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The perennial issue: branch banking

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In recent years, bankers in every state of the Seventh Federal Reserve District have been involved, on one side or the other, in the controversy surrounding branch banking. Pressures for permitting branch banking in states where it is now prohibited and for relaxing restrictions in states where it is already a fact are likely to increase in the future. Through historical background material and by identifying and discussing the findings of research on specific issues, this article aims to provide a better understanding of branch banking.

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The perennial issue: branch banking

One aspect of the American banking system that quickly impresses itself on the mind of a foreign observer is its fragmented structure. Whereas virtually every other industrial country has a banking structure dominated by a handful of large banks with extensive nationwide branching networks, the banking structure of the United States remains segmented geographically and relatively unconcentrated.[1] With negligible exceptions, even the largest banks in the United States have full service branches in no more than one state. Multibank holding companies, which are an alternative to branching, also generally have banking subsidiaries in no more than one state. In 19 states and the District of Columbia branching is permitted anywhere within the boundaries of the state, although only by merger in some cases and subject to varying control requirements. In 15 states, branch banking is prohibited by statute or regulation, and in the remaining 16 states banks may branch only within a restricted geographical area.

These restrictions can be understood only in the context of this country's unique "dual banking system" under which banks may be chartered and regulated by state or federal banking agencies. In branching, as in several other areas, federal law defers to state law, and within any given state, national banks and state banks are subject to the same geographic restrictions on branching. In recent years, however—and this clearly has been true in the Seventh Federal Reserve District—many states have experienced bitter controversy over efforts to liberalize state branching laws.

The purpose of this article is to help interested readers better understand both how the existing array of state branching restrictions came into existence, why they have come under increasing pressure in recent years, and what existing evidence suggests regarding the merits of the economic case for branching.

NOTE: Bracketed numbers **[21]** *refer to the numerically-listed bibliography on pages 4 and 5. Citations are either to studies whose results are described in this article or to scholarly elaborations of topics discussed.*

A historical overview[2]

It is striking that, despite all the criticism of banks and bankers, and all the distrust of monied interests and the concentration of economic power that is almost an American tradition, and despite the disastrous losses suffered by depositors as a consequence of banking abuses, there was virtually no criticism of branch banking as such prior to the second half of the nineteenth century. Among the few exceptions was Alexander Hamilton's expression of concern that too many weak branches might affect the solvency of the First Bank of the United States—both the First Bank of the United States (1791-1811) and the Second Bank of the United States (1816-36) operated branches, as did the state-owned Bank of the State of South

[1] Even in the United States, the 100 largest banking organizations hold almost half of total commercial bank deposits, and the 20 largest banks hold nearly one-third.

[2] This section draws heavily on studies 9, 10, 17, 22, 52, and 57.

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Carolina (1812-68) and State Bank of Indiana (1834-57).

The quiet controversy

Opposition to branch banking is a relatively recent development whose origins go back to an 1865 interpretation of the National Bank Act of 1863. The stated purposes of the National Bank Act were to provide for the establishment and supervision of a system of federally-chartered banks, to provide a uniform national currency, and to assist in financing the Civil War. The act contained many provisions borrowed directly from the free banking acts of the individual states, including the incorporation of national banks under general regulation and bank note issues secured by a deposit of government bonds with the Treasury. It also included a requirement that the organizers of a national bank specify:

> The place where its operations of discount and deposits were to be carried on, designating the state, territory, or district, and also the particular county and city, town, or village.

Although branch banking was not even mentioned in the debate preceding the passage of the National Bank Act, a strict interpretation of the singular noun "place" in the act precluded the operation of banking offices at more than one location. Beginning with Freeman Clarke in 1865, every Comptroller of the Currency up until D. R. Crissinger in 1922 interpreted the act in this fashion, although there was no broad-based opposition to branch banking. The consequence was that the national banking system consisted entirely of unit banks, except that state banks that converted to national charters were allowed to keep their branches under an amendment to the act in 1865.

At conventions of the American Bankers Association in the 1870s and 1880s, speakers argued strongly for the adoption of branch banking in the United States, usually citing the Canadian experience with such a system. The response was more one of indifference than active opposition. J. H. Eckels was the first Comptroller of the Currency to take a strong position in favor of branch banking. In the Comptroller's annual report for 1896, he urged that national banks be permitted to "establish branch banks in towns and villages where no national bank is established and where the population does not exceed 1,000 inhabitants." In support of his proposal, he cited the adoption of branch banking in 23 foreign countries and the need for banks in small towns.

