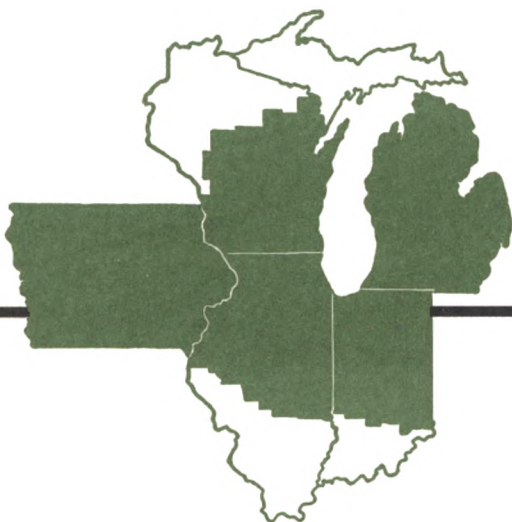


Business Conditions

1967 February



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THE Trend OF BUSINESS

Some sectors of the economy have stopped rising in recent months and some have declined although expansion continued overall. Total spending on goods and services increased further in the fourth quarter, but total industrial production changed little, as increases in some industries were balanced by decreases elsewhere. Employment and personal income continued to increase, but retail sales merely equaled the third quarter level. In short, the business picture in early 1967 differs markedly from a year ago when virtually all types of activity were rising vigorously.

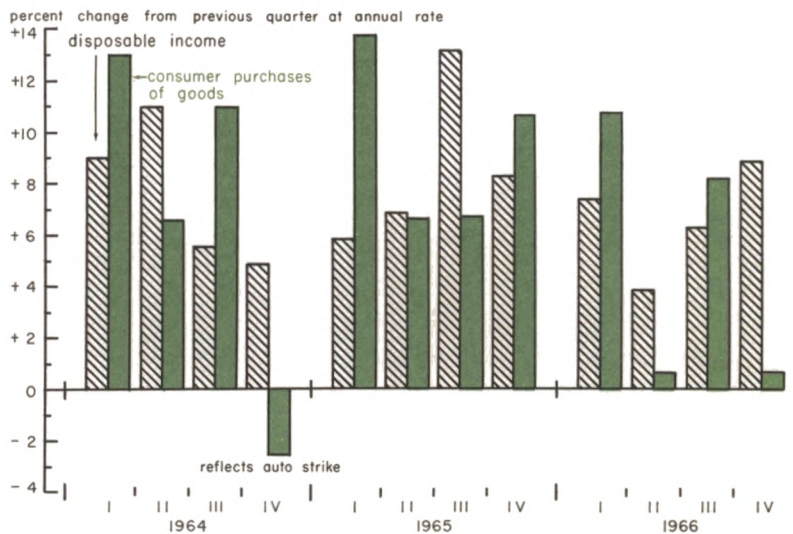
Recently published forecasts of gains anticipated in total spending for 1967 have varied widely, from less than 3 percent to more than 7 percent—a range of about 40 billion dollars. The smallest of these projections (a gross national product of 755 billion dollars) implies a mild decline from recent levels, particularly after adjustment for expected higher prices for finished goods and services. The highest projection (795 billion

dollars) indicates only a slight moderation of the excessive demands on facilities and the work force that were evident last year. In sharp contrast, a year ago virtually all forecasts of economic activity envisaged continued rapid growth. But even the highest totals projected at that time fell far short of the actual result as the year unfolded.

The moderate consensus

Despite the diversity of recent views on business prospects, there is substantial agreement on some important features. Although

Consumer income rose sharply in the fourth quarter but goods purchases increased only slightly



inflation is likely to continue, the price up-trend is not expected to accelerate. Also, there is a wide consensus that no sharp decline in overall activity will occur. Further rapid growth in Government spending and a resumption of growth in money and bank credit are deemed capable of stemming any tendency toward a general economic decline.

Within the Midwest the promise of the new year varies for different areas. Centers emphasizing production of passenger cars, appliances, furniture and construction machinery are likely to experience reduced income growth. Areas concentrating on business and industrial equipment, farm machinery, color television, defense work and processing of farm products apparently can look forward to further vigorous prosperity. Many business firms, faced with long lists of job vacancies, problems created by the use of marginal facilities and shortages of materials and components, view some relaxation of demand pressures more with relief than apprehension.

Some sectors lag

Total spending on goods and services is estimated to have reached a rate approximating 759 billion dollars in the fourth quarter of 1966, up 7.8 percent from the same period a year earlier. The rate of rise from the third to the fourth quarter was almost as large, 7.4 percent, on an annual rate basis. However, only spending on consumer services, producers' durable equipment, inventories, national defense and needs of state and local governments showed fourth quarter gains. Consumer purchases of both durable and nondurable goods, nonresidential construction and Federal nondefense spending remained at the third quarter rate. Residential construction declined sharply.

