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BANK CREDIT PROXY

Economists have suggested several theories to attempt to explain how monetary policy affects economic activity. The various theories assign different orders, as well as different degrees of importance, to the economic processes involved in the transmission of monetary policy throughout the economy. In addition, the theories differ concerning the degree of sensitivity each area of the economy has to changes in other factors and developments in the transmission process. They also differ in the estimates of the time it takes for a policy action to make itself felt, eventually, on employment, income, and prices. Therefore, economists and policymakers are not sure of the exact, measurable way in which monetary policy actions influence these variables that have been established as ultimate targets.

Against this background, the Federal Reserve System attempts to implement monetary policy in a way that assures a flow of money and credit consistent with the needs of the economy. Consequently, the Federal Reserve is concerned with those financial flows (money and credit) and interest rates that would be associated with the desired dimensions of economic activity. Because the exact paths of the impact of monetary policy and the degree of influence on the various monetary measures, or variables, are uncertain, it has been essential for the Federal Reserve to take account of this uncertainty in making policy decisions. The degree of uncertainty can be reduced by watching several variables such as money supply, money market conditions, and, as discussed in this article, bank credit.

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This article explores two aspects of bank credit: its measurement, and the behavior of various measures during different monetary policy periods. The general conclusion drawn from the article is that alternative measures of bank credit behave similarly, at least over periods longer than a few months.

THE RATIONALE FOR BANK CREDIT

Commercial bank credit is defined as total loans and investments of commercial banks; it comprises the major portion of the combined total assets of these banks. For example, on November 25, 1970, total loans and investments of all commercial banks accounted for approximately 81 percent of their total assets. The other 19 percent consisted mainly of cash, reserve assets, and fixed assets.

Bank credit and its components may be considered important for four general reasons. First, bank credit helps to finance or make possible expenditures by consumers and businesses, and such spending eventually influences income, prices, and employment. Second, because changes in bank credit could influence the level of demand deposits outstanding (the main component of the narrow measure of the money supply), bank credit may be important in transmitting the influence of monetary policy to the money supply. Third, some observers believe that developments in bank credit are a gauge of general credit conditions in the economy. Finally, bank credit is significant to policymakers as one measure of bank reserve utilization. Since monetary policy actions have a direct influence on total member bank reserves, the effect of these reserve changes on other variables can often be traced through changes in commercial bank loans and investments.

MEASURING BANK CREDIT

Essentially, bank credit can be measured in two ways—a direct and an indirect way. The direct method involves estimating the magnitudes of bank assets; the indirect approach makes use of bank deposit liabilities as “proxy” estimates of total bank credit.

The Federal Reserve System collects data on outstanding loans and investments from 341 large commercial banks¹ and weekly data on major credit components from other member banks. These data are then used to estimate the dollar volume of bank credit for all member banks and all commercial banks as of the close of business each Wednesday.² These weekly loan and investment totals often change erratically and have been available for too short a period to permit adjustment for seasonal influence. Consequently, these data are published without seasonal adjustment. In contrast, the staff of the Board of Governors of the Federal Reserve System prepares seasonally adjusted figures for all commercial banks only for the last Wednesday of each month. Although these monthly data are seasonally adjusted, generally they are not to be taken as a precise gauge of on-going bank credit developments, principally because of their “single date” feature. One-day figures often reveal and are biased by misleading or unusual events. On balance, therefore, it is very difficult to get a description of underlying bank credit developments in the short run that is both accurate and current.

¹ Released with a one-week delay in Federal Reserve statistical release H.4.2.

² Released with a two-week delay in Federal Reserve statistical release H.8.

Bank Credit Proxy. In October 1966, a new statistical series was published in the *Federal Reserve Bulletin*. The series was already being used by the monetary authorities as an indirect estimate of bank credit developments. The new measure, called the "bank credit proxy," includes all deposits subject to reserve requirements of all banks that are members of the Federal Reserve System. The Federal Open Market Committee (FOMC) began using the bank credit proxy in monetary policy deliberations and as an operating guide during the summer of 1966. At that time, the FOMC instructed the Manager of the System Open Market Account to maintain orderly money market conditions provided that bank credit did not expand more rapidly than expected.³

The bank credit proxy consists of weekly or monthly averages of daily figures for private and U. S. Government demand deposits plus all time and savings deposits.⁴ Deposits, being the major liability of commercial banks, are a reasonable proxy for bank credit; these deposits not only are a chief source of funds for expanding bank credit, but they also tend to mirror movements on the asset side of the banking system's balance sheet. Therefore, the bank credit proxy is, conceptually at least, a useful tool for analyzing fluctuations in bank lending and investing.

The link between this proxy measure and actual commercial bank credit is not perfect, of course.

³See Board of Governors of the Federal Reserve System *Annual Report*, 1966, p. 171. For a technical explanation of the seasonally adjusted series on member bank deposits (bank credit proxy), see *Federal Reserve Bulletin*, October 1966, p. 1460.

⁴Private demand deposits include all demand deposits, except those due to the U. S. Government less cash items in the process of collection and demand balances due from domestic commercial banks.

For example, if member banks enlarge their lending and investing potential either by increasing their capital or by adding to their nondeposit liabilities, the relationship between bank credit and the proxy measure might be temporarily disturbed. This has been particularly true in recent years, when commercial banks have used funds acquired from Eurodollar borrowings and other nondeposit sources of funds to support a substantial volume of loans. Such use of funds from nondeposit sources brought about the development of an "adjusted credit proxy," which is the credit proxy defined earlier but adjusted to include Eurodollar borrowings, commercial paper issued by bank holding companies or other bank affiliates to acquire funds for the subsidiary bank, plus loans sold under repurchase agreements. The adjusted bank credit proxy, therefore, is a broader measure of funds available for potential lending and investing than the unadjusted proxy because it includes funds from both deposit and nondeposit sources.

