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MONEY MARKET IN JULY

The money market was steadily firm during July, despite the potentially disturbing tensions and transfers of funds that generally accompany a major Treasury refunding operation, and wide variations in bank reserve positions stemming from such diverse sources as the large currency movements associated with the Independence Day holiday and an abnormally high and sharply fluctuating level of float. Over most of the month float remained considerably above its usual levels for this time of the year. However, the effective rate on Federal funds held at 3 per cent on almost every day during the period, and longer regular Treasury bill yields generally fluctuated within a range of $3\frac{1}{8}$ to $3\frac{1}{4}$ per cent, except for a brief decline to as low as 3 per cent shortly after midmonth and a rise to the neighborhood of $3\frac{3}{8}$ per cent as the month drew to a close. The capital markets strengthened early in the month, and interest rates slipped from the late June highs. Investor resistance developed as rates moved lower, however, and the unfavorable reception of several new issues, in combination with a growing calendar of offerings for the months ahead, turned the market around. For the period as a whole interest rates showed little net change. The 3's of 1995, for example, closed the month at a price of $88\frac{2}{32}$ (bid)—the equivalent of a 3.58 per cent yield, 1 basis-point below the yield that had prevailed at the end of June.

After the close of the market on July 18 the Treasury announced that holders of 23.9 billion dollars of notes and certificates maturing in August and October would be offered the opportunity to exchange into the following new issues: $3\frac{5}{8}$ per cent certificates maturing in four months, 4 per cent certificates maturing in one year, or 4 per cent notes maturing in four years but redeemable at the option of the holder in two years. The refunding operation was successfully completed with about 5 per cent of the total of the maturing securities and about 12 per cent of those held by the public retained for cash payment. Further details on these and other developments are described more fully below.

MEMBER BANK RESERVE POSITIONS

Member bank reserve positions were primarily affected by changes in the volume of currency in circulation and fluctuations in the level of float during the five statement weeks ended in July. Over much of the month the movements in these factors tended to reinforce each other, simultaneously draining or supplying reserves.

The withdrawal of currency from banks prior to the Independence Day holiday was more pronounced than usual, so that on a daily average basis member banks lost approximately 300 million dollars of reserves from this outflow during the week ended July 3 and a further 167 million in the following week. And although float remained above normal levels, it still declined substantially during these two weeks, thereby further depleting reserve balances. In addition, average required reserves rose by 226 million dollars in the week ended July 10 as the banks made payment by credit to Treasury Tax and Loan Accounts for their purchases of the 264-day tax anticipation bills auctioned on June 26.

While the above factors absorbed a large amount of reserves during the two weeks ended July 10, their impact was offset in part by a decline in the Treasury's balance at the Reserve Banks and by purchases of Government securities by the Federal Reserve System. The Treasury's balance declined by 117 million dollars on a daily average basis during the week ended July 10, primarily as the result of an unusually large cash outflow at the start of the new fiscal year; average System holdings of Govern-

CONTENTS

Money Market in July	101
International Monetary Developments	104
Federal Finance in Fiscal Year 1957	106
Commercial Bank Liquidity Ratios Abroad..	111
Selected Economic Indicators	116

ment securities increased by 492 million dollars in the two weeks ended July 10, with 372 million dollars of the increase in the form of additional outright holdings of Treasury bills and 120 million in the form of a net expansion of short-term Treasury obligations held under repurchase agreements. Nevertheless, during the week ended July 10 the member banks stepped up their borrowings from the Reserve Banks by about 150 million dollars to a daily average of 1.2 billion dollars.

Changes in member bank reserve positions continued to be heavily influenced by fluctuations in float and currency during a good part of the two following weeks, but during this period both factors reversed their movement and supplied a large volume of reserves to the banking system. Float rose to successive peaks in the statement weeks ended July 17 and July 24, at the same time that a large volume of currency was returning from circulation. These additions to the reserve base were sufficient to enable the member banks to reduce their average borrowings from the Reserve Banks by about 150 million dollars during the week ended July 17 and by a further 320 million in the succeeding week. As a result, such borrowings declined to 739 million dollars on a daily average basis in the week ended July 24, the first week they had averaged below 1 billion dollars since early in June. In the last week of the period borrowings from the Reserve Banks again declined, despite a sharp drop in float that drained about 350 million dollars of reserves from the

member banks. The effect of the float contraction on reserve positions was moderated, however, by offsetting changes in other factors.

Between June 26 and July 31 System outright holdings of Government securities increased by 168 million dollars and holdings of Treasury securities under repurchase agreements expanded by 276 million. Outright purchases were confined to the first three weeks of the period and were partly offset by sales in the last two weeks, while repurchase agreements were extended from time to time throughout the entire five weeks in order to prevent the build-up of undue tightness in the money market. Repurchase agreements were outstanding in considerable volume in the latter part of the month, reflecting agreements extended to Government securities dealers during the Treasury's huge refunding operation.

GOVERNMENT SECURITIES MARKET

The prices of most Treasury notes and bonds tended slightly upward on balance during the first half of July, continuing the reaction that began late in June after the substantial price declines that had been recorded during the preceding several weeks. Trading activity was light, however, particularly as midmonth approached and investors awaited the expected Treasury announcement regarding its forthcoming refunding operation.

After the close of the market on July 18 the Treasury announced refunding terms open to the holders of the 12.1 billion dollars of 2¾ per cent notes due August 1, the 3.8 billion dollars of 2 per cent notes due August 15, the 7.3 billion dollars of 3¼ per cent certificates of indebtedness maturing October 1, and the 0.8 billion dollars of 1½ per cent notes also due October 1. Holders of the two August maturities were offered the opportunity to exchange into any of the following three issues: a 3⅝ per cent four-month certificate of indebtedness due December 1, 1957, a 4 per cent one-year certificate of indebtedness due August 1, 1958, and a 4 per cent four-year Treasury note maturing August 1, 1961 but redeemable (upon 90 days' notice) at par at the option of the holder on August 1, 1959. Holders of the two October maturities were eligible to exchange into either the 4 per cent one-year certificate or the 4 per cent four-year note, but not into the 3⅝ per cent certificate. Subscription books were open Monday, July 22, through Wednesday, July 24. The physical exchanges took place on a par-for-par basis on August 1 for all of the issues, with an interest adjustment as of that date for the 2 per cent notes maturing August 15 and for the 3¼ per cent certificates maturing October 1, and an interest adjustment as of October 1 for the 1½ per cent notes maturing on that date.

The terms of the multiple offering were favorably received by the market, and premium bids of 1⅜ or 2⅜ promptly appeared on all "rights" except the October 1½ per cent notes, which remained below par but were

Table I
Changes in Factors Tending to Increase or Decrease Member Bank Reserves, July 1957
(In millions of dollars; (+) denotes increase, (—) decrease in excess reserves)

Factor	Daily averages—week ended					Net changes
	July 3	July 10	July 17	July 24	July 31	
<i>Operating transactions</i>						
Treasury operations*	- 58	+ 117	- 29	- 56	+ 18	- 8
Federal Reserve float	- 122	- 87	+ 125	+ 115	- 353	- 322
Currency in circulation	- 297	- 167	+ 130	+ 184	+ 90	- 60
Gold and foreign account	- 12	+ 81	- 72	+ 23	+ 16	+ 41
Other deposits, etc.	- 32	+ 6	+ 15	+ 15	+ 98	+ 102
Total	- 521	- 49	+ 168	+ 289	- 133	- 246
<i>Direct Federal Reserve credit transactions</i>						
Government securities:						
Direct market purchases or sales	+ 143	+ 229	- 8	- 17	- 151	+ 196
Held under repurchase agreements	+ 4	+ 116	- 116	+ 40	+ 169	+ 213
Loans, discounts, and advances:						
Member bank borrowings	+ 64	+ 116	- 154	- 320	- 186	- 450
Other	-	-	+ 2	- 2	-	0
Bankers' acceptances:						
Bought outright	+ 1	+ 1	+ 1	-	- 2	+ 1
Under repurchase agreements	+ 1	-	- 1	-	-	0
Total	+ 215	+ 492	- 276	- 300	- 171	- 49
Total reserves	- 306	+ 443	- 108	- 11	- 304	- 286
Effect of change in required reserves†	+ 84	- 226	+ 60	+ 63	+ 89	+ 70
Excess reserves†	- 222	+ 217	- 48	+ 52	- 215	- 216
Daily average level of member bank:						
Borrowings from Reserve Banks	1,067	1,213	1,059	739	553	926‡
Excess reserves†	346	563	515	567	352	489‡

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

* Includes changes in Treasury currency and cash.

† These figures are estimated.

‡ Average for five weeks ended July 31.

not a significant market factor. The "when-issued" securities also reflected the favorable market atmosphere, with $100\frac{2}{32}$ bid for the two 4 per cent issues and the $3\frac{5}{8}$ per cent certificates also at a small premium bid shortly after the subscription books had opened. These quotations reflected the feeling that the new issues were suitably priced against the current market and that many holders of "rights" might find the new $3\frac{5}{8}$ per cent certificates attractive even if they anticipated definite cash needs in the relatively near future. Considerable interest was also expressed in the four-year 4 per cent issue, since investors were provided protection against a subsequent rise in interest rates by the two-year optional redemption feature. However, the quotations on the "rights" and "when-issued" securities began to slip lower while the subscription books were open, as a widely scattered but persistent supply of "rights" came into the market, mostly from corporations or public bodies anticipating specific cash needs within a few weeks. Moreover, a sharp drop in bond prices drew attention to the fact that some outstanding intermediate-term Treasury issues were yielding above 4 per cent and carried an even more favorable after-tax yield differential as compared with the new 4 per cent "when-issued" obligations. Nevertheless, as the subscription period drew to a close, an air of renewed confidence was again apparent: the maturing issues continued to trade around par, with no sizable blocks reportedly still available for sale at that level, and par bids were maintained for all the "when-issued" securities.

