

FEDERAL RESERVE BANK OF NEW YORK



MONTHLY REVIEW

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The Business Situation

Current business developments suggest a relatively sluggish recovery, but the underlying trend of the economy is obscured by the General Motors strike. Economic activity, as measured by the nation's real output of goods and services, registered a small advance in the third quarter, according to preliminary estimates. This was an improvement in the overall performance of the economy, compared with the previous three quarters. However, in the July-September period, unemployment climbed to 5.2 percent of the labor force, up from 4.8 percent in the previous quarter and 4.1 percent in the first quarter of 1970, while average hours worked continued to decline. Industrial production was down sharply in September, largely but not exclusively as the result of the automotive situation. August and September retail sales failed to sustain the momentum they seemed to be gathering in previous months, so that the increase in consumer spending over the whole quarter was only moderate. New orders for durable goods declined in September for the second consecutive month. Thus, with the exception of housing starts and building permits, which rose substantially during the third quarter, data for recent months give few indications of vigor.

While some tentative signs of moderation emerged on the price front during the third quarter, recent developments indicate that the persistent problems of inflation are still very much with us. During the third quarter, the price deflator for gross national product (GNP), which is the broadest measure of price changes in the economy, rose at about the same rate as in the second quarter but well below the rapid pace of the first quarter of the year. However, the consumer price index rose sharply in September. Much of the earlier slowing in consumer price increases had been linked to changes in food prices, a rather tenuous basis for improvement. The rate of price increases for wholesale industrial products, which are more central to the inflation problem than changes in agricultural prices, has zigzagged over the past year or so. This makes it difficult to attach much significance to quarterly or monthly changes, but wholesale prices of industrial commodities appeared to accelerate in September and, particularly, October.

Little or no evidence has appeared to indicate any ebbing in the rapidly rising tide of wage increases. Increases negotiated in contractual wage settlements continued to leap ahead during the third quarter, reaching a particularly dizzying pace in the unionized construction sector. Although rising productivity—largely resulting from substantial declines in man-hours associated with the business downturn—has blunted some of the impact of rising compensation on unit labor costs, wage and salary increases are far outstripping productivity gains. This can only serve to make the goal of reasonable price stability all the more difficult to attain.

GROSS NATIONAL PRODUCT

The market value of the nation's total output of goods and services rose \$14.1 billion during the third quarter to an annual rate of \$985.2 billion, according to preliminary estimates of the Department of Commerce. Since the impact of the General Motors strike was not felt until the latter half of September, it had only a limited effect on the figures for the entire quarter. Nevertheless, in the absence of the strike, the quarterly rise in GNP probably would have been \$1 billion to \$2 billion larger than the reported increase. Overall economic activity in the coming quarters will certainly be influenced by the length of the strike, the settlement terms, and the manner in which lost production is recouped. The longer the strike, the greater the secondary effects on suppliers of automotive materials and the greater the repercussions from reduced spending by those directly and indirectly idled as a result of the dispute.

Real GNP grew in the third quarter, but only at a very slow 1.4 percent annual rate. To be sure, there was an improvement over the previous three quarters when real output actually fell for six months and then remained about unchanged in the April-June period. Inflation accounted for the major part of the overall GNP advance. The price deflator for total GNP rose at an annual rate of 4.4 percent, which was about the same as the previous quarter's 4.3 percent gain but below the 6.4 percent rise in the first quarter.

The seasonally adjusted rate of increase in consumer prices slowed to about 4.2 percent during the July-September period. However, the consumer price index jumped ahead sharply in September to an annual rate of 6.4 percent, somewhat higher than the average over the preceding year and a half. The September rebound was most pronounced among prices of nonfood commodities and services, which are more indicative of basic inflationary pressures than are food prices, but the latter also rose on a seasonally adjusted basis.

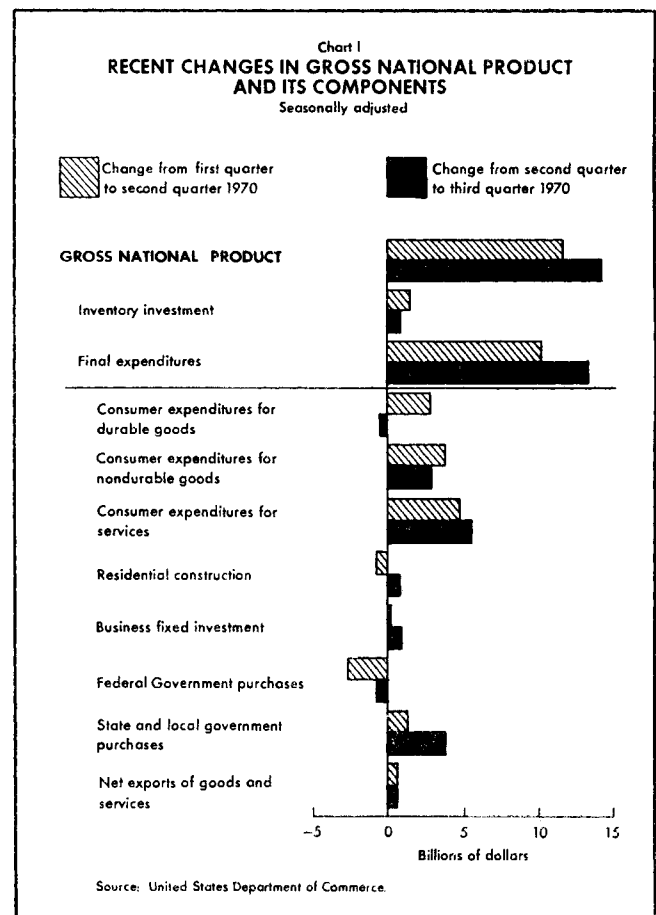
Recent movements in the wholesale price index have been dictated to a great extent by large, erratic swings in the prices of agricultural commodities. Since short-run movements in farm prices are heavily influenced by forces mainly outside the economic system, e.g., weather and blight, they are, in a sense, not at the core of the current inflationary problem. Prices of industrial wholesale products, on the other hand, are more responsive to changes in overall economic activity. Since monthly and quarterly rates of increase for wholesale industrial prices have a sawtooth appearance when mapped out over the past year or so, trends are difficult to discern. Nonetheless, the swift climb in the seasonally adjusted annual rate of increase from August's low 2 percent to September's 3 percent and, finally, to October's startling 7 percent rise is discouraging. On balance, the extent to which any price improvement can be discerned depends heavily on the indicators and time periods examined. At present, available evidence suggests that inflation remains a serious problem.

The somewhat stronger performance of total GNP in the third quarter was centered in final demand inasmuch as inventory spending remained modest. Both business fixed investment and residential construction were stepped up, the latter development bringing to an end the steady decline that had spanned the previous four quarters. State and local government spending also rebounded in response to improved credit market conditions (see Chart I).

Business spending on inventories contributed \$0.9 billion to the third-quarter rise in GNP. While inventory spending imparted a somewhat larger (\$1.5 billion) impetus to the growth of GNP during the second quarter of 1970, it had acted as a substantial drag in the two previous quarters. As usual, the preliminary inventory accumulation estimates for the third quarter are based on the developments during the first two months of the quarter. In making its estimate, however, the Commerce Department apparently adjusted for the likelihood that the large stockpiling of July and August in anticipation of the auto strike would not be repeated in September. During July and August, a large part of the advance in the book value

of total business inventories took place at retail automotive outlets, leading to a sharp rise in the inventory-sales ratio for these stores. Based on preliminary data for July and August, however, there appears to have been a small decline in the third-quarter inventory-sales ratio for all businesses. No doubt, the automotive situation will continue to exert a considerable influence on inventory adjustments for some time to come.

Personal consumption expenditures rose \$8 billion in the third quarter, the smallest gain since the final quarter of 1968. Spending on services was strong, but purchases of nondurable goods rose only slightly and expenditures for durable goods actually declined. These developments are consistent with the course of monthly retail sales, which began the quarter on a strong note in July but lost momentum during August and September. As a result, total third-quarter retail sales, using advance estimates for September, grew at a seasonally adjusted annual rate of only 2.7

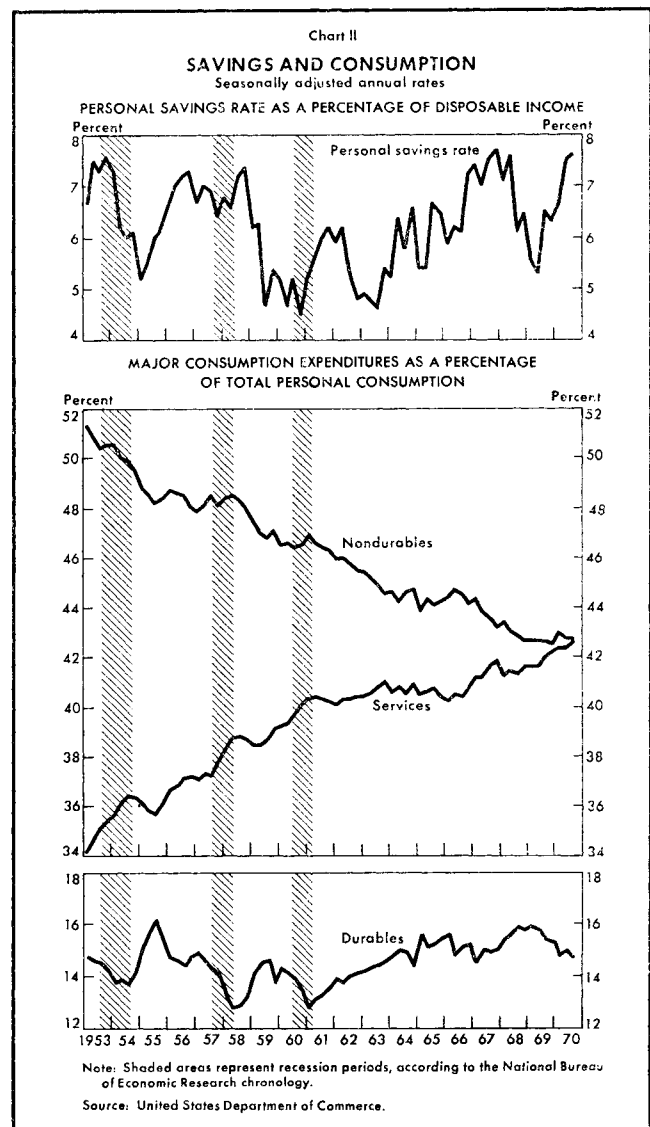


percent in contrast to the 10 percent rate of increase in the previous three months.

In the third quarter the growth of consumption spending was dampened both by the impact of a small increase in disposable, or after-tax, income and by an apparent preference on the part of consumers to save a greater than usual proportion of their incomes. Despite the expiration of the remaining 5 percent income tax surcharge, disposable incomes grew by the smallest amount since the first quarter of last year, as reduced man-hours and declines in payroll employment cut into wage and salary disbursements. The personal savings rate rose to 7.6 percent in the July-September period, which was quite high by historical standards (see Chart II). This unusually large volume of savings probably reflects consumer uncertainty over the outlook for prices and the economy. In addition, a part of the rise in the rate may be attributable to a normal lag in the adjustment of spending to the expiration of the income tax surcharge. The accumulated savings could provide fuel for a stronger pace of consumer spending in future months.

