all situation and the general credit policy. Occasionally, one dealer will have only a limited view of the market and may be a seller at a time when another may be an active buyer, possibly on an order which he alone may have. Where the market interest is involved two dealers may be "put together" in a situation of this kind. There may be times when dealers have relatively large positions and projections forecast a considerable degree of money market stringency ahead. In such circumstances, it may be expedient to take the initiative and solicit offerings from "the market" to lessen the impact of the heavy selling expected later.

Handling maturing issues of Treasury bills and, to some extent, other maturing Treasury obligations, is a particularly important phase of open market operations under present conditions. In the case of Treasury bills, the System has a weekly decision to make as to the disposal of its holdings of the maturing issue. The Treasury normally makes a fixed offering of new Treasury bills for

cash on a competitive basis on Friday of each week. Ordinarily tenders are received up until 2:00 P.M. on the following Monday and payment is made on the following Thursday in order to provide the Treasury with funds to meet the issue maturing on that date. The System is a large holder of Treasury bills and, depending on its maturity schedule, may either assume an active role in affecting reserve balances and influencing rates through the weekly bidding or, it may try to follow the judgment of the market. This it does by adjusting its exchange tenders as to price and amount in accordance with its appraisal of the market at the time and the basic decision as to whether its holdings of the maturing issue are to be replaced in full or in part, or redeemed, and the desired rate effect. If the System holdings of Treasury bills are redeemed in part or in whole at maturity, the money market effect is much the same as a market sale of an equivalent amount of Treasury obligations. Thus action of this kind provides a means by which some restraint can be placed on the reserves of member banks. Such a step leaves a larger amount of Treasury bills to be absorbed by the market in its bidding, since under usual conditions the cash offerings of Treasury bills are in the same amounts as the maturing issues.* It makes little difference whether the larger awards are made to the commercial banks at the expense of System holdings or whether dealers successfully bid bills away from the commercial banks and the System. In the latter case, dealers must, in turn, borrow from the banks to pay for their commitments on the payment date but in both cases funds move from the commercial banking system to the Federal Reserve Banks with a restrictive effect on reserves and a tendency for rates to rise if the shift is substantial and the money market is in anything but an easy condition.

* System bids are adjusted to take account of differences, if any, between the amount of the bill maturity and bill offering in a given week.

One of the problems with which we have had to contend since the war has been the insistence of most large banks on a policy of full investment and their consequent efforts to buy or sell for cash (or same-day delivery) in making necessary reserve adjustments. This occasionally causes rapid swings in the market for short-term Government securities. Despite the willingness of some banks to borrow for short periods, this investment policy places, at times, a considerable burden on the market facilities. Similarly, correspondingly greater demands are made on the System to meet these distortions in reserve positions and, in so doing, because of rate considerations to become "the market." The Federal Reserve Bank, within the limits permitted by rate effects, has resisted this practice and has refused to become a party to cash trading. However, dealers have been willing to do some of this business even on a no-profit basis for competitive reasons.

System operations in short-term Government securities must also take account of the inter-relationship between, as well as the level of, money market rates in order to maintain a smoothly functioning security market. Apart from capital funds, dealer positions are financed through loans from commercial banks. Rates on those loans vary with money market conditions. The dealers' willingness to carry positions in short Treasury obligations depends in part upon the relationship between these loan rates and the coupon or rate on the securities carried. Thus a high loan rate in a tight money market will be a deterrent to dealer borrowing and may affect the prices dealers quote to the point of forcing System intervention in a situation which might otherwise be self-correcting in the short run. To meet conditions of this kind arising out of temporary money market stringency where the need for an immediate injection of Federal Reserve Bank credit is indicated the Federal Reserve Bank of New York

sometimes enters into repurchase agreements with qualified dealers rather than make outright purchases. These agreements may be defined as a means for making immediately available to the market, through the brokers and dealers in United States Government securities, Federal Reserve Bank funds at a fixed rate of interest under arrangements which involve the purchase by the Federal Reserve Banks of such securities subject to the seller's commitment to repurchase them at the same price within a specified period of time. All Federal Reserve Banks are currently authorized to enter into such agreements. They are, however, essentially a money market instrument to be used in close conjunction with open market operations.

