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MONEY MARKET IN JUNE

Member bank reserve positions remained under steady pressure in June. The increase in business borrowing over the tax payment date on June 17 set a record for such periods, as business loans at the weekly reporting member banks rose almost 1.3 billion dollars over the two weeks ended June 19. The midmonth expansion of float supplied a large amount of reserves to the banking system, as required reserves rose and the heavy volume of tax payments passed through the banking system. Later, as float receded and the usual outflow of currency began in advance of the Independence Day holiday, the further intensification of pressures was moderated by other factors, including repurchase agreements and outright purchases by the Federal Reserve.

Federal funds stayed at the 3 per cent ceiling through the month, and virtually all interest rates reached new postwar highs. Dealers in commercial paper and in bankers' acceptances announced rate increases during the month, and Treasury bill yields generally maintained the rise to 3¼ per cent that had occurred over the last half of May. At the same time, capital market yields continued the orderly upward adjustment which had been taking place during most of the second quarter. New issue rates on long-term corporate obligations moved upward by about ½ to 1 per cent over the mid-May rates, with the month-end reoffered rates ranging from about 4¾ per cent on Aaa issues to 6 per cent on A-rated offerings. By the end of June, the Treasury 3's of 1995 were bid at $87^{26}/_{32}$, the equivalent of a 3.59 per cent yield, 19 basis-points above the yield in mid-May.

The Treasury announced on June 20 that it would offer 3 billion dollars of 264-day tax anticipation bills for cash in a special auction on June 26, the bills to be dated July 3, 1957 and to mature March 24, 1958. They will be accepted at face value in payment of income and profits taxes due on March 15, 1958. The new bills were awarded at an average issuing rate of 3.485 per cent.

MEMBER BANK RESERVE POSITIONS

Movements in the various factors affecting member bank reserves offset each other to a large extent during June. In the first part of the month, a heavier-than-usual increase in currency in circulation drained a large volume of reserves from the banking system, but these were more than replaced by funds stemming from a decline in the Treasury's balances at the Reserve Banks and by the reserve effects flowing from the sale of 300 million dollars of gold by the International Monetary Fund to the Treasury on May 28. Similarly, while average required reserves increased by 217 million dollars in the week ended June 19, in large part as the result of heavy business loan demands over the tax period, the midmonth rise in float added a somewhat larger amount to reserve balances during the same week. Toward the end of the final statement week of the month float declined, after having expanded unexpectedly earlier in the week, and currency started to flow into circulation in the usual

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pre-Independence Day pattern. However, over the week as a whole, Treasury operations and System purchases of short-term Treasury obligations, including both outright and under repurchase agreements, moderated the build-up of reserve pressures.

Although fluctuations in aggregate reserve positions were moderate for the member banks as a group, there was a pronounced shift in the distribution of reserve balances during the period. The country banks were under a greater-than-usual degree of pressure late in May and early in June, with the central money market institutions relatively comfortable. The reserve positions of the New York central reserve city banks came under increased pressure through the first three weeks of June, however, in part as the result of heavy borrowing over the tax period, while at the same time the country banks acquired reserves. In the aggregate, member bank borrowings from the Reserve Banks averaged close to 1 billion dollars in each of the statement weeks ended in June, somewhat higher than in May but about the same as in April, with the New York central reserve city banks responsible for an increasing proportion of these borrowings during the weeks ended June 12 and June 19.

Table I

Changes in Factors Tending to Increase or Decrease Member Bank Reserves, June 1957

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

Factor	Daily averages—week ended June 5	June 12	June 19	June 26	Net changes
Operating transactions					
Treasury operations*	+ 80	+ 26	− 46	+ 47	+ 107
Federal Reserve float	− 25	− 18	+ 448	− 64	+ 341
Currency in circulation	− 176	− 67	− 1	+ 55	− 189
Gold and foreign account	+ 215	− 21	− 10	− 17	+ 167
Other deposits, etc.	− 43	+ 50	− 66	+ 70	+ 11
Total	+ 51	− 31	+ 326	+ 89	+ 435
Direct Federal Reserve credit transactions					
Government securities:					
Direct market purchases or sales	+ 49	− 24	− 46	+ 8	− 13
Held under repurchase agreements	+ 131	− 114	+ 4	+ 13	+ 34
Loans, discounts, and advances:					
Member bank borrowings	+ 5	+ 163	+ 38	− 86	+ 120
Other	− 7	− 5	− 8	—	− 20
Bankers' acceptances:					
Bought outright	+ 1	− 1	—	—	—
Under repurchase agreements	—	—	+ 1	− 1	—
Total	+ 179	+ 19	− 12	− 66	+ 120
***Total** reserves*	+ 230	− 12	+ 314	+ 23	+ 555
***Effect** of change in required reserves*†	− 114	+ 65	− 217	− 55	− 321
***Excess** reserves*†	+ 116	+ 53	+ 97	− 32	+ 234
Daily average level of member bank:					
Borrowings from Reserve Banks	888	1,051	1,089	1,003	1,008‡
Excess reserves†	442	495	592	560	522‡

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 June 26.

System holdings of short-term Government securities declined by 103 million dollars between May 29 and June 26, of which 40 million represented a reduction in outright holdings of Treasury bills and 63 million was accounted for by a decline in short-term Treasury obligations held under repurchase agreements. System outright holdings were increased by 40 million dollars in the last statement week of the month, but these fell short of sales and redemptions totaling 80 million dollars during the three prior weeks. Repurchase agreements were extended from time to time during the month to alleviate incipient strains on the money market, but for the most part they were moderate in amount and of short maturity. By the end of the period the outstanding balance in that account had been reduced to zero.

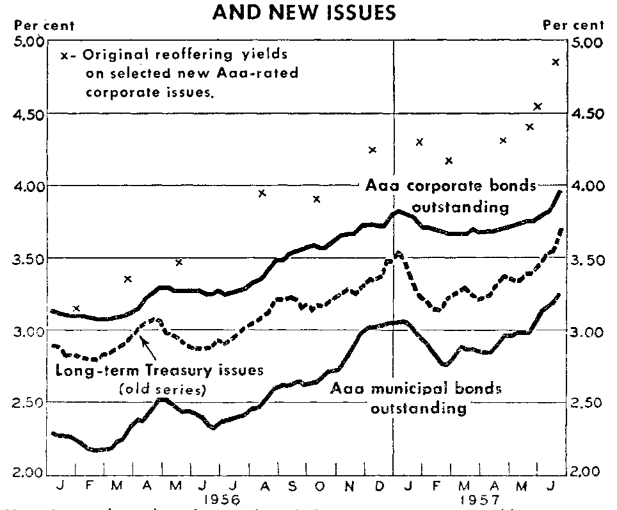
Government Securities Market

The prices of Treasury notes and bonds continued to decline during the month, with many longer issues losing about 2 points between May 31 and June 28. Trading was extremely light over most of the month; little outright selling pressure was evident and, although there was a marked lack of general buying interest despite the higher yields available, sufficient demand was available to move small blocks of bonds as they appeared. The price erosion was in large part a direct reaction to the sharp upward yield adjustments taking place in the corporate bond market, and to the related opinion that the current strength of business conditions and sentiment would continue to call for credit policies oriented toward the restraint of inflationary pressures.

The yield adjustment accelerated during the third week of the period, but a tendency toward leveling-off appeared near the month's end, suggesting the possibility that rates might be reaching a new plateau. Over the month as a whole, the prices of most Treasury bonds and notes maturing through 1962 fell by $\frac{2}{32}$ to $\frac{28}{32}$ of a point. Issues due after 1962 through 1972 fell by $1\frac{6}{32}$ points to $2\frac{8}{32}$ points, and the 3¼'s of 1978-83 and 3's of 1995 fell by 2 points and $2\frac{30}{32}$ points, respectively. On a yield basis, issues throughout the list of Government securities were generally up by about ⅛ to ¼ of 1 per cent.

Yields on Treasury bills also increased until the last week of the month, but at a slower and more irregular pace than longer term Government obligations. Bill yields rose slightly at the start of the month, declined somewhat for a brief period, increased sharply around midmonth, and then fell back to earlier levels once more. Thus the longest outstanding regular Treasury bill rose from 3.31

MARKET YIELDS OF SELECTED OUTSTANDING SECURITIES AND NEW ISSUES



Note: Latest date plotted is week ended June 22. Data are weekly averages for the corporate and Treasury series, Wednesday close for municipal series. The yields on new corporate issues (x) are original reoffering yields of selected individual flotations plotted as of the week in which initially marketed.

