

FEDERAL RESERVE BANK OF NEW YORK



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The Business Situation

The economy continues to exhibit an impressive and broadly based expansion. Real gross national product (GNP) rose at a vigorous 8.9 percent seasonally adjusted annual rate in the second quarter, as almost all major components contributed to the advance. Moreover, this gain followed sizable upward revised increases in real GNP in the two preceding quarters. Industrial production posted only a moderate increase in June, but over the first half of the year output rose at a rapid 8.5 percent annual rate. Both civilian employment and labor force changed little in July, on a seasonally adjusted basis. Consequently, the unemployment rate remained at 5.5 percent for the second consecutive month, down markedly from its average level of 5.9 percent that had prevailed since late 1970.

Recent data on wages and prices show some definitely encouraging developments. The pace of wage increases has slowed somewhat, and unit labor costs declined in the second quarter for the first time in over six years. The implicit GNP price deflator—the most comprehensive available measure of price behavior—rose at a relatively modest 2.1 percent annual rate in the second quarter, but shifts in the composition of output caused some understatement of actual inflation. The rise in consumer prices has been appreciably slower in the last four months. On the other hand, throughout the period since the end of the price freeze last November the wholesale price index has continued to rise rapidly.

GROSS NATIONAL PRODUCT AND RELATED DEVELOPMENTS

According to preliminary estimates by the Department of Commerce, the market value of the nation's output of goods and services rose by \$29.9 billion during the second quarter to a seasonally adjusted annual rate of \$1,139 billion. Measured in current dollars, the increase was a bit smaller than the advance in the first quarter. However, only about one fifth of the most recent gain was accounted for by price increases, whereas in the first quarter price rises constituted almost half of the expansion in nominal

GNP. Hence, the growth in real GNP—that is, GNP adjusted for price changes—accelerated sharply in the April-June period to a seasonally adjusted annual rate of 8.9 percent, the largest quarterly percentage increase in real GNP since the fourth quarter of 1965. Along with the preliminary data for the second quarter, the Department of Commerce released its annual revisions of the GNP data going back through 1969. Estimates of real GNP were revised upward significantly for the final quarter of 1971 and the first quarter of this year. Over these two quarters combined, real GNP growth is now estimated to have averaged 6.6 percent per annum, nearly 1 percentage point more than was previously reported. These latest figures bring the increase in real GNP over the four quarters ended in the second quarter of 1972 to a healthy 6.1 percent, significantly above the gain for any comparable period in the past six years (see Chart I).

Inventory investment as well as final spending apparently rose substantially in the second quarter. Tentative and incomplete data indicate that the annual rate of inventory accumulation in the GNP accounts accelerated to \$4.3 billion in the April-June period as compared with only \$0.4 billion in the preceding quarter. Thus, after a prolonged period of sluggishness, inventory spending provided a \$3.9 billion stimulus to the overall advance of GNP (see Chart II). Prospects appear to be good for further gains in inventory investment in the months ahead in line with increases in sales. Business inventory-sales ratios, particularly in the manufacturing and retail sectors, remain at relatively low levels. Moreover, the latest survey conducted by the Department of Commerce found that manufacturers expect to add substantially to their inventories in the third quarter.

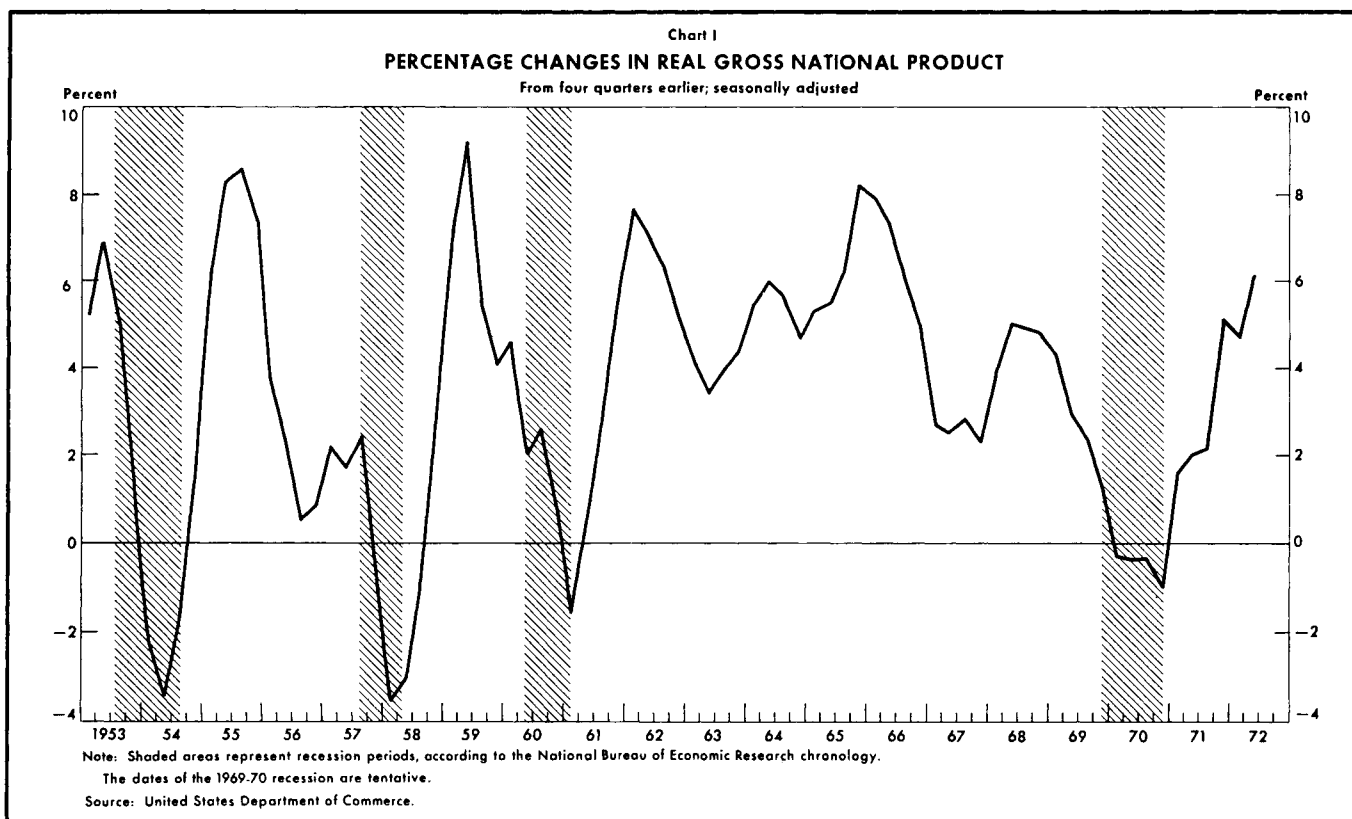
The second-quarter rise in current-dollar final expenditures—i.e., GNP net of inventory accumulation—amounted to \$26.1 billion, down from \$32.2 billion in the first quarter. In real terms, however, final spending rose at a rapid 7.2 percent annual rate, a shade higher than the growth over the January-March period. Among the components of final expenditures, consumer spending

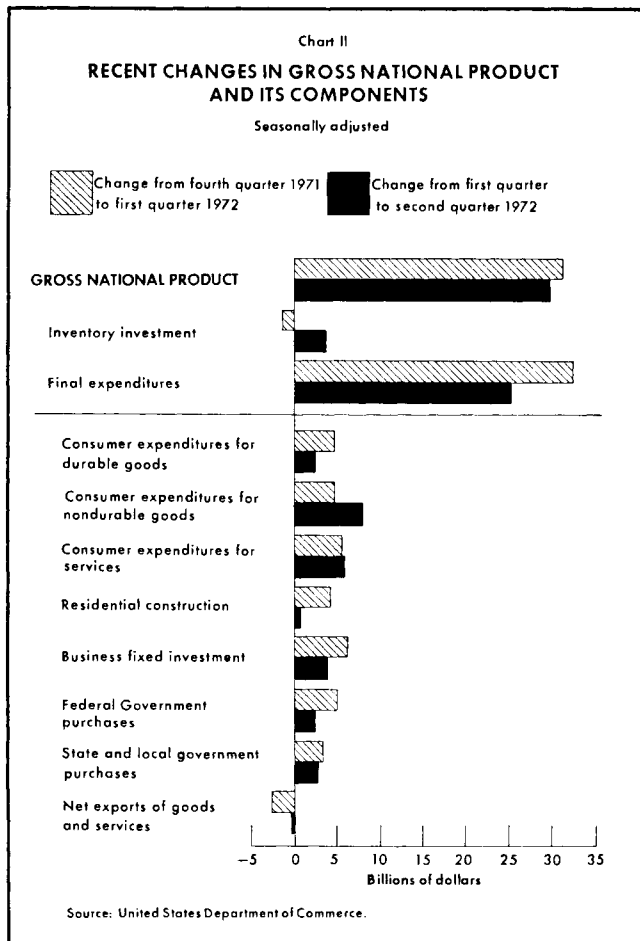
and business fixed investment were particularly strong, while residential construction rose modestly. Net exports of goods and services was the only major component which failed to contribute to the overall expansion of GNP, as the gap between imports and exports of goods and services widened slightly to an annual rate of \$4.9 billion.

Personal consumption expenditures rose by \$16.4 billion over the April-June period to a seasonally adjusted annual rate of \$712.5 billion. Outlays for nondurable goods and services posted relatively strong gains, while the increase in spending for durables moderated somewhat from the pace of the previous quarter. The large second-quarter rise in overall consumer spending as recorded in the GNP accounts had been presaged by developments in retail sales during the quarter. Such sales were particularly strong in May, but according to preliminary June data—which could be revised substantially—retail sales declined by \$500 million in that month after increasing by an average of \$400 million per month over the January-May period. Automotive sales as well as sales of other durables and nondurables were all down substantially in June.

However, retail sales may have been held back significantly in that month by the effects of flooding in the northeastern part of the country. In any event, recent surveys of consumer attitudes indicate that the consumer remains in a relatively strong buying mood. In addition, the recently enacted social security measures which provide a 20 percent general benefit increase with payments beginning in October should provide a boost in consumer spending in the fourth quarter.

The severe flooding in the East seems also to have had a significant effect on personal income in the final month of the quarter. After registering sizable gains in April and May, personal income was essentially flat in June when sharp declines in proprietors' income and rental income offset the rise in wage and salary disbursements. Over the quarter as a whole, personal income rose by \$15.5 billion, a considerably smaller increase than the \$25.5 billion advance of the first quarter. It should be noted, though, that the first-quarter rise was boosted by several non-recurring special factors. Disposable after-tax income grew by \$12.4 billion over the April-June period, about the





same gain that was posted in the preceding quarter. At the same time, the ratio of personal savings to disposable income declined for the fourth consecutive quarter to 6.6 percent.

The latest reading for the savings rate is the lowest since the fourth quarter of 1969 and is only slightly above its average for the entire post-Korean war period. While the overwithholding of personal income taxes has probably artificially depressed the savings rate in the last two quarters, it appears that even allowing for this effect there has still been a significant decline. For example, it is estimated that overwithholding increased Federal tax payments by approximately \$8 billion at an annual rate in each of these two quarters. Even if all of this overwithholding were fully intentional, the implied value of the true savings rate in the April-June period would still be about 1 percentage point below the record 8.6 percent posted in the second quarter of 1971.