Spending for producers' durable equipment

and defense, still rising late in 1966, appeared to be increasing at a somewhat slower rate than in earlier periods. Investment in non-farm business inventories increased substantially in the fourth quarter to a record annual rate of more than 15 billion dollars and was far in excess of any period since the early stage of the Korean War. But here, paradoxically, lies a principal concern for the continuance of the upswing. Inventory investments increasing at well over 1 billion dollars per month reflect the fact that, despite a leveling in factory production, output continued to exceed current sales.

Spotlight on inventories

One of the signs of health of the five-year economic expansion, before last spring, was that inventories had risen only in step with business sales and in some cases less rapidly than sales. Continued strong demand coupled with capacity limitations were largely responsible. In the second half of 1966, business inventories, especially of manufacturers, rose faster than sales (see chart).

Part of the inventory growth of recent months represents increases in goods-in-process of manufacturers of business and defense equipment. Many items produced by these firms have long production cycles, and reported inventories rise as value is added to uncompleted work. But in some industries the increase has been "involuntary" because it resulted when sales failed to achieve the levels assumed in production planning. Dealer inventories of cars manufactured in the United States, for example, amounted to 1.4 million units on January 1, equal to 53 days' sales at the December rate—the highest ratio for the month since 1960. Production cut-backs for such products as automobiles, appliances and building materials have brought layoffs or shorter weeks to some workers.

The rapid growth in inventories has been confined almost entirely to durable goods at the manufacturing, distributor and retail levels. Inventories of soft goods, such as paper, petroleum products, textiles and processed foods, generally are not out of line with current needs.

Prices of a number of raw materials, such as cotton, wool, hides, rubber, tin, lead and steel scrap, declined during 1966. Holding these commodities in excess of normal requirements as protection against possible price increases or shortages, therefore, appeared less necessary to many firms. On the other hand, prices of other materials, such as sulphur, copper, aluminum, cobalt, nickel, cadmium and molybdenum, rose in late 1966 or early 1967 and lead times on bearings,

forgings, castings and electrical components remained very long. In this environment, ample inventories of such items, of course, appeared desirable even when holdings seemed large relative to current consumption.

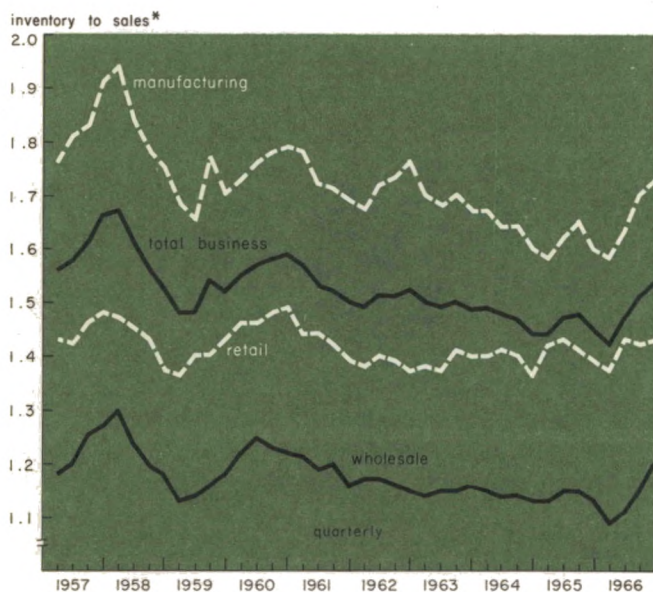
Steel production declined gradually in the final months of 1966, partly because of planned inventory curtailment by steel consumers. In November the ratio of manufacturers' inventories of steel to consumption was the lowest for the month since the series was started in 1961. Meanwhile, steel firms increased their inventories of finished steel anticipating that customers would increase orders before long, perhaps after the turn of the year when inventories are commonly valued for accounting and tax purposes.

Many business firms have encountered problems with *unbalanced* inventories, with some types of purchased materials in excess and others short. Generally these are durable goods manufacturers, some of whom placed orders for larger quantities than needed in the expectation of delays in delivery or supplier allocations that did not materialize.

Inventories invariably have risen relative to sales prior to business cycle peaks in the post-war period as supply conditions eased and demand slowed. Usually much sharper increases in these ratios occurred after general business declines were under way because output reductions lagged the slowdown in sales.