In the case of Treasury bonds, where trading volume is less active and price movements somewhat larger than in short maturities, our operations must be handled with great delicacy because they are more susceptible of damaging misinterpretation and are instrumental in shaping the psychological climate of the whole securities market. The corporate and municipal bond markets are particularly sensitive to open market policies and usually respond readily to developments in the Treasury bond market. The level, as well as the direction, of rate movements for long-term Treasury bonds directly affects the volume and the character of private financing -- both new and refunding. In these circumstances the System's open market operations assume a particular importance in the day-to-day activities of the underwriters, general security dealers and the other professional elements in the market.

There are many ways in which System Open Market transactions in Treasury bonds may be handled. Those in charge may place an order for the purchase or sale of a block of securities (at the prevailing price or above or below that price) through one dealer or through several; they may buy and sell on an agency

basis which means that the dealer acts as an intermediary between the System Account and the investor, receiving a commission for his services; they may buy and sell on a net basis in which case the dealer acts as principal, buying or selling for his own account at his quoted markets; they may wait upon the market and adjust trading operations to the situation disclosed by the firm bids and offers which dealers make on their own initiative; they sometimes use in market operations orders for Treasury investment accounts where authority permits, as an adjunct to System Open Market operations for stabilization purposes. As a general rule, they buy or sell on a commission basis,with the dealer acting as agent for the System Account as well as for his customer. In such a case, his position is unaffected. The choice between these various techniques depends on many factors, including for example, the level of dealer positions in the issues in which we may be operating, the strength of the investment demand and supply in the market, and market psychology. Finally, there are what have come to be known as "open mouth" operations. This is a term coined by the market to describe a situation in which official and semi-official statements are made with a view to encouraging certain inferences as to future policy or immediate objectives. It may also be applied to the use of moral suasion which can sometimes be exercised successfully over the market through the dealers for a given effect, in lieu of actual operations which the bank may be unable or unwilling to engage in at the time.

IV. WAR AND POSTWAR OPEN MARKET OPERATIONS - THE CONFLICT BETWEEN RATE AND CREDIT POLICIES

A quick historical look at open market operations over the past decade will emphasize how problems and objectives have varied with changing conditions and how responsibilities for a swollen public debt have come to wield such an

important influence in the determination of open market policies. This should bring the current status of open market operations into a clearer perspective By the outbreak of the war in 1941 the role of open market operations had passed through three phases of development. Starting initially as a device to obtain earning assets for Reserve Banks, they were soon utilized to influence reserve balances for credit control purposes as a supplement to discount rate action. By 1937 their function was broadened to include preservation of orderly markets in Government securities. This concept was further expanded in 1939 as war in Europe developed.

In our war years this function was again extended and open market operations were actively employed in maintaining a pattern of rates as well as in the placement of new Treasury obligations with banks and others. When the United States entered the war in December 1941 the Board of Governors of the Federal Reserve System issued a statement with respect to war finance which included the following paragraph:

> "The System is prepared to use its powers to assure that an ample supply of funds is available at all times for financing the war effort and to exert its influence toward maintaining conditions in the United States Government security market that are satisfactory from the standpoint of the Government's requirements."