Spending on consumer services rose by \$5.5 billion in line with the strong long-run growth trend of such consumption. Indeed, services have accounted for a larger and larger share of total consumer expenditures. Spending for services is currently 43 percent of consumption, compared with 35 percent in 1953 (see Chart II). All of this growth has been at the expense of nondurable goods, and the share accounted for by durable purchases—though varying over the business cycle—has been unchanged on balance. An important result of this shift is that more and more consumer outlays have been in areas where price increases have been the steepest. Productivity gains are particularly hard to achieve in the service industries, where consumer prices have risen at a 4 percent annual rate in the past decade, compared with a 2½ percent rate of increase in nondurable commodities.

After having declined a total of \$5.5 billion since the second quarter of 1969, the dollar volume of residential construction rose by \$0.7 billion during the third quarter—a rather modest but nonetheless encouraging increase. This pickup in the dollar volume of home-building activity was small by comparison with the upsurge in housing starts, which rose in the third quarter to the highest rate since the April-June period of last year. However, several factors seem to explain this difference. In terms of expenditures as recorded in the GNP accounts, a substantial part of the outlays associated with third-quarter housing starts will show up in subsequent quarters. In addition, there is some evidence suggesting that third-quarter construction was weighted more toward dwellings with lower value



per unit, which partly reflected the fact that a somewhat higher proportion of multifamily structures was started than was the case in the preceding period. Also, the median selling price of new homes during the first two months of the third quarter was actually less than the selling price during the previous quarter and for all of 1969. It should be noted that, in addition to changes in selling prices of new homes having identical characteristics, variations over time in selling prices may also reflect shifts in geographic location and the proportion of homes of different size.

Business fixed investment added \$0.9 billion to the third-quarter increase in GNP, according to the still preliminary estimate. Although on the weak side, this was somewhat ahead of the contribution made during the first half of the year. Spending on fixed investment has held up surprisingly well in the face of declining corporate profits and considerable excess capacity. By the third quarter of this year, the rate of manufacturing capacity utilization as measured by the Federal Reserve Board had fallen to 76 percent, the lowest since the first quarter of 1961. Output as a percentage of capacity has tended to decline fairly steadily since 1966 when it averaged 90.5 percent. Recent levels of new orders for producers' durable goods provide little evidence of current or impending buoyancy with respect to equipment spending. Were it not for the large September gain which appears primarily associated with increased shipbuilding bookings, third-quarter new orders for producers' durables would have been little changed from the first half of the year.

The total government sector contributed \$2.9 billion to the third-quarter gain in GNP, with an increase in state and local government outlays more than offsetting a small net decline in Federal purchases. The latter reduction was associated with a cutback in defense spending which was only partly counterbalanced by a limited rise in nondefense purchases. Defense expenditures were off nearly 6 percent in the third quarter from the high reached in the third quarter of 1969. State and local government purchases of goods and services benefited from improved credit market conditions and grew by \$3.7 billion.

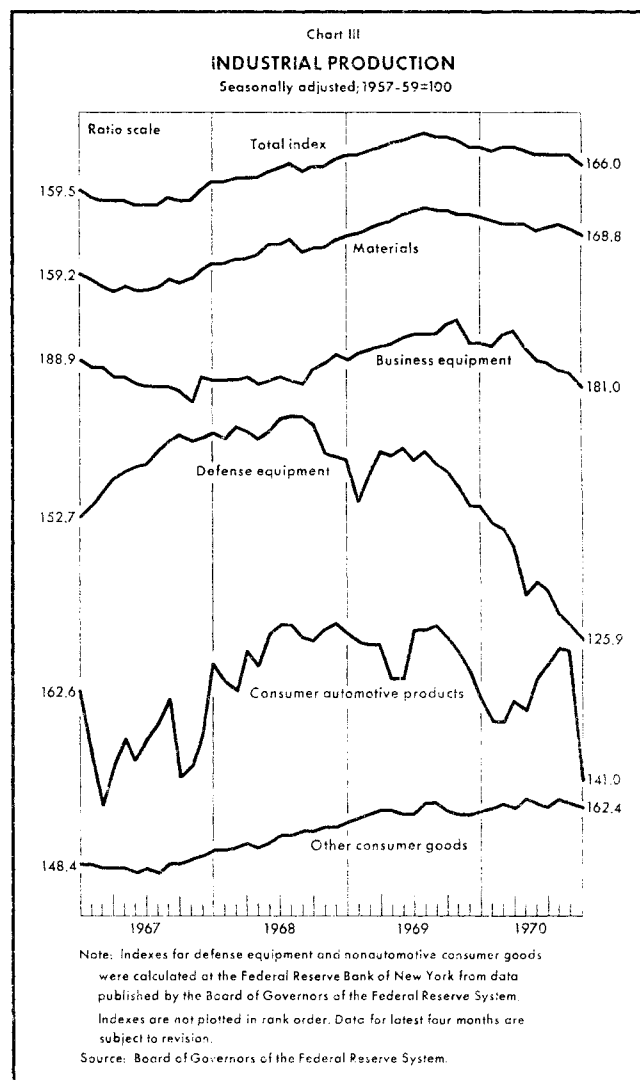
PRODUCTION, PRODUCTIVITY, AND WAGES

The Federal Reserve Board's seasonally adjusted index of industrial production dropped 2.9 percentage points (1.7 percent) in September to a level nearly 5 percent below the July 1969 peak (see Chart III). About two thirds of the September decline was linked to the direct and indirect effects of the work stoppage at General Motors. Auto assemblies in September were at a seasonally adjusted annual rate of 5.7 million units, off fully one third from the previous month. The impact of the automotive dispute on the October index is likely to be in the range of 1 to 2 additional percentage points, but overall industrial production, of course, will also depend on output in sectors beyond the immediate influence of the strike.

Among the major industry groupings, only mining, which benefited from a greater volume of fuel output, and utility production rose during September. Production by manufacturers of nondurables fell to the lowest level since January of last year. Equipment output continued the pro-

nounced decline begun during October 1969, the result of further cutbacks in both the defense and business equipment sectors.

Compensation per man-hour in the total private economy rose at a swift 7.6 percent annual rate during the third quarter, the fastest this year. At the same time, the rather hectic pace of collective bargaining settlements showed few signs of abating. Over the first nine months of this year, the mean first-year wage and benefit settlement for collective bargaining agreements covering 5,000 or more workers was 14.7 percent, compared with the 10.9 percent rise over all of 1969. Mean increases for the full life of the contracts negotiated were 10.0 percent in the



first three quarters of this year as against 8.2 percent during all of last year.

Wage gains as a whole, and especially those in the unionized areas of the economy, have continued to outstrip productivity increases. Output per man-hour in the private economy, one measure of productivity, rose at a substantial 4.6 percent annual rate. This advance, however, was clearly associated with the business cycle since it stemmed from the combination of a small increase in output and a rather large decline in man-hours. These gains are distinct from those of a more permanent nature, resulting from such factors as innovation, increased use of capital, and a more educated labor force. Taken together, the output per man-hour and compensation movements indicated a third-quarter rise of 3.0 percent in labor costs per unit of output, perhaps giving some indication of pressures on price and cost levels. Although larger than the 1.5 percent in-

crease in the preceding three months, this was a considerable improvement over the record of other quarters in 1969 and 1970. In these earlier intervals, the average advance in unit labor costs was well above a 7 percent annual rate while productivity gains were small and, in three of the five quarters, negative. In the manufacturing sector, compensation per man-hour rose at about the same rate as in the total private economy, but a much smaller rise in productivity led to a 6 percent increase in unit labor costs during the third quarter. On the whole, these third-quarter developments give little room for optimism. Unit labor costs were still rising at a rapid rate while compensation has continued, if not accelerated, its swift advance. This, coupled with the fact that productivity gains of the order of magnitude recorded in the period cannot be permanently maintained, tends to add a pessimistic note to the price-cost situation over the coming months.

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Bank Liabilities and Credit in the Third Quarter

The third quarter witnessed a strong influx of funds at commercial banks and an accompanying shift within both the liability and asset structures of banks. With fears of a liquidity crisis reaching their peak in the latter part of June, the Board of Governors of the Federal Reserve System had suspended, effective June 24, Regulation Q interest rate ceilings on time deposits of \$100,000 or more maturing in 30 to 89 days. This move enabled banks to compete aggressively for funds through massive sales of large negotiable certificates of deposit (CD's). At the same time, consumer time and savings deposits at commercial banks also rose substantially as individuals continued to accumulate liquid financial assets. The strong inflow of time and savings deposits in turn enabled banks to reduce their reliance on nondeposit sources of funds as well as to strengthen their liquidity positions.

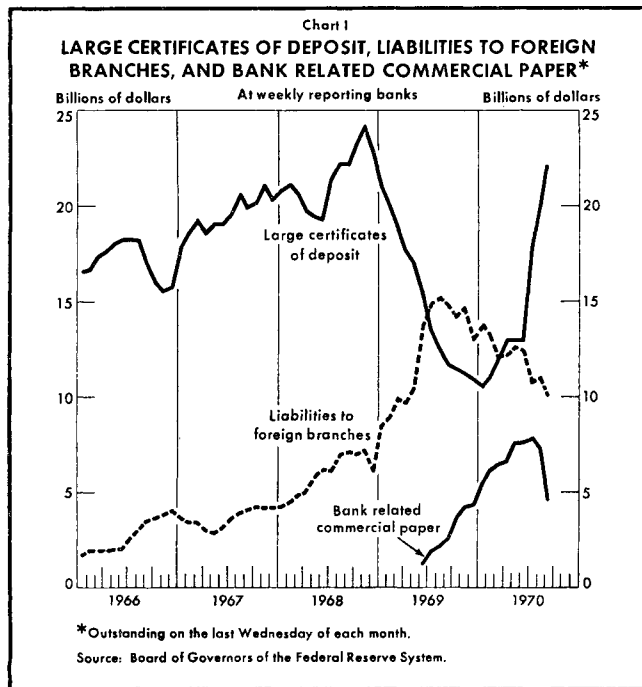
The narrowly defined money supply grew moderately during the July-September quarter, according to tentative estimates. Total credit at all commercial banks expanded somewhat more rapidly but, as the quarter progressed and loan demand slackened, a good part of the expansion took the form of additions of large quantities of Government and other securities to banks' portfolios. Savings and loan associations and mutual savings banks continued to enjoy improved deposit flows during the period.

SOURCES OF FUNDS TO THE BANKING SYSTEM

The extremely rapid increase of time and savings deposits channeled a substantial quantity of funds to the nation's banking system. During the third quarter, total time and savings deposits at all commercial banks grew at a seasonally adjusted annual rate of 31.8 percent—a record pace. In contrast, in the third quarter of 1969, when money market rates were well above Regulation Q ceilings, these deposits declined at a rate of 13.3 percent. During the first nine months of 1970, time deposits advanced at a 15.7 percent annual rate as against a 5.3 percent decline for all of 1969.

The suspension of Regulation Q ceilings on large CD's maturing in 30 to 89 days enabled banks to sell these certificates in volume. Weekly reporting bank data, which are not adjusted for seasonal variation, indicate that during the third quarter large CD's outstanding at these banks climbed \$9.3 billion. This rise was equal to two thirds of the cumulated runoff in CD's from their December 4, 1968 high to their February 4, 1970 low. At the end of September 1970, CD's outstanding thus totaled \$22.2 billion, or only \$2.1 billion below the peak of \$24.3 billion recorded on December 4, 1968 (see Chart I). Other time deposits—time and savings deposits less large CD's—experienced a similar, though smaller, buildup during the quarter. At weekly reporting banks, these deposits increased by about \$3.6 billion on a nonseasonally adjusted basis from the end of June to the end of September. By way of comparison, during the same period of 1969, such deposits dropped \$2.4 billion, while in the third quarter of 1968 and of 1967, they had shown an average increase of about \$1.7 billion.