Both measures of the proxy are defined only for member banks of the Federal Reserve System, but they are often used to analyze the total credit of member and nonmember commercial banks combined. Therefore, a change in the relative share of credit accounted for by nonmember banks will temporarily alter the relationship between the proxy and total bank credit. The link will also be affected, at least temporarily, if the ratio between the amount of currency held by the public and deposit liabilities of the member banks changes. Currency withdrawals from the banking system, although reflected in a decrease of deposits (a decline in the bank credit proxy), often do not have an immediate effect on bank credit. Instead, the withdrawals may temporarily be balanced by a decrease in bank reserves. In such a case, it would

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be misleading to infer that bank credit had changed, as would be suggested by the change in the bank credit proxy.

Any of the reasons discussed above could account for a failure of the bank credit proxy to mirror precisely very short-run developments in bank credit itself. Nevertheless, the proxy figures do help to overcome some of the short-term weaknesses in the actual bank credit data. For one thing, the proxy data meet the important test of prompt availability, since daily deposit figures are gathered each day from large banks and each week from other banks.⁵

MONETARY POLICY AND BANK CREDIT

A review of recent changes in the two measures of the bank credit proxy and the end-of-month, seasonally adjusted bank credit series is useful in showing how the three series behave in relation to one another. Here, the comparison is made against the background of periods designated by changes in monetary policy.⁶ Since the bank credit proxy was first used officially in August 1966, the period to be examined includes the months from then through December 1970, the most recent month for which FOMC policy actions had been published when this article was written.

Policy Changes. In August 1966, the economy was being influenced by a policy of monetary restraint that was initiated at the February 1966

meeting of the Federal Open Market Committee. According to the February 1966 directive to the Manager of the System Open Market Account, a restrictive policy was deemed appropriate in light of rising prices, strong credit demands, and substantial gains in GNP. The degree of monetary restraint increased somewhat in the summer of 1966, as reserve requirements against time deposits were raised effective in July and September, and Regulation Q ceilings were lowered in July and September. Also, in September member banks were requested by letter to moderate their rates of business loan expansion because the Federal Reserve was convinced that rapid increases in business loans were the principal factors causing the substantial gains in GNP and rising prices.⁷

In late November 1966, the FOMC announced a policy shift to achieve easier conditions in the money market. The policy change was made in response to a strong need for liquidity and a slackening in the demand for credit, accompanying moderating tendencies in various sectors of the private economy. This policy of monetary ease was maintained until November 1967.

In November 1967, sharply rising prices and a general resurgence of economic activity, after settlement of an auto strike, prompted a shift in policy once again toward more firm conditions in money and credit markets. A subsequent modification of policy toward less restraint occurred in the middle of 1968, when the FOMC decided to accommodate the somewhat less firm credit conditions that had developed. In light of the package of fiscal restraints that was enacted late in June 1968, it was felt that fiscal policy would take some of the burden from monetary policy in the efforts to restrain economic activity.

⁵Preliminary deposit data are available within one or two days for official use and more comprehensive figures are released to the public with a one-week delay.

⁶The intent of monetary policy from August 1966 to October 1970 is stated in the Record of Policy Actions of the Federal Open Market Committee, as published in various issues of the *Federal Reserve Bulletin*.

⁷See Board of Governors of the Federal Reserve System, *Annual Report*, 1966, pp. 102-104.

Monetary policy was made more restrictive beginning in December 1968 in response to rapid growth in prices and costs. This policy of firmness continued more or less unabated throughout 1969 and until February 1970. At that time, the FOMC expressed its desire to move gradually toward somewhat less firm conditions in the money market, provided that money and bank credit did not deviate significantly from a pattern of moderate growth.⁸

Behavior of the Bank Credit Measures. Over the entire period from August 1966 through December 1970, bank credit and the bank credit proxy increased by 39.2 percent and 30.2 percent, respectively. The tendency of the bank credit proxy to understate the growth of actual bank credit can be explained largely by banks' growing reliance on nondeposit sources of funds, particularly during the latter part of this period. (As mentioned earlier, nondeposit funds are not included in the regular bank credit proxy.)

An examination of annual rates of change in the three measures of bank credit during the various policy periods described earlier further highlights the relationship between bank credit and the measures of the bank credit proxy (see table). For example, from August through November 1966, actual bank credit decreased at a 2.1 percent annual rate, while the bank credit proxy fell at a 2.0 percent annual rate. The close association of the two measures is also apparent in the period from December 1966 through November 1967, a

period of relative monetary ease. During those months, bank credit and the bank credit proxy rose at annual rates of 11.6 percent and 11.8 percent, respectively.

The period of restraint from December 1968 through January 1970 needs further comment. Because commercial banks relied heavily on Euro-dollar borrowings or other nondeposit sources of funds during those months, the bank credit proxy did not accurately mirror the observed change in bank credit (3.8 percent increase in bank credit against a 3.0 percent decline in the proxy). The adjusted bank credit proxy, which includes funds from nondeposit sources, would be expected to give a somewhat clearer picture of bank credit developments. However, data for the adjusted credit proxy are available only for approximately half this period. From June 1969 to January 1970, actual bank credit remained essentially unchanged, while the adjusted credit proxy fell by an annual rate of 1.5 percent, indicating the relatively close trends in the two measures.