In 1898, the Indianapolis Monetary Commission, a privately-sponsored study group comprised of businessmen, drew up a plan for the reform of the banking system that included a recommendation that national banks be permitted to branch. The introduction of the plan into the House of Representatives appears to have been the high watermark of the movement to grant branching privileges to national banks. Thereafter, the pro-branching movement receded as branching came to be associated with a number of other controversial proposals, such as that to replace the bond-secured National Bank Notes with a currency secured by short-term commercial paper and other assets. In 1900, the need for banking facilities in small towns lost some of its significance as an argument for branch banking when Congress lowered the capital requirement for new national banks in towns with populations of 3,000 or less to $25,000.

Pros and cons after 1900

After the turn of the century, the branch banking issue at the federal level was eclipsed for two decades by the controversy over reform of the currency. The report of the National Monetary Commission, established by an act of Congress in 1908 to investigate the causes of the

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Panic of 1907 and to recommend means of preventing such liquidity crises in the future, made no mention of branch banking in its report issued in 1911. The Federal Reserve Act, which took shape in the wake of public discussion of the Commission's report, was also silent on the question.

Although the movement for branching by national banks failed to make any headway between 1900 and 1920, branch banking made important advances in those states whose laws either expressly permitted state banks to branch or were silent on the issue. Most of the branches established during this period were within the home-office city of the bank. The rapid multiplication of city branches reflected the growing importance of so-called "retail" banking—primarily the deposit accounts of households—and the need for conveniently located offices to attract this type of business. Prior to widespread use of automobiles, the difficulty of supervising branches located at great distances from the head office all but eliminated the development of branches in other cities, even in those states that permitted unrestricted branching. A prominent exception was California where, following the enactment of a statute authorizing statewide branch banking in 1909, several banks in San Francisco and Los Angeles established banking systems extending throughout major portions of the state. One of these, the Bank of Italy, eventually developed into the Bank of America, the largest bank in the United States with more than 1,000 domestic branches and over $49 billion in total resources as of December 31, 1973.

In many of the states that did not permit branch banking, other forms of multiple-office banking developed. Group or holding company banking, a corporate device which enabled unit banks to achieve at least some of the advantages of branching, experienced rapid growth in response to the economic forces underlying retail banking. Largely as a consequence of the expansion of both branch and group banking in the early years of the century, organized opposition to multiple-office banking in all its forms began to develop, led by unit bankers opposed to multiple-office banking on principle or fearful of its possible effects on the future of their own institutions. In contrast to the equanimity and wholly academic interest with which speeches advocating or opposing branch banking were greeted at conventions of the American Bankers Association in the 1890s, the 1916 convention erupted in bitter controversy over the branching issue. Following an acrimonious debate that sharply divided the bankers in attendance, the association adopted a resolution opposing "branch banking in any form."[3]

In retrospect, the 1916 convention represented both the pinnacle and the onset of the decline of the anti-branching movement. From that year to the present, it has fought a holding action, winning occasional victories but generally retreating. An important event occurred in 1922 when Comptroller of the Currency Daniel R. Crissinger, concerned by the competitive disadvantage suffered by national banks in states where state banks were permitted to branch, reversed the policy of previous Comptrollers and ruled that national banks might open limited service offices in their home office city in states permitting branching. This action, together with all forms of branch banking, whether by state or national banks, was condemned in a resolution adopted at the 1922 meeting of the American Bankers Association. According to the resolution, "branch banking is contrary to public policy, violates the basic principles of our Government and concentrates the credit of

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[3] In every year from 1916 through 1919, the Federal Reserve Board recommended that national banks be permitted to operate branches within the head office city or county. Similar proposals were made by Comptroller of the Currency J. S. Williams each year from 1916 to 1920.

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the nation and the power of money in the hands of a few."

The McFadden Act of 1927 appeared to reflect a standoff between pro- and anti-branching forces. Although it gave national banks explicit legislative sanction to establish full service branches in states where state banks were permitted to branch, the act limited these branches to the home office city. Indeed, its sponsor in the House referred to it as "an anti-branch-banking measure severely restricting the further spread of branch banking in the United States." In the years immediately following passage of the McFadden Act, six states enacted laws prohibiting branching.

