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Report of the
JOINT TREASURY—FEDERAL RESERVE
STUDY OF THE U.S. GOVERNMENT
SECURITIES MARKET

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PREFACE

This joint Treasury–Federal Reserve study of the U.S. Government securities market was initiated in early 1966 in order to evaluate how the U.S. Government securities market was functioning in light of the institutional and public policy changes that took place in the first half of the 1960's. That was a period, by and large, of relative stability in interest rates and during which there were several innovations in Treasury and Federal Reserve operating policies in the market, such as the Treasury's increased use of advance refundings and the System's undertaking of open market operations in all maturity sectors of the Government securities market. In the course of the study economic and financial conditions changed rapidly, as inflationary pressures developed, monetary policy was more actively used, and interest rates fluctuated widely. These conditions gave rise to a number of problems that were encompassed in the study, such as the availability of financing to the dealer market and the potential for Federal Reserve open market operations in Federal agency issues. In addition, issues involved in the continuing evaluation of market performance and practices were appraised.

The study was carried out in a period in which many other pressing domestic and international monetary problems urgently required the attention of Steering Committee members

and the staff. Because of this, the study was approached in phases, and the recommendations and staff analyses of the study were, for the most part, forwarded to the Treasury and Federal Open Market Committee as completed. This final report brings together all of the recommendations, with supporting analyses, and summarizes much of the staff research.

The study was carried out under a Steering Committee chaired by William McC. Martin, Jr., Chairman of the Board of Governors of the Federal Reserve System, and including Joseph W. Barr, then Undersecretary of the Treasury; Frederick L. Deming, then Undersecretary of the Treasury for Monetary Affairs; George W. Mitchell and J. Dewey Daane, members of the Board of Governors of the Federal Reserve System; Alfred Hayes, President of the Federal Reserve Bank of New York; and George H. Ellis, President of the Federal Reserve Bank of Boston until June 30, 1968. Henry H. Fowler, then Secretary of the Treasury, participated as a member ex-officio of the Steering Committee.

A number of individuals participated in the work of the staff Secretariat, which was immediately responsible for direction of the study. Participating for the U.S. Treasury were Peter Sternlight, Deputy Undersecretary for Monetary Affairs from November 1965 to October 1967; Frank Schiff, Deputy Undersecretary in

the latter phases of the study; and R. Duane Saunders, Special Assistant to the Secretary for Debt Management. Participating from the Board of Governors of the Federal Reserve System were Ralph A. Young, Senior Adviser to the Board until March 1967; Daniel H. Brill, Senior Adviser to the Board and Director of the Division of Research and Statistics; Albert R. Koch, Deputy Director of the Division of Research and Statistics until August 1968; and Stephen H. Axilrod, Adviser in the Division of Research and Statistics. Participating from the Federal Reserve Bank of New York was Alan R. Holmes, Senior Vice President and Manager of the System Open Market Account.

Much of the analytic work was exploratory

in nature. An effort was made to evaluate the performance of the market as a vehicle for carrying out the transactions of the Treasury and Federal Reserve as well as private institutions and businesses. This was accomplished not only through interviews with dealers and investors but also through statistical examination of the extensive daily data on securities transactions and positions collected on a consistent basis from Government securities dealers since May 1960 and of the annual data on income and expenses that have also been developed. The staff members who undertook individual studies are noted, along with the topics, in the final section of the report. These individual staff studies are available for distribution, and many of them will be published.

Wm. McC. Martin, Jr., Chairman,
Joint Treasury-Federal Reserve Study
of the U.S. Government Securities Market.

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I. INTRODUCTION

Prior to the current U.S. Government securities market study, the functioning of the market had been studied in the early 1950's and then again at the end of that decade.¹ The first of these studies was carried out following the Treasury-Federal Reserve accord of 1951, which permitted the Federal Reserve to withdraw from the wartime and early post-World-War-II policy of pegging interest rates in the U.S. Government securities market and which thus made it possible for monetary policy to be used flexibly in the interest of sustainable economic growth. Federal Reserve open market operations during the 1950's normally—except in cases of disorderly market conditions—came to be conducted almost wholly in short-term securities, preferably Treasury bills, and avoided issues involved in or related to Treasury financings. This period saw the development of a broad, active, and self-reliant U.S. Government securities market that would readily accommodate Treasury debt management operations without official support and could accommodate Federal Reserve buy-and-sell transactions in the volume consistent with a flexible monetary policy.

Following the sharp changes in price in the U.S. Government securities market around mid-1958 in connection with the shift in the economy from recession to revival, and in view of indications that price movements were partly accentuated by undue speculative activity, a further study of the U.S. Government securities market was undertaken under joint Treasury-Federal Reserve auspices. This study included consultations with active market participants

for the purpose of obtaining information on factors influencing activity and price changes in the Government securities market. Analyses were also undertaken of certain aspects of the market, including a statistical review of the Treasury's financing in June 1958 and associated price and yield movements, the adequacy of dealer statistics, the use of repurchase agreements, and the possibilities and potential functions of a dealer association. As one result of the study, a formal reporting procedure was established to obtain from U.S. Government securities dealers daily statistics on their borrowings, positions, and transactions in U.S. Government securities, Federal agency issues, and certain other securities. These statistics form the basis of several of the current staff studies, which, because of the new ground they break, should be of special interest to students of the market. In addition, dealer financial statements, measured on a consistent basis, are now being obtained annually.

In the 1960's public policies, including monetary and debt management policies, had to cope with domestic conditions which in the early 1960's were characterized by a relatively slow rate of economic growth and in the middle years of the decade showed mostly an excessively rapid inflationary-type growth. Under both settings, one aim of policy was to keep interest-rate relationships between U.S. and foreign financial centers from leading to a worsening in the U.S. balance of payments. In adapting its policies to these conditions, and inasmuch as the U.S. Government securities market had broadened and become more self-reliant during the previous several years, the Federal Reserve began to undertake open market transactions in all sectors of the U.S. Government securities market, instead of confining operations almost entirely to Treasury bills. At the same time, the Treasury made increasing use of advance refundings to refinance outstanding debt and made several innovations in the marketing of Treasury bills, coming to rely

¹See the following published studies: "Federal Open Market Committee Report of *Ad Hoc* Subcommittee on the Government Securities Market, November 12, 1952," in *U.S. Monetary Policy: Recent Thinking and Experience*, Hearings, 83rd Cong. 2nd Sess., 1954; *Treasury-Federal Reserve Study of the Government Securities Market*, Parts I-III, 1959-60, Wash., D.C. Also see U.S. Congress, Joint Economic Committee, *A Study of the Dealer Market for Federal Government Securities*, 86th Cong., 2nd Sess. 1960.

heavily on bills in raising new cash. These developments in Treasury and Federal Reserve policy represented an effort during the early 1960's to exert upward pressure on short-term rates while also improving the maturity structure of the Federal debt and providing the bank reserves necessary to encouragement of economic growth and moderation of upward pressures on long-term rates.

In this period the U.S. Government securities market was affected not only by innovation and adaptation in Treasury and Federal Reserve operations but also by developments originating in private financial markets, such as the evolution of negotiable certificates of deposit issued in large denominations by major banks. Moreover, there were changes in the dealer structure of the U.S. Government securities market: new dealer firms entered the market; some dealer firms withdrew or combined with other firms; and in general, bank dealers became relatively more important.

The current study of the U.S. Government securities market has focused mainly on the relation between the economic, financial, and policy developments of the 1960's and the market's over-all performance—that is, the ability of the market to accommodate and reflect Federal Reserve, Treasury, and private investor

transactions without unreasonable delay or price change. In addition, the development and performance of the secondary market for Federal agency issues were investigated. The ultimate objective of the study was to determine what, if any, adaptations might be made in the conduct of Treasury and Federal Reserve market operations to promote public policy objectives in light of emerging conditions in the U.S. Government securities market and in related markets.

In assessing the U.S. Government securities market performance and factors affecting it, staff analyses were undertaken on a wide variety of topics including changes in the financial and economic environment; the structure of the dealer market; the behavior of various market indicators such as activity, positions, and spreads between bid and asked prices; changes in the techniques of System open market operations; and new techniques of Treasury debt management. Moreover, market opinion was obtained through individual consultations with dealers and questionnaire responses of dealers and other active market participants. These background studies and analyses (see list of studies in Section XI on page 48) provide the detailed analyses and findings on which this report is based. □

II. SUMMARY OF FINDINGS AND POLICY CONCLUSIONS

The U.S. Government securities market during the 1960's was affected by adaptations made in Treasury and Federal Reserve operating policies in the U.S. Government securities market that contributed to the attainment of public policy objectives. In addition, the market had to adjust to innovations in private financial markets, and to a shift in economic and financial conditions from a period of considerable over-all stability to one of relatively sharp variations in market expectations and in fundamental factors affecting economic and credit expansion.

In the early 1960's, the various economic, financial, and policy influences were reflected in quite moderate and gradual movements in interest rates, which both reduced opportunities for gain and lessened risks for active market participants. In those years banks began to compete more actively for short-term funds through issuance in volume of negotiable time certificates of deposit; economic growth was steady, but the economy for the most part was below its potential; price indices were relatively stable; and monetary policy was able to hold to a generally steady, expansive posture while at-

tempting, along with Treasury debt management policies, to keep upward pressures on short-term interest rates.

Later, after mid-1965, both short- and long-term interest rates became much more volatile—and, on balance, rose considerably. Economic expansion became more vigorous and price inflation more of a threat; Federal spending, spurred by needs for defense in connection with the conflict in Vietnam, accelerated; and monetary policy shifted its posture with more frequency. In these circumstances dealers were at times confronted with very costly and less readily available financing; but there were intervals of declines in interest rates, and, over-all, the dealer market was able to remain actively functioning while experiencing a reasonable return on capital over the longer run.

Although difficult to measure and evaluate, with evidence sometimes conflicting, the over-all performance of the U.S. Government securities market appears to have been at least maintained in the 1960's as compared with the 1950's. Not all aspects of market functioning in the 1960's have been completely satisfactory to all participants, however. A number of dealers felt that the market did not show sufficient price and yield flexibility in the early 1960's. And investors found it difficult to undertake sizable transactions, particularly sales of longer-term U.S. Government securities. The latter has been most evident, of course, during periods of monetary restraint, when the threat of price declines limited the willingness of U.S. Government securities dealers to position longer-term issues. But in addition, the number of dealers that can be said to be making adequate primary markets in longer-term securities has been small relative to the approximately 20 nonbank and bank dealers who make up the dealer market for U.S. Government securities. This small number reflects in part the comparatively limited profit opportunities and the substantial risks in the bond area, given the rising trend of interest rates since the early 1950's.

The availability of financing to dealers has been another problem area in the market from

time to time. This problem, too, has been particularly evident in periods of tight money when the reduced availability and high cost of dealer financing is an unavoidable aspect of credit restraint. The market has generally adjusted well to such changes, but shortages of day-to-day financing—sometimes as a result of unforeseen deposit outflows from large lending banks—have occasionally threatened to cause unduly sharp market pressures, which, though temporary, are potentially disruptive of the market's ability to underwrite Treasury financings and to accommodate Federal Reserve operations or the investment needs of customers.

The structure of the U.S. Government securities market has undergone certain changes over the past several years. The most important of these changes has been an increase in the relative importance of bank dealers, although nonbank dealers still accounted for somewhat more than half of the activity in the mid-1960's. Little difference in behavior was found between bank and nonbank dealers, except that the latter appear to account for a relatively large portion of the activity in the bond area, where the bulk of trading in any event has been limited to comparatively few dealers.

Given the changes in the structure of the dealer market, the availability of capital appears to have been well maintained relative to the volume of activity and to the need for dealers to position securities in order to accommodate their customers' needs, including those of the U.S. Treasury and the Federal Reserve. It is, of course, difficult to measure the availability of capital, particularly for large and diversified dealer firms and banks, where management decisions on the allocation of capital take account of competing uses such as bank lending or corporate bond underwriting.

The return on capital in the dealer industry normally fluctuates widely and roughly in line with economic and interest-rate cycles. In the first half of the 1960's the return was relatively low, reflecting primarily reduced opportunities for capital gains in view of the tendency for prices of long- and also short-term securities to

show an unusual degree of day-to-day stability in a period of gradual upward yield drift and some rise in financing costs relative to the interest return on intermediate- and long-term securities. The increased volatility of security prices in more recent years, including a brief period of relatively sharp price gains in late 1966 and early 1967, tended to increase the return on capital.

It would appear that the dealer market, in terms of over-all performance, has adapted fairly well to the Treasury and Federal Reserve policy changes of the 1960's and to the increasing competition of other market instruments with U.S. Government securities. In addition to the expansion in negotiable CD's issued by banks, there has been a considerable growth in commercial paper and in Federal agency issues outstanding. In adapting to changes in the U.S. Government securities and related markets, dealers have in part broadened their operations to encompass other debt instruments, including Federal agency issues and negotiable CD's. At the same time, the structure of the dealer industry has changed, with bank dealers and non-bank dealers who are part of large diversified securities firms assuming more importance. And finally, the longer-run outlook remained satisfactory enough for dealers to maintain their activity—though not without some erosion at times in certain market areas—through years when there was little or no return on capital.

In light of the flexible adaptation demonstrated by the U.S. Government securities market to changes in the economic and financial environment during the 1960's, and to help further an effective functioning of the market, the principal recommendations with respect to operating policies and procedures vis-à-vis the U.S. Government securities market made by the Steering Committee for this study and forwarded, as appropriate, to the Treasury and/or Federal Open Market Committee (FOMC) are listed below. The various policy conclusions and considerations affecting them are discussed in considerable detail in Section X of this report. Many of the recommendations have already been, or are in the process of being, implemented.

WITH RESPECT TO TREASURY DEBT MANAGEMENT OPERATIONS:

1—Advance refundings as a technique of debt management should be retained and used when feasible in view of its advantages to the Treasury and its attractiveness to investors, while giving consideration to the impact on the market of unduly large and/or frequent advance refundings.

2—Consideration should continue to be given to the reopening, whenever appropriate, of outstanding issues in order to avoid relatively small-sized issues that may be less tradable in the secondary market.

3—A number of other suggestions with respect to Treasury debt management operations and practices were considered—such as changes in the monthly 1-year bill auction, elimination of cash refundings, alterations in the tax-and-loan-account payment privilege, and the risk of exposure to information leaks. In some cases adjustments in practices have been made during the course of this study, while in others the advantages of current practice appeared to outweigh possible disadvantages. The various debt management operations should be, and are, continuously reviewed with respect to their suitability to emerging market conditions.

WITH RESPECT TO FEDERAL RESERVE OPEN MARKET OPERATING TECHNIQUES:

4—System purchases of intermediate- and long-term U.S. Government coupon issues should be continued—even apart from use in correcting or forestalling disorderly market conditions—as a useful supplement to bill purchases in providing reserves to the banking system and, when compelling reasons exist, for affecting, to the extent consistent with reserve objectives, interest-rate pressures on specific short- or long-term maturity sectors of the debt market.

5—Consideration should be given to absorbing reserves through limited sales of coupon issues as might be appropriate from time to time in light of market conditions.

6—Under current market circumstances,

outright operations in Federal agency securities would not facilitate, in any material way, the ability of the System to alter the supply of reserves in the market. While market conditions make it more feasible to undertake System transactions in Federal agency issues by means of repurchase agreements (as has been done since late 1966), it is recognized that market conditions may develop—for example, as a result of further growth in the agency market or the availability of a large floating supply of agency securities—that would make System outright operations more practicable. Moreover, the Federal Reserve should keep under review the desirability and feasibility of conducting outright operations in agency issues in light of the over-all objectives of System policy. System outright purchases and sales of agency issues would be more feasible if the large number of small individual financings could be consolidated into fewer but larger offerings, possibly under the aegis of an over-all marketing unit.

7—To the extent consistent with policy objectives, certain modifications in the details of the operating techniques of the Trading Desk² might be made, including, on occasion, provision of a rough indication to dealers of the size of the operation, and making even more use of “go-arounds” of the whole dealer market in effecting purchase and sale orders for customer accounts as well as in System operations.

WITH RESPECT TO THE AVAILABILITY OF FINANCING TO THE DEALER MARKET:

8—Some use of Federal Reserve resources under carefully controlled terms and conditions, and for relatively limited periods, to help finance the dealer market can contribute to assuring the continuous, satisfactory performance of the U.S. Government securities market as it adapts to sharp shifts, and at times erosion, in the availability of financing from commercial banks and other lenders.

WITH RESPECT TO IMPROVING TECHNICAL MARKET PERFORMANCE:

9—Continued progress should be sought in expanding clearing arrangements for U.S. Government securities, including the active participation of the Federal Reserve in these arrangements, in an effort to avoid the necessity for physical deliveries of securities to the extent practicable; clearing arrangements might ultimately look forward to a general book-entry system, not only for those U.S. Government securities held in custody at Federal Reserve Banks but also for U.S. Government securities more generally.

WITH RESPECT TO THE CONTINUING EVALUATION OF MARKET PERFORMANCE:

10—The direct and continuing interest of the U.S. Treasury and the FOMC in the performance of the U.S. Government securities market is self-evident. Recent evidences of inappropriate market behavior by a few participants suggest that a stronger element of surveillance is probably needed than has prevailed in the past.

11—Day-to-day operating responsibilities with respect to market performance—including reporting of undesirable market practices—should remain entrusted to the Manager of the System Open Market Account, in consultation with appropriate senior staff officials at the Treasury and the Board of Governors of the Federal Reserve System. In order to underscore the interest of the Treasury and the Federal Reserve in the functioning of the Government securities market, the Secretariat of the present U.S. Government securities market study should be maintained on a permanent basis to provide for continuing study of the operations and functioning of the Government securities market; the group would submit periodic reports to the Treasury and the FOMC.