Although the aggregate inventory-sales ratio has risen in recent months, the increase was from a relatively low level. The November ratios of 1.73 for

Inventories rose faster than sales starting last spring



*Inventories at month-end divided by monthly sales.

manufacturing and 1.54 for all business were still somewhat below the levels of 1953, 1957 and 1960 when total economic activity was approaching a peak.

Increasing numbers of business firms have undertaken to halt or reverse the rise in their inventories. In several industries—building materials, autos, appliances and steel—production cut-backs already are correcting excesses. One of the major uncertainties in the near-term economic picture is whether inventory adjustments can be completed in particular industries without setting in motion a general decline in orders. A widespread move on the part of business to reduce inventories would tend to undermine the assumptions underlying favorable projections for total activity in 1967.

Labor markets still tight

Both total wage and salary employment and manufacturing employment in the United States continued to rise throughout 1966. From September to December wage and salary employment rose by about 900,000, and manufacturing employment by 270,000, equivalent in each case to a seasonally adjusted annual rate of over 5.5 percent. These gains were about equal to the increase for 1966 as a whole from 1965. Prior to earlier business cycle peaks the rate of rise in employment has slowed markedly and manufacturing employment usually has declined.

Employment gains during 1966 were somewhat less for the Midwest than for the nation, partly because unemployment had fallen to low levels in most of the region in

Large employment gains continued through 1966



the preceding year. In December, 18 of 23 important Seventh District labor markets were classified by the Department of Labor as having relatively low unemployment, compared with 66 of 150 areas for the nation. The District picture had changed very little from a year earlier in December. During the same period the number of centers in the nation in the low unemployment group rose by a third.

Unemployment for the nation averaged only 3.8 percent of the civilian labor force in the fourth quarter, the lowest since 1953. For married men the rate was only 1.8 percent, much less than in any previous period on record for this series which started in 1955.

Increases in new claims for unemployment compensation were recorded in December, especially in areas with large automobile plants. Nevertheless, the proportion of covered workers receiving unemployment com-

pensation in December remained very low, ranging from 1.2 percent in Indiana and Iowa to 2.1 percent in Michigan, among Seventh District states, compared with 2.6 percent for the nation. For all District states (except Michigan) and for the nation, the proportion of workers receiving unemployment compensation in December was the lowest on record for the month in a series dating back to 1953. The proportion for Michigan was lower than any December except in 1965.

Tight labor markets—along with relatively high profits and rising living costs—comprise the major reasons for larger increases in wages and salaries in recent months. Five percent annual increases in wage rates have been replacing the 3 to 4 percent norm of earlier years. This trend is expected to continue in 1967 even in the face of reduced demand for labor in some industries. If so, continuance of the upward cost pressures on prices is indicated.

Parallels and prospects

Comparisons of recent economic trends with past periods when activity neared cyclical peaks reveal certain similarities, but also important differences. Until the second quarter of 1965, the business uptrend of the Sixties was remarkable both from the standpoint of its longevity and the variety of industries participating. Since then some types of activity have declined, some have ceased to grow and others have increased at a slower rate. Nevertheless, the rise in total employment and income has continued.

Unquestionably, the past six months have seen a deterioration in confidence of many consumers, businessmen and lenders. Part of the slowdown in consumer spending, according to recent household surveys, reflects uncertainty caused particularly by rising prices and the Vietnam conflict. Improvement in

consumer attitudes would find the nation's families in an excellent position to increase their expenditures. Temporary plateaus in consumer spending, followed by resumption of the long-term rise have occurred several times in the past without serious effects on activity. Retail sales cannot for long remain out of touch with changes in income.

An interval will elapse before some of the softer sectors of the economy begin to expand again. Many families, business firms and financial institutions are attempting to rebuild liquidity positions. Inventories in some industries are being reduced to more comfortable levels. Some improvement in home building may occur fairly promptly, but a rebound to earlier peaks is likely to be delayed by the need to refill pipelines of credit, materials and developed land, and for contractors to rebuild their crews.

To a large degree, the slower rate of economic expansion of recent months reflects limits to the physical capacity of the economy and monetary and fiscal measures directed toward restraining price inflation and holding the expansion to a more sustainable pace. As conditions warrant, these braking influences can be moderated and reversed.

Monetary policy has been directed toward less restraint for some months. Interest rates have declined and growth in bank credit has resumed. If labor and materials were to become more generally available, restraints on Federal spending for buildings and highways could be eased, and the December 31 date for reinstating the investment tax credit advanced. In short, assuming an abatement of price inflation and greater availability of resources, monetary and fiscal policy could be turned from the brake to the throttle and with reasonable expectations that demand growth would be stabilized at a high, and hopefully, noninflationary rate.