Cash redemptions amounted to about 340 million dollars (or 3 per cent) of the maturing August 1 issue, 375 million dollars (or 10 per cent) of the August 15 issue, and 375 million dollars (or 5 per cent) of the two October issues; in the aggregate, attrition thus amounted to about 1.1 billion dollars, 5 per cent of the 23.9 billion dollars of maturing securities and 12 per cent of the amount which had been held outside the Federal Reserve System and Government investment accounts. About 9.9 billion dollars of the new four-month certificates were issued by the Treasury, 10.5 billion dollars of the one-year certificates, and 2.5 billion of the four-year notes.

The prices of most Treasury bonds and notes declined between midmonth and July 24, but the market stabilized after the refunding operation had been successfully completed and prices moved fractionally higher on balance over the remainder of the period. Over the month as a whole, the prices of most Treasury notes and bonds maturing through 1962 showed mixed changes of about $\frac{1}{32}$ of a point, while issues due after 1962 through 1972 generally rose by about $\frac{1}{2}$ of a point. However, the $3\frac{1}{4}$'s of 1978-83 declined by $2\frac{1}{32}$ of a point to $93\frac{1}{32}$ (bid), the equivalent of a 3.66 per cent yield, 5 basis-points above the yield at the end of June. All of the new Treasury securities closed the month at par bid or above, with the new four-year notes attracting particular buying interest

from some savings banks and others and closing the month at $100\frac{3}{32}$.

Treasury bill yields generally declined gradually over the first half of the month, reflecting primarily a growing scarcity of some maturities as well as a moderate nonbank demand. In addition, the expectation of a substantial reinvestment demand in connection with the Treasury's refunding operation may also have strengthened the tone of the market. Thus the average issuing rate established in the weekly Treasury bill auction declined from 3.238 per cent in the auction held on July 1 to 3.171 per cent one week later and then to 3.092 per cent on Monday, July 15. By Friday, July 19, all outstanding regular Treasury bills were trading below 3 per cent. However, with the subscription books for the refunding operation open on the following Monday (July 22), relatively little interest was shown in the bill auction and a degree of caution emerged as market opinion tended to the belief that bill yields had fallen abnormally low in view of the underlying degree of pressure in the money market as well as revised expectations of lower attrition than had been expected previously. A further upward influence on bill yields in this auction and over the remainder of the month was the competitive attraction of the $3\frac{5}{8}$ per cent coupon available on the new four-month certificates. The average issuing rate established on July 22 thus climbed to 3.158 per cent, with accepted bids ranging from 3.003 per cent to 3.248 per cent, the widest spread in a regular auction in two months. In the last weekly auction of the month, held on July 29 for bills dated August 1, the average issuing rate rose further to 3.363 per cent.

OTHER SECURITIES MARKETS

The markets for new corporate and municipal bonds were generally strong early in July, but as the month progressed the prospect of continued large demands for funds in the near future led to a somewhat weak undertone. Occasional underwriter attempts to lead the rate structure lower thus met with considerable investor resistance and were largely unsuccessful. Nevertheless, new offerings generally found a favorable response when priced in line with the yield structure established late in June. Moody's index of seasoned Aaa-rated corporate bonds rose from 3.97 per cent at the end of June to 4.05 per cent on July 31, while the long-term Aaa-rated municipal bond index increased from 3.23 per cent on June 26 to 3.25 per cent on July 31.

Most of the larger new corporate issues floated early in July were rapidly sold out and moved to premium bids, and, while no large new municipal issues were offered to investors until close to midmonth, the several small offerings that did come to market were generally well received at prevailing rate levels. Encouraged by these first signs of firmness in a number of weeks, underwriters bid aggressively for new issues from time to time, but the result-

ing higher reoffering prices were unenthusiastically received and in each case the groping toward a lower yield structure was soon abandoned. For example, on July 9 a 30 million dollar issue of 35-year 4½ per cent coupon Aaa-rated public utility debentures met with a poor response when reoffered at 101.25 to yield investors 4.43 per cent, 42 basis-points below the reoffering yield on the last previous Aaa-rated utility flotation, which had been successfully marketed in mid-June. (In addition to the reoffering yield of 4.85 per cent, the mid-June issue had also carried a five-year noncallable provision designed to assure investors that they would earn this rate for at least that long. This feature was not included in the 4.43 per cent flotation, although it did provide that the call price would be 110 for the first five years.) On the other hand, late in the month a 60 million dollar Aa-rated utility issue that carried a five-year noncallable clause was quickly sold out when reoffered to yield 4.95 per cent.

After the early part of the month a sluggish atmosphere generally permeated both the corporate and municipal markets, a tendency probably attributable in good part to frequent reports regarding additional large new flotations being scheduled for the forthcoming months. The volume of public offerings of corporate bonds for new capital purposes is estimated to have been about 595 million dollars during July, 45 million dollars less than in the previous month but 30 million higher than in July of 1956. The estimated volume of new public municipal offerings during the month was about 405 million dollars as compared with 330 million in June and 260 million in July of 1956.

MEMBER BANK CREDIT

Total loans and investments at the weekly reporting member banks decreased by 1,426 million dollars during the five weeks ended July 24, as loans declined by 938 million dollars and investments by 488 million.

The loan contraction included net repayments of 386 million dollars in security loans and 684 million in business loans, with over half of the decline in business loans attributable to a reduction of about 370 million dollars in loans extended to sales finance companies by the reporting banks. The 684 million dollar business loan decline compares with a 293 million dollar reduction in these loans during the similar weeks last year, with the larger decline apparently in part due to the larger volume of borrowing which took place this year during the immediately preceding tax period.

Investment holdings of the reporting banks fluctuated sharply over the five-week period. A substantial drop in

holdings of Treasury obligations during the week ended June 26 was primarily attributable to the cash redemption of maturing tax anticipation bills and certificates which had not been used to make tax payments. In the following week, bill holdings expanded by over 1.3 billion as the banks acquired the new 264-day tax anticipation bills that had been auctioned by the Treasury on June 26.

Thus far this year total loans have declined by 281 million dollars at the weekly reporting banks, with business loans expanding by 507 million. (In the comparable weeks last year total loans increased by 2.3 billion, 2.0 billion of which was in the form of business loans.) While total loans thus show a 2.6 billion shortfall as compared with last year, investments have correspondingly declined 3.1 billion less: in the first thirty weeks of 1957 investment holdings of the reporting banks have fallen 1.4 billion dollars, while in the similar weeks last year they fell 4.5 billion. As a result of the above, thus far in 1957 total loans and investments at the reporting banks have fallen by 1.7 billion, or 0.5 billion less than the 2.2 billion decline that took place in the comparable period last year.

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 July 24, 1957
	June 26	July 3	July 10	July 17	July 24	
<i>Assets</i>						
Loans and investments:						
Loans:						
Commercial and industrial loans.....	+ 58	- 220	- 122	- 114	- 286	+ 507
Agricultural loans.....	+ 4	+ 5	- 2	- 2	- 1	- 37
Security loans.....	- 128	+ 65	- 204	- 36	- 83	- 663
Real estate loans.....	- 8	- 18	- 4	+ 12	+ 9	- 186
All other loans (largely consumer).....	+ 96	+ 2	+ 21	+ 21	+ 5	+ 283
Total loans adjusted*.....	+ 20	- 172	- 310	- 120	- 356	- 281
Investments:						
U. S. Government securities:						
Treasury bills.....	- 556	+ 1,349	- 321	- 293	- 239	- 455
Other.....	- 160	+ 44	+ 31	- 85	- 180	- 976
Total.....	- 716	+ 1,393	- 290	- 378	- 419	- 1,431
Other securities.....	- 2	+ 11	- 23	+ 7	- 71	+ 31
Total investments.....	- 718	+ 1,404	- 313	- 371	- 490	- 1,400
Total loans and investments adjusted*.....	- 698	+ 1,232	- 623	- 491	- 846	- 1,681
Loans to banks.....	+ 169	- 125	- 10	+ 81	+ 191	+ 81
Loans adjusted* and "other" securities.....	+ 18	- 161	- 333	- 113	- 427	- 250
<i>Liabilities</i>						
Demand deposits adjusted.....	- 547	- 1,422	+ 443	+ 417	+ 403	- 2,644
Time deposits except Government.....	+ 116	- 47	+ 8	+ 40	- 9	+ 1,513
U. S. Government deposits.....	+ 326	+ 1,886	- 1,186	- 760	- 712	- 28
Interbank demand deposits:						
Domestic.....	- 424	+ 673	+ 88	+ 150	- 528	- 1,040
Foreign.....	+ 81	- 33	+ 21	- 2	+ 37	+ 10

* 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.

INTERNATIONAL MONETARY DEVELOPMENTS

MONETARY TRENDS AND POLICIES

Discount rates were raised in four European countries in July in order to tighten monetary policy further in the fight against inflation. This brings to ten the number of

discount rate increases by foreign central banks in 1957.

Sweden. Effective July 11 the central bank raised its discount rate to 5 per cent from 4; this was the third increase since April 1955 when the discount rate was 2¾

per cent. Following the central bank's action, the government, which apparently had not been notified in advance, made public its disapproval of the increase and requested the resignation of the chairman of the bank's board of directors. In Sweden, the central bank does not necessarily lend at the official discount rate, and changes in the latter serve mainly to underscore the bank's views on economic conditions and to signal adjustments in its credit policy.