12—In order to facilitate implementation of its responsibilities with respect to evaluation of market developments, the System Account Management should be granted daily access to individual dealer statistics.

² All transactions for System Open Market Account are conducted through the so-called Trading Desk of the Federal Reserve Bank of New York.

13—Over the longer run, some form of dealer organization might perform a useful function, provided that it could be organized in full conformity with antitrust laws. Such an organization could concern itself with such matters as a code of dealer conduct, trading

practices, clearing arrangements, hours of trading, and the like. It could provide a basis for self-regulation in the industry and could become a principal source of contact between the market and the Treasury and Federal Reserve regarding matters of market practices.

III. FINANCIAL AND ECONOMIC ENVIRONMENT

The U.S. Government securities market is highly sensitive to changes in the economic and financial environment and to adaptations in public policy. The market is a focal point for liquidity adjustments of such key economic groups as banks and nonfinancial businesses, and it is also the principal channel through which monetary and debt management policies are carried out. In addition, the fiscal policies of the Government strongly influence over-all demand and supply relationships in the market. During the first part of the 1960's, the market had to adjust to a number of changes and innovations in public and private institutional policies in an economic and financial environment that was characterized at first by an economy growing at a moderate rate with relative stability in prices and interest rates, later by considerably more volatile movements in economic and financial variables, and persistently by a deficit in the U.S. balance of international payments.

OVERVIEW OF THE U.S. ECONOMY IN THE 1960's

The two basic economic problems that confronted public policy in the early years of the 1960's were an economy performing below its potential with high unemployment rates and a continued large balance of payments deficit associated with an accelerating rate of gold outflow. These problems required public policies designed, on the one hand, to increase aggregate domestic demand and, on the other, to restrain capital outflows from this country. This posed a dilemma for policy with respect to interest rates because relatively low interest

rates appeared to be desirable in order to raise aggregate demand, whereas relatively high interest rates were needed to reduce incentives for capital to flow abroad.

In an effort to resolve this dilemma, a stimulative monetary policy was maintained so as to enhance credit availability, but the maturity pattern of Federal Reserve securities transactions and of Treasury debt management policies was altered so as to minimize consequent downward pressures on short-term interest rates and thereby avoid encouraging outflows of liquid funds from the United States to money markets abroad. As the 1960's progressed, other actions were taken to reduce capital outflows. These included a voluntary foreign credit restraint program (VFCR) to limit capital outflows from banks, nonbank financial institutions, and businesses and an interest equalization tax designed to reduce the attractiveness of investment in foreign securities on an after-tax basis.

Monetary and fiscal policies, including a tax decrease in early 1964, contributed to sustained economic expansion following the brief recession at the beginning of the decade. The expansion, which proceeded at a relatively moderate pace through 1964, was accompanied by unusual stability in financial markets and over-all prices and led to a gradual decline in the unemployment rate. With prices relatively stable, demands for goods and services moderate, and monetary policy changing relatively little, expectations in financial markets also tended to stabilize, and the willingness of investors to acquire longer-term securities increased. This tended to moderate upward pres-

tures on long-term interest rates, as did the increased purchases of longer-term securities by banks resulting from their enhanced ability to obtain time and savings deposits from the public.

Demand pressures in both nonfinancial and financial sectors of the economy became stronger after mid-1965 because of the sharp increase in Federal Government expenditures associated with Vietnam and an acceleration in business capital outlays. Price stability began to break down, and there was increasing concern about inflationary pressures. The balance of payments continued in deficit, as an improvement on capital account resulting from the VFCR program and from the interest equalization tax began to be offset by erosion in the U.S. surplus on goods and services transactions with foreigners. Mounting credit demands and a tightening of monetary policy led to a sharp run-up in interest rates throughout the maturity spectrum—a rise in yields that began in the latter half of 1965 and accelerated in 1966.

Thus, participants in the U.S. Government securities market were confronted with much more volatile market conditions after mid-1965 than they had been in the earlier years of the decade. The difference was traceable in large part to changes in underlying economic conditions as they influenced credit demands, monetary policy, and market expectations about the likely course of interest rates.

CHANGING ENVIRONMENT IN PRIVATE FINANCIAL MARKETS

During the 1960's two major changes occurred in private financial markets. Commercial banks became more aggressive in seeking lendable funds; this change affected not only the portfolio policies of banks but also the financial behavior of other borrowers and lenders. In addition, the international mobility of funds was increased as a result of the return to convertibility of the currencies of the major European countries in the late 1950's.

Commercial bank behavior. One of the most dramatic shifts in financial markets in the 1960's was the increased aggressiveness of

banks in obtaining funds. Banks sought interest-bearing deposits from the public more actively than in any other period since the 1920's. In addition, in adjusting their reserve positions, banks made increasing use of the Federal funds market—the market in which banks with excess reserves make them available to banks with reserve deficiencies. The volume of Federal funds transactions more than doubled from 1961 through 1966.

Efforts by commercial banks to obtain time and savings deposits reflected an attempt to regain their previous competitive position. Especially in the 1950's corporations had increasingly substituted money market assets, chiefly Treasury bills, for bank deposits, and consumers had shifted an even larger share of their financial asset holdings to claims on nonbank financial institutions, where yields exceeded those on bank time and savings deposits by a wide margin. In the 1960's the Board of Governors of the Federal Reserve System increased the ceiling rate banks could pay on time and savings deposits four times, and this enabled banks not only to issue large-denomination negotiable CD's to corporations and other investors but also to offer more attractive yields on consumer-type time and savings deposits.

As a result, the average annual rate of increase in outstanding time deposits at banks rose from 6.5 per cent in 1954–60 to more than 15 per cent in 1961–65. By the end of 1965, such deposits represented about 45 per cent of total commercial bank deposits, as compared with a little more than 25 per cent at the end of 1954. With greater deposit inflows, the rate of increase of bank credit doubled to an annual rate of about 9 per cent in 1961–65, and the banks' share of total credit flows rose to more than one-third from the average of about one-fifth for the 1954–60 period.

With credit readily available at banks, business firms relied relatively less on security issues in the market as a means of financing. Moreover, increased bank acquisitions of State and local government bonds and greater willingness of banks to make real estate loans—

associated mainly with the rapid growth of bank time deposits—also tended to reduce pressures on capital markets. At the same time, the very large increase in short-term financial assets issued by banks—especially CD's—added upward pressure on short-term rates.

Increased use by banks of markets for Federal funds and time deposits also tended to lend a day-to-day stability to short-term market yields. With the increased number of participants in financial markets and the greater variety of money market instruments, the ability of both investors and issuers to arbitrage between markets increased sharply. In particular, the ability of banks to increase or decrease the supply of time deposits by small shadings in rates increased the flexibility with which the aggregate stock of money market instruments could expand and contract.

Bank activity growing out of these developments in the first few years of the 1960's contributed importantly to a narrowing of yield spreads between short- and long-term market instruments at that time. The increased interest of banks in longer-term assets, including in particular State and local government securities, tended to keep long-term rates from rising very much in that period, and banks' increased ability and willingness to offer competitive yields on time deposits exerted upward pressure on short-term rates.

Aside from affecting security markets generally, and therefore the market for Treasury securities, greater bank use of Federal funds and time deposits also influenced U.S. Government securities more directly. With the greater development of the Federal funds market as an alternative use or source of overnight funds to banks, loan rates to U.S. Government securities dealers became more closely matched to the yields on alternative uses of bank funds. Thus, the costs to U.S. Government securities dealers of financing their inventories of securities became even more sensitively attuned to the costs to banks of reserve adjustments.

In their own portfolios banks continued to reduce the share of their assets devoted to Treasury issues. However, within their holdings of Treasury issues, a greater share of the

smaller total took the form of very short-term issues. The relative increase in bill holdings may have reflected both the increased relative attractiveness of bill yields and the efforts of banks to ensure adequate liquidity given their increased long-term assets in other than Treasury securities and their greater reliance on interest-sensitive deposits.

Insofar as the over-all market for Treasury bills was concerned, banks' purchases partially compensated for reduced acquisitions by corporations. Business firms invested an increasing amount of their short-term funds instead in negotiable CD's issued by banks. A secondary market for these CD's developed, made for the most part by U.S. Government securities dealers, and so the instruments achieved a degree of market liquidity. Still, negotiable CD's were not so liquid as Treasury bills, and therefore they generally yielded about 20 to 40 basis points more than bills.

International financial environment. With the return to convertibility of major foreign currencies in the late 1950's, funds could flow between U.S. and foreign financial centers more freely in response to interest-rate differentials. In the first several years of the 1960's, with interest rates relatively low in the United States, foreign demand for U.S. financial assets slowed, while U.S. investors, including those with liquid funds to invest, became more interested in foreign assets. And in view of the increasing number of attractive alternative investments, such as CD's and Euro-dollar deposits, foreign demand for dollar assets was diverted away from short-term U.S. Treasury issues. Indeed, except for foreign monetary authorities, foreigners reduced their holdings of short-term U.S. Treasury securities on balance after 1959. Not many long-term marketable Treasury issues were acquired by foreigners, but from 1962 through 1965 foreign central banks and governments acquired over \$1.5 billion of special nonmarketable bonds and notes that were issued by the U.S. Treasury to relieve pressure on the U.S. gold stock.

The greater ability of liquid funds to flow among leading financial centers, and the devel-

opment of instruments—such as Euro-dollar deposits—that readily reflected the interplay of supply–demand conditions in the United States and abroad, meant that domestic money markets became more sensitive to foreign developments, and vice versa. Thus, financing costs of dealers and attitudes of investors toward U.S. Government securities began to reflect not only the outlook for the domestic economy but also the likely course of credit developments abroad.

FISCAL POLICY AND TREASURY OPERATIONS

Fiscal policy from 1961 to mid-1965 was designed to increase aggregate demand, while Treasury debt management operations sought to avoid downward pressures on short-term interest rates. In addition, the Treasury sought to lengthen the average maturity of the Federal debt without exerting undue upward pressures on longer-term interest rates.

Fiscal policy. In the first half of the 1960's, fiscal policy was used aggressively as a vehicle to stimulate aggregate demand. Cash expenditures by the U.S. Government expanded by more than \$33 billion from 1961 to 1965, and reductions in tax rates in 1962, 1964, and 1965 lowered tax inflows by a total of \$23.5 billion in the years the adjustments became effective. As a result, “fiscal drag”—the amount by which tax revenues would exceed expenditures at full employment—declined from almost \$14 billion in 1960 to about \$5 billion in 1965. With increased outlays related to the war in Vietnam, the full employment surplus was reduced to zero in 1966.

The larger cash deficit of the 1960's was translated into an average increase in marketable debt of about the same size as in the 1950's. The major reason for this was that marketable issues were used to finance retirement of nonmarketable debt in the 1950's and that Federal agency and participation certificate issues were relied on more heavily in the 1960's—especially in 1966. As a result there was an increase in the stock of financial assets competing with direct marketable Treasury issues for the funds of investors.

Maturity structure of new issues. From 1961 to 1966 the supply of marketable Treasury issues increased by \$29 billion. In order to place upward pressure on short-term yields while minimizing such pressure on long-term interest rates, the Treasury used bills to finance more than 85 per cent of the increase over the

TABLE 1: MATURITY CHANGE IN OUTSTANDING MARKETABLE U.S. GOVERNMENT SECURITIES

Type or maturity of issue	Change, 1961-66 (billions of dollars)	Percentage distribution of change	
		1961-66	1954-60
Total	29.0	100.0	100.0
Bills	25.2	86.9	58.1
Coupon issues maturing (in years):			
Within 1	6.1	21.0	-56.4
1 to 5	-12.8	-44.1	125.1
5 to 10	9.3	32.1	-4.7
10 to 20	-4.7	-16.2	-49.3
After 20	5.9	20.3	27.3

period.³ Moreover, the Treasury timed its offerings of bills so as to modify tendencies for bill rates to decline.

At the same time that the Treasury was obtaining the bulk of its new cash through the bill market, it attempted to extend the average maturity of its public debt in order to ease refinancing problems. To reduce the impact of the issuance of longer-term securities on market rates, the Treasury introduced advance refundings in 1960. Advance refundings offer holders of certain outstanding issues that will not mature for some time the option of exchanging their holdings for new issues of longer maturity. Since investor preferences as to the maturity of issues in their portfolios vary, investors that desire longer-term issues tend to sell issues from their portfolios as those issues move closer to maturity, whereas most holders of short-term issues do not desire to exchange their holdings for long-term issues. Thus, the advance refunding technique seeks to make

³ The average annual increase in bill issues during this period exceeded that of each post-accord year except 1959, when outstanding bills increased sharply as the statutory 4¼ per cent rate ceiling on bonds forced the Treasury to finance its large deficit in the short-term market. In 1965-66 the increase in bill issues was a reflection of the same problem.

available to investors interested in longer-term issues attractive securities to replace those that might otherwise pass into the hands of investors attracted to shorter maturities. In this way the market and rate impact of exchanges to lengthen average maturities tends to be moderated.

Mainly through the advance refunding technique, almost \$70 billion of bonds were sold (gross) from 1961 through 1966. These sales shifted 1- to 5-year coupon issues primarily into the 5- to 10-year area and 5- to 12-year maturities mainly into the over-15-year area, lengthening the average maturity despite the net increase of only \$4 billion in new coupon issues and the shortening of the maturity structure with the passage of time.⁴

Treasury investment accounts. During the 1960's the Treasury also used its investment powers—in administering the portfolios of some Federal agencies and trust funds—to contribute to the smooth functioning of the market and, at times, to assist in market absorption of new issues.

Acquisitions by Treasury official accounts in the 1960's rose to about 23 per cent of net new Treasury issues, up from about 13 per cent in the 1950's. More importantly, a much larger share of these acquisitions took the form of long-term securities; holdings of issues maturing in less than 1 year actually declined prior to 1966. Almost 60 per cent of net acquisitions were in bonds maturing after 5 years, and about 35 per cent had maturities in excess of 20 years—both much larger than in the 1950's. These acquisitions, obtained through exchanges and some in the market, accounted for a large share of new issues of long-term securities—about one-third of all bonds maturing after 5 years and about 40 per cent of those

maturing after 20 years. The maturity distribution of Treasury official-account purchases in the 1961-66 period thereby helped moderate upward interest-rate pressures in longer-term markets.

TABLE 2: CHANGES IN MATURITIES OF MARKETABLE U.S. GOVERNMENT SECURITIES HELD BY TREASURY OFFICIAL ACCOUNTS

Type or maturity of issue	Increase in holdings, 1961-66 (billions of dollars)	Percentage distribution of increase	
		1961-66	1954-60
Total	6.5	100.0	100.0
Bills	1.0	15.4	10.7
Coupon issues maturing (in years):			
Within 1 .....	.3	4.6	17.9
1 to 5	1.3	20.0	49.0
5 to 10 .....	.9	13.8	25.9
10 to 20 .....	.6	9.2	-25.1
After 20	2.3	35.4	21.5
Memo: Acquisitions as a percentage of net new issues		22.8	13.4

On a few occasions Treasury purchases were timed to facilitate the orderly distribution of new issues and thus to restrain upward rate movements that might have occurred during financings. Such acquisitions were used to reduce the overhang of unsold securities in dealer inventories during advance refundings and re-financings involving longer-term bonds. These activities were intermittent and were designed to smooth temporary pressures, not continuously to counter market supply and demand.

FEDERAL RESERVE ACTIONS

From 1960 to the fall of 1965, monetary policy was concerned primarily with contributing to expansion in domestic output. Reserves were supplied generously, in part to permit the rapid increase in time deposits discussed earlier. For balance of payments reasons, however, the Federal Reserve System also sought to reduce downward pressures on short-term rates, especially to avoid the sharp declines in such rates that had developed in previous periods of monetary ease. To further this objective, the discount rate was lowered only to 3 per cent in 1960—whereas it had been lowered to 1¾ per cent in 1958. And

⁴ Senior advance refundings—that is, those in which holders of 5- to 12-year maturities are offered longer-term issues—have not been used since 1962 because the previous exchanges sharply reduced public holdings of issues which could be used in such refundings and because the core of the refunding problem is the large amount of 1- to 5-year issues that require the use of junior and pre-refundings. From mid-1965 through 1966, no new bond issues were used since the 4¼ per cent rate ceiling on bonds made it impossible for the Treasury to sell longer-term issues.

open market operations were conducted in such a way as to minimize the downward pressures on short-term rates from the day-to-day provision of reserves to the banking system.

Beginning in late 1965, monetary policy became increasingly restrictive as aggregate demands on resources rose sharply and pressed on the available resources of the economy. Reserves were supplied less rapidly, the discount rate was increased, reserve requirements were raised on time deposits, and the ceiling rates on time deposits became increasingly restrictive on banks as market interest rates rose during most of 1966.

Federal Reserve open market operations: volume of activity. From 1961 to 1966, the Federal Reserve became a much larger factor over-all in the U.S. Government securities market than it had been in earlier years. Not only did its volume of gross transactions more than double, but its net portfolio acquisition of Treasury issues rose sharply. In this period the System absorbed an amount equal to well over one-half of the net new issues of marketable securities, compared with less than 5 per cent from 1954 to 1960.

