

COMMITTEE ON THE HISTORY OF THE FEDERAL RESERVE SYSTEM
33 Liberty Street, New York 45, New York
Telephone: REctor 2-5700, Extension 286

August 31, 1954

Dear Mr. Martin:

Your letter of the 26th came in Monday, and with it the speech you made more than thirteen years ago when George Schaller retired as President of the Federal Reserve Bank of Chicago. We are delighted to have both of them. It means a great deal to the work of this Committee to be able to reach back and touch base, so to speak, with word from you. When I begin to feel that we started work too late, and have already lost track of valuable papers and memoirs we might have had if only we had begun earlier I think of the fine encouragement which Governor Martin of St. Louis is kind enough to give us, and am cheered.

We will welcome whatever you choose to send us, and will value it in our files. Thank you again for courtesy and kindnesses.

Most sincerely yours,

Mildred Adams
Research Director

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August 26, 1954

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Miss Mildred Adams, Research Director
Committee on the History of the
Federal Reserve System
33 Liberty Street
New York 45, New York.

Dear Miss Adams:

It was good to get your letter of August 17 and to know that you found pleasure in the luncheon at the Federal Reserve Bank which, by your presence, you helped make delightful.

In accordance with your suggestion, I am sending the notes of the address I delivered at a dinner on February 26, 1941 at the Palmer House in Chicago, on the retirement of George J. Schaller as President of the Federal Reserve Bank of Chicago. I have tried to put these notes in a fairly presentable shape. The original I have kept so that what I enclose you need not return, and can throw away or dispose of it as you see fit.

Yours sincerely,

Wm McMartin

WMcMartin
ga
Encl'd.

ADDRESS DELIVERED AT DINNER ON FEBRUARY 26, 1941
AT PALMER HOUSE, CHICAGO, ON RETIREMENT OF
GEORGE J. SCHALLER AS PRESIDENT, FEDERAL
RESERVE BANK OF CHICAGO

It is a privilege and a pleasure to be here tonight to speak on behalf of the other Federal Reserve Banks of the accomplishments of the second Governor of the Federal Reserve Bank of Chicago and its first President.

In order to do this it is necessary to review the history which he has had a part in making. It can only be described as a tumult of event following startling event which required clear thinking and a steady purpose, and this he has given in the guidance of this bank and the System. I can speak of these things because I was in the System at the very beginning when it started on its unblazed trail. I worked with Mr. ^SBothworth, the first Chairman, who was followed by Bill Heath and later by Eugene Stevens, until in the reorganization of 1935 the duties of the Federal Reserve Agent were transferred largely to the Federal Reserve Bank. I was with Governor McDougal at the beginning and went through strenuous times with him. I remember Deputy Governor McKay as one of those who with Mr. Attebery at my bank and Mr. Hendricks of New York had a great deal to do with starting and developing our check clearing system.

As you all know, 1933 was a momentous year in banking. Events and changes in the law came thick and fast. The Act of March 9 was passed. In May, what was known as the Thomas amendment, was put into effect and the President was given the right to fix the weight of the gold dollar and the silver dollar. All coins and currency were made legal tender and for the first time the Federal Reserve Board was given the right to change reserve requirements. In June the Banking Act of 1933 was passed which set up a Federal Open Market Committee composed of one representative from each of the twelve banks and for the first time provided that the Board of Directors of the several banks had to act in

that

accordance with the directions of ~~their~~ committee. Prior to that time there had been an Open Market Committee, not specifically authorized in the law but holding meetings and suggesting action which the Governors took back to their Boards of Directors and was followed out by those boards or not followed out in their discretion.

Then followed the Banking Act of 1935 which changed the name of the Federal Reserve Board to the "Board of Governors of the Federal Reserve System" and changed the title of "Governor" to that of "President". It may be of interest to recall that at that time the old Board was composed of Henry Morgenthau, Jr., Secretary of the Treasury, J.F.T. O'Connor, Comptroller of the Currency, Marriner S. Eccles, J. J. Thomas, Charles S. Hamlin, Adolph C. Miller, George R. James, and M. S. Szymczak. This is the Board as it existed on August 23, 1935 when the Act of 1935 was passed and when the Board was reorganized as of February 1, 1936 the Secretary of the Treasury and the Comptroller were left off of the Board and its members were Jos. A. Broderick, M. S. Szymczak, John K. McKee, Ronald Ransom, M. S. Eccles and Ralph Morrison. Since then Mr. Broderick has been succeeded by Mr. Ernest G. Draper and the vacancy of Mr. Ralph Morrison, who resigned shortly after his appointment, has never been filled. An act providing for the insurance of deposits was first passed on June 16, 1933. It was entirely revised and really rewritten in the Act of 1935, and, to become effective March 13, 1936, the present set-up of the Open Market Committee was established. This was to consist of members of the Board of Governors and five Presidents of the Federal Reserve Banks, elected by the banks which were placed in zones. Chicago and St. Louis elected one man and the first member of this committee was Mr. George Schaller. The next year St. Louis was given the representative and since then we have served alternately. That means that George Schaller has represented the Federal Reserve Bank of St. Louis on that committee just as I have had the privilege of

representing the Federal Reserve Bank of Chicago.

The very ~~meaning~~^{purpose} of these acts of Congress and changes indicate the turmoil in which the banking situation was and the efforts being made on the part of Congress to meet the situation.

It has been the practice of the Federal Reserve Bank Presidents to hold conferences throughout the year and, if I remember correctly, it was at one of these conferences that we first got to know George Schaller. At that conference in 1934 there were present Governors Norris, Seay, Newton, Geery, Calkins, McKinney, Harrison, Young, Fleming, Schaller, Hamilton and Martin. I give the full list because of those we sat with at that time all have left the System, some by death, except Young, Fleming, Schaller, Hamilton and Martin, and when George Schaller and George Hamilton and I finish our terms, of those men sitting in the Presidents' Conference at that date there will remain in the System only President~~s~~ Young of Boston and President Fleming of Cleveland.

We have seen George Schaller in action at the Presidents' Conferences and have seen him in discussions in regard to the Open Market Committee. We remember when reserve requirements were raised 50% in August, 1936, and another 50% in 1937, and decreased April 16, 1938. The Board of Governors had full responsibility for this action, but it was discussed with the Presidents.

In dealing with so many of these questions there has been no certain solution. We knew that the economy needed correction if that could be done and there were times when as many as three methods of action would be proposed. It was necessary to adopt that plan which seemed best, knowing that there were certain to be repercussions and feeling that the disorders occasioned would be the least to follow ~~any~~^{the} one of the three ~~plans~~^{adopted}. There was certain to be criticism. The question of timing was always difficult. I believe it does not take much imagination to know that in the discussion of vital things of this

kind men's nerves become frayed and we were all liable to be tired and irritable. I wish to say that I never knew George Schaller to lose his temper and the fact is that after our disagreements and sometimes vigorous words, after the night's sleep we came together feeling closer to each other than ever before. You knew that your team was good and that every man in his place was giving the best he had.

This recital of history from the last month of 1933 up to tonight, which after all covers the major episodes, gives you a good idea of the part the President of the Federal Reserve Bank of Chicago has played in an effort to better our economic structure. We of the Federal Reserve Banks appreciate the part he has played, for he has played it well and now when we come to the time when the Federal Reserve System must lose his services it would be sad did we not know that he is in such physical shape that he can enjoy leisure or work as he likes to the full.

It was Woodrow Wilson who said that "in these modern days the only patent of nobility is achievement", and by that standard your second Governor and first President is a nobleman of the highest rank.

FEDERAL RESERVE BANK
OF NEW YORK

CROSS REFERENCE SHEET

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FOR EARLIER COMMUNICATIONS

Replies of the Chairman
of the
Board of Governors of the Federal Reserve System
to Questions Submitted by the
Subcommittee on Economic Stabilization
of the
Joint Committee on the Economic Report
in connection with
Subcommittee Hearings on December 7, 1954

November 26, 1954

(1) What role did monetary policy play in the period of relative stability following the Treasury-Federal Reserve "accord" in 1951, in the months of boom late in 1952 and early 1953, and in the recession of 1953-54?

Inflationary dangers in prospect in 1951 made essential a shift in credit and monetary policies of the sort envisaged in the Treasury-Federal Reserve accord. Review of subsequent developments supports the conclusion that the policies pursued were helpful in bringing about and maintaining a reasonable degree of both stability and growth in the economy. The country encountered an economic problem of unprecedented nature, namely, carrying out, with no further price inflation after the 1950-51 spurt, a defense program of exceptional magnitude short of war while permitting moderate expansion in private expenditures. Private demands for goods and services were still in the process of overcoming the effects of war and postwar scarcities. Credit and monetary measures, together with fiscal and debt management policies, helped to make it possible to cope with this situation through the mechanism of competitive markets and a free price system. As a result, the various direct controls imposed early in the defense period could be eliminated, thus relieving markets of the rigidities and inefficiencies inherent in such controls.

The Treasury-Federal Reserve accord was reached after an earlier inflationary outburst of overbuying, overborrowing, and overpricing in the private economy. In the first year after its adoption, private spending and borrowing moderated while the defense program expanded. In the second year, however, from the spring of 1952 to the

late spring of 1953 there was a vigorous expansion in private spending and in private credit demands, just as defense expenditures were reaching a peak and the Federal Government faced the need for heavy borrowing to meet a deficit. Large capital expenditures, inventory accumulation, and heavy consumer purchases of durable goods--all financed to a large extent by credit--together with overtime operations in industry and exceptionally full utilization of resources generally, threatened to develop into an unsustainable boom. Credit restraints helped to keep total demands within the limits of the capacity of the economy to produce and to spread the volume of spending over a longer period.

The boom was checked without collapse and was followed by an orderly and moderate downward adjustment in activity. The adjustment was cushioned by progressive action to ease credit markets, as well as by tax reductions and other fiscal measures. It has not developed into a disastrous depression, as many quite reasonably feared.

The defense program has now been curtailed to a level more likely to be sustained over an extended period. Many of the more urgent domestic and foreign shortages resulting from war destruction and postwar reconstruction have been satisfied. Inventories have been reduced appreciably and current production is more nearly in balance with demand. The problem of economic policy has thus become one of facilitating, yet keeping within sustainable bounds, the normal growth forces of a free enterprise, competitive economy.

In the remainder of this answer, credit and related economic developments in the 1951-54 period are described and analyzed in some detail.

Treasury-Federal Reserve Accord

When the Korean outbreak occurred, the financial policies of this country were hampered by problems and methods of operation inherited from the Second World War and its aftermath. Federal Reserve credit policies for many years had been handicapped by trying to combine appropriate credit action with the support of Government securities prices. These practices, which were adopted to meet wartime conditions, contributed in the early postwar period to an inflation that had raised the price level to almost double the prewar average before it came to an end in 1949.

Following the Korean outbreak and adoption of a greatly enlarged defense program, inflation resumed. Various attempts to restrain credit expansion while continuing to support prices of Government securities had unsatisfactory and diminishing results as mounting sales of securities to the Federal Reserve by banks and other holders made funds abundantly and cheaply available for spending, investing, and speculation.

In a move to correct this situation, on March 4, 1951, the Secretary of the Treasury and the Chairman of the Board of Governors of the Federal Reserve System announced that "the Treasury and the Federal Reserve System have reached full accord with respect to debt management and monetary policies to be pursued in furthering their common purpose to assure the successful financing of the Government's requirements and, at the same time, to minimize monetization of the public debt."

Following this accord, monetary policies were reoriented. Open market operations were altered over a period so as to adjust the supply of bank reserves to levels consistent with stable economic growth rather

than to support prices of Government securities. The discount mechanism through which member commercial banks borrow from the Federal Reserve Banks was gradually restored to an effective instrument of credit regulation. Various selective regulatory and voluntary means for restraining credit extensions in particular areas were utilized for a time, but to an increasing extent reliance came to be placed upon the more general measures that operate through the quantity of bank reserves and through flexible interest rate movements.

Imposition of Credit Restraints--Spring of 1951 to Spring of 1952

Following the accord, Federal Reserve operations in the short-term Government securities market, except for limited purchases during periods of Treasury refunding, were only for the purpose of influencing the volume of bank reserves in accordance with the broad objectives of Federal Reserve policy, namely, to contribute to stable economic growth. Purchases of long-term securities by the Federal Reserve were continued in diminishing volume for a number of weeks following the accord, but after mid-1951 the Federal Reserve bought practically no long-term bonds.

Under these policies, any bank or other investor wishing to sell Government securities generally had to depend on buyers in the market, and the free play of market forces resulted in some fluctuation as well as some rise in rates. Such price and interest rate fluctuations perform important functions of a self-corrective and stabilizing nature, as is explained more fully in the answers to Questions 3 and 5.

It had been widely feared that because of the magnitude of the public debt the removal of pegs on prices of Government securities would

leave the market with insufficient buyers and holders to carry the debt, and thus would produce a catastrophic decline in bond values and panic conditions in the Government bond market. These fears proved unfounded. Would-be sellers either found buyers at prices they were willing to accept or refrained from selling. New issues were offered at yields which attracted sufficient buyers. Until late 1952, market yields on long-term bonds averaged less than 2-3/4 per cent, with prices fluctuating between 95 and 99. The rate on Treasury bills gradually increased, but until 1952 remained generally below the Federal Reserve discount rate of 1-3/4 per cent.

The Federal Reserve purchased short-term securities at times of Treasury refunding operations in order to steady the market. During periods of peak seasonal needs for reserves by the banking system, the Federal Reserve bought securities either outright in the market or from dealers under repurchase agreements for limited periods. At other times, however, System holdings of securities were reduced in order to absorb reserves in excess of current needs. For the year ending April 30, 1952, although there were wide variations during the period, total Federal Reserve holdings of U. S. Government securities declined slightly as shown in Table I.

During this period banks were supplied with some reserves on balance by other factors, primarily a gold inflow, offset in part by a growing currency demand. To obtain additional reserves, banks resorted increasingly to borrowing at the Federal Reserve Banks; these borrowings fluctuated considerably in response to temporary needs for reserves and showed a gradual rising tendency. This was the first time banks had had

to borrow to any significant extent since the early Thirties. Since banks are generally averse to borrowing steadily and the Federal Reserve Banks endeavor to discourage continuous borrowing by individual members, the result of such a situation was to exert restraint on bank credit extension and thus on growth of deposits.

Table I

FEDERAL RESERVE CREDIT AND BANK RESERVES
Changes from April 1951 to April 1952*
(In billions of dollars)

Federal Reserve credit	
U. S. securities	-0.5
Discounts and advances	+0.2
Other factors affecting reserves (Sign indicates effect on reserves)	
Gold stock and foreign balances at FR Banks	+1.8
Currency in circulation	-1.3
Other - net	+0.3
Member bank reserve balances, total	<u>+0.5</u>
Required reserves	+0.6
Excess reserves	-0.2

* Changes derived from monthly averages of daily figures for the two months indicated. Figures may not balance because of rounding.

In addition to the adoption of more restrictive monetary measures following the Treasury-Federal Reserve accord, direct controls were imposed on prices early in 1951 and the allocation of materials in short supply was made more rigorous. A general reaction set in from the overbuying, overpricing, and overborrowing of the previous months. In the following twelve months, Government expenditures for defense increased sharply, but expansion in business and consumer expenditures for durable goods

halted, and the rate of accumulation of business inventories was reduced. Consumer expenditures for nondurable goods and services continued to increase moderately. Private credit expansion slackened. Prices in general showed little change. Some prices that had previously risen most sharply declined, while some other prices advanced moderately.

Private credit expansion continued in this period, but the rate of growth was much slower than immediately after the outbreak in Korea. Commercial banks, while slowing down their loan increases, added somewhat to their holdings of short-term Government securities, being motivated to do so by the attraction of higher rates and by the fact that their longer-term holdings were less liquid than they had been under the bond support policy. Credit developments in this and other periods are indicated in Table II, which shows changes in outstanding amounts of selected types of credit and also by selected groups of lenders or investors for years ending June 30, 1950 to 1954.

Although corporate security issues increased from mid-1951 to mid-1952, as a result especially of needs to finance expanding defense activities, the rate of expansion in bank loans to businesses and in mortgage credits slackened considerably. Increases in consumer credit and in borrowing by State and local governments were kept within moderate limits, notwithstanding continuing strong demands. The moderation in credit growth was due in part to regulation of consumer and mortgage credit terms and to the voluntary credit restraint program carried on by lending institutions. To a considerable extent, however,

Table II

GROWTH IN MAJOR TYPES OF DEBT AND EQUITY FINANCING
(Net increase in amounts outstanding, in billions of dollars)

Distribution of growth by--	12 months ending June 30			
	1954	1953	1952	1951
Major types:				
Federal cash borrowing	2.2	2.9	-0.5	-5.8
State and local government issues	5.5	3.1	2.6	2.8
Real estate mortgages	9.9	9.4	8.2	11.3
Corporate bond and stock issues	6.7	7.7	7.3	4.7
Bank loans to business	-1.3	2.0	1.5	6.5
Consumer credit by banks and other lenders	0.4	4.9	2.3	1.8
Bank credit not included above	2.4	0.2	1.4	1.0
Total, major types of financing	25.8	30.2	22.8	22.3
Selected holders:				
Federal Reserve Banks	0.3	1.8	-0.1	4.7
Commercial banking system	8.2	3.5	8.4	4.0
United States securities	4.9	-2.5	2.7	-7.2
Other loans and investments	3.3	6.0	5.7	11.2
Nonbank holders:				
Mutual savings banks	1.9	2.0	1.4	0.9
Savings and loan associations	3.9	4.0	2.4	2.1
Life insurance companies	4.5	5.2	3.7	3.7
Others--U.S. Govt. securities only:				
Individuals	0.0	1.5	-0.9	-2.0
Corporations	-2.6	-0.2	-1.1	1.6
Miscellaneous investors	0.9	1.2	0.9	1.0
Total holdings of above financing types accounted for by selected holders	17.1	19.0	14.7	16.0

Note.--Table shows net changes in selected types of loan extensions and new equity financing. Among types not included are trade credit other than consumer credit; interbank loans; security issues by foreign agencies, international organizations, nonprofit and eleemosynary institutions; nonbank loans for purchasing securities; and claims such as shares, pass books, and insurance policies issued by financial organizations. Among holders, the most important exclusions are nonfinancial corporations, trusts, governments and individuals, except for U. S. Government bonds.

the slackened pace in making loans and investments resulted from the limitation on the availability of bank reserves, higher interest rates, and the reluctance of lenders and others to sell Government securities at the lower prices then prevailing.