The governor of the central bank indicated that the immediate purpose of the discount rate increase was to counter the growing expectation of further inflation, which had led to dangerous speculative developments; in recent weeks the bond market had been very weak while stock prices had risen to "unreasonably high levels". The governor also pointed out that a rise in interest rates was necessary in order to make it possible to raise funds for the housing program on the capital market and thus avoid further inflationary financing through bank credit. Finally, he stated that, "against the background of the present budgetary situation and the weakened financial policy", it was necessary for monetary policy to shoulder an even greater share of the burden of stabilization. While the Swedish balance-of-payments deficit was reduced somewhat in 1956, the import surplus has continued at a very high level this year; however, because of increased short-term borrowing from abroad, there has been only a seasonal decline in the nation's gold and foreign exchange reserves. Although there were signs of better balance in the domestic economy last year and prices remained stable in the first five months of 1957, investment and consumption have been rising more rapidly this year than in 1956.

Netherlands. On July 17, the Netherlands Bank raised its discount rate to $4\frac{1}{4}$ per cent from $3\frac{3}{4}$; during 1956 the discount rate had been raised $1\frac{1}{4}$ per cent in three stages. It was officially stated that the new step was taken because of a "continuing lack of equilibrium in the Netherlands economy", which had "led in the last few weeks to increased borrowing from the Netherlands Bank and a new decline in foreign exchange reserves".

The Dutch balance of payments, which began to deteriorate in 1956, has grown steadily weaker this year; during January-June the trade deficit rose to more than 600 million dollars' equivalent, nearly two-thirds greater than a year previous. While sales abroad of internationally known Dutch securities have eased the strain on the foreign exchange reserves, there was a decline of some 50 million dollars' equivalent in 1957 through July 22. The worsening of the Netherlands' balance of payments testifies to the continuing growth of excessive demand at home; the rise in consumer spending has slowed only slightly this year, while investment expenditure appears to have been expanding even more rapidly than in 1956, when it increased some 18 per cent. As the nation's productive resources have become fully employed, the increase in

demand has not been met by a corresponding rise in output; so far this year, industrial production has been rising less rapidly than in 1956. The cost of living, which increased 5 per cent in 1956, rose a further 9 per cent in the first half of this year. A substantial part of the increase in demand has been generated by the public sector; despite a program of fiscal restraint, the deficit in the central government's current budget is expected to be as large as last year's, and the local authorities' spending has continued to rise rapidly.

Spain. The Bank of Spain increased certain of its lending rates effective July 22; the rate applicable to the discounting of commercial paper directly from the public, which in Spain is the official discount rate, was raised to 5 per cent from $4\frac{1}{4}$, and the rate charged the banks for rediscounting such paper was increased to 4 per cent from 3.4. These rates which cover, however, only a small portion of central bank credit had previously been increased in September 1956.

In recent years, Spain has been suffering from severe inflationary pressures, reflected in rapidly rising prices and wages and in a serious deterioration of the balance of payments. While unfavorable weather has contributed to the difficulties of Spain's primarily agricultural economy, the inflation is basically a by-product of the great increase in expenditures in the country in recent years. The expansion of domestic public and private investment has been financed largely by bank credit, a substantial part of which has in the last analysis come from the Bank of Spain.

Belgium. The central bank's principal discount rate was raised 1 per cent to $4\frac{1}{2}$, effective July 25; the rate had been increased to $3\frac{1}{2}$ from 3 last December.

Increasing domestic demand has sustained the rapid expansion of economic activity in Belgium, which received its initial impetus in 1955 from soaring exports. As the margin of unutilized resources has diminished, however, the continued rise in demand has tended to become inflationary; last year the cost of living increased 3 per cent, and in order to restrain further increases this year the government has sought to freeze prices and wages. The excess of domestic demand has been a major factor in the steady increase in the trade deficit since last summer; imports have risen markedly and exports have leveled off, partly owing to the diversion of production to the home market. The central bank's gold and foreign exchange reserves have fallen by about 110 million dollars' equivalent since September 1956. While the reserve loss has reduced the liquidity of the banking system, the demand for credit from the government and from private borrowers has increased, producing a stringency in the money and capital markets that has been reflected in a rise in interest rates. The central bank's discounts of commercial paper and its advances on collateral of government securities have nearly doubled this year; the heavy dependence of the commercial banks on central bank

credit makes changes in the discount rate of special significance in Belgium.

The United Kingdom. Inflation and the use of monetary restraint to combat it were also prominent subjects of official concern in Britain last month. The Chancellor of the Exchequer emphasized that inflation was Britain's "most intractable and difficult problem", and made it clear that it would be necessary to continue the credit squeeze. At the same time the governor of the Bank of England stated that "a policy of credit restrictions in the City . . . must, as the Chancellor has said, go hand in hand with a similar policy of restraint in Whitehall and throughout the country". Reflecting the general concern over further inflation, there was substantial weakness in the gilt-edged securities market, where the price of 2½ per cent Consols fell precipitously to the lowest levels since 1921; Consol yields touched 5.17 per cent on July 17, but there was some recovery during the latter part of the month and they closed the month at 4.98 per cent.

There was a sharp expansion of bank credit during the nine weeks ended July 17; the 237 million pound increase in the London clearing banks' net deposits was nearly double the rise in the same period a year ago. This increase in deposits occurred despite an 88 million pound drop in advances in the first two weeks of July that more than canceled the increase in the preceding six weeks. It was the rise in the banks' liquid assets, and especially in their Treasury bill holdings, that provided the counterpart for the increase in deposits; the increase in the banks' Treasury bill holdings since mid-March has canceled more than half of the reduction achieved in the first quarter of the year by the government's funding program. On July 17 the average liquidity ratio of the clearing banks was up to 35.5 per cent, compared with 32.9 per cent in mid-May.

EXCHANGE RATES

The rate for American-account sterling generally declined during July, largely reflecting normal seasonal pres-

ures. The quotation remained at about \$2.79³/₁₆ during the first week of the month; by July 12, however, it had dropped to \$2.78¹/₁₆, presumably as a result of renewed concern about the danger of inflationary pressures in Britain, and despite fair demand for the pound both in New York and London. Although some covering of short positions in the market strengthened the rate to \$2.78²/₃₂ at the midmonth, it soon eased to \$2.78³/₄ where it was maintained, chiefly by commercial demand, until July 23. After the new outbreak of disturbances in the Near East, the rate again declined, falling to \$2.78⁷/₁₆ at the month end. The pressure was also evident in the forward market where the discounts on three and six months' sterling widened from ²/₃₂ and 1½ cents to 1²/₃₂ and 2³/₁₆.

Transferable sterling appreciated early in July to \$2.78, the highest quotation since May 1956, but then began to move downward. Rather substantial offerings of such sterling from Switzerland during the month were only partially offset by occasional demand from the Continent and from sugar interests. On July 31 transferable sterling was quoted at \$2.7735.

Securities sterling rose sharply from its opening quotation of \$2.62½ to \$2.73 on July 5, following the adoption of measures to make more effective the exchange regulations governing securities transactions. Subsequently, however, the rate moved lower in a moderately active market, and at the month end stood at \$2.71.

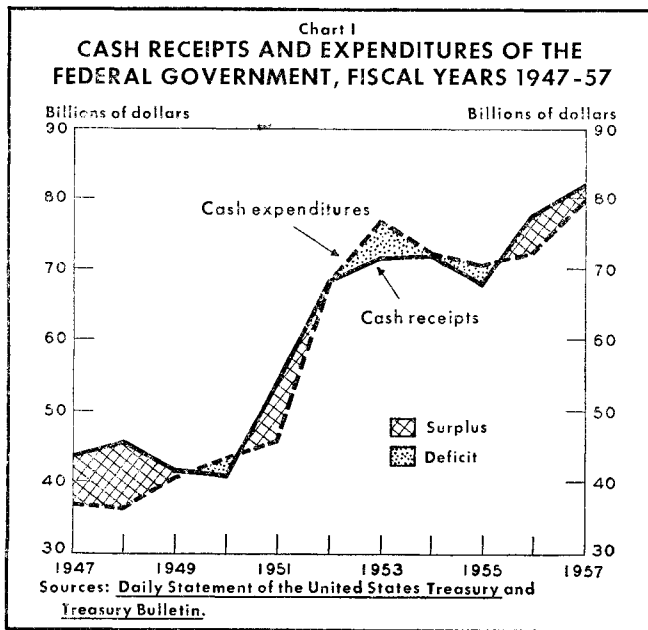
The Canadian dollar strengthened further during the month, to reach another new high. Vigorous investment demand from New York and London along with commercial demand, notably on the part of mineral and chemical interests, caused the quotation to rise fairly steadily from \$1.04²/₃₂ to \$1.05¹/₃₂ on July 25 and 30. The conversion of the United States dollar proceeds of Canadian bonds marketed last month in the United States, and the demand for Canadian dollars associated with the auction of oil leases in Canada, were major contributors to the higher quotations. On July 31 the Canadian dollar was quoted at \$1.05³/₆₄.

FEDERAL FINANCE IN FISCAL YEAR 1957

The expansion of the tax base generated by rising national income and production carried Federal tax receipts to an all-time high in fiscal year 1957, while Federal expenditures reached the largest fiscal-year total since World War II. The rise in receipts in the consolidated cash budget was 2½ billion dollars less than that in expenditures; nevertheless, the Treasury still was able to close its books on June 30 with a fiscal-year surplus, the second in a row (see Chart I). The latest surplus was 2.7 billion dollars on a cash basis, as against 5.1 billion in the previous fiscal year. For reasons given below, the decline in the cash surplus was not reflected in the conventional administrative budget surplus, which remained virtually

unchanged at 1.6 billion dollars in each of the last two fiscal years.