TABLE 3: FEDERAL RESERVE SYSTEM TRANSACTIONS IN U.S. GOVERNMENT SECURITIES

	Annual averages in billions of dollars, unless otherwise noted	
	1954-60	1961-66
Total transactions	14.9	34.7
Outright	5.6	16.8
Repurchase agreements	9.4	17.8
Net purchases:		
Volume .....	.2	2.8
<i>As percentage of net new marketable securities</i>	4.4	58.3

While the increased scale of operations reflected the generally expansive stance of monetary policy and the rapid increase in time deposits over the period, increased fluctuations in technical market factors affecting reserves required greater offsetting operations by the System. Both float and currency in circulation showed wider swings, and the gold outflow accelerated. In addition, efforts to avert downward pressures on short-term yields influenced the volume and types of open market transac-

tions as the System in the early 1960's from time to time sold bills and purchased other U.S. Government securities.

Federal Reserve open market operations: maturity structure. As in the 1950's, most of the transactions for the System Open Market Account in the 1960's involved Treasury bills. However, from 1961 to 1966—especially in the earlier years—a greater proportion of the transactions involved coupon issues as the System attempted to avoid downward pressures on bill yields resulting from reserve injections by the System. In the 1954-60 period, less than 1 per cent of the System's net purchases had involved coupon issues with maturities of more than 1 year. From 1961 to 1966, the ratio averaged about 30 per cent; it was 85 per cent in 1961 and almost 60 per cent in 1962. No security maturing after 5 years was sold by the System during the 1960's period, and sales of issues maturing in 1 to 5 years were infrequent.

TABLE 4: MATURITY DISTRIBUTION OF FEDERAL RESERVE SYSTEM TRANSACTIONS IN U.S. GOVERNMENT SECURITIES

Percentage distribution

Maturity or type of issue	Total purchases		Total sales		Net purchases	
	1954-60	1961-66	1954-60	1961-66	1954-60	1961-66
Total	100.0	100.0	100.0	100.0	100.0	100.0
Bills	93.0	83.9	97.3	94.1	87.3	69.5
Coupon issues maturing (in years):						
Within 1	6.7	3.1	2.6	5.2	12.1	(¹)
1 to 5 .....	.1	8.6	.1	.7	(¹)	19.9
After 5 .....	.2	4.4	...	...	.5	10.6

¹ Less than 0.1 per cent.

NOTE.—Includes purchases from and sales to dealers and foreign official accounts. Details may not add to totals due to rounding.

CHANGES IN STRUCTURE OF U.S. GOVERNMENT DEBT IN THE HANDS OF THE PUBLIC

Even though the average annual increase in marketable U.S. Government securities from 1961 to 1966 was about the same as from 1954 to 1960, the public's acquisitions, on the average, were considerably smaller in the 1960's. As indicated in Table 5, acquisitions

by official accounts in the 1961-66 period absorbed an amount equal to more than 80 per cent of the rise in marketable Treasury securities and so the public, on average, accounted for less than 20 per cent of the increase.

TABLE 5: CHANGES IN OWNERSHIP OF U.S. GOVERNMENT MARKETABLE SECURITIES

Owner	Average annual change (billions of dollars)		Percentage distribution ¹	
	1954-60	1961-66	1954-60	1961-66
Total	4.9	4.8	100.0	100.0
Official accounts—Total	.9	3.9	17.6	81.3
Federal Reserve	.2	2.8	4.3	58.3
Treasury	.7	1.1	13.3	22.9
Holdings of public	4.0	.9	82.4	18.8

¹ Based on actual changes, not average annual changes.

However, as indicated in Table 6, with the sharp rise in short-term securities outstanding and the relatively large acquisitions of long-term securities by official accounts, public holdings of securities maturing within 1 year rose substantially—tending to put additional upward pressure on short-term yields. While public holdings of coupon issues maturing in more than 1 year declined by more than \$4 billion, advance refundings contributed to an expansion in public holdings of 5- to 10-year and over-20-year issues. Official purchases and advance refunding techniques tended to limit the interest-rate impact of this lengthening of maturities.

TABLE 6: CHANGES IN OWNERSHIP AND MATURITY OF U.S. GOVERNMENT MARKETABLE SECURITIES, 1961-66

Billions of dollars

Maturity or type of issue	Total outstanding	Holdings of—			
		Official accounts			Public
		Federal Reserve	Treasury	Total	
Total	29.0	16.9	6.5	23.4	5.6
Bills	25.2	9.1	1.0	10.1	15.2
Coupon issues maturing (in years):					
Within 1	6.1	11.1	0.3	11.4	-5.2
1 to 5	-12.9	-3.2	1.3	-1.9	-10.9
5 to 10	9.3	-.2	.9	-.7	8.6
10 to 20	-4.8	-.1	.6	-.5	-5.3
After 20	5.9	.2	2.3	2.6	3.4

NOTE.—Details will not necessarily add to totals due to rounding. The data reflect total changes while the dollar magnitudes shown in Table 5 are average annual changes.

CONCLUDING COMMENT

Most of the factors that made up the economic and financial environment of the period from 1961 to mid-1965 contributed to a gradually rising level of short-term interest rates—with little day-to-day fluctuation—and a comparatively stable level of long-term rates. To a large degree, the stability of economic growth and prices, together with the relatively limited demand for market financing on the part of the private sector, contributed to the stability of long-term yields. When demands for goods and services and for credit accelerated and inflationary pressures developed from mid-1965 through the fall of 1966, interest rates moved up rapidly throughout the maturity range.

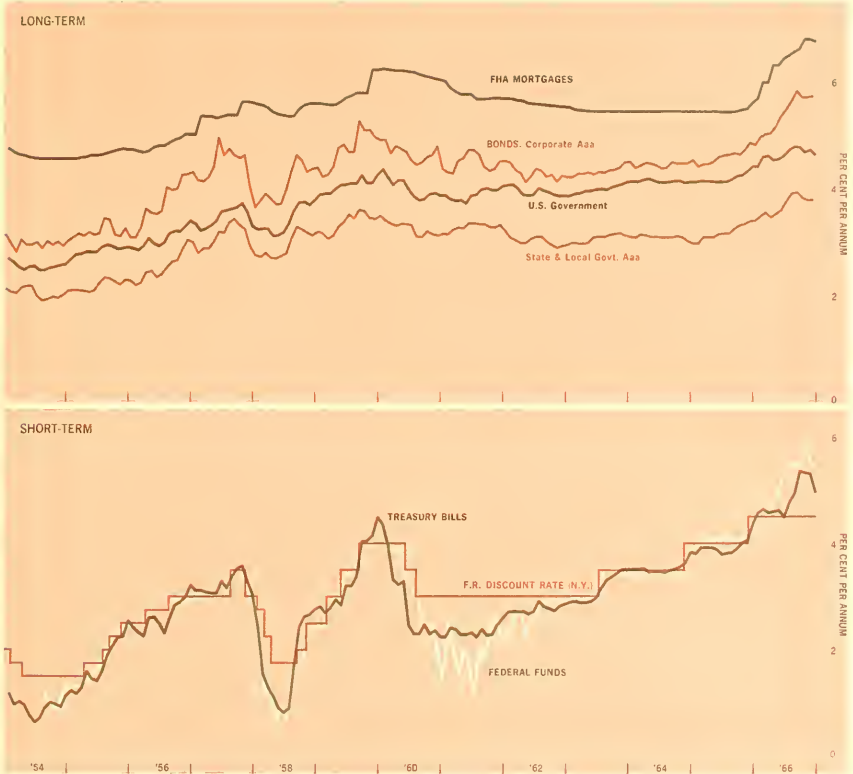
Innovations in System open market operations, Treasury debt management, and private financial markets in this period also contributed to interest-rate developments. Short-term interest rates were affected by Treasury debt management operations that substantially increased the supply of Treasury bills and by open market operations of the Federal Reserve System. For much of the period, the Federal Reserve supplied reserves in sizable quantity to the banking system, but in the early years of the 1960's the downward impact on short-term rates from this supply was minimized by making open market purchases in the intermediate- and longer-term sectors of the Government securities market.

In private financial markets the growth of the negotiable CD, the increased use of Federal funds for reserve adjustment, the broadening of commercial bank investments, and the increasing interest-rate sensitivity of money market participants contributed not only to the growth of alternative investment outlets in the short-term market but also to a greater movement of funds—through the intermediation of commercial banks—between short- and longer-term markets. These institutional developments in private markets may well have had more of an impact on the structure of interest rates than did official operations. The more aggressive issuance of time deposits by commercial banks added more to the public's holdings of short-

term assets than did Treasury and Federal Reserve debt management activities combined. Moreover, the increased demand by banks for longer-term financial assets, which accompanied

the rapid inflow of time and savings deposits, added to the relative stability of long-term yields in the 1961–65 period when yields on short-term issues were drifting up. □

1 | INTEREST RATES, 1954-66



Monthly averages of daily or weekly figures except for mortgages (based on quotations for 1 day each month). Yields: FHA-insured mortgages, weighted averages of private secondary market prices of certain new-house mortgages converted to annual yield; State and local Aaa-tax-equivalent, from Moody's Investors Service, adjusted to a tax-equivalent basis assuming

a 36 per cent individual income tax rate; corporate Aaa new issues, calculated from bonds rated Aaa, Aa, and A by Moody's Investors Service and adjusted to an Aaa basis; U.S. Govt. bonds, market yields adjusted to constant maturity (20 years) by U.S. Treasury; U.S. Treasury bills, market rates on 3-month issues.

IV. STRUCTURE OF THE DEALER MARKET IN U.S. GOVERNMENT SECURITIES

Not only were there substantial changes in the broad economic and financial environment during the 1960's, but these were also years of change in narrower segments of markets and in particular in the dealer market for U.S. Government securities. At the end of the period eight dealer departments of commercial banks and 12 nonbank firms were making primary markets in Government securities and reporting to the Federal Reserve Bank of New York on their positions, volume of trading, and borrowings. Five new dealers—two nonbank firms and three bank dealer departments—entered the industry during the interval, and three nonbank firms withdrew. The net effect was to increase competition in an already highly competitive industry. In addition, banks and other investors apparently became more active in trading Government securities for short-term gains and in taking positions in new Treasury issues.

Despite a substantial increase in the aggregate volume of transactions in U.S. Government and Federal agency securities, the dealers became increasingly concerned during the 1961–65 interval as to whether the profits being earned were adequate to justify existing commitments of capital and specialized personnel in the industry. At the same time some observers questioned whether the increased participation of banks as primary dealers might not lead to a withdrawal of nonbank dealers. This, it was said, would impair the ability of the dealer market to function under adverse conditions in intermediate- and longer-term issues, in which trading risks are greatest.

Increased competition exerted a pervasive influence on the dealer market during the balanced phase of the economic expansion that lasted from 1961 to mid-1965. The five new dealers accounted for over one-fifth of total activity in U.S. Government and Federal agency securities in 1965 while the trading volume of old dealers remained at about the 1961 level. The share of the top third of all dealers—bank

and nonbank—in total activity declined, whereas both the medium-sized and smaller dealers enlarged their shares. The erosion in market share of the top third of the dealers was most pronounced in Treasury bill trading, in which the risks are least, but their market share of trading in Treasury coupon securities also declined. Over the 1961–65 interval bank dealers accounted for a rising share of market activity, while the three leading nonbank firms experienced a roughly corresponding decline in their market share.

The primary dealers provided important and growing support to the Treasury's debt-lengthening operations from 1961 to mid-1965. In the comparatively stable interest-rate environment of the period, the dealers accounted for about a third of total public subscriptions to the longer-term option in regular exchange refundings. Over the interval the top third of the dealers continued to account for an overwhelming share of the distribution to the public of the longer issues. Other dealers—both bank and nonbank—appear to have added considerably more to their underwriting participation than to their distributive capacity. In the Treasury's advance refundings, too, the dealers were a major source of support.

As was to be expected, once imbalances began to develop in the economy and in financial markets in the second half of 1965, the dealers experienced growing difficulty in maintaining orderly and smoothly functioning markets, particularly in intermediate- and longer-term securities. Expectations in 1966 became more volatile and then progressively more apprehensive about the impact of current and prospective demands on financial markets. Many dealers and other active traders who had contributed to the resiliency of the market earlier practically withdrew from participating except in Treasury bills, and even here their participation dropped. Thus, the functioning of the Government securities market outside the short-

term area came to depend increasingly upon only a few dealers who continued to make markets in all maturities although on a reduced scale. Investors at times experienced a notable deterioration in the market's willingness to bid for Treasury securities, particularly coupon issues, even at prices significantly below those of quoted markets.

The deterioration in the market's performance in 1966 appears to be explainable almost wholly on cyclical grounds. It seems doubtful that structural changes within the dealer industry from 1961 through mid-1965—for example, the entry of new bank and nonbank dealers—contributed importantly to the result. The very heavy use of borrowed money characteristic of the industry encourages a large volume of stabilizing speculation when risks of loss are small or moderate but makes the conservation of capital a dominant consideration for most participants when such risks become large.

The very great dependence of the dealer market on borrowed funds helps to transmit the effects of monetary policy to markets. Official moves toward either stimulation or restraint are transmitted very rapidly to financial markets as changes in the cost of borrowed funds lead Government securities dealers to change prices at which they will buy and sell securities and to raise or lower their positions by sometimes large amounts. But this very dependence on

borrowings and the fact that a large part of the borrowings are overnight loans, which are strongly influenced by day-to-day swings in the money position of banks, also raise the danger that the dealer market may at times be faced with a sudden shortage of funds relative to the needs of dealers, with a consequent sharp deterioration in dealers' capacity or willingness to make markets.

Normally, even in periods of tightening credit, the market can successfully adapt to the relatively gradual changes in dealer loan terms that develop. Still, in order to provide as large a cushion as possible, dealers have attempted to broaden their sources of financing; they obtain funds from banks in leading money centers, from other banks, from nonfinancial corporations, and from others. During the 1960's, however, there were no major shifts among the sources of nonbank dealer financing and no great enlargement in the availability of funds. Nonfinancial corporations continued to finance about half of dealer positions, and banks both inside and outside of New York City financed much of the remainder. Nonbank dealers also continued to obtain financing from time to time through repurchase agreements with the Federal Reserve System at the System's initiative. Bank dealers generally finance their positions through use of bank funds, and these funds are costed in a variety of ways. But by and large the cost appears related to the Federal funds rate. □

V. VIEWS OF MARKET PARTICIPANTS

The changes in the use of monetary and debt management policy instruments, in the economic environment, in the behavior of banks and other institutions, and in the dealer market itself in the first half of the 1960's raised many questions in the minds of participants in the Government securities market. To help in analyzing how these changes were influencing the Government securities market, whether any developing problems were permanent or temporary, whether problems were broadly based or unique to particular groups, and whether there were issues susceptible to amelioration through policy action, the Treasury and Federal Reserve sought the views of all the U.S. Government securities dealers as well as of a large number of institutional investors.

VIEWS OF U.S. GOVERNMENT SECURITIES DEALERS

In the spring and early summer of 1966, some 20 primary dealers in U.S. Government securities submitted written replies to a questionnaire and participated in individual meetings with officials of the Treasury and the Federal Reserve.⁵ The dealers presented their views on a wide range of topics and made a number of proposals for improving the functioning of the market.

Market performance. Most of the dealers felt that the secondary market for intermedi-

ate- and long-term Treasury coupon issues had deteriorated during the 1960's. The reasons most often cited for this worsening were the abandonment of the "bills usually" policy by the Federal Reserve in favor of transactions in all maturity areas of the market and the too frequent use of advance refundings by the Treasury.

Federal Reserve transactions in longer-term Treasury coupon securities, many dealers alleged, tended to be destabilizing since the market for such securities was relatively "thin" and subject to sharp fluctuations in response to large transactions. Moreover, even when actual Federal Reserve operations were small, some dealers felt that their potential size and possible policy implications tended to dominate market psychology, to create uncertainty in the minds of market participants, and thus to undermine initiative in forming independent judgments about market trends based upon underlying economic forces. A number of dealers conceded that relatively small operations in longer-term coupon issues might not be unsettling so long as they remained marginal and were conducted in a manner that clearly did not imply an attempt to control longer-term interest rates. In this connection, many dealers had no real quarrel with the relatively more limited transactions in coupon issues which the Federal Reserve had carried out since the fall of 1965. A few dealers remained convinced, however, that the Federal Reserve should intervene in the market for longer-term issues only to avoid or to correct "disorderly" market conditions.

Treasury advance refundings introduced in the early 1960's had also proved detrimental to the functioning of the secondary market for coupon issues, many dealers thought. It was generally conceded that advance refundings were an excellent debt management device, but one that had been used too frequently and on too massive a scale in the 1960-65 period. As a result, many investors were able to satisfy their portfolio objectives without going to the

⁵ These included the following bank dealers: Bankers Trust Company, New York; Chemical Bank New York Trust Company; Continental Illinois National Bank and Trust Company of Chicago; The First National Bank of Chicago; First National City Bank, New York; Harris Trust and Savings Bank, Chicago; Morgan Guaranty Trust Company of New York; United California Bank, Los Angeles; and the following nonbank dealers (all with head offices in New York): Blyth & Co., Inc.; Briggs, Schaedle & Co., Inc.; Discount Corporation of New York; The First Boston Corporation; Aubrey G. Lanston & Co., Inc.; Merrill Lynch, Pierce, Fenner & Smith, Inc.; New York Hanseatic Corporation; Wm. E. Pollock & Co., Inc.; Chas. E. Quincey & Co.; D. W. Rich & Co., Inc.; Salomon Brothers & Hutzler; and Second District Securities Co., Inc.

secondary market. Moreover, trading had tended to be concentrated in periods of financings, and in the intervals between such periods market activity in longer-term securities had allegedly tended to atrophy.

Several dealers, while conceding the primary importance of monetary and debt management objectives, felt nevertheless that the implementation of these objectives had involved too much intervention in the market in the 1961–65 period, and that not enough consideration had been given to the impact on the functioning of the secondary market for Treasury coupon issues. In the long run, a well-functioning secondary market was deemed essential to the effective execution of both debt management and monetary policy objectives.