These latter changes constituted in effect a decrease in liquidity and resulted in an increased demand for cash balances. The changed liquidity needs and the expanding volume of economic activity made possible a further substantial growth in bank credit and the money supply without generating inflationary pressures. Demand deposits and currency showed a further expansion of about 7 billion dollars or 6 per cent in the 12 months ending April 1952. Savings deposits, which had actually contracted following the Korean outbreak, increased substantially as did savings in other forms.

In summary, it may be said that after the Treasury-Federal Reserve accord the Federal Reserve endeavored to adjust its policies so as to influence the level of bank reserves and the money supply in accordance with seasonal requirements, the capacity of the economy to produce goods and services, and sustainable economic growth in the economy. The discount function was restored as a means of supplying temporary needs for Federal Reserve credit in a manner that exerted restraint on unwarranted uses of such credit, thereby complementing open market operations in influencing the availability of credit at member banks. Discontinuation of rigid pegging of Government security prices removed the possibility of monetizing the public debt through sale to the Federal Reserve System at the initiative of the holders, nonbank as well as bank, and without loss to them. The excess liquidity of the economy was thereby removed.

Resumption of Expansionary Tendencies--Spring of 1952 to Spring of 1953

Beginning in the spring of 1952, the rate of increase in defense spending slackened, but there was a renewed expansion of private expenditures and private credit demands became more vigorous. Around the middle of that year, direct regulation of consumer instalment and real estate credit and the voluntary credit restraint programs were discontinued. These actions increased the dependence on general credit measures for restraining excessive credit and monetary expansion. Total national product increased in the following year as a result of growing private expenditures both for consumption and investment, including a building up of inventories. By late 1952 the economy generally was operating on an overtime basis. Wage rates again rose substantially and consumer prices advanced slightly; at the same time, however, wholesale prices continued to show more declines than advances.

All major kinds of credit increased more sharply in the twelve months ending June 1953 than in the preceding twelve months, as shown in Table II. The biggest change was in consumer credit, which increased five billion dollars as compared with only little change during most of the previous year. The United States Government became a net borrower of about three billion from the public, as compared with a reduction in its indebtedness in the previous year. The volume of mortgage loans completed and of corporate and State and local government securities issued was moderately larger than in the preceding year. Bank loans to businesses, reflecting inventory accumulation, expanded very sharply in late 1952 and failed to show the usual seasonal decline in early 1953.

A significant characteristic of this period was the amount of credit demands met from the genuine savings of the public. The net expansion in credit supplied by nonbank lenders was much greater than in the preceding year, while bank credit showed a smaller rate of increase. Furthermore, a larger portion of the bank credit represented the investment of savings deposits, which increased by 7 per cent. Demand deposits and currency continued to expand but the annual rate of growth declined from 6 per cent to 3 per cent.

The Federal Reserve occasionally bought Government securities in this period but the objective of monetary policy continued to be restraint on undue credit and monetary expansion. Purchases were made at times of Treasury refundings during 1952 and subsequently offset in part by sales. Open market operations were also undertaken in response to seasonal influences affecting bank reserve needs.

Over the whole period April 1952 to April 1953, as shown in Table III, net purchases were less than enough to cover the drains on bank reserves resulting from gold outflow and larger currency demands. Banks had to borrow substantial amounts from the Federal Reserve in order to meet growing demands for credit. Discounts and advances at Federal Reserve Banks generally exceeded a billion dollars from July 1952 to May 1953, and they averaged 1.6 billion in December 1952. This made banks much more restrained in their willingness to supply these demands. To make the policy of restraint more effective, the Federal Reserve discount rate was raised from 1-3/4 to 2 per cent in January 1953.

Table III

FEDERAL RESERVE CREDIT AND BANK RESERVES
Changes from April 1952 to April 1953*
(In billions of dollars)

Federal Reserve credit	
U.S. securities	+1.4
Discounts and advances	+0.8
Other factors affecting reserves (Sign indicates effect on reserves)	
Gold stock and foreign balances at FR Banks	-0.7
Currency in circulation	-1.3
Other - net	+0.1
Member bank reserve balances, total	+0.2
Required reserves	+0.3
Excess reserves	-0.1

* Changes derived from monthly averages of daily figures for the two months indicated. Figures may not balance because of rounding.

The restraints did not stop credit and monetary growth. The growth that occurred apparently corresponded closely to the capacity of the economy to absorb more money without inflation. Since the resources of the economy were generally fully utilized, any more credit might have resulted in inflationary price rises and moreover might have built up an unsustainable debt structure. Inflation was prevented, notwithstanding strong pressures of demand for more credit, and prices remained relatively stable. In some lines, particularly instalment loans to consumers and inventory loans to business, the rate of expansion was apparently more rapid than could be sustained.

The money market showed a marked response to the strong demand for credit and the restraints on its availability. Interest rates rose

during the period, reflecting the pressures of credit demand in excess of the available supply. The rise in interest rates was particularly great in the spring of 1953 when yields on high-grade securities and loans generally reached the highest levels for 15 to 20 years. Treasury bill rates approached 2-1/2 per cent; the average yield on long-term Treasury bonds rose above 3 per cent; and a small new issue of 30-year Treasury bonds bore a coupon rate of 3-1/4 per cent. Rates on new issues of high-grade corporate bonds exceeded 3-1/2 per cent, and Federally guaranteed mortgages sold at discounts in the secondary market.

By May 1953 the market developed a condition of tension that threatened to become unduly severe. This reflected a number of converging factors. Apprehension arose regarding the ability of the credit market to meet borrowing demands of the State and local governments, consumers, home buyers, and business corporations, together with rising Treasury financing needs. The combination of a Government deficit and large private credit demands is exceptional for a period other than one of active war and it was difficult to gauge the problems that it might present. At that time the Treasury made its offer on a one billion dollar issue of 30-year 3-1/4 per cent bonds to raise new money from nonbank investors. This offering gave probably the first tangible evidence of a striking nature, not only of the fact that the Treasury had to borrow substantial amounts, but also that it had to compete against large private borrowing demands for the available supply of savings at competitive rates if resort to the creation of an undue volume of new money through the banking system were to be avoided.

In addition to Treasury borrowing, private credit demands of various sorts were exceptionally large. New security issues by corporations and State and local governments exceeded 7 billion dollars in the first half of the year--larger than in any previous half-year, and the amount of future issues scheduled was still large. Some of this borrowing was in anticipation of further stringency. About this time, also, the ceiling rates on the FHA and VA mortgages were raised after months of consideration, and a large volume of mortgages which had been held back pending the authorization of higher rates suddenly came on the market. The new rates, however, proved low relative to the tight market at the time, and such mortgages sold at discounts in the secondary market.

The continued high level of member bank borrowing from the Federal Reserve and the limited availability of reserve funds were keeping banks under pressure. The effect on the money market was a marked rise in interest rates, which exerted a considerable amount of restraint on private credit demands. The heavy pressures on the market were due to the growing demand for credit. The supply of credit actually increased substantially but did not meet all demands.

Slackening of Activity after Spring of 1953

Early in May 1953 Federal Reserve officials recognized that as a result of a combination of circumstances, some of which were unexpected, undue tension was developing in the credit market. They concluded that steps should be taken to temper restraints currently imposed on member banks, particularly in view of prospective seasonal credit and currency demands.

The Open Market Committee began early in May to supply reserves by purchasing Government securities and by midyear about one billion dollars of securities had been acquired. Early in July some 1.2 billion

dollars of reserves were released to the banking system by a reduction in member bank reserve requirements. These actions made it possible for banks to decrease their borrowings sharply and to subscribe for a new issue of short-term Government securities early in July, as well as to meet seasonal credit and currency demands around the midyear.

Inflationary forces abated after the spring of 1953 and economic activity commenced to recede from the all-time high level reached in the second quarter of that year. Business inventory expansion slackened and subsequently contraction in inventories set in. Home building plans were temporarily held up because of financing difficulties. Substantial cutbacks in defense expenditures began to be made by the Government.

As these evidences of business slackening became clearer, the Federal Reserve further eased credit conditions by purchasing additional securities in the market. Reserves thus made available were enough to cover the effects of a gold outflow and the customary seasonal rise in currency and credit demands, but the increases that actually occurred in currency and required reserves were smaller than expected. Member banks were thus able to use a part of the reserves made available to them to reduce their borrowings at the Federal Reserve Banks. In February 1954 the Federal Reserve discount rate was reduced to 1-3/4 per cent.

Developments for the first 12 months following the change in policy are summarized in Table IV. In that period the reduction in reserve requirements of 1.2 billion dollars and Federal Reserve purchases of securities of 1.3 billion enabled member banks to meet a small further gold outflow, to decrease appreciably their borrowings at the Reserve Banks, and to obtain reserves needed to cover further deposit expansion.

TABLE IV

FEDERAL RESERVE CREDIT AND BANK RESERVES
Changes in billions of dollars*

	April 1953 to <u>April 1954</u>	April 1954 to <u>Oct. 1954</u>
Federal Reserve credit		
U.S. securities	<u>1/</u> +1.3	-0.2
Discounts and advances	-1.0	+0.1
Other factors affecting reserves (Sign indicates effect on reserves)		
Gold stock and foreign balances at FR Banks	-0.5	-0.2
Currency in circulation	0	-0.3
Other	<u>1/</u> -0.4	0
Member bank reserve balances - total	-0.6	-0.5
Required reserves, due to--		
Reduction in requirements	-1.2	-1.6
Growth in deposits	+0.4	+1.1
Excess reserves	+0.2	0

* Changes derived from monthly averages of daily figures for the two months indicated. Figures may not balance because of rounding.

1/ Exclude effect of 500 million dollar sale of Government securities to Treasury in exchange for free gold carried in Treasury cash balance.

Since April 1954, reserves needed for customary seasonal and other purposes have been supplied largely by a further reduction of about 1.6 billion dollars in member bank reserve requirements. Reserves were supplied at times by Federal Reserve purchases of Treasury bills, while at other times to absorb redundant reserves, bills were sold or not replaced at maturity. Thus banks have been able to meet seasonal credit and monetary demands and also to purchase new issues of Treasury securities with little borrowing.

Total credit demands, particularly for long-term purposes, continued substantial during the latter part of 1953 and in 1954, although less than in the preceding year. There was a decline in bank loans to business and consumer credit showed little increase from the middle of 1953 until recently. Mortgage lending began to pick up in the autumn of 1953 and has since been in record volume, stimulated in part by considerably liberalized downpayment and maturity terms, especially under Government mortgage programs. New security issues by corporations were slightly less than in the preceding year but those of State and local governments were much larger. The Federal Government remained a substantial net borrower.

Savings continued to meet a large portion of total credit demands as reflected in the figures of insurance companies, savings and loan associations, and mutual savings banks as well as in time deposits of commercial banks. The total of demand deposits and currency, which changed little from the spring of 1953 to the spring of 1954, except for normal seasonal movements, showed a more than seasonal increase after mid-1954.

As a result of the increased availability of funds and the slackened credit demands, yields on short-term Treasury securities declined by the summer of 1954 to the lowest level since 1949. Since the spring of 1954 yields on long-term Government securities and those on high-grade corporate bonds have been generally at the lowest level since the Treasury-Federal Reserve accord. Rates charged by banks on customer loans remained at about last year's higher levels until mid-March, when the rate to prime borrowers was reduced. Mortgage interest rates declined somewhat and discounts on guaranteed and insured mortgages were reduced substantially, with small premiums appearing in some areas.

Summary and Conclusion

The role and objective of the Federal Reserve in the defense mobilization period have been to make possible the provision of adequate credit and money for full utilization of, and growth in, the country's economic resources. At the same time, policy endeavored to prevent excessive credit and monetary expansion beyond the limits of productive capacity that would lead to inflationary developments and threaten the maintenance of stable growth.

During the period of restraint in 1952-53 Federal Reserve policy looked toward the avoidance of credit excesses which could cause real trouble once a downturn had come. This policy sought to even out the flow of capital investment by fostering deferment of some projects until slack had developed in the economy. During the period of ease since May 1953, the major contribution has been to facilitate as large a volume of bank lending as the economy required, and to provide support for mortgage lending and utility and State and municipal financing which has had its counterpart in a high volume of construction of residential property, utilities installations, public buildings, and roads construction. These activities have been a substantial offset to declines in defense expenditures and in business inventories.

November 24, 1954

(2) How has the emphasis in the use of monetary instruments changed during the period since mid-1952? For example, how have the various instruments--open market operations, discount policy, and reserve requirement changes--been used under varying conditions? Has there been any reliance on moral suasion during this period?

At any given time, the Federal Reserve System pursues the policy it believes appropriate for the credit and economic situation. It has three major instruments available for effectuating its policy -- open market operations, discount policy, and changes in reserve requirements. These instruments are complementary and mutually reinforcing. Extent of reliance on any one of the instruments depends upon the System's judgment as to what may be most appropriate under the circumstances to further the general credit policy being pursued.

Description of the Instruments

Open market operations are carried out at the initiative of the System by making purchases or sales of Government securities in the market. Purchases of securities supply reserves to member banks. Sales of securities absorb or extinguish member bank reserves. These operations can be used to offset losses or gains in reserves from changes in such factors as currency in circulation or gold stock or to expand or reduce the volume of bank reserves.

Discount policy relates to Federal Reserve Bank lending to member banks. The initiative in such credit extensions is taken by individual member banks when it is necessary for them to build up their reserve positions to required levels. The discount rates at which the Federal Reserve Banks will lend to member banks are established by each Reserve Bank from time to time, subject to review and determination by the Board of Governors, in accordance with the credit and economic situation.

Member banks, as a matter of well-established banking practice, are generally reluctant to operate on borrowed funds, or to stay long in debt. Therefore, under ordinary circumstances, borrowing at the Federal Reserve by individual banks is usually on a temporary, short-term basis. In unusual or emergency situations, of course, Federal Reserve discount credit may be outstanding to individual banks for longer periods. The general principles governing Reserve Bank administration of the discount window arise out of law, regulation, and Federal Reserve discount experience.

By raising or lowering reserve requirements of the various reserve classes of member banks -- within specified limits for each class as permitted by law -- the Federal Reserve at its initiative may diminish or enlarge the volume of funds which member banks have available for lending. Action of this type thus influences the liquidity position of banks and their ability to expand deposits in relation to their reserves. By their nature, changes in reserve requirements affect at the same time and to the same extent all member banks within each reserve class subject to the action.

Interrelationship of the Instruments

Although any one of these three major instruments will tighten or ease credit conditions, each of them has a somewhat unique role in carrying out System credit and monetary policy. Open market operations have become the chief instrument by which the System influences on a current basis the volume of unborrowed reserves of member banks. Such operations are also actively used to exert important restrictive or expansive pressure on bank credit conditions when the economic situation calls for fundamental change in these conditions. Since a purchase or sale of Government securities by the System adds to or subtracts from the

reserves of the member banks, it will be reflected initially, other things unchanged, in the volume of excess reserves held by member banks or in the volume of reserves that member banks need to obtain by borrowing at the Federal Reserve Banks. Reflecting the reluctance of member banks to incur indebtedness or remain long in debt, changes in the volume of member bank excess reserves or borrowing are promptly reflected in conditions of credit availability and interest rates in the money market. Bank credit is restricted as banks become increasingly indebted and eased as the volume of that indebtedness is diminished or the amount of excess reserves is increased. Open market operations are thus a flexible means for helping to achieve whatever condition of credit tightness, ease, or moderation may be appropriate.

The Federal Reserve discount rate is a pivotal interest rate in the credit market. In particular, short-term open market rates tend to array themselves in relationship to the Federal Reserve discount rate, except in a period when the reserve positions of member banks are so easy as to obviate the need for borrowing at the Reserve Banks. When through open market operations bank reserve positions have been put under pressure (or have been allowed to get under pressure as bank credit and deposits expand), money rates will tend to range higher in their relationship to the discount rate. Conversely, as bank reserve positions ease, they will be lower in relation to that rate.

In a period, for example, when restraint on bank credit and monetary expansion is needed, open market operations and changes in the discount rate need to be used to reinforce each other. In the first instance, increasing pressure on bank reserve positions (increased need

for borrowing) may be developed through use of the open market instrument alone. At a point, however, it will become appropriate to support the effectiveness of this open market action by an increase in the discount rate, strengthening the reluctance of member banks to remain indebted to the Federal Reserve by making borrowing more expensive as a means of adjusting bank reserve positions. Such discount rate adjustments tend to lag behind adjustments in market rates in a tightening credit situation. With an upward adjustment of the discount rate, market rates may shift further upward over a period of time as they re-form around the new and higher discount rate.

In a period when it is appropriate to ease credit conditions, open market operations may be undertaken to supply reserve funds. Member banks may use these funds initially to reduce their borrowing. Since this action will put banks in a stronger position to increase their lending and investing activities, it will tend to be reflected in a stronger tone in money markets and in lower market rates in relation to the discount rate. To reinforce this credit-easing action, it may be appropriate at some stage to lower the discount rate, thereby keeping the cost of using this avenue for the temporary adjustment of bank reserve positions more nearly in line with the cost of making these adjustments through the sale and subsequent repurchase of market paper or securities.

Changes in reserve requirements can be used, like open market operations, to tighten or ease bank reserve positions. As with open market operations, the effect shows up initially in changes in the volume of member bank excess reserves and borrowing at the Reserve Banks. Its impact on the money market and the availability of bank credit is, therefore, similar in many respects to that of a comparable open market action.

The reserve requirement instrument, however, is not interchangeable with the open market instrument. Unlike open market operations, the results affect immediately and simultaneously all banks in each reserve class. Changes in requirements, moreover, can not be made frequently -- especially on the up side -- without unduly disturbing the operations of individual banks, since in our country adherence to reserve requirements is a basic rule to be observed in conducting a banking business. Changes in reserve requirements are, therefore, made infrequently and typically involve a fairly sizable volume of funds. The effects tend to be large and concentrated within a short period of time. The instrument is more appropriate for making a major change in the volume of available bank reserves than it is for short-run adjustments. It is not adaptable to affecting bank reserve positions on a day-to-day and week-to-week basis, as are open market operations. Nor is the instrument as sensitive and flexible a means of affecting general credit conditions as is the combined use of open market and discount operations. In fact, it may be desirable to engage in partially offsetting open market actions in order to cushion the impact of reserve requirement changes in credit markets.

