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MONEY MARKET IN MARCH

Reserve Bank discount rates and member bank reserve requirements were reduced again during March, the second reduction in both during the year thus far. As a result of these and other actions designed to increase the availability and lower the cost of funds, member bank reserve positions eased further during the period. The margin of excess reserves over borrowing from the Federal Reserve rose to the highest monthly average since late in 1954, as member bank borrowing declined to minimal amounts.

The effective rate for Federal funds remained well below the discount rate throughout, for the most part fluctuating between 1¼ and 1½ per cent but toward the close of the month falling to between ¼ and 1 per cent. Treasury bill yields generally held within the 1⅛-1½ per cent range; rates moved upward over the first half of the month, mainly as a result of a slackening in demand due to corporate needs for cash in order to meet March tax and dividend payments, but demand revived later in the month and yields moved lower. At the end of March the longest outstanding bill was trading at around 1⅛ per cent. By contrast, although longer term Treasury issues remained fairly steady and even declined in yield in the latter half of the period, heavy demands for funds subjected other capital market yields to some upward pressure which was only partially counteracted by the easier money market atmosphere. As a result, market rates on new and outstanding corporate and municipal obligations varied around a slightly upward trend over the course of the month.

On March 6 the Federal Reserve Banks of New York, Philadelphia, and Chicago announced that their discount rates would be lowered from 2¾ to 2¼ per cent, effective on the following day. The other nine Reserve Banks made similar announcements during the ensuing two weeks, with the new 2¼ per cent rate taking effect on March 10 for the Federal Reserve Bank of Atlanta, March 11 for Boston, March 13 for San Francisco, March 14 for Cleveland, Richmond, St. Louis, Kansas City, and Dallas, and March 21 for Minneapolis. (In the case of the San Francisco Bank the reduction was from 3 per cent to 2¼ per cent.) This marked the third reduction in the discount rate of the Federal Reserve Bank of New York in the last four months. In parallel with the action of most other Federal Rerserve Banks, it had been lowered from 3½ per cent to 3 per cent last November 15, and to 2¾ per cent on January 24.

In addition to day-to-day open market operations, which resulted in a net increase of 115 million dollars in System holdings of Treasury bills between February 26 and March 26, the availability of reserve balances was further augmented by the announcement by the Board of Governors on March 18 that member bank reserve requirements against demand deposits would be lowered by ½ of 1 per cent. Following upon a similar reduction in mid-February which had become effective at about the end of that month, this brought reserve requirements against net demand deposits to 19 per cent for central reserve city banks, 17 per cent for reserve city banks, and 11 per cent for country banks. At these levels, percentage requirements were the lowest since the 1936-37 period, when variable reserve requirements were first being put into use by the Federal Reserve System. The new requirements went into effect on March 20 for central reserve and

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Table I

Changes in Factors Tending to Increase or Decrease Member Bank Reserves, March 1958

(In millions of dollars; (+) denotes increase, (—) decrease in excess reserves)

Factor	Daily averages—week ended				Net changes
	Mar. 5	Mar. 12	Mar. 19	Mar. 26	
Operating transactions					
Treasury operations*	+ 18	+ 3	+ 134	— 307	— 152
Federal Reserve float	— 60	— 76	+ 157	+ 10	+ 31
Currency in circulation	— 20	— 79	+ 49	+ 68	+ 18
Gold and foreign account	— 14	— 74	— 58	— 44	— 190
Other deposits, etc.	— 2	+ 30	— 77	— 25	— 74
Total	— 77	— 198	+ 206	— 299	— 368
Direct Federal Reserve credit transactions					
Government securities:					
Direct market purchases or sales	— 129	+ 181	+ 48	+ 38	+ 138
Held under repurchase agreements	+ 5	+ 29	— 14	+ 14	+ 34
Loans, discounts, and advances:					
Member bank borrowings	— 35	+ 13	— 6	+ 39	+ 11
Other	+ 1	—	—	+ 2	+ 3
Bankers' acceptances:					
Bought outright	—	+ 1	— 3	—	— 2
Under repurchase agreements	—	—	—	—	—
Total	— 158	+ 223	+ 25	+ 94	+ 184
Total reserves	— 235	+ 25	+ 231	— 205	— 184
Effect of change in required reserves†	+ 332	+ 32	— 232	+ 282	+ 414
Excess reserves†	+ 97	+ 57	— 1	+ 77	+ 230
Daily average level of member bank:					
Borrowings from Reserve Banks	118	131	125	164	135‡
Excess reserves†	551	608	607	684	613‡

Note: Because of rounding, figures do not necessarily add to totals.

* Includes changes in Treasury currency and cash.

† These figures are estimated.

‡ Average for four weeks ended March 26.

reserve city banks, and on April 1 for country banks. About 500 million dollars of reserve balances was thus released, approximately the same amount as was freed by the similar reduction in February. Reserve requirements of 5 per cent against time deposits were not altered.

Member Bank Reserve Positions

Average free reserves of all member banks amounted to 478 million dollars over the four statement weeks ended March 26, 150 million dollars higher than during February and almost 800 million above the average for the corresponding month last year. Average excess reserves rose to 613 million dollars from 567 million last month, while average member bank borrowings from the Reserve Banks declined to 135 million from 242 million in February. These represented the highest monthly average figure for free reserves since November 1954 and the lowest monthly average for member bank borrowings since October 1954.

During the first statement week of the month, average free reserves climbed to 433 million dollars from about 330 million in the last week of February, primarily as the result of the ½ per cent reduction in reserve requirements against net demand deposits announced on February 19. The lower requirements went into effect on February 27 at central reserve and reserve city banks and March 1 at country banks. As Table I indicates, average required reserves dropped by 332 million dollars in the statement week ended March 5, but some of these released balances were initially absorbed by a net decline in average System holdings of Government securities and by a net loss of funds attributable to other factors influencing the reserve base.

Reserve positions continued to ease gradually as the month progressed, with average free reserves reaching 520 million dollars in the final statement week of the period. Reserve losses from various operating transactions in the week ended March 12 were more than offset by System purchases of short-term Treasury securities, both outright and under repurchase agreements, while in the succeeding week a large rise in average required reserves was similarly counteracted by the midmonth expansion in float and a decline in Treasury balances at the Reserve Banks. (The increase in required reserves in the week ended March 19 was primarily attributable to the sharp rise in business loans during that week, a usual phenomenon around quarterly tax dates.) In the final week of the month the processing of tax checks led to a build-up of Treasury balances at the Reserve Banks which drained reserves from the banking system, but this was again offset, in this instance largely by the reduction in reserve requirements and System purchases of Treasury bills.