Among other developments viewed as detrimental to market performance was the relative decline in holdings of Treasury obligations by commercial banks, considered to be the mainstay of the secondary market and the principal lenders of securities to dealers. Concomitantly, large blocks of intermediate- and long-term securities had been acquired by traditionally less active market participants such as pension funds and official accounts. The trading activity of institutional investors was further curtailed, dealers maintained, by the generally narrow interest-rate fluctuations over most of the 1961–65 period, which reduced opportunities for profitable portfolio switches. Moreover, the gradual uptrend in yields over the period, which accelerated after mid-1965, discouraged trades by investors reluctant to realize book losses on their security holdings.

On the positive side, at least from the standpoint of investors, several dealers pointed to the increased competitiveness of the market during the 1961–65 period. In part, this was related to the establishment of several large new dealer firms, including dealer or quasi-dealer departments at some major banks. Concern was expressed that bank dealers, who were alleged to enjoy certain competitive advantages such as more ready access to financing and the rendering of a wide range of services to customers, might tend to displace the nonbank dealer firms, who looked primarily to

the Treasury market and other closely related markets for their profits and necessarily remained active in the market in good years and bad.

A number of dealers emphasized that even though they felt the functioning of the Treasury bond market had deteriorated in the 1960's, the market still performed quite well in view of the many obstacles it had to overcome. Most of the dealers also stressed that the market for Treasury bills had continued to function exceptionally well in recent years and that investors were continuously able to execute a large volume of business at, or very close to, prevailing market quotations.

Most of the dealers noted that the secondary market for Federal agency securities had improved substantially in the 1960's when considerable growth had occurred in amounts of agency issues outstanding. Some dealers did express objections to the basic idea of issuing relatively expensive Federal agency debt instead of direct Treasury obligations to finance Government or quasi-Government expenditures. Many dealers also decried the bunching of new Federal agency offerings during the first half of 1966. They believed that this concentration of new issues had contributed importantly to the upward escalation of interest rates in that period.

Profitability of dealer operations. The dealers observed that narrow market fluctuations over most of the 1960–65 period and a gradual uptrend in yields had made profitable operations difficult to achieve. The major source of dealer profits, they noted, was the correct anticipation of market swings from which dealers could benefit through appropriate adjustments in their inventories. The most sizable profits were usually realized in periods of falling interest rates, when the value of debt securities held in portfolios appreciated. Dealers found it much harder to operate profitably in periods of rising interest rates, since it was always technically difficult to build up and maintain sizable net short positions. Moreover, in periods of tight money market conditions, financing costs of dealers rose in relation to interest returns on their inventories,

and at such times dealers often experienced a "negative carry" on their inventories. Dealers also expressed serious concern about their ability to find sufficient financing at any cost in periods of very tight money market conditions such as prevailed in mid-1966. Since the nonbank dealers, in particular, depend upon borrowed funds to carry virtually all of their inventories, access to financing is essential to their continued functioning as dealers. Accordingly, several dealers saw an urgent need for a "lender of last resort" and recommended that the Federal Reserve make the necessary funds available either directly or through banks.

The difficulties encountered in achieving profitable operations during the 1960's had compelled a number of firms to re-assess their continued functioning as full-fledged dealers, and indeed several firms reduced their activity in coupon issues after mid-1965. However, many firms remained quite optimistic about the long-run prospects for profitable operations in U.S. Government securities, and the profit experience of most firms improved markedly in late 1966 and 1967.

Dealer views and suggestions on various other topics. Many dealer recommendations centered on a desire to obtain as much information as possible concerning the nature and scope of Federal Reserve operations in U.S. Government securities. Accordingly, most of the dealers urged that the Trading Desk identify the accounts for which it was conducting significant transactions, namely Federal Open Market Account, or "customer" accounts such as Treasury investment accounts and foreign official accounts. A few dealers recommended that an approximation of the likely total amount of each operation also be given. The dealers alleged that such information was important to them since the market impact of operations for the FOMC could differ significantly from that of similar transactions for customer accounts where monetary policy was not a consideration.

In their comments on trading facilities, several dealers noted the difficulty of borrowing certain securities to execute short sales in the normal course of making markets for their customers and proposed that the Treasury in-

vestment accounts and/or the Federal Reserve undertake to lend such issues on commercial terms. A number of dealers also urged that progress be accelerated toward a fully automated system for clearing securities transactions. Many dealers, notably the diversified firms and bank dealers, viewed odd-lot transactions as a costly and growing problem. Suggestions for alleviating the problem included higher minimum denominations for Treasury obligations, more bunching of orders, greater use of computers, and possibly the establishment of a central odd-lot house.

Dealer comments about the few brokers who are used as intermediaries for the purpose of anonymous trading of relatively small amounts of Treasury coupon issues varied widely. Some dealers stressed that brokers provided a useful source of information about the market, while other dealers noted that the brokers could be used to influence market prices at least temporarily to the advantage of individual dealers.

Dealer views concerning a dealer association which might help to oversee market practices were quite diverse. Many dealers stressed the legal difficulties under the antitrust laws of forming such an association without active Treasury or Federal Reserve sponsorship, whereas some dealers saw no significant advantage to be gained and appeared to envision some loss of autonomy as members of such an association.

IEWS OF INSTITUTIONAL INVESTORS

About 400 major institutional investors in U.S. Government securities responded to a mail questionnaire sent to them in mid-1966. These investors submitted their views concerning the functioning of the market for U.S. Government securities, Treasury advance refundings, and official—System and Treasury—operations in outstanding Treasury coupon issues. The questionnaire focused on the period 1961–65, but comparative information was also supplied for the period 1955–60 and for mid-1965 to mid-1966.

Institutional investors and the U.S. Government securities market. The questionnaire sought information concerning both the

extent of participation by institutional investors in the market for U.S. Government obligations and the attitudes of these investors concerning the functioning of the market. The responses indicated that a large part of the secondary market transactions of institutional investors were executed through the primary dealers in U.S. Government securities. About three-fourths of the total volume reported appeared to be transacted through the primary dealers. Nondealer commercial banks accounted for most of the remaining business.

The larger institutions in the survey showed a distinct preference for conducting their market operations through the primary dealers. It was also found that the number of dealers used by individual institutional investors was directly related to the size of the investor firms. While only 40 per cent of the firms in the survey executed their transactions with six or more primary dealers, these firms accounted for more than 70 per cent of the holdings and nearly 90 per cent of the trading of all the firms responding to the questionnaire.

Among the criteria cited by the institutional investors in the selection of dealers to execute transactions, price was by far the most important. Many institutions, notably the smaller in size, also gave high and even primary importance to "other banking or financial business with primary dealer or bank." Even so, the apparently overriding importance of price for major institutional investors, along with the tendency of the largest investors to distribute their business among many dealers, supports the hypothesis that the market is highly competitive. About half of the respondents felt that competition among the dealers had increased during the 1960's, and only 7 per cent believed such competition had decreased.

With reference to investors' ability to execute transactions, a majority of the respondents felt there had been no change during the 1960's in the size of transactions that dealers were willing to undertake. However, an important minority concentrated among the larger institutional investors felt that dealer willingness to execute large transactions had deteriorated in all maturity sectors of the market during the mid-1965 to mid-1966 period. A

lesser but still important number of generally larger investors also felt that dealer performance in coupon issues had begun to deteriorate earlier in the decade.

Many of the respondents to the questionnaire availed themselves of the invitation to comment about the functioning of the market. Numerous specific suggestions for improving the market were made, but the most frequent single comment was one of satisfaction with the market.

Participation in advance refundings.

Some 60 per cent of the institutional investors in the survey reported that they had participated in Treasury advance refundings. These investors tended to be among the larger institutions and accounted for 85 per cent of the survey group's market activity in 1965 and 72 per cent of its holdings of Government securities. Nearly all of the institutional investors in the survey indicated either a favorable opinion of the advance refunding technique or at least a neutral attitude toward it.

A large majority of the institutional investors reported that advance refundings had not affected their trading in outstanding issues or had actually increased such trading. Some of the larger institutions were among the small minority suggesting that advance refundings had tended to decrease their secondary market activity.

Influence of Treasury and Federal Reserve operations in coupon securities.

A majority of the respondents reported that their investment operations were not affected by Treasury or Federal Reserve transactions in outstanding Treasury coupon obligations, but those that were influenced tended to include the larger institutions. Some felt that official activity in the market had tended to increase their ability to execute transactions. On balance, however, those reporting decreased ability to conduct their investment activities tended to account for a larger share of total market trading, and this fact suggested that official activity in the coupon area may have reduced over-all trading by institutional investors to some extent.

Most of the institutional investors who were affected by official activity in the market indi-

cated that their judgment of the course of interest rates was influenced for a "few days" or a "few weeks." Some investors, generally in-

cluding smaller institutions, reported that their expectations tended to be influenced for a period of a "few months." □

VI. OVER-ALL PERFORMANCE OF THE MARKET

As a basis for analyzing the performance of the U.S. Government securities market, not only were the opinions and experience of dealers and investors solicited but also statistical analyses were undertaken of the behavior, during the 1950's and the 1960's (to 1966), of such aggregative data on the market for U.S. Government securities as the volume of trading, dealers' positions, and security prices. In particular, an effort was made to evaluate how market performance was affected by the changing character of Treasury debt management policy and of open market operations of the Federal Reserve.

The analysis focused on the following specific market indicators: the daily-average volume of trading, the annual rate of turnover of the marketable U.S. debt, the 16th lowest daily volume of trading in each quarter,⁶ dealers' daily-average positions, the frequency of small and large daily price changes, and the spread between quoted bid and asked prices. Given the limitations of data availability, each indicator was selected in part because it measured an essential operational characteristic of the market and in part because it approximated desirable or undesirable attributes of the market. Since performance may vary greatly in different segments of the market, the indicators were examined on a quarterly basis for selected maturity classes of U.S. Government securities—bills, other securities maturing in 1 year or less, and securities maturing in 1 to 5 years, 5 to 10 years, and after 10 years. Charts 2 to 6 present profiles of market performance, as defined by the indicators, for each maturity class.

Key characteristics of an efficiently function-

ing market have been described as "depth, breadth, and resiliency," with these qualities defined in terms of orders on the dealers' books. The market

... possesses depth when there are orders, either actual orders or orders that can be readily uncovered, both above and below the market. The market has breadth when these orders are in volume and come from widely divergent investor groups. It is resilient when new orders pour promptly into the market to take advantage of sharp and unexpected fluctuations in prices.⁷

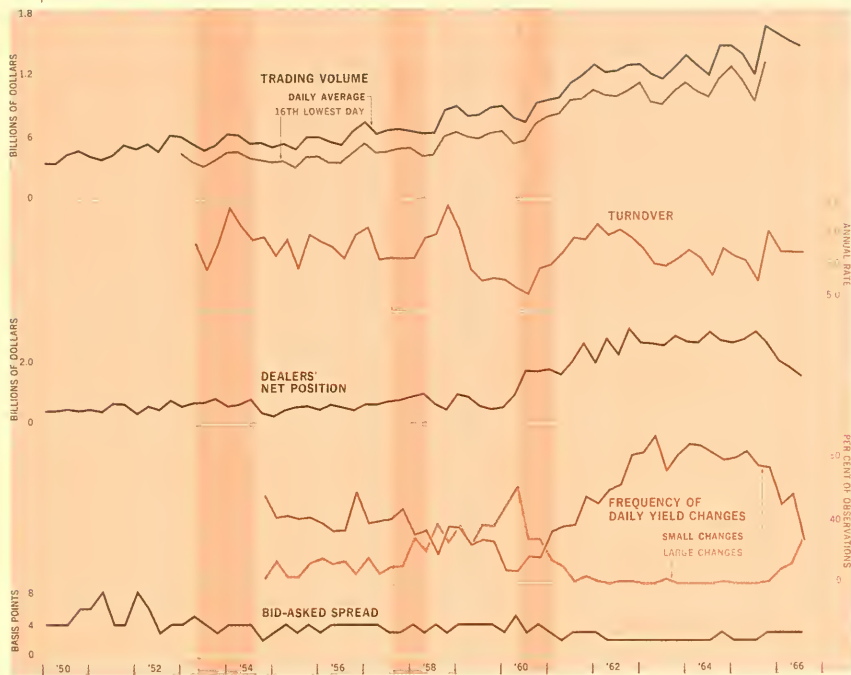
At the other extreme, in a disorderly declining market, "selling feeds on itself so rapidly and menacingly that it discourages both short covering and the placement of offsetting new orders."⁸ In more general terms, it is usually agreed that an adequately functioning U.S. Government securities market would have the capacity to accommodate Treasury financings, Federal Reserve open market operations, and private investment transactions at reasonable speed and cost. Such a market would be characterized by continuity in trading and would not exhibit extremely sharp daily price movements or very large spreads between bid and asked prices suggesting investor or dealer unwillingness to maintain an active market. Although lack of data on orders on the dealers' books prevents development of statistical indicators directly measuring "depth, breadth, and

⁷ From the 1952 report of the *Ad Hoc* Subcommittee on the Government Securities Market. See U.S. Congress, Joint Committee on the Economic Report, Subcommittee on Economic Stabilization (Flanders Committee), *United States Monetary Policy: Recent Thinking and Experience Hearings*, 83rd Cong., 2nd Sess., 1954, p. 265.

⁸ *Ibid.*, p. 268. A similar definition applies to a disorderly rising market.

⁶ This indicator shows the low trading days; daily trading would be below this level approximately 25 per cent of the time.

2 U.S. TREASURY BILLS Profile of Market Performance, 1950-66



For notes see Chart 6.

resiliency," the statistical indicators that were available for analysis do approximate some of these technical characteristics, as well as the more general criteria. At least they should signal changes over time in the underlying market characteristics.⁹

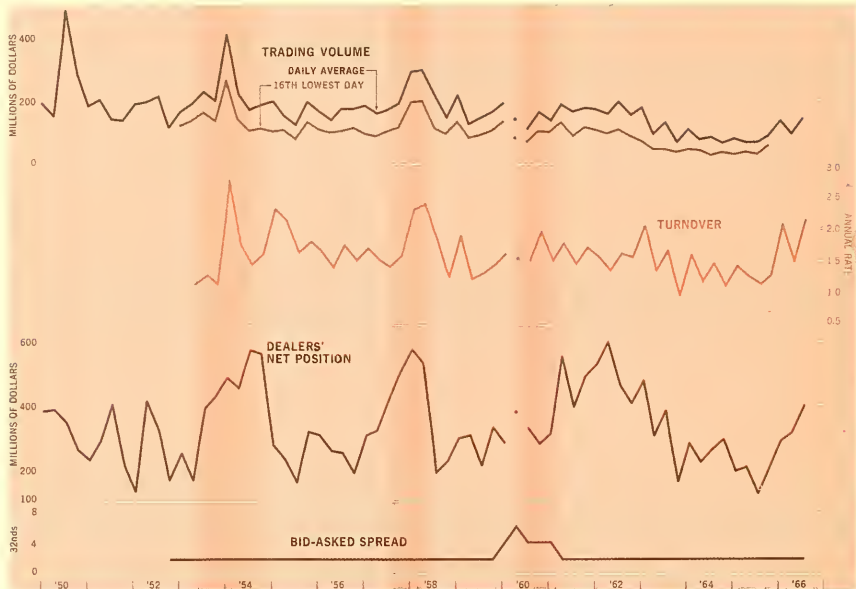
The conclusions with respect to market performance based on analysis of the market indicators are summarized below. But two precautions in interpretation are in order. First, the data used were subject to inconsistencies,

particularly the data reported informally by dealers in the 1950's, and comparability over time is not exact. Second, results of the statistical regression analyses that were carried out have to be interpreted carefully not only because of the data and other statistical problems but also because the results do not necessarily adequately reflect day-to-day operating problems of dealers and their customers in the market.

Over-all, the market showed few or no signs of deterioration from the 1950's to the 1960's in terms of the indicators studied. The indicators based on trading showed few signs of any long-term deterioration from the 1950's to the 1960's. Only in coupon issues maturing within 1 year was there clear-cut evidence of

⁹ It should be noted that these definitions and the selected indicators reflect activity of both dealers and customers, since performance of a dealer market—as distinct from performance of the dealers alone—depends on the behavior of the customers as well as on the functioning of the dealers.