Use of the Instruments Since Mid-1952

In an appended tabulation, Exhibit A, the various credit actions taken by the Federal Reserve after mid-1952 are set forth, together with a summary of the surrounding credit and economic circumstances. A chart, Exhibit B, shows the interrelated effects of these actions on member bank borrowings and excess reserves. Examination of these measures will make clear the interaction and interrelation of the major instruments following a pattern similar to that described above. As may be seen from the

accompanying chart, the System did not fully meet through open market operations the heavy demands of banks for reserves in the fall of 1952, with the result that there was a build-up in the volume of discounts. This pressure on bank reserves was reflected in a rise in interest rates, particularly in the short-term sector. The restrictiveness of this development was reinforced in early 1953 by an increase in the discount rates of the Reserve Banks from 1-3/4 to 2 per cent. Restraint on bank reserve positions was maintained over the first several months of 1953. Reflecting the very strong demand for credit from a variety of sources, interest rates, both long- and short-term, rose further.

The revival in this period in the use of the discount instrument, little used since the early 1930's, raised some problems of discount administration for the System. Through a lapse of time some member banks had lost familiarity with the principles of law and regulation relating to the appropriate occasions for borrowing at the Reserve Banks. Under the excess profits tax law then in effect, it was profitable for member banks in excess profits tax brackets to borrow to increase their tax base, and, in order to improve their tax situations, a few of these banks began to rely on borrowing at the Reserve Bank rather than adjustments in asset positions in maintaining their reserve positions. Some other banks seemed willing to remain indebted at the Reserve Banks for extended periods in order to profit from differentials between market rates of interest and the discount rate. As these developments became apparent, they were dealt with administratively by the Reserve Banks on a case-by-case basis.

With signs of an abatement of the inflationary threat in the spring of 1953, the Federal Reserve modified its credit policy. Easing actions were first undertaken through open market purchases begun in early May and made on an increasing scale through June. These open market purchases were supplemented at mid-1953 by a reduction in reserve requirements. Taken together these actions made available sufficient reserve funds to meet seasonal reserve drains and credit needs at the midyear, including large Treasury needs, and at the same time greatly to ease pressures on bank reserve positions and to reduce member bank borrowing needs.

Additional open market actions were taken over the second half of 1953 to expand further the supply of reserves available to member banks in accordance with usual seasonal factors. Actual credit demands did not come up to seasonal expectations, however, and member banks used surplus reserve funds to reduce their borrowings at the Reserve Banks. By early 1954 banks were largely out of debt to the Reserve Banks and over the first half of the year excess reserves increased steadily, largely reflecting seasonal factors. Easing actions by the open market instrument were supported by reductions in the discount rates of the Reserve Banks first in February and again in April and May. Interest rates declined sharply over the period in response to this combination of actions and the reduced demand for short-term credit.

In May of 1954 the Federal Reserve again began to supply bank reserves through open market operations and around midyear reserve requirements of member banks were further reduced. This action was taken in order to promote further bank credit and monetary expansion and to make available funds to meet seasonal reserve drains and credit needs,

including those of the Treasury. It was foreseen that the action would supply more reserves than were called for at the time and accordingly open market sales were made to absorb a part of the funds. It was anticipated that these funds would be released to the market over the fall months as needed by open market purchases and this was done. The dovetailing of reserve requirement and open market actions in the summer of 1954 illustrates how the impact of a change in reserve requirements may be cushioned and spread over time by temporarily offsetting open market measures.

Selective Credit Actions^{1/}

In addition to its general credit instruments, the System had during this period one continuing instrument of selective credit action, namely, margin requirements on stock market credit. Margin requirements established by the Board of Governors limit the amount which brokers, dealers, and banks may lend to customers in order to purchase or carry securities. Their statutory purpose is to prevent undue use of credit for stock market transactions. From the standpoint of credit and monetary administration, margin requirement regulation serves to minimize the bearing that stock speculation might have on the use of the general instruments of System policy discussed above.

^{1/} At times during the past the Board has also had temporary authority to regulate the terms of consumer and real estate credit. Most recently, for example, regulation of consumer credit was undertaken in the early fall of 1950 under temporary authority granted by the Defense Production Act. The Board suspended such regulation in May 1952, and in the Defense Production Act amendments approved June 30, 1952, Congress repealed the authority to regulate consumer credit. In the fall of 1950 the Board was also given temporary authority to regulate real estate credit terms. Such regulation was begun in mid-fall of that year and suspended in September 1952 to conform with the provisions of the Defense Production Act as amended. That Act continued the authority for real estate credit regulation until mid-1953, but required that the regulation be relaxed earlier if the estimated number of dwelling units started in each of three successive months was below a seasonally adjusted annual rate of 1.2 million.

In February 1953 margin requirements on stock market credit were reduced from 75 to 50 per cent. The 75 per cent margin requirement had been set in January 1951 as a preventative measure during that inflationary period. The action in early 1953 was taken in the judgment that a 50 per cent requirement would be adequate to prevent an excessive use of credit for purchasing and carrying securities.

Use of Moral Suasion

Moral suasion is generally taken to refer to oral or written statements, appeals, or warnings made by the banking and monetary authorities to all or special groups of lenders with the intent of influencing their credit extension activities. During the period under review only minor use was made of this instrument within the Federal Reserve System.^{1/}

The term moral suasion is sometimes given a broader meaning to include any public or private statements made by Federal Reserve officials in the discharge of their responsibilities. As so defined it would include statements made to promote awareness and understanding of current credit and monetary problems on the part of the public and the financial community. It would also include conferences with member banks, individually and in groups, and with others in connection with the administration of various System functions, including particularly the discount function. On the basis of this broader definition, it may be said that moral suasion is constantly being employed by the System to promote public understanding of System actions and to ensure compliance with the law and with regulations issued pursuant to the law.

^{1/} For example, the Federal Reserve Bank of Boston, on May 15, 1953, addressed a letter to all commercial banks in the First Federal Reserve District calling attention to relaxation of credit standards taking place in the market for instalment credit.

EXHIBIT A

USE OF FEDERAL RESERVE INSTRUMENTS

July 1952 - October 1954

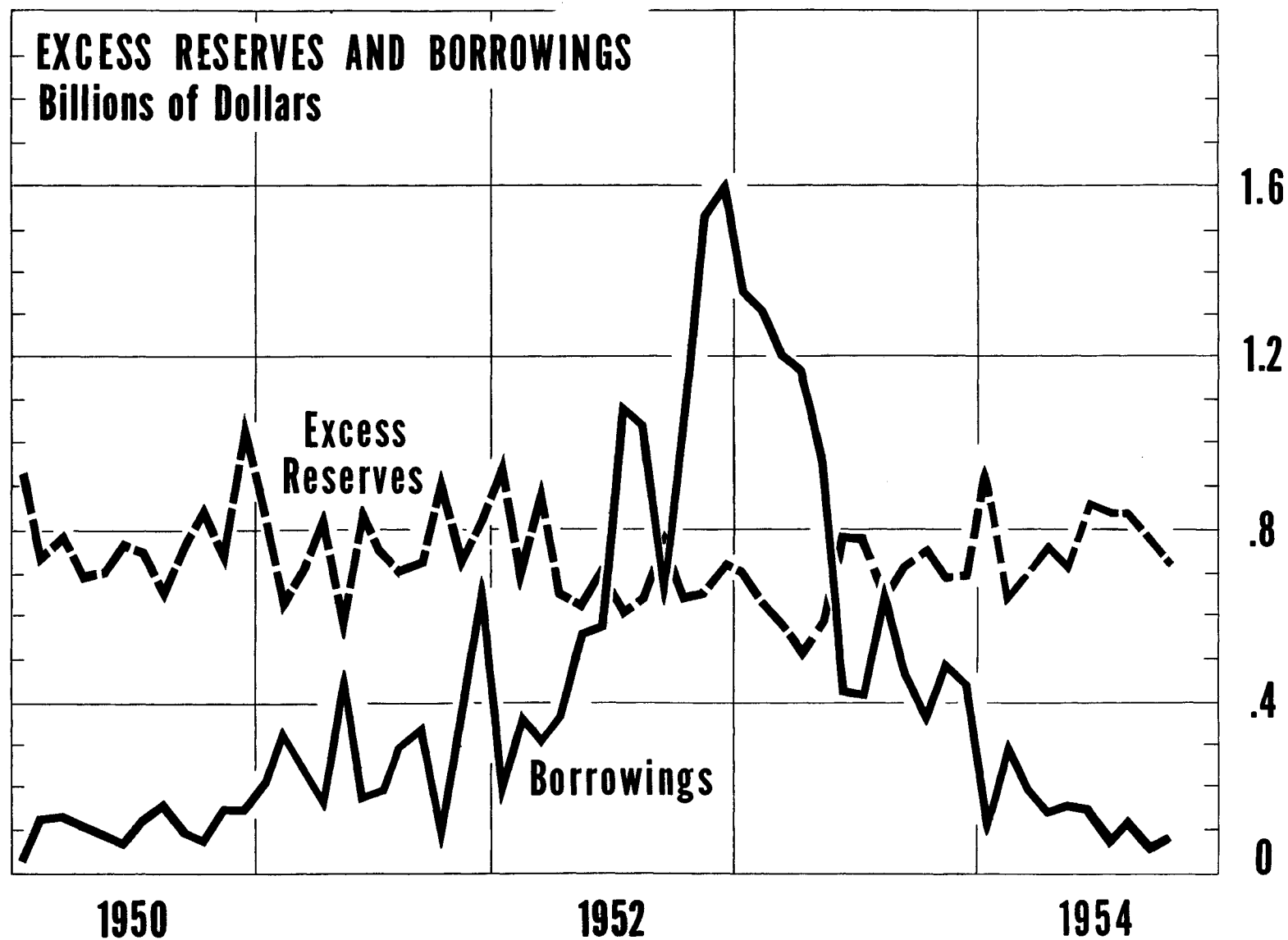
Date	Action	Purpose of action	
		Intent with respect to effect on credit and money	Explanation
September 1952	Suspension of regulation of real estate credit.	None	To conform with the terms of the Defense Production Act, as amended, requiring suspension of regulation if housing starts in each of three consecutive months fell short of an annual rate of 1,200,000 units, seasonally adjusted.
July - December, 1952	Limited net purchases of U. S. Government securities in open market to 1.8 billion dollars.	Restrictive	<p>To meet seasonal and other reserve drains only in part, requiring banks to borrow some of the reserves needed so as to restrain bank credit and deposit expansion at a time when credit demand was very large and the economy was fully employed.</p> <p>Purchases in August and September were made primarily at times of Treasury refunding operations and were offset in part by subsequent sales.</p>
January - April 1953	Sold or redeemed 800 million dollars net of U. S. Government securities.	Restrictive	To offset seasonal changes in factors affecting reserves and thus to maintain pressure on member bank reserve positions.

Date	Action	Purpose of action	
		Intent with respect to effect on credit and money	Explanation
January, 1953	Raised discount rates from 1-3/4 to 2 per cent and buying rates on 90-day bankers' acceptances from 1-7/8 to 2-1/8 per cent.	Restrictive	To bring discount rates as well as buying rates on acceptances into closer alignment with open market money rates and to provide an additional deterrent to member bank borrowing from the Reserve Banks.
February, 1953	Reduced margin requirements on loans for purchasing or carrying listed securities from 75 to 50 per cent of market value of securities.	None	To reduce margin requirements from the high level imposed early in 1951, in the judgment that the lower requirement would be adequate to prevent excessive use of credit for purchasing and carrying stocks.
May-June, 1953	Purchased in open market about 900 million U. S. Government securities.	Relief of credit market tensions	To provide banks with reserves and to permit a reduction of member bank borrowing from the Reserve Banks at a time when such borrowing was high, credit and capital markets were showing strain, and seasonal needs for funds were imminent.
July, 1953	Reduced reserve requirements on net demand deposits by 2 percentage points at central reserve city banks and by 1 percentage point at reserve city and country banks, thus freeing an estimated 1.2 billion of reserves.	Expansive	To free additional bank reserves for meeting expected seasonal and growth credit demands, including Treasury financing needs, and to further reduce the pressure on member bank reserve positions.

Date	Action	Purpose of action	
		Intent with respect to effect on credit and money	Explanation
July-December, 1953	Made net purchases in open market of U. S. Government securities totaling 1.7 billion dollars.	Expansive	To provide banks with reserves to meet seasonal and growth needs and to offset a continuing gold outflow with little or no additional recourse to borrowing. This action and the one below were taken in pursuance of a policy of active ease adopted in view of the business downturn.
January-June, 1954	Limited net sales to about 900 million dollars of U. S. Government securities in open market.	Expansive	To absorb only part of the reserves made available by the seasonal deposit contraction and return flow of currency thereby further easing bank reserve positions.
February, 1954	Reduced discount rates from 2 to 1-3/4 per cent and buying rates on 90-day bankers' acceptances from 2-1/8 to 1-3/4 per cent.	Expansive	To bring discount rates as well as buying rates on bankers' acceptances into closer alignment with market rates of interest and to eliminate any undue deterrent to bank borrowing from the Reserve Banks for making temporary reserve adjustments.
April-May, 1954	Reduced discount rates from 1-3/4 to 1-1/2 per cent and buying rates on 90-day bankers' acceptances from 1-3/4 to 1-1/2 per cent.		

Date	Action	Purpose of action	
		Intent with respect to effect on credit and money	Explanation
June-October, 1954	<p>Reduced reserve requirements on net demand deposits by 2 percentage points at central reserve city banks and by 1 percentage point at reserve city and country banks, and requirements on time deposits by 1 percentage point at all member banks, thus freeing about 1.5 billion of reserves in the period June 16-August 1.</p> <p>Sold or redeemed U. S. Government securities totaling about 1.0 billion dollars in July and August.</p> <p>Made net purchases in open market of about 400 million dollars in September and October.</p>	<p>Expansive</p> <p>Cushioning</p>	<p>To supply the banking system with reserves to meet expected growth and seasonal demands for credit and money, including Treasury financing needs.</p> <p>Reductions in reserve requirements were offset in part by temporary sales of securities in order to prevent excess reserves from increasing unduly at the time, but security purchases were resumed as need for funds developed.</p>

MEMBER BANKS



November 26, 1954

(3) What is the practical significance of shifting policy emphasis from the view of "maintaining orderly conditions" to the view of "correcting disorderly situations" in the security market? What were the considerations leading the Open Market Committee to confine its operations to the short-end of the market (not including correction of disorderly markets)? What has been the experience with operations under this decision? *(Answer by Mr. [unclear] [unclear])*

The matters referred to in this question relate to changes in techniques of System open market operations adopted in the spring of 1953. At that time, the full Federal Open Market Committee decided to amend its directive to the executive committee by dropping the clause authorizing operations to maintain orderly conditions in the market for U. S. securities and by substituting therefor a clause authorizing operations to correct a "disorderly situation" in the securities market. At the same time, the executive committee was instructed to confine its operations to the short-end of the market. Closely associated was a decision taken earlier to discontinue direct supporting operations during periods of Treasury refinancing with respect both to maturing issues and to new issues being offered, as well as issues comparable to those being offered in exchange.

These three decisions did not change basic policy objectives. They were taken after intensive reexamination in 1952 of the techniques then employed in System open market operations with particular reference to the potential impact of such techniques on market behavior. Their purpose was to foster a stronger, more self-reliant market for Government securities. Improvement in this market was desired (1) in order that the Federal Reserve might better implement flexible monetary and credit policies, (2) to facilitate Treasury debt management operations, and

(3) to encourage broader private investor participation in the Government securities market.

The decisions were taken to remove a disconcerting degree of uncertainty that existed at that time among market intermediaries and financial specialists. The market was uncertain, first, with respect to the limits the Federal Open Market Committee had in mind in its directive to "maintain an orderly market in Government securities." A second uncertainty pertained to the occasions when the System might decide to operate directly in the intermediate and long-term sectors of the market to further its basic monetary policy objectives, i.e., to ease intermediate and long-term interest rates in periods of economic slack or to firm these rates in periods of exuberance.

Both of these uncertainties related solely to transactions initiated by the System outside the short-end of the market, transactions which had as their immediate objective results other than a desire to add to or absorb reserves from the market. The effect, however, was to limit significantly the disposition of market intermediaries and financial specialists to take positions, make continuous markets, or engage in arbitrage in issues outside the short-end of the market.

The constant possibility of official action, which from the standpoint of investors and market intermediaries would often seem capricious, constituted a market risk which private investors could in no reasonable way anticipate and evaluate in formulating their advance judgment about market prospects. Even a financial intermediary who appraised correctly the emergence of a situation, where the Committee might decide to intervene, would have little basis for estimating the

exact timing of that intervention, the issues in which it might be concentrated or the levels at which it might take place. Such estimates are important to the sensitive rapid trading at very small spreads that is characteristic of a self-reliant securities market. Inability to make them may add a degree of risk that is more than financial intermediaries are willing to accept.

It became apparent that these uncertainties, so long as they persisted, would tend to perpetuate a condition of thin markets and sluggish adjustment as between sectors of the market. This impaired the attraction of Government securities as a medium of investment, since their very high status with investors rests on ready salability as well as on credit quality. From the point of view of the Federal Reserve System, such uncertainties might increase the probability of situations arising in which the Open Market Committee would be forced to intervene in various sectors of the market, either to prevent disorderly situations from arising or to see to it that funds it added to or absorbed from bank reserves in the pursuit of monetary policies found effective and appropriate response throughout the credit structure. In taking these decisions, the Federal Open Market Committee is not absolving itself from concern with developments in the longer-term sector of the market. It is particularly concerned that its policies shall be reflected in the cost and availability of credit in those markets.

In the case of all three decisions, subsequent experience with actual operating results has, on the whole, tended increasingly to substantiate the judgments that led to their adoption. This is particularly true of operating experience since June 1953. Without any intervention

from the Federal Open Market Account, except in the short-end, the market for U. S. Government securities has become progressively broader, stronger, and more resilient throughout all maturity ranges. Experience during April and May 1953, just after the new techniques were adopted, and before their import was understood, is less clear. This was the period of mounting tension in the credit and capital markets analyzed in the answer to Question 1.

In the twenty-months' period of operations under these decisions, the economic climate has changed from one of boom to one of reduced levels of activity. Accordingly, Federal Reserve policies have been shifted from restraint against inflation to the active promotion of ease in the credit markets. Ease in the long-term markets, as well as the short-term money market, has been an important objective of these policies. Although all open market operations, for technical reasons cited below, have been confined to the short-end of the market, there appears to be no example that can be cited from Federal Reserve history where the cost and availability of credit in all sectors of the securities market has been more sensitively responsive to shifts in Federal Reserve policy than during these months. This applies as fully to the market for long-term funds as for short-term funds; to the market for mortgage money, for business and industrial, state, municipal and public financing.