The difference in the growth rates of the two measures of the bank credit proxy since mid-1969 can be explained by movements in nondeposit sources of funds (see chart). In the eight months ended in January 1970, for example, commercial banks increased their liabilities from nondeposit sources by approximately \$5.1 billion, primarily because banks were unable to attract deposits. At that time, rates paid by these banks on time and savings deposits were not competitive with other short-term market rates, and the banks turned instead to funds from nondeposit sources. Subsequently, from February through December 1970, banks reduced their liabilities from these sources by approximately \$8.9 billion. Their actions were taken for two reasons. Short-term market rates began to fall during this period, and rates paid on

⁸In January 1970 the FOMC did express its desire to "see a modest growth in money and bank credit." However, it was in February that the FOMC voted for less firm conditions in the money market accompanied by moderate growth in money and bank credit. See the "Record of Policy Actions of FOMC," *Federal Reserve Bulletin*, April 1970, p. 334.

Bank Credit Developments

Seasonally Adjusted Annual Rates of Change

August 1966–December 1970

| | Policy Periods | | | | | |
|--|-------------------------------------|---------------------------------------|-----------------------------------|-----------------------------------|--------------------------------------|---------------------------------------|
| | August 1966– November 1966 | December 1966– November 1967 | December 1967– June 1968 | July 1968– November 1968 | December 1968– January 1970 | February 1970– December 1970 |
| Measures of Bank Credit | | | | | | |
| Bank Credit | –2.1% | +11.6% | +6.7% | +16.0% | +3.8% | + 9.3% |
| Bank Credit Proxy | –2.0 | +11.8 | +3.7 | +13.9 | –3.0 | +13.3 |
| Adjusted Bank Credit Proxy | n.a. | n.a. | n.a. | n.a. | –1.5* | + 9.4 |
| Components of Credit Proxy Measures | | | | | | |
| Private demand deposits | –2.1 | + 6.4 | +6.5 | + 7.0 | +2.2 | + 2.8 |
| Time and savings deposits | –0.9 | +16.1 | +6.5 | +16.4 | –3.6 | +20.9 |
| Private demand deposits plus U. S. Government demand deposits | –3.1 | + 7.5 | +3.9 | + 8.3 | +2.5 | + 3.4 |
| Private demand deposits plus U. S. Government demand deposits plus time and savings deposits | –2.0 | +11.8 | +3.7 | +13.9 | –3.0 | +13.3 |
| Private demand deposits and U. S. Government demand deposits plus time and savings deposits plus nondeposit sources of funds | n.a. | n.a. | n.a. | n.a. | –1.5* | + 9.4 |

NOTE: The policy periods were established by an examination of the *Annual Reports* of the Board of Governors of the Federal Reserve System and the Record of Policy Actions of the Federal Open Market Committee, published in the *Federal Reserve Bulletin*.

n.a. Not available.

* June 1969–January 1970.

Source of Data: Board of Governors of the Federal Reserve System

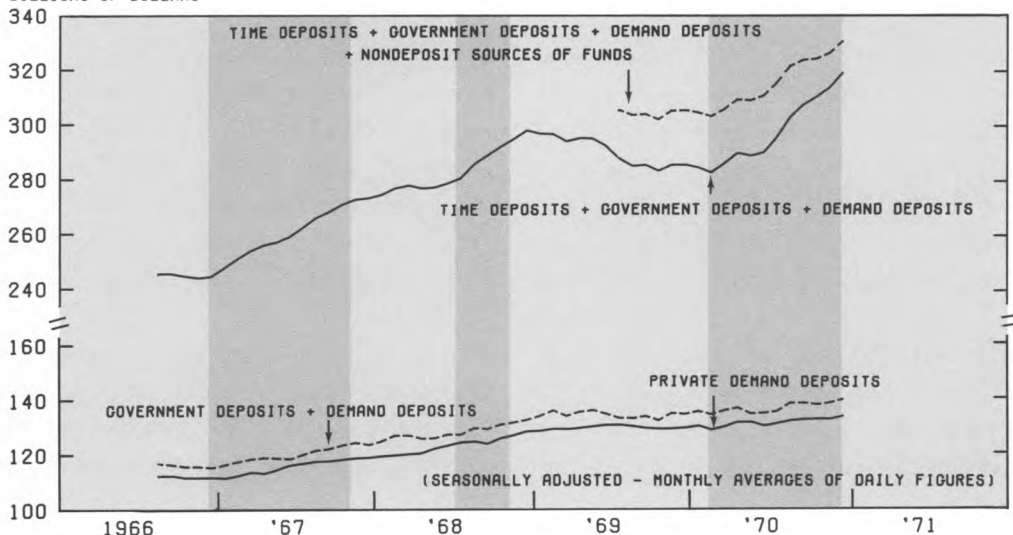
bank deposits became relatively more attractive. In addition, the partial suspension in June 1970 of Regulation Q ceilings on maximum rates banks can pay on time and savings deposits encouraged further growth in large denomination certificates of deposit.

Over time, the growth rates of both proxy measures can be explained primarily by changes in the time and savings deposit component. The chart and table help to illustrate this point. Clearly, time and savings deposits have fluctuated considerably

more from policy period to policy period than the other three components of the adjusted credit proxy—demand deposits, United States Government demand deposits, and nondeposit sources of funds. An extreme example of this is revealed in a comparison of the period from July 1968 to November 1968 and the period from December 1968 to January 1970. Although time and savings deposits increased at an annual rate of 16.4 percent in the first time period, they decreased at a 3.6 percent annual rate in the second period.

BEHAVIOR OF THE COMPONENTS OF THE BANK CREDIT PROXY AND THE ADJUSTED CREDIT PROXY (AUGUST 1966 - DECEMBER 1970)

BILLIONS OF DOLLARS



LAST ENTRY: DEC. 1970

SOURCE OF DATA: BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM

This change is considerably greater than the comparable shift in rate of gain in private demand deposits (7.0 percent, compared with 2.2 percent), the second largest component of the credit proxy measures. Time and savings deposits obviously responded more to changing credit conditions than did demand deposits, reflecting the impact of Regulation Q ceilings. During periods when Regulation Q ceilings kept interest rates on time and savings deposits from being competitive with other short-term interest rates in financial markets, the amounts of these deposits declined, often sharply. The proxies were affected accordingly.