The frequency of the Treasury's cash offerings increased considerably during the past twelve months, partly because of unexpectedly large cash requirements in the second half of the fiscal year, when an upsurge in defense and foreign-aid spending was superimposed upon increasing Savings bond redemptions and heavy attrition on refundings. Moreover, the strength of competing demands for funds by private borrowers throughout the year restricted the Treasury largely to short-term financing, part of which fell due within the year and had to be refinanced. To maintain adequate working balances the Treasury raised new cash



through the public sale of securities in eight of the twelve months of fiscal 1957. However, a modest amount of net debt retirement was reported for the fiscal year as a whole.

The following financial review of the fiscal year, as well as the accompanying charts and tables, is based upon the Federal Government's cash accounts as recorded in the *Daily Statement of the United States Treasury*, rather than upon the conventional administrative budget accounts. The cash accounts are generally considered more satisfactory than the budget accounts for purposes of economic analysis, because they exclude intragovernmental transfers and present the consolidated results of budget, trust fund, and agency transactions. They thus provide an all-inclusive measure of the flow of cash payments and receipts between the public and the Federal Government.¹ The surplus in the cash accounts, when adjusted for changes in the Treasurer's balance, indicates the amount of net cash debt redemption.

The difference between the budget and cash surpluses was only about 1 billion dollars in the fiscal year 1957, compared with a 3½ billion dollar difference in the previous fiscal year. The substantial narrowing of the margin resulted largely from the changed cash position of the Old-Age and Survivors Trust Fund, which failed to produce a significant excess of tax contributions over cash outlays in 1957 for the first time since it was established, and from dollar drawings by the International Monetary Fund. The latter increased cash, but not budget, expenditures.

¹ However, the cash accounts as derived from the *Daily Statement* exclude certain transactions of Government-sponsored enterprises not cleared through the Treasurer's account. These transactions, usually small in the aggregate, are included in the Treasury Department's series on receipts from and payments to the public, compiled from the *Monthly Statement of Receipts and Expenditures of the United States Government*.

CASH EXPENDITURES

In the fiscal year 1957 total Federal cash expenditures increased by 7.2 billion dollars, reaching 79.2 billion—a rate exceeded only in the two peak spending years of World War II. As illustrated in Chart I, the highest previous year for Federal spending in the post-Korea period was fiscal 1953, when cash expenditures were 76.4 billion dollars.

Increased outlays for defense and related programs accounted for the largest single share of the total advance in expenditures in the latest fiscal year. Defense and related spending rose to 42.8 billion dollars, or 2.7 billion more than in the previous year and about 1.6 billion more than estimated in the President's January *Budget Message*. The possibility exists, moreover, that the expenditure breakdown given in Table I, which is compiled from the *Daily Treasury Statement*, understates defense spending in fiscal 1957—and also understates spending for several other programs—owing to a change in the method of processing Treasury checks. A few months ago, in connection with the installation of new tabulation machines, the Treasury revised the procedures for tabulating Government disbursements, and it appears that the classification of checks by expenditure programs has lagged during the transition period. The rising backlog of unclassified and canceled checks is reflected in the substantial

Table I
Cash Income and Expenditures of the Federal Government
Fiscal Years 1957 and 1956
(In billions of dollars)

Item	1956	1957	Change 1956-57
Cash income—total	77.1	81.9	+4.8
Withheld income taxes.....	24.0	26.6	+2.6
Nonwithheld income taxes.....	11.3	12.3	+1.0
Corporate income taxes.....	21.3	21.5	+0.1
Excise taxes.....	10.0	10.7	+0.7
Old-age and railroad retirement trust funds*	7.0	7.3	+0.3
Unemployment trust fund.....	1.4	1.6	+0.2
All other receipts.....	5.8	5.9	+0.2
Less: tax refunds.....	- 3.7	- 4.0	-0.3
Cash expenditures—total	72.0	79.2	+7.2
Defense and related†.....	40.1	42.8	+2.7
International finance and aid†.....	1.5	2.3	+0.7
Interest on the debt.....	5.1	5.5	+0.4
Veterans Administration.....	4.6	4.8	+0.2
Commodity Credit Corporation.....	3.8	3.1§	-0.7
Old-age and railroad retirement trust funds.....	6.1	7.3	+1.2
Unemployment trust fund.....	1.4	1.6	+0.2
All other expenditures.....	9.1	9.9	+0.9
Clearing account.....	0.3	1.9	+1.6
Net cash income (+)‡	+ 5.1	+ 2.7	-2.4

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

* Includes Federal Disability Insurance Trust Fund.

† Military outlays by the Defense Department and related expenditures for strategic and critical materials, as well as military assistance under the Mutual Security Act, Atomic Energy Commission, maritime activities (formerly the Maritime Commission), the Coast Guard, expenditures for defense production, and the redemption of Armed Forces Leave bonds.

‡ Economic and technical assistance under the Mutual Security Act, and net redemption of notes issued to the International Monetary Fund.

§ Includes Soil Bank beginning August 1956.

On the basis of the series entitled "Receipts from and Payments to the Public", the fiscal 1956 cash surplus was 4.5 billion dollars; data on this basis for fiscal 1957 are not as yet available, but preliminary data suggest a surplus slightly in excess of 2 billion dollars. The difference between that series and the data given in the table is accounted for chiefly by net payments by Government-sponsored corporations from cash balances held outside the Treasury. The latter payments are not reported in the *Daily Statement*.

Sources: Based on *Daily Statement of the United States Treasury* and *Monthly Statement of Receipts and Expenditures of the United States Government*.

growth of the Clearing Account in recent months. Thus, more than 10 per cent of total expenditures in the last quarter of the fiscal year appears under the Clearing Account. Further, the Clearing Account increased by 1.6 billion dollars over the fiscal year as a whole, which is the second largest year-to-year increase shown in the table.

A better indication of the recent trend in defense spending can be obtained from the Treasury's *Monthly Statement of Receipts and Expenditures*, which is on a checks-issued basis and is not distorted by the recent lag in tabulating checks cashed. Between July-December 1956 and January-June 1957, for example, the expenditures of the Department of Defense (military functions) rose from 18.4 billion to 19.9 billion dollars. This marked advance seems to have been associated chiefly with an acceleration of the guided missiles program.²

Treasury disbursements for old-age and retirement benefits increased by 20 per cent from fiscal 1956 to 1957, which is in line with the increases in other recent years. These disbursements were partly related to the continual growth in the retired population; in addition, benefits first became available in fiscal 1957 to farmers given coverage under the 1955 amendments of the social security law, and to women whose retirement age was lowered to 62 by the 1956 amendments.

Another relatively large increase in spending occurred in international finance and aid, which rose from 1.5 billion to 2.3 billion dollars. Almost the entire change was accounted for by the substantial dollar disbursements by the International Monetary Fund in December 1956, following the Suez crisis. In that month the Treasury was asked to redeem 580 million of special noninterest-bearing notes representing a large part of this country's participation in that institution. This redemption, which added to Treasury cash outlays, provided the IMF with needed dollars. Subsequently, the IMF's dollar disbursements—and the associated cash redemptions of special notes—averaged about 100 million a month, but the cash drain on the Treasury was largely offset: the IMF repurchased 600 million of notes with gold in order to replenish its note holdings, and the Treasury monetized the gold.

Much of the 900 million rise in "all other" expenditures, as tabulated in Table I, was related to increased purchases by the Federal National Mortgage Association of mortgages on the secondary market.

The only major decline in expenditures during the latest fiscal year was for the Commodity Credit Corporation. This reduction was mainly attributable to lower crop-support costs. The CCC paid out about 500 million dollars for the new Soil Bank program in fiscal 1957, but

² "We are shifting to new guided missiles as our major deterrent weapon, but we dare not abandon our older, conventional defenses. We have just entered into an era of overlapping, double costs; research and development of missiles, at a fantastic price, on top of a complete, strong conventional weapons arsenal." (Address by R. E. Merriam, Assistant Director, Bureau of the Budget, May 23, 1957)

there were no redemptions of special certificates of interest secured by crop loans, as there had been the year before.

CASH INCOME

The growth in the tax base in recent years more than offset the effects of the important tax reductions made three years ago. From a level of about 71½ billion dollars in fiscal years 1953 and 1954, cash receipts declined to about 68 billion dollars in the following year and then rose to 77 billion dollars in fiscal year 1956 and to almost 82 billion dollars in fiscal 1957.

As indicated in Table I, every category of Federal income increased in fiscal 1957, although the total increase was not much more than half that of the previous year, when the economy was expanding at a more rapid pace than recently. Most of the 4.8 billion dollar increase in fiscal 1957 receipts is accounted for by withheld and non-withheld income taxes (3.5 billion dollars) and excises (750 million); by contrast, corporate income taxes changed but little. Personal income, which reflects rather closely changes in the individual income tax base, advanced from 317 billion dollars to about 336 billion dollars between fiscal 1956 and fiscal 1957. On the other hand, corporate profits before taxes experienced only a slight improvement from 42.5 billion dollars in calendar year 1955 to 43.0 billion in calendar 1956.³

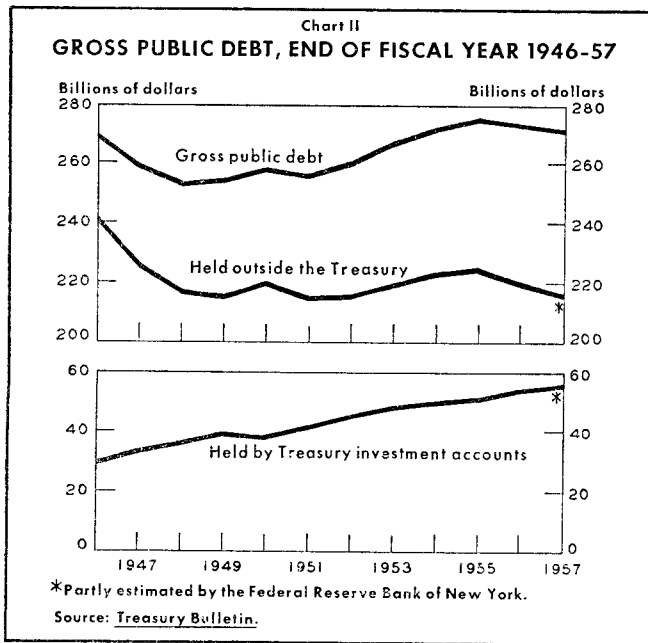
Individual income tax collections rose some 15 per cent above the level of 1953, when higher tax rates prevailed, and 10 per cent over last year's amount. For corporate income taxes, the rise in profits to a record level was not quite enough to compensate for the loss of revenue attributable to the repeal of the excess profits tax as of December 31, 1953. Although corporate tax liabilities actually were slightly higher in calendar 1956 than in calendar year 1953, this rise in liabilities was submerged by other factors, such as the changed timing of tax payment dates.