It is important to keep in mind the scope of the decisions relating to the new open market techniques. They are decisions of the full Open Market Committee adopted for the guidance of its executive committee and the Manager of the Open Market Account. They do not mean that no operations will be undertaken henceforth outside the short-end of

the market. They do mean, unless modified by the Committee, that operations in other than the short-end of the market will have to be specifically authorized by the full Open Market Committee, except operations to correct a disorderly situation. In that case the executive committee, which can be convened quickly by telephone if necessary, is empowered to authorize such corrective operations.

Background of New Techniques

These three interrelated decisions are designed to hold to a minimum the technical market repercussions that result in some degree from any operation on the part of the Federal Open Market Account. In one sense it may be said that any purchase or sale in a market by any party, private as well as public, small as well as large, disturbs the market in that it results in a change in demand and supply conditions in that market. The new operating techniques are not designed to prevent this type of repercussion. Such market response is necessary and desirable if a market is to perform efficiently the function of continuously equilibrating changes in demand with changes in supply. On the contrary, it is the primary objective of the techniques to contribute, so far as possible, to the development of such responsiveness in the market for U. S. Government securities. For this end to be realized, the market must be able to translate swiftly an increase in the availability of funds in any one sector of the market to increased availability in all sectors, and to soften the impact of decreased availability of funds on any one sector by spreading that impact over other sectors of the market. In a well functioning market capable of such resilient response, Federal Reserve policies can make their greatest contribution to economic stability and growth.

Technical characteristics peculiar to System transactions. The danger that operations by the Federal Open Market Account may, if executed through faulty techniques, exert an unduly disturbing or even disruptive effect upon the market for U. S. Government securities arises from four characteristics of these operations by which they are differentiated from purchases and sales of securities for the account of private firms and individuals.

First, the dollar amounts of reserve funds that are required to be injected into or withdrawn from the markets in the course of ordinary day-to-day operations are likely to be quite large, much larger than the average amounts bought or sold in the course of a day for any individual private account. This naturally puts some strain on the market mechanism which is likely to function most effectively when the aggregate of its transactions is made up of numerous individual transactions of relatively small magnitude.

Second, the Open Market Account deals in reserve funds which provide a basis for a multiple expansion of credit. This means that when it buys it does more than merely add to the demand side of the market, as do other purchasers. The Account pays for its purchases with a check on the Reserve Banks. Consequently, it simultaneously adds to the reserve base sufficient buying power to absorb a much larger volume of securities. Conversely, when the Open Market Account sells a Government security, the problem of the market is more than finding a buyer for that issue, as it must in the case of sales of securities by others. The purchasers must simultaneously pay for the security with commercial bank reserve funds which will be subtracted from the reserve base. This

withdrawal of reserve funds will affect positively the supply of securities offered for sale.

Third, transactions by the Open Market Account are not motivated by profit or loss considerations. They differ, consequently, from private purchases and sales which are so motivated. Private firms or individuals motivated by profit and loss considerations will not pursue purchases when prices rise or yields fall to levels that appear less remunerative than comparable alternative outlets for their funds, neither will they press sales and take losses with respect to either price or yield when alternative courses of action open to them appear less costly. The result of these motivations in a market with large numbers of participants is to generate forces that tend to slow down, or counteract, or limit movements in either direction. The importance of these counteracting forces was effectively illustrated after the accord when the unwillingness of investors to take losses reduced offerings in the market for U. S. securities. This restrained expenditures and helped materially to prevent a continuation or resumption of the Korean inflation. These same motives do not govern transactions initiated by the Federal Open Market Account, which are undertaken for policy reasons, and pursued, until policy goals are achieved, without regard to their effect upon the earnings of the Reserve Banks.

Fourth, the Federal Open Market Account is the largest portfolio of U. S. securities under single control. Its holdings of marketable U. S. securities approximate 25 billion dollars or nearly one out of six of all such securities outstanding with the public. Its potential buying power is also very large. Transactions initiated by the Federal Open

Market Account differ, therefore, from privately initiated transactions not only with respect to their motivation but also with respect to the potential financial power that lies back of them.

Role of financial intermediaries. These four basic respects in which transactions in U. S. Government securities initiated by the Federal Open Market Account differ from privately initiated transactions find a reflection in the technical organization of the market for U. S. securities. They are particularly important in circumscribing the role which primary dealers in U. S. Government securities and other professional intermediaries are willing to assume in that market.

In general, a market such as the market for U. S. Government securities achieves depth, breadth, and resiliency when there are active within it, at all times, professional intermediaries alert and willing, on their own capital and risk, to make continuous markets and to engage in arbitrage. To make continuing markets, they must stand willing continuously to quote firm prices at which they will buy reasonably large quantities of securities from any and all sellers, including each other. They must be prepared, if necessary, to hold such securities in their portfolio, pending subsequent resale. Similarly, a professional intermediary must stand ready to quote firm prices at which he will sell securities in reasonably large quantities to any and all purchasers, and must be prepared to enter into such contracts for sale even if the particular issues in demand are not in his portfolio at the time but must subsequently be purchased from others.

To make continuous markets successfully with his own capital and at his own risk, the professional intermediary must be alert to

possibilities for arbitrage, i.e., he must sense when various issues are offered for sale or sought for purchase at prices which are mutually inconsistent with each other in terms of price relationships which may be expected to prevail in the near future. In such cases, the professional intermediary seeks to sell the issue that is overvalued and simultaneously to purchase the issue for which there is momentarily less demand. This requires a keen sense of values, and has the effect of keeping market quotations for comparable values in close alignment with each other. The sensing of such minor inconsistencies is less difficult when the two issues are in the same maturity sector of the market. It requires great skill, however, when they lie in different maturity sectors, for then the professional intermediary must stake his capital on a judgment as to price and interest rate relationships that may be expected to emerge as between the various maturity sectors of the list. When the financial intermediary, alert to possibilities for arbitrage as between the various maturity sectors, is able to make such judgments successfully, and is willing to act on them aggressively, the effect is to impart continuity and responsiveness to the whole market. Continuity exists when variations in quotations as between successive transactions are minor. Responsiveness obtains when the impact of sales in any particular sector, instead of being concentrated in that sector, is cushioned and dispersed in greater or less degree throughout all maturity sectors.

Technical repercussions of transactions for System Account. These technical factors, taken in conjunction, pose the problem dealt with in the decisions discussed in this answer. Since transactions in U. S. securities initiated by the Federal Open Market Account differ in important

respects from similar transactions for private account, there is a danger that they may set off adverse repercussions that impair the efficiency of the market as an equilibrating factor in the economy. The nature of these repercussions may be illustrated by analysis of a sales transaction initiated by the Federal Open Market Account.

In any market, a transaction initiated by the seller is likely to have as one effect a lowering of price for the commodity sold. In the market for Government securities, this means that sales initiated by any seller are likely to find their first expression in a softening of quotations for the particular security offered for sale. The softening is likely to be larger, the larger the amount that is offered. It is also likely to be larger if there is ground to expect that the specific offer for sale is only the first of a series of further offers. In the case of offers from the Federal Open Market Account, these typical reactions and expectations are likely to be accentuated because such sales not only supply issues to the market for which purchasers must be found but also withdraw reserve funds from the market and diminish its ability to carry securities. They are made, furthermore, from the largest portfolio of U. S. Government securities available for sale in the market. For all the market knows, they may be the forerunner of many more sales to come. Since they are not motivated by the twin incentives of maximizing gains or minimizing losses that motivate most other offers that appear in the market, but are made solely in the execution of monetary policy, they are properly regarded as a possible signal of the attitude of the monetary authorities with respect to the state of the economy. These reactions acquire peculiar significance when transactions are initiated outside the

short-end of the market because prices fluctuate most widely in these sectors in response to changes in the availability of securities relative to the demand for them.

This imposes a handicap upon private dealers and other professional intermediaries in the market whose function it is, first, to provide continuous markets by carrying portfolios and taking positions throughout all maturity sectors of the list, and, second, to maintain a consistent relationship between prices of different individual securities by being alert to possibilities for arbitrage. The gross operations of these professional elements are very large relative to their capital at risk. They maintain markets by trading at very small spreads. If they are alert, they can function effectively when variations in price from one transaction to the next are small, as they are likely to be when selling and buying is on private account, limited in volume by the needs of private investors for outlets for funds on the one hand, or for cash on the other.

Private professional intermediaries face a very different problem when prices in any group of securities vary sharply between transactions. Then the risk of making continuous markets and of engaging in arbitrage becomes too great. They tend to retire to the sidelines so far as putting their own capital at risk is concerned. They cease, under these conditions, to make continuous markets, and confine their activities mainly to acting as brokers. As a result, the market for issues characterized by such risks becomes thin and moves over a relatively wider range between transactions. Such a market reacts sharply to relatively small bids or offers, and quotations that characterize an individual transaction become a poor guide to the values that would prevail on normal volume.

Technical advantages of operations in the short-end of the market. The danger that transactions initiated by the Open Market Account may unduly disturb the efficient functioning of the market is much less acute when they are confined to the short-end of the market. There are three main considerations which contribute to this result.

In the first place, the risk assumed by professional intermediaries when they trade in bills is much less than when they trade in longer-term securities. Bills are traded on a discount basis and the great preponderance of bills outstanding at any one time have a maturity of less than three months. This means they will always appreciate to par within that period. Bills are ideal collateral, furthermore, and can always be used as security for loans. It is not too difficult, therefore, to hold them to maturity. The main financial hazard attending professional operations in bills is that the holder will have to pay more in interest when he borrows to carry them than they gain in price as they approach maturity.

Another reason is that the bill market is accustomed to relatively large transactions such as the Open Market Account must undertake in absorbing and releasing reserves. It is the market in which all financial institutions typically adjust their day-to-day positions. Trading is continuous and the market is accustomed to a large volume of individual transactions.

Finally, the financial markets do not attach the same significance to System operations when they are transacted in bills as they do to transactions in other sectors of the market. Financial experts know that the

Federal Open Market Committee is more or less continuously engaged in putting funds into or absorbing funds from this market as it compensates for large day-to-day fluctuations in the amount of float, in Treasury balances, in the demand for currency, and in other factors. The appearance in the bill market of purchase or sell orders initiated by the Federal Open Market Account has no general long-term policy significance in the great majority of cases, and therefore does not so readily give rise to apprehensions that a change in policy is imminent.

Summary of technical considerations. To summarize, transactions initiated by the Federal Open Market Account, particularly transactions in intermediate and long-term issues, may seriously affect the efficiency of the market. The initial impact of such transactions falls first on the professional intermediaries of the market whose willingness to take positions gives continuity to the market and whose willingness to engage in arbitrage works to cushion a concentrated impact of such sales on part of the price structure by spreading their effect in greater or less degree throughout all maturity sectors.

These intermediaries confront great difficulty in estimating how large transactions for the Federal Open Market Account may be, how long they may continue, or how large are the losses the seller may be willing to absorb. Such estimates, however, are essential to the efficient performance of the professional intermediary whose operations make continuous sensitive markets possible. Without them, dealers and other professional intermediaries have less basis for decision as to the amounts of securities they can afford to take into portfolio, or the points at which they can undertake an arbitrage operation. The ability to make

such supply and demand estimates correctly on the average is a rare skill which a professional intermediary in the market must possess in high degree to survive.

When market conditions are such that approximate supply and demand estimates cannot be made, the continuity and sensitiveness of the market is seriously impaired. Dealers and other professional intermediaries in the market become reluctant to take positions and to undertake arbitrage. Instead, they tend to confine their role to that of brokers, operating mainly on a commission basis. In this role, they offer to find buyers for issues pressed for sale, and other sellers for issues in demand, but they do not themselves purchase or sell securities at their own risk. They do not, therefore, perform the function of giving breadth and continuity to the market by their willingness to take securities into position.

This situation presents a very real dilemma to the monetary authorities. Monetary policy is most effective and can make its maximum contribution to economic stability and growth without inflation at high levels of output and employment when the entire credit structure is sensitively responsive to its operations. Federal Reserve operations exert their constructive influence most effectively when they affect the cost and availability of credit throughout all sectors of the market. This is particularly true of the long-term market where the rate of saving and the cost and availability of funds register on capital formation. The effectiveness of monetary policies is definitely hampered when markets are thin.

Historical Background of New Techniques

Market conditions, adverse to the proper functioning of dealers and other professionals in the market for Government securities, were strongly in evidence during the period of pegging prior to the Treasury-Federal Reserve accord of March 1951. Dealers in U. S. Government securities tended to confine their operations to the broker function, coming to the Federal Open Market Account for securities when they were in demand in the market and disposing of securities to the Federal Open Market Account when they were in supply. Under these conditions, the Account itself performed the function of making continuous markets for most maturity sectors even including the very short-end of the market. It did so, of course, at the expense of monetary policies appropriate to the stability of the economy. The reserve funds that were made available almost automatically under the technique of pegging operated to augment the availability of credit and thus to increase the demand for commodities to a volume that was in excess of what could be supplied. The result was to incorporate into the base of the price structure a spiral of rising costs and prices.

This inflationary process was stopped early in 1951 when the Federal Open Market Committee discontinued pegging the prices of U. S. Government securities. Thereafter, as is brought out in the reply to Question 1, the reserve funds released or absorbed through open market operations were adjusted more closely to the needs of a growing economy operating without inflation at high levels of activity. The market for U. S. Government securities showed its basic strength at that time by adjusting to the new situation with much less disturbance than many close and informed observers had expected, and within a few months the operations of the Open Market

Account were almost wholly confined in practice to the short-end of the market.

The Federal Open Market Account continued during this period, however, to engage in operations in support of Treasury refinancing. The volume of reserve funds released in these supporting operations became, as time passed, a matter of increasing concern to the Federal Open Market Committee. They were large in volume and had later to be recovered by offsetting sales if the fueling of inflationary forces was to be avoided. Concurrently, there was increasing concern at the failure of certain sectors of the market, particularly the long-term sectors, to develop the degree of depth, breadth, and resiliency that would be desirable from the point of view (1) of effective refinancing of the public debt, (2) of the effective execution of monetary policies, and (3) of the effective operation of the market in shifting or allocating funds among various users.

Specifically, following the accord, the long-end of the market was described by competent observers as "thin." This was illustrated by the fact that prices of long-term Government bonds fluctuated over a relatively wide range in response to the appearance of relatively small buying or sales orders. It indicated that, so far as the longer sectors of the market were concerned, dealers and other professional intermediaries still tended, on the whole, to confine their operations to the broker function. Operations undertaken at their own risk, either to maintain continuous markets or for arbitrage, remained limited on the whole to relatively small commitments, too small to give the market a desirable degree of self-reliance.

It was in this setting that the Federal Open Market Committee

undertook, in 1952, to reexamine intensively the techniques employed by the System itself in its contacts with the market for U. S. Government securities to see whether any changes could be made in those techniques that would contribute to a stronger, more smoothly-functioning market. This examination led, among other things, to the three interrelated decisions that are dealt with in this reply. These decisions have fostered a more effective and efficient market for U. S. Government securities in two ways: first, by reducing to a minimum the direct disturbing or disruptive impacts on the market of transactions initiated by the System; and, second, by establishing a climate of expectations in the market that would encourage private operators to engage more actively in making continuous markets and in arbitrage.

The accomplishment of these results has had beneficial effects on System open market operations from a monetary point of view. These operations are now confined to the amounts necessary to effectuate basic monetary policies. That is to say, they have come to be limited to providing or withdrawing reserve funds in amounts and at times appropriate to the general economic situation.

Decision to Discontinue Support of Treasury Refinancing

The decision to discontinue support operations during periods of Treasury refinancing was mainly important in improving the timing, reducing the volume, and minimizing the disturbing or disruptive effects of System operations on the market. Its importance in minimizing the volume of operations initiated by the Open Market Account and in improving their timing shows up strikingly in the record of System operations between July 1, 1951, i.e., after the market had adjusted itself to the accord,

and September 30, 1952, the last month in which direct support was given to a Treasury refunding issue. During these fifteen months, direct operations for System Account put reserve funds into the market amounting to 2,418 million dollars net, during periods when the Treasury was refinancing. During the same fifteen months, the net effect of all open market operations initiated by the System in the intervals between these periods of refinancing was to withdraw 1,658 million dollars. In other words, during those fifteen months, a large volume of sales from System Account were made solely to absorb reserve funds in excess of basic needs that had previously been put into the market to support Treasury refundings.

This phenomenon has entirely disappeared since the autumn of 1952 when the practice of giving direct support to Treasury refinancing was discontinued. At the same time, the rate of attrition incident to Treasury refunding operations, i.e., the relative proportion of maturing Treasury securities that have been presented for cash payment at maturity, has averaged lower than it did in the period when such direct support was given. This wholly satisfactory result reflects, of course, the nature and pricing of new securities offered by the Treasury since supporting operations were discontinued as well as improved performance on the part of the market under the new operating techniques.

Decision to Confine Operations to the Short-End of the Market

The technical considerations that account for the decision to confine operations to the short-end of the market have already been discussed. The decision was taken to remove an obstacle that appeared to account, in part at least, for an undesirable degree of "thinness" in the

intermediate and long-term sectors of the U. S. Government securities market after the accord. It was not taken without consideration of alternative techniques from the point of view both of the possible effects of these techniques on market behavior and of their implications in the development and effectuation of credit and monetary policy.

Alternative to operations at the short-end of the market. The problem of how to deal with the effects of central bank transactions on market behavior are not confined to this country. They are present in greater or less degree in all countries with highly developed credit structures where open market operations are used as a principal means of effectuating monetary policies. Some monetary authorities have tried to meet the problem by themselves assuming primary responsibility for making continuous markets and for arbitrage. They do this by being themselves prepared to buy or sell in all maturity sectors of the Government securities market. When a particular issue in demand is in relatively scarce supply in the market, the monetary authority is prepared to make the desired securities available from its own portfolio. It may then have to purchase other securities from other sectors of the list to offset the effect of the sale upon bank reserves, if the basic objectives of monetary policy do not justify an absorption of reserves from the credit base.

This procedure resembles in many respects that which was employed by the Federal Reserve System when it was engaged in pegging the prices of Government securities prior to the accord and for a period afterward during periods of Treasury refinancing. It has the important difference that no attempt is made to perpetuate any particular price level for Government securities. Rather, when this is done, the monetary

authority comes to a judgment not only as to the general interest rate level but also as to what structure of rates would be most appropriate in the various maturity sectors of the market and is prepared in its operations to make these levels effective. As economic conditions change, requiring a different level of interest rates or a different structure of rates as between the various maturities, the monetary authority uses its own operations to move the prices of securities quoted in the market and market rates of interest to levels it regards as more appropriate to the new situation.