The periods from June 1969 through January 1970 and February 1970 through December 1970

illustrate this effect. In the second half of 1969, the volume of time and savings deposits declined because Regulation Q ceilings kept such deposits from being competitive. After February, however, other short-term rates began falling, leading to a slight inflow of funds into time and savings deposits at commercial banks. The partial suspension of Regulation Q ceilings late in June 1970 has encouraged substantial increases in time and savings deposits since then.⁹

When Regulation Q ceilings are changed, time and savings deposits are directly influenced, and

⁹See "Regulation Q and Time Deposit Growth at Member Banks," *Economic Commentary*, Federal Reserve Bank of Cleveland, July 27, 1970.

the two measures of the bank credit proxy are similarly affected. Because of these developments, extreme caution must be used when attempting to interpret changes in the two measures of the bank credit proxy or in bank credit itself. In particular, additional information is required before any changes in these three variables can be said to indicate decisively the relative strength or ease of monetary policy at a particular time.

CONCLUDING COMMENTS

Both measures of the bank credit proxy have two prime advantages over the bank credit series itself. First, deposit data are more readily available than are all bank statistics on loans and investments. Second, the seasonal adjustment of the more frequent deposit data is more meaningful.

An examination of the behavior of the two credit proxy measures, compared with the behavior of the end-of-month bank credit series, has shown that the three series exhibited similar trends during the various monetary policy periods discussed. However, the time periods analyzed were relatively long. In any month, the two measures of the bank credit proxy may fail to mirror exactly

the movements of bank credit itself (for reasons discussed earlier in the article), but this may be of little consequence; most short-term deviations seem to disappear within a few months. Any failure of the bank credit series or the two credit proxy measures to duplicate each other exactly can probably be explained by the technical differences in the two series. For one thing, because the bank credit series consists of figures for one day a month, while the two measures of the bank credit proxy represent daily averages over a month, the proxies and the bank credit series are not comparable in every sense.

Since most monetary policy transactions are carried out daily in the open market, it is essential that the Manager of the System Open Market Account have as much accurate information as possible concerning important policy target variables. Bank credit is one such variable. The bank credit proxies provide Federal Reserve officials with reasonably accurate and relatively up-to-date estimates of trends in bank credit and, therefore, help to alleviate the major problems inherent in analyzing the actual bank credit series.



CHANGES IN BANKS, BRANCHES, AND BANKING OFFICES IN THE FOURTH DISTRICT, 1965-1970

During the 1965-1970 period, there was a significant change in the number of banks, branches, and banking offices in the Fourth Federal Reserve District.¹ This article attempts to trace these banking structure changes by comparing, where appropriate, Fourth District patterns with those in the United States. Changes in banks and facilities in individual counties and Standard Metropolitan Statistical Areas (SMSAs) are also examined to determine where and to what extent such changes took place in the District. The acquisition of banks by registered bank holding companies in the Fourth District is not discussed in detail in this article, even though there has been a great deal of holding company activity in Ohio in recent years.² Figures indicating changes in the number of independent banks operating in Fourth District states do not reflect the number of banks acquired by holding companies, but only the number of new banks, mergers, and bank closings that occurred in each state during the five-year period.

¹End-of-year data are used in this article. The Fourth Federal Reserve District includes all of Ohio (88 counties) and parts of three states: eastern Kentucky (56 counties), western Pennsylvania (19 counties), and northwestern West Virginia (6 counties).

²See "Registered Bank Holding Company Activity in Ohio, 1964-1969," *Economic Review*, September 1970, Federal Reserve Bank of Cleveland.

RECENT PATTERNS

From yearend 1965 to yearend 1970, the number of banks in the United States declined from 13,804 to 13,688, or by nearly 1 percent, while in the Fourth District, the number of banks dropped from 841 to 794, for a decline of 6 percent (see Table I). The reduction in banks during the five-year period in both the United States and the Fourth District is a continuation of a trend that has been apparent since the mid-1950's.³

As shown in Chart 1, the number of branch offices increased at a slightly faster pace in the United States than in the Fourth District during 1965-1970. In both cases, the year-to-year increases in branches were fairly steady, as they have been since 1955.

The marked decline in the number of banks in the Fourth District and the United States was more than offset by the rise in the number of branches. As a result, the number of banking offices in both the United States and the Fourth District increased sharply during the 1965-1970 period. This also reflects a trend that has prevailed during the past 15 years.

³See "The Anatomy of Fourth District Banking, 1964-1965," *Economic Review*, May 1966, Federal Reserve Bank of Cleveland.

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TABLE I

Change in the Number of Commercial Banks,
Branches and Banking Offices
United States and Fourth District
December 31, 1965 to December 31, 1970

| | <u>December 31, 1965</u> | <u>December 31, 1970</u> | <u>Net Change</u> | <u>Percent Change</u> |
|--|--------------------------|--------------------------|-----------------------|---------------------------|
| United States | | | | |
| Banks* | 13,804 | 13,688† | — 116 | — 0.84% |
| Branches | 15,753 | 21,633† | +5,880 | +37.32 |
| Total banking offices | 29,557 | 35,321† | +5,764 | +19.50 |
| Fourth District | | | | |
| Banks‡ | 841 | 794 | — 47 | — 5.59 |
| Branches | 1,465 | 1,968 | + 503 | +34.33 |
| Total banking offices | 2,306 | 2,762 | + 456 | +19.77 |
| Kentucky (Fourth District Portion) | | | | |
| Banks | 149 | 148 | — 1 | — 0.67 |
| Branches | 74 | 110 | + 36 | +48.65 |
| Total banking offices | 223 | 258 | + 35 | +15.70 |
| Ohio | | | | |
| Banks§ | 541 | 516 | — 25 | — 4.62 |
| Branches | 947 | 1,293 | + 346 | +36.54 |
| Total banking offices | 1,488 | 1,809 | + 321 | +21.57 |
| Pennsylvania (Fourth District Portion) | | | | |
| Banks# | 127 | 103 | — 24 | —18.90 |
| Branches | 444 | 565 | + 121 | +27.25 |
| Total banking offices | 571 | 668 | + 97 | +16.99 |
| West Virginia (Fourth District Portion) | | | | |
| Banks | 24 | 27 | + 3 | +12.50 |
| Branches | —0— | —0— | —0— | —0— |
| Total banking offices | 24 | 27 | + 3 | +12.50 |

*Excluding mutual savings banks.