Excise tax receipts in fiscal 1957 were augmented by the advance in highway-user taxes on July 1, 1956, which were designed to defray costs under the new Federal-aid highway program, as well as by continued rising purchases by consumers of taxable items. Similarly, receipts by the old-age and railroad retirement trust funds benefited from tax-rate increases, effective January 1, 1957, to finance the new Disability Trust Fund. Adding to the growth in these receipts were the expanded coverage under the Social Security Amendments of 1956 and a general increase in taxable payrolls.

PUBLIC DEBT TRANSACTIONS

In the period since the end of World War II, the Federal debt passed through declining and rising phases, but its

³ Most corporate tax collections in fiscal year 1957 were based on profits earned in calendar year 1956. However, a part of these collections was based on earlier earnings, since approximately one fourth of these taxes is paid by corporations with tax periods that do not coincide with the calendar year.



size on June 30, 1957 was about the same as in mid-1946. Chart II illustrates the reduction of the gross public debt from about 270 billion dollars at the end of fiscal 1946 to a low of 252 billion at the end of fiscal 1948, the relatively steady rise after the Korean emergency to a peak of 274 billion dollars at the end of fiscal 1955, and the gentle downturn thereafter to 270.5 billion at the end of fiscal 1957.

The distribution of ownership of the Federal debt between Treasury investment accounts and other holders has changed markedly, however. The Treasury investment accounts almost doubled the value of their investment portfolio between fiscal 1946 and fiscal 1957, chiefly as a result of the growth of reserves as a counterpart to the rising social security liabilities to the public. These accounts held about 55 billion dollars of Federal securities on June 30, 1957. On the other hand, the share of the public debt held outside the Treasury declined from 240 billion dollars at the close of fiscal 1946 to about 215 billion at the end of fiscal 1957. During fiscal year 1957, the combined effect of an over-all reduction in the debt and the continuing acquisition of Government issues by the Treasury investment accounts decreased the debt held by the public by more than 4 billion dollars (see Table II). At present, approximately 80 per cent of the public debt is held outside the Treasury, compared with almost 90 per cent in 1946.

The Treasury's operations within the past fiscal year were notable for the frequency of cash offerings, the heavy reliance placed upon short-term issues in both cash and refunding operations, and the relatively high attrition experienced during several refundings. Essentially, this experience seems to have been an outgrowth of a per-

sistent tendency for cash requirements to run ahead of expectations, and of intermittent pressures on the securities markets.

All told, the Treasury engaged in twelve major market financings during the fiscal year, of which four were refundings of maturing issues totaling 37.1 billion dollars, two involved the roll-over of special bill issues amounting to 3.4 billion dollars, and six raised a total of 12.5 billion dollars of new cash. In addition, the regular weekly bill issue was increased upon seven occasions during the late winter to raise an additional 1.1 billion dollars. Except for a two-month lapse between early August and mid-October 1956, this heavy financing schedule required the Treasury to enter the market at intervals of one month or less.

The number of refundings, which was determined by the structure of the debt at the start of the fiscal year, was not exceptional for postwar years, and the major exchange operations were fairly widely spaced in August, December, February, and May. Where possible, issues coming due within a few months were combined into one exchange offering, so that the four refundings encompassed five maturing notes and two maturing certificates. By calling one partially tax-exempt bond of 1 billion dollars for redemption, and by not calling other optionally dated issues callable during the year, the Treasury minimized the frequency and to some extent the size of its refundings.

The frequent cash financings after October 1956 were partly a consequence of seasonal operating deficits, unexpectedly heavy defense expenditures, and large drawings on the IMF by foreign countries. A sizable share of the cash borrowing also went to meet cash drains from debt operations, such as the heavy redemption of Savings bonds, the sizable attrition on refundings, and the roll-over of very short-term borrowing. The two offerings of tax anticipation bills in January and February, for example,

Table II
Federal Cash Operations and Changes in Debt
Fiscal Years 1956 and 1957
(In billions of dollars)

Item	1956	1957
Cash surplus (-)	- 5.1	- 2.7
Add: Change in Treasurer's balance.....	+ 0.3	- 1.0
Equals: Net cash debt redemption (-) or borrowing (+) from the public.....	- 4.8	- 3.7
Less: Net sales of securities of Government corporations.....	0.7	0.7
Equals: Net change (cash basis) in gross public debt held by the public.....	- 5.5	- 4.4
Add: Net investments by Government agencies and trust funds.....	3.2	2.4
Net accruals of interest on Savings bonds.....	0.4	0.3
Other noncash borrowing.....	0.2	- 0.6
Equals: Net reduction (-) in gross public debt.....	- 1.6	- 2.2
Memorandum (end of year):		
Gross public debt.....	272.8	270.5
Debt subject to ceiling.....	272.4	270.2
Treasurer's balance.....	6.5	5.6

Note: Because of rounding, figures do not necessarily add to totals.
Source: Daily Statement of the United States Treasury.

merely replaced special 91-day bills. Subsequent cash borrowing late in March and May, as well as the tax bill auctioned in late June, was associated with the retirement in March and June of large tax-anticipation issues that absorbed the seasonal cash surpluses in those months.

The bulk of the new money issues and refundings carried short maturities. Of a total of 16.9 billion dollars of new money raised during the fiscal year (including the roll-over of the special bills), about two thirds were retired by the fiscal-year end; less than a billion of the remainder matures beyond the current fiscal year. Of the 33.5 billion dollars of new issues taken in exchange for maturing securities, 90 per cent must be repaid or refinanced in fiscal 1958; only 6 per cent of the total will mature as late as 1960 or 1962. As a result, the average maturity of the marketable debt fell from five years five months at the end of fiscal 1956 to four years nine months at the end of fiscal 1957.

The extensive reliance upon short-term financing did not prevent a significant rise in the Government's interest costs. The ratcheting-upward of interest rates is clearly illustrated by the experience in the Treasury's refunding operations. In the first exchange offering of the fiscal year a note issue carried a $2\frac{3}{4}$ per cent rate; the second refunding offered two certificates at $3\frac{1}{4}$ per cent, the third a $3\frac{3}{8}$ per cent certificate and a $3\frac{1}{2}$ per cent note, and the fourth a $3\frac{1}{2}$ per cent certificate and a $3\frac{5}{8}$ per cent note. Thus, from the first note to the last, the interest rates offered rose by nearly 1 percentage point. Interest costs on new cash offerings followed a similar pattern, but the trend is blurred somewhat by the effects of granting Tax and Loan Account credit for the majority of those issues.⁴

The heaviest attrition on refundings during the fiscal year was experienced in the refinancing of May 1, when 28 per cent of the outstanding amount of the maturing issue was turned in for cash. For the fiscal year as a whole, attrition averaged 9 per cent of the total exchange offerings, compared with 4 per cent in the previous fiscal year. The higher rate of cash redemption of maturing Federal issues during this period was associated with the generally strong competition for available funds by private and State and local government borrowers.

The repercussions from the pressures in the capital markets also were apparent in the Savings bond sector of the Federal debt. All told, net redemptions of Savings bonds (at issue price) in fiscal 1957 amounted to 3.2 billion dol-

lars, a sharp increase from net redemptions of 1.2 billion a year earlier. Most of the rise in Savings bond redemptions and the falling-off of sales reflected the response of relatively large investors to the upward adjustment in interest rates on other debt instruments. A change in the law enabled the Treasury to raise the return on Series E and H Savings bonds held to maturity from 3 per cent to $3\frac{1}{4}$ per cent, effective February 1, 1957, but at the same time the annual limit for such purchases was lowered from \$20,000 to \$10,000. In addition, on May 1 the Treasury discontinued the sale of Series J and K bonds, which had been intended primarily for larger investors.

SEASONAL FACTORS IN TREASURY FINANCING

The seasonal fluctuations in the Treasury's cash requirements, while still sizable, were smaller in fiscal year 1957 than in other recent years. In the first half of the fiscal year (July-December 1956) the Government incurred a cash deficit of 5.7 billion dollars, while in the second half (January-June 1957) there was a cash surplus of 8.4 billion dollars. The deficit-to-surplus turnaround in fiscal 1957 thus amounted to about 14 billion dollars, compared with 19 billion in fiscal 1956.