With sizable inflows of time deposits, commercial banks have been reducing their dependence on the Euro-dollar market as a source of loanable funds. Euro-dollars consist of dollar-denominated deposits in banks outside the United States. Generally, United States banks that have obtained Euro-dollars have done so through borrowing from their foreign branches. Such borrowing began to become a significant source of funds for commercial banks—primarily the large money center banks—in the latter half of 1966 when liabilities to their foreign branches rose from just under \$2 billion in June to about \$4 billion by the end of the year. These liabilities continued to increase irregularly thereafter, picking up momentum in 1969 when banks turned to Euro-dollars to offset run-offs of CD's as market interest rates surpassed Regulation Q ceilings. In early 1969, liabilities to foreign branches were approximately \$8 billion and, by mid-August of that year, totaled more than \$15 billion. Borrowings then fluctuated narrowly, reaching their peak of \$15.4 billion



in the week ended October 15, 1969.

In the summer of 1969 the Board of Governors of the Federal Reserve System moved to make Euro-dollar borrowings a more expensive source of funds for United States banks. First, in July, the Board revised Regulation D to eliminate a reduction in reserve requirements stemming from the use of "bills payable" checks to repay Euro-dollar borrowings. Then in August 1969, the Board modified Regulations D and M, imposing marginal reserve requirements on bank borrowings of Euro-dollars, on the sale of loans to foreign branches, and on loans made by foreign branches to United States residents. The amendment to Regulation M applied a 10 percent reserve requirement to borrowings and asset acquisitions in excess of a reserve-free base, defined as the average amounts of net borrowings of member banks from their foreign branches and of assets purchased by foreign branches from their head offices in the four-week period ended May 28, 1969. If average amounts fall below the base level for a four-week computation period, the reserve-free base for future periods is reduced by the amount of the shortfall. Similarly, the August amendment to Regulation D provided for a 10 percent reserve requirement on borrowings by member banks from foreign banks when these borrowings exceed a base level.

The amendments to Regulations D and M in 1969 diminished the attractiveness of Euro-dollars and encouraged banks to look for other sources of funds. At first, the banks turned to the sale of bank-related commercial paper as an alternative source and, more recently, the inflow of large CD's and other time deposits has supplied liquidity. As a result, in 1970, domestic banks have gradually reduced their liabilities to foreign branches. These liabilities stood at just under \$14 billion early in January and declined to about \$11.5 billion by the week ended July 22. Since then the runoff has been more rapid, and by the final week of September liabilities to foreign branches had fallen to slightly under \$10 billion. In the past, member banks had been reluctant to permit their Euro-dollar borrowings to fall below their reserve-free base, but recently several major money center banks have allowed their bases to erode.

The inflow of time deposits was, in part, also responsible for the decrease in bank-related commercial paper that occurred in the third quarter. However, much of the decline in bank-related commercial paper in August and September can be attributed to the reserve requirements imposed by the Board of Governors of the Federal Reserve System on funds acquired by banks from the sale of such paper.

Bank-related commercial paper is a short-term unsecured promissory note issued by a bank holding company or nonbank subsidiary. When a bank holding company issues commercial paper, it can use the funds raised to purchase loans or investments from the portfolio of the affiliated bank. As a result, banks are able to obtain additional funds to lend. Loan sales have usually increased concomitantly with the issuance of bank-related commercial paper. Bank holding companies and other bank affiliates began borrowing in the commercial paper market in late 1968. Regulation Q interest rate ceilings largely precluded banks from issuing short-term notes directly during periods of monetary restraint, but bank affiliates were not so restricted. In 1969, commercial paper rates were below those on Euro-dollars or Federal funds for much of the year, and the amount of bank-related commercial paper outstanding grew from about \$860 million in early June 1969 (when the System first began to collect comprehensive figures on such paper) to \$4.3 billion in December of that year. Bank-related paper continued to grow until it reached \$7.8 billion in July 1970.

On August 17 of this year the Board announced the imposition, effective with the reserve-maintenance period beginning October 1, of a 5 percent reserve requirement on all funds raised by member banks through the sale of

bank-related commercial paper with a maturity of thirty days or longer and the imposition of Regulation D reserve requirements on demand deposits on bank-related paper of less than thirty days' maturity. At the same time, the Board reduced the member bank reserve requirement on time deposits in excess of \$5 million from 6 percent to 5 percent. In effect, these measures placed large CD's and bank-related commercial paper on an essentially equal basis; the special attractiveness of commercial paper as a source of funds to banks was thus largely eliminated.

Since the August 17 announcement, commercial banks have steadily adjusted to the reserve requirement changes. In the seven-week period ended September 30, the volume of bank-related commercial paper outstanding dropped by \$3.1 billion, with most of the decline occurring in September. Loans sold to affiliates of large banks displayed similar movement, falling from their peak of about \$8 billion in July to \$7.8 billion in August and then to \$5.0 billion in September.

The money supply, despite wide month-to-month variation, expanded at a seasonally adjusted annual rate of 5.1 percent during the third quarter, according to preliminary estimates. This represented a somewhat faster expansion than the 4.2 percent rate registered in the second quarter and brought growth of the narrowly defined money supply for the first nine months of the year to an annual rate of 4.4 percent. These figures must be regarded as tentative, since the annual revision of the money supply series—incorporating new data culled from various sources including the June call reports for nonmember banks and updated seasonal adjustment factors—is due soon. In the light of the growth of time deposits, the broad money supply—private demand deposits and currency plus time deposits—expanded more strongly, at an 18.4 percent seasonally adjusted annual rate in the July-September period.

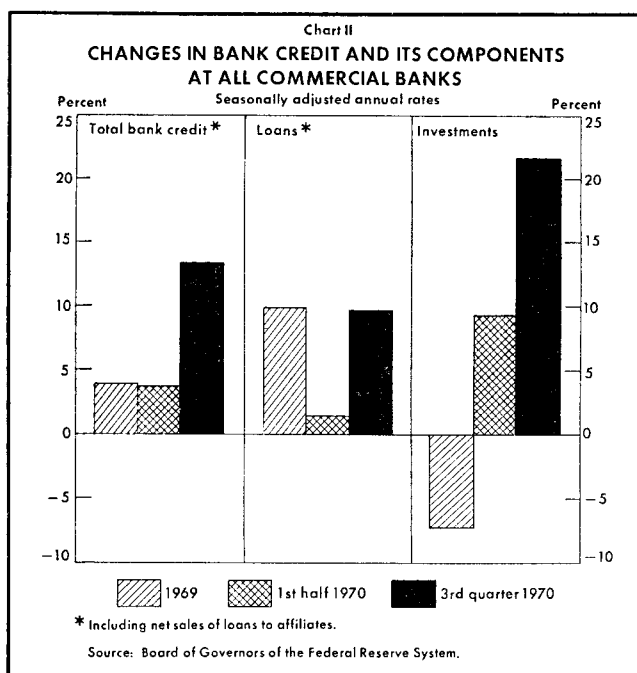
Total member bank deposits subject to reserve requirements plus nondeposit liabilities¹—the so-called adjusted bank credit proxy—rose during the third quarter at a seasonally adjusted annual rate of 17.2 percent. Growth of the adjusted proxy proceeded at rates of 18.1 percent in July and 23.2 percent in August, but tapered off to 9.7 percent in September. The slower growth of the proxy in

September was attributable to the decline in nondeposit liabilities and to the slower growth of demand deposits during the month.

BANK CREDIT

Total credit at all commercial banks advanced strongly during the third quarter at a seasonally adjusted annual rate of 13.4 percent. This is in addition to those loans bought back from bank affiliates whose commercial paper liabilities were run down. The growth was especially rapid during the first two months of the quarter; a rate of increase in excess of 15 percent was registered in both July and August. For the first nine months of 1970 bank credit expanded at an annual rate of 7.1 percent, compared with a rate of only 4.0 percent for all of 1969. (These figures include net sales of loans to affiliates during 1969 and the first half of 1970.)

Investments continued quite strong in the third quarter. Bank holdings of securities increased at an annual rate of 21.7 percent, after advancing at an 18.2 percent pace in the second quarter. Inflows of funds to the banking system, in conjunction with easing loan demand and a desire on the part of banks to rebuild liquidity, contributed to the substantial increase in investment holdings during the July-September quarter. Holdings of United States Gov-



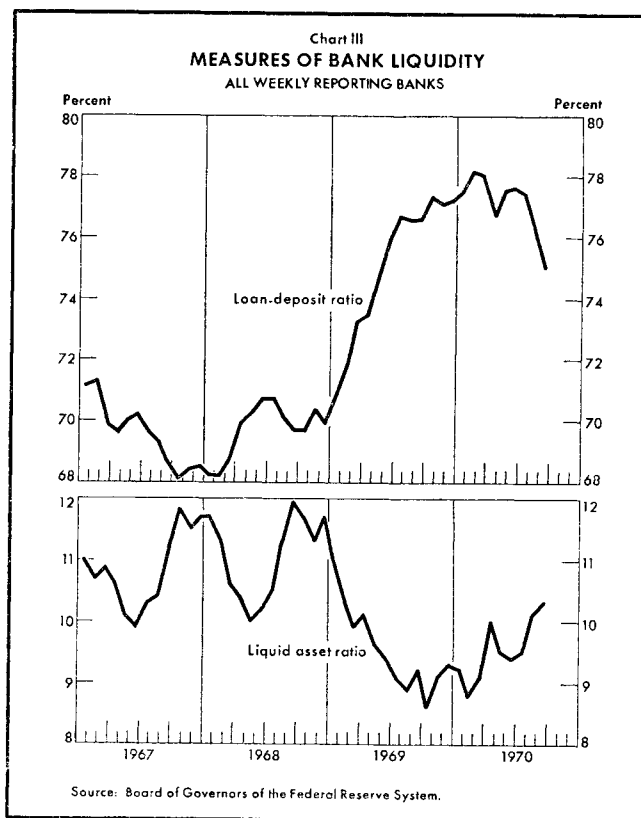
¹ Liabilities to own foreign branches, Euro-dollars borrowed directly from foreign banks or through brokers and dealers, liabilities to own branches in United States territories and possessions, commercial paper issued by bank holding companies or other bank affiliates, and loans or participation in pools of loans sold under repurchase agreement to institutions other than banks and other than banks' own affiliates or subsidiaries.

ernment securities climbed at a 23.7 percent annual rate for the quarter as a whole, with the growth concentrated in the first two months of the period. Banks added United States Governments to their portfolios at annual rates in excess of 30 percent in both July and August, reflecting bank purchases of tax anticipation bills in July and bank participation in the Treasury's refunding and cash offering in August. In September, however, bank holdings of Governments increased at only a 2.1 percent rate. On the other hand, holdings of other securities, primarily obligations of state and local governments, grew at a 31.3 percent rate in September and at a 20.3 percent pace overall in the third quarter.

Total bank loans, aside from those repurchased from affiliates, grew at a seasonally adjusted annual rate of 9.6 percent in the July-September quarter (see Chart II). This was a modest expansion by comparison with the rate at which banks increased their securities holdings during the quarter but nevertheless represented a significant upswing in bank lending, compared with the second quarter when total loans (net of sales to affiliates) declined at a 0.4 percent rate. Total loans grew quite rapidly in July and advanced modestly thereafter in the quarter. The July increase in bank lending primarily reflected the bulge in loans to nonbank financial institutions, as this loan category expanded at an annual rate of 158.1 percent in the month. Pressures in the commercial paper market became severe in late June, following the filing of the petition for reorganization of the Penn Central Transportation Company, and nonbank financial institutions turned to the banking system for financing to replace some maturities of commercial paper. As the quarter progressed, however, the commercial paper market stabilized and, in both August and September, loans to these institutions declined on a seasonally adjusted basis.