† Preliminary figures.

‡ Excluding three mutual savings banks.

§ Excluding one mutual savings banks.

#Excluding two mutual savings banks.

Sources: Board of Governors of the Federal Reserve System and Federal Reserve Bank of Cleveland

District Developments. Thirteen new banks were started in the Fourth District during 1965-1970—six in Ohio, three in West Virginia, three in Kentucky, and one in Pennsylvania. Three new banks were formed in Montgomery County,

Ohio. One of the new banks in the county was set up to serve the needs of the black community in Dayton. At present, this bank is operating with total assets of more than \$2 million. Three of the new banks in the District were converted from

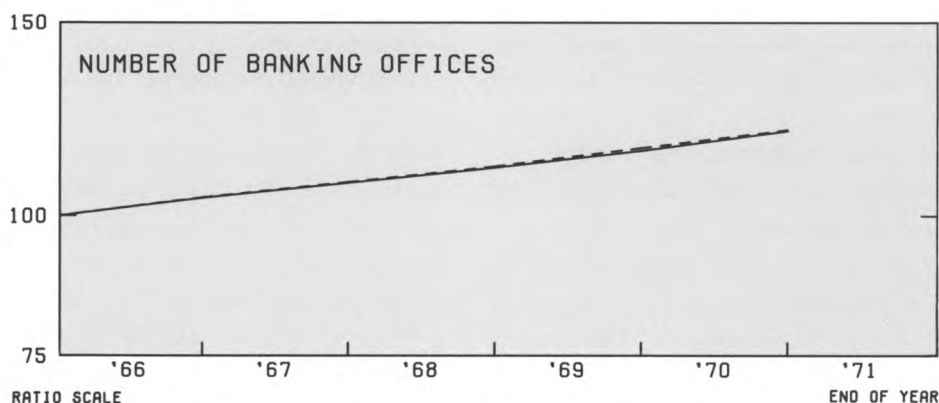
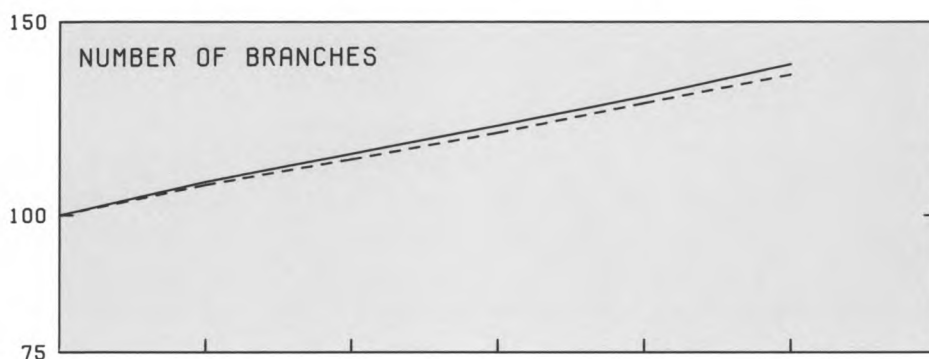
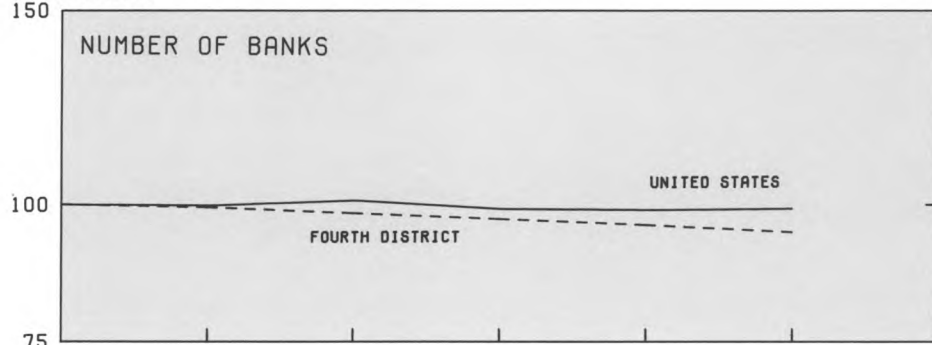
CHART 1.

COMMERCIAL BANKS AND BANKING OFFICES

UNITED STATES AND FOURTH DISTRICT

INDEX 1965=100

150



LAST ENTRY: DEC. 31, 1970

SOURCES OF DATA: BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM
AND FEDERAL RESERVE BANK OF CLEVELAND

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TABLE II

Number of De Novo Starts* in the Fourth District
By County (Major City)
December 31, 1965 to December 31, 1970

| | De Novo Starts |
|------------------------|-------------------|
| Ohio | 6 |
| Cuyahoga (Cleveland) | 2 |
| Montgomery (Dayton) | 3 |
| Portage (Kent) | 1 |
| Pennsylvania | 1 |
| Allegheny (Pittsburgh) | 1 |
| Kentucky | 3 |
| Boyd (Ashland) | 1 |
| Fayette (Lexington) | 1 |
| Pulaski (Somerset) | 1 |
| West Virginia | 3 |
| Hancock (Weirton) | 1 |
| Ohio (Wheeling) | 2 |

* New banks.