3 U.S. GOVERNMENT SECURITIES (OTHER THAN BILLS) MATURING IN 1 YEAR OR LESS Profile of Market Performance, 1950-66



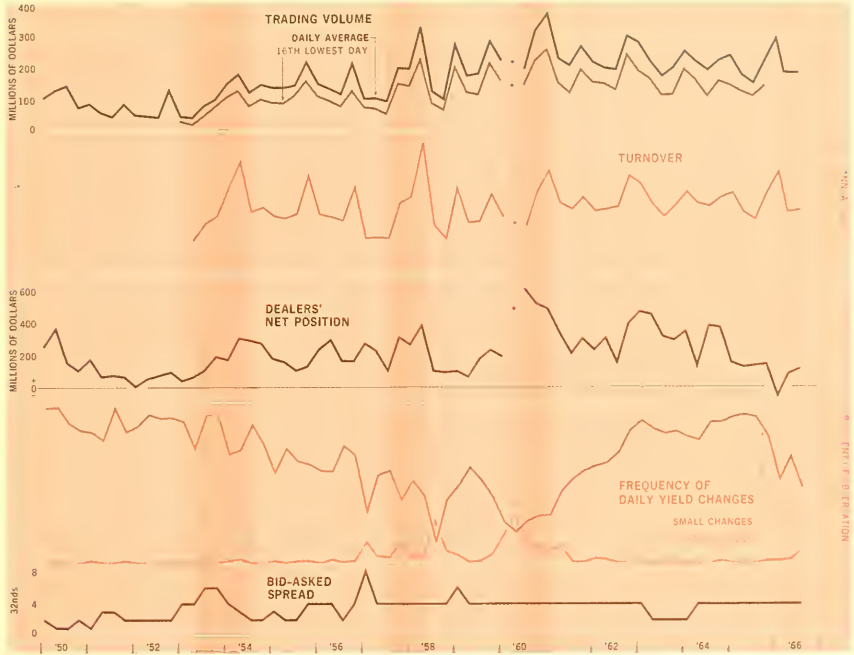
For notes see Chart 6.

some deterioration; here the level of debt was lower as the Treasury cut back sharply on the issuance of certificates in the 1960's. For 1- to 5- and 5- to 10-year issues all indicators based on trading suggested secular improvement in performance, while for bills and for coupon issues maturing in more than 10 years the indicators offered conflicting evidence. Daily-average trading was higher in the 1960's in all maturity classes except coupon issues maturing in 1 year or less. The annual rate of turnover of the marketable U.S. debt—a rough adjustment of trading for debt outstanding—was generally greater in the 1960's in 1- to 5-year and 5- to 10-year issues, but very slightly lower in bills, and considerably lower in other short-term issues and in bonds maturing after 10 years. However, there was little or no evidence of increased discontinuities in trading—as measured by variations in trading during quarters—except in coupon issues maturing within 1 year.

In both the 1950's and 1960's there were sizable short-term fluctuations in the indicators based on trading, and in this sense market performance was subject to periods of deterioration and improvement in both decades. The relative variation in trading was greater in 5- to 10-year and over-10-year bonds, implying that short-run variation in market performance was more pronounced in the long-term market. In part these fluctuations reflected cyclical movements in free reserves and interest rates, with trading rising in periods of easy money and falling when credit policy tightened noticeably, thus causing appropriate countercyclical changes in the liquidity of U.S. Government securities. Movements in trading also were related to U.S. debt outstanding, Treasury financings, official operations in the market, and swapping for tax purposes.

Trading was positively associated with the size of Treasury financings throughout the

4 U.S. GOVERNMENT SECURITIES MATURING IN 1-5 YEARS Profile of Market Performance, 1950-66



For notes see Chart 6.

period studied. Thus, to the extent that advance refundings made possible more long-term bond offerings, they contributed to a higher average level of market activity. Treasury financings involving long-term bonds also appeared, however, to cause a widening of the spread between daily-average trading and trading on low days—as measured by trading on the 16th lowest day. Nevertheless, the 1960's saw a rise in trading on low days that was almost as much as the rise in the daily-average volume of trading.

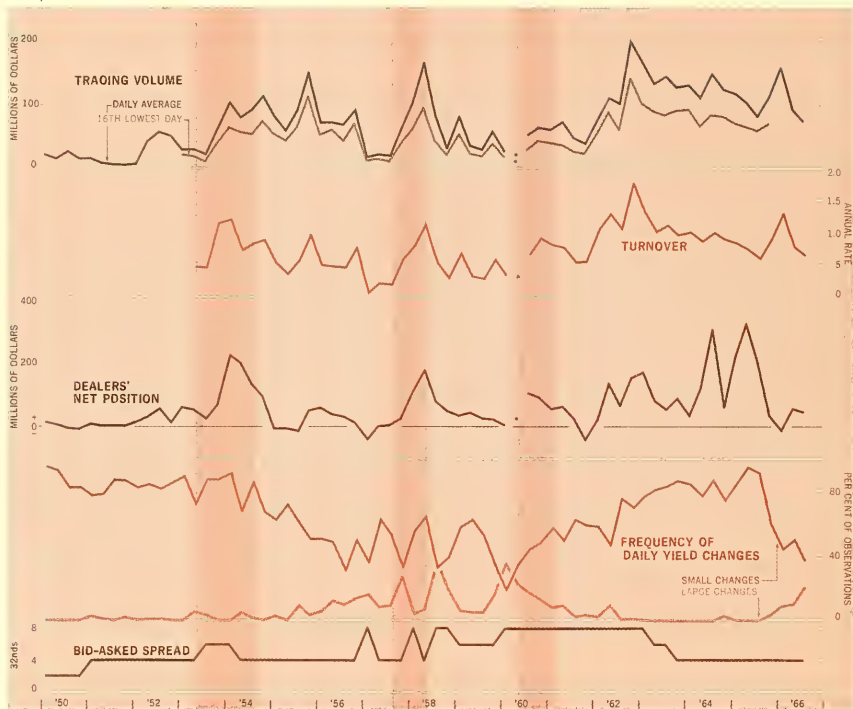
There was no evidence that official transactions in coupon securities caused market activity in the same quarter to dry up. On the contrary, market activity—excluding official activity—was positively related to official transactions in bills, 5- to 10-year issues, and

over-10-year issues, although this association was not statistically significant in the 1960's. The stimulative impact in 5- to 10- and over-10-year bonds was associated with Treasury investment-account operations; Federal Reserve operations did not show a significant relationship to trading in these maturity areas.

The analysis of dealers' positions unearthed little or no evidence of secular deterioration from the 1950's to the 1960's in the performance of dealers as gauged by their inventory practices.¹⁰ The raw data on dealers' daily-average net positions showed a substantial rise from the 1950's to the 1960's in all maturity categories with the exception of coupon issues

¹⁰ The profitability of dealer operations is discussed in Section VIII of this report.

5 U.S. GOVERNMENT SECURITIES MATURING IN 5-10 YEARS | Profile of Market Performance, 1950-66



For notes see Chart 6.

maturing within 1 year.¹¹ Where positions increased, the rise, after allowing for the change in reporting basis and number of reporting dealers in mid-1960, is largely explained by the greater volume of gross new Treasury bill issues and in some cases new coupon issues, the sharply increased stability in day-to-day security prices (and yields) in the first few years of the 1960's, and the increased volume of official—Treasury and Federal Reserve—transactions in coupon issues.

¹¹ For issues due in 1 to 5 years, however, there appear to be reporting problems in the earlier data, and it is possible that such positions were steady or even declined somewhat from the 1950's to the 1960's.

Official transactions appeared to have a significant influence on dealers' positions in the 1960's, while in general no such relationship was found in the 1950's. In Treasury bills, dealers accommodated large net purchases of official accounts in part by drawing down their positions in the same quarter. The institution of official operations in coupon issues in size in early 1961, generally on the buy side of the market, might have been expected to contribute to expectations of a one-way (upward) movement in prices. For issues due in 5 to 10 years and over 10 years, dealers did increase their gross—and net—long positions in response to official purchases. But in no sector of

6 U.S. GOVERNMENT SECURITIES MATURING AFTER 10 YEARS Profile of Market Performance, 1950-66



NOTES TO CHARTS 2-6

- Indicates change in series.

Data are quarterly.

"Trading volume:" Transactions include dealer purchases and dealer sales, but exclude allotments of new issues, exchanges, maturities, and repurchase agreements. Until mid-May 1960 securities were to be classified by first call date, thereafter by final maturity. Averages are based on the number of trading days in the quarter. Source: 1950 through mid-May 1960, Securities Department, Federal Reserve Bank of New York; mid-May 1960 on, Market Statistics Division, Federal Reserve Bank of New York.

"Turnover:" For coupon issues the annual rate equals daily average gross dealer transactions multiplied by 249 divided by marketable debt held by the public. Until mid-May 1960 securities are classified by first call, thereafter by final maturity. For Treasury bills the divisor is bills outstanding.

"Dealers' net position:" Data are on a commitment basis and include securities sold by dealers under repurchase agreement since mid-May 1960. From 1950 through the fourth quarter of 1960, however, some dealers may have reported differently. Securities were to be classified by first call prior to mid-May 1960 and by final maturity thereafter. Averages are based on the number of trading days in the quarter. Source: 1950 through mid-May 1960, Securities Department, Federal Re-

serve Bank of New York; mid-May 1960 on, Market Statistics Division, Federal Reserve Bank of New York.

"Frequency of daily yield changes:" The 3-month bill and usually two issues in each of the other maturity classes were used in the calculations. Source, daily quotation sheets prepared by the Securities Department, Federal Reserve Bank of New York and later by the Market Statistics Division, Federal Reserve Bank of New York. The sizes of changes are as follows:

	Large (minimum change)	Small (maximum change)
Chart 2	5 basis points	1 basis point
Chart 4	$\frac{6}{32}$ point	$\frac{1}{32}$ point
Charts 5 and 6	$\frac{8}{32}$ point	$\frac{2}{32}$ point

"Bid-asked spread:" The quarterly series were derived from observations on the 15th of each month (for Chart 3 on the Wednesday closest to the 15th). The typical spread is the one that existed on the 15th of two out of the three months; or if the spreads were different, the middle spread. Source: 1950 through February 1953, U.S. Treasury, *Prices and Yields of Public Marketable Securities Issued by the U.S. Government and Federal Agencies*; beginning with March 1953, Board of Governors of the Federal Reserve System, daily quotation sheets.

the coupon market was there evidence of dealer reduction of gross short positions as a result of System purchases, though in several cases declines in gross short positions were associated with Treasury trust account purchases.

The dealers' response to the greater day-to-day stability in security prices (and yields) during the first few years of the 1960's, through mid-1965, was to increase net long positions rather than withdraw from the market. This rise in positions probably reflected the lessened risk of capital losses as well as an attempt to increase trading—and trading profits—in a period when speculative profits were limited.

With respect to spreads between bid and asked prices (or yields), it appears that these spreads declined from the 1950's to the 1960's

for Treasury bills. For the less active coupon sector of the market, the available data show no change in spreads on maturities of 5 years or less, fluctuation of spreads on 5- to 10-year issues around the same levels in the 1960's as in the 1950's, and a generally greater spread in over-10-year issues since 1958. However, interpretation of available data on bid-asked price spreads requires considerable caution since the quoted figures do not always reflect the actual trading spreads in the market, with the particular timing and size of trades having an influence on the quotations. The narrowing of spreads, at least in the bill area, may reflect increased competition among dealers and other active market participants, as well as from other money market instruments. □

VII. MARKET ACTIVITY BY TYPE OF DEALER

The Government securities market is composed of a variety of dealers of differing sizes and ownership bases. This section analyzes how transactions and positions of various types of firms related to the over-all performance of the market.

Changes in individual dealer average positions in U.S. Government securities between the last half of the 1950's and the first part of the 1960's for the most part followed the trends in the outstanding marketable debt in the various maturity categories. And the variation in dealer positions, by maturity and type of security, that did develop between the two periods was not characterized by any consistent pattern of differences according to type of dealer—large or small, bank or nonbank.

For instance, Treasury bill holdings of most dealers increased by between 50 and 150 per cent from 1955–59 to 1961–66, and as a group bank dealers' positions in Treasury bills increased in roughly the same proportion as did nonbank dealers' holdings. Two large dealers did increase Treasury bill positions by considerably greater relative amounts, in part ap-

pearing to offset reductions in holdings of securities maturing in 1 to 5 years.

A majority of individual dealers showed increases in average holdings of coupon securities maturing in over 5 years in the period of the 1960's. These dealers included both bank and nonbank firms. It should be noted, however, that positions in securities maturing in over 5 years were relatively concentrated, with the three largest nonbank dealer firms holding 50 per cent of such positions on the average during the 1961–66 period.

DEALER ACTIVITY IN PERIODS OF MONETARY TIGHTENING

In a further effort to analyze market performance by type of dealer, cross-sectional data on positions and trading volume were compared during periods of monetary tightening in the years 1955–59 and 1961–66. In such periods, with free reserves declining and interest rates rising, dealers generally reduced their holdings in at least some maturities of U.S. Government securities to below-average levels, as would be expected.

During the 1955–59 period, there was considerable diversity among the various maturity categories in the number of dealers who did reduce positions and in the magnitude of the adjustments, although the largest relative reductions were generally made by the large nonbank firms. During periods of monetary tightening in the years 1961–66 the large nonbank dealers generally maintained considerably higher positions relative to their average than they had before the 1960's. At the same time there appeared to be some increase in the extent to which bank dealers and small nonbank firms pared positions during periods of tightening in the 1960's.

BEHAVIOR AT TURNING POINTS IN INTEREST RATES

The individual dealers included in this study generally made fairly substantial adjustments in their portfolios once turning points in interest rates were clearly discernible—that is, they built up positions as interest rates declined and reduced them as interest rates rose. However, the evidence appears to show that dealers are not always successful in adjusting positions in anticipation of changes in the trend of interest rates.

Only for the months around the peak in interest rates in late summer 1966 was there any broadly based evidence of dealers making fairly large-scale position adjustments prior to the turning point in interest rates. During the period just before this peak, virtually all individual dealers held very small positions in Treasury bills and also very small, or net short, positions in coupon issues maturing in 1 to 5 and over 5 years. But as the peak in interest rates approached, almost all of the dealers showed evidence of adding to their holdings, or reducing or eliminating net short positions, in at least some maturity categories.

By contrast, there was no such broadly based evidence of anticipatory position adjustments during the months around the cyclical peaks in

interest rates in 1957 and 1959 and the troughs in interest rates in 1958 and 1961–62. Such adjustments during these turning-point periods were limited to scattered individual dealers in a few maturity categories. To the extent that any pattern existed as to the characteristics of the dealers involved, it appeared that the larger firms, both bank and nonbank, showed a slightly greater willingness to make speculative position adjustments than the smaller firms. In addition, even during the months around the 1966 peak in interest rates, when all dealers were adjusting to some extent, the large dealers, both bank and nonbank, generally made relatively the largest and the most rapid position changes in 1- to 5-year issues, and the large nonbank dealers made the most substantial additions to holdings of over-5-year maturities.

TREASURY FINANCING PERIODS

All of the individual dealers had above-average trading activity and typically added significantly to their holdings of Government securities at some stage in Treasury financing periods, from announcement to payment or settlement date. The largest increases in transactions occurred in connection with rights exchanges, particularly during the period from the announcement of the offering through the close of the subscription books, as dealers and investors traded in the issues eligible for exchange. Cash financings also resulted in a large rise in trading activity, but the increase was generally sustained throughout the financing period.

The extent of increases in activity and of build-ups in position varied quite widely among individual firms, with most diversity being shown when the financing included new issues with maturities in excess of 5 years. Although the individual dealers showed quite diverse patterns in positions and transactions during Treasury financings, there was in general no significant difference in behavior among bank and nonbank dealers as a group or among the various dealer-size groups. □

VIII. DEALER PROFITS AND CAPITAL AVAILABILITY

While the position policies of dealers and the trading volume in the dealer market indicate little, if any, deterioration in market performance during the 1960's, the ability of the market to sustain a satisfactory performance depends on operations being reasonably profitable so the industry can maintain and attract capital.

PROFITS

There was a deteriorating trend in earnings of U.S. Government securities dealers from 1961 through 1965, following several years of high earnings. In 1966, however, there was a considerable rebound in profits. The principal factors contributing to these developments are noted below, with an attempt to evaluate the relative importance in affecting profits of such factors as public and private innovations in financial markets and cyclical interest-rate movements as influenced by economic fluctuations and monetary policy.

A longer-run view of dealer profit performance, from the late 1940's, reveals a strong cyclical pattern of earnings, suggesting that the low profit levels of the early 1960's were not out of pattern. The principal feature of the early 1960's was the extended and uninterrupted interval of economic expansion, which was accompanied by a generally rising and, perhaps more importantly, nonvolatile level of interest rates. The sharp reduction in dealer profits, for 1961-65 inclusive, can be attributed in great measure to the negative effects of declining security prices on dealer positions. Treasury bill yields rose in each of the 5 years 1961 through 1965, and long-term bond yields moved higher in every year but 1962. (In that year, there was some improvement in dealer earnings.) Also in the 1961-65 period the differential between long- and short-term rates

narrowed with higher rate levels so that the tendency for profitable carry (the difference between interest earned on securities held in position and the interest cost of financing them) was lessened and eventually eliminated. Reports for 1966, however, indicate that the abrupt drop in security yields late in the year led to a very profitable period for dealers; this gave support to the hypothesis that cyclical monetary conditions have dominated dealers' profit performance.

In assessing long-term profitability in the dealer industry, the effects of Federal and private innovations in financial markets become relatively more important. The extent to which Federal innovation, in the broad sense of new and evolving fiscal and monetary action and debt management, guided the prolonged expansion of the 1960's—with its period of limited interest-rate movement from 1961 through about mid-1965—and in doing so affected market expectations is difficult to measure. It is unclear whether these essentially exogenous decisions produced greater or less uncertainty about rate movements and thus were a hindrance or a help to profitable dealer operations. The wider interest-rate swings since mid-1965—associated with more volatile economic conditions and changes in monetary policy—led perhaps to more uncertainty in markets but, at the same time, to more opportunities for expertise of the dealer market in advising customers and in dealers' own position policies.

Developments in the private sector tended to affect dealer profits adversely in the first half of the 1960's. The greater mobility and sensitivity of investable funds, inherent in the growth of Federal funds activity and expanded use of certificates of deposit by banks, contributed to flatter yield curves for much of the period and

to a relatively higher rate structure for financing positions. Both uses competed directly for funds that otherwise might have been more cheaply available to finance dealer positions. Furthermore, the increased competition of these instruments for short-term funds undoubtedly aggravated the pressure on dealers to reduce quoted spreads for short-maturity U.S. Government securities.