Average free reserves thus remained within the 430-520 million dollar range from week to week throughout the month, and member bank borrowings from the Reserve Banks fluctuated within even narrower boundaries. Such stability is rather unusual for a month characterized, as March always is, by large transfers of funds. However, the regional distribution of reserves altered significantly during the period, perhaps mainly because the excess reserves released at country banks by the February reduction of reserve requirements were not used rapidly, while the excess reserves at most of the larger banks were put to work at once. Near midmonth, funds flowed to New York as large corporations accumulated funds preparatory to paying taxes and dividends, but shortly thereafter the flow was reversed and country banks again acquired the bulk of available free reserves. Chicago banks came under pressure in the latter part of the month, largely as a result of the special conditions associated with the April 1 Cook County, Illinois, personal property tax. The purchase of Treasury bills by Chicago investors drained reserves from

that area and indirectly caused an increase in borrowing by the affected banks from their Reserve Bank.

Total System holdings of Treasury securities increased by 194 million dollars between March 5 and March 26, after having declined by 79 million dollars in the first statement week of the month. For the four statement weeks under review, therefore, total holdings rose by 115 million dollars. Although securities were acquired under sales contract agreements with Government securities dealers from time to time during the period, the amount outstanding had been reduced to zero by the end of the month.

Government Securities Market

For the most part the prices of Treasury notes and bonds moved within a narrow range in light trading during March. Prices tended downward early in the period, but then rose on balance after about the middle of the month. Daily changes were generally moderate, with activity consisting largely of switching transactions for tax purposes and some investor programs for lengthening maturities. Over the month as a whole, issues maturing before 1962 generally gained about ¼ of a point, while most longer bonds rose from ⅜ of a point to 1 point.

On March 4 the Treasury announced that it had received subscriptions totaling 6.7 billion dollars for its recent offering of about 1¼ billion dollars of 3 per cent bonds due in 1966. (The securities had been subscribed for on February 28, with payment required by March 10.) Subscriptions for $10,000 or less were allotted in full, while subscriptions for more than that amount were allotted 20 per cent but not less than $10,000. In addition, 100 million dollars of the issue was allotted to Government investment accounts. Trading in the new securities on a "when-issued" basis began on March 3 at around 100½ bid. The price remained close to that level until about mid-March, rose gradually over most of the remainder of the month, and closed on March 31 at $101\frac{9}{32}$ bid. Other recent longer issues were also in good demand, with the 3 per cent bonds of 1964 and the 3½'s of 1990—both of which were issued in mid-February—closing the month at $101\frac{20}{32}$ and $103\frac{10}{32}$, up $\frac{20}{32}$ and $\frac{22}{32}$, respectively.

Trading in Treasury bills was moderate during the first half of the month, with investment demand limited by corporate needs for cash to meet March tax and dividend payments. Some outright liquidation was also in evidence for the same purposes. As a result, market yields moved higher early in the period, with the longest outstanding Treasury bill rising from 1.27 per cent bid at the close on February 28 to 1.48 per cent on March 10. Demand revived, however, as the month progressed, first from public funds and commercial banks, and subsequently from other investors. Part of the investment demand later in the month stemmed from holders of tax anticipation bills who had redeemed the securities for cash. In addition, the Treasury reduced the supply of regular bills outstanding by 100 million dollars on March 13. Market yields thus receded, and by the close of the month the longest bill was bid to yield 1.10 per cent.

The average issuing rate in the weekly bill auctions rose from 1.202 per cent on February 24 to 1.351 per cent on March 3, and then climbed to 1.532 per cent on March 10. Thereafter it declined to 1.343 per cent on March 17 and to 1.189 per cent on March 24. In the last auction of the month, held on March 31 for bills maturing on July 3, the average issuing rate slipped to 1.148 per cent.

Other Securities Markets

The moderate congestion that had marked the corporate and municipal bond markets during February carried over into early March, but was subsequently relieved somewhat by a modest decline in the aggregate volume of new market offerings during the month and, in some cases, by dealer efforts to reduce their sizable inventories of unsold issues by lowering prices. However, the prospective calendar of new corporate and municipal offerings scheduled for the month of April continued to grow as the month progressed, and as the period drew to a close the markets were subject to the restraining influence of announcements by a number of industrial corporations of intentions to float new capital issues in the near future. The upward pressure on the structure of market yields brought average yields on seasoned long-term Aaa-rated corporate bonds (as measured by Moody's Investors Service) from 3.61 per cent at the end of February up to 3.64 per cent on March 31, while similarly rated municipals rose from 2.76 per cent to 2.79 per cent during the month. They thus closed the month 9 and 14 basis points, respectively, above their late January lows of 3.55 per cent and 2.65 per cent.

The estimated volume of publicly offered municipal bonds declined to 450 million dollars during March, sharply below the previous month's record of 825 million. This relatively small total and the fairly favorable reception accorded most new issues as offering rates edged upward helped dealers to reduce their heavy holdings of recent issues in preparation for the rather large amount of new offerings in prospect for April.

Corporate bond offerings for new capital purposes

totaled an estimated 435 million dollars during March, about 40 million above the previous month's level. In addition, in midmonth the "rights" expired on a 718 million dollar American Telephone and Telegraph Company offering of 4¼ per cent convertible debentures. Most new offerings moved fairly well, although investor interest was selective and three scheduled issues totaling 80 million dollars were postponed during the month because of unsettled market conditions. Dealers generally managed to reduce unsold balances on several recent slow-moving issues, in some cases with syndicate terminations and resulting price adjustments. A 30 million dollar 35-year utility offering, the month's only Aaa-rated corporate issue, received only a fair response when reoffered early in March to yield investors 3.94 per cent, 14 basis points above a similarly rated issue marketed late in February. As the month progressed, however, the bonds moved more rapidly.

On March 24, along with the sharp drop in the Treasury bill auction rate on that day, dealers in bankers' acceptances announced a rate reduction of ¼ of 1 per cent for all maturities, bringing the dealers' offered rate on 1 to 90-day acceptances to 1⅝ per cent and the bid rate to 1¾ per cent. This was 2⅜ per cent below the peak quotations of 4 per cent offered and 4⅛ per cent bid that were reached last August. On the following day, and again on March 27, dealers in commercial paper lowered their quotations by ⅛ of 1 per cent to bring the offered rate on prime 4 to 6-month paper to 2⅛ per cent, 2 per cent below the 4⅛ per cent high of last October. And on March 27 the major finance companies that place their paper directly with investors also cut their rates by ⅛ of 1 per cent for all maturities, bringing the rate on their 30 to 89-day paper to 1⅝ per cent.