Business fixed investment grew by \$4 billion in the second quarter, with the gain concentrated almost exclusively in producers' durable equipment. This increase, coupled with the extraordinary \$6.3 billion rise in capital expenditures during the January-March period, brought the growth in the first half of this year to an annual rate of 19.6 percent. Moreover, recent data suggest continued strength in spending for new capital equipment in the months ahead, as new orders for nondefense capital goods rose sizably in both April and May and edged up further in June. In light of this evidence, it appears quite possible that the rise in plant and equipment expenditures for 1972 as a whole will surpass the 10.3 percent increase that was expected in the May survey of spending plans conducted by the Department of Commerce and may be closer to the 14 percent gain indicated in the McGraw-Hill spring survey. By comparison, plant and equipment expenditures rose by a small 1.9 percent in 1971.

Spending on residential construction increased by \$0.8 billion over the April-June period. This was the smallest quarterly gain in almost two years, suggesting that the housing boom may be peaking out—albeit at a very high level. Housing starts in the second quarter averaged 2.2 million units at an annual rate, down from the unprecedented 2.5 million unit pace set in the January-March period. In addition, the second-quarter level of building permits was slightly below its average of the previous three-month period.

Government purchases of goods and services contributed \$5.2 billion to the second-quarter GNP advance. Federal expenditures rose by \$2.5 billion, about half the increase of the January-March period which was swollen by civilian and military pay raises. The bulk of the rise in Federal expenditures in the second quarter reflected an increase in defense spending. This increase brought Federal spending for defense to an annual rate of \$78.6 billion, the highest level in more than two years. At the state and local levels, spending rose by \$2.7 billion in the April-June period, down \$0.8 billion from the increase of the previous quarter.

PRICES, WAGES, PRODUCTIVITY, AND EMPLOYMENT

With the exception of movements in the wholesale price index, recent price data confirm a definite easing of inflationary pressures. The slow advance of the consumer price index in the last four months is especially encouraging. Taking a somewhat longer perspective, June marked the first time since 1967 that the year-to-year change in this index was less than 3 percent. Moreover, the GNP de-

flator posted a relatively modest increase in the second quarter, although shifts in the composition of output caused some understatement of actual inflation.

According to preliminary estimates, the implicit GNP price deflator rose at a 2.1 percent seasonally adjusted annual rate in the second quarter, down sharply from the 5.1 percent rate of the January-March period. This comparison overstates the deceleration in the underlying pace of inflation since the first-quarter deflator was given a temporary boost by the post-freeze clustering of price increases and the Federal pay raises. Beyond this, the slowdown partly reflected shifts in the composition of output in the second quarter toward goods—such as producers' durable equipment—whose prices have risen less rapidly relative to the prices of others since the base year for the index. These shifts had a depressing effect on the deflator in the April-June period because this index is a weighted average of component price indexes, with the weights determined by the composition of output in each quarter. Thus, the chain price index, a measure of prices which is not affected by changes in the composition of output between adjacent quarters, rose at a 3.2 percent annual rate in the second quarter, down from the 3.9 percent average gain posted over the preceding four quarters.

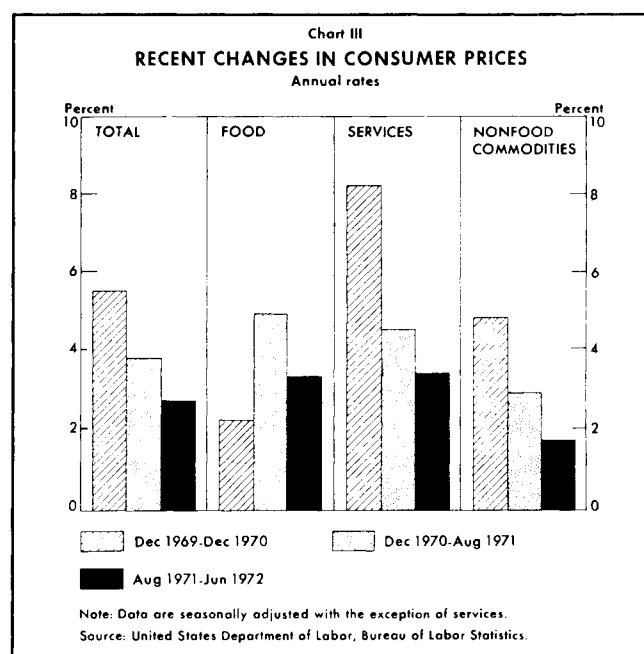
Recent movements in the consumer price index are encouraging. In June, consumer prices rose by only 0.7 percent on a seasonally adjusted annual basis. This small increase followed a 4 percent rise in May but very modest advances in the two preceding months. During the March-June period as a whole, increases in the consumer price index had averaged less than 1.8 percent per annum, the slowest advance in this index for any four-month period—including the months covered by the price freeze—in almost seven years. Overall, in Phase Two thus far, consumer prices have risen at an annual rate of 3.1 percent, down 0.7 percentage point from the pace of the first eight months of 1971 and substantially below the increases registered in each of the preceding three years when consumer prices rose annually between 4.7 percent and 6.1 percent. To some extent, this comparison may understate the recent deceleration in the advance of consumer prices, since increases that might otherwise have occurred during the price freeze tended to be bunched in the immediate post-freeze period. Thus, when the price-freeze and Phase Two periods are combined the slowdown is even more apparent (see Chart III).

The small June increase in the consumer price index resulted from virtually no change in prices of nonfood commodities as a whole, coupled with a 3.7 percent annual rise (not seasonally adjusted) in prices of services and a 2 percent gain in food prices. In the nonfood com-

modity group, the prices of some individual products—such as homes and used cars—moved up appreciably, but these increases were balanced by declines in the prices of apparel, gasoline, liquor, and fuel oil and coal. Within the service sector, mortgage interest rates moved up for the first time since October of last year and doctors' fees rose at a 6 percent annual rate. Not surprisingly, given recent movements in food prices at the wholesale level, retail prices of meats and poultry climbed sharply in June, and vegetable and fresh fruit prices also rose. In the light of the steep advance of wholesale food prices in July, the rise in consumer food prices seems likely to accelerate in coming months.

At the wholesale level, prices rose in July at a seasonally adjusted annual rate of 8.6 percent, the sharpest gain since August of last year. This huge July bulge mainly reflected a large increase in prices of farm products and processed foods and feeds which surged ahead at over a 24 percent annual rate. Livestock prices, particularly for hogs, and prices of fresh fruits, eggs, and poultry posted steep increases. At the same time, however, the rise in industrial commodity prices moderated to an annual rate of 2.8 percent.

July was the first month this year in which industrial commodity prices rose by less than 4 percent. While the rapid advance of such prices during the first few months of the year was expected in view of the post-freeze cluster-



ing of price increases, the sharp increase of 4.5 percent posted in the second quarter remains somewhat disturbing despite the more moderate July increase. Overall, in Phase Two thus far, industrial commodity prices have climbed at an annual rate of 4.1 percent, down 0.6 percentage point from the rise in the first eight months of 1971 but 0.6 percentage point above the average gain registered in the 1968-70 period.

The pace of wage increases has slowed somewhat in recent months. Compensation per hour of work in the private economy rose at a 5.6 percent seasonally adjusted annual rate in the April-June period, down from an average increase of 6.5 percent over the previous four quarters. Average hourly earnings—one of the monthly sources for the series on compensation per hour of work—rose very rapidly in April, posted very small increases in both May and June, and then rose moderately in July. Moreover, the latest Bureau of Labor Statistics survey reveals some moderation in the rate of increase in wages and benefits under major collective bargaining settlements. For example, in the manufacturing sector the mean life-of-contract wage and benefit gain for settlements, covering 5,000 or more workers, negotiated from January through June was 6 percent in contrast to 7.7 percent in 1971. The slowdown was even more pronounced in the construction sector, where the increase in the average life-of-contract settlements for wage and fringe benefits was 7.6 percent in the first half of 1972, down sharply from last year's 12.1 percent gain. It should be noted, however, that this survey covers contracts involving only 616,000 workers for all industries and excludes wage settlements, involving 750,000 workers, which had not been acted upon by either the Pay Board or the Construction Industry Stabilization Committee. In addition, 1972 is a relatively light collective-bargaining year and a much heavier load of settlements is expected to be negotiated in 1973. Thus, the extent to which this recent slowdown in the pace of wage increases under collective bargaining agreements proves to be of a permanent rather than temporary nature depends in part on future decisions of the Pay Board and perhaps more fundamentally on

whether price inflation is brought under control.

The growth of productivity, as measured by the index of output per hour of work in the private nonfarm economy, accelerated to a 4.8 percent seasonally adjusted annual rate in the second quarter. Including the farm sector, where productivity changes tend to be quite volatile on a quarterly basis, output per hour of work climbed at a 6.3 percent annual rate. This gain coming on the heels of the sizable advance in output per hour of work over the previous nine-month period brought growth in the second quarter from four quarters earlier to a rapid 4.4 percent, about 1.2 percentage points above its long-run trend. As a consequence of the substantial increase in productivity coupled with the moderation in compensation per hour of work, unit labor costs declined slightly in the second quarter for the first time in over six years. In contrast, unit labor costs climbed at an average annual rate of 6 percent over the 1968-70 period and rose by 2.2 percent in 1971.

According to the monthly survey of households, both civilian employment and the labor force were virtually unchanged in July, after adjustments for seasonal variations. As a consequence, the unemployment rate remained unchanged from June's level of 5.5 percent. Prior to these two months, the rate of unemployment had hovered near 5.9 percent since late 1970. Notably, the jobless rate for men twenty-five years of age and older declined in July by 0.3 percentage point to 3.0 percent, its lowest level in nearly two years. Jobless rates for teen-agers and men and women between twenty and twenty-four years of age rose during the month after posting declines in June. Following several months of sizable gains earlier in the year, the most recent survey of establishments indicates that non-farm payroll employment was essentially flat for the second consecutive month. In July, employment in the construction and manufacturing industries was particularly weak. It should be noted, however, that the decline in construction employment in this month partly reflected an increase in strike activity. Also, according to the Bureau of Labor Statistics, employment in both construction and manufacturing seems to have been held back by the effects of tropical storm Agnes.

Financial Developments in the Second Quarter

During the second quarter of 1972, the narrow money supply (M_1) grew at a seasonally adjusted annual rate of 5.3 percent, 4 percentage points below its rate of advance in the first three months of the year. At the same time, the broad money supply (M_2) and the volume of reserves available to support private nonbank deposits (RPD) expanded at far slower rates than had been witnessed in the January-March interval. However, aggressive bank marketing of large negotiable certificates of deposit (CDs) allowed the more comprehensive measure of member bank liabilities—the adjusted bank credit proxy—to expand at virtually the same rate as in the first quarter. On the asset side of the commercial banking system's balance sheet, bank credit growth slowed over the quarter, although the extent of the slowing may have been exaggerated by the manner in which bank credit is measured.