During the early 1960's, there was a further increase in competition among dealers, arising from the entry of three new bank dealers and the addition of one sizable nonbank dealer. This expansion in numbers may also have brought increased pressure on spreads, while cutting into existing dealers' shares of rising transactions.

AVAILABILITY OF CAPITAL

Despite the decline in profits during 1961–65, the long-run outlook apparently remained satisfactory enough so that the amount of capital possessed by nonbank dealers plus that potentially available to bank dealers appeared to remain well in excess of probable needs in the foreseeable future. Estimated minimum capital requirements for supporting dealers' daily-average positions—preponderantly short-term—in 1965 were between \$40 million and \$45 million. Of this total, nonbank dealers represented about \$30 million. The nonbank dealers reported an aggregate net worth of \$261 mil-

lion in 1965 and specifically allocated \$86 million to their operations in U.S. Government securities. Bank dealers, who accounted for one-third of estimated minimum capital requirements, in fact are not actually subject to such capital requirements since the bulk of their position is financed with their own funds. In short, the amount of capital potentially available for margining securities is enormous and, for the industry as a whole, is not in itself technically a constraint on market performance, recognizing that dealer positions in securities vary considerably over time in response to the timing of Treasury financing and cyclical changes in market conditions.

The willingness of both old and new dealers actually to commit available capital to expand positions, however, is largely unrelated to the amount technically available. The availability of capital has practical significance only to the extent that those with control over the capital are willing to commit it to dealer operations. Capital is very mobile in financial industries, particularly so for diversified nonbank dealers as well as banks. Thus, the extent to which capital is committed will depend very much on the circumstances of the moment—the profit outlook and alternative investment or underwriting opportunities. And even if alternative uses did not exist, “dormant” capital under some conditions may be less costly than if used to expand positions. □

IX. OFFICIAL RELATIONSHIP TO THE MARKET

The dealer market for U.S. Government securities as such is relatively free of direct supervision and regulation from governmental units or privately formed associations or groups, although the banks and securities firms comprising the dealer market are otherwise subject to a variety of laws and regulations, including those administered through bank supervisory agencies and the Securities and Exchange Commission. Moreover, both the Treasury and the Federal Reserve have available to them a considerable body of continually reported financial data from the various dealer firms. And the trading staff at the Federal Reserve Bank of New York—which not only carries out open market operations for the FOMC but also undertakes market transactions as agent for Treasury and foreign official accounts—is in continuous daily contact with the market and is in a position to observe market behavior as reflected in bids and offers to the Trading Desk.

The Trading Desk does not undertake transactions with dealers until they have a proven record of performance, and it has in the past

discontinued trading with individual dealers when deteriorating performance made such action advisable. The System Account Manager in New York bears the responsibility for informing the Treasury and the Federal Reserve of undesirable market practices or financial and other market problems which affect any individual dealer or which appear to be developing more generally.

Among the statistics reported by each individual dealer firm are daily reports on positions, borrowing, and activity for Treasury bills and Treasury coupon issues by maturity category. In addition, annual balance sheet and income data are reported by the dealers, and more frequent reports will be possible as efforts to obtain consistent reporting progress. Much of this statistical material has been reported as a result of recommendations in the previous joint Treasury–Federal Reserve study of the market at the end of the 1950's, and the material has provided a basis for evaluation of market performance, including analyses undertaken in the current study. □

X. POLICY ISSUES, CONSIDERATIONS, AND CONCLUSIONS

The various policy issues that were considered in light of the comments of market participants and the Steering Committee's evaluation of the market's performance are discussed below, with conclusions, under five headings—Treasury debt management operations, Federal Reserve open market operating techniques, availability of financing to the dealer market, improvement of technical market performance, and continuing evaluation of market performance.

A: TREASURY DEBT MANAGEMENT OPERATIONS

Advance refundings were the principal aspect of Treasury debt management operations considered. The advance refunding technique was perhaps the most important debt management innovation of the 1960's. It was also one for which a few dealers advocated more limited use on the grounds that frequent and large advance refundings could, and sometimes appeared to, impair the performance of the secondary market for U.S. Government securities, since with advance refundings investors might make a large portion of their portfolio adjustments directly with the Treasury rather than through the market. A variety of other debt management proposals, pertaining to such technical items as bill strip financing and maximum allotments to bidders in bill auctions, were also considered in the course of the study.

ADVANCE REFUNDINGS

Considerations:

1—Staff studies did not indicate any significant reduction in over-all market activity associated with Treasury financings in the coupon area, including advance refundings. In fact, secondary market trading in intermediate- and long-term coupon issues appears to have increased in the 1960's as compared with the 1950's.

2—Of the 400 institutional investors in the U.S. Government securities market surveyed as part of the staff studies, about 60 per cent participated in advance refundings. Less than 5 per cent reported an unfavorable attitude toward advance refundings. Less than 15 per cent reported that advance refundings had reduced their transactions in outstanding issues, while about 20 per cent indicated that advance refundings had increased their secondary market activity. The remaining 65 per cent reported that advance refundings contributed to no change in their other trading.

When allowance is made for the relative importance in the market of the investors included in the above percentages, broadly the same results are obtained. For example, the institutional investors whose secondary market trading was decreased by advance refundings accounted for 27 per cent of total activity reported in the survey, whereas those investors who indicated increased market activity accounted for 31 per cent of total trading. Finally, investors who were not in favor of advance refundings—less than 5 per cent—accounted for only about 8 per cent of the trading volume reported by respondents.

3—Advance refundings have undoubted advantages for the Treasury, including especially the ability to time offerings so as to enhance debt-lengthening opportunities without placing undue pressure on interest rates. Further, it is possible to maintain contact with existing holders of debt outside the short-term area—inducing those holders to take something longer—instead of trying to sell long issues to holders of maturing issues or to investors putting up new cash. In short, the technique is suited to maximizing debt-lengthening opportunities with minimum market disruption or churning.

4—Dealers in Government securities recognized the advantages to the Treasury of advance refundings; most dealers did not raise objections to advance refundings as such, but were more concerned with too frequent or too

massive a use of the advance refunding technique of debt management.

5—At the same time, it may well be that debt management objectives would be served as well, or even better, by somewhat more moderate use of the advance refunding device than prevailed at times in the 1960–65 period. Investors might be induced to make maximum use of each advance refunding opportunity as it occurs rather than to wait for the “next time around.”

Conclusions:

1—Advance refundings should be retained as a technique of debt management in view of their advantages to the Treasury and attractiveness to investors and in view of the absence of any evidence that they disrupted the Government securities market.

2—Consideration should continue to be given to the impact on the Government securities market of large and/or very frequent advance refundings.

CERTAIN OTHER DEBT MANAGEMENT TECHNIQUES

Considerations:

1—With respect to bill strip financing (simultaneous sale of differing bill maturities in a strip that includes equal amounts of each bill maturity), some active market participants regard the sale of bill strips as an awkward, and at times a relatively difficult, way for the Treasury to raise cash. From a debt management viewpoint, the sale of bills in strip form has been a convenient way to raise some money through enlarging the bill cycle, by doing it all at once rather than waiting for the gradual effect of, say, \$100 million in weekly increases to raise funds. In the early 1960's, when the Treasury was deliberately concentrating its debt offerings in the bill area in order to keep short-term rates from dropping too low, there was some conscious use of the bill strip as a further means of keeping bill rates higher than they otherwise would have been. This motive did not figure in later bill strip financings. Indeed,

in some of these, the bills were sold with payment permitted through crediting tax and loan accounts—and this was intended to make the offering as readily salable as possible. While a bill strip is not so simple a way to raise a bloc of money as, say, a tax-anticipation bill, it would appear from experience that dealers as a whole have not encountered undue difficulties in pricing and trading the bills sold in strips.

2—With respect to the size and frequency of 1-year bill auctions, there has been recurrent criticism, some of it inconsistent. For example, some observers say that the amounts auctioned each month are too large to be digested smoothly before the next auction comes along. Others assert that the bills sold each month are soon locked in relatively permanent hands and become virtually unavailable for trading. Another criticism is that the monthly sale often comes at an awkward time relative to other Treasury financings and particularly that the timing makes it difficult to price a short-term option for the regular quarterly refundings that are announced at the end of the first month of each quarter.

On the other hand, a significant amount of Treasury financing is being achieved by sale of 1-year bills. Some modifications in the use of the 1-year bill were in fact made in 1967–68, and these have gone some distance to meet certain of the objections noted above. In particular, 1-year bill issues are now reopened after 3 months as 9-month bills—adding to the tradability of the bills without overloading the initial supply that the market must handle. And by coming each month, the current schedule of 1-year bill sales has attained some degree of routineness that permits other debt management and monetary steps to go on unhampered. This is preferable to larger and less frequent auctions of yearly bills which might, because of their size and timing, interfere significantly with other debt management operations.

3—With respect to maximum allotments of bills to individual dealers in auctions, for the last several years the Treasury has had an informal guideline that single bidders would not be able to purchase more than about 25 per cent of the amount auctioned. There has been

occasional comment that it would be desirable to remove this limitation in order to give greater scope to dealers and investors in reacting to market forces. Further, it is pointed out that the rule is costly to the Treasury in that some bids are reduced in favor of lower bids.

From an over-all market viewpoint, however, an undue concentration of the immediate floating supply in the hands of one dealer could work to the detriment of the Government securities market. A major asset of that market from the viewpoint of investors is the flexibility and availability of supply. It could be shortsighted to sacrifice this for the benefit of an immediate gain in terms of a possible higher price to the Treasury.

But there is nothing sacrosanct about a 25 per cent limit; it can be administered with flexibility as circumstances warrant. As a general principle, too high a limit would permit concentration of an issue in the hands of one or two dealers, while too low a limit might unduly inhibit the free play of market forces and the ability of the dealer market to obtain sufficient bills to service corporate and other investors.

4—With respect to subscription ceilings in Treasury cash financings, where holders of maturing issues do not have pre-emptive rights to obtain the new securities, subscriptions are generally limited for different categories of subscribers. Primary dealers in Government securities who regularly report to the Market Statistics Division of the Federal Reserve Bank of New York may, like commercial banks, tender for an amount of the securities without deposit, but they are limited by subscription lines set by the Treasury with the advice of the New York Federal Reserve Bank. In general, this limitation as to subscription lines is needed to keep the primary dealers, or particular firms in the dealer group, from absorbing too much of an issue, which could lead to domination of the market by a few and impair the secondary market for the new issue. At the same time, relief from a deposit requirement permits active participation by nonbank dealers, who generally operate on thin margins of capital and are key underwriters of Treasury issues.

While there is little reason to alter the princi-

ple of subscription lines to dealers, the lines to nonbank dealers have been revamped within the past few years to give explicit recognition to dealer performance in taking positions and making a market, and not just to the capital structure of the dealer, which had been the chief guide earlier.

5—With respect to cash refundings, some market participants have suggested that they be eliminated. Small and medium-sized investors have often voiced a preference for being able to subscribe for new issues in a refunding with certain knowledge that they will be awarded the amount they tender for—and not a percentage allotment, as is the practice with cash refundings. The percentage allotment subjects the buyer with a specific investment objective in mind to considerable uncertainty, as he does not know how large a subscription to enter in order to be sure of getting a specified amount of the issue. Typically, the Treasury awards a certain minimum amount in full, say \$50,000 to \$100,000, and this can take care of the needs of the smallest subscribers, but even this practice produces some degree of uncertainty as the subscriber usually is not informed ahead of time how much may be awarded in full.

From the Treasury's standpoint, cash refundings have advantages and drawbacks compared with exchange refundings, and on each financing occasion there are pros and cons to be weighed. A cash refunding has the major advantage of avoiding attrition—a net payout of cash because some holders of the maturing issues fail to turn them in for the new offering. The cash refunding also permits the Treasury to raise some extra cash in connection with the refunding offering, if that is desired.

The cash refunding also lets the Treasury set the amount of each new issue to be sold. This may be an advantage or not, depending on the circumstances. In an uncertain market, it may be desirable to let the market decide how much of a particular issue is desired. But an uncertain situation may also be a useful time for the Treasury to provide some guidance to the market by setting the sizes of different issues. It might also be argued that the cash refunding

is fairer in that it permits all investors to subscribe for the new issue, not just those who hold or acquire the maturing issues.

6—With respect to those instances when payment for new Treasury issues can be made by commercial banks through crediting U.S. Government tax and loan accounts, rather than by cash payment to Federal Reserve Banks, the question has been raised as to whether this does not work to the disadvantage of nonbank dealers. If a bank can subscribe to a new issue by crediting the Treasury's tax and loan account, the subscribing bank has the use of the newly created deposit for a number of days—perhaps 7 to 20 days—until the Treasury calls the money into its working balance at the Federal Reserve Banks. The use of this deposit has a value to the banks, and they are willing to pay a little higher price for the securities in order to obtain the deposit. The banks will then generally sell the securities, particularly if it is an issue of bills, at a lower price in the secondary market, at which point nonbank dealers can obtain the issue at a competitive market price. Even so, nonbank dealers in Government securities tend to feel that they are at some relative disadvantage when banks are permitted to buy new issues, particularly coupon issues, on what may be in effect more favorable terms.

It has been suggested that nonbank dealers be given a comparable advantage by permitting them to purchase the securities for delayed payment (while earning interest from the issue date) or to purchase the securities at a lower price that would reflect at least a part of the tax-and-loan-payment advantage. It is argued that such treatment would broaden the underwriting for Treasury issues and would be more equitable than the existing arrangements.

A number of considerations favor confining the tax-and-loan-payment privilege to banks. One consideration is that the system of bank payment by crediting tax and loan accounts does not involve any cost to the Treasury while a compensating price cut to others would. If nonbank dealers were given a lower price, the Treasury would take in less money on the sale, and it is not clear that the addition of this group

of underwriters would sufficiently broaden total interest so that the over-all average price paid would be any higher. It may also be questioned whether it would be equitable for nonbank dealers to have a special subscription price that is not accorded to other nonbank subscribers as well. Finally, in terms of interdealer competition, it should be noted that it is the bank, and not the bank dealer department, that would secure any benefit from the tax and loan privilege.

On balance, the method of crediting the proceeds of security sales to tax and loan accounts of banks provides a useful and economical means for facilitating the underwriting of large Treasury cash issues. Moreover, nonbank dealers are able to participate in the secondary market distribution of such issues. The bulk of the Treasury bills sold with tax-and-loan-account privilege are normally resold by banks to nonbank dealers, who are then able to provide their customers with the new bills. With respect to coupon issues, the nonbank dealers have often been able to bid successfully for the new issue, despite tax-and-loan-account privilege to the banks; and as with bills, such issues also become available in the secondary market as banks sell their awards.

7—With respect to reopening outstanding issues in Treasury financings, it has been suggested that, wherever possible, the Treasury sell additional amounts of already outstanding issues in preference to selling new issues. The objective is to avoid small-sized issues that usually are difficult to trade because of the thin market supply.

It may be noted, on the other hand, that reopened issues are not always the most suitable kinds to sell. Often, there is no issue already outstanding in the appropriate maturity area that lends itself to reopening. It must have not only the right maturity but also approximately the right coupon rate so that it can be reopened without too great a premium or discount. A large premium can discourage purchases, as can a large discount that may discourage buyers who prefer current income. And if the discount is large enough the implicit capital gain may in effect create a new issue since it will be subject

to the provisions of the tax laws that pertain to "original issue discount."

8—With respect to problems of exposure to information leaks in debt management operations, the Treasury has undertaken numerous safeguards, and most recently—in light of a leak that did develop—procedures have been tightened further. In order to secure the best advice possible in designing its large refunding packages, the Treasury meets with advisory groups of the American Bankers Association and Investment Bankers Association and obtains views from Federal Reserve officials and others in the Government. A wide variety of advice is often received from these various sources, which the Treasury evaluates in terms of the public policy objectives of the Government before coming to a final decision.

While the advice of the investment community is sought in evaluating alternative financing proposals, the final financing decision is made by a very limited group in the Treasury, and knowledge of the decision before announcement has also always been available to a very few persons. Necessary communication of the announcement to the public requires preparation of press releases and offering circulars, which spreads knowledge of the announcement to persons not directly involved in the decision-making process. But these preparations are undertaken as late as possible during the day consistent with making an announcement that will achieve broad, simultaneous coverage throughout the financial community.

Conclusions:

1—Most of the issues briefly discussed above are of relatively minor importance, but they do represent aspects of Treasury financing which have been of concern to some market participants from time to time. However, no significant change from current practice appears required on the basis of the analysis and evidence currently available.

2—Such a conclusion recognizes that certain changes have been introduced as this study has been in progress. For example, the monthly bill auctions have become somewhat more flexible in the sense that 9-month as well

as 1-year bills are offered; and procedures have been tightened further to reduce exposure to leaks on financing terms to an irreducible minimum.

3—Where feasible in terms of price, coupon, and over-all issue size, it appears desirable from the viewpoint of market functioning to continue giving consideration to the re-opening of outstanding security issues in financings.

4—It is clear from the variety of comments and suggestions continually being received about Treasury financing techniques, and from the continuing short- and long-run changes in the financial and economic environment, that efficient debt management operations will require constant reappraisal by the Treasury of its operating techniques, as well as the continuing availability of advice and information to the Treasury from market participants.

B: FEDERAL RESERVE OPEN MARKET OPERATIONS AND TECHNIQUES

The operating techniques of the Federal Reserve were evaluated under three general headings—outright operations in coupon issues, various day-to-day operating techniques, and outright transactions in Federal agency issues.