Source: Federal Reserve Bank of Cleveland

saving and loan associations. Two of these conversions took place in Ohio County (Wheeling), West Virginia, and one in Cuyahoga County (Cleveland), Ohio (see Table II). The average number of new banks started per year in the District was lower in the 1965-1970 period, (2 1/2) than in the previous five-year period (four starts per year during 1960-1964). This may partially reflect the fact that to compete effectively in many banking markets today, new banks must begin with a much larger capital base than was previously necessary.

Commercial banks in the Fourth District were involved in 59 mergers⁴ during the 1965-1970 period. Ohio had 31 mergers, the Pennsylvania portion of the District had 25, and the Kentucky portion of the District had 3. Although bank

mergers took place in only one-fourth of the counties in the Fourth District, merger activity occurred in 58 percent of the counties in the District portion of Pennsylvania. Nearly 38 percent of Ohio's counties were involved in mergers, while the Kentucky portion of the District had bank mergers in only 5 percent of its counties (see Table III). The largest number of mergers (7) took place in Allegheny County (Pittsburgh), Pennsylvania, while four Ohio counties (Adams, Licking, Wayne, and Williams) had two mergers each.

Based on the total number of banks in the region's states or portions of states at the end of 1965, 14 percent of the banks in the Fourth District were involved in a merger between 1965 and 1970. However, the merger pattern among banks differed throughout the District. In the Kentucky portion of the District, only 4 percent of the banks were involved in mergers, while in the Pennsylvania portion 40 percent of the banks participated in merger activity. Nearly 12 percent of Ohio's banks were involved in mergers from 1965 to 1970, while banks in the West Virginia portion of the District had no merger activity during the period.

Determining Legislation. The wide variations among Fourth District states in the share of banks involved in mergers may be partially attributed to the banking laws in each state. Banks in states with less restrictive branch banking laws can generally be expected to have a larger number of mergers, since it would be less likely that a merger would be denied by Federal regulatory authorities on anticompetitive grounds. Since a major legal deterrent to bank mergers is the possible elimination of competition between the banks involved, less restrictive branch banking laws would automatically provide banks with a wider

⁴A merger is defined as the purchase or absorption of one bank by another which results in an elimination of an independent banking unit.

TABLE III

Number of Mergers and Acquisitions
of Banks in the Fourth District

By County

December 31, 1965 to December 31, 1970

| State | Number of Counties | Number of Counties In Which Mergers and Acquisitions Occurred | Percent of Counties In Which Mergers and Acquisitions Occurred | Number of Mergers and Acquisitions | Number of Counties With: | | |
|---------------|-----------------------|--|---|--|--------------------------|----------------|---------------------------|
| | | | | | One Merger | 2-5 Mergers | More Than 5 Mergers |
| Ohio | 88 | 27 | 30.7% | 31 | 23 | 4 | —0— |
| Pennsylvania | 19 | 11 | 57.9 | 25 | 5 | 5 | 1 |
| Kentucky* | 56 | 3 | 5.4 | 3 | 3 | —0— | —0— |
| West Virginia | 6 | —0— | —0— | —0— | —0— | —0— | —0— |
| Total | 169 | 41 | 24.3% | 59 | 31 | 9 | 1 |

* In addition to three mergers, Kentucky also had one bank closing in 1970 that reduced the number of banks in the state by one.

Source: Federal Reserve Bank of Cleveland

selection of potential merger candidates. At the same time, less restrictive branching laws allow other banks to compete with the merging banks by branching into their market area. For example, the Pennsylvania portion of the District, which had the largest share of banks and counties involved in mergers in the period under review, has the least restrictive branch banking laws. Banks in Pennsylvania can establish branches within their home office county and in all counties contiguous to the home office county. Ohio, which had the second largest share of banks participating in mergers, permits banks to open branches throughout their home office county but not outside that county.⁵ In Kentucky, banks may also branch throughout their home office county, but a home office protection rule limits banks from branching into certain areas within the county where other banks are located. This rule makes the Kentucky banking laws slightly more restrictive than the Ohio laws. The restrictive

⁵Registered bank holding company acquisition of banks throughout Ohio may partially be a response to the branch banking laws in the State.

influence of the home office protection rule was reflected in the merger activity in the Fourth District portion of Kentucky, where only 4 percent of the banks were involved. West Virginia does not permit any branch banking; thus, the portion of West Virginia located in the Fourth District did not have any bank merger activity from 1965 to 1970.

Changes Within the District. Net changes in the number of banks, branches, and banking offices within the Fourth District from 1965 through 1970 are shown in Table I and Chart 2. In the Pennsylvania portion of the District, the number of banks declined by 19 percent during the period. The number of banks fell by nearly 5 percent in Ohio and by less than 1 percent in the Kentucky portion of the District, while in the Fourth District portion of West Virginia, the number of banks increased by 13 percent.⁶ The decline in the

⁶Since the number of banks in the six-county portion of West Virginia is small, any structural changes will show up as a large percentage. For this reason, only selected reference will be made to this portion of the Fourth District.