Despite the slowdown in the expansion of the monetary and reserve aggregates, upward movements in interest rates were quite moderate. To be sure, those money market yields most closely tied to the availability of funds to the banking system—the Federal funds rate, the rate on large negotiable CDs, and the prime loan rate—advanced somewhat over the interval. However, Treasury bill rates were virtually stable, as were commercial paper rates following an initial upward surge in this latter rate in April. At the longer end of the maturity spectrum as well, there was only a slight upward drift in yields, reflecting in part the easing of the demand for funds by the Federal Government and private corporations.

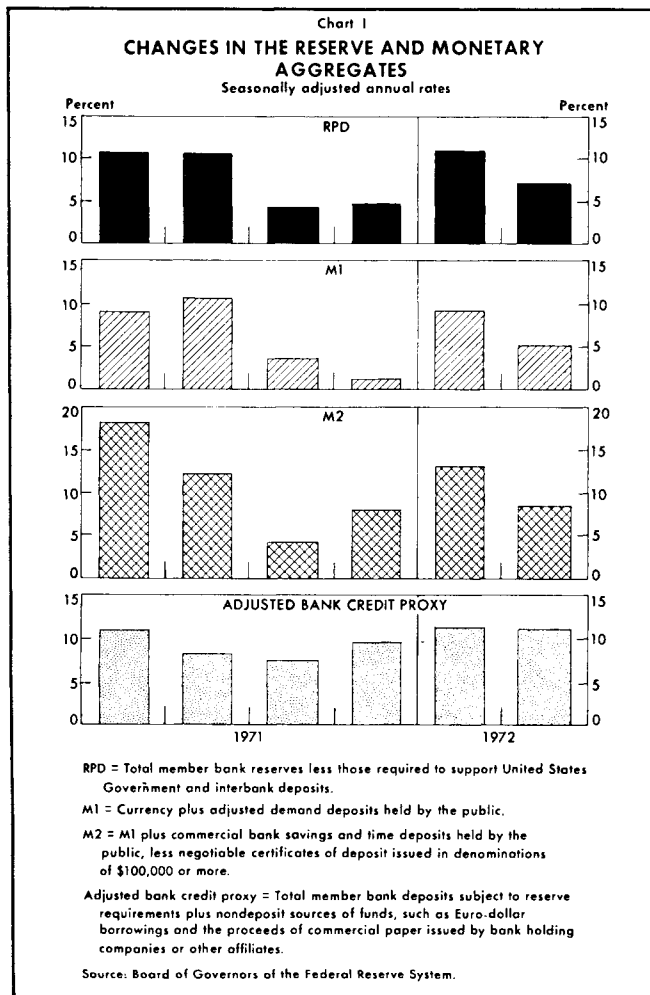
The healthy tone of the capital markets manifested by these interest rate developments was further reflected in the performance of the nonbank depository institutions as suppliers of funds to the residential mortgage market. The inflow of deposits to these institutions continued strong, though the rate of growth decelerated substantially from that witnessed in the first quarter. However, the data available through May suggest that despite the slowdown of deposit growth the combined rate of acquisition of mortgages by these institutions accelerated.

MONETARY AGGREGATES

Following its rapid first-quarter growth at a rate of 9.3 percent, M_1 —defined as currency outside banks plus private demand deposits—expanded at a more moderate rate of 5.3 percent in the second quarter (see Chart I). As a result, the growth rate of M_1 for the entire six-month period ended June 1972 was 7.4 percent. Moreover, from November 1970—which the National Bureau of Economic Research has tentatively dated as the trough of the current business cycle—through June of this year, M_1 grew at a seasonally adjusted annual rate of 6.8 percent, a rate only slightly above that regarded by many as commensurate with the goal of viable economic recovery.

The decline in M_1 growth over the quarter was accompanied by reductions in the rate of advance of RPD and M_2 —which adds to M_1 commercial bank savings accounts and time deposits except negotiable CDs in denominations of \$100,000 or more. In the April-June interval, the seasonally adjusted annual rate of growth of RPD slowed to 7.4 percent, compared with 11 percent in the first three months of the year. Growth of M_2 took place at a rate of 8.6 percent through the April-June period, in contrast to its first-quarter rate of 13.3 percent. This decline in M_2 growth was attributable not only to the slowing of M_1 expansion, but also to a marked decline in the rate of advance of consumer-type savings deposits from 17.1 percent in the first quarter of the year to 11.8 percent in the second. As a result, the growth rate of M_2 over the six months ended June 1972 was 11.1 percent, the same as its rate of growth over all of 1971.

Despite this deceleration in the growth of private deposits, a broader measure of liabilities of banks that are members of the Federal Reserve System—the adjusted bank credit proxy—increased at a rate of 11.1 percent in the second quarter, a rate of growth only 0.2 percentage point below that realized in the first quarter. To a large extent the continued strength of the bank credit proxy in contrast to the slowdown in the growth of the deposit aggregates reflected the ability of commercial banks to



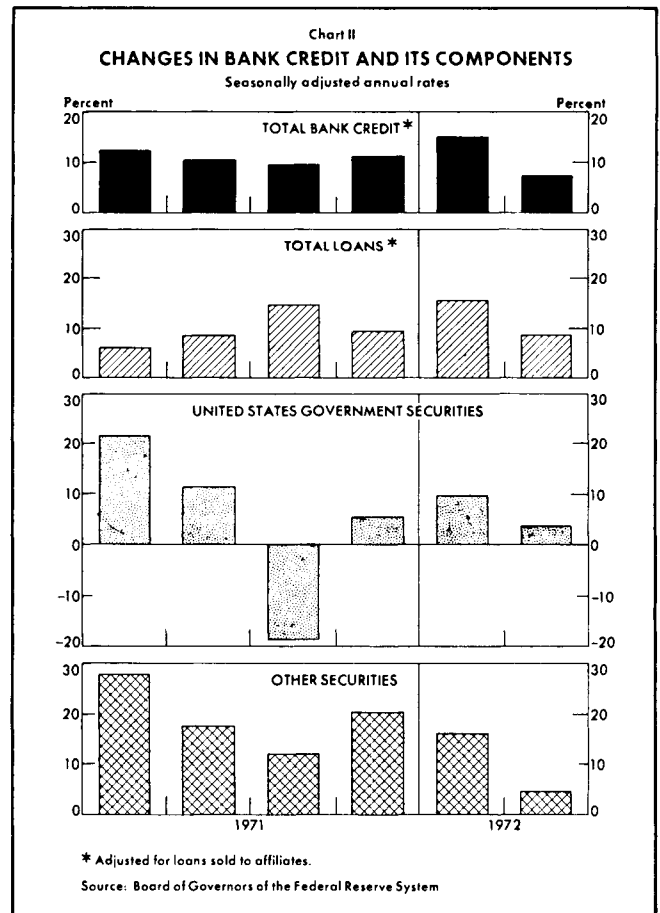
attract funds through the use of large-denomination CDs. Over the quarter, the rate on three-month CDs in the secondary market rose from 4.28 percent at the beginning of the quarter to 4.67 percent by its end. The volume of CDs outstanding expanded over the quarter by \$3.7 billion seasonally adjusted, an annual rate of increase of 44 percent. At the outset of the period, this CD growth was accompanied by large increases in the level of Treasury deposits in Tax and Loan Accounts. However, the accounts were drawn down sharply in June and showed a small net decline over the quarter.

**BANK CREDIT, INTEREST RATES,
AND THE BOND MARKET**

Although the sources of bank funds, as indicated by the adjusted bank credit proxy, grew at virtually the same

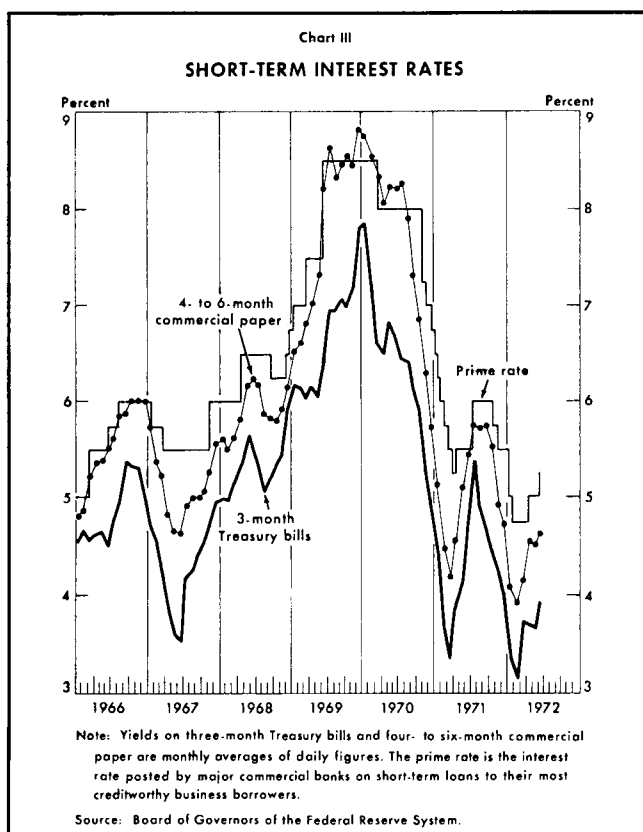
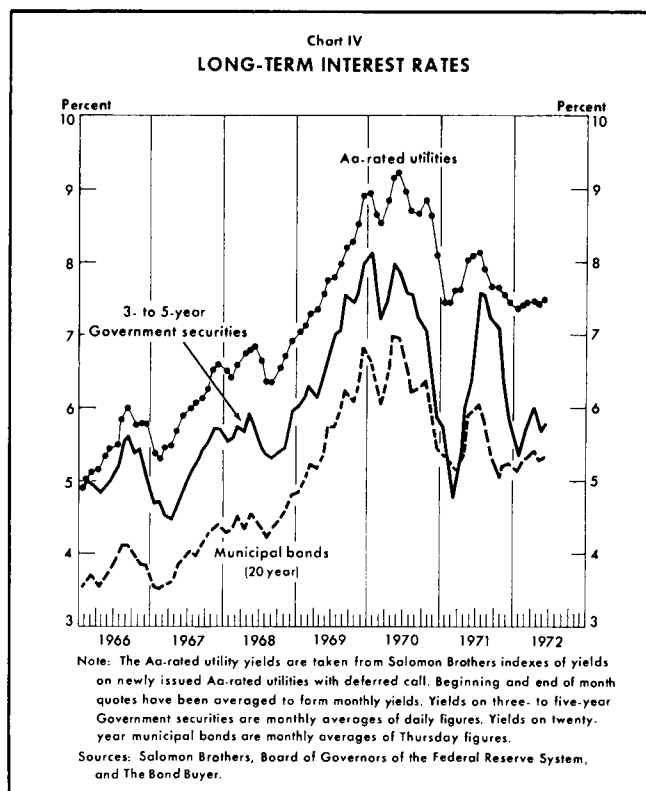
rate during both of the first two quarters of 1972, bank earning assets—measured as loans and investments adjusted for loan sales to affiliates—displayed a marked slowing in their rate of growth during the second quarter of the year. After having expanded at an annual rate of 15.1 percent over the January-March period, bank credit increased at a rate of 7.3 percent during the second quarter of 1972 (see Chart II). The slowing in bank credit growth resulted in part from a lower rate of purchase of securities, both United States Government and others. It also reflected a June decline in business loans, which had grown rapidly over the first two months of the second quarter. In contrast, the growth of real estate and consumer loans accelerated in the second quarter from their already rapid growth in the first three months of the year.