When monetary authorities adopt this technique, the problem of thin markets and sluggish arbitrage is in a sense eliminated, since the monetary authority is itself prepared to maintain continuous markets and to establish directly and to change from time to time the levels of prices and of interest rates which it regards as appropriate to the various maturity sectors of the market. The various securities in its portfolio become part of the potential market supply and it takes over the role of primary jobber to the market. At the same time, for reasons already noted, dealers and other professional middlemen operating on their own capital and at their own risk tend to confine their activities to that of brokerage.

It has been recognized within the Federal Reserve System since the accord that the technique described above not only had intrinsic defects but was inapplicable to the American economy. Considerable thought has, however, been given to a variant of this approach, namely, one in which the Federal Open Market Committee would normally permit the interplay of market forces to register on prices and rates in all the

various maturity sectors of the market but would stand ready to intervene with direct purchases, sales, or swaps in any sector where market developments took a trend that the Committee considered was adverse to high level economic stability.

It will be readily appreciated that this variant differs decisively from that described above. Instead of taking affirmative responsibility to make continuous markets and to establish interest rates and prices in all the various sectors of the list, the Committee under this variant would operate normally in the short-end of the market, absorbing or releasing reserve funds from day to day in accordance with general policy directives. It would stand continuously ready, however, to intervene in any sector of the list when it considered such intervention might further the objectives of monetary policy.

Such intervention would not necessarily have to be decisive. The fact that the Committee purchased or sold securities at any given quotation would not mean that it was prepared to engage in similar subsequent transactions to maintain the same price. Rather, it would seek, by occasional purchases and sales at the fringe of the market, to cushion or reverse declines or advances at some times and to accelerate them at others. In each case of intervention, the decision whether to accelerate or cushion would be based on an evaluation of what was considered most appropriate at the time to the achievement of the objectives of monetary policy.

This variant, which paralleled closely the actual pattern of System operations during the period following the accord up to the spring of 1953, was not adopted because it did not appear to offer real promise

of removing obstacles to improvement in the technical behavior of the market.

System open market experience from the accord to March 1953.

During the greater part of the first two years after the accord, the great bulk of transactions actually undertaken by the System was confined, in fact, to the short-end of the market. These included purchases to support Treasury refinancings, most of which were executed in the short-end of the market. At the same time, the policy statement of the Federal Open Market Committee directed the executive committee to maintain orderly conditions in the market for U. S. Government securities. It was generally understood during this period, both within the System and in informed market quarters, that it was the policy and desire of the System that a free market for U. S. Government securities should develop and be permitted to make its maximum contribution to economic stability both in the sense of equating the demand for funds for investment with the supply of savings (with due allowance for the growth factor in the money supply) and of being permitted to allocate these demands and supplies as between the various sectors of the market. At the same time, it was understood that the System stood ready through open market operations, without restriction as to maturity, to check undesirable movements in prices and interest rates.

In comparison with the preceding period in which the practice of pegging prices and yields contributed to the inflationary potential, this shift in policy and technique was in the right direction. Despite the forebodings of many who prophesied that the dropping of the pegs would be followed by chaos, a free market did develop when the pegs were

dropped and did play a major role in stopping the inflation and in sustaining the economy at high levels of activity. There was no catastrophic shift in prices of Government securities. There was no panic. Confidence in the stability of the dollar was restored. The results of the action in all major respects, except one, corroborated the judgment of those who took the responsibility for its initiation.

The exception, already noted, was the thinness that continued to characterize the intermediate sector and the long-end of the market for U. S. Government securities. At first, this was generally explained by the fact that a return to a free market after so long an interval would necessarily be accompanied by some frictions. It would necessarily take time, it was felt, for appropriate mechanisms to develop in the market before it could perform its normal functions at high efficiency. As time went on, however, these mechanisms failed to develop adequately and the problem of thin long-term markets continued to exist. It was in this setting and, in part, to consider how to deal with this problem, that the Federal Open Market Committee in 1952 undertook the studies that led to the three decisions treated in this question.

Decision to Change Directive with Respect to Orderly Markets

During the period from the accord to March 1953 there was considerable misapprehension and confusion with respect to the interpretation of the phrase "orderly markets," a situation which in many respects was justified. The clause in the directive requiring the executive committee to maintain orderly markets was in the directive prior to the accord and was the authority under which many stabilizing operations were taken at that time. The fact that the phrase had not been changed after the accord

but instead had been interpreted less restrictively left legitimate grounds for uncertainty with respect to the interpretation that might be placed upon it in future operations.

The decision to change the directive to the executive committee "to maintain orderly markets for U. S. Government securities" to read "to correct a disorderly situation in the Government securities market" was made to remedy this misapprehension and confusion. This gave notice that the Federal Open Market Committee would not intervene to prevent fluctuations of prices and yields such as normally and necessarily occur as markets seek to establish equilibrium between supply and demand factors and to allocate savings as between the different maturity sectors. Instead, it indicated that the market would have to be clearly disorderly before such intervention would occur.

The primary aim of this shift in operating objectives was to foster in the market a climate of expectation with respect to System intervention that would encourage maximum private participation in market activities. In combination with confinement of operations to the short-end of the market, the shift also contributed to minimizing the disturbing or disruptive effects of System operations.

Experience with the New Techniques

These decisions were taken in March of 1953 in the hope and expectation that they would provide an environment in which professional intermediaries in the market would begin to broaden the scope of their operations in a way that would give greater depth, breadth, and resiliency to the intermediate and longer sectors. Specifically, it was hoped that these intermediaries, faced mainly by business and market risks which they

were in a position to evaluate and freed from the risk of disturbing or disruptive repercussions arising from direct intervention by the Federal Open Market Committee, would begin to make more continuous markets and engage more promptly in arbitrage through all maturity sectors. It was hoped that they would sufficiently improve the market so as to minimize the occasions for direct System intervention in these sectors of the market, intervention either to correct the development of a disorderly situation or intervention to hasten the market's response to changes in credit and monetary policy. These expectations to date have been on the whole fulfilled, although, of course, it is recognized that this approach is still experimental and that insufficient time has elapsed to draw firm conclusions.

The first and most difficult test came in the spring of 1953, within a very short time after the new techniques were adopted, and before their impact had been evaluated or understood. This was the period described in the answer to Question 1 when great tension developed in the long-term investment market, sufficient tension to require vigorous offsetting action by the Federal Reserve System. There were many at that time who felt that direct System intervention in the long-term money market was the only remedy that would relieve the situation. This view gained adherents when the first purchases of bills, initiated by the System early in May 1953, found relatively small immediate response in relieving tension in the long-term sector of the market even though the Treasury with its own funds made some purchases in that sector during this period. Finally, as the Treasury made larger purchases and the Open Market Account undertook to supply reserves in large volume through an

aggressive purchase of bills, the tension began to subside.

Subsequently, all sectors of the market, long, intermediate, and short, have been characterized by great improvement with respect to their depth, breadth, and resiliency. Private arbitrage has brought about a sensitive response to the System's monetary policy in the long-term sectors of the market. The ease that for some time has pervaded the money and credit markets may account for part, but it does not by any means account for all, of these results.

It has been a primary objective of System credit and monetary policy during this period to encourage an expansion in private activity financed by long-term funds. This has also been a main objective of Treasury debt management policy which has refrained from competing with mortgage borrowers and other potential users of long-term savings. While, under the new techniques, open market operations to help effectuate this policy objective have been confined entirely to putting reserves into the short market, the response in the form of increased availability of funds in the long-term capital markets, including even the semi-isolated mortgage market, has been gratifying.

The recession of industrial activity during this period has been exceptionally mild as compared to other periods, even milder than the recession of 1949 when U. S. security prices were pegged. It would be very difficult to make a case that direct intervention in the long-term markets during this period would have induced an even better response.

Such is the experience with the new techniques to date. As previously pointed out, it remains for them to be tested in other more normal periods of Federal Reserve operations. Only time and further

experience will tell whether problems not now foreseen will or will not emerge. If they do, it will be the duty of the Federal Open Market Committee to deal with them in the light of its accumulated experience.

Conclusion

The formulation of appropriate credit and monetary policy is at best difficult. It requires, first, painstaking search for all the relevant facts that may bear on the economic and financial outlook, second, all the wisdom and insight that experience and operating contacts can bring to the interpretation of those facts, and, finally, and perhaps most important, humility with respect to any emerging situation. There are relatively few occasions when the meaning of developing events is so clear that the monetary authorities can say, "As of today, our policy should be changed from restraint to ease." A shift in policy emphasis more typically emerges from a succession of market developments and administrative decisions in which the range for variation needed in pursuit of any particular policy gradually shifts from the side of ease to the side of restraint or vice versa.

The various factors that exert an impact on bank reserve positions are at best difficult to forecast in advance. There is a considerable margin of uncertainty in any forecast of factors absorbing or supplying reserves. Yet these forecasts or projections must be made in planning open market operations. In consequence, there is frequently much discussion, when prospective purchases or sales are authorized, of whether it would be wiser to deal with the area of uncertainty in the forecast in the direction of restraint or in the direction of ease. These changing shifts in emphasis do not necessarily mean that a new policy direction is

emerging. Usually, however, by the time the facts of the economic situation are sufficiently clear to lead to the adoption of a changed policy directive, it will be found that these day-to-day allowances for uncertainties in the forecasts of reserve availabilities have begun to be increasingly resolved on the side later indicated by the new policy directive.

Such tentative testing and probing of the responsiveness of the economy to monetary actions would be much more difficult if the Federal Reserve were to make itself responsible not only for adding to and withdrawing marginal amounts of reserve funds from the money market but also for making continuous markets and establishing interest rates and prices prevailing in all sectors of the security markets. Then any changes in such interest rates and prices could result only from direct administrative decisions. Such decisions would carry considerable significance in themselves and would require adequate justification.

Such justification might not be too difficult to find if the American economy customarily relied on the import of capital for its development. In that case, the necessary signals would usually be furnished by movements of prices and interest rates in the various sectors of the foreign financial market from which the capital was imported. In fact, however, the American economy is a high saving economy that exports rather than imports capital. In this country if the structure of interest rates were too closely controlled, it would be difficult to tell from the character of the market response whether and when new trends were developing within the economy. The allocation functions of the market place in determining relationships between the cost and availability of funds in

the various sectors of the market, short-term, intermediate, and long-term, would be in abeyance, and responsibility for efficient performance of these important economic functions would be transferred to the area of official discretionary action.

In conclusion, it needs to be emphasized once more that it is not contemplated that these new techniques will never be changed. The Federal Open Market Committee must always be prepared to tailor the techniques of its operations to the requirements of the economy. In the development of those techniques, situations may well arise when the Federal Open Market Committee will want to operate directly outside the short-end of the market.

It must also be emphasized that the new techniques do not imply that the Federal Open Market Committee is unconcerned about developments throughout the securities market or that it is committed to dealing only in the short-end of the market whatever may happen to prices and yields of long-term securities. The Federal Open Market Committee directive specifically and positively enjoins the executive committee to operate to correct a disorderly situation in the market for U. S. Government securities if one develops. Such situations rarely do develop in efficiently functioning markets. History indicates, however, that there are occasions when a market becomes clearly disorderly and in itself threatens economic stability. This happens when a selling or buying movement feeds on itself so rapidly and so menacingly as to prevent counteracting forces from developing within the market mechanism. Usually, these situations reflect a serious deficiency or excess of reserve funds and can be corrected by operating to adjust the volume of reserves to the requirements of the economy.

Sometimes, however, they occur in response to other factors. Under the Federal Open Market Committee's present directive, the executive committee is responsible for diagnosing such a situation if one develops and for dealing with it decisively without any restriction whatever as to sectors of the market in which transactions are initiated.

November 23, 1954

(4) What is the policy with respect to volume of money?

The policy of the Federal Reserve System with respect to the volume of money is to provide as nearly as possible a money supply which is neither so large that it will induce inflationary pressure nor so small that it will stifle initiative and growth. Put another way, the policy is to help maintain a volume of money sufficient to facilitate the consumption and investment outlays necessary to sustain a high level of production and employment, without leading to spending and investing at a rate which would outstrip the supply of available goods at prevailing prices and generate speculative conditions. Judged from this standpoint, the amount of money required varies with such factors as: the productive capacity of the economy; the state of business expectations; economic dislocations of various kinds; seasonal fluctuations; and changes in money turnover or velocity reflecting variations in liquidity and the demand for liquidity on the part of businesses and consumers.

In the past, the monetary supply has shown considerable fluctuation over the course of business cycles. It is the policy of the Federal Reserve System to counteract, in so far as possible, the tendency for excessive cyclical swings in the volume of money.

An economy which is expanding requires an increasing supply of money to facilitate its growing volume of transactions. Additions to population and productive capacity and a growing complexity of economic organization give rise to increased needs for cash balances. It is the policy of the Federal Reserve System to foster growth in the money supply in accordance with these needs.

Like any other modern monetary system, the monetary system of the United States is complex. In view of its complexities, it is not feasible to rely upon any mechanical formula for the determination of the volume of money appropriate to a given economic situation. This subject is one requiring continuous examination and study -- historically, currently, and prospectively -- of the various changing forces affecting the economy's need for money.

Our monetary organization and its complexities were discussed at considerable length in the reply of the Chairman of the Board of Governors to Question 28 of the questionnaire addressed to him in 1951 by the Subcommittee on General Credit Control and Debt Management, under the chairmanship of Representative Patman. They were also treated again in an article under the title "The Monetary System of the United States" published in the Federal Reserve Bulletin for February 1953, a copy of which is attached.

Attachment

THE MONETARY SYSTEM OF THE UNITED STATES¹

Credit and monetary policy, the primary function of the Federal Reserve System, exerts its influence on the levels of economic activity and prices largely through its effect on the volume, availability, and cost of credit. The results of the policy are reflected in the quantity of money and in the introduction of new money into the monetary system. For this reason, an essential preface to the study of credit and monetary policy is a consideration of the meaning of money and of the factors influencing the quantity of money.

This article serves as an introduction to later articles considering the purposes, instruments, and effects of credit and monetary policy by providing a brief description of the working of the monetary system in the United States. It considers the nature of money and the assets which may be appropriately classified as money; major factors entering into changes in the quantity of money; general forces underlying the need of the economy for money; and the nature of reserve banking measures that influence expansion of the money supply.

DEFINITION OF MONEY

Money is defined in terms of the functions it performs. Definitions of money differ in accordance with the emphasis given to par-

ticular functions. Usually money is defined in terms of one or more of its three main functions: (1) as a medium of exchange; (2) as a store of purchasing power; and (3) as a standard of value.

The first function relates to the fact that money is generally used to make payments for goods and on debts. Through this use money has a direct impact on markets and prices. Currency and commercial bank demand deposits are generally accepted as media of exchange in the United States.

The second function refers to the fact that money is held as a store of generalized purchasing power to be drawn on in the near or distant future. Indeed, the actual process of payment requires a very short time, and currency and demand deposits are always held for some period of time by their recipients in anticipation of the next use as a medium of exchange. While held, they provide a store of liquidity for their owners. The store-of-purchasing-power function can also be performed by an asset that does not itself serve as a means of payment if there is confidence that it can be converted into currency or demand deposits without undue loss or great delay. Time deposits with commercial and mutual savings banks meet this requirement. The existence of liquid assets of this nature makes possible smaller holdings of media of exchange in relation to the volume of payments.

The third function refers to the fact that prices and debts are generally expressed in terms of the monetary unit—in the United States, in terms of the dollar. The dollar, which is defined by law in terms of a weight of gold, is the unit for valuing current goods and for stating obligations due in the future.

¹ This is the first of a series of articles considering the operation of credit and monetary policy in the United States. These articles are based on selected replies submitted early in 1952 by the Board of Governors of the Federal Reserve System to a questionnaire from the Subcommittee on General Credit Control and Debt Management of the Congressional Joint Committee on the Economic Report. The material selected has been modified and expanded in order to bring it up to date and to fill gaps in content resulting from the fact that the original material was organized in reply to definite questions.

Preparation of the articles is under the direction of Ralph A. Young, Director of the Division of Research and Statistics.

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THE MONETARY SYSTEM OF THE UNITED STATES

Standard of value. The concept of money as a standard of value is abstract. It has no direct usefulness in the measurement of the quantity of money. Prices and debts are stated in terms of dollars without reference to the form which money may take, whether bank deposits or currency. Changes in the quantity of money, however, have an important influence on the value of money.

Just as the value of goods may be stated in terms of the monetary unit, so the value of the monetary unit may be stated in terms of the goods that it will buy. Thus, an increase in prices may be looked upon as a decline in the value of money, and a decline in prices as an increase in the value of money.

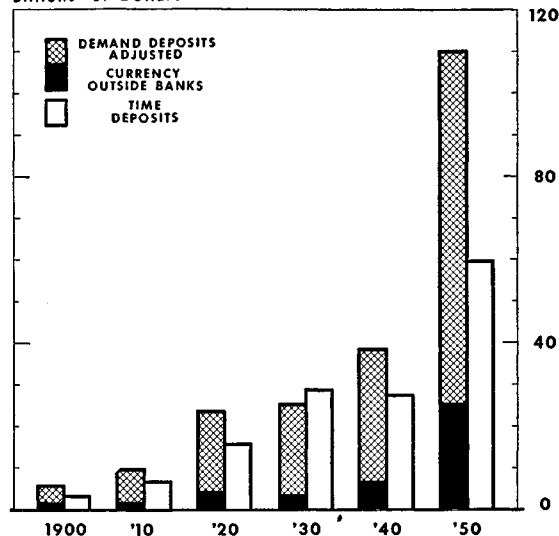
Relative stability of the value of the monetary unit is essential for the performance of the standard-of-value function. Indeed, in areas of the world undergoing very drastic inflation, prices and debts have sometimes been stated in terms of specific goods or foreign currencies, even though currency or deposits valued in terms of the original monetary unit of the country continued to serve as media of exchange.

Medium of exchange. As noted, currency and commercial bank demand deposits are generally accepted media of exchange and stores of purchasing power. Time deposits held with commercial and mutual savings banks are not used as a means of payment but do serve as a store of purchasing power. The amounts of these assets at 10-year intervals since 1900 are shown in the chart.

As used in this article, the term currency includes paper money and coins. Only the Federal Reserve System and the Treasury now issue currency. The major part of currency consists of Federal Reserve notes, with most of the rest in the form of silver certificates and coins issued by the Treasury. Demand deposits held with commercial banks,

DEPOSITS AND CURRENCY

Billions of Dollars



NOTE.—June 30 data. Demand deposits adjusted exclude U. S. Government and interbank deposits and items in process of collection. Time deposits include those in mutual savings banks and in the Postal Savings System as well as in commercial banks but exclude U. S. Government and interbank deposits.

which are transferred by means of checks, have for many years constituted the major media of exchange.