Competition in banking

What is known? What is the evidence?

Certain aspects of recent controversy over the role of competition in banking were discussed in general terms in the January issue of this review.¹ In banking as in baking, however, the proof of the pudding is in the eating. This second instalment, therefore, undertakes to describe the actual results achieved in the marketplace, as gauged by prices charged and paid and services rendered, under alternative banking structures.

Studies of structure and performance in banking markets have been handicapped both by data difficulties and by the impossibility of holding "all other things equal" when seeking to measure the effects of specific factors present in different market situations. Nevertheless, by cross classification of the data and the use of multiple regression analysis, it often has been possible to isolate the more important and consistent relationships which shed light on certain of the issues.

Summarized here are the major results of a generous sample of research efforts that have been undertaken in the past two decades. These are listed on pages 8 and 9 together with their reference numbers.

It deserves stress that the conclusions indicated by these studies are suggestive rather than final. In some instances, clear inconsistencies are revealed in the results. Complete consistency in the findings could scarcely be expected simply because of the widely

diverse samples of banks and bank markets studied and the possibilities that some of these were not representative of all banks. Where all but one or two of several investigators report similar findings, the relationship found by the majority may still be a valid one, but it should be studied further before being accepted as conclusive and providing a basis for generalization.

The effects of banking concentration

With these reservations in mind, we proceed to present the available evidence. Among the structural characteristics of banking markets most frequently alleged to have an effect on performance are the number and size distribution of banks and other financial institutions. There is a presumption—partly based on experience in other industries and partly derived from economic theory—that the smaller the number of independent sellers in a particular market or the greater the concentration of business in the hands of a few, the lower is likely to be the quality of the product or service and the higher the price.

Several analysts have attempted to determine the relationships, if any, between concentration—generally measured as the percentage of total deposits in a given banking market accounted for by some small number of banks—and various measures of banking performance. On this basis, and other things equal, it would be expected that interest rates on loans should be higher, interest rates on time deposits lower, the ratio of time to total deposits lower and pretax earnings on assets

¹See "Competition in banking: the issues," *Business Conditions*, January 1967.

higher in markets where concentration is high than in those with greater diffusion of "market power."

In addition, it has been suggested that concentration would be likely to result in less activity in the form of direct lending and more in purchases of securities, which would be reflected in a lower loan to deposit ratio than would otherwise prevail. The number of banks in the market, on the other hand, would be expected to be related to measures of performance in a manner opposite to that premised for concentration.

Results of four published studies [5, 6, 7, 13] and two preliminary studies that examined the relationships between concentration and performance are generally consistent with expectations. The inconsistencies are so few and tentative as to be attributed reasonably to chance characteristics of the data. The one exception concerns the relationship between interest rates on business loans and concentration.

Although three of the four studies [5, 6, 13]—including a major research effort that

utilized extensive data from the Federal Reserve's 1955 and 1957 surveys of business loans [5]—found a direct relationship, another study [7] utilizing many of the same data came to the conclusion that "no easily identifiable relationship exists between concentration ratios and the level of interest rates charged by commercial banks on business loans."

According to the author of this research paper [7], intercity variation in loan rates is better explained by regional differences in such factors as the rate of change of employment, bank operating expenses and competition from nonbank financial institutions. He further contends that the direct or positive relationship between concentration and loan rates found by the earlier studies is a spurious result ascribable to the pronounced but misleading correlation between concentration and the true explanatory factors.

The technical nature of these questions precludes any attempt to demonstrate which of the conflicting results seems more acceptable. Suffice it that competent scholars have

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been unable to reach agreement on this issue on the basis of the data currently available. Nevertheless, this still unresolved controversy serves to illustrate the dangers of accepting the results of any one study as conclusive, especially in the absence of thorough familiarity with the data and methods employed in the analysis. But with the possible exception of interest rates on business loans, the evidence so far available is consistent with the view that differences in the degree of banking concentration may be responsible for at least a part of any differences observed in performance in banking markets.

The results of two published studies [12, 13] and two preliminary studies that examined the effects on performance of the number of banks in the market are also generally in accord with theoretical expectations. As with concentration, the most important inconsistencies concerned interest rates on loans. Two of the studies found a positive relationship between number of banks and loan rates—that is, the greater the number of banks the *higher* the level of loan rates—and two found

the “expected” negative relationship. In all four studies, average loan rate was measured as the ratio of interest received on loans during the year to total loans outstanding.