Bad times for banks

An important force working in favor of the branching movement throughout the 1920s was the large number of rural bank failures. Between 1921 and 1929, 5,712 banks failed in the United States, an average of more than 600 per year (and most were in agricultural areas). Others were prevented from failure by merger into other banks. By the late 1920s, this experience gave rise to a call for more liberal branching laws in order to bring banking facilities to small towns left bankless by the failure of local institutions. The arguments set forth at the time were (1) that a branch can operate economically on a smaller scale than a unit bank, and (2) that, because of the greater geographical diversity of their lending, branch banks are less susceptible to local economic vicissitudes [10, 41, 52]. These assertions, which were not then and are not now universally accepted, formed only part of a broader set of questions concerning the relative efficiency and soundness of branch and unit banking. Nevertheless, they weighed heavily in the thinking of many at the time, and led to a number of proposals to enlarge the branching powers of national banks.

After the enormous wave of bank failures between the beginning of 1930 and the bottom of the Depression in 1932 (5,096 banks closed their doors during this period), it appeared that greatly expanded branching would be an integral part of any reform measures designed to strengthen the banking system. As it turned out, the only liberalization of national bank branching powers to be undertaken in the 1930s was a provision of the Banking Act of 1933 that allowed national banks to establish branches outside the home office city "subject to the restrictions as to location imposed by the law of the State on state banks."

That the federal banking legislation adopted in the 1930s went no further than this in enlarging branching powers appears to be due to the fact that Congress found alternative means of improving the safety of the banking system [10]. Most important by far was the adoption of federal deposit insurance, which eliminated the incentive for depositor "runs" on banks by effectively restricting the effects of an isolated bank failure to the stockholders and large depositors of the failed institution. Since the Depression, the controversy over branching has shifted from the federal to the state level. Although few states have liberalized their branching laws in the past four decades, branching has made spectacular gains in those states where it has been permitted. Between 1933 and 1973, the number of branches in the United States increased from 2,780 to 26,251.

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Issues and evidence

As the political struggle between pro- and anti-branching forces has settled into a continuing trench warfare, with attrition on both sides but no victory in sight for either, the issues have been refined and crystallized into a few well-defined categories. There has been almost no change in the statement of the issues over the past 30 years, and but little over the past 50. In spite of their longevity, some issues continue to be presented in a misleading or confused manner. In only a tiny minority of cases has sufficient evidence accumulated to allow issues to be resolved. In the remainder of this article, an attempt is made to state the principal issues in the controversy over branching as clearly as possible and to assess them in the light of both logic and available evidence.

Branch banking and operating efficiency

It is frequently asserted in arguments favoring the liberalizing of branching laws that branching would enable banks to achieve greater operating efficiency. Opponents of branching either deny this or, if they concede it, argue that other adverse consequences of branching more than outweigh this advantage.

Before launching into a review of existing evidence on the relationship between branching and efficiency, it is necessary to clarify just what question it is that needs to be answered. Failure to do so can lead to confusion in both the design of research studies and the interpretation of them, and often has done so in the past. For example, a finding common to the earliest studies of the costs of branching [1, 46] has been that for banks producing the same output—as measured by total assets, operating revenue, number of accounts, etc.—it is cheaper to operate a unit bank than a branch bank. However, because of the importance banking customers attach to convenience, a single large unit bank is a poor substitute for another bank of the same size that operates a number of branches. To the customer, the total costs of doing banking business consist of the costs of banking services at the office where the services are available plus the costs of time, trouble, and transportation expense involved in obtaining them.

In principle, one could measure these "inconvenience costs," add them to the internal operating costs of both branch and unit banks, and compare their efficiency directly. However, it is difficult to measure the dollar value of nonpecuniary costs incurred by a great number of customers residing in various locations. A more manageable approach is to compare a branch bank, not with a unit bank of the same size, but with a collection of unit banks of the same size and producing the same mix of services as the individual offices of the branch bank [18, 20, 22, 39]. Because the convenience costs associated with the two organizational forms would then be identical, their relative efficiency could be determined on the basis of internal operating costs alone, for which data are more readily available. Moreover, this comparison corresponds more closely to the public policy question that is most often encountered: given a determination that a specified location can support a new banking facility, should that facility be a new unit bank or a branch of a larger institution?[4]

A conceptual difficulty that plagues even this comparison is that certain mixes of output that are feasible for a branch are

[4] Strictly speaking, even this comparison is not completely valid. Even if unit banking could provide the same total number of banking offices in a given area, it could not provide bank customers the convenience of being able to do business at two or more offices of the same bank.