Sources: Board of Governors of the Federal Reserve System and Moody's Investors Service.

per cent (bid) on May 31 to 3.34 per cent on June 5, fell back to 3.24 per cent by June 11, and then climbed to 3.38 per cent by June 20. Over the remainder of the month, however, it remained close to 3.25 per cent as bank liquidation diminished and nonbank demand expanded moderately, in part due to the reinvestment demand arising from the holders of tax anticipation bills and certificates which matured June 24. The sharp mid-month rise was primarily attributable to substantial commercial bank selling, basically the cumulative result of a prolonged period of monetary restraint combined with the credit demands of the tax period. The average issuing rate in the regular weekly bill auction rose to 3.374 per cent on June 3 (the highest since the week of March 6, 1933), fell back to 3.256 per cent one week later, and then surged to a new post-1933 high of 3.404 per cent on June 17. In the last regular auction of the month, held on June 24 for bills dated June 27, the average issuing rate dipped to 3.231 per cent as demand arose from the reinvestment of proceeds of the maturing tax anticipation obligations.

On June 26, as mentioned above, the Treasury auctioned 3 billion dollars of new 264-day tax anticipation bills dated July 3. Commercial banks were permitted to pay for their own and their customers' allotments by credit to Treasury Tax and Loan Accounts, the value of which was partly reflected in the average issuing rate of 3.485 per cent. By the end of the month the new tax anticipation bills were quoted at 3.82 per cent (bid) in "when-issued" trading.

Other Securities Markets

The corporate and municipal bond markets were again featured by unusually sharp rate increases during the month as heavy demands for capital pressed hard upon the supply of funds available for investment purposes. Underwriters priced new offerings to yield successively higher rates to investors in order to encourage buying interest, and dealers similarly cut the prices of outstanding issues in an attempt to move their inventories. Once the rise in rates had gathered momentum, investors held back in the expectation of still more favorable terms, but as the end of the month approached investor response strengthened. Thus Moody's index of seasoned Aaa-rated corporate bonds rose from 3.80 per cent on May 31 to 3.97 per cent by the end of June, and the long-term Aaa-rated municipal bond index rose from 3.10 per cent to 3.23 per cent; in both cases the levels at the end of June represented new postwar highs.

The yield increases on seasoned corporate bonds reflected the sharp upward yield adjustment in the new corporate issue market. In the latter part of May, for example, a large flotation of Aaa-rated public utility bonds was priced to yield investors 4.40 per cent; although this issue moved slowly—the underwriting syndicate disbanded in early June and the unsold portion quickly dropped in price to yield about 4.55 per cent—the 4.40 per cent had been the highest original reoffering yield on such an issue in the postwar years. However, the lack of demand soon forced progressively more attractive terms: new long-term Aaa-rated corporate bonds were successively priced to yield investors 4.53 per cent, 4.80 per cent, and by mid-June 4.85 per cent—plus, as an added feature in the last case, a five-year noncallable provision designed to assure investors that they would earn this rate for at least that long. At 4.85 per cent plus the five-year provision, investor response was favorable and the securities quickly went to a premium.

The volume of public offerings of corporate bonds for new capital purposes is estimated to have been about 705 million dollars in June, 280 million dollars above the previous month and 440 million higher than in June of 1956. During the first half of this year such offerings are estimated at 3.1 billion dollars, compared with 1.9 billion during the first six months of 1956. (During the second half of 1956 approximately 2.1 billion dollars of corporate bonds were publicly offered for new capital purposes, of which 560 million dollars was marketed in the month of July. At the end of June the supply expected during the coming month was estimated at about 305 million.)

On the other hand, the volume of new public municipal offerings during the month was only about 330 million dollars, compared with 430 million in May. (Thus far in 1957 the volume is estimated to have been about 3.0 billion dollars, 360 million above the amount in the first six months of 1956.) The relatively light volume of new offerings during the month aided dealers in reducing their advertised inventories moderately over the period, but this was generally accomplished only by means of substantial price concessions. Part of the reason for the light volume of municipals was the postponement or cancellation, because of unfavorable market conditions, of fifteen offerings (totaling 56 million dollars) previously announced for June. Several corporate offerings, aggregating 47 million dollars, were similarly withheld.

In the wake of higher yields on other short-term securities, commercial paper and bankers' acceptance dealers also announced rate increases during the month. Commercial paper rates were raised by ⅛ of 1 per cent on June 5 and again on June 18; these were the first changes in commercial paper rates since last September, and they brought the rate on prime four-to-six months' paper to 3⅞ per cent. Dealers in bankers' acceptances announced a rate increase of ⅛ of 1 per cent on June 6, bringing quotations on 90-day acceptances to 3½ per cent bid and 3⅜ per cent offered. In addition, rates on directly placed finance company paper were also advanced ⅛ of 1 per cent on June 14 and again by June 27, the first changes since October 1956; thus at the end of June the rate on the 30 to 89-day paper of these companies was 3½ per cent, compared with 3¼ per cent a month earlier.

Member Bank Credit

Total loans and investments at the weekly reporting member banks increased 2,044 million dollars during the four weeks ended June 19. Loans rose 1,508 million dollars, primarily owing to a record expansion of business loans over the two tax-period weeks, June 12 and 19, and investments increased 536 million, mainly in the form of Treasury bills acquired in the special auction for tax anticipation bills held on May 22.

The loan increase included a 277 million dollar rise in security loans and a net increase of 1,133 million dollars in business loans. Among the borrower categories accounting for the bulk of the rise in business loans were sales finance companies, public utilities and transportation firms, and metals and metal products concerns. The sales finance companies were forced to borrow heavily from the banks in the week ended June 19 in order to pay off their finance paper which came due near the tax payment date.

The sharp increase in business loans at the reporting banks over the two weeks ended June 19 was evidently attributable in large part to business borrowing to meet tax payments due June 17; the 1,289 million dollar expansion in these two weeks exceeded the former record 1,263 million dollar rise at the reporting banks which had occurred in the two-week tax period in March 1956. (In June of 1956 tax-period borrowing at the reporting banks amounted to 955 million dollars, while in March of this year it was 1,142 million.) For the first twenty-five statement weeks in 1957, however, the rise in business loans amounts to only 1.2 billion dollars as compared with a rise of 2.3 billion in the similar weeks of 1956.

The rise of 536 million dollars in total investment holdings during the four weeks ended June 19 was mainly due

Table II
Weekly Changes in Principal Assets and Liabilities of the Weekly Reporting Member Banks
(In millions of dollars)

Item	Statement weeks ended				Change from Dec. 26, 1956 to June 19, 1957
	May 29	June 5	June 12	June 19	
Assets					
Loans and investments:					
Loans:					
Commercial and industrial loans	− 245	+ 89	+ 344	+ 945	+ 1,191
Agricultural loans	− 6	+ 4	+ 5	− 1	− 41
Security loans	+ 59	+ 9	+ 178	+ 31	− 277
Real estate loans	− 3	− 12	+ 18	+ 8	− 177
All other loans (largely consumer)	+ 23	− 10	+ 33	+ 38	+ 138
Total loans adjusted*	− 170	+ 78	+ 579	+ 1,021	+ 657
Investments:					
U. S. Government securities:					
Treasury bills	+ 815	− 27	− 53	− 44	− 395
Other	− 51	− 61	− 47	− 13	− 626
Total	+ 764	− 88	− 100	− 57	− 1,021
Other securities	+ 22	− 22	+ 65	− 48	+ 109
Total investments	+ 786	− 110	− 35	− 105	− 912
Total loans and investments adjusted*	+ 616	− 32	+ 544	+ 916	− 255
Loans to banks	− 101	+ 197	− 531	+ 162	− 225
Loans adjusted* and "other" securities	− 148	+ 56	+ 644	+ 973	+ 766
Liabilities					
Demand deposits adjusted	− 2	+ 171	+ 1,128	− 172	− 1,938
Time deposits except Government	+ 150	+ 50	+ 29	− 94	+ 1,405
U. S. Government deposits	+ 878	− 846	− 856	+ 1,288	+ 418
Interbank demand deposits:					
Domestic	− 342	+ 767	+ 157	− 3	− 999
Foreign	− 90	− 12	+ 1	+ 68	− 94

* 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.

to an 815 million dollar increase in Treasury bill holdings in the week ended May 29, the result of the acquisition during that week of the special Treasury tax anticipation bills that had been auctioned on May 22 and issued May 27. Since the banks were allowed to pay for these bills by crediting Treasury Tax and Loan Accounts, a large fraction of the 1.5 billion dollars of the bills auctioned on May 22 was initially acquired by commercial banks. In subsequent weeks, these holdings were drawn down. Thus far this year the reporting banks have lowered their investment portfolios by 912 million dollars, compared with a decrease of 3.4 billion in the first twenty-five weeks of 1956.