Only those demand deposits and currency that are held by the public are used as media of exchange in the commonly accepted sense. To include both these and also the coin and bullion, paper money, and deposits held as reserves by the banking and monetary system would involve double counting. This becomes clear when one considers that the monetary system in the United States is so organized that some forms of money, frequently referred to as reserve money, serve as immediate or ultimate backing for the forms that are used as means of payment. This reserve money in a sense is immobilized as long as the money issued on the basis of it is outstanding.

Gold, which serves as a means of settlement of international accounts, is purely reserve money domestically. All gold in this country is held by the Treasury and it can-

not be used legally for making domestic payments. Instead, the Treasury issues gold certificates to the Federal Reserve Banks on the basis of the gold, and these serve the Federal Reserve Banks as reserves behind their note and deposit liabilities. Federal Reserve notes, as the major part of the currency supply, are an important part of the volume of money in the hands of the public. Federal Reserve notes are also held as cash in vault by commercial banks.

Deposits in Federal Reserve Banks are held almost exclusively by member commercial banks as reserves behind their deposit liabilities to the public. The major exception is deposits with Federal Reserve Banks held by the United States Government, which are used to make payments for goods and services. Vault cash held by commercial banks and their deposits with other banks generally serve as working reserves in the case of member banks and as both required reserves and working reserves in the case of nonmember banks.

In general, gold imports and the international transactions giving rise to them result in an increase not only in gold holdings of the Treasury but also in gold certificates held by the Federal Reserve Banks, in member bank reserve balances, and in deposits held by the public. In measuring changes in the volume of money during any period, it is essential that the direct increase in the money supply be counted only once—that is, as an increase in deposits and currency held by the public.

The factors influencing the holding of deposits by the United States Government differ in some respects from those influencing the holding of deposits by others. For this reason, it is desirable for some purposes to exclude Government-held deposits and consider only money held by consumers and businesses. Money so held is commonly re-

ferred to as the privately held money supply.

The relative amounts of currency and demand deposits used as media of exchange depend in large part on the preferences of the public. Some types of transactions—notably small purchases at stores and some wage payments—are typically settled by means of currency. By far the larger part of dollar transactions is settled by the transfer of demand deposits through checks. The relative importance of the two media of exchange is also influenced by other factors, including interest payments and service charges on demand deposits, confidence in the banking system, and the desire for concealing transactions, as well as convenience and safety.

In the 1920's, for example, interest payments on demand deposits encouraged a growth in their importance relative to currency. Banking difficulties during the early 1930's resulted in an increase in the proportion of the means of payment held in the form of currency; even after confidence in the banks had been restored, this proportion remained considerably higher than in the predepression period because of the elimination of interest payments on demand deposits and the growing prevalence of service charges on checking accounts. During World War II black market transactions and disruption of accustomed banking connections for military personnel and civilian employees in armament industries resulted in a further increase in the relative importance of currency. Since the war the importance of currency has declined, but only slightly.

Store of purchasing power. As already noted, money serves as a store of generalized purchasing power in anticipation of payments in the future. Assets which best perform this function are those free from market risk. In order for money to perform the store-of-purchasing-power function satisfac-

torily, it is necessary that its value be relatively stable.

Time and savings deposits as stores of purchasing power. Media of exchange are not the only assets that serve as stores of purchasing power. In particular, time and savings deposits held with commercial and mutual savings banks perform this function almost as well as demand deposits or currency.² Savings deposits, while not generally transferable directly as media of exchange in this country, can usually be converted at will, without loss, into currency or demand deposits. Although banks have the legal right to require a period of notice for the withdrawal of savings deposits, the practice of paying them on request has become so common that individual holders may look upon them as demand assets. Since a part of the desire for liquidity is thus met, owners of savings deposits are willing to hold a smaller amount of demand deposits and currency relative to their expenditures than would otherwise be the case.

When deposits expand as a result of commercial bank lending activity, the initial increase is generally in demand deposits, since borrowers borrow in order to make payments. Part of the deposits thus created may eventually be paid to savers who prefer to hold them in the form of time deposits.

Factors influencing holdings of time deposits and of media of exchange. In general, holding of demand deposits and currency is more likely to be in anticipation of payments in the near future than is the case for time

deposits, while the latter are more likely to represent an accumulation of semi-permanent savings. Time deposits cannot generally be transferred as means of payment, while demand deposits and currency are less satisfactory than time deposits for the holding of savings because they do not yield interest. Since 1933 it has been illegal for banks to pay interest on demand deposits, and prior to that time the rate of interest was always considerably lower than on time deposits.

Changes in relative amounts of time and of demand deposits outstanding reflect in part changes in the relative importance of deposits held awaiting current use and of those representing semi-permanent savings. Such changes also reflect other factors, including interest rates on time and demand deposits, service charges on demand deposits, and provisions concerning withdrawals from time deposits (for example, whether the balance is in practice payable on demand, the number of withdrawals permitted over a period of time, and whether there are means for transfer of time deposits other than through withdrawal and transfer of currency). In the 1920's high rates of interest and lenient withdrawal provisions encouraged a rapid growth of time deposits. The shift by banks in the 1930's to a practice of paying only a nominal rate of interest or of refusing to accept time deposits, coupled with the establishment generally of service charges on small demand deposits, caused time deposits to decline and inactive demand deposits to increase. Recently, increased rates of interest and rather lenient withdrawal provisions have been a factor in further growth of time deposits.

Comparison of time deposits with security investments. In many ways, the holding of savings in the form of time deposits is similar to their investment in various types of secu-

² The term *time deposits*, when used without qualification in the subsequent discussion, will refer to both time deposits in a narrow sense, which are payable only at some specified future date or upon some specified period of notice, and savings deposits, with respect to which the right to demand notice is merely reserved by the bank. Savings deposits constitute the major part of total time and savings deposits. Because the generally available statistics include savings deposits as a part of time deposits, this broad usage of the term *time deposits* will be adopted except when there is reference to characteristics unique to savings deposits.

rities. In either case the saver, in exchange for an interest return, gives up an immediate means of payment which becomes available for use by someone else—in the case of time deposits, by the commercial or mutual savings bank and through it by a borrower.

The major difference between time deposits and other types of high-grade assets lies in the fact that time deposits are redeemable without risk of loss and without great delay, whereas most securities can be liquidated somewhat less readily. Even this difference between time deposits and other interest-yielding assets is not clear-cut, however. Shares in savings and loan associations have come to be considered as liquid as time deposits. Series E savings bonds may be redeemed at any time at a price known in advance, although they yield a slightly lower return when redeemed prior to maturity. When prices of marketable Government securities were pegged, the term liquid assets was commonly used to refer to the total of all United States Government securities, savings and loan shares, time and demand deposits, and currency. This total represented all assets which were at that time readily convertible without penalty into money.

Marketable securities, including United States Government as well as other securities, normally possess liquidity in varying degrees. The liquidity of such securities varies with changes in rates of interest and conditions in security markets. Since a change in the liquidity of these assets affects the degree to which they can serve as a substitute for cash balances, such a change in turn affects public demand for deposits and currency. Under conditions of flexible interest rates and security prices, the concept of liquid assets is a variable one and depends heavily on the state of market expectations as to the short-run stability of prices and yields. For

this reason it is difficult to set up any single definition of liquid assets which is valid under changing market conditions.

Difficulties in separate treatment of time and demand deposits. In measuring the money supply of the United States, it is difficult to differentiate between time and demand deposits because of the organization of banking. In general, commercial banks have both time and demand deposit liabilities, and they do not segregate assets behind the two types of deposits. Thus, it is impossible to say whether any given asset has been acquired through the investment of savings entrusted to the banking system by depositors or through the creation of demand deposit liabilities. Commercial banks, moreover, are required to hold some reserves behind time deposits, as well as behind demand deposits. Consequently, when savers convert demand deposits to time deposits with commercial banks, a part of the funds is tied up as reserve requirements behind the time deposits. This affects the quantity of demand deposits which the banking system can support, as is discussed later.

The problems of the nonsegregation of assets held by savings and commercial departments and of the presence of reserve requirements behind time deposits do not arise in the same way in the case of time deposits in mutual savings banks. Mutual savings banks usually do not hold demand deposits. Moreover, deposits in mutual savings banks are generally not subject to reserve requirements, and the cash assets of such banks are held mainly in the form of deposits with commercial banks. In the interest of consistency, however, it is desirable that time deposits in both commercial and mutual savings banks be considered as having the same money quality.

Focus of this article. Credit and monetary policy generally influences the quantity

of media of exchange outstanding much more directly than the quantity of other assets held by the public. Accordingly, attention in this article will be focused primarily on media of exchange—that is, demand deposits and currency—and the term money, when used without qualification, will refer to demand deposits and currency. Whenever changes in the amount of time deposits relative to media of exchange have an important influence on the liquidity of consumers and businesses, this fact needs to be borne in mind. Moreover, in any discussion involving total bank assets, the behavior of time deposits will be considered because of the nonsegregation of commercial bank assets.

FACTORS DIRECTLY AFFECTING MONEY SUPPLY

Under this country's monetary system the reserve position of the banking system is a major determinant of the supply of money. The lending activity of commercial banks is the principal source of new money, and the amount of lending in which banks can engage is limited by their reserves. The principal factors besides bank lending which directly affect the quantity of money are the country's international financial transactions and reserve banking transactions with nonbank investors.

Bank lending and the money supply. The public accepts bank deposits as its major form of money. In the process of making loans and investments, commercial banks exchange their liabilities to the public—deposits—which are accepted as money, for the public's liabilities to them—loans and investments—which are not accepted as money. Therefore, the supply of money expands when banks increase their loans and investments and contracts when bank loans and investments decline.

When a commercial bank lends to a busi-

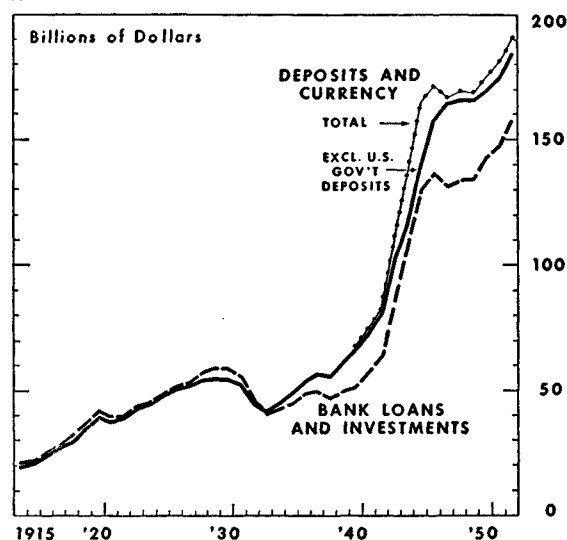
ness or a consumer, it generally provides the funds in the form of a deposit credit for the borrower with itself. Since a borrower usually borrows in order to make payments, he is likely to write a check transferring the deposit, in whole or in part, to a recipient who may keep his deposit in a different bank. The first bank then loses both the newly created deposit and an equivalent amount of cash resources, but the second bank gains them. Likewise, when a bank purchases United States Government or other securities from a nonbank investor or the issuer, the seller is paid with a newly created deposit. If the seller uses a second bank, he immediately deposits the check therein, and again the deposits as well as the cash assets of the second bank are increased. No matter how frequently it is transferred from holder to holder and from bank to bank, the money created by bank lending and investing continues in existence until used to repay a bank loan or to buy securities from a bank.

When a borrower repays a loan to a bank, he usually pays with a check on his deposit with this bank. The bank's earning assets and its deposit liabilities are reduced by the amount of the loan which is repaid, and there is no offsetting increase elsewhere. Likewise, when a nonbank investor buys a security from a bank, he usually makes payment by drawing down his deposit with some bank in the system, and this part of deposits then ceases to exist as part of the money supply.

The close relationship between total deposits and currency and total loans and investments of commercial and mutual savings banks is illustrated by the chart. The major dissimilarities in the magnitude of the movements which have occurred since 1914 took place in the periods 1934-40 and 1943-45, when other factors were of importance in

THE MONETARY SYSTEM OF THE UNITED STATES

DEPOSITS AND CURRENCY AND BANK LOANS AND INVESTMENTS



NOTE.—June 30 data, including both commercial and mutual savings banks. Deposit and currency series shown for entire period 1914-52 excludes U. S. Government deposits—that is, it consists of demand deposits adjusted, time deposits, and currency outside banks. The other series shown, beginning with 1940, includes total U. S. Government deposits.

accounting for changes in the amount of deposits and currency.

Other factors directly influencing money supply. Important factors other than bank credit operations which influence the quantity of money are foreign transactions, reserve banking transactions with nonbank investors, and, of less significance, changes in the amount of silver certificates and other Treasury currency. Foreign payments to this country, reserve banking credit extensions to nonbank investors, and issues of Treasury currency result directly in an increase in the volume of money. Since these changes also affect the reserve positions of commercial banks, they may result in a multiple expansion of bank credit. The direct effect, however, is likely to be of particular importance at a time when banks prefer to retire indebtedness to the Federal Reserve System or to build up excess reserves rather than expand loans and investments. Con-

versely, payments made from this country to other countries, reductions in reserve banking credit via nonbank investors, and withdrawals of Treasury currency result directly in decreases in the money supply. Changes in bank capital accounts also have an influence on the level of deposits.

The amount of money in the hands of consumers and businesses may increase as a result of the drawing down of Treasury deposits, or decrease as a result of the building up of Treasury deposits. Such variations in Treasury deposits, however, are normally associated primarily with tax payments and therefore are of a seasonal nature.

In the period 1934-40, when the movements of bank loans and investments and of deposits and currency held by consumers and businesses were dissimilar, gold imports accounted directly for a considerable part of the expansion of the money supply. In the years 1943-45 a part of the monetary expansion was due directly to purchases of Government securities made by the Federal Reserve System in order to supply the reserves needed by banks to facilitate their purchases of Government securities and to meet the wartime demands of the public for currency. Deposits and currency held by consumers and businesses continued to increase after the war, even though total bank loans and investments declined somewhat before resuming their expansion. During this period the Treasury drew down its abnormally large wartime deposits partly to make current payments or to repay debt to nonbank investors and partly to retire bank-held debt, and banks in turn substituted loans to consumers and businesses for part of their holdings of Government securities.

INFLUENCE OF BANK RESERVES ON DEPOSITS

Commercial banks are required by law to hold minimum reserves equal to a stated

fraction of their deposit liabilities. Thus, the amount of deposits that the banking system can support depends on both the amount of reserves and the percentage reserve requirements. A net increase of reserves would make possible a multiple expansion of deposits, while a decrease in reserves, in the absence of excess reserves or a source of new reserves, would require a multiple contraction of deposits.

Member banks of the Federal Reserve System, which have about 85 per cent of the demand deposits of all banks in the United States, must hold their legally required reserves in the form of deposits with Federal Reserve Banks. Nonmember banks generally hold a large part of their reserves as deposits with member banks. In this discussion attention will be focused on the reserves of member banks. If member banks expand deposits on the basis of increased reserves, nonmember banks will generally find themselves with larger reserves and hence be in a position to expand deposits also.

Factors affecting the volume of reserves.

The most important domestic factor influencing the level of bank reserves is changes in the amount of Federal Reserve credit outstanding. Such changes may offset the effects of changes in other factors that influence the level of reserves or they may result in an increase or a decrease in total reserves. As will be explained later, changes in the quantity of Federal Reserve credit occur immediately at the initiative either of the Federal Reserve System or of bank borrowers. Since Federal Reserve Banks make payment to borrowers or to sellers of investment securities by creating deposit liabilities, the Federal Reserve System can supply additional reserves by making advances to banks or by buying securities from either bank or nonbank investors. Since nonbank investors hold their deposits with

commercial banks, they build up their deposits with commercial banks when they sell securities which are bought by the Federal Reserve System, and commercial banks in turn receive increased deposits with Federal Reserve Banks. The Federal Reserve can absorb reserves by selling securities or by bringing about a decline in bank borrowing.

Another important factor influencing bank reserves is changes in the amount of currency held by the public. Member banks meet the currency needs of their depositors by drawing down their reserve balances with the Federal Reserve Banks, and they return currency not needed by depositing it with the Reserve Banks. Thus an increase in the amount of currency held by the public exerts a drain on bank reserves, while a decline supplies the banks with reserves.

Changes in deposits of the Treasury with Federal Reserve Banks also affect the volume of bank reserves. The Treasury, however, endeavors to manage the distribution of its deposits between commercial banks and Federal Reserve Banks in such a way as to minimize the effect on bank reserves of the fluctuations in Treasury receipts and expenditures. Changes in cash held by the Treasury in its own vaults and also in Treasury currency outstanding affect the level of bank reserves, but such changes are generally small.

Another domestic factor influencing the level of bank reserves is the amount of credit extended by Federal Reserve Banks in connection with the clearance of checks. This type of credit, which is generally referred to as "float," arises because the accounts of commercial banks at Reserve Banks are credited for checks which are deposited before these checks are actually collected from the banks on which they are drawn. Although the amount of float has increased in recent years, it fluctuates mainly with seasonal factors.

THE MONETARY SYSTEM OF THE UNITED STATES

The most important international factor affecting the amount of bank reserves is the movement of gold arising from surpluses or deficits in the country's international accounts. The Treasury pays for gold by drawing down its deposits with the Federal Reserve Banks, which it then replenishes by issuing gold certificates to the Federal Reserve Banks. Thus an inflow of gold and the transactions giving rise to it result in additional deposits and bank reserves, while an outflow of gold contracts deposits and bank reserves. The amount of gold certificates held also places a ceiling on the volume of credit that can be extended by the Federal Reserve System, under its reserve requirements, without penalty. In general, however, this reserve ratio has not been a limiting factor, and credit and monetary policies have been determined by the needs of the economy rather than the amount of gold certificates held.

Multiple deposit expansion. At the present time, member banks of the Federal Reserve System are required to hold reserves behind demand deposits which range from 14 to 24 per cent, depending on whether the bank is classified as a country bank, a reserve city bank, or a central reserve city bank. Since the reserve requirements average slightly under 20 per cent, member bank demand deposits can expand (assuming adequate demand for bank credit) by about five times the amount of any net increase in bank reserves. This means that demand deposit liabilities of member banks as a group can rise at the rate of about \$500 for every \$100 added to reserves. Conversely, a decrease in reserves of \$100 would require a contraction in demand deposits of about \$500 under present reserve requirements, unless banks were operating with excess reserves greater than necessary for working purposes or responded by borrowing from the Federal

Reserve Banks. If reserve requirements were 10 per cent, an increase or decrease of \$100 in reserves would tend to be accompanied by an increase or decrease of \$1,000 in demand deposits.