Such a gross measure is, of course, open to many objections, particularly that it glosses over differences in the makeup of credit demand and resulting bank-to-bank variations in loan composition. The distortion caused by the use of such a measure of the interest rate on loans would tend to be smaller for large samples and for samples consisting of banks that are alike in as many characteristics as possible. For this reason, the negative relationship between the number of banks in individual market areas and average interest rates on loans found in a study [13] of 672 banks in Iowa is more persuasive than the contrary result reported on the strength of an analysis [12] of 106 one- and two-bank towns throughout the country. At the same time, the highly localized character of the Iowa sample makes any generalization to conditions elsewhere hazardous; a preliminary study at the Chicago Federal Reserve

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Bank of 413 Indiana banks under somewhat less uniform conditions yielded generally inconclusive results.

A second unpublished paper, which examines the relationship between loan rates and changes in the number of banks in Indianapolis in the postwar period, lends further support to the view that interest rates on loans tend to vary inversely with the number of competing banks. As for the relationships between the number of banks and other performance variables—specifically, interest rates on time deposits, ratios of loans to assets, time to total deposits and pretax earnings to assets, and service charges on demand deposits—none of the four studies contradicts the conjectures made above although in a few cases the data also fail to give them positive support. Importantly, however, of the four foregoing studies only the one for Iowa reported relationships that were “significant” in the statistical sense that the results might not reasonably have occurred by chance.

Additional evidence is offered in two other bank studies, one in New York state [15] and the other in the Chicago area [19]. The former found some tendency for rates on new car loans, conventional mortgage loans and small business loans to be higher and rates paid on savings deposits to be lower in upstate New York towns with only one banking office than in towns with two or more offices. On the other hand, service charges on checking accounts were generally lower in the one-bank towns. The Chicago study found that interest rates on automobile loans tended to be lower in suburbs having larger numbers of banks. The samples in both of these studies, however, were relatively small and the results are therefore only tentative.

The findings reviewed thus far generally conform with expectations. This is not true, however, of the results of a number of other

studies that have been made. An example is furnished by investigations of the effects on bank behavior ascribable to the presence of nonbank financial institutions.

Competition from thrift institutions

Students of banking and bankers alike are aware that, although commercial banks offer checking deposit services that are unique, they face strong “outside” competition in the supply of other financial services. This is particularly true for savings. The savings and time deposits offered by commercial banks compete with mutual savings bank deposits, savings and loan association and credit union shares and other highly liquid financial assets.

The intensity of such competition has been in sharp focus during the recent “rate war” between the banks and savings and loan associations and had been evident in the earlier dramatic rise in commercial bank time and savings deposits following the revision of Regulation Q in 1962. Nevertheless, evidence so far examined indicates that the presence of a thrift institution in a community has no systematic influence on the rates paid by commercial banks on time deposits.

Of three studies that examined this question [12, 13, 18], only one—which looked at unit banks in Minnesota—supports what would be expected on a priori grounds, namely that the additional competition afforded by the presence of a nonbank financial institution would raise the interest rates on time deposits paid by commercial banks. The Iowa study [13] found no such relationship and the previously mentioned study of 106 unit banks [12] showed results precisely opposite to what would appear plausible.

The evidence regarding the effect that the presence of a thrift institution has on the ratio of commercial bank time deposits to total deposits and total local savings (sav-

ings held in local institutions) relative to population or income is somewhat more helpful. Both the study of Iowa banks [13] and that of the 106 unit banks located throughout the country [12] found that the ratio of commercial bank time deposits to total deposits tends to be lower in those communities where a nonbank thrift institution is present, indicating that to some degree commercial bank and other savings are substitutes.

A related finding is the conclusion of a follow-up study [14] of the same Iowa counties included in study [12]. This study was supplemented by an analysis of data for 48 states and showed that the volume of local savings at banks and thrift institutions combined—both in the aggregate and per capita—is larger, the greater is the proportion of local “deposits” held by the nonbank institutions. Similarly, a study of large metropolitan areas found that savings are greater relative to income in areas with mutual savings banks [19]. On balance, this evidence, if not that relating to time deposit interest rates, confirms the existence of considerable inter-industry competition between commercial banks and thrift institutions.

Branch banking and performance

Perhaps the most controversial issue in American banking history and one on which feelings have been stronger than any other concerns branch banking. While much of the emotion surrounding discussion of this subject is undoubtedly attributable to aspects of a noneconomic nature, much of the writing and debate have focused upon purely economic considerations. Certain of the claims and counterclaims made over the years regarding the economic effects of branch banking have recently been subjected to the impersonal assessment of statistical analysis.

Seven studies [2, 6, 10, 12, 16, 19, 20]

comparing bank performance in unit and branch areas reveal only one clear-cut contradiction: one [12] found interest rates on time deposits to be higher in branching areas while another [6] found them to be lower.