Since total investments at the weekly reporting banks have declined 912 million dollars thus far in 1957, while total loans have risen 657 million, loans and investments taken together have fallen 255 million dollars. In the comparable period last year, investments had declined 3.4 billion while loans rose 3.0 billion, so that the two taken together fell 400 million—145 million dollars more than the decline this year. In both periods the drop in investment holdings was primarily in the form of Government securities, but last year a much larger volume of such securities was sold by the reporting banks. The difference in the loan expansion is primarily attributable to the 1.1 billion dollar shortfall in business loans in 1957, compared with 1956. In addition, real estate loans have declined 177 million dollars thus far in 1957, while they increased 435 million in the same weeks last year, and "all other loans" (mainly consumer) have risen only 138 million dollars thus far this year as contrasted with a 687 million dollar increase in the similar weeks last year.

INTERNATIONAL MONETARY DEVELOPMENTS

Monetary Trends and Policies

United Kingdom. There was a further sizable increase of 78 million pounds in bank advances during the three months to mid-May, according to the British Bankers' Association; while partly seasonal, the increase was substantially greater than a year ago. Bank lending rose more than 7 per cent in the six months to mid-May, but, largely owing to an offsetting reduction in the banks' Treasury bill holdings, there has been no expansion of total bank credit; actually, the money supply has declined slightly. However, the latest analysis of advances reveals that, while the upward trend continued in bank borrowing by the engineering and other "essential" industries, the bulk of the increase during February-May was accounted for by the food, drink, and tobacco industries, retail trade, and the financial sector; the only major decrease was one of 11 million pounds in lending to the public utilities (other than transport). The sharp increase in bank borrowing by the hire-purchase finance companies, which reached a total of 34 million pounds, compared with a low of 23 million last November, largely reflects the recovery in automobile sales that followed the relaxation of consumer credit restrictions last December; however, at the end of May, the minimum downpayment required on cars, motorcycles, and light trucks was increased to 33⅓ per cent from 20.

British interest rates last month remained at or near the high levels reached in May. The average Treasury bill tender rate slipped slightly during the month and stood at 3.85 per cent on June 28. The weakness in the gilt-edged market continued, with the yield of 2½ per cent Consols exceeding the record level established during the height of the Suez crisis and reaching a new postwar peak of 5 per cent on June 26.

Canada. The upward trend of long-term interest rates extended into June, with Canadian Government bond yields again reaching new highs. The average Treasury bill tender rate edged upward during the month and on June 27 stood at 3.81 per cent, equal to the all-time high attained last February. The moderate seasonal expansion of the chartered banks' business loans continued; however, during the three months to mid-June business loans rose only about 5 per cent during 1957, compared with a 10 per cent increase a year ago. The money supply (excluding personal savings deposits), which has been expanding seasonally since March, rose toward the end of June above the 1956 level for the first time since early this year. There was a further small reduction in the banks' holdings of government bonds, which in mid-June were equivalent to 16 per cent of their deposits compared with 18 per cent a year previous. On June 26 the banks' cash and liquid assets ratios stood at 8.4 and 16.7 per cent, respectively, comfortably above the required minima of 8 and 15 per cent; there was, however, some commercial bank borrowing at the Bank of Canada during the final week of the month.

Latin America. Two South American central banks have recently taken measures to tighten the reserve position of the banking systems as part of their efforts to restrain inflationary pressures. In *Bolivia,* commercial bank reserve requirements were redefined more restrictively to consist exclusively of deposits in the monetary department of the central bank, and new minimum requirements were set for each bank equal to its reserves in mid-May but not less than 30 per cent of deposits. In addition, a new supplementary reserve requirement of 75 per cent against any net increase in deposits above the March 18-30, 1957 average was established. In *Colombia,* the central bank has also tightened its credit policy by: (1) raising reserve requirements for sight deposits to 18 per cent from 14; (2) requiring the banks to maintain a supplementary reserve equal to 80 per cent of any increase in deposits above the June 18 level, or the average level of deposits during the preceding thirty days, whichever the individual banks prefer; and (3) directing the commercial banks to transfer to the central bank all peso equivalents of import payments in arrears from the period June 15 to September 1, 1956, thus reducing the banks' reserves accordingly.

Exchange Rates

American-account sterling weakened somewhat during the early part of June in the New York foreign exchange market, falling to $\$2.78\frac{25}{32}$ on June 7 despite fairly substantial offerings of dollars in London. The rate appeared to be unaffected by the announcements that during the previous month Britain's gold and dollar reserves had risen 25 million dollars and that a deficit of nearly 20 million had been recorded with the European Payments Union. Increased commercial demand then began to strengthen the rate which, following the announcement of a lower trade deficit in May, rose as high as $\$2.79\frac{13}{32}$ on June 18. Subsequently, with increased offerings of sterling the rate eased to $\$2.79\frac{1}{16}$ on June 25. After recovering to $\$2.79\frac{9}{32}$ on June 26, the rate again moved lower, slipping to $\$2.79\frac{3}{32}$ on June 28. In the forward market, discounts on three and six months' sterling moved within the narrow ranges of $\frac{13}{16}$-$\frac{15}{16}$ and $1\frac{21}{32}$-$1\frac{27}{32}$ cents, respectively, with oil and metal interests active buyers on occasion.

Transferable-sterling quotations fluctuated between $2.7715 and $2.7785, with the higher quotations reflecting in part demand from the Far East early in June, some commercial buying at midmonth, and interest by Continental European countries at the month end. The quotation on June 28 was $2.7775. Securities sterling moved from $2.56½ to $2.60½ in the first part of the month, as some interest developed in British oil stock investments. The rate then eased before rising sharply to as high as $2.63⅜ on June 26. At the month end, securities sterling was quoted at $2.62¼.

The Canadian dollar continued to display pronounced strength in a relatively active market during June. Except for a brief weakening in the rate on June 11 and 12 following the Canadian elections, quotations were generally higher. Demand for Canadian dollars by British and American investors and further offerings of new issues of Canadian securities were again major factors bringing higher quotations which, on June 26, reached $\$1.05\frac{3}{64}$, the highest rate since November 1933. On June 28, the Canadian dollar stood at $\$1.04\frac{59}{64}$.

EARNINGS AND EXPENSES OF COMMERCIAL BANK TRUST DEPARTMENTS IN NEW YORK AND NEW JERSEY IN 1956[1]

Profits of commercial bank trust departments in New York and New Jersey continued to increase in 1956, although not so rapidly as they had in 1955, but a larger proportion of banks showed losses on trust operations than had done so a year earlier. According to the fourth annual survey of trust department earnings and expenses recently completed by the Federal Reserve Bank of New York, net profits after income taxes and allowed credits for deposits rose by about 2.3 million dollars, or 21 per cent, during 1956.[2] At New York City banks, where the great bulk of the dollar volume of trust accounts is centered, the increase amounted to 2.1 million dollars, or 22 per cent, and at banks outside the City it amounted to a little over $200,000, or 13 per cent. These increases reflected a rise both in the volume of trust business and in the legal scale of allowable commissions and fees for banks in New York State.

The 1956 trust department survey included reports from 102 banks in New York, New Jersey, and Fairfield

[1] An analysis of trust department earnings and expenses with a number of additional tables may be obtained free of charge by writing to the Bank Examinations Department, Federal Reserve Bank of New York, New York 45, N. Y.

[2] Based on trust department net earnings for 68 banks that reported in both 1955 and 1956.

County, Connecticut,[3] all of which had annual commissions and fees in excess of $10,000. Aggregate commissions and fees earned by these banks were 92 million dollars in 1956, nearly 80 per cent of the total amount of commissions and fees received by all banks in the area surveyed. The survey banks serviced in 1956 about 85,000 personal trust accounts and about 10,000 corporate trust accounts. Sixty-eight of the banks reported in both 1956 and 1955, and their consolidated returns provided the basis of this analysis.