Business loans, other than those repurchased from affiliates, advanced at a 2.5 percent rate in the third quarter, a slower pace than the 5.8 percent increase posted in the preceding three months. Moreover, business loans declined in September at a 9.5 percent seasonally adjusted annual rate. Business loan demand during the week of the September corporate tax and dividend dates was smaller than anticipated, and during the following week many large banks lowered their prime lending rate from 8 percent to 7½ percent. On a nonseasonally adjusted basis, business loans at all weekly reporting banks registered a sizable gain during the week ended September 16, but a substantial portion of this increase was accounted for by banks purchasing loans from their affiliates.

Growth of both real estate and consumer loans in the third quarter surpassed their performance of the April-



June period. Real estate loans moved up at an annual rate of 2.3 percent after growing at a 1.1 percent pace in the second quarter, and consumer loans expanded at a 6.6 percent rate during the third quarter, a rate about four times as large as the second-quarter advance. Securities loans experienced a large increase at an annual rate of 131.6 percent over the July-September period, when dealers borrowed heavily to finance inventory positions.

Bank liquidity improved during the third quarter, as loan growth failed to keep pace with deposit inflows. At weekly reporting large commercial banks, the expanded loan-deposit ratio—the ratio of loans (other than loans to brokers and dealers) to deposits (less cash items in the process of collection) plus liabilities to foreign branches—declined by about 2.7 percentage points, reaching 74.9 percent in September. The September figure was the lowest the ratio has been since the spring of 1969 (see Chart III).

The expanded loan-deposit ratio is not a completely satisfactory measure of bank liquidity, however, because it neglects the quality of loan portfolios and the cash flow arising from loan repayments. An alternative indicator of

liquidity is the liquid asset ratio.² For the third quarter, the liquid asset ratio displayed a similar improvement in bank liquidity positions. In September, the ratio rose to 10.3 percent at all weekly reporting banks, well above the 1970 low of 8.8 percent posted in February and the highest since February 1969. In this context, the improvement in bank liquidity noted here is relative to liquidity positions earlier in 1970 and in 1969. The ratios indicate that bank liquidity still remains well below the levels of 1967 and 1968.

THRIFT INSTITUTIONS

Deposit flows to mutual savings banks and savings and loan associations continued strong in the third quarter, advancing at a 9.5 percent seasonally adjusted annual rate after increasing at a rate in excess of 7 percent in the second quarter. September marked the eighth consecutive month that these institutions experienced deposit growth, and preliminary evidence also indicates that, unlike recent similar periods, substantial declines in deposits did

² The liquid asset ratio is defined as loans to brokers and dealers, loans to domestic commercial banks, Government securities due within one year, balances with domestic commercial banks, bankers' acceptances, municipal tax warrants, and short-term notes as a percentage of total liabilities excluding capital accounts.

not occur following the quarterly interest-crediting period. Interest rate ceilings at thrift institutions were raised at the end of January, and in March the Treasury raised the minimum denomination on newly issued bills from \$1,000 to \$10,000. These actions undoubtedly helped thrift institutions attract deposits. More recently, lower short-term market yields and weakness in the stock market have probably also contributed to the inflow of funds to these institutions.

Mortgage lending at savings and loan associations and mutual savings banks increased at a moderate 7.7 percent pace in the third quarter. While mortgage extensions at savings and loan associations expanded at a fairly strong 8.9 percent seasonally adjusted annual rate during the quarter, mortgage lending at savings banks increased at a rate of 4.8 percent. Savings and loan associations experienced a more rapid inflow of deposits than did mutual savings banks during the quarter, 10.9 percent as compared with 6.8 percent, and savings banks continued to diversify their investments, thus contributing to the divergence in the growth rates of mortgage lending. In an effort to make additional funds available for housing, a new Federal Home Loan Mortgage Corporation was formed on September 2 as part of the Federal Home Loan Bank System. The Corporation is authorized to purchase residential mortgages from members of the Federal Home Loan Bank System and from financial institutions insured by an agency of the United States Government.

The Money and Bond Markets in October

Short-term interest rates continued to decline in October, while yields on long-term bonds generally rose as the capital markets labored under a record \$4.9 billion of corporate and tax-exempt offerings. Consequently, the yield spread in favor of interest rates on long-term issues over those on short-term obligations continued to rise in all sectors of the market. An increase in this yield spread is, of course, normal during an economic slowdown, when slack in the economy and a less restrictive monetary policy

foster a more rapid decline in short-term than in long-term rates. The 1970 experience has been somewhat unusual, however, because long-term interest rates reached their peaks quite late in the cycle—well after short-term rates had started trending lower—and are still close to these high levels.

A major force holding long-term rates high has been the massive outpouring of intermediate- and long-term corporate bonds. Through October, corporate bond flota-

tions in 1970 totaled more than \$24 billion, about 30 percent higher at an annual rate than in 1967, the previous record year. A number of factors seem responsible. First, some restructuring of corporate debt is normal after a period of monetary restraint, in which corporations have depended heavily on bank loans and short-term debt. Since the recent period of monetary restraint had been quite prolonged, as had corporate reliance on short-term borrowing, a surge in corporate bond flotations is perhaps not surprising. In addition, the Penn Central Transportation Company's insolvency and the ensuing weakness in the commercial paper market made many corporations anxious borrowers in the bond market without too much concern about the level of interest rates. Furthermore, corporate borrowers seem to be guarding against the possibility of a rapid rebound in the economy such as developed in 1967.

As corporations substituted borrowing in the capital market for short-term borrowing, bank lending activity remained slack in October. This enabled the banks to make substantial additions to their investment portfolios, which in turn was beneficial to the municipal bond market where bank demand played a key role in steadying prices of shorter and intermediate-term maturities. On the basis of preliminary estimates, the narrowly defined money supply—demand deposits and currency held by the public—showed a small increase in October. Time deposits continued to flow into the banking system at a very rapid pace in October, as investor interest in large certificates of deposit (CD's) was apparently undiminished by a lower range of offering rates. While these deposits expanded, member banks once again reduced their reliance on nondeposit sources of funds.

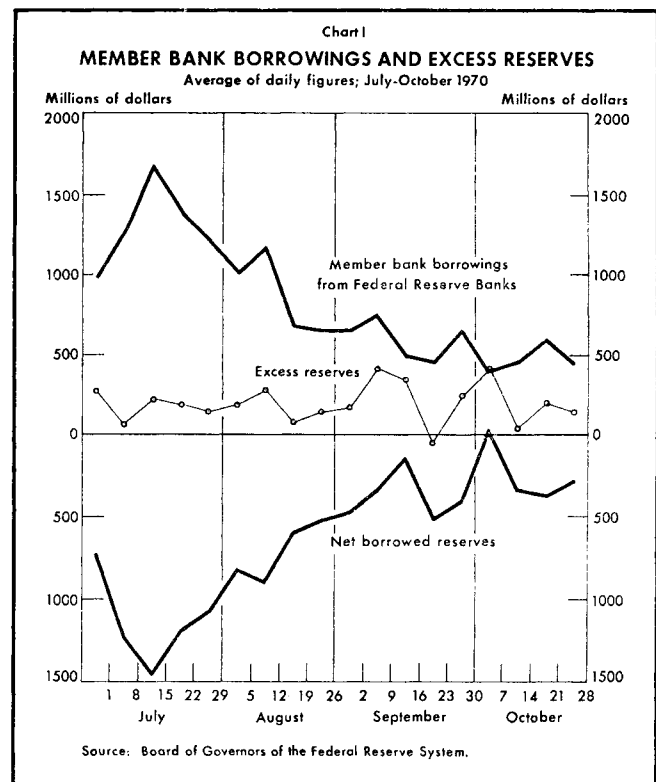
BANK RESERVES AND THE MONEY MARKET

Conditions in the money market remained comfortable through October, although a slightly firmer tone displaced the particularly easy conditions prevailing in late September. During the first week of the month, the effects of the Federal Reserve Board ruling imposing reserve requirements on funds received by banks from the sale of their affiliates' commercial paper, and the simultaneous reduction in required reserves held against certain time deposits,¹ became evident on the balance sheet of the banking system. The measures contributed to a net reduction of \$408 million in required reserves during the

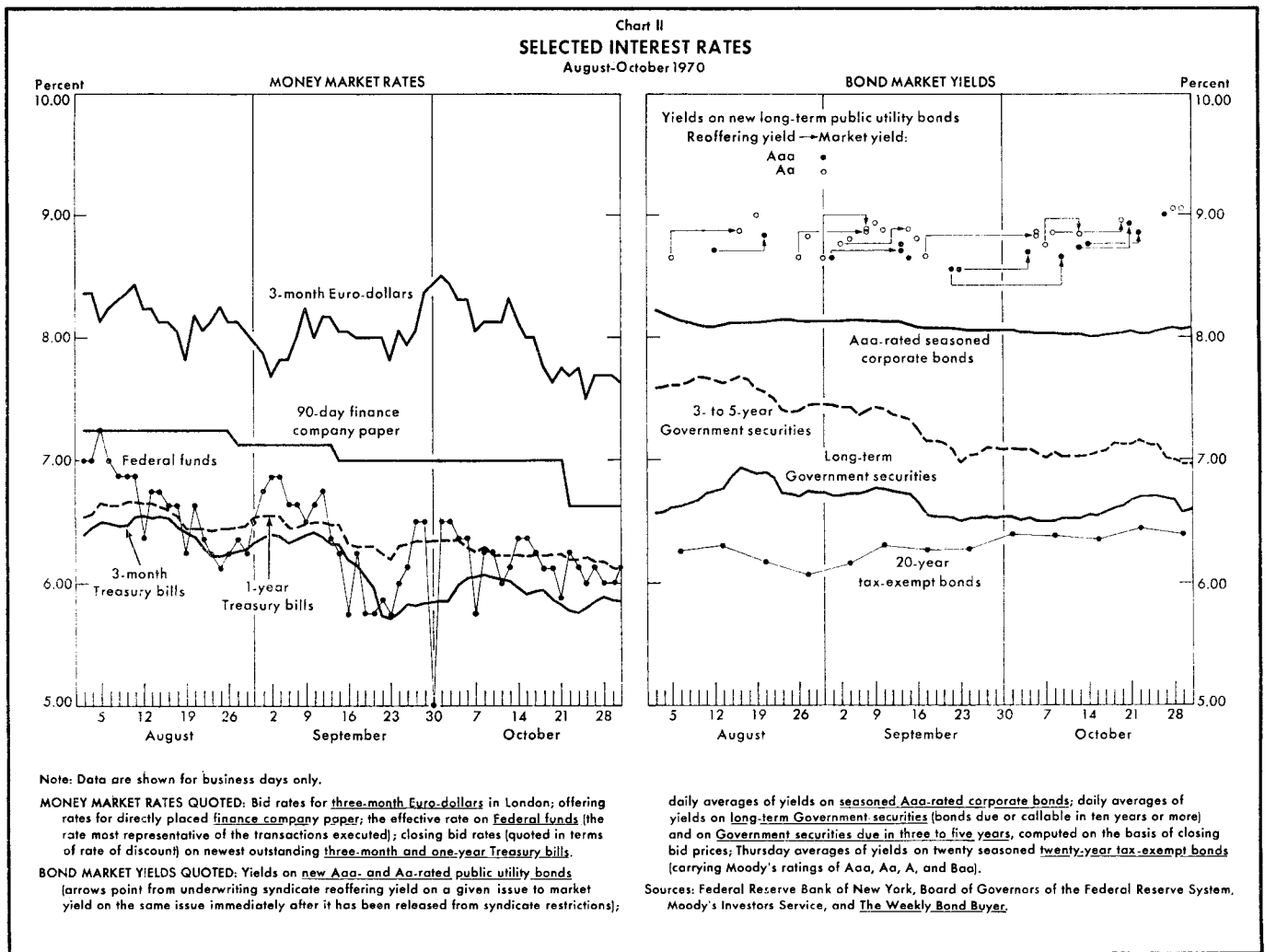
statement week ended October 7. Although this was partially offset by System open market sales and the absorption of reserves by operating factors, member bank excess reserves rose considerably during that week. Since the high level of excess reserves was not exceeded by member bank borrowings (see Chart I), banks were in a free reserve position for the first time since February 1968. Despite ample reserve availability, the average effective Federal funds rate rose sharply during the week (see Chart II), reflecting pressure from heavy financing needs of Government securities dealers and a cautious management of reserve positions by member banks. Over the remainder of the month, conditions in the money market were comfortable, and the average effective rate on Federal funds moved somewhat lower.