Of 12 other measures of performance, six were observed to be generally more favorable to bank customers in branch banking areas than in unit banking areas. The ratios of time to total deposits and loans to assets were higher under branch banking as were personal savings relative to income and the number of banking offices relative to population. At the same time, interest rates on mortgage and unsecured instalment loans were lower.

The six remaining measures of performance, on the other hand, were more favorable in unit banking areas. Interest rates on business and new car loans, the average return on all loans, the ratio of net current earnings both to assets and to capital and service charges on checking accounts were all lower in unit banking areas. However, the lower earnings to assets and earnings to capital ratios of unit banks are to be viewed as advantageous to consumers only insofar as they reflect competitive pricing in the market, which is already partially taken into account in the measures of time deposits and loan interest rates. If the lower earnings rates of unit banks are the result of inefficiency—that is, higher unit costs for a given package of services—they may actually be detrimental to the interests of consumers in the long run by leading to a deterioration in the quality of service.

The observed relationships may be due to factors other than the prevalent form of banking organization. In particular, branch and unit banking follow fairly definite geographic patterns in the United States, suggesting that regional differences in demand or in the character of state bank regulation could have

pronounced effects on bank performance that may not properly be attributed to organizational characteristics. It may be useful, then, to look at the results of seven studies [1, 2, 6, 12, 15, 19, 21] that have compared the performance of unit and branch banks *within* branch banking states.

A comparison of these findings again illustrates the extent to which the results of individual studies have occasionally differed on particular questions. The only results not contradicted by at least one of the seven studies are that branch banks generally have higher net current earnings relative to capital and higher loan to asset ratios than unit banks in the same state. The latter finding has been reported with unvarying regularity.

Inasmuch as loans bear greater risks than Government securities, the reduction in risks attributable to the geographic and industrial diversification of lending enabled by branch banking would be expected to result in higher ratios of loans to deposits and loans to assets; competition may or may not be an important factor in accounting for them. These ratios, in turn, are important in accounting for the higher earnings rates of branch banks.

Somewhat less thoroughly documented, but still worthy of consideration is the finding reported in two recent contributions [6, 12] that ratios of time to total deposits are lower for branch banks than for unit banks in the same states. Also receiving support from two studies [15, 21] is a tendency for service charges on checking accounts to be higher at branch banks. But while the latter finding simply confirms what was learned in the comparisons between branch banking and unit banking areas, the former flatly contradicts the reported results of the inter-area comparisons.

What at first glance seem to be inconsistent conclusions are in fact two valid

aspects of the relationship between branch banking and the ratio of time to total deposits. Although branch banking areas typically have higher time deposit ratios than unit banking areas, unit banks within the branch banking areas surpass branch banks in their proportion of time to total deposits. If, as has been tacitly assumed here, the time to total deposit ratio reflects competitive forces—in the sense that vigorous competition for deposits will result in some demand deposits being bid away to the interest paying time deposit categories—then the inter-area comparisons suggest that deposit competition is keener in branch banking areas.

This interpretation, however, may attribute to branching laws the influence of regional differences in saving habits or other factors. Similarly, the generally higher interest rates paid on time deposits and higher ratios of time to total deposits of unit banks within branch banking areas lend themselves to various interpretations. They might mean, among other things, that unit banks in branch banking areas must resort to rate competition to make up for the greater locational convenience offered by branch systems.

Entry by branching

A distinctive type of comparison between branch and unit banking was the before-and-after study carried out in Nassau County, New York [17]. This examined the effects of New York state's Omnibus Banking Act of 1960, which opened suburban counties to branches of the New York City banks. The findings for Nassau County were as follows: Somewhat surprisingly, the aggregate rate of return to capital in banking did not fall in the years immediately following entry, possibly because of the strong and growing demand for banking services during the period in question. On the other hand, there was a

“significant increase in number of offices and number of banks per submarket,” a reduction in instalment loan interest rates and a gradual increase in interest rates on time and savings deposits.

But although these results strongly suggest that benefits are to be derived from liberalization of branching laws and subsequent entry by branching, the study deals only with the immediate, short-run effects of such a move. It tells nothing about the potential long-term influence of big city branches on competition in the suburbs, nor does it adequately isolate the influence of liberalizing the branching law from that of the extraordinary growth and economic change in Nassau County in affecting the measures of bank performance used. Nevertheless, the figures presented are sufficiently impressive to make a strong *prima facie* case that the change in banking law favorably affected the price and quality of banking services in Nassau County.