The reduced seasonal swing last year was partly due to the timing of cash expenditures, since the large increase in defense spending took place in the second half of the fiscal year, thereby holding down the surplus of that period. On the receipts side, the progress of the "current payments" plan for corporate taxes reduced the imbalance of tax receipts in the two halves. Nevertheless, out of 21.5 billion dollars of corporate taxes in the fiscal year, the Treasury still collected about 75 per cent in the January-June period; a year ago that proportion had been 80 per cent. While the major share of individual income taxes is subject to current withholding arrangements, or is collected through quarterly payments of estimated nonwithheld taxes, receipts continue to be somewhat clustered in the January-June period because final returns for the preceding year, as well as three of the four quarterly payments of estimated tax, are received then.

It is interesting to observe that the pattern of Treasury borrowing during fiscal 1957 was not determined simply by the seasonality of its current receipts and expenditures. Although there was the usual cash surplus in the January-June period, the amount of new money borrowing (9.3 billion dollars) in that period was larger than in the previous six months (7.6 billion). As noted above, a substantial amount of funds was required in the January-June period to redeem the short-dated debt sold in the previous half year as well as to meet the drains from attrition on refundings and heavy net Savings bond redemptions.

⁴ Commercial banks were permitted to make payment for most of the cash offerings by crediting their Treasury Tax and Loan Accounts. This arrangement encouraged the banks to bid aggressively for the new securities sold at auction, thereby holding down the average issuing rate for such securities.

COMMERCIAL BANK LIQUIDITY RATIOS ABROAD

Since the war a new credit-control instrument, sometimes called minimum liquidity ratios and sometimes securities reserve requirements, has been developed in a number of foreign countries. Under these requirements, commercial banks have to hold minimum reserves, in specified proportions of their deposits, in the form of prescribed liquid assets such as cash and government securities. Such liquidity ratios are in force both in countries that have cash reserve requirements¹ and in countries where cash reserve requirements do not exist. Essentially, the ratios are a means of ensuring that the commercial banks' holdings of Treasury bills or of other government securities remain at, or above, a prescribed minimum level. The purpose for which the ratios have been instituted, however, has varied among individual countries. Thus, soon after World War II, and again during the post-Korea inflation, several European countries turned to them in an effort to halt the excessive expansion of bank credit; in certain cases, the ratios also resulted in channeling bank funds into the financing of budget deficits. On the other hand, during the course of the postwar period, a number of less developed countries have established the ratios as a selective credit-control tool. More recently several countries, notably Canada, have introduced the ratios as a supplement to other quantitative credit-control instruments. In the United Kingdom, informal minimum liquidity ratios have been observed by the commercial banks for some time.

ORIGIN OF THE RATIOS

Initially, minimum liquidity ratios were established as a means of ensuring good banking practice. Thus, in the 1930's such ratios became a feature of the commercial banking legislation in the Scandinavian countries and Switzerland; ratios of this type still exist in these countries as well as in several others outside Europe, but they have become less significant than the ratios that were subsequently introduced for monetary policy purposes.

Belgium was the first country to turn to liquidity ratios as a weapon of quantitative credit control, adopting them in 1946;² Italy and France followed in 1947 and 1948. Sweden, the Netherlands, and Austria also turned to this instrument during the year following upon the outbreak of the Korean conflict in mid-1950. In Belgium, Italy, and France, the abnormally heavy wartime and immediate postwar accumulation of government securities in commercial bank portfolios created the risk that the banks would try to meet the postwar surge in the demand for

¹ See "Commercial Bank Reserve Requirements Abroad", *Monthly Review*, October 1955.

² The Belgian authorities in 1935 had received statutory power to establish liquidity ratios for the purpose of ensuring good banking practice, but never exercised this authority. The ratios were finally established in 1946, not for this purpose, but for monetary policy uses.

loans by resorting to massive redemptions of government securities or to sales of these securities to the central bank. The liquidity ratios therefore were introduced in these countries as a means of immobilizing the government securities portfolios of the commercial banks, rendering the banks dependent on the central bank "discount window" and thereby preventing an excessive extension of credit to private borrowers. In Austria, the Netherlands, and Sweden, which adopted liquidity ratios during the post-Korea inflation, the circumstances were similar although less extreme. The Netherlands abolished the ratios in 1952, but subsequently reintroduced them on a stand-by basis.

More recently, liquidity ratios have been established in Australia, Canada, and the Union of South Africa in order to supplement the monetary authorities' other powers over bank credit expansion. In Australia, cash reserve requirements, called "special accounts", are the main instrument of monetary policy. At times, however, the Australian commercial banks' liquidation of their government securities holdings, in a market supported by the central bank, largely nullified the restraining effect of these requirements. In 1954 such selling of government securities by the Australian banks prompted the central bank to propose that the banks observe a ratio of 25 per cent between their liquid assets (including all government securities) and their total deposits; the central bank stated that its monetary policy would thereby be made more effective. Two years later the central bank was able to report that all banks had given assurances that they would not let their ratio of liquid assets and government securities to deposits fall below an agreed uniform minimum.

In the case of Canada, minimum liquidity ratios were introduced in mid-1956 in an effort to reinforce the effectiveness of the Bank of Canada's primary credit-control instruments of open market operations and cash reserve requirements. At present the Canadian liquidity ratios are set at 15 per cent of deposits and, in contrast to the Australian regulations, include among eligible liquid assets only Treasury bills (in addition to cash and day-to-day loans to government securities dealers) instead of the broad range of government securities. According to the Bank of Canada, the primary purpose of the liquidity ratios is to limit the scope, during periods of credit restraint, for commercial bank liquidation of Treasury bills to support an expansion of bank loans. The commercial banks, thus restrained from running down their secondary reserves of liquid assets, would quickly be confronted with the necessity of selling off less liquid assets, such as government bonds, to finance loan expansion. In such circumstances it is expected that the capital losses likely to be incurred on such sales would compel the banks to scruti-

nize loan applications more carefully and would generally temper the inducement to expand loan portfolios. Any judgment of the effectiveness of the Canadian liquidity ratios is handicapped by the brief period during which the ratios have been in effect, but the experiment will continue to be studied with interest by central banks throughout the world.

In the Union of South Africa, which had statutory fixed cash reserve requirements, the central bank in 1956 obtained authority to impose liquidity ratios above the level of the statutory cash minima as well as to increase the cash minima themselves. The new powers were intended as an added means of controlling credit, in order to provide a further safeguard against inflationary pressures. The central bank was given the power to introduce liquidity ratios, mainly in order to neutralize possible substantial extensions of central bank credit to the government or public institutions.

A minimum liquidity ratio is also observed by commercial banks in the United Kingdom. The ratio, which in a loose form appears to have been maintained by British commercial banks for some time, has become an acknowledged practice in the past few years. In 1955, the authorities are reported to have secured an understanding from the commercial banks for its observance. The minimum ratio is not rigid—it tends to vary seasonally—but at the seasonal low the banks are expected not to let their holdings of cash, call money, and commercial and Treasury bills fall below 30 per cent of their deposits. The British minimum liquidity ratio which, like the Canadian ratio, does not cover the banks' government bond holdings operates on the principle that, as the actual liquidity ratios decline to the minimum, the banks will be forced to restrain the growth of their less liquid assets or even to reduce their government bond holdings and/or their loans. Or, as the governor of the Bank of England said, "when government borrowing is in hand but bank advances are increasing too fast, the liquidity ratio rings a bell of warning to the banks". On the other hand, when the banks' liquidity is rising, the ratio may point up the need for a change in the government's fiscal and debt management policies—i.e., "when bank advances are in hand but government short-term borrowing is mounting dangerously, it rings a bell of warning to the government".

In addition to being used as an instrument of quantitative credit control, liquidity ratios have also been established primarily for selective credit-control purposes—to direct credit into desired channels—generally in countries with less developed financial systems. Thus, in a number of countries in Asia and Latin America such ratios were introduced during the wartime and early postwar years in order to lodge a portion of the government debt in commercial bank portfolios, and often were intended to help develop a market for government securities. More recently, they were introduced, also as a qualitative instrument, in

a few additional countries in Asia and Latin America; thus, in Cuba and Honduras existing cash reserve requirements were changed in 1955 to permit the banks to hold a part of their required reserves in government securities, while in Indonesia, where no commercial bank reserve requirements had existed, liquidity ratios were established in 1957. Furthermore, in a few of these countries (e.g., Israel and Mexico) the requirements have been used to channel bank funds into specific types of nongovernment loans that the authorities wish to promote, by authorizing the banks to count such loans as meeting a part of their reserve obligations.

CHARACTERISTICS OF THE RATIOS

The liquidity ratios that have been established as instruments of quantitative credit control in Western Europe and the British Commonwealth are of much wider interest than those used as qualitative instruments, and the remainder of this article will be focused upon them. While these ratios naturally exhibit certain common characteristics, they vary widely as regards both the way in which they are administered and the kind of assets which they cover. They have a statutory basis in Belgium, France, Italy, the Netherlands, and the Union of South Africa (in the last two countries they are at present not in force). In Australia, Austria, and Canada, on the other hand, they exist under special agreements between the authorities and the commercial banks, and in Sweden under "unilateral recommendations" of the central bank; in Sweden, in addition, the central bank has statutory authority to make the liquidity ratios compulsory. In the United Kingdom, as already noted, they are basically a matter of banking practice. The monetary authorities are specifically empowered to vary the ratios in the Netherlands, Sweden, and the Union of South Africa, but they can also do so in the other countries either under their general powers or through renegotiation of existing agreements with the commercial banks.

In those countries where the authority to set the liquidity ratios is not given exclusively to the central bank, the bank nevertheless has great influence in the formulation of policy. Thus, in Austria the liquidity ratios are set by agreement between the Finance Ministry and the commercial banks, but only after consultation with the central bank; in France and Italy, the central bank plays the leading role within the policy-making body entrusted with the supervision of the ratios—the National Credit Council in France and the Interministerial Committee on Credit and Savings in Italy. In Belgium, it is true, the liquidity ratios are the responsibility of the Banking Commission, under the general authority of the Finance Ministry, but even there the central bank has an important voice. In the Union of South Africa, however, the central bank has power to impose and vary the ratios only with the consent of the Treasury.