New York City Banks

The accompanying table shows a comparison of 1955 and 1956 trust department earnings for seven banks in New York City and 61 banks outside the City. Commissions and fees earned by the New York City banks rose from 59 million dollars in 1955 to nearly 69 million dollars in 1956—an increase of nearly 17 per cent. Over 40 per cent of the rise in commissions and fees came from expanded corporate trust and agency business, but in relative terms income from estates expanded the most, recording a gain of nearly 27 per cent. Expenses at the New York City banks increased about 12 per cent in 1956, a smaller amount than in 1955. Net income from the trust operations of these banks, after taxes but before allowed credits for deposits,[4] rose 53 per cent above 1955 levels. However, while allowed credits for deposits rose substantially in the case of estates and pension and profit-sharing trusts, credits allowed both for personal and for corporate trusts and agencies either declined or increased only slightly, and allowed credits for all trust business rose only 6.3 per cent above 1955. Consequently, net earnings after adjustment for deposit credits were up 22 per cent, compared with a rise of 41 per cent the year before.

A factor contributing to increased earnings in 1956 was a rise in fiduciary commission rates charged by banks in New York. The New York State legislature authorized an increase in fiduciary commissions effective July 1, 1956. Under the new statute the commissions of executors, administrators, testamentary trustees, guardians, and committees for incompetents were increased. Although the full impact of the rate changes will not be felt until 1957, no doubt the higher rates enabled some banks to expand their 1956 earnings.

Five of the seven New York City banks reported a limited breakdown of expenses by type of trust account. Expenses other than salaries showed only minor changes in 1956. However, salaries and wages (including related

[3] Banks in Fairfield County, Connecticut, were grouped with New York banks. Two mutual savings banks in New Jersey were included with commercial banks in that State.

[4] Allowed credits for deposits represent income credited to the trust department as earnings on uninvested trust balances deposited with the commercial banking department.

Earnings and Expenses of Commercial Bank Trust Departments in New Jersey and New York State, 1955-56*
(Dollar amounts in thousands)

Item	Banks outside New York City with commissions and fees under $100,000 (33 banks)			Banks outside New York City with commissions and fees of $100,000 and over (28 banks)			All banks outside New York City (61 banks)			Seven New York City banks		
	1955	1956	Per cent change	1955	1956	Per cent change	1955	1956	Per cent change	1955	1956	Per cent change
Commissions and fees from:												
Estates	398.6	456.4	+ 14.5	1,921.2	2,264.9	+ 17.9	2,319.8	2,721.3	+ 17.3	3,725.2	4,728.4	+ 26.9
Pension and profit-sharing trusts	32.1	34.6	+ 7.8	202.8	243.2	+ 19.9	234.9	277.8	+ 18.3	2,999.4	3,499.7	+ 16.7
Personal trusts	485.7	502.3	+ 3.4	3,103.7	3,244.6	+ 4.5	3,589.4	3,746.9	+ 4.4	12,657.7	14,784.4	+ 16.8
Personal agencies	225.3	248.5	+ 10.3	1,639.9	1,868.0	+ 13.9	1,865.2	2,116.5	+ 13.5	15,187.0	17,165.5	+ 13.0
Corporate trusts and agencies	50.1	46.5	− 7.2	688.7	622.0	− 9.7	738.8	668.5	− 9.5	24,273.7	28,604.2	+ 17.8
Total income	1,191.8	1,288.3	+ 8.1	7,556.3	8,242.7	+ 9.1	8,748.1	9,531.0	+ 8.9	58,843.0	68,782.2	+ 16.9
Total expense	1,381.9	1,457.9	+ 5.5	6,745.8	7,318.0	+ 8.5	8,127.7	8,775.9	+ 8.0	51,776.7	57,797.7	+ 11.6
Net earnings before income taxes	− 190.1	− 169.6	+ 10.8	810.5	924.7	+ 14.1	620.4	755.1	+ 21.7	7,066.3	10,984.5	+ 55.4
Income tax charges (−) or credits (+)	+ 110.6	+ 73.0	− 34.0	− 319.6	− 372.4	− 16.5	− 209.0	− 299.4	− 43.3	−3,804.0	−5,995.6	− 57.6
Trust department net earnings	− 79.5	− 96.6	− 21.5	490.9	552.3	+ 12.5	411.4	455.7	+ 10.8	3,262.3	4,988.9	+ 52.9
Allowed credit for deposits	237.2	243.5	+ 2.7	939.3	1,091.6	+ 16.2	1,176.5	1,335.1	+ 13.5	6,328.4	6,728.6	+ 6.3
Trust department net earnings (adjusted for allowed credit for deposits)	157.7	146.9	− 6.8	1,430.2	1,643.9	+ 14.9	1,587.9	1,790.8	+ 12.8	9,590.7	11,717.5	+ 22.2

Note: The algebraic signs indicate the effect of the item on final net profits, except in the case of "total expense".
* This table includes data for only those 68 banks which reported in both the 1955 and 1956 surveys.

expenses), which accounted for the largest portion of expenses, continued to rise in 1956, largely because rates of pay increased. Nevertheless, they were only 65 per cent of commissions and fees in 1956, compared with 67 per cent in 1955. Salary expense allocated by these five City banks to pension and profit-sharing trusts reached a level of over 86 per cent of gross income from these accounts, the highest percentage for any type of trust business. However, substantial declines occurred in salary and wage costs allocated to personal trust accounts. This drop, together with a relative decline in overhead expenses at these five City banks, accounted in large part for the decline in total expenses from 90 per cent of commissions and fees in 1955 to only 86 per cent in 1956.

Banks Outside New York City

Commissions and fees of the 61 banks outside New York City which are included in the table totaled 9.5 million dollars in 1956, an increase of 9 per cent over the previous year, and expenses rose 8 per cent to 8.8 million dollars. Net income (after taxes but before allowed credits for deposits) from trust operations of these banks rose nearly 11 per cent; after adjusting for deposit credits, net profits were up nearly 13 per cent above 1955 levels. A rise in commissions and fees from estates, amounting to over 17 per cent or more than $400,000, was the most important factor contributing to their increased gross earnings. Income from pension and profit-sharing trusts expanded more rapidly than income from any other type of trust business, rising over 18 per cent in 1956. In dollar terms, however, these accounts still provide the smallest share of trust income.

Although all banks outside New York City taken together reported net profits on their trust department business (after taxes but before allowed credits for deposits), the banks with trust incomes of over $100,000 fared better than the smaller banks. The 33 banks outside New York City with gross trust department incomes of less than $100,000 continued, in the aggregate, to sustain a net loss on their trust business before income taxes and allowed credits for deposits, but their net losses were reduced nearly 11 per cent from those recorded in 1955. Nevertheless, these banks recorded a drop of 6.8 per cent in 1956 adjusted net earnings, compared with 1955, because income tax credits declined more than the cut in net losses and allowed credits for deposits rose less than 3 per cent.

In contrast, the banks outside New York City with gross trust incomes over $100,000 showed a rise in net earnings before taxes and allowed credits of 14 per cent over 1955. In addition, this group of banks boosted allowed credits for deposits 16 per cent, and they recorded nearly a 15 per cent gain over 1955 in adjusted net earnings.

Operating Losses

In spite of the continued rise in trust earnings for all banks in the aggregate, a larger proportion of the banks surveyed reported net losses on trust operations in 1956 than in 1955. Over 53 per cent of banks outside New York City reported net losses before allowance for deposit credit in 1956, compared with 44 per cent in 1955 and 43 per cent in 1954. Moreover, after allowed credits for deposits, 24 per cent of the banks outside New York City still reported losses, a considerable increase over the 14 per cent reporting losses on this basis in 1955. Four of the New York City banks included in the survey reported net losses in 1956 before making allowance for credits on deposits, but only one after allowance for this credit.

THE POSTWAR DEVELOPMENT OF MONEY MARKETS ABROAD

The increasing reliance on monetary policy in much of the world today has emphasized the importance of fostering short-term money markets. Central banks have long endeavored, of course, to develop active local money markets, and at present numerous foreign countries, with more developed as well as with less developed financial systems, are taking steps in this direction. The rapid broadening of the Canadian money market has been the most notable example of these efforts in the last few years. Other foreign markets—with the exception of London—remain, it is true, relatively narrow, but a number of them have gained much in scope and flexibility since the war.