Branching by merger

A final type of study bearing on the merits of branch and unit banking looks at the changes in lending behavior and pricing policy that occur when a unit bank becomes, through merger, a branch of a larger bank. Two studies [12, 15]—which utilized similar questionnaires—purport to shed some light on this area of banking controversy.

The results of the two studies are striking in their agreement. In only one of 17 measures of performance is any inconsistency evident; this disagreement concerns service charges on regular checking accounts. Whereas the New York state study [15] found that mergers generally led to reduced service charges, the other study [12]—which surveyed all national banks that acquired other banks through merger in 1962—reported that service charges were usually

raised. With respect to every measure but two—service charges on special checking accounts under two alternative assumptions regarding activity and average balances—the effects of mergers were generally favorable to consumers. After merger, interest rates on savings deposits were higher; interest rates on 24-month new car loans, 15-year conventional mortgages and unsecured small business loans were lower; secured and unsecured lending authority of the chief lending officer was greater; maturities on car loans and conventional, FHA- and VA-mortgage loans were longer, and maximum amounts on car loans and all three types of mortgage loans were greater. Thus, the quantitative measures of bank performance relied on in these two surveys failed to discern any of the noncompetitive results that opponents of branch banking and mergers often allege to be inherent in multiple office banking.

Closer examination, however, reveals that the results reported are at best misleading and at worst potentially dangerous. It would be absurd, for example, to use them as a guide to future policy, for the favorable effects found to accompany most of the mergers are themselves partly the result of the discretion exercised by regulatory authorities in the past in deciding which mergers to permit. This is less true of the New York study [15], which examined mergers that occurred from 1951 to 1961 when little public control was exercised over bank mergers. Nevertheless, the bias imparted by the selected nature of the samples studied cannot safely be ignored.

Even if it is the case that mergers are, on balance, beneficial to consumers, this would not be grounds for giving blanket approval to all branching by merger. Both studies found some mergers to be detrimental to the public interest. The emphasis must continue to be on strengthening the ability to identify in ad-

vance, for purposes of prevention, those mergers that would be likely to have adverse effects on bank customers.

Branch lending policies

Certain other charges against branch banking receive support from the studies cited. The New York state study [15] found that the out-of-town branches of branch banks were less willing to make small (less than \$25,000) unsecured loans than were unit banks. This was evidenced by the greater volume, whether measured by number or dollar amount, of unsecured loans relative to deposits at unit banks. The same observation was made several years earlier in a study of New England banking [10].

Often voiced in conjunction with the charge that branches tend to have much more impersonal lending policies than unit banks is the argument that branch banking is undesirable because it drains some localities of funds and lends them elsewhere. The charge receives support from the New York finding that branches showed a much greater dispersion of loan to deposit ratios than did unit banks, clearly indicating that some branches were primarily deposit collecting agencies, whereas others were primarily loan outlets.

Although the evidence apparently bears out the factual basis of these two charges, it has nothing to say about their logic. Their underlying premise—the notion that deposit funds generated locally should stay at home—has little to recommend it, either as banking practice or public policy. It amounts to a contention that the interests of bank borrowers and depositors perfectly coincide, which is not generally true.

Any attempt to limit the lending activities of banks to a specified geographic area or otherwise to favor local borrowers would be almost certain to divert bank credit into less

profitable channels. This, in turn, would reduce the earnings from which depositors can be paid for the use of their funds and introduce a distortion in the allocation of society's resources.

Bank size and performance

An additional characteristic of banks that may be systematically related to bank performance is absolute size, measured in terms of assets or deposits. The studies that have been made of the influence of this factor fall into two broad categories: first, studies of economies of scale [1, 3, 8, 9, 11, 19] and, second, studies of the price, quality and availability of banking services at banks of different sizes [2, 4, 6, 12, 19, 21].

Studies in the first category are concerned with finding which size of bank is most "efficient"—that is, which scale of production results in minimal costs per unit of output. Although several of these studies are the products of imaginative and laborious research, none of them satisfactorily comes to grips with a major conceptual problem—namely, the specification of just what it is that banks "produce."

Banks of different size and location offer diverse combinations of services that cannot readily be measured with a common yardstick. The failure to solve this problem in an adequate manner—a failing of which most investigators in the field are fully aware—robs their quantitative findings of much significance. In fact, since most studies arbitrarily measure bank output in terms of the dollar value of assets and since it is well established both that larger banks in general make larger loans than small banks and that costs per dollar are regularly lower for large than for small loans, these studies embody a systematic bias in the direction of overstating the relative efficiency of large banks.