To some extent, the disparate growth patterns of bank credit and the proxy during the second quarter reflect the



different methods used in calculating these aggregates. To place this matter in proper perspective, it should be recalled that the bank credit proxy as well as the other monetary aggregates, when calculated monthly or weekly, are obtained on a daily average basis. In contrast, seasonally adjusted bank credit is reported monthly at its level on the last Wednesday of the month. Judging from the data available on a nonseasonally adjusted basis for weekly reporting banks, it appears that bank credit dropped temporarily in the last statement week in June, a week in which bank credit had been rising seasonally in recent years.

There was moderate upward pressure on short-term interest rates during the second quarter (see Chart III). For example, the average effective rate on Federal funds rose from 3.83 percent in March to 4.46 percent in June. CD rates also rose over the quarter. As the cost of funds to banks drifted upward, the prime business loan rate at most major commercial banks was raised from 4¾ percent at the end of March to 5¼ percent by the end of June.



Treasury bills were firmer than the rest of the market, with rates on three-month bills rising only about 20 basis points over the quarter.

Yields on intermediate- and long-term securities were for the most part little changed during the second quarter, with modest increases outnumbering slight declines. Interest rates etched an irregular pattern over the quarter, generally rising through most of April, declining in late April and through May, and then rising again in June (see Chart IV). One particularly interesting development during the quarter was the strengthening of the intermediate sector of the market for United States Government coupon obligations. Although yields in this sector had declined in general concert with the downward movement of interest rates following President Nixon's announcement of the new economic program, the decline in rates on three- to five-year Governments ended earlier than those on instruments in other sectors of the market, as investors became concerned about the financing implications of the prospective Federal deficit for the fiscal year 1973. Consequently, the first-quarter average yield on three- to

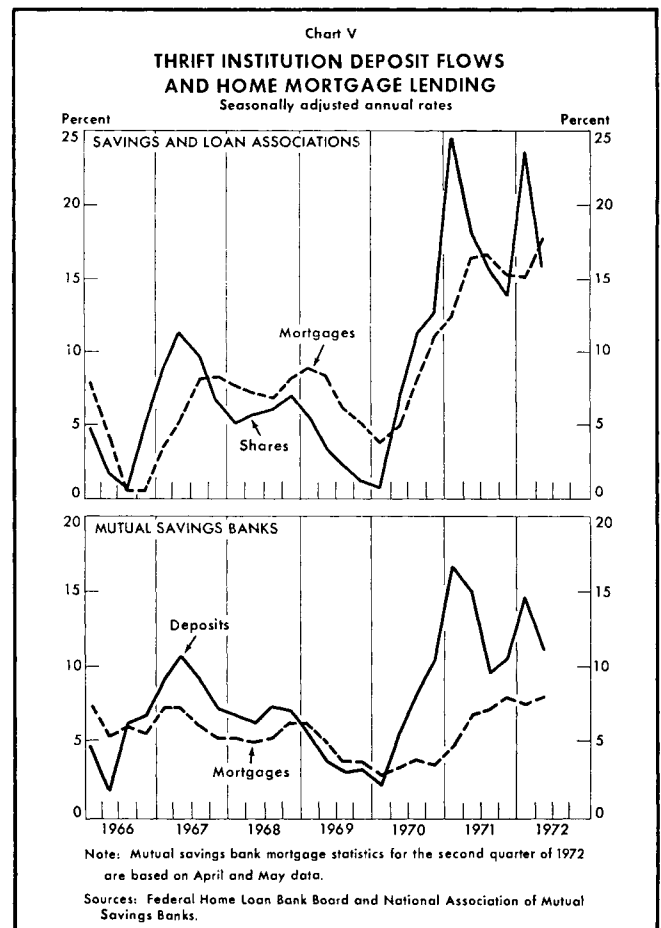
five-year Government securities was higher than it had been in the first quarter of last year at the same time that most other securities were yielding less than they had during the same period last year. With the announcement of the Treasury's May refunding plans on April 26, which disclosed that a portion of the maturing securities would be redeemed, market expectations for this sector of the market brightened considerably and yields dropped sharply throughout May. Although rates backed up slightly in June, the average yield on three- to five-year Governments over the entire quarter was below that witnessed in the second quarter of last year.

The relative stability of intermediate- and long-term interest rates during the second quarter reflected in part the absence of heavy demands for funds in the capital markets. The United States Government repaid a net of \$6 billion of debt, in contrast to the \$1.6 billion raised during the second quarter of 1971. The Federal budgetary deficit for the fiscal year that ended June 30, 1972 was \$23 billion—large historically but far below the \$38.8 billion projected in the Budget document submitted by the Administration last January. Outlays were \$5 billion below the January estimates, while receipts exceeded the estimates by \$10.8 billion. The larger than expected tax revenues reflected not only overwithholding of individual income taxes but also the impressive strength of the recovery in economic activity during the fiscal year. In addition, the Treasury obtained during the second quarter \$2.5 billion through the sale of special nonmarketable securities to foreign central banks which had acquired dollars in foreign exchange markets in an effort to prevent the exchange rates of their currencies against the dollar from exceeding the limits specified in the Smithsonian Agreement of December 18, 1971.

The corporate bond market was bolstered by a relatively light calendar of securities offerings. In part, this reflected the buildup of corporate liquidity that was accomplished through the record volume of bond offerings during 1970 and 1971 and the recent increases in cash flow as a result of increasing profits and accelerated depreciation allowances. Consequently, nonfinancial corporations floated only \$10 billion of securities in the corporate bond market in the first six months of 1972, after having raised \$15 billion through bond flotations over a comparable period last year. At the same time, state and local governments raised \$12 billion in the bond market during the first half of this year. While it was almost equal to the record \$12.5 billion in funds during the first half of 1971, a larger part of this year's gross proceeds have gone toward retirement of outstanding debt.

THRIFT INSTITUTIONS

The slowdown in the growth of small-denomination time deposits at commercial banks was paralleled at thrift institutions. Savings and loan association shares grew at an annual rate of 16 percent during the April-June interval, compared with the near-record rate of growth of savings and loan association capital of 23½ percent in the first quarter, while mutual savings bank deposit growth decelerated from its 14½ percent rate in the first quarter to 11 percent during the second (see Chart V). As a result of the total buildup of savings and loan association capital during the previous five quarters, however, the growth of mortgage holdings by savings and loan associations accelerated to a rate of 18 percent, compared with a growth rate of 15 percent in the first quarter of the year. At mutual savings banks, data available through May suggest



that the growth of mutual savings bank mortgage holdings accelerated to an 8 percent annual rate in the second quarter, after having been 7½ percent in the first quarter. With this continued strong participation of thrift institutions in the mortgage market, yields on new home conventional mortgages averaged 7.53 percent, 11 basis points below their average in the first quarter.

The deceleration of thrift institution deposit growth in the second quarter of this year notwithstanding, the overall performance of these deposits over the eighteen-month interval ended June 1972 was unusually strong. Over that

period of a year and a half, savings and loan association capital grew at a seasonally adjusted annual rate of 21 percent, while mutual savings bank deposits increased at a rate of 14 percent. To be sure, much of this growth occurred in a period when the ratio of personal savings to disposable income was unusually high and when rates on competing market instruments were relatively low. However, it was also attributable to the aggressiveness with which thrift institutions have been offering higher yielding certificate-type accounts as a means of attracting deposit liabilities.

The Money and Bond Markets in July

Interest rates generally drifted slightly lower in July. At the beginning of the month, it had been widely expected that the upward trend exhibited in June would continue. However, increases in interest rates during the month were generally small and were later reversed. In consequence, most interest rates closed a bit lower on balance. Late in July, rates were influenced by anticipations concerning the Treasury's refunding announcement. More uncertainty than usual preceded the announcement. On the one hand, the Treasury continues to enjoy an unusually comfortable cash position. On the other hand, the Treasury's longer run cash needs are believed to be quite large in view of the sizable Federal budgetary deficit expected in fiscal 1973.

The Treasury announced the terms of a massive refinancing operation after the close of business July 26. Along with the \$2.3 billion of publicly held notes and bonds maturing August 15, an additional \$17.4 billion of coupon issues maturing at later dates this year and at selected dates in 1974 and 1975 was eligible for the refunding. One of the Treasury's goals is to lengthen the maturity structure of the debt. The average maturity of marketable Federal debt outstanding had fallen from five years four months in 1965 to less than three years three

months by mid-1972. The shortening of the debt occurred partly because the 4¼ percent interest rate ceiling on Treasury bonds had prevented the issue of new bonds from 1965 until the 1971 suspension of this ceiling, which permitted the Treasury to issue up to \$10 billion of bonds at rates in excess of 4¼ percent. The new offering did not include a short-term note but instead consisted of 3½-year and 7-year notes and 12-year bonds. The offering was enthusiastically received, and an impressive \$8.7 billion of new securities was subscribed. Because of the Treasury's currently strong cash position, no companion issue was offered for cash. In part, the strong cash position reflects the recent sale of special nonmarketable issues to foreign official institutions.