Bacause the Treasury was unable to raise, through taxation, all the funds needed to finance the war in amounts and at rates which kept pace with expenditures, extensive reliance was placed on borrowing. A large part of the Treasury borrowing in the years 1941 through 1945 was done outside the area of the banking system but the Treasury was nonetheless forced to lean heavily on the banks for its cash needs. It became the duty of the Federal Reserve System not only to maintain a stable market in which the Treasury could complete its financing operations but also to assure the success of Treasury loans in terms

of subscription response. Through open market operations the System, therefore, took an active part in maintaining a fixed rate structure in the Government security market which was considered vital to the success of the war effort on the financial front in order that 1) a market would be available for Treasury securities at rates known in advance, 2) Treasury borrowing would be possible at steady rather than at rising rates, and 3) the incentive for investors to defer purchases of Government securities in the hope of rising rates would be eliminated. Large scale purchases of United States Government securities by the Federal Reserve System to prevent rates from rising (many of which were made at the fixed buying rate of 3/8 of 1 per cent posted on Treasury bills), provided the banks with the reserves needed to enable them to act as residual buyers of market debt, and to meet a rapidly expanding public demand for currency.

After the war the System endeavored to reorient its policies to the requirements of the peacetime problems. In the period 1946-48 the primary concern of the Federal Reserve System was the two-sided problem of combatting strong inflationary pressures and of maintaining an orderly and relatively stable market for United States Government securities. The war-time growth of public debt and its new financial significance as a repository of abnormally large war-time savings left the Federal Reserve System at the conclusion of the war with a heightened sense of peace-time responsibility for conditions in the Government security market, especially in view of the fluidity of holdings of much of the debt, post-war economic abnormalities and international commitments. The guiding consideration was credit restraint within the limits imposed by 1) the avoidance of action which might have an adverse effect on full production and employment, 2) the maintenance of conditions conducive to the successful refunding of maturing Treasury obligations. Rate stability required that the System act as a

residual buyer of Government securities to maintain market liquidity and stabilize market values at a time when credit policy was directed toward restraint. As a result the successful administration of open market operations as a credit instrument was greatly complicated.

This basic conflict between rate and credit policy continues to dog the System but in less acute ways. The form in which that conflict has manifested itself and the problem it presented at any given time has varied. Different elements in the problem have received varying degrees of emphasis, depending on the market, the budget and the economic situation. In the various discussions of the problem the fundamental, central criticism leveled at the System has been the charge that over-emphasis on debt management responsibilities has made an arbitrary structure of rates the overriding criterion in the determination of open market operations, with a perverse effect on the supply of money. In this way, it was feared, an effective brake on the potential increase in the supply of money would be removed and the Treasury encouraged to handle its debt on the basis of interest costs rather than on monetary considerations.

In order to prevent support operations from resulting in net additions to Federal Reserve Bank holdings of United States Government securities and thereby providing a basis for a multiple expansion in commercial bank credit three steps were taken in the period 1946-48:

1. Utilization of Treasury cash balances and surplus to retire maturing debt with emphasis on the debt held by the Federal Reserve Banks, as inflationary forces grew.
2. Controlled increases in short-term rates on United States Government securities.

3. An increase in discount rates and legal reserve requirements against demand deposits for member banks.

As a result the System was able to offset by redemptions and sales of short term Governments not only the effects on bank reserves of its own purchases of Government bonds but also the greater part of the effects of other factors such as an inflow of gold and a gradual reduction in currency circulation. Growth in the money supply first slowed and then reversed itself.

In 1949 the character of this open market problem changed and its seriousness temporarily lessened as inflationary pressures abated and deflationary tendencies assumed, for a while, greater relative importance. In view of the accumulating evidence of economic readjustment, the System first modified and later reversed the earlier policies adopted to combat post-war inflation by relaxing certain qualitative controls imposed over credit under Regulations T, U and W and later by reductions in reserve requirements of member banks. Open market operations also played a critical role in the implementation of this redirected policy through their influence over the supply, the availability and the cost of credit. The Federal Open Market Committee after consultation with the Treasury Department, reformulated policy with respect to open market operations along lines intended to increase their flexibility and to coordinate them more closely with other instruments of Federal Reserve policy. Toward this end the Federal Open Market Committee made the following statement on June 28, 1949:

> "The Federal Open Market Committee, after consultation with the Treasury, announced today that with a view to increasing the supply of funds available in the market to meet the needs of commerce, business, and agriculture it will be the policy of the Committee to direct purchases, sales, and exchanges of Government securities by the Federal Reserve Banks with primary regard to the

> general business and credit situation. The policy of maintaining orderly conditions in the Government security market, and the confidence of investors in Government bonds will be continued. Under present conditions the maintenance of a relatively fixed pattern of rates has the undesirable effect of absorbing reserves from the market at a time when the availability of credit should be increased."