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not possible for a unit bank. If, for example, a branch is to be established in a rapidly growing residential area where the demand for consumer instalment loans and residential mortgage loans greatly exceeds the supply of deposits, it may be possible for the loans of that office to greatly exceed its deposits if the shortfall in funds can be made up by surpluses at other branches of the same bank. In contrast, a unit bank would be bound by its balance sheet either to limit its lending to the available supply of deposited funds or to borrow outside its immediate area.

On its face, the argument that branch banks should enjoy some advantage in operating efficiency appears quite plausible. There are a number of banking operations—personnel management, purchasing, investment portfolio management, and general administration, among others—that could well be centralized at the bank's head office [1, 10, 22]. Assuming there are any economies of scale in these functions, the result should be lower costs for a branch system than for a unit bank. It may also be possible to use lower level management personnel to manage branch offices, inasmuch as key policy decisions, including credit decisions on loans exceeding a specified amount, are typically reserved to senior loan officers at the bank's main office. Assuming that the resulting cost savings are not completely eaten up by the additional costs of maintaining adequate supervision over the branches, this arrangement may reduce management costs.

The existence of these alleged economies of the branch form of organization is disputed by some opponents of branching [36]. They emphasize the difficulties inherent in overseeing a large branch network, and question the extent to which authority and responsibility can safely be delegated to branch managers. Clearly, the issue is not a purely logical one that can be answered by abstract reasoning and argumentation, but an empirical question that can be answered only by hard evidence. However, repeated attempts over the past two decades to collect and analyze data in order to resolve the question once and for all have yielded conflicting results. Only through a critical analysis of the methodology and data used in each study can one reach a reasoned conclusion as to the validity of the results. Even then, doubts remain.

Measurement of efficiency involves relating production or output either to the resources used to produce it or to the cost of those resources. The measures of output used in the earliest studies of branch and unit bank costs—the amount of specified "stocks" of assets as of a given point in time—are not appropriate measures of output. Banking output is a flow of services over time. To be sure, there is likely to be some relationship between the size of the bank's stock of assets at the end of the year and the size of the flow of services the bank provides during the year. But the correspondence is likely to be loose and, more importantly, use of the stock measure of output involves a systematic bias.

The bias results from the fact that the average size of loan and deposit accounts tends to be larger at large banks than at small ones. In an output measure such as total loans and investments or total assets, a $1 million commercial loan will count the same as one thousand $1,000 consumer instalment loans. However, the actual service output of the bank—in terms of credit investigation, decision-making, physical processing of the loan application, collection, recordkeeping, and risk-bearing—will be much greater for the 1,000 small consumer loans than for the single large commercial loan. Hence, relating costs to unweighted stocks of assets as measures of output will overstate the efficiency of large banks and wholesale-oriented banks relative to small or retail-oriented banks.

One approach that overcomes this problem is to weight each category of earning assets by its gross yield. Thus, a dollar

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of consumer loans would be weighted more heavily in the index of output than would a dollar of commercial loans. Where the yields used as weights are the actual yields of the individual bank, the resulting measure of output is simply the total revenue or gross income derived by the bank from its lending and investing functions. Though solving the weighting problem implicit in using stocks of earning assets as a measure of output, most of the revenue measures suffer from their assumption that all banking output is associated with the asset side of the balance sheet. Actually, the safekeeping, accounting, liquidity, and payments services rendered in conjunction with the administration of deposit accounts are as much a part of a bank's output as are its lending services.

At least three studies have related banking costs to one or another of the revenue measures of output in order to determine the relationship between total or average costs and size of bank (as measured by output) and type of organization (unit bank, branch bank, or member of bank holding company). The first of these [18] reported, on the basis of statistically estimated cost functions for member, branch, and unit banks in the Fifth and Tenth Federal Reserve Districts, that branch banks operate at lower average cost, at most comparable levels of output, than collections of unit banks having the same output and number of offices. A later study [44], which compared the costs of unit and branch banks of similar size and with similar product mixes, used data on member banks in the Seventh Federal Reserve District. Its findings on the unit-branch cost question are inconclusive. The most recent such study [39], based on data for all insured commercial banks in the First, Second, and Third Federal Reserve Districts, reported that only branch banks with $5 to $24.99 million in assets, fewer than four offices, and whose output was in the upper part of the range for banks in this asset size class were more efficient than an equivalent collection of unit banks. Branch banks in the $25 to $99.99 million asset size class are less efficient, and results for the $100 million and over class were inconclusive.