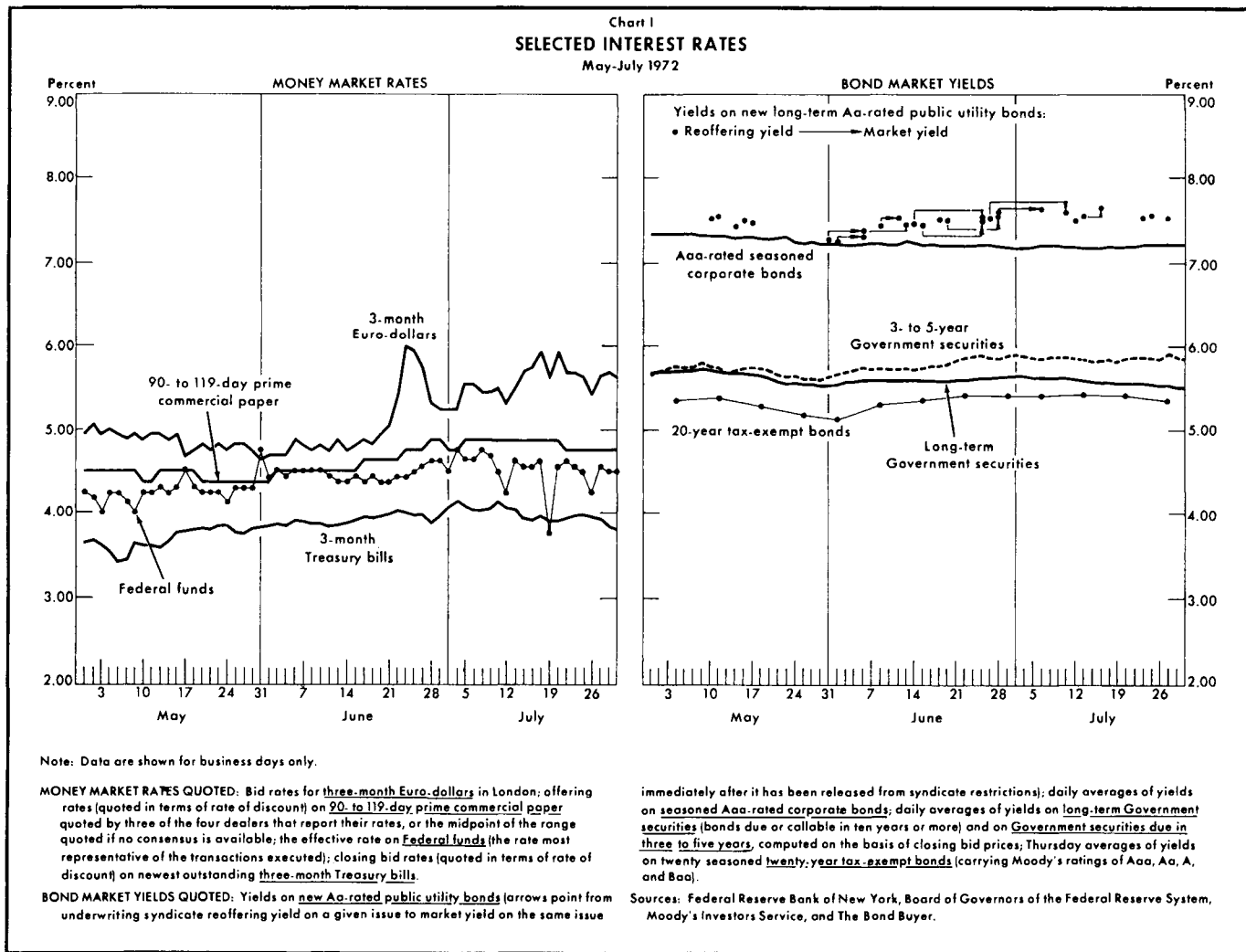
About \$3.1 billion of special certificates of indebtedness was issued in July to absorb the large volume of dollars purchased by foreign central banks. This operation was one of the repercussions that followed the British decision in late June to allow the pound to float. Other governments quickly reaffirmed their determination to maintain the exchange rate structure established in the Smithsonian Agreement, but even so widespread speculation developed in favor of several continental European currencies. With exchange rates driven hard against their

upper limits against the dollar, the foreign central banks were required to absorb large quantities of dollars, with which they in turn purchased both marketable and nonmarketable United States Treasury securities. On July 19, the Federal Reserve initiated a new line of operations by offering German marks in the New York exchange market. Federal Reserve Board Chairman Arthur Burns explained that the United States authorities "are now moving to play our part to restore order in foreign exchange markets and to do our part in upholding the Smithsonian Agreement". The Chairman said that such operations would continue on whatever scale and whenever transactions were deemed desirable, and he disclosed that the suspension on use of the Federal Reserve swap lines that went into effect last

August 15 had been lifted. During the remainder of July, the exchange markets were quieter and dollar rates improved.

BANK RESERVES AND THE MONEY MARKET

Short-term interest rates generally declined slightly over the month of July. There were a number of minor upward movements early in the month, which were reversed as the month progressed. For example, rates on 90- to 119-day dealer-placed commercial paper increased 1/8 percentage point in the first week of July but fell back 1/8 point in the third week to 4 3/4 percent (see Chart I). Rates on most other maturities of commercial paper were also lowered 1/8 to 1/4 percentage point during July. Secondary



market rates on large negotiable certificates of deposit (CDs) climbed about 20 basis points at the start of July but were reduced later in the month by as much as 30 basis points. Rates on bankers' acceptances were reduced by 1/8 percentage point late in July. Euro-dollar rates continued to be sensitive to uncertainties in the foreign exchange markets. The three-month Euro-dollar rate generally advanced through July 18. After that, some degree of calm was restored to the exchange markets partly in response to Federal Reserve sales of German marks. Euro-dollar rates subsequently declined and ended the month at 5 3/8 percent, 3/8 percentage point above the opening rate. A few large banks raised their prime commercial loan rate to 5 1/2 percent in response to previous increases in market rates. Most banks did not feel, however, that loan demand was sufficiently strong to justify such an increase, and therefore they retained a 5 1/4 percent prime rate. Effective July 31, in response to a drop in commercial paper rates, two major banks with floating prime rates reduced their prime rate from 5 1/2 percent to 5 3/8 percent.

The average effective rate on Federal funds in July was 4.55 percent, 9 basis points above the June level. For the statement week ended July 5, excess and borrowed reserves increased sharply (see Table I). However, in each succeeding week, excess and borrowed reserve levels were both reduced. Since excess reserves fell more rapidly, free reserves declined, becoming negative after the first statement week.

The growth in reserves available to support private nonbank deposits (RPD) accelerated in July to an estimated 9 1/2 percent seasonally adjusted annual rate. By excluding reserves backing Treasury and net interbank deposits, which are not included in the money supply, the RPD series is more closely related to the money supply than is the total reserves series.

According to preliminary data for the period through July 26, the growth of the narrowly defined money supply (M₁)—adjusted demand deposits plus currency outside banks—also accelerated in July, to an estimated 15 percent seasonally adjusted annual rate from its more restrained 5.3 percent pace in the second quarter. The acceleration took place during the first two weeks of July after which the money supply fell back slightly. As was indicated by Federal Reserve Board Chairman Burns in testimony before the Joint Economic Committee of the United States Congress, the System is still “in a favorable position to continue pursuing a path of moderate monetary growth”. Despite the bulge in July, longer term growth rates, generally considered to be more meaningful in evaluating the impact of money supply behavior, show somewhat

Table I
FACTORS TENDING TO INCREASE OR DECREASE
MEMBER BANK RESERVES, JULY 1972

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

Factors	Changes in daily averages— week ended				Net changes
	July 5	July 12	July 19	July 26	
“Market” factors					
Member bank required reserves	- 638	+ 291	- 640	+ 192	- 795
Operating transactions (subtotal)	- 176	+ 336	- 28	+ 199	+ 331
Federal Reserve float	- 444	+ 714	+ 164	- 215	+ 219
Treasury operations*	+ 998	- 230	+ 66	- 143	+ 691
Gold and foreign account	- 98	+ 76	- 23	- 72	- 117
Currency outside banks	- 439	- 358	- 312	+ 633	- 476
Other Federal Reserve liabilities and capital	- 194	+ 134	+ 78	- 2	+ 16
Total “market” factors	- 814	+ 627	- 668	+ 391	- 464
Direct Federal Reserve credit transactions					
Open market operations (subtotal)	+ 827	- 698	+ 612	- 505	+ 236
Outright holdings:					
Treasury securities	+ 804	- 732	+ 300	- 72	+ 400
Bankers’ acceptances	+ 2	- 2	- 1	- 3	- 4
Federal agency obligations	- 21	- 11	-	- 7	- 39
Repurchase agreements:					
Treasury securities	+ 40	+ 33	+ 247	- 329	- 9
Bankers’ acceptances	- 4	+ 6	+ 45	- 58	- 11
Federal agency obligations	+ 6	+ 8	+ 21	- 36	- 1
Member bank borrowings	+ 183	- 85	- 51	- 4	+ 42
Other Federal Reserve assets†	+ 8	+ 51	+ 54	+ 41	+ 154
Total	+ 1,013	- 732	+ 614	- 468	+ 432
Excess reserves	+ 204	- 105	- 54	- 77	- 32

	Daily average levels				Monthly averages
	July 5	July 12	July 19	July 26	
Member bank:					
Total reserves, including vault cash.....	33,143	32,747	33,333	33,064	33,072‡
Required reserves	32,815	32,524	33,164	32,972	32,869‡
Excess reserves	328	223	169	92	203‡
Borrowings	312	227	175	171	221‡
Free, or net borrowed (-), reserves.....	16	- 4	- 6	- 79	- 18‡
Nonborrowed reserves	32,831	32,520	33,158	32,893	32,851‡
Net carry-over, excess or deficit (-)\$. . .	98	209	182	133	156‡

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

*Includes changes in Treasury currency and cash.

†Includes assets denominated in foreign currencies.

‡Average for four weeks ended July 26.

§Not reflected in data above.

more moderate rates of advance. Over the three months through July, M₁ increased at an annual rate of about 8 percent (see Chart II). In the past year, M₁ grew by about 5 1/2 percent.

The broad money supply (M_2)—defined as M_1 plus time deposits other than large CDs—accelerated slightly in July to a 12 percent annual rate of growth from a 10½ percent rate in June. The acceleration in this aggregate resulted entirely from the speedup in M_1 . Time deposits other than large CDs advanced more slowly than they had in June.

The adjusted bank credit proxy, consisting of member bank deposits subject to reserve requirements and certain nondeposit liabilities, advanced at an estimated 13 percent seasonally adjusted annual pace in July, quite close to the rate of growth of M_2 . Treasury deposits and net interbank deposits at member banks, both of which are included in the proxy but not in the money supply, rose only slightly in July. However, large CDs, the other major element of the proxy excluded from the money supply, increased at a significantly faster pace than did other types

of deposits so that, on balance, proxy growth paralleled that of the monetary aggregates.

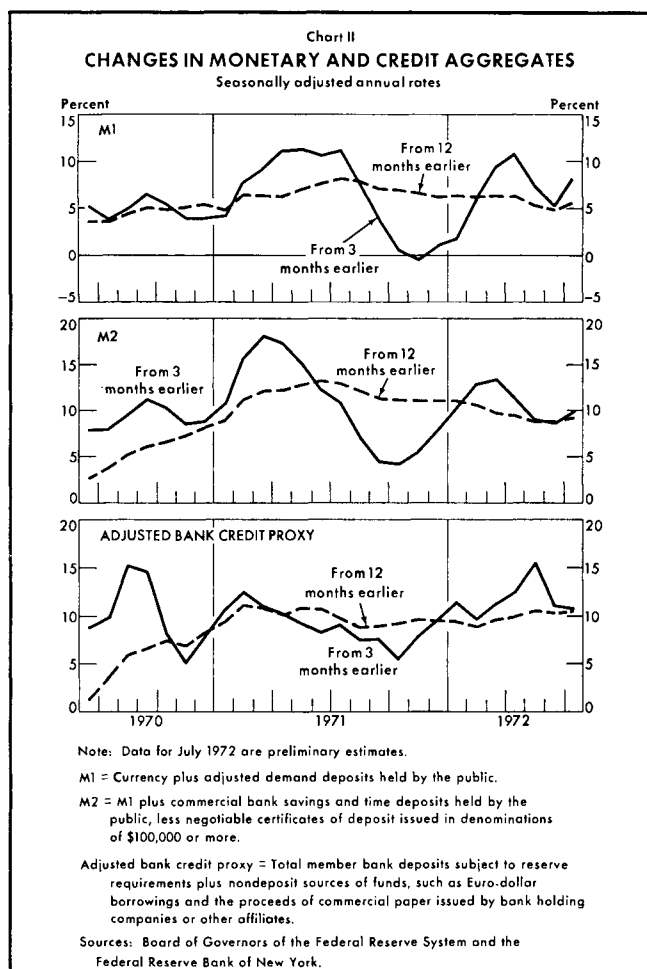
THE GOVERNMENT SECURITIES MARKET

The market for United States Government securities was subject to conflicting sets of influences in July. Various news items indicating that the economy was experiencing a vigorous expansion, along with the concern about the impact of the large Federal budget deficit on the size of future Treasury financing needs, worked toward pushing up interest rates on Government securities. However, continuing turmoil in the foreign exchange markets tended to depress yields, particularly in the shorter maturities, as foreign central banks purchased Government securities with the dollars they acquired in support operations. Adding to the downward pressure in rates was the rather thin floating supply of securities, especially in certain intermediate maturity ranges. The Treasury had actually retired debt on balance in the second quarter and raised only a modest amount in July through weekly additions of \$200 million to the maturing bills beginning July 13.