Table II

Changes in Principal Assets and Liabilities of the Weekly Reporting Member Banks

(In millions of dollars)

Item	Statement week ended				Change from Dec. 31, 1957 to Mar. 19, 1958
	Feb. 26	Mar. 5	Mar. 12	Mar. 19	
Assets					
Loans and investments:					
Loans:					
Commercial and industrial loans	− 7	− 210	+ 131	+ 666	−1,208
Agricultural loans	+ 4	+ 3	—	+ 3	+ 12
Securities loans	− 79	+ 398	+ 282	+ 131	+ 527
Real estate loans	+ 5	− 33	+ 16	− 15	− 51
All other loans (largely consumer)	− 65	− 3	− 85	− 6	− 372
Total loans adjusted*	− 141	+ 153	+ 342	+ 775	−1,107
Investments:					
U. S. Government securities:					
Treasury bills	+ 298	+ 411	+ 106	+ 178	+ 359
Other	+ 106	+ 440	+ 212	+ 52	+1,473
Total	+ 404	+ 851	+ 318	+ 230	+1,832
Other securities	+ 71	+ 211	+ 172	+ 61	+ 762
Total investments	+ 475	+1,062	+ 490	+ 291	+2,594
Total loans and investments adjusted*	+ 334	+1,215	+ 832	+1,066	+1,487
Loans to banks	+ 10	+ 244	− 135	+ 57	+ 903
Loans adjusted* and "other" securities	− 70	+ 364	+ 514	+ 836	− 345
Liabilities					
Demand deposits adjusted	+ 61	− 440	+1,528	− 788	−1,644
Time deposits except Government	+ 164	+ 270	+ 226	+ 160	+2,082
U. S. Government deposits	+ 164	+ 105	− 427	+1,716	+1,212
Interbank demand deposits:					
Domestic	− 290	+ 711	− 176	+ 11	−1,556
Foreign	+ 24	− 9	+ 11	− 14	− 202

* Exclusive of loans to banks and after deduction of valuation reserves; figures for the individual loan classifications are shown gross and may not, therefore, add to the totals shown.

Member Bank Credit

Total loans and investments of the weekly reporting member banks expanded by 3.4 billion dollars during the four weeks ended March 19, with loans rising by 1.1 billion dollars and investments by 2.3 billion. Business loans increased by 580 million and loans for the purpose of purchasing or carrying securities by 732 million.

As Table II indicates, business loans rose by almost 800 million dollars in the two "tax-period" weeks ended March 19. However, this expansion fell considerably short of the 1.1 billion dollar increase in the corresponding two-week period last March. Sales finance companies stepped up their bank borrowings by 182 million dollars over the complete four-week interval, including an increase of 248 million recorded in the week ended March 19. These firms typically turn to the banks around tax dates as their directly placed paper expires and the proceeds are used by nonbank investors in order to make tax and dividend payments. The rise in securities loans was primarily for the purpose of purchasing or carrying non-Government securities, and was presumably related to the recent "rights" financings of several larger corporations and to the swollen inventory positions of corporate and municipal bond dealers.

The 2.3 billion dollar increase in total investments over the four weeks ended March 19 was heavily concentrated in Government securities, partly reflecting the acquisition of the 3 per cent bonds of 1966 in the weeks ended March 5 and 12.

Over the eleven weeks of 1958 elapsed through March 19, total loans and investments of the weekly reporting banks have expanded 1.5 billion dollars; a decline of 1.1 billion dollars in loans was more than offset by a rise of 2.6 billion in investments. In the corresponding weeks last year total loans and investments had declined by 887 million dollars, with loans down 260 million and investments 627 million.

INTERNATIONAL MONETARY DEVELOPMENTS

Monetary Trends and Policies

Last month was marked by discount rate reductions in four Western European countries—the United Kingdom, the Netherlands, Belgium, and Ireland. In addition, certain other changes in credit policy were made in the Netherlands and Switzerland.

United Kingdom. Effective March 20, the Bank of England reduced its discount rate to 6 per cent from 7; the previous rate, the highest since 1921, had been in effect since September 19. In a statement accompanying the announcement, the bank explained that, while there still was a need to strengthen further the overseas monetary position, the speculative pressures against sterling had ceased and the exceptionally high level of short-term interest rates in London was no longer justified. However, the bank added, the reduction was not to be taken to "imply any general relaxation in monetary policy". This latter view was reiterated the following day by the Chancellor of the Exchequer, who stated that the discount rate change was not intended to be "a green light for expansion". The rate had been reduced, he said, "not because we think we have settled all our international problems, which we clearly have not, but because we think that the exceptional external circumstances have passed". The Chancellor declared that the government's anti-inflationary policies remained unchanged, and would be prosecuted with the same vigor as during recent months.

The improvement in Britain's external position is reflected most vividly in British gold and dollar reserves, which at the end of March had risen to 2,770 million dollars from a 1957 low of 1,850 million at the end of September. Part of this increase was of course brought about by two special factors toward the close of 1957—the drawing of 250 million dollars on the Export-Import Bank line of credit last October and the deferment of the 176 million dollar year-end interest and principal payments due on postwar United States and Canadian loans. In each of the first three months of this year, however, the so-called "ordinary" British gold and dollar gains were larger than in any month since the spring of 1954; a contributing factor was a rise in exports to the United States in January-February to a level approaching the highest attained in any two-month period since the war. The discount rate reduction, however, must also be viewed against the background of changing domestic conditions. These changes are highlighted by a definite slackening in the investment boom, a further decline of industrial production in January, and a slight rise in unemployment to just below 2 per cent of the labor force in February.

The clearing banks' liquidity position remains comfortable, with the average liquidity ratio standing at 33.9 per cent in mid-March. At the moment, the banks seem to be having no great difficulty in complying with the official directive requiring them to hold their advances during the twelve months ending September 30, 1958 to the average of the preceding twelve months. Advances rose by 37 million pounds in the four statement weeks through March 19, as against a 53 million increase in the corresponding period of 1957; at 1,917 million pounds, outstanding advances were 59 million, or 3.0 per cent, below the year-earlier level. Following the discount rate reduction, the yield of 2½ per cent Consols, which had ranged from 5.14 to 5.18 per cent during the first half of March, declined to 5.12 on March 21 and fell to 5.09 on March 31. The average Treasury bill tender rate stood at 6.03 per cent at the second March tender, but fell to 5.56 per cent—the lowest since mid-September—after the discount rate change, and declined further to 5.52 per cent at the final tender of the month.