A somewhat different approach to measuring banking output was taken in several other studies [5, 6, 37, 39]. Rather than attempting to find a single index of output for the whole bank, these studies disaggregated banks into their component functions or services—demand deposits, time deposits, capital and industrial lending, instalment lending, real estate lending, and safe deposit—and related the costs of providing each service to a physical measure of output for each function, usually the number of accounts serviced. This was made possible by use of data from the Federal Reserve Functional Cost Analysis Program, a standardized cost accounting program, for small banks. The total costs for a bank with any given mix of output could then be found by substituting the output of each service into the cost equation for the corresponding bank function, calculating its cost, and then adding the costs for all the functions.

Again, the results were mixed. Although the studies using the functional cost approach reported the usual finding that branch banks have higher costs than unit banks producing the same output, the results of comparisons of branch bank costs with those of a collection of unit banks were found to depend on the particular sizes of the branches being compared and their output mix. This is primarily a consequence of the fact that the existence and extent of economies of scale (declines in unit costs as output increases) differ greatly among the functions. For example, the most recent and sophisticated of these studies [37]—which, however, dealt only with the demand deposit function—concluded that "branch banks which have large offices which cater to customers with small accounts are more efficient than similar unit

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Branch banking in the Seventh District

Illinois

The only concessions Illinois law has made to branch banking have been a 1967 amendment that permitted the establishment of a single drive-in facility not more than 1500 feet from the main premises of the bank, and the 1973 Foreign Banking Office Act that permits foreign banks to open one office in the downtown business district of Chicago. On December 31, 1973, there were 175 drive-in facilities in the state and applications had been received for seven branches of foreign banks. Illinois law prohibits multibank holding companies.

In 1973, the Illinois Bankers Association split over a resolution reaffirming the association's continued opposition to branch banking. Some members, primarily large banks in Chicago and in larger cities downstate, withdrew from the association and supported a bill that would have permitted branching in the home office county.

Indiana

In Indiana, branches may be established within the home office county but not within one-quarter mile of an existing bank or trust company. Home office protection is conditioned on the population of the county and the number of cities of a given size in the county. For each branch opened, a bank must have at least $200,000 in capital and surplus. At year-end 1973, there were 777 branches in the state. Several bills to permit branching in contiguous counties have been defeated in recent years, as has a proposal to permit multibank holding companies.

Iowa

Banks in Iowa may open offices that provide all banking services, but records must be maintained at the home office. Offices may be established only in the home office county and in the counties contiguous to it, but only in unincorporated areas in which no bank or banking office is already located. The number of offices that may be established within the municipal corporation or urban complex in which the home office is located varies with the population of the area. At year-end 1973, there were 369 such offices.

Iowa permits multibank holding companies. However, under a 1972 law, the maximum proportion of state commercial bank deposits that any holding company may control is 8 percent. At year-end 1973, there were eight multibank holding companies that controlled 52 banks in the state.

Michigan

With the exception of Michigan National Bank, which was permitted to retain one office in each of several cities when the branching law was revised in 1945, banks may establish branches only within the home office county, within a 25-mile radius of the home office, or in a contiguous county at a distance greater than 25 miles if that county has no bank. A home office protection clause specifies that branches may be established only in the home office city or village or in a city or village in which no bank or branch is in operation. At year-end 1973, there were 1,400 branches in the state.

Michigan's banking law was revised in 1960 to permit corporate ownership of bank stock. By year-end 1973, ten holding companies controlling 48 banks had been established.

Wisconsin

Prior to 1968, the only full service branches permitted in Wisconsin were those allowed to continue to operate under a grandfather clause in a 1947 act that prohibited branching. Limited service offices were permitted in towns having no other banking facilities. Since 1968, banks have been permitted to establish branches in the home office county, or in municipalities with no bank or branch that are located in contiguous counties within 25 miles from the home office. Branches may not be closer than three miles from an existing bank or branch. At year-end 1973, there were 309 branches in the state.

Wisconsin has permitted multibank holding companies for many years and at year-end 1973, 24 holding companies controlled 128 banks in the state.

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banks, while unit banks which have small offices and cater to customers with large accounts are more efficient than similar branch banks." This is valuable information, but it does not settle the branch-unit cost question once and for all.