Lack of pressure on member bank reserve positions, combined with weak loan demand, led banks to reduce further their level of borrowings from the Federal Reserve Banks. Member bank borrowings declined by \$138 million in October to an average of \$468 million (see table), their lowest level since October 1968.

Demands for funds in the commercial paper market were moderate in October. In addition to the emphasis



¹ For a discussion, see this Review (September 1970), page 213.



on long-term financing, demand pressures were reduced as bank affiliates again allowed a substantial share of their obligations to run off at maturity. Moreover, the auto strike may have exerted a dampening effect on the growth of finance company paper by retarding auto sales. During October, interest rates on commercial paper continued to decline, as did rates on such other money market instruments as bankers' acceptances and three-month Euro-dollars.

A pronounced weakness in bank lending, which had been evident from about mid-September, continued through October. Despite the September prime rate reduction, business loan demand remained slack. The volume of commercial and industrial loans outstanding at all

weekly reporting banks fell by about \$1.2 billion² in the five weeks ended October 21, compared with sizable increases in the comparable period of the three preceding years. In the face of sluggish loan activity, banks increased their holdings of securities—particularly short- and intermediate-term obligations of state and local governments. The growth of commercial bank holdings of municipal securities thus far this year has been marked and stands in sharp contrast to the liquidation of these

² Includes an adjustment for loans repurchased from affiliates in connection with commercial paper redemptions.

investments, which occurred during the comparable period of 1969 when banks were attempting to meet loan demands at a time of severe disintermediation. Over the first ten months of 1970, bank holdings of obligations of states and political subdivisions increased by \$4.4 billion, compared with a \$2.7 billion decline during the like period last year.

Banks again received very strong inflows of time deposits in October. Despite reductions in issuing rates on large CD's during the month, the volume of these obligations outstanding continued to surge ahead as it has since the partial suspension of Regulation Q interest rate ceilings in late June. Indeed, offering rates on large CD's of 30- to 89-day maturity have fallen to or below the suspended ceiling rates. In late June, in contrast, they exceeded those ceilings by 1½ percentage points. Moreover, offering rates on longer maturities fell below the Regulation Q ceiling rates in October. This may have the effect of lengthening the average maturity of large CD's, which stood at only 2.9 months at all weekly reporting banks in September, the most recent month for which data are available. Over the four weeks ended October 28, large CD's increased by \$1.25 billion, bringing the total volume outstanding to \$23.50 billion.

The daily average money supply expanded at a rate of approximately 1 percent during October.³ However, since this series frequently shows considerable month-to-month variation, longer time periods are more suitable for examining the behavior of this aggregate. Over the first ten months of the year, the rate of increase in the money supply averaged 4 percent. The adjusted bank credit proxy, a measure of member bank liabilities, also grew at about a 1 percent rate in October, as strong deposit growth was offset to a large extent by a reduction in nondeposit liabilities. This aggregate has grown at an annual rate of 7.5 percent thus far this year.

THE GOVERNMENT SECURITIES MARKET

The buoyant tone that characterized the Government securities market during most of September faded somewhat in early October, as the slightly firmer tone of the money market reduced speculation of an imminent reduction in the discount rate and tempered expectations of further sharp declines in interest rates. Activity in the market during the early days of the month was also restrained

by anticipation of the October Treasury financing and uncertainty about the vehicle that might be chosen to raise the new cash. Thus, yields on intermediate- and long-term securities and Treasury bills all edged higher during early October.

FACTORS TENDING TO INCREASE OR DECREASE MEMBER BANK RESERVES, OCTOBER 1970

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

Factors	Changes in daily averages— week ended on				Net changes
	October 7	October 14	October 21	October 28	
"Market" factors					
Member bank required reserves	+ 408	—	— 348	+ 440	+ 500
Operating transactions (subtotal)	— 153	— 348	+ 182	— 32	— 351
Federal Reserve float	+ 21	+ 191	+ 544	— 339	+ 417
Treasury operations*	+ 214	— 163	— 63	— 71	— 83
Gold and foreign account	— 10	— 4	+ 9	— 15	— 20
Currency outside banks	— 272	— 331	— 511	+ 407	— 707
Other Federal Reserve liabilities and capital	— 106	— 41	+ 203	— 14	+ 42
Total "market" factors	+ 255	— 348	— 166	+ 408	+ 149
Direct Federal Reserve credit transactions					
Open market operations (subtotal)	— 219	— 57	+ 88	— 326	— 514
Outright holdings:					
Government securities	— 165	—	— 16	— 63	— 244
Bankers' acceptances	— 2	+ 3	— 2	—	— 1
Repurchase agreements:					
Government securities	— 18	— 56	+ 83	— 205	— 196
Bankers' acceptances	— 9	— 8	+ 7	— 14	— 24
Federal agency obligations	— 25	+ 4	+ 16	— 44	— 49
Member bank borrowings	— 265	+ 57	+ 135	— 153	— 226
Other Federal Reserve assets†	+ 380	+ 42	+ 27	+ 17	+ 466
Total	— 104	+ 41	+ 250	— 464	— 277
Excess reserves	+ 151	— 307	+ 84	— 56	— 128

Member bank:	Daily average levels				Monthly averages
Total reserves, including vault cash	28,777	28,470	28,902	28,406	28,639‡
Required reserves	28,354	28,354	28,702	28,262	28,418‡
Excess reserves	423	116	200	144	221‡
Borrowings	396	453	588	435	468‡
Free, or net borrowed (—), reserves.....	27	— 337	— 388	— 291	— 247‡
Nonborrowed reserves	28,381	28,017	28,314	27,871	28,171‡
Net carry-over, excess or deficit (—)\$....	149	204	69	88	128‡

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

* Includes changes in Treasury balances at the Federal Reserve and in Treasury currency and cash.

† Includes assets denominated in foreign currencies.

‡ Average for four weeks ended on October 28.

§ Not reflected in data above.

³ Because final October data are not yet available, growth rates of the money supply and adjusted bank credit proxy are based on an average of the four weeks ended October 28.

The upward drift in yields was halted toward the close of the first statement week by increased demand in advance of President Nixon's October 7 statement on the Vietnam situation. While market participants viewed the speech as constructive, its subsequent effect on the market was minimal since it was not considered likely to affect near-term interest rate movements. Thereafter, yields on long-term issues began to climb once again, as prices were affected by the weakness developing in the corporate sector. Shorter term notes and bonds, however, benefited from the October 8 announcement by the Treasury that it would raise \$2.5 billion in new cash via a tax anticipation bill (TAB) offering at midmonth. Since some market participants had speculated that the financing would take the form of an 18- to 24-month note and had reduced their holdings of issues in that maturity range, demand for shorter term Treasury securities was stronger in the wake of the TAB announcement. News of the offering caused only a brief hesitancy in the Treasury bill market, as participants expected that bank demand for the new issue would be good, in light of both sluggish lending activity and full tax and loan privileges accorded the offering. Improved conditions in the financial markets in recent weeks were underscored by the terms of the TAB offering. The average issuing rate on the bills was set at 5.970 percent, well below the 6.504 percent rate on the previous nine-month TAB offered in late July and the lowest on such an issue since July 1968.

Attention in the intermediate-term sector during the second half of the month was focused on the Treasury's refinancing of \$7.7 billion of notes maturing in November. On October 22 the Treasury announced that holders of the maturing securities could exchange them for either a 42-month note with a 7¼ percent return or a 7½ percent note maturing in August 1976 and priced to yield 7.39 percent. In anticipation of this announcement, prices of issues due in three to five years had eased in generally quiet trading. Prices rebounded sharply after the announcement, however, as strong interest developed in the new issues. By the close of the books on October 29, the new issues had risen to a premium of 1⅜ over issue price for the 3½-year note and 1⅞ for the note maturing in 1976. Much of the enthusiasm appeared to be based on the renewed expectation that a cut in the Federal Reserve discount rate—and perhaps a further cut in the prime lending rate—was likely over the weeks ahead. On October 30 the Treasury reported that the refunding had been highly successful, with a relatively low attrition of 12 percent. About \$5.3 billion of the \$6.0 billion in maturing notes held by the public was exchanged for the new notes. The department also announced that it plans to cover the at-

trition and raise new cash through the auction of \$2 billion of a 1½-year note with a 6¾ percent coupon on November 5. This will be the first time in thirty-five years that a competitive auction has been used to sell notes. The procedure has been selected by the Treasury to provide it with somewhat more flexibility in varying market circumstances.

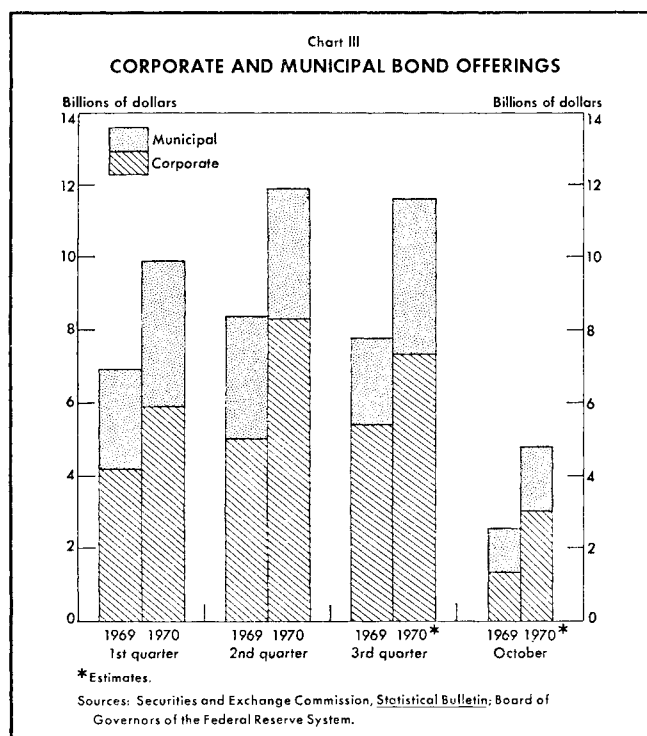
Developments in the long-term sector during the latter half of October continued to be influenced primarily by the easing of corporate bond prices. Since many investors move between the two sectors, dealers lowered prices of long-term Treasury issues as corporate yields were rising. Prices picked up late in the month, however, when bonds attracted good buying at the higher yields. In the Treasury bill sector, moderate but steady demand from midmonth to late October caused rates to decline. Strong bank interest in the TAB auction and a relatively thin supply of short-term issues in dealers' inventories contributed to the rate improvement.