Netherlands. The Netherlands Bank reduced its discount rate from 4½ per cent to 4, effective March 25; this follows an earlier reduction from 5 per cent on January 24. The latest move reportedly was taken to adapt the rate to easier conditions on the Amsterdam money market, where the Treasury bill rate had fallen from the late-January level of 4⅜ per cent to 3⅛ on March 11; the bill rate continued at this level during most of the month. This easing reflects in the main a substantial gold and foreign exchange inflow, which by March 24 had boosted official reserves to 1,189 million dollars' equivalent, 154 million (or 15 per cent) above the level at the end of 1957. The resulting increase in the liquidity of the banking system had enabled the banks to substantially reduce their indebtedness to the central bank, as well as to take up considerable amounts of three, six, and twelve-month bills offered by the Dutch Treasury.

However, the latest discount rate reduction does not point to a relaxation of the bank's restraint policy. After a two-year interval, the Netherlands Bank in late February resumed open market operations, and in recent weeks has sold from its own portfolio sizable amounts of short-term Treasury paper. In addition, the bank raised commercial bank reserve requirements from 4 per cent to 5 for the four-week period through March 21, at which time it raised them further to 6 per cent. Finally, the Netherlands

Bank early last month issued two directives to the banking system, setting rather rigid ceilings on lending to the local authorities and the private sector. With respect to the latter, the bank reaffirmed its directive of last January that the amounts granted during the first half of this year should not surpass the fourth-quarter level of 1957. However, to make allowances for unforeseen fluctuations in economic activity, this level may be exceeded by 2 per cent before the central bank's penal rate—1 per cent above the prevailing discount rate—will become applicable to the institution concerned.

Belgium. The National Bank of Belgium lowered its discount rate to 4¼ per cent from 4½, effective March 27. The previous rate had been in effect since July 25, 1957, when it had been raised from 3½ per cent, largely in response to short-term capital outflows, a deteriorating trade position, and substantial commercial bank recourse to the central bank. Last month's reduction reflects in the main Belgium's improved international reserve position and a considerably easier tone on the money market, following a return flow of funds into the country and sales of Belgian Treasury bills to foreign commercial banks. The discount rate reduction therefore appears primarily as an adjustment to prevailing money market conditions both at home and abroad; however, there has also been a slackening of economic activity in Belgium in recent months.

Ireland. The Central Bank of Ireland reduced its discount rate to 5½ per cent from 6, effective March 28, thus becoming the fifth Western European central bank to decrease its rate since the beginning of 1958. The previous rate had been in effect since September 30, 1957, when it had been raised from 5 per cent.

Switzerland. The Swiss National Bank last month abolished the gentlemen's agreement with commercial and other banks, in effect since mid-1955, under which the majority of the banks had maintained balances with the central bank corresponding to specified ratios of their short-term liabilities. This step reportedly was taken in view of the slowing-down in economic expansion in Switzerland; the banks were requested, however, to remain selective in granting credit, and in particular to refuse loans for speculative purposes. At the same time, the Swiss National Bank terminated the agreement—likewise in force since 1955—under which deposits of nonresidents above a certain amount had not earned interest and had been withdrawable only at sixty days' notice.

Exchange Rates

American-account sterling continued to show strength during March. Commercial demand in New York was steady, and the underlying strength was in evidence during most of the period. The increase in Britain's gold and dollar reserves and its surplus in the European Payments Union in February were encouraging factors. During most of the month sterling sold above $2.81½; on March 20, when the Bank of England reduced its discount rate from 7 to 6 per cent, the exchange rate dipped lower but immediately recovered. Most of the foreign exchange market traders considered the Bank of England's action as taken from strength, thereby confirming the market's appraisal of sterling's underlying stability. At the month end, sterling was being traded at about the $2.81⅝ level in a relatively quiet market, with commercial interests on the buying side.

There was little activity in the forward-sterling market. Forward discounts moved within a relatively narrow range until the announcement of the Bank of England's discount rate reduction, when the forward discounts narrowed. The narrowing appears to have represented a sympathetic market movement, such as tends to follow the reduction of money rates in one financial center when there is no corresponding change in the others. As the month ended, the discounts on three and six months' sterling were 2¾ and 4¾ cents, respectively, which on a per annum basis are equivalent to 3.91 and 3.38 per cent.

Transferable sterling likewise maintained a favorable undertone, being quoted above $2.79½ for much of the month. Swiss banks reportedly were buyers on balance, as were commercial interests in New York, particularly the sugar industry. There were unconfirmed rumors during the month that transferable sterling might be combined with American-account sterling, which may have caused some additional interest in transferable sterling.

Securities sterling was quieter in March than in February and tended to ease as interest lagged, moving to $2.78¼ after having been quoted as high as 2.79^{7}/_{16}$.

The Canadian dollar was less active during March, with the rate tending irregularly higher. Reports and announcements of new borrowings by Canadian municipalities and commercial interests, totaling in the neighborhood of 200 million dollars, contributed to the rise of about ⅝ cent in the Canadian dollar to a high for the month of 1.02^{21}/_{32}$, where the quotation stood at the month end.

THE TREASURY'S DEPOSIT BALANCES AND THE BANKING SYSTEM

Financing the Federal Government's operations involves huge and irregular transfers of funds between the Treasury and the general public. While some progress has been made in recent years in reducing the extreme fluctuations in the Treasury's receipts and payments, the remaining swings still are sizable. Moreover, they are likely to continue to be large, because of the vast scale of the Government's financial operations and the unavoidable concentration of expenditures, tax collections, and debt transactions in certain months and in certain days of each month.

Almost all of the Treasury's cash disbursements are made by checks paid by the Government's fiscal agents, the Federal Reserve Banks. Treasury cash receipts, on the other hand, typically take the form of checks drawn against commercial banks. These receipts, reflecting tax collections or the proceeds of securities sales, sooner or later must be funneled through the Treasury's balances at the Federal Reserve Banks, to reappear as disbursements. Thus, the flow of Treasury funds from commercial banks into the Reserve Banks involves losses in commercial bank reserves, while Treasury disbursements from the Reserve Banks produce reserve increases. The method used to minimize the impact of these massive flows of funds into and out of the Federal Reserve Banks involves the regulation of the Treasury's balance at the Federal Reserve Banks so that it is held as nearly constant as day-to-day operations permit; consequently, temporary accumulations of Treasury deposits are left in the commercial banks. This means that the amounts shifted each day from the commercial banks need to be gauged as closely as possible to the day's disbursements from the Treasury's balances in the Federal Reserve Banks. The cycle is completed when the Treasury disbursements from the Federal Reserve Banks flow back into commercial bank accounts.