Availability of banking facilities

An indirect measure of the relative operating efficiency of branch and unit banks, as well as an important dimension of their service to the public, is the accessibility of banking facilities that each form of organization provides. Other things being equal, it would clearly be desirable to have more banking offices than fewer and to have them so located as to provide the greatest convenience to the largest number of bank customers. In the absence of legal restraints on entry, the availability of banking offices under unit and branch banking gives an indication of their relative efficiency in the following sense: if the minimum size banking office consistent with profitable operation is smaller under one form of banking organization than another, this should be reflected in a larger number of offices under that form of organization.

It has often been argued that because branches need not provide all the services of a unit bank or perform such overhead-generating functions as personnel administration, accounting, investment portfolio management, and commercial lending, they can operate profitably in locations where the character and volume of business could not support a unit bank. As a consequence, branching has often been proposed as the solution to the problem of inadequate banking facilities in rural areas and small towns [41, 52].

A common procedure of studies attempting to determine the relative availability of banking facilities in unit and branch banking states is to classify the states by their branching status—according to either their current laws or prevalent form of organization—and then to compare the population per banking office of the states in each classification [3, 10]. A fundamental shortcoming of this approach is that it does not isolate the effect of branching laws from that of other factors, such as income, the level of economic activity, and the liberality of state bank chartering policy.

Several studies have used the state as the unit of observation but have used multiple regression analysis to isolate the effects of these other variables [27, 33, 34]. They have yielded mixed results, partly because they have not adequately accounted for the most important variables other than branching status that affect population per banking office—the geographical distribution and density of population. The denser the population, the fewer offices needed to provide any given level of convenience in terms of the average distance traveled by customers.

Indeed, the fact that distance traveled may reasonably be accepted as the primary convenience cost in the mind of the customer calls into question the use of population per banking office (or its reciprocal, the ratio of banking offices to population) as a measure of banking convenience. In and of itself, population per banking office affects customer convenience only insofar as it is related to congestion or impersonal treatment. It is a poor proxy even for these aspects of convenience, because congestion and courtesy depend not simply on population per office, but also on the physical size of the banking facility and the quality and quantity of personnel employed to serve customers.

Area per banking office, which gives some indication of the average distance customers must travel for banking services, is a better measure [15]. However, it is also affected by population distribution and density. In general, the greater the proportion of a state's population that is concentrated in a few urban centers and the smaller the area outside such centers, the

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greater the population per banking office and the smaller the area per banking office. In order to separate the effects of branching laws from population dispersion, several studies have disaggregated states into smaller units—either towns, counties, or other political subdivisions that are more homogeneous in terms of population density—and compared the number of banking offices in units of similar population in branch and unit states [22, 24, 46, 58].

These studies tend to support the contention that branch banking provides a greater number of banking offices than unit banking. Surprisingly, however, the advantage appears to be limited to towns and metropolitan areas with populations of more than 7,500. In cities with populations of more than 25,000, the advantage is pronounced, with the area per banking office in branching states only about half that in unit banking states [15]. In smaller towns and villages—those usually expected to benefit most from expanded branching—the average number of banking offices differs little between branch and unit banking states [24].

Thus, the weight of the evidence suggests that branching does result in greater convenience to bank customers, as measured by the number of banking offices. This fact suggests, although it does not prove conclusively, the existence of operating economies related to branching.

Competition

One of the most commonly offered justifications for statutory restrictions on branch banking is that the restrictions provide protection against the effects of branch banking on the "concentration of banking resources" and promote healthy competition between banks. Before examining the validity of this contention, it is necessary to clarify a number of concepts that have not always been used with precision in discussions of branch banking.

Concentration is a term used by economists to describe a situation where the ownership of a large proportion of an industry's assets—or total sales or some other measure of output or capacity—resides with relatively few sellers. For a given number of sellers, an increase in concentration implies a more unequal distribution of assets or sales. In most cases, however, increases in concentration are accompanied by a reduction in the number of sellers.

When concentration occurs in a well-defined market—i.e., an area encompassing all those sellers whose actions have a significant direct or indirect effect on the sales of each other but excluding sellers whose actions have little or no effect—it is reasonable to expect, and considerable evidence suggests, that competition may be less intense than it would be in a less concentrated market. The reason: because each of the large sellers controls a significant share of the market, a price change or other action by any one of them produces a perceptible effect on the sales and profits of its major rivals. A change by one seller that produces adverse effects on the sales and profits of others is likely to be followed by retaliation; e.g., the other sellers may match a price cut initiated by the first seller. Knowing this, perhaps through past experience, the first seller is less inclined to undertake such a change than he would be if he were certain no retaliation would be forthcoming. The mutual recognition of this interdependence by the largest sellers is the essence of the market situation known as oligopoly—and most local banking markets could be characterized as oligopolies. At the extreme, it is conceivable that the sellers in the market could behave in such a fashion that prices, quality of product, etc. would be the same as under a simple monopoly—i.e., they would behave so as to maximize their joint profits.