The Functions of a Money Market

The developing of money markets may seem a rather technical matter that mainly concerns the commercial banks. In reality, however, it is of much wider importance, even when the money market is defined in a narrow sense, as in this article. In this present narrow sense, the term may be defined as the center for organized dealings in monetary assets that provides the liquidity needed by lenders and at the same time satisfies the short-term requirements of borrowers.[1]

A well-functioning market of this kind has important advantages not only for a country's commercial banks, but also for other financial institutions, businesses, and individuals, and for the economy as a whole. For the commercial banks, such a market makes possible a rapid and relatively inexpensive evening-out of their reserve positions, by helping to match off among the banks the excesses and deficiencies of reserves that result from shifts of deposits from one bank to another in the normal course of trade. It also enables the banks to employ a part of their reserves in income-earning assets, since it assures the liquidity of such secondary reserves. As a result, the banks are able to operate on a narrower margin of nonearning assets. A developed money market, moreover, provides a convenient outlet for the short-term investment of any surplus funds of corporations and other nonbank investors over and above the cash balances maintained on deposit in the banks. Such a market also helps to satisfy the needs of short-term borrowers, and tends to facilitate short-term borrowing by business firms and others in the form of marketable instruments such as bankers' acceptances, commercial paper, finance company paper, or loans collateralized by stock exchange securities.

A flourishing and flexible money market not only leads to a more economical allocation and more intensive use of short-term capital, but by supplying temporary financing for the holding of securities it also facilitates the shiftability of liquid assets that is essential if there are to be smooth functioning markets for securities in general. By providing diversified, competitive facilities that reach into all other markets for credit and capital, an efficient money market helps to assure the channeling of funds into the uses most needed for the expansion of the economy, and facilitates the most efficient utilization of domestic savings.

A developed money market also makes a major contribution to the effectiveness of monetary policy. It provides a sensitive barometer of monetary conditions generally, and is a natural point of contact between the central bank and the financial sectors of the economy. A market with a broad distribution of short-term government securities, for example, is able to absorb transactions of reasonable size without undue price fluctuations, and thus makes an effective open market policy possible. Such a market also enlarges the scope for flexibility in the use of open market operations and helps to spread the intended effects of such operations throughout the economy. The widening of the market also may increase the influence of open market operations in another way: the facilities for ready shiftability of secondary reserve assets make it possible for the commercial banks to operate with smaller excess reserves and with relatively stable cash ratios, rather than with widely fluctuating excess reserves; and the maintenance of stable cash ratios in turn provides an effective base for open market operations. As a result, the changes in bank reserves effected through such operations can substantially and promptly affect the availability of credit from the commercial banks.[2]

Since an efficient money market for the most part operates with a relatively narrow margin of excess bank reserves, the need frequently arises in the normal course of day-by-day fluctuations in money payments for resort to central bank credit. The discount rate thus acquires a positive influence on commercial bank lending policy. This is true, moreover, whether the actual use of the central bank's discount window is by the commercial banks themselves, as in the United States, or whether that use is limited to intermediaries, like the discount houses in the United Kingdom. At the same time, because the commercial banks can rely on the market as a "buffer" for the adjustment of their positions, the central bank becomes truly a lender of last resort, and excessive injections of central bank credit can be avoided. The influence of the central bank is likely to be further enhanced by a decline in the commercial banks' dependence on secondary liquid assets held in foreign centers as the banks increase their dependence on the local market.

Finally, a money market in which all suppliers and users of liquidity actively participate will necessarily provide facilities in which the government's own short-term financing requirements can be met more efficiently. It reduces the need for direct central bank loans to the government, and thus minimizes the kind of threat that historically has been the most serious cause of undesirable expansion in bank reserves and the money supply. A developed money market can also help accommodate short-term swings in the government's borrowing requirements without the risk of creating sharp changes in the commercial banks' liquidity, such as would make the banks extremely short of liquid

[1] For a more extensive discussion of the various definitions of the money market, as well as for a description of the United States market, see *Money Market Essays,* by Harold V. Roelse and others, Federal Reserve Bank of New York, March 1952 (fourth printing, November 1954, currently out of print but being revised), and *Federal Reserve Operations in the Money and Government Securities Markets,* by Robert V. Roosa, Federal Reserve Bank of New York, July 1956.

[2] See "Open Market Operations Abroad", *Monthly Review,* March 1957.

assets at one time and perhaps dangerously liquid at another.

The Structure of Money Markets Abroad

Few countries have broad enough money markets to reap all, or even most, of the advantages just described. In fact, London probably is the only foreign center that can be said to have a highly developed market of long standing. Many foreign countries, especially in Continental Europe, have, of course, well-organized and active capital markets. In general, the development of such longer term markets precedes the growth of money markets and brings with it some of the advantages of the latter; moreover, it is also essential for its own sake in a country's balanced economic expansion. The two kinds of markets are naturally closely interconnected and the existence of the long-term market is helpful in the establishment of the short-term one, just as a broad money market is of great benefit for the operation of the capital market.

Despite the general absence abroad of highly sensitive and well-integrated money markets with specialized submarkets, a number of foreign countries have organized money markets of some kind, and many of them quite understandably are much more closely intermingled with, and dependent upon, the markets in foreign exchange and foreign short-term assets than is the money market in the United States. The money markets of foreign countries vary widely, of course, in size, complexity, types of participants, and the kinds of instruments used. Some function with intermediaries, whether dealers (discount houses) or brokers; others operate without them. Some markets deal primarily in a single kind of instrument, such as call money; others in several instruments, such as call money, Treasury bills and/or other short-term government securities, and various kinds of private paper. As would be expected, however, in all of those markets the commercial banks are the main participants, and the central banks are the lenders of last resort, with varying responsibilities for regulating over-all conditions in the money market.

In several European countries — West Germany, Sweden, and Switzerland—money market transactions are mainly or entirely confined to interbank loans, usually on a day-to-day or on a call basis. These loan markets are essentially similar to the Federal funds market in this country in that they are markets in deposits held at the central bank, although with a few exceptions the interest rates are much less sensitive than in the United States. In West Germany, in addition, insurance companies and other nonbank investors are also important lenders of such short-term funds. Markets for interbank loans also exist in Burma, Ceylon, Japan, and Pakistan; in Japan and Pakistan, the loans may be made through brokers, while in the other countries they take place directly between the banks, as they do in most European countries which have such markets. In some of these countries, as well as elsewhere, there are also markets on a relatively small scale in other short-term instruments, sometimes with nonbank investors as participants. Thus there appears to be a minor market in Treasury bills in West Germany and Pakistan; in short-term government securities in Ceylon, Japan, and a few Latin American countries; in bankers' acceptances in Switzerland; and in commercial paper in the Union of South Africa. There is also a growing market in finance company paper in Australia and in short-term government securities in New Zealand.

Broader markets exist in a number of other countries and, in these, intermediaries play an important role. As a rule, call loans or their equivalent are at the heart of such markets. In Belgium and the Union of South Africa, the intermediaries are semiofficial institutions. The South African National Finance Corporation accepts money at call, mainly from nonbank investors, financial and other corporations, but also the banks, and invests it primarily in short-term government securities. In addition, a private firm has recently been established in South Africa to act as an intermediary in the market for commercial bills. The Belgian Rediscount and Guarantee Institute borrows call money from banks and from various semipublic financial institutions, relends some call money to other semipublic institutions, and invests the bulk of the remainder in bankers' acceptances. In addition, it resells bankers' acceptances from its own portfolio and also acts as a broker in the market for bankers' acceptances and commercial bills.

In India, the intermediaries are private brokers of various kinds, there being no discount houses or their equivalent in the market to undertake transactions as principals. Nevertheless, the Indian money market seems comparatively well developed in terms of organized relationships and specialization of function, although the links among its principal sectors—the two main central markets, Bombay and Calcutta, and the bazaar markets—are rather weak. The core of the central markets is the call money market, which is mainly an interbank market usually functioning with brokers as intermediaries; these central markets contain, however, no true market for bills, whether commercial or Treasury. On the other hand, the bazaar sections of the market, which are also highly organized, deal in a wide variety of commercial paper; these bazaar markets are grouped around the indigenous bankers, who represent a long Indian banking tradition.

In Canada, France, and the Netherlands the markets resemble the London market,[3] even though they are narrower and their detailed arrangements are different. While these four markets vary greatly in breadth, they are similar in that they hinge on the operations of dealer-intermediaries (discount houses in France and the United Kingdom). These intermediaries carry portfolios of short-term securities (mainly government securities) and help to make markets in them; they finance their portfolios through short-term loans obtained largely from the banks, usually at rates below those earned on the securities they carry. They have access to central bank credit in the form of advances in the United Kingdom and the Netherlands, of repurchase agreements in Canada, and of both in France; in fact, in the United Kingdom borrowing from the central bank is done entirely by the discount houses and not by the banks. The money market loans generally are secured loans, although in France repurchase agreements (so-called "en pension" operations) predominate, while in Canada such agreements are important in the case of short-term funds obtained by dealers from nonbank investors. Not only are these loans an increasingly important outlet for the temporarily surplus funds of such investors in some of these countries, but they also are a source of short-term funds for others, such as the banks in France and the local authorities in the Netherlands.