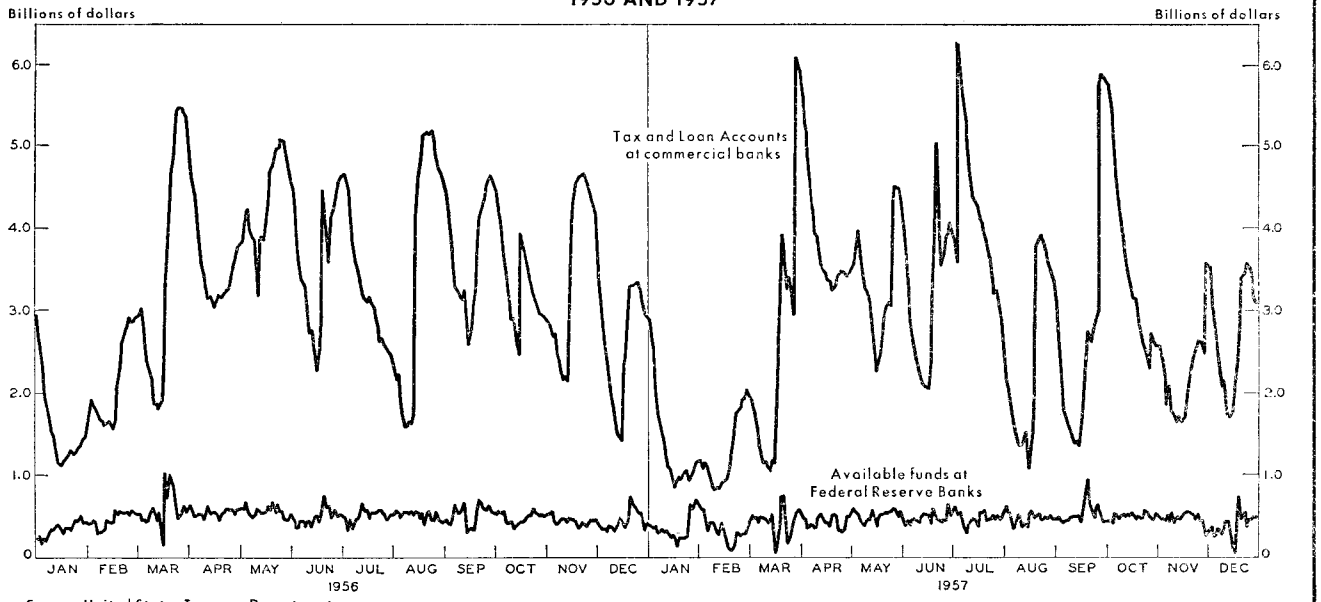
If, in contrast, all tax receipts and the proceeds of Government securities sales were deposited immediately in the Treasury's accounts with the Reserve Banks, the effect would be periodic heavy drains on bank reserves, particularly in the quarterly tax months, as funds poured in more rapidly than they were disbursed. The resultant contraction of the reserve base could have seriously disruptive effects on the money market and the functioning of the entire banking system.

An example of the actual variations in the Treasury's deposit balances during March 1957 clearly shows these potential reserve effects. The Treasury's combined cash balances in all depositaries (including the Federal Reserve Banks) fell from 2.5 billion dollars at the beginning of the month to 1.2 billion on the 15th, then rose in six days to 4.7 billion on March 21 as a result of the concentration of tax collections, and then dropped away once again, due to net disbursements, to 3.4 billion on March 27. On the following day, a new money borrowing brought the cash balance to 6.6 billion dollars, and the end-of-month balance was 6.5 billion dollars. If these large increases and decreases of the Treasury's cash balances had taken place exclusively in its balance at the Federal Reserve, that balance would first have been reduced by more than 1 billion dollars (with member bank reserves correspondingly increased), to be followed by a 3½ billion increase in the balance; it would then have been reduced again by 1 billion, and finally raised once more by about 3 billion dollars. Such swings in the Treasury's balance at the Federal Reserve would have meant that the reserve balances of the commercial banking system would have been, successively, raised by 7 per cent, cut by 19 per cent, increased by 7 per cent, and reduced by 17 per cent, all within the space of one month.

For reasons of operating convenience, but principally to prevent the irregular ebb and flow of Government funds from interfering with the smooth and effective functioning of the nation's payments mechanism, it has been necessary to develop a set of techniques especially adapted to minimizing the strains and dislocations of drawing money from the commercial banks in which it is held, into the Federal Reserve Banks, and later disbursing it. These techniques include handling the bulk of the Treasury's receipts in two steps: (1) most receipts are credited initially to the Treasury's Tax and Loan Accounts in commercial banks all over the country by transfers from their respective customers' accounts as each bank actively solicits its customers to make their payments due the Treasury through the bank; and (2) through carefully scheduled "calls", the funds in these accounts are transferred, as needed, to the Treasury's deposit balances in the Federal Reserve Banks. This procedure for mobilizing the Treasury's funds has been in the course of development since 1917, and makes it possible, even in periods of abrupt shifts in Government receipts and disbursements, to synchronize rather closely the withdrawal of reserves from the commercial banking system with their subsequent replacement through disbursements from the Treasury's Reserve Bank accounts. In other words, it enables the Treasury to keep its balance with the Federal Reserve Banks reasonably stable. The present

Chart I

TREASURY DEPOSITS IN TAX AND LOAN ACCOUNTS AND FEDERAL RESERVE BANKS
1956 AND 1957



Source: United States Treasury Department.

article examines the effective mechanism employed by the Treasury in managing its fluctuating working balances with a minimum of undesirable money market effects.[1]

Management of the Treasury's Working Balances

One objective of the "housekeeping" aspect of managing the Treasury's balances is to neutralize the impact of day-to-day operations on commercial bank reserves, and one measure of its success is the restricted amplitude of the daily variations in the Treasury's Reserve Bank balance, shown in Chart I. In recent years the acknowledged target has been a balance of 500 million dollars in the Treasury's combined balance in the twelve Federal Reserve Banks and their branches. Experience has shown that an active working balance of approximately this size is necessary to accommodate the Treasury's transactions. Aggregate balances in the commercial bank depositaries vary over a range of several billions of dollars because they absorb the wide fluctuations caused by differences in the timing of over-all receipts and expenditures.