On July 26, the Treasury announced a major refunding operation. In the refunding, holders of the remaining five issues of notes and bonds maturing in 1972—on August 15, September 15, November 15, and December 15—were offered 5⅞ percent 3½-year notes priced to yield 5.96 percent, 6¼ percent 7-year notes priced at par, and 6¾ percent 12-year bonds priced to yield 6.45 percent. In addition, the holders of notes and bonds due in November 1974 and February 1975 were given the opportunity to exchange those securities for either the 7-year notes or the 12-year bonds. The bonds were also offered for cash to individuals in amounts not to exceed \$10,000.

Preliminary results of the refunding indicate that it was highly successful. Of the \$2.3 billion of publicly held securities maturing August 15, \$1.67 billion was exchanged for an attrition rate of 27.6 percent, somewhat lower than usually expected in refunding operations containing no new short-term issue. In addition, \$3.3 billion of the \$6.2 billion maturing between September and December 1972 and \$3.1 billion of the securities due to mature in 1974 and 1975 were exchanged. The holders of issues maturing in 1972 purchased primarily the 3½-year notes, but the longer term issues sold well because of orders from holders of the 1974 and 1975 securities. Preliminary figures show subscriptions for \$3.9 billion of the new 3½-year notes, \$3 billion of the 7-year notes, and \$1.1 billion of the 12-year bonds, including \$22 million sold to individuals for cash.

Treasury bill rates were particularly sensitive to the



foreign situation. With large dollar-support operations undertaken by foreign central banks, prices tended to be bid up in the bill market in anticipation of probable foreign official demand for bills. Although there was some upward pressure on bill prices from official foreign sources, it was smaller than it might have been because much of the foreign demand was channeled into special nonmarketable Treasury certificates of indebtedness. Over the month, the Treasury issued about \$3.1 billion of special certificates to foreigners while marketable United States Government securities held by the Federal Reserve in custody for foreign official accounts increased by \$670 million.

Against this background, three-month Treasury bill rates declined by about 15 basis points through July 19. During this period, several other short-term rates increased. Then, as speculative pressures eased in the foreign exchange markets, bill rates began to edge upward again. In the final days of the month, bill rates fell once more as the absence of a short-term issue in the refunding pointed to limited supply conditions. On balance, secondary market rates ended the month about 3 to 40 basis points below their opening levels.

The weekly auction of three- and six-month Treasury bills that would normally have been held in the first week of July was pushed forward to June 30, since July 3 was a holiday for many. At that auction, interest rates had moved up somewhat—by 12 basis points on the three-month bills. Beginning with the first auction actually held in July, bill rates began to slide. At that auction, on July 10, three-month rates declined 4 basis points to an average 4.102 percent (see Table II). In the intervening week, purchases by foreigners were heavy and, at the auction held on July 17, three-month Treasury bill rates fell a further 15 basis points to an average of 3.948 percent. Bill rates climbed 10 basis points in the auction held on July 24 after foreign exchange jitters began to ease. In light of this turnaround, the monthly auction of nine- and twelve-month Treasury bills, held on July 25, exhibited mixed results. Yields on the nine-month bills averaged 2 basis points less than those on equivalent bills offered in June. On the other hand, the yield on the one-year bill climbed 6 basis points to 4.918 percent, the highest rate posted since last September. In the final auction of three- and six-month bills, held July 31, yields dropped substantially—to 3.794 percent on the three-month bills—in response to previous declines in secondary market rates.

Yields on intermediate-term Treasury issues declined early in July, but later these yields moved back up so that they were little changed over the month as a whole. Long-term Government bond yields edged lower through most of the month. Treasury bond issues have benefited in the

Table II
AVERAGE ISSUING RATES*
AT REGULAR TREASURY BILL AUCTIONS
In percent

Maturities	Weekly auction dates—July 1972			
	July 10	July 17	July 24	July 31
Three-month	4.102	3.948	4.047	3.794
Six-month	4.605	4.465	4.585	4.298
	Monthly auction dates—May-July 1972			
	May 23	June 23	July 25	
Nine-month	4.367	4.754	4.731	
One-year	4.465	4.854	4.918	

* Interest rates on bills are quoted in terms of a 360-day year, with the discounts from par as the return on the face amount of the bills payable at maturity. Bond yield equivalents, related to the amount actually invested, would be slightly higher.

last few months from the low level of new financing. Yields have remained significantly below the highest levels for the year established in April. On April 13, the average yield on Treasury bonds maturing in more than ten years reached 5.79 percent. By the end of July, however, the average yield had fallen to 5.52 percent, the lowest level of the year.

OTHER SECURITIES MARKETS

Corporate bond prices stabilized early in July, braking at least temporarily the decline of the previous month. During the remainder of July, the market was jostled by alternately favorable and unfavorable news, but it still managed to absorb an expanded volume of issues with little difficulty.

A particularly light calendar during the holiday-shortened Fourth of July week contributed to the early stabilizing of rates. In the succeeding two weeks, however, the volume of new corporate bonds placed on sale mushroomed to about \$1.7 billion. On July 11, a utility issue rated Aa sold well at a yield of 7.60 percent, the same yield as another Aa bond which had been poorly received in late June. The next day, a much larger Aa-rated utility bond was offered to yield 7.50 percent. A surge of activity late in the day led to heavy sales. On the following day, however, a relatively small utility issue rated Aa by one rating service and A by another met with a poor reception despite its 7.55 percent yield.

In the week beginning July 17, market sentiment vacillated. Observers were generally glum at the beginning of the week, as several older issues were released from syndicate price restrictions on Monday and quickly climbed as much as 10 basis points in the secondary market. The next day the market regained some stability when a heavy demand greeted a finance company bond and two new industrial issues. But the succeeding day, optimism was dissipated as a two-part \$250 million Aaa-rated offering by a Bell Telephone subsidiary met with a disappointing reception in spite of a 7.45 percent yield on the 38-year debenture, the same rate that was offered on a similar Bell System obligation in June which had sold well. This bond was released from syndicate price restrictions on the following Tuesday, and the yield quickly climbed 4 basis points in the secondary market.

In the final July week, the volume of corporate financing slackened. In that week, two utility issues rated Aa and priced to yield 7.55 percent and 7.52 percent, respectively, attracted only lukewarm interest initially but sold well on Friday following the announcement of prime rate reductions by two banks.

Prices on most tax-exempt securities were relatively stable over the month of July. The Bond Buyer index of twenty municipal bond yields remained unchanged at 5.43 percent for three weeks through July 6. During the next two weeks the index fluctuated slightly, then declined at the end of the month to 5.35 percent. The volume of tax-exempt securities was light in the first and third weeks, but heavy in the second and fourth weeks. Dealers were able to reduce their inventories somewhat, with the Blue List

of dealers' advertised inventories declining by \$80 million to \$674 million during the month. New York City offered \$267.2 million of securities on July 12. These bonds, rated Baa-1, were priced to yield from 4.25 percent in 1974 to 6.80 percent in 2013. By comparison, a similar New York City offering in April was priced to yield 6.90 percent on the longest maturity. Most of the new issue was reported sold the first day. Other tax-exempt securities marketed the same week did not fare quite so well, but in the maturity ranges considered to be generously priced the securities stimulated substantial interest. The final week's sizable volume of offerings met with generally favorable receptions despite instances of aggressive pricing.

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Reform of Reserve Requirements

By GEORGE GARVY

Economic Adviser, Federal Reserve Bank of New York

The Board of Governors has concluded that the prospect of eliminating a considerable amount of float as a result of extending same-day payment of collection items offers an opportunity for making simultaneously the first significant change in the structure of reserve requirements since the creation of the Federal Reserve System.¹ The purpose of this article is to place these changes in reserve requirements in perspective by reviewing, first, the shortcomings of the system of reserve requirements which the new changes in Regulation D are designed to remedy and, then, past efforts directed at improvements.

Banks must hold a certain amount of cash as a matter of sound banking practice to meet possible deposit losses. In addition, most countries, including the United States, have legal provisions stipulating a minimum amount of reserves that must be held in prescribed form. These "legal reserves" provide a fulcrum against which Federal Reserve System control over reserve availability becomes effective in influencing bank credit and the monetary aggregates. Achieving the objectives of monetary policy depends primarily on the System's ability to control the availability of member bank reserves, rather than on a particular average level of prescribed reserve ratios.

The average (weighted) reserve ratio for demand and time deposits sets an upper limit on the deposit multiplier. However, attempts to define an optimal average reserve ratio, or even to agree on criteria for determining it, have not been successful. Required reserves can perform their fulcrum function even when set at a relatively low level. Arguments have been put forward in academic literature in favor of large as well as small deposit multipliers.

ORIGINS

Formalization of the traditional cash reserves of commercial banks into a set of legally required reserve ratios was an American invention. Not until the Great Depression of the 1930's did reserve requirements begin to be widely used abroad as a policy instrument. Legal reserve requirements became part of much of the banking legislation that was enacted or modified in foreign countries during World War II and the early postwar years. Some of the leading countries, such as the United Kingdom and France, introduced reserve requirements only a few years ago. So far, the Bank of England continues to rely on voluntary compliance with ratios set by it. In several other countries of Western Europe, central banks have obtained powers to impose reserve requirements but have made use of them only intermittently or not at all. In Germany, however, reserve requirements have become a main tool of monetary control.

The present structure of member bank reserve requirements based on a geographical classification of banks was inherited from the National Banking Act which specified reserve ratios, in increasing amounts, for three classes of banks: country, reserve city, and central reserve city banks. Prior to the enactment of the Federal Reserve Act, a specified portion of reserves could be held on deposit with banks in designated cities. Indeed, the rationale for higher reserve requirements in reserve and central reserve cities was undermined by the provision in the Federal Reserve Act which required that reserves be deposited (after a transition period) with the Federal Reserve and not with other banks. The system of reserve requirements embodied in the Federal Reserve Act linked reserve requirements to assumed liquidity needs. The liquidity function of reserves, in turn, was related to location, because of the presumed greater exposure of banks in cities which served as clearing

¹ A summary of the amendments to Regulations D and J appeared in this *Review* (July 1972), page 154.

centers to sudden and/or sizable deposit withdrawals.² For all banks in cities designated as reserve cities the Act imposed requirements that were higher than those for country banks, and still higher ones for those in the central reserve cities.³ After the transfer in 1917 of reserves of member banks to the Federal Reserve Banks, the three-tier structure of ratios was justified on different grounds, such as the smaller velocity or volatility of demand deposits at country banks.