Several important qualifications should be noted regarding the hypothesized relationship between concentration and

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competition. For one thing, the outcome in individual cases cannot be predicted with certainty. The attainment of maximum joint profits requires that all sellers practice restraint in their competitive behavior. If some sellers believe they have more to gain by lowering prices to win a larger share of total industry profits—even if the total is thereby reduced—they will do so. Second, there is no presumption that the relationship between concentration and competitive behavior is continuous over all levels of concentration. It is possible that concentration must exceed some critical level before pricing behavior ceases to be competitive and approaches that of a monopoly. Evidence on this point, though less than conclusive, suggests that this is true.

Finally, the degree of concentration in the market will have little or no effect on competitive behavior if entry into the market is easy. Under such conditions, any increase in prices will attract new sellers, whose additional output will reduce the price to a competitive level. However, because entry into banking is restricted by statute and regulation, concentration would be expected to affect competitive behavior. This conclusion is partially vitiated by the fact that various types of nonbank financial institutions can perform many bank services and enjoy relatively free entry.

Opponents of liberalized branching say that branch banking almost invariably leads to increased concentration, and they conclude from this that branching results in a reduction in competition leading to higher prices and poorer service for the public. The assertion that branching leads to higher concentration usually is based on observations at the statewide or national level [25]. Indeed, it is clear that the share of total state banking assets or deposits held by the five largest banking institutions is greatest in statewide branching states, followed in turn by limited branching states and unit banking states. New Jersey and Virginia experienced rapid increases in concentration at the statewide level following liberalization of their branching laws [49]. Similarly, it is true that concentration in countries having nationwide branching is vastly greater than in the United States.

It is not clear, however, that the state constitutes a distinct geographical market for any class of customers or type of banking service. It is widely acknowledged that most individuals and many small businesses are restricted in their banking alternatives, particularly for borrowing, to institutions in their immediate vicinity. Their market, as small as a village or as large as a standard metropolitan statistical area (SMSA), will seldom be as large as the entire state. On the other hand, larger firms are not restricted by state boundaries and may be able to borrow anywhere within a broad region or even throughout the country.

Given the large number of alternatives that are always open to borrowers whose size and reputation enable them to borrow anywhere in the country, it is most important that the closest scrutiny of the concentration/competition issue be directed to local markets. Here the relationship between branching and concentration is much more difficult to discern. Many past studies have shown that banking concentration at the SMSA level closely reflects the degree of concentration at the statewide level. Among the findings were these: SMSAs in branching states have higher deposit concentrations than SMSAs in unit banking states [20]; in recent years, concentration increased in SMSAs in branching states and declined in SMSAs in unit banking states, and the number of banks in SMSAs in branching states declined while the number of banks in SMSAs in unit banking states showed more increases than declines [15]. If SMSAs are reasonable approximations of local banking markets, then there are grounds for concluding that branching is conducive to anticompetitive changes in bank market structure.

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Some doubt has been cast on this conclusion by the results of a study of changes in local banking markets in New York and Virginia after those two states liberalized their branch and holding company laws in 1960 and 1962 [49]. Both states revised their laws to permit statewide holding companies and to enlarge the area within which banks could branch. New York's six SMSAs experienced a net decline of ten banking organizations. However, four of the six SMSAs experienced declines in deposit concentration. Four of Virginia's five SMSAs experienced either an increase or no change in the number of banking organizations, while the direction and magnitude of the change in concentration depends on how concentration is measured. While the deposit share of the largest banking organization in four of the five Virginia SMSAs declined, the deposit share of the four largest banking organizations increased in three SMSAs and declined in two.

Thus, there is some ambiguity concerning the effect of branching and holding company laws on the structure of local banking markets. In all likelihood, the relatively minor changes in concentration in SMSAs in New York and Virginia reflect the increasingly procompetitive stance of the Federal Reserve System and other banking agencies since the Bank Merger Act was enacted in 1960. The Federal Reserve generally has denied applications for mergers that would result in large increases in concentration in local markets.