The Treasury acts in consultation with officials at the Federal Reserve Bank of New York in scheduling "calls" against its Tax and Loan Account balances at the three classes of depositaries (A, B, and C).[2] When regular calls on Class B and C depositaries are necessary they are ordinarily announced each Monday for payment on the following Friday and Monday, and further calls are announced on Thursday for payment on the following Tuesday, Wednesday, and Thursday. Under this schedule, these depositaries are given four to seven days' notice in which to prepare for the impending withdrawal. Treasury calls for the transfer of its balances from the smaller Class A banks into the Federal Reserve Banks are ordinarily made only once a month and usually on a week's notice. This one-month interval merely reflects the Treasury's desire to avoid extensive calling for a large number of small amounts. Of course, calls could be made more frequently on these "A" banks at any time if the Treasury should wish to do so, and on occasion it does.

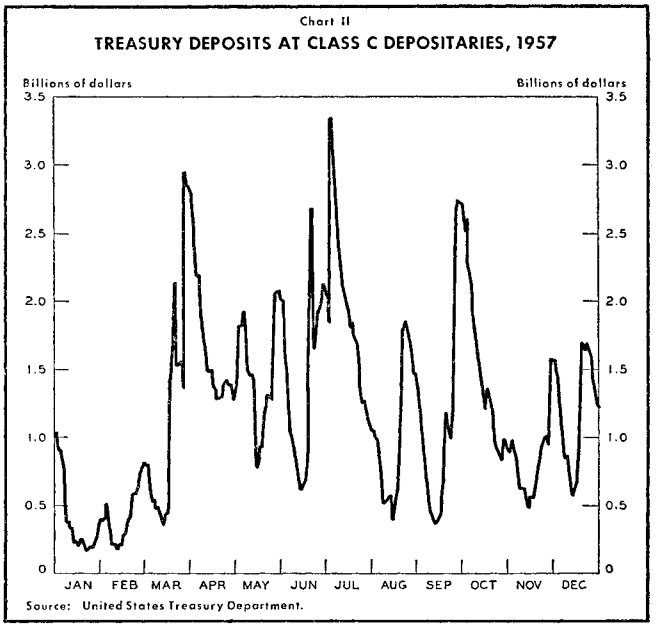
[1] For a detailed description of the Federal Government's financial operations and their effects on the money market, see *The Treasury and the Money Market,* Federal Reserve Bank of New York, Third Printing (May 1956).

[2] These depositaries are classified on the basis of size, and the classifications are periodically reviewed by the Treasury. The most recent review of the roughly 11,000 "special depositaries" placed into Class A those banks whose Treasury Tax and Loan Accounts were $150,000 or less on March 19, 1958. Class B includes all bank depositaries whose Tax and Loan Accounts exceeded $150,000 on that date, except for the special group of the largest banks, designated Class C. Banks with *total* deposits of 500 million dollars or more, as of the latest detailed report on assets and liabilities to the bank supervisory agencies (which is known as a "call report"), are Class C depositaries. As of the end of 1957, there were 9,949 banks in Class A, 1,319 banks in Class B, and 46 in Class C. The total Tax and Loan balances of banks in each of the three classes, as of December 31, 1957, were about 500 million for Class A; 1.3 billion dollars for Class B; and 1.2 billion dollars for Class C.

The total size of each call from the commercial banks must be set in accordance with estimates of how large the cash needs of the Treasury are likely to be. This requires a forecast of the daily receipts and expenditures which flow in and out of the Reserve Bank balance of the Treasury. These forecasts are based on detailed studies by both Treasury and Federal Reserve staffs of many individual categories of receipts and expenditures.

Should actual Treasury receipts and disbursements on the days between the issuance of the regular call and the actual transfer of the funds vary substantially from the forecasts projected at the time of the call, the transfers already scheduled would produce unintended effects on bank reserves by either withdrawing too much or too little from commercial banks. To compensate for such unavoidable forecasting errors, it is necessary at times for the Treasury to make "last minute" adjustments by means of a "special" call on the Class C banks or by a redeposit of amounts withdrawn earlier from these banks; deferrals or cancellations of previously scheduled withdrawals from "C" banks are also made.[3] Since these are the nation's largest banks and are, generally, banks that rely daily upon the money market to adjust for large movements of funds, they are able to accommodate themselves to withdrawals or redeposits by the Treasury on very short notice. As a rule, notice is given such banks before 11:00 a.m. (Washington time) on the day on which the change is to be effective. An indication of the impact of these swings on Class C depositaries is given in Chart II, showing the extremes of daily variation in the aggregate balances at these large banks during 1957.

The success of this flexible call procedure in avoiding unstabilizing effects on bank reserves is apparent in Chart I, which shows the daily fluctuations in the Treasury's deposits in Tax and Loan Accounts and with Federal Reserve Banks during 1956 and 1957. In contrast to the wide and irregular swings in the Tax and Loan balances, the variations in the Treasury's Reserve Bank balance were small indeed. Except for brief intervals, the latter balance held within a daily range of 400 million to 600 million dollars during the period covered by the chart. The Tax and Loan balances, on the other hand, frequently exceeded 4 billion dollars and reached peaks of 5 billion and even 6 billion dollars which were followed by rapid declines to the 2 billion or 3 billion dollar range. This variability in the Tax and Loan balances gives an indication of the magnitude of swings in total reserves that might have resulted from the daily routine of the Treasury's financial operations if



the special facilities had not been developed.[4] The small fluctuations in the Treasury's Reserve Bank balance around the 500 million dollar level, on the other hand, indicate the remaining reserve effect that it has not thus far been possible to eliminate. It should be noted that, on the rare occasions when the Treasury's balance with the Federal Reserve Banks fluctuated widely from the 500 million dollar norm, the deviations were permitted by the Treasury in the light of its own needs and in consultation with Federal Reserve officials.

In the final analysis, resort to a special mechanism, such as Tax and Loan Accounts, for easing the shift of reserves from the commercial banking system to the Treasury's Federal Reserve balance is imperative. Under fractional reserve banking arrangements, and with the Treasury receiving funds in varying amounts from depositors in virtually every bank in the country, the absence of such a system would work a kind of capricious havoc upon the reserve position of the banking system as a whole, with undesirable effects in turn on the position of individual banks. As government receipts and expenditures have grown, country by country around the world, one country after another is becoming interested in the techniques developed here.

[3] These adjustment procedures were first instituted on July 29, 1955.

[4] Swings of this magnitude in the Tax and Loan Accounts do not necessarily affect commercial bank deposits as a whole. Unless new money borrowing by the Treasury from the commercial banks is involved, they usually reflect only shifts from private to Treasury deposits in the commercial banks, without affecting total bank reserves in a major way. There is always, of course, a problem for individual banks, as some lose and others gain deposits on balance, but that is a normal occurrence in conducting banking operations.