Despite this, a finding common to almost all of the studies was that the greatest part of the potential savings due to size may be realized by banks with no more than 10 million dollars in deposits. When output is measured by the number of loans or deposit accounts rather than the dollar volume, as in a recent study of the costs of a sample of New England banks [3], the results are even less favorable to large size. Extremely moderate economies of scale were reported for each of six separate bank activities for which cost to output relationships were estimated.

Another interesting attempt to measure economies of scale defined bank output as the yield weighted sum of 16 earning asset categories [9]. The study found that average costs of banks in the Kansas City Federal Reserve District decreased up to a deposit size of about 300 million dollars, then began to increase. In sharp contrast to the conclusion reached in a study of all member banks in 1959 [11] that branch offices were more expensive to operate than unit banks of the same size, it was reported by the Kansas City study that merging unit banks into a branch system would reduce costs even if the output of each office remained unchanged.

At the present time—given the conflicting results, inadequate data and imperfect methodology of extant studies—there is no firm basis for judgment on which size of bank is most efficient. In all probability this will depend on the composition of the services rendered so that at best there may be only an optimal distribution of sizes of banks, rather than a single optimal size for all banks.

The influence of size on other banking performance variables has been the subject of several studies [2, 4, 6, 12, 19, 21]. At first glance, the results seem to be entirely in favor of size. Not only do larger banks pay higher average rates on savings, but they

charge lower average rates on loans, have higher ratios of time to total deposits and—despite this price situation, which would appear to be unfavorable to bank profits—they end up with higher net current earnings relative to both assets and capital. The problem, similar to that encountered in studies of economies of scale, is that the effective rates of interest were computed as the ratios of total interest income on loans to total loans and total deposit interest paid to total time deposits (except for the Chicago area study [19], which gives the quoted rates on specific types of loans).

It is well known, however, that large banks have a larger share of their assets in large, low-cost, low-risk loans to major corporations on which interest rates charged are relatively low. Similarly, large banks normally have a much larger share of their time deposits in large denomination certificates of deposit, which entail little administrative expense and generally command higher interest rates than are paid on regular savings accounts. For this reason the findings presented contain a pronounced bias and must be regarded as possessing only limited validity.

Some additional insight into the relationship of size to banking performance is shed by a recent questionnaire survey of 2,650 commercial banks [21]. Using cross-classification tables to sort the separate influences of bank structure (branch versus unit), size and location (city versus other), the authors concluded that “size is what matters in the provision of banking services, not location, and not structure.”

Thus, larger banks more frequently made automatic allocations from depositors' demand deposits to their savings accounts; maintained Christmas Club programs, and provided trust services, parking facilities, drive-in windows, special checking accounts,

data processing, payroll and locked box services, foreign exchange, revolving credit and safe deposit boxes. On the other hand, charges on regular checking accounts were found to be generally lower at small banks than at large banks.

But although the authors concluded that "banking services definitely increase with bank size," they hastened to add that "where small banks are less apt to provide the service than large ones . . . usually it is because there is little demand for this service by the customers of the smaller banks."

Policy implications

No attempt has been made in this article either to present every detail of each study or to survey more than a small sample of recent research in the general area of banking markets. Nevertheless, most of the major empirical studies that deal directly with banking competition have been included so that the results presented are biased to only a minimal degree by selective omission. If the findings are taken at their face value—which, as has repeatedly been indicated, is very hazardous—they would seem to suggest the desirability of a public policy toward banking structure that discouraged concentration, encouraged new entry, liberalized branching and permitted banks to grow to large size.

That these immediate goals in many market situations would be mutually contradictory follows as a matter of arithmetical necessity. These contradictions—apparently inherent in a society where technological ad-

vantages of size exist side by side with an economic system that relies on competition to prevent exploitation of consumers and the stagnation of industry—are the essence of the problem faced by the public agencies entrusted with channeling the evolution of the banking system along those lines most conducive to the public interest.

Valuable as they are as a start toward providing a factual basis for decisions bearing a crucial impact on the quality and prices of banking services today and in the future, empirical studies like those summarized above can provide only part of the answers to questions involving fundamental value judgments. There is the possibility that particular changes in the banking structure may have much more pronounced effects on some classes of bank customers than on others. There is also the fact that bank performance is far from being uniquely determined by bank size or structure or even the intensity of external rivalry but that it does depend heavily on the qualities of individual bank managements and personnel—factors that are not easily reducible to terms suitable for statistical investigation.

Imperfect knowledge, nevertheless, is greatly to be preferred to total ignorance. If the great amount of effort currently being expended on research in the field of banking markets and banking competition yields nothing else, it will have been worthwhile if it dispels some of the prejudices and preconceptions that have marked discussion of these subjects in the past.

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