While the geographic principle had become outmoded a long time ago, the existing system became more and more anachronistic with the succeeding changes in banking practices and advances in transportation and communications that have taken place over the years.⁴ It failed to accord equal treatment to banks that were similar in most significant aspects of their activities but different in terms of location, or to provide differential treatment reflecting a bank's place in the banking system as it affects the conduct of monetary policy. As a result, banks with virtually identical net demand deposits and similar business have been often subject to different reserve ratios. Specifically, a number of large banks participating in the money market and/or having extensive foreign operations through branches or affiliated Edge Act corporations have continued to be classified as country banks because of their location.

PAST CHANGES

While no comprehensive reform has been undertaken since the passage of the original Federal Reserve Act,

² On the history of minimum reserve requirements, see Phillip Cagan, "The First Fifty Years of the National Banking System—An Historical Appraisal" in *Banking and Monetary Studies*, Deane Carson, ed. (Homewood, Illinois: 1963), notably the Figure 2 showing required, excess, and total reserve ratios of national banks, 1865-1913.

Reserve requirements stipulated in some state banking laws antedated those of the National Banking Act.

³ The Federal Reserve Act originally designated three central reserve cities: New York, Chicago, and St. Louis. In 1922 St. Louis was reclassified as a reserve city.

⁴ Irving M. Auerbach pointed out in "Reserve Requirements of Commercial Banks", this *Review* (July 1948), reprinted in an updated and expanded version in this Bank's publication *Bank Reserves* (1953), that a proposal to base reserve requirements on the class of deposits was advanced even before the Federal Reserve Act was enacted. For a review of the earlier history of reserve requirements, in addition to Auerbach's article, see "The History of Reserve Requirements for Banks in the United States", *Federal Reserve Bulletin* (November 1938), pages 953-72. See also "Member Bank Reserve Requirements—Heritage from History," *Business Conditions* (Federal Reserve Bank of Chicago, June 1972).

there have been several changes in the definitions of demand deposits subject to reserves as well as assets qualifying as reserves, in reserve accounting, and in the structure of reserve requirements. The following may be considered the most significant:

(1) In 1935, reserve requirements were made variable within specified ranges by giving the Board of Governors the authority to increase the reserve ratios up to double the ratios then in force.

(2) The next important change was in 1959, when the Board of Governors was given broad discretionary powers to reclassify individual banks in reserve cities as country banks, thus exempting these banks from the higher reserve ratios attached to the reserve city bank status; previously, only banks in "outlying areas" could be so reclassified. This change recognized the fact that banks located in a reserve (or central reserve) city could differ greatly in significant features, and these differences were not necessarily systematically related either to a bank's size or its location within a city.

(3) Banks were permitted to count a portion of their vault cash as a reserve asset in 1959; all vault cash was permitted to be counted in 1962.

(4) The central reserve city classification was abolished in 1962, thereby reducing the reserve requirements to which twenty-two large banks in New York City and Chicago were subject at that time.

(5) The principle of graduation was introduced in 1966, by establishing a higher reserve ratio for time deposits other than savings deposits of over \$5 million at any bank. In 1968, it was expanded by raising requirements for net demand deposits above \$5 million, for country as well as reserve city banks.

(6) Lagged reserve accounting was introduced in 1968. Since then, reserve requirements against demand and time deposits in any statement week have been based on average deposit liabilities two weeks earlier.

(7) Reserve requirements on borrowings from foreign branches (or foreign banks) were introduced in 1969, in the form of marginal requirements on amounts above an exempt base figure. Reserve requirements on commercial paper issued by bank affiliates, another nondeposit source of funds, became effective in 1970.

The introduction in 1935 of variable reserve requirements was widely hailed as a significant innovation in techniques of monetary control; subsequently they were adopted by many other countries. The actual use of reserve requirements has varied with monetary conditions and with the prevailing views within the System but, on the whole, changes have been quite infrequent. Some of the most notable episodes include the sharp (and controversial) increase in requirements in 1936-37 to mop up excess liquidity, the successive reductions in 1942 at central reserve city banks from maximum levels to facilitate bank absorption of war loans, the modest increases in 1951 to cushion the initial impact of the Korean war on bank credit,⁵ followed by gradual reductions from 1953 to 1966 to meet a widespread criticism that requirements were at excessively high levels. The very modest increases in 1968 and 1969 were related to overheated conditions in the economy, though no similar increases had been made when the economy approached cyclical peaks in the previous fifteen years. Yet, for both classes of member banks, reserve ratios for demand deposits at the beginning of 1972 were not far from the late-1930's levels, a period when bank reserves were considerably enlarged by gold inflows.

In the ten years (1949-58) following the immediate postwar adjustment period, the lowering of reserve ratios supported most of the deposit growth at member banks, but in the following years the further growth of deposits was supported mostly through open market operations.

The possibility of reducing reliance on open market operations by making frequent changes of small percentage amounts in reserve requirements has been explored, but no experimentation along these lines has been undertaken as open market operations have provided an effective tool for implementing policy objectives. Indeed, monetary policy was revived in the early fifties under conditions which offered a unique opportunity to control reserves through open market operations. The public debt was large and widely distributed and was comprised largely of marketable securities with a wide range of maturities.

Thus, in recent years, there has been a clear tendency to use the reserve tool sparingly. To be sure, reductions in requirements were usually timed so as to be coordinated

with other moves to ease credit conditions and/or to meet seasonal demands. On several occasions the possibility of changing reserve requirements was considered, but no action was taken. On the whole, the System seemed to agree with Allan Sproul who, when president of the Federal Reserve Bank of New York, remarked that reserve requirements were a "blunt instrument". When reserve ratios were changed, in most instances cushioning open market operations were undertaken.

The respective advantages of the two means of supplying and absorbing reserves have been the subject of study and discussion within the System and also of lively debate in academic journals.⁶ There was less interest among academic economists in devising a better system of reserve requirements.⁷

REFORM PROPOSALS

Over the years the Board of Governors and several committees of the Conference of Federal Reserve Bank Presidents and of the System's research function have considered and tested numerous ways of placing member bank reserve requirements on a more logical footing and of making them more flexible on either an automatic or a discretionary basis. Numerous attempts were made to develop an alternative system which, even though not ideal or even wholly logical, would constitute a sufficiently desirable improvement (without posing significant administrative problems) to warrant a request for appropriate Congressional legislation.

Because of uniformity of reserve requirements on time deposits for all classes of banks and because ratios have consistently been considerably lower than those on demand deposits (which resulted in about 80 percent of aggregate reserve assets being held against demand deposits), the System's efforts to find an alternative system have been focused on demand deposits alone. While

⁵ The Board of Governors also exercised its power, granted for a limited period by the Anti-Inflation Act of 1948, to raise reserve requirements above the statutory limit. It did not make full use of these powers, which lapsed less than a year after they were enacted.

⁶ See, for instance, J. Ascheim, "Open-Market Operations versus Reserve Requirement Variations", *Economic Journal*, (December 1959); C. A. Thanos, "Open-Market Operations and the Portfolio Policies of the Commercial Banks", *ibid.* (September 1961); H. N. Goldstein, "The Relative Security Market Impact of Open-Market Sales and 'Equivalent' Reserve-Requirement Increases", *ibid.* (September 1962); John H. Kareken, "On the Relative Merits of Reserve-Ratio Changes and Open-Market Operations", *Journal of Finance* (March 1961).

⁷ See, however, Frank E. Norton and Neil Jacoby, *Bank Deposits and Legal Reserve Requirements*, UCLA (Los Angeles, 1959) and Neil Jacoby, "The Structure and Use of Variable Bank Reserve Requirements", in *Banking and Monetary Studies*.

the need for legal reserve requirements on time deposits was occasionally questioned both within and outside the System, the various schemes considered focused on demand deposits. Studies of alternative structures of reserve requirements were, of course, limited by the practical considerations of public acceptance and the problems of transition. It was clear that any alternative system should permit effective control of bank deposit expansion. Furthermore, it was recognized that, in order to facilitate transition, a new plan should result in aggregate reserve liabilities not much different from those held at the time by all member banks combined. Various sets of ratios were suggested and tested with this constraint in mind.

The history of endeavors to achieve a more equitable and more defensible system of reserve requirements and to reassess its role in relation to other instruments of monetary control is a good example of the difficulty of finding practical solutions to complex problems, of achieving a sufficiently broad agreement within the System when the problem at hand has considerably different regional aspects, and of the interplay between academic discussion and internal System efforts.

Proposals for a more rational system of reserve ratios proceeded along two lines. Earlier efforts had concentrated on finding a substitute for the reserve city bank classification by relating reserve requirements either to the rate of activity (turnover velocity) of deposits or to the relative importance of interbank deposits at a given bank. Different reserve ratios on various classes of deposits were proposed primarily on the presumption that different rates of use of such deposits reflected significant differences in the function of each class of deposits in our monetary system. Higher reserve requirements on interbank deposits were proposed not so much on the basis of a theory which justified them, but rather as a means of abandoning the outmoded geographic classification without changing considerably the existing pattern of reserve liabilities among individual banks and without lowering or raising the aggregate volume of reserves by a significant amount. Later endeavors concentrated on devising a system of graduated reserve requirements that would apply to all banks irrespective of location.

Attempts to devise a more rational system for distributing the burden of member bank reserve requirements go back at least to 1931, when an elaborate study (by a Federal Reserve System committee chaired by W. Riefler) resulted in a published report which served as the basis for recommendations to the Congress, on which, however, no action was taken. Since that time, the issue has come to life intermittently. The Board of Governors discussed many, but endorsed none, of the various proposals de-

veloped over the years by its own staff, by various System committees, or outside the System.

When, after World War II, the banking situation re-emerged little changed and with the war-generated liquidity replacing the prewar influx of reserves from abroad, consideration of the problem of reserve structure was placed on the agenda again. In 1948 the Board presented to the Joint Economic Committee, without endorsement, a version of the "uniform reserve plan".⁸ This plan, developed by Karl Bopp, then director of research of the Federal Reserve Bank of Philadelphia, would have supplanted the geographic classification, in that different ratios would apply to interbank and to other demand deposits. Under this plan, reserve requirements for demand deposits could ultimately have been made completely uniform merely by lowering the initially higher ratio on interbank deposits.

A closely related plan would have related reserve requirements directly to deposit velocity. It is likely that the System did not formally endorse the velocity version of the uniform reserve plan because no workable solution could be found to deal with the special situation of "stockyard banks", which, although few in number, had some importance and an association to defend their interests. These banks, servicing primarily accounts maintained by sellers and buyers at major cattle markets, held an exceptionally high amount of interbank deposits in relation to demand deposits (up to 50 percent), and their deposits had an exceedingly high velocity. There were other small groups of banks which had similar characteristics, such as banks in tobacco-auction centers. More importantly, the association of velocity with certain relevant characteristics, such as bank location, type of business, or structure of deposit liabilities, was too erratic and too complex (some of these characteristics being interrelated) to permit generalizations that could be used as a basis for an alternative system of reserve requirements. There were, furthermore, considerable doubts with regard to the theoretical underpinnings of the proposal.