OTHER SECURITIES MARKETS

During October, total corporate and tax-exempt bond offerings were at a record volume of approximately \$4.9 billion. The month's new offerings ran about 80 percent ahead of last October, and continued the trend under way throughout 1970. In each quarter of this year, financings carried out in both the corporate and municipal bond sectors have exceeded considerably those undertaken in the corresponding periods of 1969 (see Chart III). Despite the heavy onslaught of new issues in October, the capital market displayed considerable strength, and yields were not far above their end-of-September levels by the close of the month.

A marked preference for higher quality issues, which became evident in the wake of the Penn Central insolvency, persisted through October. During the first half of the year, the spread between Baa- and Aaa-rated seasoned corporate bonds fluctuated primarily within the range of 75 to 90 basis points, and stood at 70 basis points on June 15. Following the disturbance in the nation's financial markets in late June and early July, the yield spread widened substantially, reaching 136 basis points in late August. During September and October, the spread remained close to this margin, which is the widest that has occurred in the postwar period.

In the corporate sector, where some \$3.0 billion in new debt was introduced during the month, the schedule of offerings was moderately light in early October. Prices of highly rated seasoned issues edged upward during that period, and most new issues were well received as issuing



rates were set above those of late September. The higher range of offering yields caused a fairly sharp downward price adjustment on the unsold portions of several issues originally marketed in late September which were released from syndicate at this time. The yield on Pacific Northwest Telephone Company debentures offered at the end of September, for example, rose from 8.55 percent to 8.70 percent when price restrictions were removed in early October.

Favorable anticipation of the President's address on Vietnam pulled up prices of most outstanding corporate bonds and encouraged a quick sellout of several new issues. However, prices eased in the wake of the announcement as the heavy volume of new issues and mount-

ing dealer inventories became the overriding concerns. Although some encouragement was offered at midmonth by the very good reception given to another large Bell System offering at a yield of 8.76 percent, prices continued to edge lower. In addition to the backlog of inventories, a formidable visible future supply of offerings increased pressures in the corporate sector. This was highlighted by the American Telephone and Telegraph Company's announcement on October 21 that it planned to offer \$500 million in new debt in early November. Under the weight of these supply factors, new issue yields moved up steadily, and on October 27 a \$150 million debt offering of Mountain States Telephone and Telegraph Company reached the market with a 9 percent yield—the highest on a Bell System issue since late June. Several syndicates were terminated, and a number of new issues postponed at this time. However, good demand generally developed at the higher yield levels, in part because of speculation about a reduction in the discount rate or prime rate.

A heavy supply of new offerings was also a major factor influencing the price of tax-exempt securities in October. The municipal sector, however, benefited from strong bank demand, which played a very important role in stabilizing prices of shorter and intermediate-term issues. Prices of longer term municipals, which were steadied early in the month by the improved expectations regarding the Far East and a good reception of new offerings, gained ground toward midmonth as supply pressures lessened briefly. This price improvement was offset, however, during the week ended October 23, when an extraordinarily heavy \$640 million in new issues was brought to the market. As most of the new issues met only fair receptions, prices of outstanding long-term securities sustained sizable declines. A very heavy buildup in dealer inventories added to market pressures in this sector also. As of October 26, the Blue List of dealers' advertised inventories stood at \$847 million, its highest level for the year. These inventories were worked down to \$709 million by the end of October, however, and prices generally rose toward the month end amid improved investment demand.

Banking Market Determination— The Case of Central Nassau County

By RALPH H. GELDER and GEORGE BUDZEIKA*

Commercial banks are multiproduct firms operating in many different markets. The geographic boundaries of these markets vary from service to service and depend to a significant degree on the type of customers served. The market for loans to large national corporations, for example, is countrywide with only the United States' largest banks as "sellers". In contrast, the market for personal checking services tends to be local in character, with all commercial banks, large and small, that operate in a local area functioning as suppliers.

The "multimarket" character of commercial banking poses particularly difficult problems for bank regulatory authorities in considering bank mergers and acquisitions by bank holding companies because these authorities must determine a "relevant" market within which to evaluate anticompetitive effects and convenience and needs benefits.¹ In the landmark Philadelphia National Bank case, the Supreme Court provided guidance in resolving this particular problem by asserting that com-

mercial banking is a "distinct line of commerce" consisting of a "cluster of products (various kinds of credit) and services (such as checking accounts and trust administration)".² This single-line-of-commerce position has been reaffirmed in subsequent antitrust actions and most recently in the Phillipsburg case.³

As a result of the Court's position, regulatory authorities have focused primary attention on product markets unique to commercial banking—demand deposit services and business loans. Competition with other financial institutions in other product markets, such as for consumer savings and mortgage financing, is also considered in determining the relevant market but accorded less weight. Thus, by and large, the boundaries of the relevant market are drawn in the best judgment of the authorities so as to include commercial banks and the households and business firms for whose deposit and loan business the banks compete. To be sure, the Court's line-of-commerce argument simplifies considerably the task of defining a relevant market. Nevertheless, in any particular case, there remains the knotty problem of determining, even for a single product, where properly to fix geographic boundaries that would indeed delineate the area of competition.

This article discusses the problem of determining and identifying the relevant market area for banking services in a suburban area with reasonably close economic and

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¹ The Bank Merger Act of 1960 requires that every bank merger involving an insured bank receive the prior approval of the Comptroller of the Currency, the Board of Governors of the Federal Reserve System, or the Federal Deposit Insurance Corporation depending on whether the resulting bank is a national bank, state member bank, or nonmember insured bank, respectively. The Bank Holding Company Act of 1956 requires the prior approval of the Board of Governors of the Federal Reserve System for a company to become a bank holding company and for a bank holding company to acquire more than 5 percent of the voting stock of another bank. In ruling on such proposals, the responsible agency is required to consider the likely effect of the proposal on competition, the convenience and needs of the communities involved, and the financial and managerial resources and future prospects of the institutions involved.

² *United States v. Philadelphia National Bank*, 374 U.S. 321, 356 (1963). In reaching this opinion the Court indicated that, since only commercial banks have the privilege of accepting demand deposits, they have a competitive advantage over other financial institutions in providing loans and other services because of consumer preference for full service banking.

³ *United States v. Phillipsburg National Bank & Trust Co.*, 399 U.S. 350 (1970).

cultural ties to New York City. It presents the results of a survey conducted recently by the Banking Studies Department of this Bank of households, business firms, and professional individuals in central Nassau County—a suburban area outside the city but within the New York metropolitan area.⁴ “Central Nassau” was selected for study to aid the Board of Governors in consideration of a merger proposal.⁵ However, the Central Nassau area is of interest in its own right because the structure of banking there has been undergoing significant changes as a result of extensive branching by New York City banks and numerous mergers and acquisitions involving local banks. To measure and evaluate the likely competitive effects of these changes, it is important that the market area be properly delineated.

The primary objective of the survey was to obtain information on where residents and businesses of a suburban area do their banking. The survey would thus indicate whether suburban households and firms confine their banking locally or exercise their preferences elsewhere in the metropolitan area. To the extent that the survey results can be generalized, they shed some light on the factors bankers and bank regulators ought to consider important in delineating banking markets in metropolitan areas.

This article comprises three sections. The first part discusses the concept of a market area. The second part presents the results of the survey. The final part discusses the implications of the findings for market area analysis.

MARKET AREA DELINEATION

The most widely used approach to defining a market area, particularly favored by bankers and many bank regulators, is through consideration of “service areas”. A service area is the geographic area from which a bank derives the bulk of its deposit or loan business.⁶ Banks

proposing to merge or affiliate are required to identify and submit data on their service areas. Two banks are said to be operating in the same market if each derives a significant amount of deposit or loan business from the service area of the other. All other banks maintaining offices in the service areas of the two merging banks would also be counted as competitors. In the typical case, the relevant geographic market would center on the combined service areas of the two banks.

The rationale for the service area approach is that households are thought to choose a banking office that is convenient to their residences, and business firms an office convenient to their locations. Households and business firms located in an area-of-service overlap of two banks are thus assumed to have either bank as a convenient alternative. If each bank derives a significant fraction of its deposits or loans from the area, the competitive effort of either bank is likely to be countered by its rival to defend its market share.

But what of the case of two banks that do not share a common service area in any degree? In such a case the service area approach proves to be of limited usefulness. For while it is clear that two banks sharing such a common service area are indeed competitors, it is not true that two banks not sharing a common service area are not competitors. To cope with this kind of market area problem, it is necessary to refer to the analytical framework provided by economic theory. Indeed, the delineation of a relevant market area for analysis of bank competition must meet tests derived from the economic theory of markets.

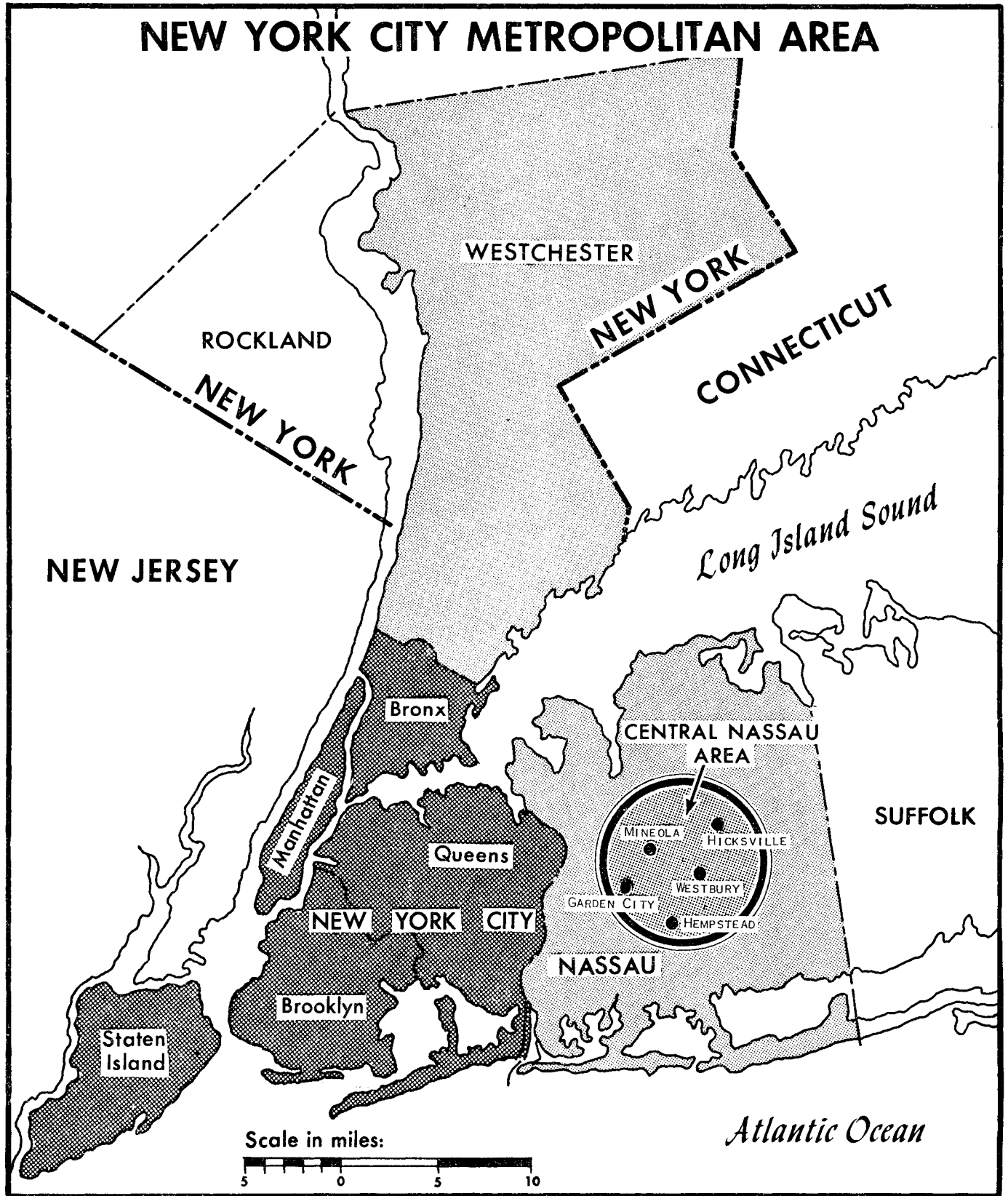
According to theory, two banks may be considered in the same market if significant price, service, and marketing decisions of one cause a significant competitive response on the part of the other. If no reaction is elicited, the banks are likely serving different markets. The unifying force is the actual or potential threat that customers will “substitute” lower priced, higher “quality”, or more varied banking services offered at one bank for higher priced, lower “quality”, or less varied ones at another.