Short-term government securities are the most important instruments traded in these markets, and are held for the most part by banks and dealers, although holdings by other investors are also significant; the extent of such nonbank holdings varies from country to country and appears generally to be much less than in this country. These securities include short-term bonds in Canada, the Netherlands, and the United Kingdom, while in France they comprise only bills with maturities of up to two years. Treasury bills are issued at regular weekly tenders in Canada and the United Kingdom, as in this country, and at irregular tenders in the Netherlands; in France, however, they are placed "on tap", that is, are issued continuously, at rates fixed by the Treasury.[4] The smaller markets in paper of borrowers other than the Treasury include markets in bankers' acceptances in France, the Netherlands, and the United Kingdom; in other commercial or trade paper (including finance company paper) in Canada, France, and the United Kingdom; in paper of local authorities in the Netherlands; and in National Railroads bills in France.

The Broadening of the Canadian Market

The foregoing survey of the existing foreign money markets points up the fact that, despite the long-standing efforts to develop such markets, few of them approach the markets in this country or England in inclusiveness, or even in terms of organized relationships and variety of instruments. In the interwar period, a number of central banks endeavored to encourage the growth of a market in private commercial paper, but these attempts were not very successful, mainly because of the continued decline in this form of financing. After World War II, on the other hand, following the general expansion of government debt, the efforts to develop money markets more often centered on the market for Treasury bills and for short-term loans with such bills as collateral. The most notable advance along these lines in recent years has taken place in Canada.

When the Bank of Canada began operations in 1935, a short-term market was almost nonexistent, although there was a reasonably good market for middle and longer term government securities. The bank, shortly after its establishment, instituted in cooperation with the government a regular fortnightly tender of Treasury bills, but their volume remained relatively small, they were held largely within the banking system, and a trading market failed to develop. This, however, changed rapidly after 1953, when the authorities began taking further major steps to promote a short-term market. The government changed its regular issue of Treasury bills to a weekly from a fortnightly tender, and for a time began issuing nine months' as well as three months' bills, enlarging the total volume of bills and increasing the number of maturities available to the market. The Bank of Canada then introduced repurchase agreements involving Treasury bills and other short-term government securities, with those government securities dealers who had demonstrated a capacity to maintain more or less continuous jobbing positions in the short-term market.[5] To encourage the development of

[3] For a brief discussion of the London market arrangements, see Roosa, *op. cit.*, pp. 14-16 and 51.

[4] The tender method for issuing Treasury bills is also used in Ceylon, Egypt, India, Pakistan, and Thailand, while issues at fixed rates, whether on tap or on an irregular basis, are made in Belgium, Burma, Denmark, Italy, Norway, Sweden, Switzerland, and the Union of South Africa. In all these countries, however, Treasury bill markets as already noted are very small or nonexistent, the bills ordinarily being held to maturity by their original purchasers.

[5] The agreements, which are now applicable to government and government-guaranteed securities with maturities up to three years, provided for the payment of interest at the bank rate. The bank rate is at present adjusted weekly to maintain it at a level of ¼ of 1 per cent above the average rate on Treasury bills at the most recent tender for auction of Treasury bills. Repurchase agreements run up to thirty days, and the dealers may terminate them at any time. To date, the average period of borrowing has been two and one half days. The dealers to whom this facility is extended may draw upon it at their own initiative but must stay within their borrowing limits as set by the Bank of Canada.

market intermediaries, the Bank of Canada in its market transactions in Treasury bills progressively widened the spread between its buying and selling levels, established a minimum for its individual buying transactions, and discontinued making payment in immediately available funds at the Bank of Canada for bills purchased from banks, paying instead in clearing house funds on the day following purchase as it had been doing in its transactions with dealers. Moreover, the bank instituted wire transfer facilities to dealers to help them avoid transit costs or interest charges in transferring bills and short-term bonds between cities.

In mid-1954 two more important changes were made. First, the minimum required reserves of the chartered banks were altered, as part of a revision of the banking legislation, from a fixed daily ratio of 5 per cent to a daily average of 8 per cent during each calendar month. Secondly, the chartered banks were encouraged to make day-to-day loans to those government securities dealers who were prepared to act as jobbers in short-term government securities. Rates on these loans are determined through over-the-counter negotiations on a competitive basis. Since these loans could be called for payment at any time, banks were provided with the convenience and efficient means of adjusting surplus or inadequate cash reserve positions. This facility, combined with the new cash reserve requirement, encouraged the banks to work down from the 10 per cent ratio which they had customarily maintained to a figure closer to the 8 per cent minimum, and fostered more active trading in money market instruments. Late in 1955 the banks agreed to endeavor to maintain a 15 per cent daily average ratio of cash, Treasury bills, and day-to-day loans to deposits.

Over the period, the interest in the Treasury bill market has grown rapidly and nonfinancial corporations and other investors have become important participants. The dealers, in addition, have increased the number of participants in the money market and have provided an alternative to the outright holding of short-term government securities by nonbank investors by drawing on such investors for the financing of their portfolios. Moreover, the volume of private paper has risen markedly; this paper is issued mainly by finance companies, but also by nonfinancial corporations, and is placed either directly or through dealers, the purchasers apparently being mostly corporations with temporary surpluses of funds.

Western European Markets

In Western Europe, the postwar expansion of money markets has not been so far-reaching, partly because a number of countries had already broadened their markets earlier. The London market has, of course, long been considered a classic market model and has remained the most developed financial center abroad. Since this article is concerned with the establishing and developing of money markets since World War II, the London market will not be described further; it need only be noted that, with the postwar revival of monetary policy that began in November 1951, the London market has regained much of its earlier rate flexibility.

On the Continent, the monetary authorities of a number of countries have either taken or proposed a variety of measures to establish or further develop money markets, perhaps the most noteworthy example occurring in Belgium. This country had had an acceptance market before 1914, but the efforts to revive it in the interwar years were only partly successful. In the postwar years, however, the market began to develop on these earlier foundations, in particular around the Rediscount and Guarantee Institute, which was established in 1935 in part to help rebuild the acceptance market. Since the commercial banks were anxious not to disclose their business to their competitors, the institute's first step in 1945 was to start acting as a trustee for bankers' acceptances and commercial bills, so that the buyers of acceptances would know only the name of the acceptor and not the name of the originating business "customer". The central bank, for its part, started giving its approval to acceptances it had inspected and found satisfactory, thus guaranteeing their eligibility for rediscount with it; at the same time it encouraged the market by refusing to discount directly from the accepting bank, limiting its discounts for any given bank to paper accepted by other banks. The institute in turn began to operate as a buyer and seller of such acceptances, and subsequently also as a broker for other private paper. Aided by these facilities, the volume of acceptances has more than doubled since 1946 and trading activity has greatly increased; market rates, however, have remained somewhat inflexible.

Since 1945, in addition, the institute has been the center of the day-to-day money market; it has thus provided the banks with an outlet for their temporarily surplus funds, while at the same time it has obtained funds to finance its acceptance portfolio. Its policy has until recently been to change its rates only rarely, and it has almost always taken all day-to-day money offered to it. In early 1956, however, its rates became flexible and began to reflect market conditions; at the same time the institute started taking five and ten-day, as well as day-to-day, money. Belgium, however, has no trading market in Treasury bills, which are issued on tap at fixed rates only to banks (in contrast to a short-lived interwar system of tenders) and which are nonmarketable; under existing securities-reserve requirements the banks are required to hold these bills in certain proportions to their deposits. In 1956, in addition, there was introduced a new type of Treasury bills of five to fifteen-day maturity, which are sold to the banks and public financial institutions at rates varying with the market, but the volume of these has generally been rather small. It is in this area of government financing that the governor of the central bank has suggested that changes are essential for the establishment of a truly flexible money market.

Unlike Belgium, four other Continental countries—France, West Germany, the Netherlands, and Norway—have since the war concentrated on broadening their markets in Treasury bills and other short-term government securities. In France, the major postwar change in the Treasury bill market concerned the form of such bills, which remain continuously on tap at fixed rates. In 1945 the monetary authorities established a special bookkeeping system for all Treasury bills held by banks and other financial institutions, under which such bills were no longer represented by actual certificates, but rather by entries in special accounts administered by the central bank for the Treasury. In this manner important cost savings were realized, not only for the Treasury but also for the holders of bills, and the functioning of the market was altered by this simplification of the physical handling of bill transactions.