Although the banking system as a whole can expand deposits by a multiple of the increase in reserves, this is not true of a single bank. Each bank in a unit banking system, such as that of the United States, is free to lend only such funds as it acquires from its depositors or its stockholders. Deposits originating in loans and investments seldom stay with the bank of origin but move from one bank to another in the course of business. A bank's new loans thus tend to increase the calls on it for cash and thereby to reduce its cash resources. At the same time, however, if the banking system as a whole is expanding loans and investments, this bank is likely to be receiving new deposits and cash assets from other banks. Thus the deposits and the reserves do not leave the banking system but are merely transferred from bank to bank, and the banking system as a whole can and does expand money by a multiple of its reserves.

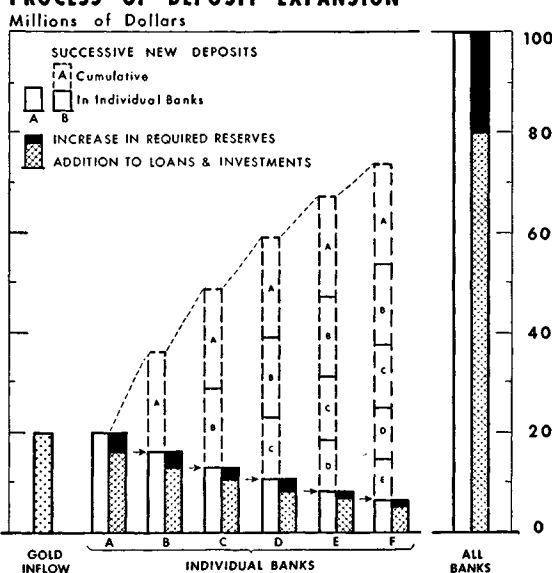
The chart on the following page illustrates the process by which an increase in reserves of 20 million dollars arising, say, from a gold inflow can eventuate in an increase in demand deposits of 100 million. For purposes of convenience, it is assumed that each individual bank is subject to reserve requirements of 20 per cent and that no newly created demand deposits are converted into currency or time deposits. It is also assumed that banks do not use the reserves acquired either to repay indebtedness to Federal Reserve Banks or to build up excess reserves.

The inflow of gold results in an increase of \$20,000,000 in the demand deposits of a commercial bank, shown as Bank A on the chart. This increase in deposits is shown

THE MONETARY SYSTEM OF THE UNITED STATES

by the first (hollow) bar for Bank A. The inflow also provides Bank A with additional reserves totaling \$20,000,000. Behind the \$20,000,000 of deposits only \$4,000,000 of additional reserves are required, however; these are shown as the black section of the second bar for Bank A. Hence the bank can lend or invest the remaining \$16,000,000, as shown by the cross-hatched section of the second bar for Bank A.

PROCESS OF DEPOSIT EXPANSION



If loans were made to customers, these loans would result immediately in a further increase in demand deposits as well as earning assets of Bank A. The checks written by borrowers, however, would probably be deposited in other banks. For purposes of simplicity, it is assumed here that all demand deposits resulting from the expansion of loans and investments by Bank A are transferred immediately to Bank B, increasing its deposits and its reserves. The resulting increase of demand deposits—\$16,000,000—is shown by the first (hollow) bar for Bank B. The total increase of deposits thus far is \$36,000,000—the original increase of \$20,000,000 resulting from the gold inflow and

the increase of \$16,000,000 resulting from the lending and investing activities of Bank A. This cumulation is shown in the chart by the dashed bar for A's deposits on top of B's deposits. Behind the increase of \$16,000,000 in its deposits, Bank B requires \$3,200,000 in additional reserves, and it can lend \$12,800,000. The demand deposits thus created are transferred, it is assumed, to Bank C. The total increase in demand deposits becomes \$48,800,000, which is shown by the dashed bar on top of C's deposits. Bank C requires \$2,560,000 of additional reserves behind the \$12,800,000 in new deposits and can lend \$10,240,000.

If the process continues to its conclusion, with each bank lending the reserve funds which it has left after meeting the additional reserve requirements behind its increased deposits, deposits of all banks will increase by 100 million dollars, as shown in the last hollow bar of the chart; of this increase, 20 million can be attributed directly to the gold inflow and 80 million to the expansion in bank loans and investments. Loans and investments will expand by 80 million. The entire increase in reserves of 20 million will be absorbed by the additional reserve requirements behind the 100 million increase in demand deposits.

Conversely, a decrease of 20 million dollars in reserves would result in a decrease of 100 million in demand deposits, assuming that banks are operating without excess reserves and that no new reserves are acquired from other sources—for example, by borrowing from Federal Reserve Banks. If Bank A lost \$20,000,000 in reserves and deposits through a gold outflow, it would find itself with a reserve deficiency of \$16,000,000. If it raised this amount, say by selling securities to depositors in Bank B, Bank B would have a reserve deficiency of \$12,800,000, which it might replenish by selling securi-

ties to depositors in Bank C. The net result of the entire process of contraction would be a decline of 100 million dollars in demand deposits, of 80 million in loans and investments, and of 20 million in required reserves.

The 5 to 1 ratio used in computing the potential for bank deposit expansion (or contraction) on the basis of a given initial change in reserves is, of course, only a rough average. It is subject to modification, in particular because of the probability that increases or decreases in demand deposits will be accompanied by changes in the same direction in the demand for currency and time deposits, which influence the average reserve requirements behind the money supply. The limit on deposit expansion is also influenced by the fact that nonmember banks generally hold reserves partly in the form of deposits with member banks and that reserve requirements vary among member banks.

If expansion of the total money supply is accompanied by an increase in the dollar value of transactions, it will generally lead to additional demand for currency for retail transactions and for wage payments. Since demand for currency involves a drain of equal amount on commercial bank reserves, this demand reduces the potential for expansion on the basis of a given initial increase in reserves.

It is probable also that some of the newly created deposits will find their way into the hands of savers who will convert them into time deposits. Time deposit liabilities of member banks of the Federal Reserve System are subject to reserve requirements which are now set at 6 per cent. Conversions of demand to time deposits therefore result in a decline in the potential for expansion of demand deposits but an increase in the potential for expansion of total deposits. Thus, the conversion of \$100 in demand deposits to time deposits would free \$14 in

reserves (the difference between \$20 required behind \$100 in demand deposits and \$6 required behind \$100 in time deposits). These reserves could form the basis for \$70 of demand deposits.³

FACTORS INFLUENCING NEED FOR MONEY

The amount of money, while by no means the sole factor influencing expenditures in the economy, nevertheless has an important effect on levels of economic activity and prices.

Relation between volume of money and expenditures. Total expenditures vary both with the amount of money and with the frequency of use, or turnover, of the existing supply. Businesses and consumers need to hold some minimum cash balance in relation to their transactions in order to facilitate the execution of such transactions. The amount required for this purpose depends on such factors as the regularity of income and expenditures and the length of the average income period, as well as on the volume of transactions. The quantity of cash balances which businesses and consumers may wish to hold in excess of the necessary minimum depends on many factors, among which are the level of interest rates, the ease or difficulty of borrowing, and anticipations of future income and prices. The relationship between the total amount of money demanded and total money transactions varies from time to time with changes in all these factors.

To some extent, an increase or decrease in expenditures resulting from changes in the intensity of use of the money supply can be offset by changes in the opposite direction in the quantity of money. Thus, if recip-

³In the past, expansion ratios have generally been cited for total deposits rather than for demand deposits alone. Average reserve requirements behind total deposits of member commercial banks are now about 16 per cent, the equivalent of an expansion potential of about 6 times.

THE MONETARY SYSTEM OF THE UNITED STATES

ients of money are building up inactive balances in order to increase their liquidity, an increase in the supply of money may meet this demand for liquidity and allow expenditures to be maintained. On the other hand, if businesses and consumers are drawing down idle balances to make expenditures, the resulting expansion in expenditures may be offset in part by a decrease in the volume of money.

It is difficult to trace what happens to new money that is introduced into the monetary system, and hence to judge with accuracy its long-range effect on expenditures. It is important to observe, however, that changes in the volume of money are generally associated directly with changes in expenditures. Thus when a businessman or a consumer borrows from a bank, he does so in order to make an expenditure. Whether the recipient also spends the money at once or holds it for later spending, there has been an increase in expenditures made possible by commercial bank lending. Likewise, if a savings institution is enabled to make a loan by selling Government securities which are bought by the banking system, the borrower who thereby obtains funds generally increases his expenditures. This direct increase in expenditures may be of particular importance when short-run changes in the money supply are considered. Conversely, when a borrower repays a bank loan, the funds available to him for expenditures are reduced.

From the standpoint of stability, an economy needs a volume of money sufficient to support the volume of spending necessary to maintain a high level of production and employment, without leading to undue speculation or to spending at a rate which would outstrip the supply of available goods at prevailing prices. Judged from this standpoint, the amount of money required varies with

the productive capacity of the economy, with the state of business expectations, with changes in the demand for liquidity on the part of businesses and consumers, with economic dislocations of various kinds, and with seasonal factors.

Need of expanding economy for increased money supply. An economy which is expanding requires an increasing supply of money to facilitate its growing volume of transactions. If prices are not to decline, the money supply will have to expand to meet the increased needs for cash balances resulting from the additions to productive capacity and from the growing complexity of economic organization. In the past banks have met this need by supplying the credit demands of their customers, especially of businesses engaged in agriculture, commerce, and industry. More recently, an important part of the increase in the money supply has resulted from bank response to demand for credit by the United States Government and by customers borrowing to finance consumption expenditures.

Changing need for money over business cycles. The demand for cash balances in relation to transactions does not generally remain constant over business cycles. On the contrary, there are recurrent periods of pressure for increased or decreased holdings of money on the part of businesses and consumers.

In a period of recession, decline in business activity is typically accompanied by both a decline in the quantity of money and a decline in its turnover, as many recipients keep a larger volume of money inactive or use a greater part of their receipts to repay bank loans. This situation may be expected, for example, when the attractiveness of business investment opportunities temporarily declines or when consumer demand for durable goods temporarily slows up, although

the resulting decline in expenditures may be moderated by an appropriate credit and monetary policy. In some cases, however, uncertainty concerning future income and prices, and concerning the ability to raise funds through loans or through sales of securities, may result in an attempt on the part of businesses and consumers to build up their cash balances further in relation to their expenditures.

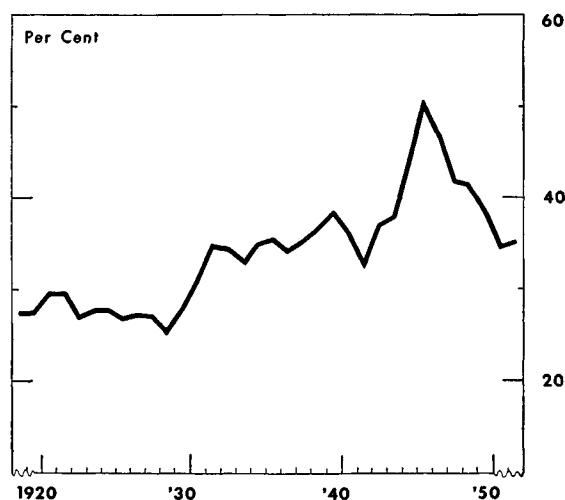
In the absence of an increase in the money supply, increased holdings of inactive cash cannot result in an increase in the total amount of cash balances held but only in a redistribution of the money supply between active and inactive balances. Such a redistribution will result in a further decrease in the demand for goods, with an adverse effect on production and employment and a tendency for prices to decline. In the interest of checking such decreases, and counteracting greater economic instability, it is desirable that an additional supply of money be made available to offset the effect of the increased demand for inactive balances.

During a period of economic revival, when investment opportunities become more attractive or demand for consumer durable goods expands, businesses and consumers both increase their borrowings from commercial banks and draw down inactive balances. The resulting increase in expenditures has the favorable result of bringing about the employment of previously unemployed, or underemployed, labor and machinery. If expenditures continue to increase after productive facilities are fully utilized, however, they will be reflected only in price increases and speculative activities. The increase in prices and the expectation of further increases may in turn induce others to spend their receipts more promptly or to activate idle balances, thus intensifying the upward pressure on prices. At such times,

restraining the expansion of the money supply would help to curb expenditures.

The relationship of the amount of money to the volume of expenditures is illustrated by the ratio of total demand deposits and currency to gross national product, shown in the chart. Since gross national product measures only the dollar value of goods and services produced and not total money outlays, changes in this ratio do not correspond precisely to changes in the relationship between cash balances and expenditures. Changes in the ratio shown over periods of a few years, however, are generally indicative of changes in the willingness of the public to hold deposits and currency. Worthy of note are the increase in the ratio in the period 1930-32, when the pressure for liquidity was exceptionally great, and its subsequent failure to decline to the earlier level as investment opportunities remained unattractive in the latter 1930's. Also of interest are the increase in the ratio during World War II, when shortages of goods,

**RATIO OF DEMAND DEPOSITS AND CURRENCY
TO GROSS NATIONAL PRODUCT**



NOTE.—Ratio of demand deposits adjusted and currency outside banks as of June 30 to gross national product for calendar year. Gross national product estimates beginning in 1929 are from U. S. Department of Commerce and prior to 1929 were compiled by Mary S. Painter and published in Federal Reserve BULLETIN for September 1945, p. 873.

THE MONETARY SYSTEM OF THE UNITED STATES

rationing, and patriotic motives kept expenditures from increasing at the same pace as the increase in the quantity of money, and the decline in the ratio after 1946 as deposits which had been held inactive were spent.

REGULATION OF MONEY SUPPLY

Changes in the quantity of money that reflected only changing demands for credit by businesses, consumers, and governments and changing bank judgments of creditworthiness would tend to be cumulative, first expanding and then contracting unduly. These increases or decreases in the volume of money would reinforce changes in the turnover of money, and movements of prices and production would be accelerated. It is the function of reserve banking, by regulating the volume of bank reserves, to counteract the tendency for excessive swings in the volume of money.

Tendency for excessive changes in money volume over business cycles. When the demand for goods is increasing and prices are rising, the demand for loans on the part of both businesses and consumers is likely to increase. At the same time, bankers' standards of creditworthiness are likely to become less rigorous and more borrowers are likely to meet any given standard. If the expansion in the supply and use of money exceeds the increase in the supply of goods and services resulting from increased employment, then higher prices result. Rising prices lead in succession to increased demand for loans, more favorable credit ratings, and, if reserve funds are freely available to banks, to more money.

Conversely, when there is a decline in the demand for goods and in employment, the demand for loans on the part of credit-worthy borrowers will generally decline, and at the same time banks will become more

pessimistic regarding credit ratings and more applicants will fall into high-risk categories. The resulting decrease in the quantity of money may contribute to a further decline in demand, employment, and income, and to still further contraction of the money supply.

In wartime, there is special danger that the increase in the volume of money may be excessive. In the absence of restrictions of any kind, credit demands may arise not only from the Government and from industries producing war goods but also from other industries profiting from the general increase in income and expenditures. It has generally been found desirable to ration scarce productive resources under such circumstances, thus not only assuring greater availability of these resources for essential wartime uses but also cutting down on the demand for loans. Under any circumstances, however, the additional demand for bank credit during war is likely to be far in excess of that needed to supply the increased monetary needs of the economy. Even if it were possible by means of direct controls and appeal to patriotic motives to restrain temporarily the expenditure of the larger cash balances, problems would be likely to develop later as the result of excessive liquidity.

Moderation of changes in money supply through reserve banking. Modern nations have set up various forms of centralized mechanisms in order to moderate fluctuations in the volume of credit and money. Because of the dependence of bank lending capacity on the reserve position of banks, lending activities of banks can be affected by influencing their reserve positions. Reserve positions can be eased when depression threatens and the decline in the money supply should be retarded; they can be tightened when an inflationary boom threatens and

there needs to be a check on the expansion of credit and money. In the United States, the Federal Reserve System through its operations can act to offset the effects of gold and currency movements when such movements tend to result in undesirable expansion or contraction of the money supply. It can also act to bring about a change in the amount of bank reserves when other factors, such as changes in the intensity of use of existing deposits by the public or changes in the willingness of banks to hold excess reserves or in their pressure to repay borrowings, make a change in the reserve position desirable.

One means by which the Reserve System can influence bank reserve positions is through its handling of the discount mechanism by which it lends to member banks. Reserve funds acquired through borrowing at the Federal Reserve Banks are residual funds for member banks; it is to this source that banks resort when they find themselves with temporary reserve deficiencies for any reason. When a bank is obliged to borrow to maintain its reserves, it tends to be more restrained in credit operations than when reserves are otherwise available. As total bank borrowing tends to increase—that is, as more banks borrow at any one time and as individual banks resort to borrowing more frequently and for larger amounts—the strength of this restraint multiplies. By raising the discount rate, the Federal Reserve can reinforce bank reluctance to increase reserves through borrowing; by lowering the rate, the System can lessen somewhat the reluctance of banks to borrow when it is necessary to make adjustments in reserve positions.

Another and closely related way in which reserve banking operations can expand or contract bank reserves is through purchases and sales of eligible paper or securities in the

market. Actually, the Reserve System does this largely through operations in United States Government securities. As has already been indicated, if the Federal Reserve System purchases Government securities from bank or nonbank investors, it supplies the banking system with the reserve basis for multiple deposit expansion. Although the reserve funds may be used immediately to build up excess reserves or to repay indebtedness to the Reserve Banks, the increased liquidity of the banks will make them more willing to accommodate the credit demands of their customers. Contrariwise, when the Federal Reserve System sells securities, bank reserves are reduced. Unless the banking system has been operating with excess reserves, available reserves will no longer meet the legal requirements and the commercial banks will be obliged to replenish reserves by borrowing temporarily from the Reserve Banks. As such borrowing occurs or increases, banks will be under pressure to retard the expansion of credit and money.

As has already been noted, Reserve Bank transactions in Government securities with nonbank investors have a direct effect on the volume of money which is independent of action by commercial banks. Even without a response by banks, therefore, the System is able to operate directly to change the quantity of money. The multiple effect of such open market transactions on the money supply, however, depends on their effect on bank reserves and the response of bank lending policies to increases or decreases in the volume of reserves.