This statement represented a significant milestone in the development of a peacetime credit policy aimed at striking a fairer balance of interest between Reserve System responsibilities in the related areas of debt management and credit control. With the cooperation of the Treasury Department, short-term rates have been permitted to move more freely in response to market forces and System credit policies. Short-term rates moved sharply lower in the summer of 1949 in reflection of the easy money policy then in effect. Later as recessionary forces spent themselves rates again responded by hardening slightly. The Treasury Department recognized this market situation in the choice of terms used in its refunding operations.

The System has been moving as rapidly as circumstances will permit toward the restoration of a freer market. It has availed itself of every opportunity to relax the rigidities of the rate stabilization practices of the war and early post-war years in favor of a policy of guided flexibility in rates, the full expression of which has not yet been fully developed. The future role of the open market instrument will be determined by the measure of agreement that can be achieved between the System and the Treasury in coordinating actions in the separate areas of administrative responsibility.

What is involved in such coordination of action and the results that may reasonably be expected from it have been cogently stated in the following quotations from two speeches made earlier this year by Allan Sproul:

"The primary role of the Federal Reserve System in promoting economic stability is in the field of monetary and credit policy, with which we must now always associate debt management. We will gain much, I believe, if we can achieve general recognition of the inherent interrelations between the two, and of the need for continually directing both, harmoniously, toward the objective of economic stability.***there cannot be a purposeful monetary policy unless the Federal Reserve System is able to pursue alternating programs of restraint, 'neutrality,' and ease, as the business and credit situation may require. Such programs must, as they accomplish an increase or contraction in the volume of credit and a tightening or loosening in the availability of credit, affect interest rates, not only for private credit, but for Government securities. The terms of Treasury offerings for new money, and for refunding issues, must be affected. Yet those effects will, at times, be inconvenient and burdensome to the Treasury in its management of the enormous public debt, and may conflict with otherwise praiseworthy efforts to minimize expenditures for debt service. This is a conflict which will continue to arise, in one form or another, so long as this public debt, huge in relation to our present national income, is with us. It is not a problem which can be solved by demanding more courage or independence on the part of the Federal Reserve System, nor by attacking indiscriminately the Treasury's understandable concern with the cost of servicing the public debt."

(Excerpt from remarks of Allan Sproul, President, of Federal Reserve Bank of New York, at the Conference of Chairmen of the Federal Reserve Banks and Directors of the Federal Reserve Banks of New York and Minneapolis and their branches, in Washington, D. C., on January 16-17, 1950.)

"***if a suitable permanent framework for the relations between debt management and monetary policy can be established, the tasks of monetary control and debt management will not be impossible. While the money market is not so sensitive to slight changes or disturbances as it was from 1946 through much of 1948, when large segments of the swollen public debt had not yet settled into firm hands, it is still sensitive to relatively small changes in the interest rate structure, and to any uncertainty concerning the future direction of rates created by such changes, in terms of its readiness to make funds available for expansion. Through judicious use of discount rates and flexible open market operations, it should be possible to make

monetary policy reasonably effective without such abrupt and such wide changes in interest rates as used to be considered quite normal and a necessary part of central banking technique. Such a monetary program would be consistent with moderate fluctuations in the cost of servicing the debt (and it is important to remember that 'fluctuation' does not mean only decreases, or only increases, but changes which may 'average out' over time); nor would such a program contemplate (or require) large changes in the prices of outstanding Government securities."