Interest in a reform of reserve requirements was revived in the early fifties as a result of continuing post-World War II inflationary pressures, which were reinforced by the outbreak of the Korean war. Also, System officials recognized that over the longer run the System would have to provide support for continuous deposit growth either through an ever-growing scale of open market operations

⁸ See *Credit Policies*, Joint Economic Committee, 79th Congress, Second Session (1948).

or, in part at least, by lowering average reserve requirements.

A variant of the velocity proposal was recommended for consideration by the "Douglas Subcommittee" in 1950,⁹ and was again discussed in 1952 in System replies to a questionnaire and in oral testimony in connection with the "Patman Subcommittee" inquiry.¹⁰ A committee of System economists studied the problem again in 1953-54 but, after producing numerous analyses and conducting discussions which revealed considerable differences of views on several important issues, failed to agree on recommendations. Two proposals, which, in fact, represented variants of the velocity plan, were circulated within the System in the following years.

In 1957, a committee of Federal Reserve Bank officers studied a report by an American Bankers Association committee which recommended moving toward a single reserve ratio on all demand deposits. It rejected the velocity approach and differential ratios for interbank deposits. While endorsing a uniform reserve plan as the ultimate goal, it recommended that further studies be made to determine the range within which the Board should have the power to vary reserve ratios.

Subsequently, discussions within the System centered on a system of graduated reserve requirements put forward in April 1963 by the President's Committee on Financial Institutions (known as the Heller Committee) but, even though a good deal of testing with a variety of sets of ratios and size brackets was undertaken, no urgency was felt to find an immediate solution to the problem of reserve structure.

Every plan considered in the past would have resulted in increasing total reserve liabilities for some significant group of banks; it was obvious that only a general lowering of average reserve ratios could avoid it.

Nearly all proposals considered in the past required changes in the Federal Reserve Act. For a variety of reasons, the System has been reluctant to recommend formally new legislation to reform reserve requirements, or else concluded that chances for passage were too slim to try. In the meantime, liberal interpretation of the authority to reclassify banks in reserve cities as country banks, permitting use of vault cash as a reserve asset

(even though a partially offsetting increase in reserve requirements for country banks was made at the time), and establishing a lower reserve ratio on the first \$5 million of demand (and also for "other time") deposits—all contributed to improving the structure of reserve requirements. Liberal use of the discretionary authority to declassify reserve city banks (as well as mergers) resulted in a reduction of this group to only 179 by the time the new Regulation D was promulgated. While the Board had the power to designate new reserve cities (as well as to terminate such designation), no such actions were taken after December 1965. Some quite large banks have remained in the country bank category, including, for instance in this District, several banks in Albany, the state capital, and in Newark, New Jersey. On the other hand, three large and rapidly expanding suburban country banks, by acquiring New York City banks through merger, became subject to reserve city requirements.

Interest in a reform of reserve requirements acquired new urgency in recent years as withdrawals from membership became widespread in some Federal Reserve Districts. The System, of course, always has been aware of the effect of reserve requirements on profits and on membership. Requirements imposed by state authorities are typically lower than those in force for member banks, and can be satisfied in a less onerous manner. In particular, interbank deposits held for business purposes can usually be counted among eligible reserve assets. In some states, a proportion of reserves can be held in specified (usually United States Treasury) securities. In the recent past, some states have taken various steps to liberalize further the reserve requirements for nonmember banks.

THE NEW SYSTEM

The change which is to take effect for the reserve period September 21 to September 27 is thus the result of a forty-year search to find a workable solution for a situation which, in fact, antedated the creation of the Federal Reserve System. By redefining reserve city banks on the basis of net deposit size, it abolishes the geographic principle through administrative action within the framework of existing legislation.

The uniform treatment of all member banks, irrespective of location, will be achieved under the revised Regulation D by applying a uniform set of graduated reserve ratios to all member banks and by defining reserve cities other than those with Federal Reserve offices as a function of the net demand deposit size of the largest member bank located in a given city. Every city with a bank having net demand deposits of over \$400 million will

⁹ *Monetary, Credit and Fiscal Policies*, Joint Economic Committee, 81st Congress, Second Session (1950).

¹⁰ *Monetary Policy and the Management of the Public Debt*, Joint Economic Committee, 82nd Congress, Second Session (1952).

automatically become a reserve city. However, country bank status will be granted to all banks located in such a city having net demand deposits of \$400 million or less.

A number of centers (none in this District) will lose the reserve city designation because even their largest banks will be reclassified as country banks, and a few centers (probably Albany in this District) will become reserve cities. With the passage of time, more banks now in the country bank category will reach the demand deposit size that will shift them automatically into the reserve city bank category. In fact, however, the reserve city-country bank distinction will lose much of its meaning. A borderline bank would be considered a reserve city bank only for the reserve periods when its demand deposits subject to reserves exceed \$400 million. The provisions in the Federal Reserve Act relating to these two classifications will merely continue to set an upper and lower limit for graduated reserve ratios that can be imposed within the range stipulated in the Federal Reserve Act as amended in 1935.

The revised Regulation D establishes five net demand deposit-size brackets, with reserve ratios ranging from 8 to 17½ percent and which apply cumulatively. More than 4,200 member banks will henceforth be subject to the first- and second-bracket ratios only, which will reduce significantly reserve liabilities for each of them.

The lowest reserve ratio (8 percent) applies to the first \$2 million of net demand deposits, instead of the 12½ percent ratio now in force for country banks. For the following tranche, between \$2 million and \$10 million, the reserve ratio is 10 percent, still substantially below the average ratios formerly in force for this deposit size (12½ percent applying to deposits of \$5 million and under, and 13 percent for amounts exceeding \$5 million). A bank with net demand deposits of \$10 million will be subject to an average reserve ratio of only 9.6 percent, and the ratio is smaller for banks below this size. Given the average relationship between net demand deposits, time deposits, cash items in process of collection, and capital funds, a bank with \$10 million in net demand deposits would typically have a balance sheet of about \$25 million.

The reserve ratio for net demand deposits in excess of \$10 million, but less than \$100 million, will be 12 percent. A reserve ratio of 13 percent (formerly applicable to net demand deposits in excess of \$5 million at country banks) will apply to deposits in excess of \$100 million and up to \$400 million (with a 16½ percent ratio applicable in the transitional week on deposits at existing reserve city banks which now are subject to a 17½ percent reserve requirement).

Institutions formerly classified as country banks with net demand deposits of \$400 million or less benefit from

the new system to the extent that the first \$100 million of such deposits are now subject to an average ratio of 11.76 percent instead of 12.98 percent, as formerly. This reduction is quite significant for banks with net demand deposits in excess of \$10 million, but for a country bank with deposits at the upper limit the reduction of reserve liabilities (by \$1,215,000) is fairly small, only about two cents for each dollar of reserves now required.

The reduction under the new regulation is also significant for the fewer than sixty institutions which will continue to be classified as reserve city banks, even though their net demand deposits in excess of \$400 million will continue to be subject to a 17½ percent reserve ratio—the same ratio as now applicable to net demand deposits at such banks in excess of \$5 million. Banks in this category are benefiting from a reduction in their reserve liabilities against the first \$400 million; the reduction amounts to \$19,215,000 for each bank, irrespective of size. Again, the relative value of this reduction for members continuing in the reserve city bank classification is the greatest (about 27 percent of the liabilities prior to the revision) at the lower limit of the bracket, that is, for banks with total assets of about \$1 billion, but diminishes rapidly for the giant money market banks. The only institutions that are experiencing an increase in their reserve liabilities are four or five banks being shifted from the country to the reserve city bank classification.

It is estimated that the revised Regulation D will reduce reserve requirements by about \$3.4 billion, or approximately \$1.4 billion more than the estimated loss resulting from the change in Regulation J. The prospective shrinkage of float as a result of same-day payment occasioned by the revision of Regulation J which will also become effective September 21 is expected to reduce member bank reserves by approximately \$2 billion on average.

There is no sure way of knowing to what extent the reduced reserve liability will offset, or more than offset, the loss of Federal Reserve float (and thus of reserves) experienced by each given member bank, although the various Federal Reserve Banks have endeavored to obtain as complete an analysis of their situation as possible from the individual member banks. Some banks may reap a considerable advantage from changes in Regulation D, while losing little from the change in Regulation J; but the opposite case is likely to occur quite frequently. Also, the reduction of reserve liabilities will become effective on a single date, while additional losses of float may result from a number of changes in the collection mechanism beyond the establishment of additional county or regional clearing arrangements, not all of which are directly related to the current change in Regulation J. Even the effects of changes

resulting from the revision of Regulation J may take some time to work themselves out.

The new version of Regulation D removes, in effect, the anachronistic basis for the structure of reserve requirements, but the much-delayed reform is becoming effective at a time when the banking system is undergoing what might well be the most profound changes in its history. Indeed, the most conspicuous developments—liabilities management and formation of multibank holding companies—are only two of a wide range of changes that are profoundly affecting the environment in which banks operate. The relationship of deposits to other categories of short-term assets and liabilities and of commercial banks to other categories of financial institutions are also undergoing important changes, as are banking practices and policies. The geographic area of operations open to individual banks is widening in many states, and the diversification of services which individual banks or holding companies are able or willing to offer is growing. On the other hand, a variety of influences, including the generally less onerous burden of reserve requirements in almost all states, has resulted in a decline in membership and a resulting shrinkage of the percentage of total demand deposits held by member banks.

Clearly, revisions in Regulations D and J, taken together, represent a significant change in operating conditions for member banks. It remains to be seen what their effect will be on the collection mechanism and on banking structure. For instance, the graduated structure of reserve requirements might favor the holding company route over

mergers as a means of banking growth.

The new Regulation D leaves room for subsequent moves toward more complete uniformity in reserve ratios. Under existing legislation a single ratio could be set within the range of 10 and 14 percent. The desirability of making identical reserve requirements applicable to all commercial banks, irrespective of membership,¹¹ continues to be debated. A good case can be made for extending reserve requirements to all short-term liabilities at all depository institutions or at least at all commercial banks—particularly if some of the developments that are taking place or are being widely discussed further blur the distinction of demand accounts of commercial banks from other short-term liabilities, or reduce considerably the unique role of banks in the payments mechanism.¹² Questions also have been raised as to whether, by substituting (with proper adjustment in reserve ratios) gross for net demand deposits as the basis for assessing bank liabilities, additional simplification and uniformity could be achieved.

¹¹ The Board of Governors of the Federal Reserve System has requested legislation along these lines in several of its *Annual Reports* since 1964.

¹² *The President's Commission on Financial Structure and Regulation* has recommended in its *Report* of December 22, 1971 that membership in the Federal Reserve System be made mandatory not only for all state-chartered commercial banks but also for all savings and loan associations and mutual savings banks that offer third-party payment services (with identical reserve ratios becoming applicable after a transitional period).

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