Cash reserves held under existing minimum cash ratios are included in the computation of the liquidity ratios in Austria, Belgium, Canada, the Netherlands, and the United Kingdom; in Australia and in the South African legislation, on the other hand, such cash reserves are excluded, and the liquidity ratios are in effect supplementary requirements. Cash assets are also included in the liquidity ratios in the countries that do not have cash reserve requirements except France; in that country, where the commercial banks have long operated with very small cash ratios and have used Treasury bills for adjusting their positions, such bills are the only liquid assets that can be included in the ratios. In Italy, eligible liquid assets comprise only government securities besides balances with the central bank. Call loans or their equivalent are eligible in Austria, Belgium, Canada, the Netherlands, and the United Kingdom, commercial bills in Austria and the United Kingdom, and in Austria also nongovernment bonds quoted on the Vienna stock exchange; other approved nongovernment assets are eligible in the South African legislation.

As regards government securities holdings, the liquidity ratios in all these countries except Canada and the United Kingdom cover all types of marketable government securities (and sometimes government-guaranteed securities) that are held by the banks to any important extent; in Canada and the United Kingdom, Treasury bills are the only government securities eligible (government bonds, which are held by the banks in large amounts, are not eligible). In France and the Netherlands, it is true, only short-term marketable government securities are eligible—in France, Treasury bills issued with original maturities of up to two years, and in the Netherlands, Treasury bills of up to one year and Treasury notes of up to five years—but in these countries the commercial banks' holdings of other marketable government securities are negligible. Belgium makes all government securities eligible for the liquidity ratios applicable to time liabilities, but specifies in detail the composition of the required government securities holdings against demand liabilities, certain longer term securities being excluded. Austria, Italy, and Sweden, on the other hand, permit the inclusion of all government securities without restriction.³ In the Union of South Africa, government securities with a maturity of up to three years might be included, as well as any other assets approved by the central bank, up to the amount by which these securities and other assets exceed a bank's holdings as of a date specified by the central bank.

The liquidity ratios are based on total deposits except in Sweden and Belgium. Sweden excludes savings deposits from the base but adds some minor liabilities, while Belgium has separate requirements for sight and time liabilities.

³ Austria, in addition to an over-all liquidity ratio, has a primary liquidity ratio, half of which may be satisfied through holdings of Treasury bills and the remainder by cash assets. In Italy, the securities in question must be deposited at the Bank of Italy.

Ratios are generally related to current levels of deposits, rather than to *increases* in deposits above some specified amount; the only exceptions are in the Union of South Africa where they may be imposed on either basis, and in Italy where a 40 per cent minimum ratio against increases in deposits applies until a bank's actual ratio reaches 25 per cent of deposits, at which point the latter ratio becomes operative. The liquidity ratios are uniform for all banks except in Belgium and Sweden. Belgium classifies banks in four categories according to size and type, while Sweden differentiates among banks according to size alone; in the Netherlands, where the ratios are not now in force, they would be adjusted according to the size of the banks by exempting the first 10 million guilders of deposits from the requirement.

The liquidity ratios apparently must be observed at all times in most of the countries under discussion; in practice, however, verification of such observance probably is possible only at the time of the periodic bank statements. The Canadian liquidity ratios provide for a monthly averaging, thus permitting day-to-day variations in the ratios so long as the month's average is not below the minimum; such averaging is apparently also the practice in the United Kingdom.

EXPERIENCE WITH LIQUIDITY RATIOS

The effectiveness of the liquidity ratios as a quantitative credit-control instrument has varied widely, mainly according to the circumstances at the time of their introduction as well as the subsequent budget and debt-management policies of the governments. In Belgium, France, Italy, and the Netherlands, the ratios were successful in accomplishing their immediate purpose of restraining bank credit through a locking-in of the banks' government securities holdings. Even though the commercial banks in these countries had some leeway in their operations at the time the ratios were established, the point soon arrived when they could no longer sell government securities in order to expand loans to private borrowers. The banks were thus forced to have recourse to central bank credit, the rates for which were increased to discourage such borrowing; and the expansion of bank loans slowed down markedly. In Italy, in addition, the psychological impact of the introduction of the ratios, during a period of rapid inflation, was very important, since their establishment led to a drastic revision of business expectations. On the other hand, in Sweden, where the authorities felt it necessary after a time to combine the ratios with directives to the commercial banks regarding the level of their bank loans, the directives seem to have been more instrumental than the ratios in halting bank credit expansion.

With the passage of time, however, the requirement that the commercial banks enlarge their government securities holdings in proportion to their deposits has often had the result that larger and larger amounts of bank funds have

been channeled to the Treasury as the primary reserves of the banks have been permitted to increase. The ratios have thus tended in some of these countries to become increasingly a vehicle for facilitating the financing of government deficits and less a means of restraining bank credit.

Moreover, in Belgium, where the ratios require unusually large holdings of government securities, it has been contended that they have actually had a destabilizing impact on the economy because of the way they affect the financing of the government's continued deficit. Thus, during periods of rapid world-wide expansion of demand, when Belgium usually gains gold and foreign exchange, the primary reserves of the commercial banks tend to increase. On the basis of such reserve additions, the banks expand their domestic loans, but because of liquidity ratios that are as high as 65 per cent they have to acquire about two francs of reserve-eligible liquid assets—in practice government securities—for every franc of the loans that they wish to add to their loan portfolios. The government is thus provided with an automatic method for financing its deficits, and needs to rely relatively little on raising funds in the capital market, making it easier for private borrowers to do so. In contrast, during periods of a decline in demand for Belgian goods accompanied by a slowing-down or even a reversal of Belgian foreign exchange gains, the additions to the primary reserves of the banks level off or are even replaced by losses; as a result, the government obtains less of its financing from the banks, and has to rely increasingly on the capital market. In view of these circumstances, it is not surprising that Governor Frère has implicitly criticized on a number of occasions the workings of the ratios.

Since their establishment, the actual minimum ratios have been changed in Austria, France, and Sweden. In Austria, they were increased within a year of their establishment, but greater emphasis was subsequently placed on credit-control regulations intended to restrain the expansion of bank loans for nonapproved purposes. In France, the ratio was changed in mid-1956 to apply to total deposits instead of to increases in deposits. This change, which made necessary an increase in the banks' holdings of Treasury bills, was intended, according to the Bank of France's annual report, both to satisfy the immediate needs of the Treasury and to limit a possibly excessive credit expansion. In Sweden, the minimum ratios were raised substantially in 1952, and at the same time were put on an informal basis. The present informal arrangement, however, does not prevent the authorities from reintroducing the requirements on a statutory basis. Indeed, in April 1955 the central bank announced that statutory ratios would be put into effect if by the following July the commercial banks had failed to reach the minimum ratios. However, the banks increased their holdings of liquid assets in time. In addition, in Belgium, the com-

position of the assets eligible for the liquidity ratios has been changed slightly a number of times, primarily to provide some diversification of the required reserves and thus increase somewhat the freedom of the commercial banks in the management of their government securities portfolios. In the Netherlands, where liquidity ratios were established in 1951 on a temporary basis, they were abolished within fifteen months after having helped to slow down the domestic boom, but later were reintroduced on a stand-by basis.

In the United Kingdom, the actual liquidity ratios of the banks have during most of the postwar period been so much above the minimum that an evaluation of the impact of the minimum ratio on the banks' operations is difficult. In late 1951, it is true, the actual ratios dropped low enough to exert pressure on the banks. In the first half of 1955, on the other hand, when the actual ratios again fell sharply, bank loans continued to rise rapidly. The banks were able to maintain their ratios above the minimum only by continuous large sales of government securities. After mid-1955 bank loans began to decline, but within a few weeks thereafter the authorities specifically requested the banks to reduce their loans; the further decline in loans must therefore be attributed primarily to this request.

SOME MAJOR PROBLEMS

The foreign experience with liquidity ratios throws light on some of the difficulties noted in the postwar United States discussions of this instrument (for example, in the various Patman Committee documents in 1952). Of these difficulties, the problems of assuring equity as among individual banks and of limiting the amount of Treasury financing at the banks and thus the volume of reserve-eligible assets seem the most important. The equity problem arises because of differences in the asset structures of the individual banks, and foreign countries have attempted to meet it in a number of ways. Thus, France, Italy, and the Netherlands, when they first introduced the liquidity ratios, linked the ratios to increases in deposits. Such arrangements, it is true, overcome the problem of the existing differences in the asset structure of individual banks; at the same time, however, they penalize those individual banks whose deposits are growing most rapidly. If the arrangement is only temporary, as it was in the Netherlands, this discrimination against growing banks need not be serious. In Italy, the problem tends to be mitigated by the provision that the requirement of a 40 per cent minimum cover against deposit increases ceases to apply when a bank's total holdings of reserve assets has reached 25 per cent of its total deposits.

In Belgium and Sweden, the problem was met by adjusting the minimum ratio according to the size of the bank; such an adjustment is also provided for in the Netherlands where the ratios are on a stand-by basis. The Netherlands has also used another method for meeting the problem.

In 1954 the Dutch Treasury floated, for the most part in exchange for short-term government securities, a special issue of eight to ten-year securities marketable only among the banks and ineligible for the liquidity ratios, in order to reduce the exceptionally high liquidity of the banking system. The issue, however, had the additional effect of removing the interbank differences in holdings of short-term government securities. The banks with especially large holdings of short-term government securities exchanged these in larger amounts than the other banks for the new funding issue, despite its restricted marketability, because the yield was relatively high.