In West Germany, the central bank and the government agreed in 1955 to transform certain nonmarketable securities held by the bank (the so-called "equalization claims" created during the 1948 currency reform) into short-term marketable securities, in order to obtain suitable securities for the bank's open market sales. This procedure not only created a large central bank portfolio of Treasury bills and short-term bonds but in addition, with the sizable open market sales that followed, led to large holdings of these securities outside the central bank, which until then had been insignificant. So far, however, a true market has not developed, and the commercial banks, which are the principal purchasers, generally either hold these securities to maturity or resell them to the central bank at its published buying rates. These buying rates, together with the central bank's selling rates, are in turn altered from time to time in line with changes in money market conditions.

In the Netherlands, the Treasury until mid-1952 issued short-term government securities (bills up to twelve months' maturity and notes up to five years') on tap at fixed rates regardless of its immediate needs; during the following four years it issued such paper only at irregular intervals, but continued the practice of fixing the rates. In 1956, however, it resumed its more flexible prewar practice of issuing Treasury bills by tender at rates determined by the market, although on occasion it still places Treasury bills on tap; the tenders, however, do not take place at regular intervals. The central bank, for its part, added some flexibility to the market in December 1956 when it offered to the commercial banks the facility of repurchase agreements on short-term government securities; the initiative for such operations comes from the central bank, and the interest charge is determined either by it or by auction with participation by the prospective borrowers.

In Norway, the central bank has been trying to establish a money market both by having the commercial banks borrow from each other and by developing a Treasury bill market. In 1954 Treasury bills were changed from registered to bearer securities, and the central bank declared its readiness in principle to purchase Treasury bills from the banks at a rate that would ensure them interest for the time they held such bills. In 1955 the Finance Ministry made nonbank investors eligible for the purchase of Treasury bills, and instituted a weekly offering of such bills at a fixed rate; the amount outstanding, however, has remained small. The banks regard Treasury bills as competing with their time deposits and, in order to avoid withdrawals by their customers, raised their rates when the new Treasury bill system was introduced. Although legislation exists which would enable the government to impose maximum interest rates that the banks may charge, the power was not used in retaliation for this action by the banks.

In Austria, in contrast, a proposal has been put forward to establish a money market, not on the basis of Treasury bills, but by encouraging the use of the commercial bill. A few years ago a special commission under the chairmanship of the governor of the Belgian central bank, which the Austrian Government requested to study the country's banking system, proposed a scheme, along the lines of the Belgian practice discussed above, for the establishment of a special agency that would buy bills from commercial banks, to hold or resell. These bills would first have to be approved by the central bank, thereby becoming eligible for possible rediscount, and then would be retained by the agency, which in order to ensure secrecy with respect to the names on the acceptances would issue deposit receipts against the acceptances to the purchaser. The agency would finance its own bill portfolio by borrowing money at call from the banks.

Markets in Other Areas

The commercial bill is also the basis of plans to broaden the money market that have recently been adopted in India and proposed in Pakistan. In India, the central bank in

1952 introduced a so-called "Bill Market Scheme" under which commercial banks lacking eligible commercial paper for temporary borrowing at the bank were enabled to obtain central bank credit in the form of advances against the collateral of ninety-day notes. These notes were to be created by the conversion of a part of a bank's overdraft to a customer—the preferred form of commercial bank lending in India. At first, these advances were made at a preferential rate, and the central bank bore a part of the cost of the tax incurred in converting bank loans into bills. The scheme has proved to be very popular, and by providing a domestic source of funds for the banks has imparted greater elasticity and wider autonomy to the Indian money market. Apart from sales to the central bank, market transactions in commercial bills have, however, not developed.

In Pakistan, where a similar effort has been under way but apparently with much less success (as also in Burma), the Government Planning Board recently proposed to go a step further by establishing discount houses that would operate a commercial bill market. The board has been assured that various firms and individuals with adequate financial resources would be willing to establish such discount houses, which would discount commercial bills. The commercial banks, on their part, would not only contribute to the discount houses' capital, but would also stand ready to rediscount the bills at concessional rates; the central bank in turn would backstop the market by offering its own rediscount facilities.

Somewhat similar private money market intermediaries have recently been established in the Federation of Rhodesia and Nyasaland and in the Union of South Africa. These institutions, two in Rhodesia and one in South Africa, accept bills and arrange for their financing, thus mobilizing local funds and assisting in the development of short-term money markets. This latter function since 1949 has been entrusted in the Union of South Africa to a semiofficial intermediary as well—the National Finance Corporation. The corporation, which is in part publicly owned and controlled, operates with a central bank guarantee of its liquidity. By accepting deposits at call and investing most of its funds in short-term government securities, it seems to have already brought about some of the advantages of a money market, at least insofar as concerns the borrowing demands of the government. It has facilitated a nation-wide flow of funds, and has succeeded in drawing idle balances from the various parts of the country. In this it has been helped by the central bank, which transmits funds for it from any of the central bank's branches to the corporation's head office free of exchange charges. The corporation has also attracted South African funds from overseas, has acted as a buffer between the market and the central bank, and has enabled the commercial banks to work with closer reserve margins, thus tending to make them more sensitive to changes in monetary conditions and policies. In addition, the authorities more recently have taken another step toward a more active market by introducing Treasury bills in bearer form and in smaller denominations.

In Japan, recent efforts to broaden the money market have centered on short-term government securities. These securities had until recently been issued only to the central bank for possible resale to the commercial banks which, however, could not deal in them among each other. As of May 1956, the government began to issue such securities directly to banks, insurance companies, and other financial institutions, and permitted trading in them among such buyers. The central bank, for its part, has stood ready to repurchase such securities at the issuing rates—a form of interest-rate pegging with potentialities for impairment of an effective monetary policy, but presumably judged important as giving transitional assistance to the current broadening of holdings of government securities. In addition, the central bank has recently started extending limited credit to three short-term loan-brokerage firms in order to assist them in their operations in the call-loan and discount markets.

In New Zealand, the government last fall turned down proposals from various quarters for the establishment of a Treasury bill market even though it approved them in principle, saying that such a market was impracticable for the immediate future. Instead, the government stated that it would enter the government bond market at appropriate times in order to reduce short-term price variations and to increase the attractiveness of government securities. The government also announced its intention to make available a wider range of government securities so as to suit more closely those who wanted special maturity dates. The rejected proposals included one by a Royal Commission,[6] which suggested the offering, at appropriate rates, of three and six months' Treasury bills to all types of investors. The central bank, for its part, stated that it was prepared to offer rediscount facilities for these bills without penalty. A more limited scheme for a specialized market has, however, received legislative approval, providing for a pooling of short-term funds of local authorities in a special agency for investment in local-authority bonds.

A number of other countries with less developed financial systems, including many in Latin America, have taken

[6] For a discussion of the commission's other recommendations, see "Monetary Control in a Rapidly Developing Economy: The New Zealand Royal Commission Report", *Monthly Review,* October 1956.

measures to broaden their capital markets rather than attempting to establish money markets. In this endeavor, these countries have concentrated on the market for long-term government securities; and some of them, notably Mexico, Cuba, Ceylon, and the Philippines, have already made considerable headway in this direction.

Concluding Remarks

A country's money market is naturally a product of its local institutions, and the fact that certain markets have grown up in a particular fashion does not imply any reason for others necessarily to do the same. Nevertheless, the foregoing survey of recent foreign experience reveals, amidst a great variety of national settings, some common lines along which the development of short-term markets might be expected to proceed.

A short-term loan market, usually centering on loans against the collateral of marketable obligations, is a feature of almost all money markets. In countries where such a market exists on an interbank basis it tends to spread to include other participants. The monetary authorities of some countries have found it possible to help in establishing such a market simply by obtaining the cooperation of the parties concerned, where conditions were otherwise suitable. In other countries, they have been able to encourage it by permitting money market loans to be included in commercial-bank liquidity ratios where such ratios have existed, by helping to ensure the liquidity of the underlying collateral or by establishing semiofficial intermediaries that would pool idle funds and hold other liquid or shiftable assets. Where such intermediaries function, however, experience has shown the advantages of introducing fairly promptly a flexible rate policy. Otherwise such arrangements may retard progress toward a more effective market and may even become merely a syphon for drawing funds into government obligations—thereby stifling instead of encouraging competitive forces.