OPEN MARKET OPERATIONS IN COUPON ISSUES

Considerations:

1—While many market participants saw no problem, in terms of market functioning, with Federal Reserve secondary market operations in coupon issues, a number were of the view that such operations, especially in intermediate- and longer-term issues, adversely affected the performance of the market; and similar allegations have been made at times with respect to Treasury trust account operations. It was felt that System operations are of such potential size that even if actual operations are small they tend to dominate market psychology, with the result that dealers become

less willing to make markets at prices very far from what they conceive to be the official buying level. And some market participants thought that investors may be discouraged from being active in the Government securities market, if they feel prices and yields do not reflect underlying demand-supply conditions.

2—Staff statistical analyses have produced results that are somewhat mixed but that generally do support the view that System, and also Treasury, operations in the secondary market for coupon issues have not had any measurable adverse impact on indicators of market performance. However, the results cannot be considered as conclusive in view of the inherent difficulties in isolating official operations from all of the other factors affecting the market at any one time and in view of the attitudinal shifts of market participants over time that are difficult to quantify.

(a) There was no statistical evidence that official purchases of coupon issues by either the System or the Treasury caused market activity in the same quarter to dry up, or even to decrease. On the contrary, market activity in bills, 5- to 10-year issues, and over-10-year issues showed some signs of being positively related to official transactions, although this association was not significant in the 1960's. The increases in trading in coupon issues were associated primarily with Treasury trust fund operations.

(b) In the survey of 400 institutional investors conducted as part of this study, about 70 per cent of the respondents indicated that their investment operations were not affected by official account operations in coupon issues. Of the 400 respondents, less than 10 per cent reported that their ability to conduct transactions in the market tended to decrease as a result of official operations; however, these respondents were mainly among the large institutions in the survey, and they accounted for 31 per cent of total market activity and 18 per cent of total holdings of Government securities reported in the survey. A few respondents, who were also among the largest institutions, noted that Treasury or Federal Reserve operations in coupon issues sometimes

helped and sometimes hindered their investment activities, depending on whether these respondents happened to be on the buying or selling side of the market.

(c) With respect to dealers' positions, statistical studies indicate that official purchases, particularly Federal Reserve purchases, were associated with increased gross and net long positions in the over-5-year area during the 1960's. Decreased gross short positions in intermediate- and long-term maturities were also significantly related to Treasury market purchases, though not to Federal Reserve purchases. The increased dealer willingness to take long positions in long-term bonds may be viewed as favorable to market performance, although it is also consistent with the view that official operations do influence market psychology and thereby affect market performance by limiting the scope for price movements in a direction other than that given by official operations.

(d) It is probable that official secondary market operations in coupon issues—both by the Federal Reserve and by the Treasury—contributed, though to a minor extent, to the comparative day-to-day stability of rates during the first half of the 1960's. Many dealers did recognize the unique economic characteristics of the period, however, and tended to attribute the relative interest rate stability more to underlying economic forces than to official secondary market operations. Nevertheless, the relative stability in security prices and rates influenced the dealer community in several ways. Most importantly, the price stability, especially in the mid-1962 to mid-1965 period, affected dealers' profitability adversely by limiting their ability to make profits on price swings. And this relative absence of price fluctuation accompanied a generally upward interest-rate trend, so that dealers had comparatively little chance to anticipate extended periods of rising prices, which historically have provided their best opportunity for profits. But secondly, there was no statistical evidence that dealers responded by reducing positions to any measurable degree; and in fact, in many cases dealers responded by holding larger positions presumably in an attempt to

increase profits from trading, given a lessened risk of capital losses.

3—Coupon operations have had the advantage to the System of taking some downward pressure off short-term rates, especially in periods when there was a relatively small market supply of bills. While most academic and other research findings indicate that System operations did not impart much of a “twist”—that is, a decline in long rates relative to short rates—to the interest-rate structure over an extended period, there does appear to have been some increase in private borrowing, especially in the form of new corporate bond issues during periods when the System was very active in the coupon market. It also appears that System coupon operations may have had some direct effects on interest rates through their impact at critical times on market psychology.

4—Some dealers indicated that at times the purpose of System transactions in coupon issues was not readily discernible and created considerable market uncertainty. If coupon transactions are continued, it was thought desirable that the reasons for them should be clearly understood by the market and therefore could be rationally taken into account in the dealers’ own operations.

Conclusions:

1—In addition to their use in disorderly market situations, System purchases of coupon issues should be continued as a useful supplement to bill purchases in providing bank reserves. Consideration should also be given to absorbing reserves through limited sales of coupon issues from time to time. Such sales would add flexibility to Trading Desk operations and occasionally might help the market mechanism to be more responsive to investor needs—for example, when the System holds a very large share of an issue which is in strong market demand. But any such sales would have to be handled cautiously in order to avoid a disproportionate effect on prices, especially in the introductory period.

2—Depending upon market circumstances System operations in coupon issues might be

used to implement reserve objectives, yield objectives, or both.

(a) When conducted solely for reserve purposes, such operations should continue to be executed in such a way—for example in relation to market availability—as to minimize their effects on interest rates. This approach would also imply continuance of the policy of keeping coupon operations outside the maturity ranges involved in a current Treasury financing.

(b) When balance of payments considerations suggest efforts to avoid downward pressures on short-term interest rates, reserves might be supplied through purchases of coupon issues rather than bills to the extent that market conditions permit.

(c) When compelling reasons exist, System operations in coupon issues might also be used for purposes of influencing the maturity structure of market rates or flows of funds in the capital markets. But there are limitations on the System’s ability to influence a rate structure in the long run—especially if market forces and psychology are adverse—without compromising reserve objectives. Nevertheless, even marginal operations in coupon issues in favorable circumstances can have a useful short-run market impact.

MODIFICATIONS OF TRADING DESK TECHNIQUES

Considerations:

1—Consultations with dealers produced numerous suggestions about some of the Trading Desk’s methods of operating in the Government securities market. A number of the suggestions appeared to be related to particular problems of individual dealers or reflected the tendency of some dealers to overinterpret any Desk activity. But many of the suggested changes by dealers, as well as operational adjustments suggested by the Trading Desk’s own experience, seemed to be broad enough in application to be evaluated in terms of their contribution to improvement of market functioning and to better market understanding of operations, without interfering with the achievement of System objectives.

2—With respect to providing information to dealers concerning operations, dealers have recommended that the Desk provide more data, especially with respect to the identity of the accounts, the size of the operations, and even their purpose. Dealers obviously desire to be in a better position to gauge the possible market impact of Desk operations, and they are particularly interested in determining whether or not monetary policy is a consideration in these operations.

While it would not be appropriate for the Trading Desk to provide running interpretations of the monetary policy objectives of particular actions—in the main these actions must speak for themselves—it is nevertheless feasible for certain technical information to be provided to the market. In fact, the Desk has already, in the course of the current study, taken steps to give dealers more information than formerly concerning whether the Desk is operating for System or customer accounts (though not the names of particular accounts) and the approximate size of certain operations. On large-scale operations, especially those involving “go-arounds” of the whole market, the dealers are often informed when the Desk is operating for customer account (foreign official accounts or Treasury investment accounts). And in the “go-arounds” for customer accounts, recent practice has often been to indicate the approximate total amount involved. On some recent occasions, the approximate aggregate amount that the Desk planned to buy has also been revealed in “go-arounds” in coupon issues for System account—although this is not always feasible because the amount may depend partly on the size and nature of offerings presented.

While the Desk has gone some distance toward providing more information about its operations, it cannot commit itself to disseminate such information under all market circumstances. To do so would seriously curtail the Desk’s operational flexibility and in some cases hinder and perhaps prevent the attainment of the Desk’s objectives. In general, however, the Desk can undertake to provide information when that is possible without detriment to operations.

3—With respect to the suggestion that operations in coupon issues be confined to a few of the large dealers, it does appear that only a few such dealers assume the considerable risk of making consistent and meaningful markets in intermediate- and long-term issues. Greater market stability would probably be fostered, and privilege would be more closely equated with responsibility, if the Desk limited its bond transactions to selected dealers who make reasonable markets under a wide range of conditions. On the other hand, a willingness to undertake coupon transactions with all dealers may serve to broaden the coupon market over the long run. In any event, it appears that the bulk of the Trading Desk’s operations in coupon issues are—quite naturally—conducted with those dealers who carry positions and make the best markets.

4—With respect to modification of repurchase agreement procedures, a number of suggestions were considered:

(a) Make repurchase agreements earlier in the day. At times the Desk deliberately waits as long as possible before deciding whether or not to make repurchase agreements. This complicates dealer financing and delivery arrangements. However, the Desk must avoid hasty action that would risk producing undesirable results in the money market. Early impressions of money market conditions are frequently modified as the day unfolds, and dealer progress in obtaining funds elsewhere—along with other developments in the money market—may often be an important clue. The Desk cannot give assurances that it will act by a given time, but only that it will make its decision as soon as reasonably possible.

(b) Substitution of securities. Under present procedures, dealers who withdraw securities held by the System under repurchase agreements automatically reduce their access to Federal Reserve credit unless the Desk is willing to make at least an equal amount of new agreements on the same day. If an equivalent amount of new agreements were obtainable at the dealers’ option they would, in effect, be able to substitute securities for particular issues they need. The pricing of the securities submitted

under the new contract would be different, but the total amount of repurchase agreements outstanding would remain approximately unchanged.

There are times when the Desk is reluctant—for reasons related to banking statistics or money market indicators—to see repurchase agreements withdrawn before maturity simply because dealers need particular issues. In such situations, permitting substitutions would be helpful in meeting reserve objectives. On other occasions, however, repurchase agreement withdrawals are a useful means of absorbing reserves if money market availability and reserve supply unexpectedly increase. Consequently, it would appear desirable to permit dealers to substitute securities held under repurchase agreements only at the Desk's option.

(c) Inform all dealers when repurchase agreements are to be made. As a matter found to be good market relations and not detrimental to Desk operations in any way, the Desk has already adopted a policy of simultaneously informing bank dealers as well as nonbank dealers whenever it is in the process of making repurchase agreements, although bank dealers do not participate in such agreements.

5—Among other proposals considered affecting Trading Desk techniques were the following:

(a) More operations for regular delivery (delivery 1 day later) instead of cash (same-day delivery). This suggestion stems from the sometimes costly and troublesome delivery and financing problems of dealers. Cash trading is extremely useful to the Desk and has become an integral part of its operations. It facilitates both the delay and the acceleration of operations so that the optimum time may be selected from the standpoint of reserve objectives, market impact, and the management of investments for customer accounts. Thus, cash trading is likely to remain the principal form of operation, but well-defined opportunities to trade for regular delivery, or delayed delivery, should not be overlooked. Moreover, necessary cash trading should be undertaken as early in the day as is consistent with other objectives.

(b) All operations by "go-arounds." During

the last several years, the Desk has markedly increased its reliance on "go-arounds" to execute its operations in Treasury bills. Since 1966 this technique has been used on most occasions when the Desk bought coupon issues for the System and frequently on sizable Treasury and foreign account orders. Large operations can now often be accomplished by this method. However, there is a practical minimum to the size of an operation that can be accomplished efficiently through a "go-around." The minimum varies with changing market conditions and with the area of the market involved. Therefore, it is not feasible to execute smaller, routine business of the Desk by means of "go-arounds." Constantly recurring, almost perpetual "go-arounds" would be required to handle the uneven, unpredictable flow of operations during the day.

(c) Place orders for coupon issues with one dealer on a rotating basis. This technique might be useful under some market conditions and to achieve certain objectives but would not be appropriate as a regular procedure. The ability to rotate such orders regularly and automatically among dealers presupposes equal dependability and performance by all dealers. Such a presupposition is unrealistic, nor is it desirable for the Desk to limit its ability to buy or sell securities at a given time to the position, contacts, and outlook of any one dealer.

(d) Timing of operations. The Desk is acutely conscious of the market effects of its operations and deliberately seeks to avoid whenever possible timing that would be generally disruptive. Within such a framework, System and Treasury operations must be timed for maximum achievement of over-all policy objectives when such are involved and for satisfactory execution of routine Treasury investment account and foreign orders. The timing of operations is influenced by the availability of statistics and emerging market conditions, and the Desk cannot forego its right to initiate operations at any time that the market is open.

Conclusions:

1—Trading Desk techniques have already been modified in the course of this study in

ways that give effect to some suggestions received from dealers, and the Desk should be alert to the possibility of further changes that would improve market functioning without sacrificing its ability to achieve policy objectives. Among the modifications that should be continued, where feasible, are: (a) revealing whether operations are for System or customer account; (b) providing indications as to size of operations; and (c) greater use of "go-arounds."

2—Some suggested procedures can only be undertaken by the Desk in principle as conditions permit, and with no commitment, such as more trading for regular delivery, convenient timing of operations, earlier decisions to make repurchase agreements, permission to permit dealers to replace withdrawals of repurchase agreements before maturity with new agreements to run to the same maturity, and disclosure of the purpose of operations.

3—Some suggestions cannot be considered feasible, such as "go-arounds" on all orders, placing orders with dealers on a rotating basis, and forfeiture of the right to operate at certain times, for example, before Treasury bill auctions.

FEDERAL RESERVE OUTRIGHT TRANSACTIONS IN FEDERAL AGENCY ISSUES

Considerations:

1—The Federal Reserve now makes repurchase agreements against Federal agency issues under authority of the amendment to the Federal Reserve Act that permits the System to buy and sell in the open market any obligation which is a direct obligation of, or fully guaranteed by, any agency of the United States. This amendment was originally enacted on a temporary basis in September 1966 and was subsequently made permanent.

2—The capacity of the agency market to absorb System operations, while not becoming dominated by such operations, depends broadly on the over-all size of the market, the size and market availability of individual issues,

and the nature of trading activity. Indicators of market performance that bear on those points show that the over-all market has expanded in breadth and depth in recent years, and in the short-term area as a whole (within 1 year) appears comparable with, or even more active than, the short-term Treasury coupon market. At the same time, however, the agency market has many more individual issues, the issues are much smaller in size, and large market transactions in particular issues are thus often more difficult to execute than in the Treasury coupon area. A good deal of the trading activity in the agency market is accounted for by the frequency of financings, but activity in short-term issues outside of financing periods holds up fairly well and has grown in recent years.

3—Dealer positions in agency issues (including PC's) have increased markedly since the early 1960's with the increase reflected both in issues maturing within and beyond a year. Net dealer positions averaged about \$114 million in 1961 and \$365 million in 1967. About one-third of net positions in 1967 were in securities with maturities of over 1 year. The average level of positions in agency issues fluctuates widely and shows characteristics not very different from positions in Treasury coupon issues.

4—The rise in dealer positions and transactions in Federal agency issues reflects largely the increase in the supply of agency debt, with outstanding agency issues (including marketable PC's) held by the public rising from around \$8½ billion in mid-1960 to around \$23 billion at the end of 1967. Also at the end of 1967 issues maturing in a year or less amounted to about \$11 billion and those in over a year amounted to \$12 billion; nearly half of the latter were marketable PC's. (By way of comparison, outstanding Treasury coupon issues maturing in a year or less held by the public at the end of 1967 totaled \$17.9 billion, and those maturing in over a year totaled \$91.5 billion; bankers' acceptances outstanding amounted to \$4.3 billion.)

5—A critical question is whether the data on the agency market are indicative of the size

and activity of a single basically homogenous market or whether there are really several smaller markets for various types of agency issues. (As with other markets there are differences by maturity of issue, with the longer end, as earlier noted, less active than the shorter end and attractive to different investor groups.) The evidence gathered appears to indicate that the agency market is fairly homogenous. There are rather small yield differences as between issues of similar maturity of the various agencies; that is to say, a rather smooth yield curve can be traced utilizing various agency issues, just as a relatively smooth yield curve can be derived from Treasury coupon issues. With respect to how investors may view agency issues, the ownership data (using data for the nonguaranteed issues of the five major agencies) indicate that investor groups do not appear to show any very significant preferences for one agency as against another—with the exception of the relatively greater preference of nonbank financial institutions for Federal home loan bank issues, presumably due to the holdings by savings and loan associations of such issues—although, of course, some investor groups have a larger proportion of agency issues taken together than do others.

6—Dealers were divided in their views as to the desirability of Federal Reserve outright transactions in agency issues from the point of view of market functioning. A major argument of those who advised against such transactions was the probability that strong political pressures might develop for the support of particular issues or financings. Some dealers, in fact, attached great weight to this consideration, both in its implications for the System's continued ability to conduct open market policy in an environment relatively free from day-to-day political pressures and in its implications for the viability of the Federal agency market itself. Some dealers also stressed the possibly disturbing impact on the secondary market of relatively large and, by nature, discontinuous Federal Reserve operations.

On the other hand, a number of dealers felt that the short-term sector of the agency market

could accommodate, on both the buy and the sell sides of the market, more than token Federal Reserve transactions, although not all of such dealers favored the transactions. Dealers who did recommend such operations thought they would enhance the prestige of the Federal agency securities market, stimulate investor activity in such obligations, and tend to lower interest rates on agency issues and bring them into closer alignment with yields on U.S. Government securities. Some small-scale outright transactions in the agency market have been undertaken by the Desk acting for Treasury investment accounts, but thus far the great bulk of acquisitions of agency issues and PC's by these accounts have been directly from the issuers.