It is of course self-evident, however, that a funding issue can be of no help in overcoming the problem of equity when the liquidity positions of individual banks are relatively low. Under such conditions of low liquidity, a gradual introduction of minimum liquidity ratios can help alleviate the unfavorable impact of the ratios on individual banks by giving them time to adjust their positions. This procedure was followed in Austria, Canada, and Sweden, where the banks were allowed several months before the new ratios became fully effective. In Canada, moreover, because the banking system's holding of Treasury bills had fallen to an unusually low level by the time the ratios were agreed upon, the Bank of Canada reportedly stood ready to undertake swaps with the commercial banks by selling them Treasury bills from its holdings in exchange for government bonds; at the same time, the Treasury stepped up its weekly issue of Treasury bills. The market repercussions of the new liquidity ratios thus were minimized, and the commercial banks were enabled to reach the minimum ratios well before the target date.

One of the most serious problems to have confronted those foreign countries that have relied on liquidity ratios as a quantitative credit-control instrument has been that of Treasury borrowing at the banks. The foreign experience clearly confirms the view that minimum liquidity ratios do not necessarily have any credit-restraining effect unless budget and debt-management policies are such as to limit the volume of the reserve-eligible government securities. It also shows that an increase in the minimum ratios to offset the expansionary effect of a growing volume of reserve assets has very rarely been a practical policy. The experience of Belgium, France, and Sweden is particularly revealing in this respect. The governments of these countries, faced by large budget deficits, resorted increasingly to the issue of reserve-eligible government securities. At the same time, the primary reserves of the banks rose, mainly owing to an inflow of gold and foreign exchange or government borrowing from the central banks. The banks therefore had little difficulty in expanding credit to private borrowers despite the existence of the minimum liquidity ratios. The credit-restraining effect of limiting the volume of reserve-eligible assets can be seen in the experience of Mexico. In that country,

where during most of the postwar period the special reserve requirements were applied mainly as an instrument of selective credit control, the authorities more recently have used them to restrain over-all credit expansion by so changing the requirements as to include in the required reserves certain securities available only from the central bank.

Recent developments in the United Kingdom likewise have pointed up the impact of fiscal and debt-management policies on the effectiveness of the liquidity ratios. Despite the consistent efforts of the authorities to keep the floating debt down to manageable size, this debt at times in recent years rose substantially. The banks' Treasury bill holdings thus became large and their actual liquidity ratios comfortable; consequently, as the governor of the Bank of England pointed out, it became more difficult to maintain pressure on the banks. Nevertheless, the British authorities rejected the alternative method of operating through an enforced variable minimum liquidity ratio, and continued to pursue their policy of reducing the volume of short-term debt by budget economies, a savings drive, and a general funding program. The governor of the Bank of England, affirming his belief that the right decision had been taken, stressed the need for an appropriate fiscal policy and noted that "a mandatory increase in the liquidity ratio by forcing the banking system to hold more Treasury bills, would work in absolute contradiction with a policy of funding and reducing bank lending to the Government".

CONCLUDING REMARKS

The experience with the liquidity ratios as an instrument of monetary policy thus has been somewhat mixed. As a qualitative instrument—their main use in the countries with less developed financial systems—the ratios have not been very successful. Where they have been utilized to direct nongovernmental expenditures into desired channels, through the inclusion of approved bank loans among the reserve-eligible assets, they have had the usual weaknesses of selective credit controls—particularly the difficulty of determining the end-use of bank loans and the possibility that borrowers may obtain larger loans for the "permitted" or "preferred" purposes and employ their own funds thus freed on expenditures that the selective controls are intended to discourage. In those Asian and Latin American countries where their establishment was regarded as a means of helping develop a market for government securities, they have had only moderate success in accomplishing this purpose, even though they have resulted in lodging a portion of the government debt in the commercial banks' portfolios.

Where the ratios were established as a quantitative instrument to deal with conditions of extreme bank liquidity, such as prevailed in Europe in the early postwar years, they generally fulfilled their objective. Their usefulness

under less strained circumstances, however, is more difficult to appraise, although it is clear that they have in some cases been applied as a substitute for a flexible interest rate structure and have thus hindered the conduct of an effective monetary policy. In a number of countries the efficacy of the ratios as a credit-control weapon has been impaired by budgetary and debt-management policies that have led to an increase in the volume of reserve-eligible assets, particularly short-term government debt; where this has happened, the existence of the liquidity ratios has

proved no obstacle to an excessive expansion of credit. In other countries, the ratios have not been in force long enough for their effectiveness to have been fully tested, while in a few they have been only a temporary expedient that was soon reinforced or replaced by other credit-control measures. However, in every case where minimum liquidity ratios have been relied upon, the experience with this instrument has served to highlight the vital importance of reinforcing credit control by appropriate budget and debt-management policies.

SELECTED ECONOMIC INDICATORS
United States and Second Federal Reserve District

Item	Unit	1957			1956	Percentage change	
		June	May	April	June	Latest month from previous month	Latest month from year earlier
UNITED STATES							
<i>Production and trade</i>							
Industrial production*	1947-49=100	143 _p	143	143 _r	141	#	+ 1
Electric power output*	1947-49=100	—	228	227	219	#	+ 5
Ton-miles of railway freight*§	1947-49=100	—	101 _p	106	107	- 5	- 5
Manufacturers' sales **¶	billions of \$	28.4 _p	28.6	28.7	n.a.	- 1	n.a.
Manufacturers' inventories**¶	billions of \$	54.0 _p	53.9	53.7	n.a.	#	n.a.
Manufacturers' new orders, total**¶	billions of \$	27.2 _p	28.4	27.9	n.a.	- 4	n.a.
Manufacturers' new orders, durable goods**¶	billions of \$	13.2 _p	14.1	13.2	n.a.	- 6	n.a.
Retail sales**¶	billions of \$	—	16.4 _p	16.3	15.9	+ 1	+ 4
Residential construction contracts*	1947-49=100	—	n.a.	n.a.	269	n.a.	n.a.
Nonresidential construction contracts*	1947-49=100	—	260	287	248	- 9	-11
<i>Prices, wages, and employment</i>							
Basic commodity prices†	1947-49=100	89.7	88.2	88.8	88.3	+ 2	+ 2
Wholesale prices†	1947-49=100	117.4 _p	117.1	117.2	114.2	#	+ 3
Consumer prices†	1947-49=100	120.2	119.6	119.3	116.2	+ 1	+ 3
Personal income (annual rate)**¶	billions of \$	343.8 _p	342.9	340.6	326.8	#	+ 5
Composite index of wages and salaries*	1947-49=100	—	155 _p	155	149	#	+ 5
Nonagricultural employment*†¶	thousands	52,615 _p	52,639 _p	52,568	52,026	#	+ 1
Manufacturing employment*†¶	thousands	16,893 _p	16,935 _p	16,965	16,895	#	+ 1
Average hours worked per week, manufacturing†	hours	39.9 _p	39.7	39.8	40.2	+ 1	- 1
Unemployment†	thousands	3,030	2,489	2,481	2,927	+22	+ 4
Unemployment†	thousands	3,337	2,715	2,690	n.a.	+23	n.a.
<i>Banking and finance</i>							
Total investments of all commercial banks	millions of \$	72,010 _p	73,680 _p	73,970 _p	73,122	- 2	- 2
Total loans of all commercial banks	millions of \$	93,280 _p	91,180 _p	90,900 _p	86,887	+ 2	+ 7
Total demand deposits adjusted	millions of \$	103,540 _p	104,770 _p	107,350 _p	104,744	+ 1	+ 1
Currency outside the Treasury and Federal Reserve Banks*	millions of \$	31,083 _p	30,655	30,922	30,720	#	+ 1
Bank debits (337 centers)*	millions of \$	77,684	85,408	82,596	75,734	- 9	+ 3
Velocity of demand deposits (337 centers)*	1947-49=100	145.0 _p	148.1	143.8	135.0	- 2	+ 7
Consumer instalment credit outstanding†	millions of \$	32,344	31,901	31,532	30,084	+ 1	+ 8
<i>United States Government finance (other than borrowing)</i>							
Cash income	millions of \$	12,214	7,487	4,804	12,192	+63	#
Cash outgo	millions of \$	7,297	7,017	6,726	6,898	+ 4	+ 6
National defense expenditures	millions of \$	3,474	3,166	3,280	3,505	+10	- 1
SECOND FEDERAL RESERVE DISTRICT							
Electric power output (New York and New Jersey)*	1947-49=100	—	156	154	156	+ 1	+ 2
Residential construction contracts*	1947-49=100	—	n.a.	n.a.	230	n.a.	n.a.
Nonresidential construction contracts*	1947-49=100	—	n.a.	n.a.	285	n.a.	n.a.
Consumer prices (New York City)†	1947-49=100	117.9	117.2	116.9	113.8	+ 1	+ 4
Nonagricultural employment*	thousands	7,829.0 _p	7,829.0	7,836.0	7,867.6	#	#
Manufacturing employment*	thousands	2,660.5 _p	2,665.0	2,669.9	2,723.0	#	- 2
Bank debits (New York City)*	millions of \$	69,637	73,245	73,059	66,106	- 5	+ 5
Bank debits (Second District excluding New York City)*	millions of \$	4,946	5,393	5,340	4,892	- 8	+ 1
Velocity of demand deposits (New York City)*	1947-49=100	181.7	184.4	181.7	166.0	- 1	+ 9
Department store sales*	1947-49=100	117	115	109	114 _r	+ 2	+ 3
Department store stocks*	1947-49=100	134	131	131	126	+ 2	+ 6

Note: Latest data available as of noon, August 2, 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 United States Department of Commerce.

†† Revised series. Back data available from the United States 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.