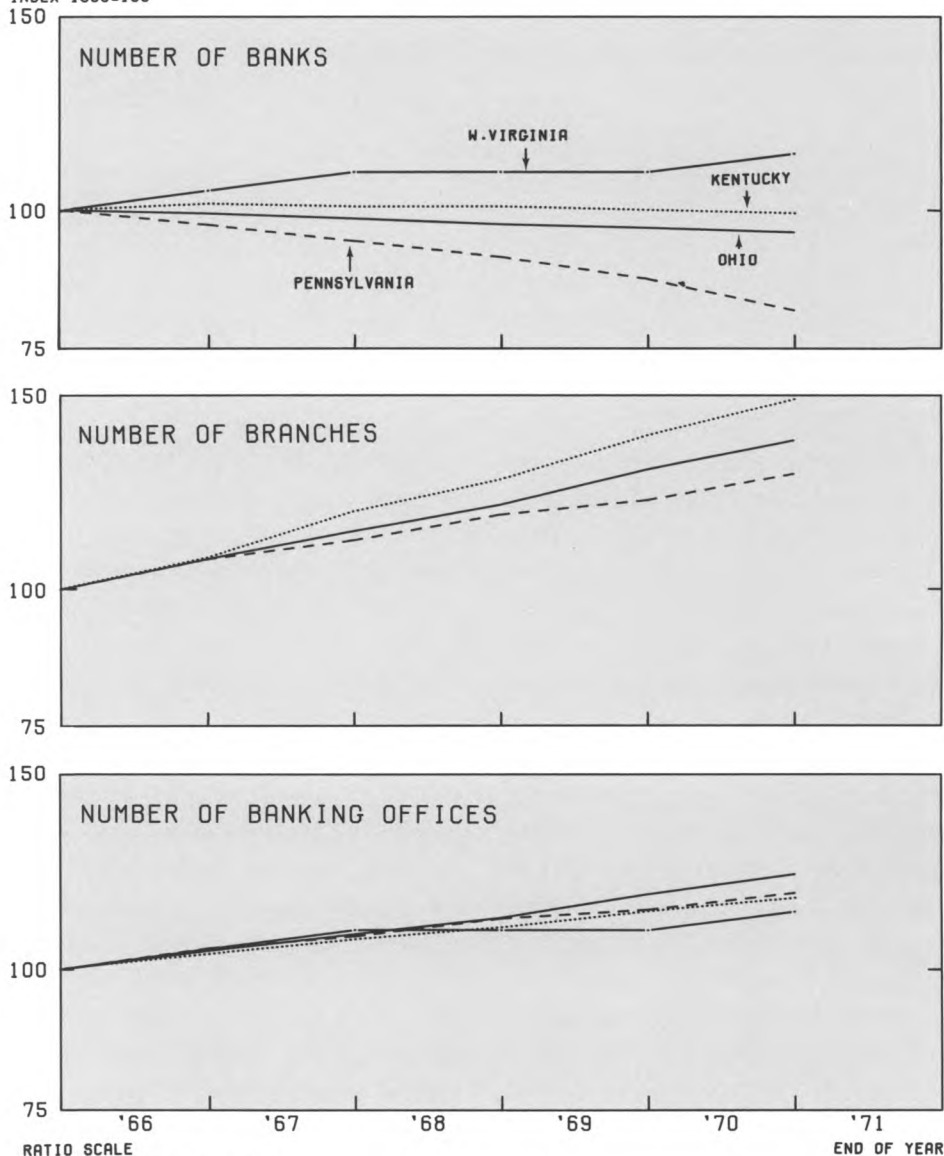
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CHART 2.

COMMERCIAL BANKS AND BANKING OFFICES

FOURTH DISTRICT

INDEX 1965=100



RATIO SCALE

LAST ENTRY: DEC. 31, 1970

SOURCE OF DATA: FEDERAL RESERVE BANK OF CLEVELAND

number of banks in three of the states or portions of states in the District can be attributed almost entirely to the merger activity in each area. The only exception was in the District portion of Kentucky where one bank failure occurred during 1970. In addition to the 5 percent decline in the number of banks through mergers in Ohio, the state experienced 34 acquisitions of banks by registered bank holding companies over the five-year period.⁷ Thus mergers and registered bank holding company acquisitions of banks actually reduced the number of banking organizations operating in Ohio from 517 to 458, or by 11.41 percent.⁸

In contrast, the explosive growth in branch banking in the District is apparent from the data in Table I. As indicated earlier, the number of branches in the District as a whole increased by 34 percent during the 1965-1970 period; however, growth was uneven among the states or portions of states in the District. The number of branches expanded by 27 percent in the District portion of Pennsylvania, by 37 percent in Ohio, and by 49 percent in the Kentucky portion of the District.⁹ Branch banking is prohibited in West Virginia.

Despite the decline in the number of banks during 1965-1970, the number of banking offices in the Fourth District increased by 20 percent, reflecting the greater number of branches. Ohio had the largest growth in banking offices, followed by Pennsylvania and Kentucky. West Virginia also

⁷Ohio is the only state in the Fourth District that has any registered bank holding companies.

⁸Banking organizations are defined as all registered bank holding companies plus all banks *not* affiliated with a registered bank holding company.

⁹The Fourth District portion of Kentucky had a relatively small number of branches at the end of 1965, which accounts for this significantly high percentage increase.

had an increase in the number of banking offices because three new banks were added during the period.

CHANGES BY BANKING MARKET AREAS

A geographical banking market is generally defined as an area encompassing all those banking offices that exert and react to essentially the same set of competitive forces (over some time period) that influence the price and quality of banking services in that area.¹⁰ In cases where one major city or town in a county accounts for most of the economic activity that takes place, the geographical banking market can generally be approximated by that county alone. In metropolitan areas, the geographical banking market may extend to several counties. In many of these cases, an SMSA can be used to approximate the banking market area. Data were collected on changes in the number of banks, branches, and banking offices by county and SMSA¹¹ for the state and portions of states within the Fourth District.

The number of banks increased in only 7 of the 169 counties in the Fourth District, and all seven counties are located within SMSAs. In the Dayton, Cleveland, and Wheeling SMSAs, there was an increase of two banks each, while in the four other

¹⁰For a discussion of how a banking market is determined, see R. H. Gelder and George Budzeika, "Banking Market Determination—The Case of Central Nassau County," *Monthly Review*, Federal Reserve Bank of New York, November 1970, pp. 158-165.