Treasury Borrowing and Bank Reserves

The cash borrowings of the Treasury introduce a peculiarly destabilizing influence into the banking system. Whereas seasonal concentrations of tax collections may at times generate somewhat larger flows of funds than the amount involved in an "average" cash borrowing, the transfer of taxes takes a number of days, while a cash borrowing usually involves a large shift of funds on a *single* day. Moreover, cash borrowings by the Treasury may take place rather often since they are not confined to meeting annual operating deficits but are also required —and usually in far greater amounts—to replenish the Treasury's balances during seasonal lows in tax collections and in order to repay matured debt that is not refunded and Savings bonds that are turned in for cash redemption. In the calendar year 1957, for example, the Federal Government had a moderate cash *surplus,* but was nevertheless compelled to raise a total of nearly 20 billion dollars in new cash (exclusive of the roll-over of regular Treasury bills).

The six major cash flotations undertaken last year ranged in size up to 3.6 billion dollars. In each case, commercial banks were allowed to pay by credit to Treasury Tax and Loan Accounts for their own and their customers' subscriptions, and virtually all of the proceeds were received in that form. If, instead, the Treasury had required direct payment to the Federal Reserve Banks, the reserve balances that would have been withdrawn from the banking sytem on the payment dates for the six flotations would have ranged from about 4 per cent to about 19 per cent of total bank reserves. And the reserve base would have been subjected to considerable irregular buffeting thereafter, reflecting the release of the borrowed funds in the ordinary course of Treasury disbursements. If the Federal Reserve System were to attempt to cushion shocks of such size to the reserve base, the scale and frequency of its open market operations during each Treasury financing would need to rise far above current requirements for seasonal operations or for implementing changes in credit policy.[5] With the arrangement for payment through Tax and Loan Accounts, on the other hand, and with the flexibility of the fractional reserve banking system, the immediate impact on the reserve base was restricted in each case to no more than the increase in *required* reserves to cover the new Tax and Loan deposits credited to the Treasury. In Treasury borrowings in which the securities were purchased on original issue almost entirely by the banking system, the immediate increase in required reserves over recent years has generally been about one sixth of the amount borrowed.

Perhaps the most effective method of illustrating the process of credit creation in a Treasury financing is to look at a specific offering and to trace the subsequent cash flows through the Tax and Loan Accounts to the Federal Reserve Banks. The auction of 3 billion dollars of tax anticipation bills (TABs) on June 26, 1957 can be used as an example. Since all but 90 million dollars of this sale of bills was paid for with credits to Tax and Loan Accounts, approximately 2.9 billion dollars were added to the latter accounts on the July 3 payment date. This peak, somewhat reduced by that day's withdrawals (or calls), is apparent in Chart I, and partially in Chart II.

The privilege of paying for the new bills through credit to Tax and Loan deposits meant that commercial banks, buying the bills for their own portfolios, had an immediate reserve need equal to the required reserves on the new deposits—at that time 20 per cent in the case of the New York City banks—whereas they began earning interest on the full amount of their allotments immediately upon issue. However, the Treasury soon issued calls against the new Tax and Loan Account deposits and the bills (or other assets) had to be sold so that funds could be available to pay over to the Treasury's balance at the Federal Reserve Banks. Many sales of the new bills were made at a price lower than the original purchase price, but such losses generally were offset by the earnings on the new securities for the period held. In practice this meant that the commercial banks paid a price at the time of original sale higher than the Treasury could have obtained through the sale of the issue without the privilege of payment through Tax and Loan Account credit. As a result the banks were able to outbid nonbank subscribers for the issue. Yet when nonbank investors first purchased these securities from commercial banks, the price was substantially lower than that in the initial sale by the Treasury.

This illustration, which refers to the "retailing" of an auction issue, sets forth quite clearly the distribution of possible gains from a Treasury financing, to the Treasury itself, commercial banks, and other investors. In addition, the Federal Reserve System benefited by avoiding large-scale open market operations that might have confused the market. In the case of coupon-bearing issues offered on a subscription basis such gains are not so clearly ascertainable for illustrative purposes, because coupon securities are sold at a fixed price and not to the highest bidders. The same forces are nonetheless at work.

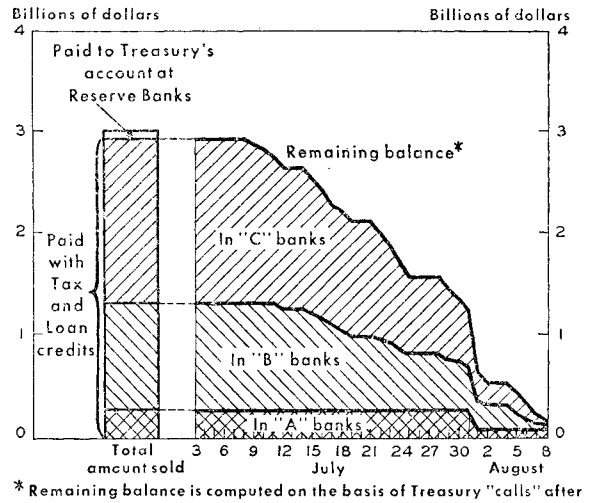
[5] For a discussion of the Federal Reserve System's "defensive" and "dynamic" responsibilities for monetary control, see R. V. Roosa, "Federal Reserve Operations in the Money and Government Securities Markets", Federal Reserve Bank of New York (July 1956), Chapter I.

Whether Treasury flotations carry a coupon, or are sold at auction, bank payments through credit in Tax and Loan Accounts provide a striking illustration of the process of multiple deposit expansion. To validate this deposit multiplication, an increase in required reserves of about one sixth of the deposit increase has usually been required. If excess reserves at the outset of a deposit expansion are insufficient, these required reserves must be supplied by the central bank. The Federal Reserve System may provide the necessary amount of reserves by open market operations, through the "discount window", or through changes in reserve requirements, the choice of action depending upon the current direction of policy, expected seasonal changes in credit conditions, and other factors.

Returning to the illustration of the sale of TABs in July 1957, it should be noted that member banks in the aggregate were in a negative free reserve position at that time; that is, total member bank borrowing from the Federal Reserve Banks exceeded excess reserves in the banking system. In order to subscribe for the new securities it was necessary for the banks to mobilize a substantial amount of additional reserves, since the required reserves needed to support the increase of nearly 3 billion dollars in Tax and Loan Account deposits amounted to approximately 500 million dollars. An examination of the monetary statistics for the period surrounding the Treasury financing indicates that this need for additional reserves was met largely through an expansion of Reserve Bank credit.