Reserve banking policy can also affect the reserve position of banks by altering, within limits set by statute, the percentage of deposits that banks are required to hold in reserves. If reserve requirements are lowered, reserves are freed and the stage is set for a

THE MONETARY SYSTEM OF THE UNITED STATES

process of multiple deposit expansion. If reserve requirements are raised and there are no excess reserves, new reserves must be acquired or deposits must be reduced until the available reserves meet the requirements. Even if changed reserve requirements are offset temporarily by changes in bank borrowing or in excess reserves, the resulting change in bank liquidity will have an important influence on the willingness of banks to respond to the credit demands of their customers. At the present time, the potentialities of Federal Reserve action through changes in reserve requirements are almost altogether in the direction of easing reserve positions, for reserve requirements are already at the legal maximum for all member banks except for a relatively small leeway in authority to raise requirements further at central reserve city banks.

The discount mechanism, open market operations, and changes in reserve requirements are all instruments of credit and monetary policy which operate primarily through their effect on bank reserves and consequently affect credit in general. Although these instruments differ from one another in their applicability to short-term credit conditions, they are closely interrelated and hence need to be combined in an integrated policy. The individual instruments and the relationship among them will be considered in detail in subsequent articles.

The Federal Reserve System also has authority to regulate the use of credit for the purpose of purchasing or carrying listed securities. It has also had in the past authority

to regulate the terms for the extension of consumer instalment and real estate credit. This type of selective credit influence does not operate through bank reserves and affects the volume of money indirectly. It is not intended to treat the role of selective credit measures in detail in this series of articles.

In addition to their influence on bank reserve positions and through them on the volume of money, reserve banking policies also have important effects on the intensity of use of the money supply through their influence on business anticipations and on the liquidity of various assets other than money. Changed expectations concerning future economic conditions on the part of financial institutions, businesses, and consumers can increase or reduce their desires to hold cash. At the same time, capital values are affected by changes in conditions in the security markets which accompany changes in credit policies, and thus the liquidity of major sectors of the economy is increased or reduced. In particular, during a period of inflationary pressures, credit and monetary policies which lead to uncertainty as to the future availability of credit and the stability of capital values can dampen the willingness of lenders to lend, borrowers to borrow, and holders of cash balances to spend. In periods of deflation, action to stimulate confidence as to future credit and monetary ease tends to relieve the strain on liquidity positions and to promote more active use of money. The broad effects of reserve banking policies will be discussed in the next article.

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(5) Has monetary machinery (a) worked flexibly, and (b) has the market demonstrated flexibility in its responses to changes in policy? For example, how has the policy of "active ease" been reflected in the level and structure of interest rates, the volume of credit, and the roles of various types of lenders?

The monetary machinery since mid-1952 has worked flexibly, and the market has responded flexibly to changes in credit and monetary policy. The effectiveness of credit and monetary policy is due in part to its adaptability to changing economic circumstances. During late 1952 and early 1953, inventories were rising, the Federal cash deficit was increasing sharply, consumer instalment indebtedness was growing rapidly, capital outlays were being made on a large scale, credit demands generally were very strong, and forward commitments were taking on a speculative hue. With the economy already operating at virtually full capacity and producing in excess of final takings from the market, these developments constituted a threat to long-term stability and growth. Accordingly, Federal Reserve policy from mid-1952 to late spring 1953 was directed toward restraint of further increases in spending financed by bank credit. With abatement of inflationary pressures in the late spring of 1953, the Federal Reserve readapted its policies to promote orderly realignment of activities and to foster a climate favorable to resumption of economic growth.

The influence of credit and monetary policy can be traced through observations of changes in five interrelated factors: the availability of credit relative to demand, the volume of money, the cost of borrowing, capital values, and the general liquidity of the economy. Examination of each of these factors helps to illustrate the points of "flexibility" and "responsiveness" raised in this question.

In considering these factors it is important to keep in mind that credit and monetary action is only one of the many factors, although an important one, affecting the general level of economic activity. The influence of credit and monetary policy in any period is necessarily conditioned by various other policies and programs of the Federal Government, by economic and political developments abroad, and by public responses to a variety of unpredictable events. Also, the effectiveness of credit and monetary policy in a particular period needs to be judged in the light of broad experience and observation. One of the difficulties with such judgments is that financial and institutional practices are constantly changing so that close comparison with past periods may not be entirely appropriate. These changes result in financial adjustments which differ in responsiveness and degree of lag from one period to another.

Availability of Credit

Changes in the availability of credit, while not subject to statistical documentation, may be observed in a general way from the terms and conditions which lenders require in granting credit, from their passivity or aggressiveness in seeking out new outlets for loan funds, and by the response that borrowers experience to their applications for credit. During the period of credit tightening through late spring of 1953, for example, the very large demands for credit exceeded the substantial volume of funds available for lending and lenders had to adjust their operations to this fact. Some lenders, particularly banks, tended to favor short-term credits and reduced their longer-term lending.

Other actions to discourage undue borrowing were adopted by various lenders. Commercial banks tended to require larger minimum

deposit balances from borrowers. Insurance companies tended to write more restrictive call provisions and other features into their private-placement agreements. Mortgage lenders generally tended to favor paper with shorter terms and to require larger downpayments. Also, lenders cut back their activities for developing new credit outlets, became reluctant in many cases to accept new borrowing customers, and reduced the volume of their lending to borrowers who were marginal in terms of risk and long-run profitability. These tendencies became more pronounced as the tightening movement progressed.

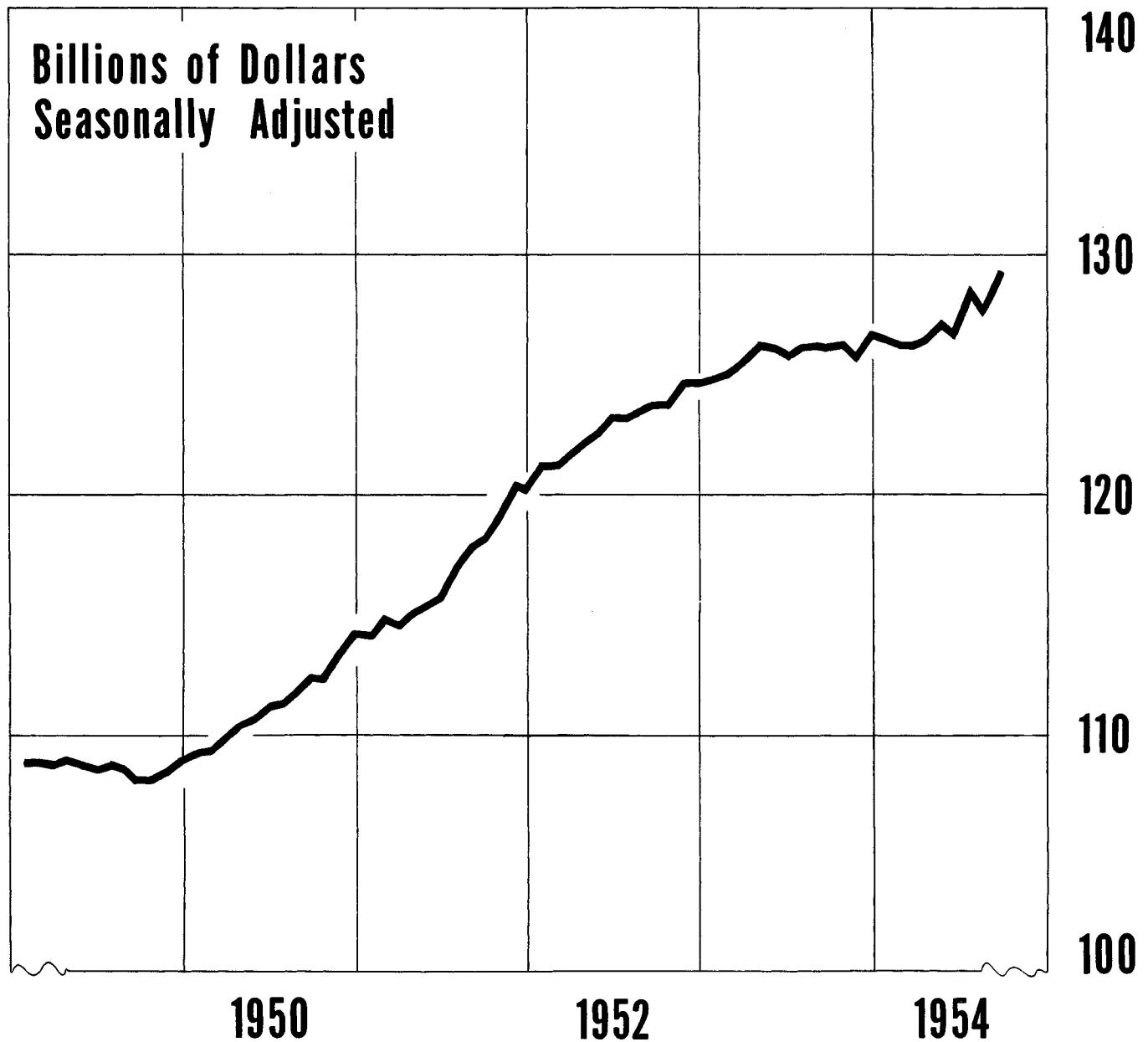
With credit easing after the late spring of 1953, these developments were reversed. In general, lenders found themselves with more funds available relative to the demand than earlier, and were under pressure to keep such funds fully invested. As a result, uses of credit were promoted that under tighter money conditions had been postponed or curtailed. The volume of new security issues was maintained at a very high level throughout the period of business decline, and a number of these issues, particularly State and local government revenue issues, were of a type that would not have been brought out in the earlier period of restraint. Mortgage credit became available on more liberal terms with respect to downpayment and maturity, and lending commitments to builders again came to be readily arranged. Consumer credit standards and terms also eased, although with more lag than in the case of mortgage credit. Commercial banks, moreover, became more aggressive in term-lending and tended to lengthen somewhat the maturities of their investment portfolios as well as to widen the area of their investment interest. In some cases these liberalizations went further than had been attained in the preceding period of credit ease.

Volume of Money

The accompanying chart shows the movement in demand deposits adjusted plus currency in circulation, seasonally adjusted, since mid-1952. Federal Reserve restraints on the expansion of bank credit during the period of inflationary threat from mid-1952 to late spring of 1953 were effective in curbing growth in the money supply at a time when pressures for bank credit and monetary expansion were very strong. During this period, the demand deposit and currency holdings of individuals and businesses increased by 3 billion dollars, or about 2-1/2 per cent. This compares with a growth of over 6 per cent in each of the preceding two years.

Over the past year and a half, the money supply increased further even though business activity declined over the first half of that period. Demand deposits and currency of businesses and individuals leveled off during the second and third quarters of 1953, after allowances for usual seasonal movement, rose moderately thereafter through mid-1954, and subsequently increased sharply. Over the year ending September 1954, the money supply expanded by 3 billion dollars, or approximately 2-1/2 per cent. This expansion, which reflected primarily an increase in bank holdings of Government securities, is in contrast to the behavior of the money supply in most previous periods of business decline. In some previous recession periods the money supply contracted, reflecting a significant liquidation of bank credit as a factor of economic recession. Under such circumstances, curtailed liquidity put consumers and businesses under pressure to reduce their spending, thus contributing to further recession in activity.

DEMAND DEPOSITS AND CURRENCY



Cost of Borrowing

The accompanying table of selected market interest rates since mid-1952 shows the changes that have taken place in the cost of borrowing. Reflecting the combined influence of heavy credit demands and restrictive Federal Reserve policy, interest rates began a general advance in the second half of 1952. The advance accelerated in early 1953, with peaks for this movement reached in June. Thereafter, the interest rate movement was reversed as Federal Reserve policy shifted from one of restraint to one of actively fostering credit ease. Market interest rates declined appreciably through the early part of 1954 and subsequently have shown little change.

The movement in interest rates spread throughout the credit market, affecting all types of credit paper and securities, although in different degree. For example, rates charged by banks on customer loans were more sluggish in their response on the downside than were open market rates. However, the responsiveness of market interest rates to the policy of "active ease" was very marked; the decline in money and capital market rates after mid-1953 was as sharp and widespread as in the comparable phase of any other business downturn since World War I.

SELECTED MONEY RATES
(Monthly Averages)

	U.S. Gov't securities			Prime	Bank	Corporate Bonds			Muni-
	Bills	3 - 5 years	Long-term Old series	Com'l. Paper	rates to customers	Aaa	A	Baa	ci- pal bond
1952 - June	1.700	2.04	2.61	2.31	3.51	2.94	3.20	3.50	2.10
July	1.824	2.14	2.61	2.31		2.95	3.19	3.50	2.12
Aug.	1.876	2.29	2.70	2.31		2.94	3.21	3.51	2.22
Sept.	1.786	2.28	2.71	2.31	3.49	2.95	3.22	3.52	2.33
Oct.	1.733	2.26	2.74	2.31		3.01	3.24	3.54	2.42
Nov.	1.862	2.25	2.71	2.31		2.98	3.24	3.53	2.40
Dec.	2.126	2.30	2.75	2.31	3.51	2.97	3.22	3.51	2.40
1953 - Jan.	2.042	2.39	2.80	2.31		3.02	3.25	3.51	2.47
Feb.	2.018	2.42	2.83	2.31		3.07	3.30	3.53	2.54
Mar.	2.082	2.46	2.89	2.36	3.54	3.12	3.36	3.57	2.61
Apr.	2.177	2.61	2.97	2.44		3.23	3.44	3.65	2.63
May	2.200	2.86	3.09	2.67		3.34	3.58	3.78	2.73
June	2.231	2.92	3.09	2.75	3.73	3.40	3.67	3.86	2.99
Change									
June 1952-June 1953	+.531	+.88	+.48	+.44	+.22	+.46	+.47	+.37	+.89
1953 - July	2.101	2.72	2.99	2.75		3.28	3.62	3.86	2.99
Aug.	2.088	2.77	3.00	2.75		3.24	3.56	3.85	2.88
Sept.	1.876	2.69	2.97	2.74	3.74	3.29	3.56	3.88	2.88
Oct.	1.402	2.36	2.83	2.55		3.16	3.47	3.82	2.72
Nov.	1.427	2.36	2.85	2.31		3.11	3.40	3.75	2.62
Dec.	1.630	2.22	2.79	2.25	3.76	3.13	3.40	3.74	2.59
1954 - Jan.	1.214	2.04	2.68	2.11		3.06	3.35	3.71	2.50
Feb.	.984	1.84	2.60	2.00		2.95	3.25	3.61	2.39
Mar.	1.053	1.80	2.51	2.00	3.72	2.86	3.16	3.51	2.38
Apr.	1.011	1.71	2.47	1.76		2.85	3.15	3.47	2.47
May	.782	1.78	2.52	1.58		2.88	3.15	3.47	2.49
June	.650	1.79	2.54	1.56	3.60	2.90	3.18	3.49	2.48
July	.710	1.69	2.47	1.45		2.89	3.17	3.50	2.31
Aug.	.892	1.74	2.48	1.33		2.87	3.15	3.49	2.23
Sept.	1.007	1.80	2.51	1.31	3.56	2.89	3.13	3.47	2.29
Oct.	.987	1.85	2.52	1.31		2.87	3.14	3.46	2.32
Change									
June 1953-Oct. 1954	-1.244	-1.07	-.57	-1.44	-.17	-.53	-.53	-.40	-.67

Capital Values

Changing interest rates have also affected the economy through the recapitalization of future income, that is, through lowering or raising the dollar value of existing capital assets, particularly long-lived assets. This response has been especially noteworthy in the securities markets where prices of outstanding bonds and investment-type stocks have registered the influence of interest rate movements as well as, of course, of other factors. The attached table shows the percentage changes in values in selected types of capital asset over the past two and one-half years.

From mid-1952 to mid-1953, the increase in yields and consequent decline in prices of U. S. Government securities and corporate and municipal bonds reduced significantly the market value of investors' portfolios of such securities. Stock prices also showed moderate decline over this period despite prosperous business conditions. These developments were an influence helping to damp down the boom in capital outlays in this period.

Since mid-1953, rising prices of bonds and stocks have reflected in part the influence of falling interest rates. This movement in values has tended to help sustain private capital expenditures during the period when business activity in other lines was receding somewhat in consequence of the work-off of excess inventories and reduced defense expenditures following the settlement in Korea. In some investment areas, such as the farm and existing residential real estate areas, values declined somewhat despite falling interest rates. These declines reflected the overriding effect of other factors, for example, the reduction in agricultural income

in the case of farm real estate values and the increasing supply of new homes in the case of residential real estate values. Even in these areas, however, there is reason to believe that the higher capitalization factor helped to cushion the decline in market values.

Percentage Changes in Selected
Capital Values

	June 1952- <u>June 1953</u>	June 1953- <u>Oct. 1954</u>
Government bonds (long-term)	- 7	+ 9
Corporate bonds (high-grade)	- 6	+ 8
Municipal bonds (high-grade)	-12	+10
Preferred stocks (high-grade)	- 9	+14
Common stocks* (Standard & Poor's series)	- 3	+33

*Values of common stocks are, of course, particularly affected by important variables other than the capitalization factor. These include, for example, changes in earnings and dividends and changes in expectations as to general business developments.

General Liquidity of the Economy

Changes in the volume of money and other highly liquid assets and in the value of existing assets affect the liquidity of businesses and individuals and influence their willingness to spend and invest. They also affect the liquidity of financial institutions and their willingness to lend and invest.

The restrictive credit policy from mid-1952 to last spring 1953 caused existing assets to decline in liquidity. This development influenced consumers and businesses to screen expenditures more carefully either because they were reluctant to dispose of interest bearing securities at the prices currently prevailing, or because they were encouraged by rising yields to save and invest in securities or other savings forms. Also, the desire for liquidity was heightened by the fact that access to credit was not as assured as it had been earlier. This put a greater premium on holding cash balances and other liquid assets rather than spending. The relative stability of prices over this period, moreover, fostered confidence in the value of the dollar so that holders of deposits and currency did not feel pressed to make expenditures immediately in anticipation of higher prices.

In contrast, falling interest rates in the recent period of monetary ease tended to make individuals and businesses, as well as financial institutions, more liquid and increased the proportion of their assets that could be sold at cost or profit. This is particularly true of investment portfolios where the rise in prices of marketable U. S. Government bonds, corporate bonds, State and local government bonds, and corporate stocks made holders more willing to lend and to spend. The fact of ready availability of credit, furthermore, reduced the requirements of businesses and individuals generally for liquidity.

Concluding Comment

Viewed as a whole it appears that credit and monetary policy exerted a wholesome restrictive influence in the 1952-53 period of boom and a desirable cushioning and sustaining influence in the economic decline which followed. In so doing, it made a necessary and positive contribution to stable economic growth.