While call money markets fulfill some of the money market's functions, many countries have found it desirable to proceed to the establishment of a market for commercial or Treasury bills. Even though the commercial bill has generally declined in importance, a few countries have concentrated on this form of short-term paper in developing their markets, both because they have considered it a useful form of short-term financing and because the alternative of establishing a Treasury bill market may have posed special problems. In such endeavors much help has been obtained from the activities of semiofficial intermediaries that ensure secrecy for the originating bank, and from the operations of central banks that help to assure the liquidity of such instruments. While the revival of the market in bankers' acceptances and commercial paper has shown signs of becoming important at various times in the postwar period, this development has not yet become a factor of major significance on a world-wide scale.

Unlike the period before World War II, therefore, the Treasury bill since the war has generally been the preferred basis for the establishment of a bill market. For such a market to succeed, the central banks have, in order to prevent unduly sharp increases in time deposit rates by the commercial banks, sometimes had to persuade the banks that any increased competition of Treasury bills with their time deposits as an outlet for short-term funds need not, on balance, be harmful to their interests. More important perhaps, the central banks have found the cooperation of the Treasury necessary. Where the Treasury has gradually increased the volume of bills, evened out the flow of maturities, and enlarged their variety, it has contributed a great deal to a broadening of the market. In this endeavor the issue of bills by regular tender, instead of on tap at rates fixed by the Treasury, has been found preferable; in particular, the determination of issue rates by tender has helped to give the market a certain amount of flexibility even from the start. For widening the distribution of bills, the removal of restrictions limiting their ownership to any one category of holders has often been considered the necessary first step, and the readiness of the central bank to buy and sell such bills has been useful in stimulating active trading. In some instances the central banks have given special inducements by posting purchase prices close to each tender rate, but, as the markets have widened, it has been found best to withdraw these more or less automatic facilities in order to avoid undesirable distortions or "pegs" in the market.

Finally, the existence of market intermediaries holding money market securities, making markets in them, and seeking out idle short-term funds from all parts of the economy, has generally proved of great help in the development of money markets, even though it may not have been found essential in all cases. Such intermediaries have been either semiofficial institutions or private firms. Where private, they have either been firms already in existence, which had been operating in other markets such as those for long-term government securities or for foreign exchange, or new firms established with or without official encouragement. In any case, provision for such dealer intermediaries to have access to central bank credit, in some form, has been found to be almost essential to their smooth functioning as a helpful part of the money market.

The development of broad and flexible money markets, as recent experience shows, is a slow and often difficult process. A country's economy must first expand and diversify, and a money market must be able to draw not merely upon a well-organized banking system but also on a supply of short-term funds from nonbank sources interested in a relatively low return in exchange for high liquidity. Nevertheless, while an effective money market cannot be created in the absence of the necessary fundamental conditions, central banks and governments have had considerable success in developing such markets since World War II. The development of these markets has in turn helped the various countries to adapt their financial resources to their own needs for liquidity and investment, and has provided facilities through which the selection among alternative uses of funds could be resolved in greater degree by reliance upon competitive market forces.

SELECTED ECONOMIC INDICATORS
United States and Second Federal Reserve District

Item	Unit	1957			1956	Percentage change	
		May	April	March	May	Latest month from previous month	Latest month from year earlier
UNITED STATES							
Production and trade							
Industrial production*	1947-49=100	143*p*	144	145*r*	141	− 1	+ 1
Electric power output*§	1947-49=100	228	227	226	216	#	+ 5
Ton-miles of railway freight*§	1947-49=100	—	104*p*	112	106	− 7	− 8
Manufacturers' sales*	billions of $	—	28.5*p*	28.8	27.8	− 1	+ 5
Manufacturers' inventories*	billions of $	—	52.5*p*	52.3	48.6	#	+ 9
Manufacturers' new orders, total*	billions of $	—	27.8*p*	27.7	28.8	#	#
Manufacturers' new orders, durable goods*	billions of $	—	13.2*p*	13.5	14.7	− 2	− 6
Retail sales* ¶	billions of $	16.4*p*	16.3*p*	16.3	15.7	+ 1	+ 4
Residential construction contracts*	1947-49=100	—	n.a.	n.a.	286	n.a.	n.a.
Nonresidential construction contracts*	1947-49=100	—	287	282	237	+ 2	+14
Prices, wages, and employment							
Basic commodity prices†	1947-49=100	88.2	88.8	88.7	90.4	− 1	− 2
Wholesale prices†	1947-49=100	117.1*p*	117.2	116.9	114.4	#	+ 2
Consumer prices†	1947-49=100	119.6	119.3	118.9	115.4	#	+ 4
Personal income (annual rate)*	billions of $	340.4*p*	339.3	338.1	322.8	#	+ 5
Composite index of wages and salaries*	1947-49=100	—	154*p*	154	148	#	+ 4
Nonagricultural employment* ††	thousands	52,569*p*	52,567*p*	52,522	51,799	#	+ 1
Manufacturing employment* ††	thousands	16,868*p*	16,952*p*	16,962	16,919	#	#
Average hours worked per week, manufacturing†	hours	39.7*p*	39.8	40.1	40.0	#	− 1
Unemployment	thousands	2,489	2,481	2,700	2,608	#	− 5
Unemployment‡	thousands	2,715	2,690	2,882	n.a.	+ 1	n.a.
Banking and finance							
Total investments of all commercial banks	millions of $	73,680*p*	73,970*p*	72,230*p*	73,730	#	#
Total loans of all commercial banks	millions of $	91,180*p*	90,990*p*	90,630*p*	85,960	#	+ 6
Total demand deposits adjusted	millions of $	104,770*p*	107,250*p*	105,230*p*	104,190	− 2	+ 1
Currency outside the Treasury and Federal Reserve Banks*	millions of $	30,955*p*	30,922	30,846	30,629	#	+ 1
Bank debits (337 centers)* §	millions of $	85,408	82,457	77,414	79,351	+ 4	+ 8
Velocity of demand deposits (337 centers)*	1947-49=100	147.5*p*	143.8	141.3	138.1	+ 3	+ 7
Consumer instalment credit outstanding†	millions of $	—	31,532	31,273	29,763	+ 1	+ 7
United States Government finance (other than borrowing)							
Cash income	millions of $	7,487	4,804	12,235	6,879	+56	+ 9
Cash outgo	millions of $	7,017	6,726	7,203	6,200	+ 4	+13
National defense expenditures	millions of $	3,166	3,280	3,873	3,444	− 3	− 8
SECOND FEDERAL RESERVE DISTRICT							
Electric power output (New York and New Jersey)* §	1947-49=100	156	154	155	153	+ 1	+ 2
Residential construction contracts*	1947-49=100	—	n.a.	n.a.	259	n.a.	n.a.
Nonresidential construction contracts*	1947-49=100	—	n.a.	n.a.	310	n.a.	n.a.
Consumer prices (New York City)†	1947-49=100	117.2	116.9	116.0	113.0	#	+ 4
Nonagricultural employment*	thousands	—	7,830.8	7,820.3	7,829.8	#	#
Manufacturing employment*	thousands	—	2,669.8	2,665.8	2,713.4	#	− 1
Bank debits (New York City)* §	millions of $	73,245	73,059	69,893	70,869	#	+ 3
Bank debits (Second District excluding New York City)* §	millions of $	5,393	5,340	4,997	5,165	+ 1	+ 4
Velocity of demand deposits (New York City)*	1947-49=100	184.4	181.7	181.3	180.2	+ 1	+ 2
Department store sales*	1947-49=100	115	109	115	110	+ 6	+ 5
Department store stocks*	1947-49=100	131	131	131	123	#	+ 7

Note: Latest data available as of noon, June 28, 1957.
p Preliminary.
r Revised.
n.a. Not available.
* Adjusted for seasonal variation.
† Seasonal variations believed to be minor; no adjustment made.
# Change of less than 0.5 per cent.
‡ New basis. Under a new Census Bureau definition, persons laid off temporarily and those waiting to begin new jobs within thirty days are classified as unemployed; formerly these persons were considered as employed. Both series will be published during 1957.
§ Seasonal factors revised. Back data available from the Domestic Research Division, Federal Reserve Bank of New York.
¶ Revised series. Back data available from the U. S. Department of Commerce.
†† Revised series. Back data available from the U. S. Bureau of Labor Statistics.

Source: A description of these series and their sources is available from the Domestic Research Division, Federal Reserve Bank of New York, on request.