7—Under present circumstances, operational difficulties would be encountered by the Trading Desk in executing transactions for the System Open Market Account. The size of individual agency issues is generally quite small in comparison with Treasury coupon issues,¹² and as a consequence, the amounts of individual issues that can be readily bought or sold in the secondary market tend to be correspondingly limited. An attempt by the System to conduct transactions in the amounts that are customary in Treasury coupon issues—and meaningful from the standpoint of System objectives—could therefore have a disproportionate impact on prices and yields in the agency market. The availability and size of agency issues would make it most difficult for the System to undertake more than token operations if undue market dominance is to be eschewed. In addition, because of the frequency of new agency offerings there are limitations on the timing of operations if the System is to avoid having an undue influence on the marketing process for individual agency issues. Total new offerings of the five major agencies—Federal land banks, Federal intermediate credit banks, banks for cooperatives, Federal National Mortgage Association, and Federal

¹² The average size of an agency issue is about \$300 million, compared with \$2½ billion for the typical Treasury coupon issue.

home loan banks—average about four each month; and there are in addition periodic offerings by other agencies, including FNMA and Export-Import Bank participation certificates.

Conclusions:

1—At the present time and under current market circumstances, outright operations in Federal agency securities would not facilitate, in any material way, the ability of the System to alter the supply of reserves in the market. Purely technical operational difficulties, noted above, would seriously limit the size, scope, and opportunities for such transactions. Moreover, the frequent marketing of new Federal agency issues would considerably reduce opportunities for meaningful operations without undue influence on the market's appraisal and absorption of the new issues. The System would also encounter technical difficulties when its holdings of particular agency issues matured unless special arrangements were made with the agencies for their replacement. The problem has been overcome in the case of direct Treasury debt where facilities exist for the automatic rollover of Treasury notes and bonds held by the System and where bidding is feasible for a desired amount of new Treasury bills to replace maturing issues.

2—A broadening of market instruments for the conduct of open market operations is in itself a worthwhile objective for the longer run, provided that operational difficulties can be resolved. It is doubtful, however, that marginal outright transactions in Federal agency issues would make any real contribution at the present time to the effectiveness of open market operations in supplying or absorbing bank reserves, given the large current and prospective market availabilities of direct Treasury debt. Continued growth of the Federal agency securities market, both absolutely and relative to the Treasury market, would of course counsel a reexamination of this conclusion.

3—It is not clear that occasional and marginal System operations in agency securities would significantly improve the functioning of the agency market. Sizable, frequent, and significant System operations in agency securities

could under current circumstances tend to exert a dominating influence on the Federal agency market, giving rise to uncertainties and perhaps to false hopes which would be hard to dispel. The result might be to inhibit the market's continued development by impairing its functioning as a free, self-reliant, and effective mechanism for executing transactions.

4—System operations in agency issues would be made more attractive and feasible if the variety of agency issues were reduced and especially if individual Federal agencies were to consolidate their new issues into fewer but larger offerings, possibly under the aegis of a single marketing agent that distributed the funds raised to the individual agencies. Such a development would tend to make agency issues available in larger and more tradable blocs and thereby facilitate more sizable transactions without undue effects on market quotations. Moreover, the frequency of agency financings could be reduced as could the potential periods of System inactivity in this market. In general, the problems raised by the multiplicity of agency securities and the allocation of System transactions among them would be eliminated.

5—It is recognized that market conditions could develop—for example, as a result of further growth in the agency market, the development of less frequent and larger agency issues, or the availability of a large floating supply of agency securities—which might make outright operations in agency issues in the market by the Federal Reserve appear more desirable. Moreover, the Federal Reserve should keep under review the desirability and feasibility of conducting outright operations in Federal agency securities in light of the overall objectives of System policy. Meanwhile, the System should continue to make repurchase agreements against Federal agency securities. Such repurchase agreements, which were first undertaken in late 1966, have proved to be a useful supplement to repurchase agreements against direct Treasury obligations, given the sometimes limited collateral immediately available to nonbank dealers and the System's need for large transactions. Moreover, repurchase

transactions are not subject to the operational problems involved in outright purchases or sales outlined above.

C: AVAILABILITY OF FINANCING TO THE DEALER MARKET

Considerations:

1—Financing to the dealer market is provided by a wide variety of sources, including banks in and outside major financial centers, business corporations, and public funds. Dealers obtain financing on a day-to-day basis through nationwide contacts with potential lenders, but they tend to rely on major money market banks, chiefly in New York, for financing to cover residual needs not accommodated through other sources.

2—The interest rates charged dealers vary from day to day with fluctuating money market conditions, with the level of rates generally above the Federal funds rate. In providing residual, or “last resort,” lending to the dealer market, the major money market banks post daily interest rates on new and renewal loans to dealers. These interest rates are normally at the high end of the spectrum of daily financing charges that dealers pay.

3—The changing terms on which they lend to dealers are one of the most important means by which banks make continuous adjustments to daily, and often unpredictable, inflows and outflows of funds. Day-to-day swings in money position can be especially large at the major money market banks, which have large corporate depositors and which have the most volatile portions of Treasury deposits. As their money positions become stringent, banks would tend to raise interest rates on new loans to dealers, often by individual banks to levels that would discourage any borrowing by dealers. Interest rates on renewal loans would also be raised at times to levels that might force borrowers to seek for funds elsewhere. Some major money market banks have from time to time simply posted no new loan rate. When the daily money position of banks becomes easy, dealer loan rates are lowered, and banks become more willing to lend.

4—Daily fluctuations in the cost and availability of financing are an integral and well-understood aspect of the dealer market in U.S. Government securities. The large and unpredictable daily inflows or outflows of funds affect individual banks and institutions by differing and changing degrees, so that dealers have attempted to develop as extensive sources of financing as possible. But the market has come to rely on a relatively few major money market banks for “last resort”-type financing. Erosion in the willingness of such banks to provide residual financing, even at temporarily very high interest rates, can lead to excessive pressures in the securities market as dealers are forced to liquidate inventories at an overly rapid pace, or become unwilling—because of uncertainties as to sources of financing—to position securities in order to, say, help in the secondary market distribution of a Treasury financing.

5—The availability of financing to dealers is a problem chiefly in periods of monetary restraint, but this does not necessarily make the financing problem an isolated or temporary difficulty. In recent years of strong economic activity, some degree of monetary restraint has generally been present, and in such periods dealer financing has often been quite costly relative to the interest return on securities held by dealers. Indeed, the imposition of a high cost of carrying an inventory of U.S. Government securities is one of the ways that monetary restraint achieves its effects in dampening the economy, effects that spread from the Government securities market to the financial markets more generally, and then to expenditures in the economy at large. At times, however, the rapidity of increases in financing costs in itself seems to have been a disruptive market factor, and at other times even the high-cost financing that is generally available during tight money periods has appeared to be limited and on the verge of drying up. In particular, the effects on dealer financing of day-to-day swings in banks' money positions can be exacerbated when these swings take place within generally tight market conditions.

6—Presumably, if residual dealer financing did dry up more or less completely for a time, the System would provide temporary funds, as it has in the past, for instance, consistent with directives of the FOMC—rather than let a disorderly Government securities market ensue. But the continued effective functioning of the U.S. Government securities market depends in part on a steady stream of financing becoming available from banks and other sources in the private economy, so that daily price adjustments in the securities market are not excessive and cumulative, “distress selling” of securities is minimized, and the market can absorb and distribute Federal Reserve operations and Treasury financings, while also accommodating the buy-and-sell orders from private sectors of the economy.

Conclusions:

1—Dealer financing has been a recurrent problem, especially in periods of tight money, although it is recognized that a restrictive monetary policy unavoidably involves pressures on dealer financing as part of the process of achieving monetary restraint. Some official assistance can help to assure continuity in the availability of dealer financing funds and the satisfactory performance of the market without impeding the market’s role in transmitting monetary policy. This could involve flexible use of the discount window in relation to banks that actively finance nonbank dealers or that have active dealer departments themselves, and could also involve flexible use of repurchase agreements available through the Trading Desk.

2—So as not to impair the functioning of general monetary policy, the availability of Federal Reserve resources in providing, or backstopping, dealer financing would have to be under carefully controlled terms and conditions, and for relatively limited periods. The exact nature of any official assistance to the market—that is, relation of official interest rates to market rates, amount of assistance, distribution of assistance over time, and the mechanism through which any assistance may be made available—will, of course, depend on market conditions and on institutional developments,

such as evolution in the regulations affecting Federal Reserve Bank discount facilities (which are currently being considered in light of the Federal Reserve System study, “Reappraisal of the Federal Reserve Discount Mechanism,” published in July 1968).

3—It is recommended that at the Trading Desk’s option dealers be allowed, in effect, to “substitute collateral” on regular System repurchase agreements, as indicated in the previous discussion on possible modifications of Trading Desk techniques.

4—Institution of repurchase agreements with bank dealers is not recommended at this time. Such dealers appear to have more assured sources of financing than nonbank dealers—although it is recognized that the bank dealer departments must compete for funds with other departments of the bank, and this may well result in constraints on their ability to take positions. As an offset to not having repurchase agreements, banks in general, although not bank dealer departments as such, have the advantage of paying for some new Treasury issues through direct crediting of Treasury tax and loan accounts, of direct financing in the Federal funds market, and of borrowing at the discount window. It is possible that a better rationale for making repurchase agreements with dealer banks could be developed, to the extent that dealer departments of banks were separated in some way from the rest of the bank and did their own financing from sources similar to those employed by the nonbank dealers.

D: IMPROVEMENT OF TECHNICAL MARKET PERFORMANCE THROUGH CLEARING AND AUTOMATION OF TRANSACTIONS IN GOVERNMENT SECURITIES

Considerations:

1—Since most trading in the Government securities market is conducted for New York delivery, the adequacy of clearing arrangements in New York is of paramount importance. In view of the increased volume of

trading, practically all dealers have found increasing difficulty with the existing clearance arrangements¹³ principally furnished by two large New York banks, and there have been reports of a growing number of delivery failures.

2—In addition to the adoption of certain rules—such as earlier closing hours for deliveries—by the New York Clearing House banks, a further effort is being made by the Federal Reserve Bank of New York to improve clearings of Government securities transactions. This further effort involves the establishment of a new mechanism to process and settle, on a net-balance basis, interdealer and interbank transactions in New York City so as to limit physical deliveries of securities. This arrangement is already in operation between 10 New York City member banks and the Federal Reserve Bank of New York, and is accommodating upwards of 5,000 inter- and intradistrict transactions weekly, representing an average \$3 billion in aggregate par amount. With the introduction of electronic switching and data processing equipment, this mechanism is expected to produce an even greater improvement in Government securities market operations.

3—The clearing arrangements being developed in New York can be viewed as a step toward a more rational and efficient trading mechanism for the U.S. Government securities market. The clearance of trades throughout the U.S. Government securities market could probably be made more efficient, less costly, and less time-consuming by the expansion of present and planned clearing arrangements. Ultimately, it may be desirable to seek a full-scale book-entry system for the market, which would result in an even further improvement of the market mechanism and reduction of physical handling of securities. The book-entry system for U.S. Government securities currently held in custody at Federal Reserve Banks now in

process of implementation may provide a stepping stone to a broader book-entry system geared toward trading since it will accustom some important market participants to automated arrangements.

Conclusions:

1—The progress made to date in developing a better clearing system is all to the good, and all practicable steps should be taken to accelerate its expansion. The steps in process in New York are expected to lead to clearing locally among the major banks, thereby supplementing the clearing arrangements already in effect when Federal Reserve wire transfers are used between each participating New York bank and accounts in other Federal Reserve districts.

2—Clearing arrangements would be improved further by the ultimate development of a general book-entry system which would be available to all investors in marketable U.S. Government securities.

E: CONTINUING EVALUATION OF MARKET PERFORMANCE

Considerations:

1—The dealer market for U.S. Government securities has been relatively free of direct supervision and regulation from governmental bodies or privately formed associations or groups. It comprises a relatively small number of dealers with varying capital structures who perform an important function for the investing public, the Treasury, and the Federal Reserve. A diminution of confidence in this market as a result of questionable market practices, speculative excesses, or financial difficulties would have widespread adverse repercussions on all financial markets and would seriously impede Treasury debt management and Federal Reserve open market operations.

2—It is believed that participants in the Government securities market have, for the most part, maintained high standards of performance—relatively free of undesirable market practices or dealer financial difficulties. A noteworthy exception to the typically high standards of

¹³ The term "clearance arrangements" as used here refers to the receipt and delivery of securities, and the processing of payments, by a New York City bank on behalf of another bank or nonbank dealer, but it does not involve the offsetting or "netting" of transactions as accomplished by the Federal Reserve Bank.

performance in the market was the recent revelation that certain individuals in the market had received advance confidential information on the terms of Treasury financing operations; the leak was quickly investigated, and official procedures were revised to prevent recurrence. Another undesirable practice that recently came to light was trading by certain individuals at some of the dealer firms in Government securities for their own account, without the knowledge of the employing firms and in some cases in violation of the rules of those firms or of the organized securities exchanges; violations of the antifraud provisions of the securities and exchange laws have also been charged.

3—While the present informal observation and at times moral suasion exercised by System and Treasury officials appear to have worked reasonably well in dealing with most questions of market practice, the charged violations noted in the above paragraph have called for a reconsideration of whether present procedures are sufficient. Indeed, such a reconsideration is already under way in the form of a renewed study by a joint Treasury—Federal Reserve group—with a view to developing specific recommendations in the area of market supervision. At present, official surveillance is limited to receipt of daily reports of dealer position, trading, and financing figures to the Market Statistics Division of the Federal Reserve Bank of New York; annual and possibly eventually more frequent balance sheets and income statements to that division; and the continuous market contacts of the Trading Desk, including occasional additional data submitted to it by dealers. The responsibilities for and access to the various types of information are diffused throughout the Treasury and the System. Until recently, the System Account Manager, who has had in practice the chief responsibility for reporting of and dealing with market problems, has not had access to individual dealer statistics. However, in line with recommendations made in the course of the current study, the Account Manager and other officials of the Trading Desk now have access to individual dealer statistics for purposes of

improving market analysis. Nevertheless, in general, the lines of responsibility, authority, and policy are not so well defined as they might be in order to provide a firm basis for evaluating market performance and practices.

4—The attitude of market participants to further or more direct official surveillance of the U.S. Government securities market may be somewhat mixed at this time. Some participants may feel that they are already subject to considerable scrutiny—not only of an informal nature from Treasury and System officials but also from other governmental and private agencies to the extent that the dealers are involved with other securities markets or with banking. Some participants may feel, too, that further surveillance might tend to discourage healthy innovation and initiative in the market at a time when talent and expertise need to be attracted to it. On the other side, it can be argued that recent instances of inappropriate market behavior point to a need for better surveillance in some form—perhaps through a dealer association, or more directly by an official body itself, or through some combination of these approaches.

Conclusions:

1—While the present official relationship to the market has worked reasonably well in fostering a market that is on the whole viable and healthy, some recent evidences of inappropriate market behavior by a few participants suggest that a stronger element of surveillance probably is needed. At the same time, given the valuable relationships of the past, which have served most needs well, it would appear to be desirable as far as possible to build on existing relationships rather than to construct entirely new ones.

2—The direct and continuing interest of the Treasury and the FOMC in the proper functioning of the market is self-evident. Day-to-day operating responsibilities in this regard should remain entrusted to the Manager of the System Open Market Account, in consultation with appropriate senior staff officers at the Treasury and the Board of Governors.

3—The Manager, in consultation with senior

staff officials at the Treasury and the Board of Governors, has the responsibility for informing the Treasury and the Federal Reserve of any undesirable activity on the part of an individual dealer or of any undesirable activity which appears to be developing more generally.

4—In order to underscore the interest of the Treasury and the Federal Reserve in the functioning of the Government securities market, the Secretariat of the present U.S. Government securities market study should be continued on a permanent basis. This group—which comprises senior staff representatives from the Treasury, the Board of Governors of the Federal Reserve System, and the Federal Reserve Bank of New York—should be charged with continuing study of the opera-

tions and functioning of the Government securities market, submitting periodic reports to the Treasury and the FOMC, publishing studies subject to Treasury and FOMC approval, as warranted, and overseeing statistical reports.

5—Some form of dealer organization might perform a useful function, provided that it could be organized in full conformity with antitrust laws. Such an organization could concern itself with such matters as quotation and trading practices, hours of trading, and the like; and it could become a principal source of contact regarding matters of market practices between the market and the Treasury–Federal Reserve. It might also become involved in some degree of supervision over market activities. □

XI. STAFF STUDIES

Most of the studies listed below will be published, and all are available upon request.

- AHEARN, LOUISE, Studies of Government Securities Market Performance in the Wake of Official Operations in Coupon Issues—Day-to-Day Performance.
- AHEARN, LOUISE, and PESKIN, JANICE, Market Performance as Reflected in Aggregative Indicators.
- BANYAS, LAWRENCE, New Techniques in Debt Management since the Late 1950's.
- BERNARD, NORMAND, Views of the U.S. Government Securities Dealers.
- COLBY, WILLIAM G., Dealer Profits and Capital Availability in the U.S. Government Securities Industry, 1955-65.
- COOPER, ROBERT L., Techniques of the Federal Reserve Trading Desk in the 1960's Contrasted with the Bills Preferably Period.
- DAVIS, FELIX T., and HOEY, M. J., Automating Government Securities Market Operations.
- ETTIN, EDWARD C., The Financial and Economic Environment of the 1960's in Relation to the U.S. Government Securities Market. (Appendix by Carl H. Stem: The Changing International Financial Environment and Foreign Demand for U.S. Treasury Issues).
- MEEK, PAUL, The Changing Structure of the Dealer Market in Government Securities.
- PESKIN, JANICE, Federal Agency Debt and Its Secondary Market.
- ROTHWELL, JACK C., Effects of Operations in Coupon Issues on Interest Rates and Flows of Funds Over Shorter Time Intervals.
- SCHERER, JOSEPH, Institutional Investors and the U.S. Government Securities Market.
- WENDEL, HELMUT, The Position of Nonbank Dealers When Treasury Securities Are Issued with Payment Permitted in Tax and Loan Accounts.

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