For two banks sharing a common service area, the competitive linkage is direct. Customers of each bank view the other as an immediate alternative. But customers may also find it convenient to bank beyond the service areas of local banks. If a number of such households bank outside their resident communities—for example, near work or shopping—banks in widely separated locations may in fact compete directly with one another. In seeking such custom the banks may be induced to provide banking services on generally more attractive terms to all customers. The significance of such households—and they

⁴ The New York City metropolitan area may be represented by the five counties of New York City—New York (Manhattan), Kings (Brooklyn), Queens, the Bronx, and Richmond (Staten Island)—plus the two New York State counties which are contiguous to New York City—Nassau and Westchester (see map on page 260).

⁵ *Federal Reserve Bulletin* (October 1970), pages 769-771, referring to the Board's decision on the merger proposal of the Long Island Trust Company and Bank of Westbury Trust Company.

⁶ Usually the service area is specified as the area from which a bank derives 75 percent or more of its total individual, partnership, and corporate (IPC) deposits.



need represent no more than an important minority—in tying together seemingly remote areas should not be underestimated, since the prospect of gain and the fear of loss of meaningful increments of business may represent a strong competitive inducement for banks.

In addition, competitive forces may be transmitted indirectly through third or intervening banks. Consider two banks that are not direct competitors, that do not share common customers or a common service area. If each of them competes significantly with a third bank, any important competitive efforts by either one of the banks that are not direct competitors will nevertheless be transmitted to the other through the competitive reaction of the third bank. Such indirect competition is a feature of economically integrated metropolitan areas.

Competition thus may be both direct and indirect: direct because of overlapping service areas, extensive commutation, and area-wide advertising, and indirect because competitive efforts in any part of the area are transmitted efficiently through intervening banks to more remote parts of the market. However, as an empirical matter, it frequently is difficult to identify the direct and indirect competitors which should be included in the market area.

For bank merger proposals in rural communities and in self-contained nonmetropolitan towns and cities, the service area approach to market area definition probably delineates roughly the same geographic area that would be suggested by economic theory. Buyers of banking services almost all live, work, shop, and do business within the areas served by banks, which are frequently located in the economic center of a trading area. Market studies in such areas have supported the widely held view that for most business and household customers the demand for banking services tends to be highly localized.⁷

For bank merger proposals in major metropolitan areas, and particularly in suburban communities, the service area approach is likely to result in delineating a substantially different market area than theory would suggest—and is likely to lead to different conclusions regarding the effect of merger proposals on banking performance in the designated market areas. For example, for a merger of suburban banks, the service area approach for measuring

the scope of competitive forces would delineate an area including only the local banking options of individuals and firms. Economic theory would suggest a much larger market, perhaps an entire metropolitan area, because of the substantial economic and financial interdependence that usually exists among the communities comprising a metropolitan area. Whether or not a specific community would be included within the relevant market area would depend upon the strength and importance of such factors as the extent of commutation, the pull of centralized shopping facilities, patterns of commerce and transportation, the possibility for branching in the area by “central city” institutions, and the extent to which banks and other financial institutions in the city engage in area-wide advertising. Economic integration *per se* suggests, however, that the local community is not the relevant market area for measuring bank competition.

SURVEY OF CENTRAL NASSAU COUNTY

The survey of central Nassau County requested by the Board of Governors in connection with the merger proposal provided an opportunity to test the hypothesis that the relevant market for banking services in suburban communities is broader than the service areas of local banks. The survey focused on Central Nassau, a sector encompassing two dozen communities clustered in the geographic center of that county (see map).

Nassau County, as a whole, has experienced very rapid growth over the past twenty years and was in the 1950's one of the fastest growing areas in the United States, reaching a population of 1,500,000 in 1970. The growth of commerce and industry has paralleled the growth of population. Nevertheless, the county—and particularly Central Nassau—retains the character of a “bedroom” for persons working in New York City. The major transportation systems (highways, railroads, bus lines) are east-west oriented, and link Nassau County to the city proper. A study completed in 1963 showed that 350,000 Nassau residents traveled to work, and over 170,000 of them, or almost one out of every two workers, commuted to New York City.⁸

Central Nassau consists primarily of high-income, residential communities. Current estimates indicate that this area of roughly seventy-five square miles contains about

⁷ George G. Kaufman, *Customers View Bank Markets and Services: A Survey of Elkhart, Indiana* (Federal Reserve Bank of Chicago, 1967). George G. Kaufman, *Business Firms and Households View Commercial Banks: A Survey of Appleton, Wisconsin* (Federal Reserve Bank of Chicago, 1967). Lynn A. Stiles, *Businesses View Banking Services: A Survey of Cedar Rapids, Iowa* (Federal Reserve Bank of Chicago, 1967).

⁸ *Long-Island-Journey-to-Work Report, 1963* (New York Office of Transportation, August 1963). The Central Nassau survey indicated that commutation patterns in 1970 did not differ much from those reported in 1963.

400,000 residents, the majority of whom live in single-family dwellings. The center of the area is about six miles from the New York City border and about twenty miles distant from midtown Manhattan. While the economy of Central Nassau is oriented toward New York City, it nevertheless provides employment in the manufacturing of aerospace products and communications equipment and in publishing. Retail trade employment is also significant, due principally to the clusterings of retail stores along principal roads.

The Central Nassau area is served by fourteen commercial banks, which operate a total of sixty-eight banking offices. Since 1960, commercial banks headquartered in New York City have been permitted to branch into Nassau County.⁹ Five large banks headquartered in Manhattan presently operate fifteen of the sixty-eight banking offices in the Central Nassau area. In addition, this area is served by sixteen savings banks and savings and loan associations with seventeen offices, nine of which are branches of New York City-headquartered institutions.

To obtain information on different categories of customers served by banks, four separate samples were drawn—households, “large” businesses, “small” businesses, and professionals.¹⁰ Questionnaires were mailed to 1,619 households, 684 businesses (large and small), and 668 professional individuals, all located in Central Nassau. Different questionnaires were used for households, business firms, and professionals. Those sampled were asked to indicate the location of the banking offices at which each of their deposit and loan accounts was held and to answer a few demographic questions. A total response rate of well over 60 percent was achieved, with usable questionnaire returns obtained from 804 households, 90 large businesses, 265 small businesses, and 345 professionals.

⁹ The Omnibus Banking Act of 1960, as reenacted in 1961, permits New York City commercial banks to branch and merge into Nassau and Westchester Counties and banks in these counties to branch and merge into New York City. Prior to this act, New York City banks were restricted to the city itself, except for banks headquartered in Brooklyn and Queens which were allowed to operate branches in Nassau and Suffolk Counties.

¹⁰ The *Nassau County Telephone Directory* was used as the source for the household and professional samples. The “large” business sample was drawn from Central Nassau firms listed in the *Dun & Bradstreet Credit Directory* with at least an “A” rating (net credited assets of \$500,000 or above) or branches and subsidiaries of other firms with at least a “C” rating (net credited assets of \$150,000 or above). The “small” business sample was drawn from Central Nassau firms listed in the *Nassau County Yellow Pages Telephone Directory*, excluding those in the large business category defined above.

WHERE HOUSEHOLDS BANK. Of the types of banking services considered in the survey—checking, savings, and loan accounts—almost 80 percent of the household respondents with banking affiliations indicated having one or more accounts at offices of banks and thrift institutions outside Central Nassau, principally in New York City. About one fifth of the respondents said they bank only at offices in Central Nassau. Very few have no banking connections.

The greatest use of “outside” banking services was found among commuters. The survey disclosed that about three out of four of the employed household respondents work outside Central Nassau, with about one half of all those employed commuting to New York City. Almost 90 percent of the New York City commuters reported having at least one deposit or loan account outside Central Nassau. Even for those householders who both work and live in Central Nassau, 75 percent have a banking connection outside Central Nassau.

Looking at each of the surveyed banking services separately, the results still show substantial ties to New York City. About three out of five responding households indicated having their main (most active) checking account at a Central Nassau banking office, but more than half of them said that this account was in a bank which also had offices in Manhattan.¹¹ About 20 percent of respondent households said their most active account was in New York City. Households reported a similar locational preference for their principal savings account, the account with the largest balance. (See Tables I and II.)

Commutation and convenience to work apparently also were important factors to Central Nassau residents in obtaining personal loans. Commuters to New York City reported that one half of their personal (nonmortgage) loans outstanding were obtained from banking offices in New York City, while only about a third were obtained in Central Nassau (see Table III). For those who live and work in Central Nassau, nearly two out of three of their personal loans were from local-area banking offices while one in ten was obtained in New York City.

For mortgage credit accommodation, however, commutation does not explain the locational preferences of Central Nassau residents. Residents of that area reported mortgage loans from offices all over the metropolitan

¹¹ The group of banks with Manhattan offices consists of five major city banks headquartered in Manhattan, one large bank headquartered in Queens, and one large bank headquartered in Nassau County.

New York area. A high proportion—about 87 percent—of these mortgage loans was obtained from banking offices located outside Central Nassau, with Brooklyn and Queens accounting for 53 percent (see Table IV). This pattern reflects the importance of the giant New York City thrift institutions in mortgage financing in the metropolitan area. It also suggests the willingness of prospective homeowners to shop for credit, since a mortgage loan represents perhaps the most important financial transaction a household undertakes, and may indicate as well close ties with New York City institutions of former city residents who have moved to the suburbs. Moreover, real estate agents and builders may often refer Central Nassau borrowers to the major New York City thrift institutions with which the agents and builders may have made prior credit arrangements or may have long-established business relationships.