¹¹The Fourth District consists of all or parts of 19 SMSAs which include 45 of the 169 counties in the District. Three of the SMSAs (Toledo, Ohio, Cincinnati, Ohio, Huntington-Ashland, West Virginia, Kentucky) include counties outside the District; those counties are not included in the data discussed here.

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SMSAs, there was a net increase of one bank. At the same time, 40 of the counties in the District had a decrease of one or more banks. Of these 40 counties, 17 are in SMSAs. The Pittsburgh SMSA had the largest number of bank losses of any area in the District—nine banks were eliminated through merger activity. In more than two-thirds of the counties in the District (122), however, there was no net change in the number of banks during the period, and only 21 were SMSA counties. In other words, the changes in the number of banks tended to be concentrated in the metropolitan areas in the District.

The pattern of changes in branches within Fourth District banking markets was even more concentrated in SMSA counties than was the pattern of changes in the number of banks. The number of branches decreased in only one county in the District (Lincoln County, Kentucky, a non-SMSA county) and remained unchanged in 58 counties. Only six of the counties in which the number of branches did not change were located within District SMSAs, and five of these were located in the West Virginia portion of the District—an area that does not allow branch banking. In contrast, all of the 12 counties that had ten or more branches established during 1965-1970 were located within SMSAs. The largest number of branches was started in the Pittsburgh SMSA (71), with the next largest increases occurring in the Akron and Cleveland SMSAs (45 in each area).

As expected, changes in the total number of banking offices within the District reflect the relative dominance of changes in number of banks or changes in number of branches, respectively. Increases in the number of banking offices were widespread throughout the District with only three counties out of 169 showing a net reduction

during the 1965-1970 period; 65 counties had no change. Only one SMSA county (Boone County, Kentucky, which is part of the Cincinnati SMSA) had a reduction in banking offices—one bank was closed in 1970 and there were no changes in branches. Of the 65 counties that showed no change in banking offices, only four were located in District SMSAs. On the other hand, 10 counties in the District experienced an increase of ten or more banking offices, and all were in SMSAs. In fact, these 10 counties accounted for nearly one-half of the increase in the number of banking offices in the Fourth District during the 1965-1970 period. The Pittsburgh, Cleveland, and Akron SMSAs had the largest net changes in banking offices, with increases of 62, 47, and 46 offices, respectively.

The data indicate that, although there was substantial growth in the number of banking facilities in the Fourth District as a whole during 1965-1970, the non-urban county and SMSA markets did not share proportionately. The pattern is revealed more clearly in Table IV, which shows the percent of all new banks, branches, and banking offices and bank mergers that occurred in SMSA counties in the Fourth District and its state areas. As expected, a significant proportion of the new banks, and increases in branches and banking offices in the District were in the counties within SMSAs. At the same time, less than 50 percent of the merger activity occurred in District SMSA counties. These figures indicate that while a significant portion of the expansion of new banks and banking facilities occurred in SMSA counties, more than 50 percent of the independent banks eliminated by merger were located in less populated non-SMSA counties. In the Kentucky and Pennsylvania portions of the District, 50 percent or more of the new banks, branches,

TABLE IV

Changes in Banking Structure in SMSA Counties
As Percent of Total Changes in the Fourth District
December 31, 1965 to December 31, 1970

| | Number of New Banks | Change in Number of Branches | Change in Number of Banking Offices | Number of Mergers |
|-----------------|------------------------|------------------------------------|--|----------------------|
| Fourth District | 92.3% | 72.2% | 76.1% | 44.1% |
| Ohio | 100.0 | 74.9 | 79.1 | 35.5 |
| Pennsylvania | 100.0 | 68.6 | 72.2 | 52.0 |
| Kentucky | 66.6 | 58.3 | 57.1 | 66.7 |
| West Virginia | 100.0 | -0- | 100.0 | -0- |

Source: Federal Reserve Bank of Cleveland

banking offices, and mergers occurred within SMSA counties. Ohio, however, was below the District as a whole for the proportion of mergers that occurred within SMSAs. That is, in relative terms, more of the merger activity in Ohio took place in the less populated counties and non-urban areas during the 1965-1970 period. Even so, all of the new banks, and the bulk of the increase in branches and, thus, total banking offices occurred within SMSA counties in Ohio.

It should not be surprising that a large portion of the increase in banking offices was in SMSAs in the District. Since the majority of the population in the Fourth District resides in SMSA counties, it could be expected that most economic activity would be concentrated in these areas and, thus, a significant portion of the banking expansion would occur in these heavily populated areas. In fact, SMSA counties accounted for all but one of the de novo banks in the District, more than two-thirds of all the increases in the number of branches, and more than three-fourths of the increases in banking offices in the District between 1965 and 1970.

SUMMARY OF STRUCTURAL CHANGES

Although the number of banks declined in the United States and the Fourth District during 1965-1970, there was a significant increase in the number of branches and total banking offices. During the period, 13 new banks were chartered in the District. However, this expansion was more than offset by 59 bank mergers in sub-areas of the District. In fact, merger activity accounted for all but one of the net 47 banks eliminated in the Fourth District during 1965-1970.

Changes in banks, branches, and banking offices were unevenly distributed throughout individual county and SMSA banking markets in the District. SMSA counties accounted for a significant portion of all new banks, and the increases in branches and banking offices in the District. In fact, more than 90 percent of the new banks, and 70 percent of the increases in branches and banking offices took place in counties in SMSAs. This is not surprising though, since most of the population resides in SMSA counties, and most of the District's economic activity takes place in these urbanized areas.