Chart III

COMPUTED EFFECT OF TREASURY "CALLS" ON TAX AND LOAN BALANCES ARISING FROM SALE OF TAX ANTICIPATION BILLS, JULY 3-AUGUST 8, 1957



* Remaining balance is computed on the basis of Treasury "calls" after the July 3 payment date on Tax and Loan Account balances at each class of banks.

Source: Computed by Federal Reserve Bank of New York.

Otherwise, the banks could not have taken up the new issue without making simultaneous reductions in their other loans and investments, with a resulting severe wrench to the availability of credit and the money market. In the week ended July 10, on a daily average basis, the System made open market purchases of about 230 million dollars and extended 120 million dollars of repurchase agreements to Government securities dealers, and member bank borrowing increased by about 150 million dollars.

The net result of the Federal Reserve actions, therefore, was to facilitate the initial placement of this issue with the commercial banks, pending its distribution to others. In essence the banks served as temporary "underwriters". The question of how long to permit the additional Federal Reserve credit to remain within the commercial banking system, once the new securities were firmly lodged in investors' portfolios, was decided in the context of the degree of monetary pressure that was being sought at that time. As it worked out, the additional reserves were soon needed to support a seasonal expansion of the money supply.

The next step in making the proceeds of the sale of TABs available for financing Treasury disbursements was to transfer the amounts that had been credited to the Tax and Loan Accounts to the Treasury's balance at the Reserve Banks. The manner in which this step was carried out is illustrated in Chart III. The gradual drawing-down of the Tax and Loan Account balances at the three classes of depositaries cannot be determined from any reported data, since the Treasury's calls apply to the total balance in the accounts and not simply to that portion of the balance representing the proceeds of a particular sale of Government securities. The data in the chart were computed by assuming that the calls subsequent to the July 3 payment date had the same proportionate effect on the proceeds of the sale of TABs as on other balances in the Tax and Loan Accounts.

Withdrawals of balances at "C" banks, where the largest share of the proceeds accumulated, proceeded at a somewhat more rapid rate than the withdrawals at "B" banks, and in each of these classes of banks the rate of withdrawals was far more rapid than in the smaller Class A banks. In fact, the first withdrawals for the latter did not occur until August 1, or twenty-nine days after the TABs had been issued. By that date the "C" banks had already transferred to the Reserve Banks almost five sixths, and the "B" banks about three fourths, of their original credits to Tax and Loan Accounts in payment for the new bills. By August 10, or thirty-eight days after the securities had been sold, the calculations in the chart indicate that less than 200 million dollars remained out of the starting balance of 2.9 billion.

There is, of course, an element of potential profitability for each depositary bank in having Tax and Loan Account balances, however these arise, provided the variations are not so great as to prevent some useful employment of the funds as an offset to the costs of handling credits to the account. Whether it is profitable for the individual bank probably depends, as much as anything, upon the enterprise it demonstrates in handling these funds while assuring the prompt remittance of funds due the Treasury. Whether profitable or not, many individual banks apparently continue to perform these services, both in handling balances and in "underwriting" and distributing Treasury issues of Government securities, because of the obligation which they feel arises from the unique role which commercial banks occupy as a part of the nation's monetary mechanism. That is, commercial banks are, in a broad sense, special instrumentalities of the United States Government in that they exercise in part the function of creating money.

Usefulness of Payment for Cash Offerings with Credits to Tax and Loan Accounts

Commercial banks acquired virtually the entire issue of TABs in the July 1957 auction because the privilege of paying through Tax and Loan Accounts made it possible for them to pay the Treasury a higher price than could other direct subscribers, with the result that the net interest cost to the Treasury was clearly much lower than would otherwise have been possible. As noted in the previous section, however, the forces of competition made it inescapable that the banks had to share any of their gains with other investors. Thus the principal net result was the profitability for the Treasury, which actually obtained a net cost for its issue well below the going market yield on comparable securities. On the day of issue, for example, a similar security maturing only a month later than the TABs (a 3½ per cent certificate maturing April 15, 1958) carried a market yield of 3.74 per cent (bid), while the TAB was sold at an average price equivalent to a 3.485 per cent yield.

The value of the added Tax and Loan Account balance to the individual bank depended upon such factors as the bank's reserve position at the time the credit was established, the probable price at which the TABs would be sold to investors, the net yield the bank was able to earn on additional (or substitute) loans or investments, and the length of time the new deposit in the Tax and Loan Account remained with the banks. All of these factors had, in some way, to be estimated by each subscribing bank before it could adequately judge the price it could afford to pay or the quantity it would like to have.

In effect, therefore, payment with credits to the Tax and Loan Accounts results in the subscribing banks serving for a time as "underwriters" and distributors for the Treasury. The banks who calculate correctly are likely to find that they are compensated for their service as "underwriters" of the new issue, while the Treasury is able to keep for itself, by borrowing below the market rate, a considerable portion of the possible earnings value of the Tax and Loan Account credits to the banks. The process also provides a good example of the more or less automatic working of competitive forces in the market for Treasury securities.

Conclusion

The ability of the nation's monetary system to accommodate immense transfers of funds within the private sector of the economy without undue strain on the money market is evidence of the system's remarkable flexibility. Transfers between the private and Government sectors raise a special problem, however, because of the unique role of the Federal Reserve Banks as the Government's banker. Payments to the Treasury's balance at the Reserve Banks involve a loss, and disbursements of that balance a gain, of commercial bank reserves, with potentially magnified effects (under our fractional reserve system) on the availability of bank credit.

Given the impossibility of maintaining an even balance each day between the Government's total receipts and disbursements, the Treasury must employ a financial mechanism which avoids large and sudden increases or decreases of the commercial banks' reserve base. The system of Tax and Loan Accounts is that type of mechanism. As reservoirs for temporary accumulations of Treasury funds, these accounts provide a necessary buffer against the disturbing effects of massive movements of funds during Treasury financings, or on the major tax payment dates. Moreover, the Tax and Loan Account mechanism facilitates monthly collection of withheld and social security taxes, thereby giving the Treasury the proceeds ahead of the quarterly tax returns. By spacing out the transfers of funds into its Reserve Bank deposits, the Treasury aims to achieve a close balance between the inflows and outflows, with the result that these deposits are held at a fairly steady level. Experience has shown that this method of managing the Treasury's balances is well adapted to the United States banking system and that it can be used successfully to avoid the grave money market disturbances that might otherwise be a mechanical by-product of large-scale Treasury operations.