(Excerpt from remarks of Allan Sproul, President, of Federal Reserve Bank of New York, at the Midwinter Meeting of the New York State Bankers Association, New York City, January 23, 1950.)

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Table 1.

STATEMENT OF UNITED STATES DIRECT AND GUARANTEED PUBLIC DEBT OUTSTANDING#

(In millions of dollars)

	Outstanding 2/28/50	Per Cent
Direct Debt		
Market Issues:		
Treasury Bills	12,336	4.9
Ctfs. of Indebt.	24,399	9.6
Treasury Notes	14,790	5.8
Treasury Bonds	102,796	40.5
Other Bonds	160	-
Sub-total	154,481	60.8
Non-Market Issues:		
U. S. Savings Bonds (*)	57,217	22.5
Savings Notes	7,988	3.1
Investment Series Bonds	954	.4
2% Depositary Bonds	287	.1
Armed Forces Leave Bonds	325	.1
Sub-total	66,771	26.2
Special Issues	32,871	13.0
Total Interest Bearing Debt	254,123	100.0

* Current redemption value

\# Reflects exchange of certificates due March 1 and bonds called for payment March 15, for new Treasury notes.

Table 2.

SUMMARY OF UNITED STATES DIRECT
INTEREST-BEARING MARKET ISSUES OUTSTANDING FEBRUARY 28, 1950 #
CLASSIFIED BY YEAR IN WHICH ISSUES BECOME DUE OR CALLABLE

(In millions of dollars)

				Treasury Bonds				
					Taxable			
Year	Bills	Ctfs. of in-debted.	Treasury Notes	Part. Tax-exempt	Unre-stricted	Restrict-ed	Total	Cumu-lative Total
1950	12,336	19,026	3,596	1,186	7,574		43,718	43,718
1951		5,373	4,659	3,500	8,496		22,028	65,746
1952					17,013		17,013	82,759
1953				725			725	83,484
1954			4,675	681			5,356	88,840
1955			1,860	2,611			4,471	93,311
1956				982	5,272		6,254	99,565
1957								99,565
1958				919			919	100,484
1959						8,754	8,754	109,238
1960				1,485			1,485	110,723
1961				50*			50	110,773
1962						2,118	2,118	112,891
1963						2,831	2,831	115,722
1964						7,599	7,599	123,321
1965						5,197	5,197	128,518
1966						3,481	3,481	131,999
1967					2,716	19,656	22,372	154,371
Various				110*			110	154,481
	12,336	24,399	14,790	12,249	41,071	49,636	154,481	

* Wholly Tax-Exempt

\# Reflects exchange of certificates due March 1 and bonds called for payment March 15, for new Treasury notes.

Table

TREASURY SURVEY OF OWNERSHIP, NOVEMBER 30, 1949

SUMMARY OF INTEREST BEARING PUBLIC MARKETABLE SECURITIES

CLASS OF HOLDER	HOLDINGS AS A % OF MARKET DEBT OUTSTANDING	HOLDINGS BY CALL CLASSES AS A PER CENT OF TOTAL HOLDINGS					
			Due or first becoming callable				
		Total	In 1 yr.	1-5 yrs.	5-10 yrs.	10-15 yrs.	Over 15 yrs.
Commercial Banks	38.5	100.0	43.8	38.1	11.3	2.5	4.3
Mutual Savings Banks	6.9	100.0	4.2	10.1	18.3	27.2	40.2
Life Insurance Companies	9.4	100.0	1.3	5.6	6.5	25.8	60.8
Fire, Casualty & Marine Insurance Companies	2.5	100.0	25.3	19.5	19.5	16.5	19.2
U. S. Government Investment A/CS and Federal Reserve Banks	14.8	100.0	48.5	8.0	4.8	7.0	31.7
All Other Investors	27.9	100.0	45.3	13.4	8.1	7.6	25.6
TOTAL	100.0	100.0	37.7	21.3	9.7	8.8	22.5