The results of the household survey thus show the high degree to which Central Nassau residents demand banking services outside their home communities. Commuters to the city, in particular, tend to utilize banking services convenient to their place of work. But even noncommuters, who have fewer convenient banking alternatives available, have a tendency to seek at least some banking services outside their local area. While the majority of residents maintain their major deposit relationships in Central Nassau, over three quarters de-

Table II
LOCATION OF PRINCIPAL SAVINGS ACCOUNTS
OF CENTRAL NASSAU RESIDENTS

Location of banking office	All residents	Residents commuting to New York City	Residents working in Central Nassau	All other residents
In percent of all accounts				
Central Nassau	63	51	75	67
Nassau County outside Central Nassau	15	11	15	18
New York City:				
Manhattan	14	27	6	7
Brooklyn and Queens	6	10	3	5
Bronx and Staten Island	—	—	—	—
Total New York City	20	37	9	12
All other locations	2	1	1	3
Grand total	100	100	100	100
Number of respondents reporting accounts with location of banking office designated	663	255	153	255

Table I
LOCATION OF MOST ACTIVE CHECKING ACCOUNTS
OF CENTRAL NASSAU RESIDENTS

Location of banking office	All residents	Residents commuting to New York City	Residents working in Central Nassau	All other residents
In percent of all accounts				
Central Nassau	64	47	83	69
Nassau County outside Central Nassau	13	5	13	19
New York City:				
Manhattan	15	32	3	6
Brooklyn and Queens	6	12	1	2
Bronx and Staten Island	*	1	—	*
Total New York City	21	45	4	8
All other locations	2	3	—	4
Grand total	100	100	100	100
Number of respondents reporting accounts with location of banking office designated	723	280	160	283

* Less than 0.5 percent.

pend on New York City banking offices for mortgage credit. Even those few who depend solely on Central Nassau banking offices quite often use financial institutions which are either headquartered in Manhattan or have Manhattan offices. Both the preferences of residents for outside services and the intensive use of the local offices of banks with Manhattan offices provide a strong link between banking developments in Central Nassau and those in the city. Area residents are affected by these developments even if they have no direct banking relationships with the major city banks.

These findings for households in Central Nassau differ significantly from other studies of banking habits, reflecting to a large extent differences in the size and character of the areas surveyed. The Elkhart (Indiana), Appleton (Wisconsin), and Cedar Rapids (Iowa) studies show convenience to residence as the most important determinant of where people do their banking.¹² However, each of these cities is a relatively self-contained locality and the distances between work and home are relatively short. The Doylestown (Pennsylvania) study did involve a region where some "central city" commutation exists; however, Doylestown is less integrated into the metropolitan area of Philadelphia than is Nassau County into

¹² See footnote 7.

Table III
LOCATION OF BANKING OFFICES HOLDING PERSONAL LOANS
TO CENTRAL NASSAU RESIDENTS

Location of lending office	All residents	Residents commuting to New York City	Residents working in Central Nassau	All other residents
In percent of all loans				
Central Nassau	52	38	63	57
Nassau County outside Central Nassau	18	10	22	22
New York City:				
Manhattan	18	36	10	8
Brooklyn and Queens	7	13	1	6
Bronx and Staten Island	*	1	—	—
Total New York City	25	50	11	14
All other locations	5	2	4	7
Grand total	100	100	100	100
Number of loans reported with location of lending office designated	280	97	73	110

Note: Personal loans are largely consumer instalment loans.

* Less than 0.5 percent.

that of New York City.¹³ The degree of commutation, for example, from Doylestown to the city of Philadelphia is much less. However, for suburban communities with substantial commutation to a major city, the Central Nassau study suggests that convenience to work is also an important determinant of where people do their banking.

WHERE BUSINESS FIRMS BANK. Since large firms have considerably more latitude in bank selection than small firms, two separate business samples were drawn. Of the large firms responding, about two thirds had one hundred or more employees and annual sales in excess of \$1 million. Of the small firms, about 85 percent had twenty-five or fewer employees and sales of \$1 million or less.

The survey results showed that large firms in Central Nassau are more likely than small firms to bank outside Central Nassau, but a substantial proportion in both groups—about 75 percent of large firms and 43 percent of small ones—reported some use of banking offices outside Central Nassau, primarily in New York City (see Table V). Most of these firms use outside-Central-Nassau

¹³ Robert D. Bowers, "Businesses, Households, and Their Banks", *Business Review* (Federal Reserve Bank of Philadelphia, March 1969).

facilities in addition to offices in Central Nassau, but 20 percent of the firms, large and small alike, reported banking exclusively with offices outside Central Nassau. Moreover, about three quarters of all large firms and about one half of all small firms with outside-Central-Nassau banks indicated that these affiliations were at some distance from their own locations—five miles or more—reflecting, for the most part, banking connections in New York City.

It is interesting to note furthermore that a great many of the firms which bank exclusively with banking offices in Central Nassau do so with large banking institutions that also operate Manhattan branches. About one quarter of the large firms indicated having checking accounts only at Central Nassau offices, but two thirds of these accounts were with offices of banks which have Manhattan offices. For small firms, two thirds indicated having checking accounts only with a Central Nassau office but one half of them were at offices of banks with Manhattan offices. The intensive use of large branch banking organizations by Central Nassau firms may be attributable largely to the existence of many branches of these institutions in Central Nassau; about 55 percent of the sixty-eight offices of commercial banks operating in Central Nassau are offices of banks with Manhattan branches. The findings also suggest that Central Nassau firms are able to obtain locally the full range of sophisticated financial services which are offered by the leading New York-area banks having

Table IV
LOCATION OF BANKING OFFICES HOLDING MORTGAGE
LOANS TO CENTRAL NASSAU RESIDENTS

Location of lending office	All residents	Residents commuting to New York City	Residents working in Central Nassau	All other residents
In percent of all loans				
Central Nassau	13	12	11	16
Nassau County outside Central Nassau	7	7	12	5
New York City:				
Manhattan	23	26	24	18
Brooklyn and Queens	53	50	49	58
Bronx and Staten Island	*	1	—	1
Total New York City	76	77	73	77
All other locations	4	4	4	2
Grand total	100	100	100	100
Number of loans reported with location of lending office designated	464	194	101	169

* Less than 0.5 percent.

Table V
LOCATION OF BANK AFFILIATIONS
OF LARGE AND SMALL FIRMS IN CENTRAL NASSAU

Location of bank affiliation	Large firms		Small firms	
	Number	Percent	Number	Percent
Only in Central Nassau	22	24	151	57
Both in Central Nassau and elsewhere	49	55	62	23
Only outside Central Nassau	18	20	52	20
No banking connection reported	1	1	—	—
Total number of firms	90	100	265	100

branches or headquarters in the financial center of the city.

That so many large and small Central Nassau firms have outside banking connections and that these firms use the local facilities of banks with Manhattan offices indicate the high degree to which Central Nassau is financially integrated into the city. These considerations suggest that the relevant geographic market for banking services for business customers, large and small, is much broader than the Central Nassau area itself and reaches at least into New York City.

WHERE PROFESSIONALS BANK. Professional individuals—physicians, lawyers, accountants, etc.—were surveyed separately because they have some characteristics of both households and business concerns. Most of these individuals have high incomes, are self-employed, and live in the Central Nassau area. The results of the professional survey are similar in many respects to the household survey. However, the professionals tend to have more checking accounts and make more extensive use of the services offered by banks. This reflects to a large degree their higher incomes and that they utilize banking services for personal as well as business reasons.

Professionals who live and work in the Central Nassau area have banking habits similar to other residents who work locally; they tend to bank to a greater extent in Central Nassau than those professionals who commute to the area each day. Of those professionals who live and work within Central Nassau, three out of ten bank exclusively at area banks. Only about one out of eight of those who live out of the area use Central Nassau banking offices exclusively. The high percentage of professionals who have banking connections outside the Central Nassau area suggests that the market for banking services for professional individuals is not confined to the local area.

An interesting finding is the fact that a greater percentage of professionals obtain mortgage loans in Central Nassau than do other residents of the area. Three out of ten professionals have Central Nassau-area mortgage loans, whereas only about one in eight of the respondents in the household survey obtained mortgage credit locally. The greater use of local facilities by professionals is probably attributable to the strong banking contacts which they develop in the course of their normal professional activities, as well as their being considered preferred credit risks by local bankers.

IMPLICATIONS OF THE SURVEY RESULTS

The survey results demonstrate that the marketplace for banking services in Central Nassau extends far beyond the service areas of local sellers. Indeed, local buyers, large and small, demand banking services from sellers located elsewhere in the New York metropolitan area. While local convenience remains an important determinant of bank-selection behavior of customers, it is clear that other factors in a suburban area such as Central Nassau have a significant bearing on where individuals and firms seek and obtain banking services.

The survey disclosed that locational preferences of Central Nassau buyers tend to follow the commerce and transportation patterns that link Nassau County with Manhattan—the hub of the New York City economy. This Manhattan-Nassau corridor (which may be approximated by the borough of Manhattan and Nassau County as well as the two intervening New York City boroughs of Brooklyn and Queens) circumscribes an area encompassing the work locations of about 90 percent of all workers residing in the Central Nassau area. This four-county area also contains about 95 percent of the banking offices where households, business firms, and professional individuals obtain all their banking services. This evidence suggests that the appropriate geographic boundaries for measuring direct competition should be broad enough to embrace banking options convenient to places of work.¹⁴ In other words, the market area for measuring bank competition should, at minimum, include banking alternatives convenient both to work and to home of a significant proportion of households in the community under consideration.

¹⁴ Information on shopping patterns was not collected and may be an important independent factor in determining the choice of a particular banking office. However, market areas that include banking alternatives convenient to home and to work would in most cases also include those convenient to shopping.

Competition in a metropolitan area, however, may be even broader than revealed by the survey. Central Nassau is only one of many suburban communities surrounding New York City. Most of these communities have similar economic and demographic characteristics, with a substantial percentage of their working populations commuting daily to New York City. The area for measuring direct competition among banks in these suburban communities would presumably also extend into Manhattan. As a consequence, banks in one suburban community may be linked indirectly to banks in other suburban communities through the major New York City banks that seek and serve customers, large and small, throughout the metropolitan area. Thus, for an area like New York City and its suburbs, characterized as they are by a high degree of economic and financial interdependence, the relevant market for measuring the scope of competitive forces in banking may well include New York City and all of Nassau and Westchester Counties.

In any event, it would appear that direct and indirect linkages tend to spread the benefits of competition over the entire metropolitan New York area. Indeed, the compactness of the area and interdependence of its sectors make it unnecessary for most bank customers to shop the entire area. Competitive striving of two banks, for example, has an effect on other banks which are geographically close by or otherwise compete for some important fraction of the commuter trade. The competitive reaction of these other banks stimulates, in turn, a reaction among still different banks in the market, and so on. As a result, banks throughout the entire market are forced generally to maintain competitive prices, even though each bank may not appear to be in direct competition with every other bank

in the market. In such an environment, advantages offered to bank customers in one sector of the market are likely to be transmitted to all other parts of the market, making it unnecessary for bank customers to change their banking affiliations. Moreover, if a bank customer does change his affiliation, it is not necessary that he elect to do business with the most competitively aggressive bank but only that he change to a bank that responds promptly to competitive pressures originating elsewhere in the market.

In conclusion, the economic and financial environment of metropolitan New York City places few obstacles to competition among banks in the area. On the contrary, the economic structure of the market and its interdependence are conducive to the development of meaningful competition both through the buyers' side—by permitting residents of the area to shift their bank allegiance if the services currently provided are below what they consider reasonable—and through the sellers' side—by forcing banks to be responsive to competition originating in any sector of the metropolitan area.

The Banking Studies Department is preparing a comprehensive report on the Central Nassau survey which will provide detailed information on the survey results. A copy of this report—available in early 1971—may be obtained upon request from the Public Information Department, Federal Reserve Bank of New York, 33 Liberty Street, New York, N.Y. 10045.

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