However, even in those states where liberal branching laws have led to levels of concentration in SMSAs that are substantially higher than the levels in unit banking states, there is reason to question whether the resulting market structures are less conducive to competition. They may not be if the markets for specific banking services are smaller than the entire SMSA. Some bank customers, particularly those who commute to the central business district of an SMSA, may have a wide choice of banks. But others may be more restricted. To the extent this is true, the number of banks in the SMSA can greatly overstate the number of alternatives available to any given individual or small business customer.

Little research has been done on the number of banking alternatives available in smaller areas within the SMSAs. One of the few exceptions is a 1967 study of the Philadelphia SMSA [21]. Between 1946 and 1966, the four-county core of the Philadelphia SMSA underwent a dramatic change in its banking structure, with the total number of commercial banks declining from 115 to 38. The proportion of deposits controlled by the largest four banks increased from 23 percent in 1947 to 69 percent in 1962. According to the most commonly used structural criteria, the market should have become less competitive.

However, if one looks at what occurred in each of 38 districts into which the four-county area had been divided for purposes of a survey of local retail trading areas, the picture is quite different. In addition to a great deal of merger activity, the Philadelphia area experienced an enormous expansion of branch facilities during the 1946-66 period. The net result was that the number of banks represented in 26 of the 38 districts increased. In nine districts, the number declined and in three it was unchanged. For all districts taken together, the average number of banks per district increased from 3.8 in 1946 to 5.1 in 1966. Thus, even in an SMSA undergoing a massive consolidation process, the number of banks conveniently available to the customers with the most restricted number of banking alternatives increased under a permissive branching law.

Still another reservation that must be appended to the conclusion that branching increases concentration arises from evidence that SMSAs in branching states are more closely integrated markets than those in unit banking states. That is to say, the effects of competitive actions by one bank

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in a branching SMSA are more evenly distributed throughout the SMSA. There are two reasons for this. First, as has been mentioned, banks are represented by physical facilities throughout the SMSA. Secondly, the threat of new entry via branching makes it more difficult for a bank located in one area of the SMSA to pursue policies without regard for what other banks are doing, irrespective of the number of competitors in its immediate locality.

The evidence that branching tends to integrate SMSAs into homogeneous banking markets consists primarily of data indicating that the interbank variation in prices of banking services is less in SMSAs in branching states than in SMSAs of similar size in unit banking states. Moreover, in SMSAs in which branching is permitted, the prices of banking services in the suburbs are not significantly different from those in the central city, while in the largest unit banking SMSAs there are significant differences [14, 46]. It appears that in large unit banking SMSAs, in contrast to SMSAs in states permitting branching, the intensity of banking competition within areas smaller than the entire SMSA can vary from area to area. Consequently, traditional measures of banking structure for the entire SMSA—e.g., total number of banks or concentration ratios—may overstate the degree of competition in unit banking SMSAs.

Because the expressed rationale for much of the opposition to branching is the fear that it will lead to a reduction in competition [25, 36], it is interesting to evaluate the efficacy of existing branching restrictions in maintaining a banking structure conducive to competition. Most state restrictions on branching take the form either of outright prohibition or a limitation on the area within which a bank may establish branches. Other branching restrictions include "home office protection," which requires new branches to be established outside the limits of cities in which the home office of an existing bank is located, or at a certain distance from offices of existing branches; restrictions on the activities in which branches may engage, often including a prohibition on making loans; and requirements that branching beyond certain boundaries be by merger rather than de novo.

Although such measures obviously constrain the growth of banks in terms of absolute size, their effect on local banking markets is less clear. Limiting a bank's expansion to a county or to an area defined in terms of distance from the home office gives it an incentive to saturate that area with banking offices to preempt additional entry. Such restrictions assure that whatever expansion banks do undertake will add to concentration in the local market.

For SMSAs in the same population size class, concentration tends to be higher in SMSAs in statewide branching states than in SMSAs in limited branching states, but recent data indicate that this relationship is being altered over time. Not only are differences in concentration in statewide and limited branching states becoming smaller, but in the two smallest population size classes (up to 499,999) used in the comparison, concentration in SMSAs in statewide branching states is now insignificantly different from that in limited branching states. Computer simulation studies used to predict the evolution of state banking structures in the future under different legal and regulatory assumptions also suggest that statewide branching may reduce concentration in local markets [29, 40].

The explanation for the declining concentration in statewide branching states relative to limited branching states is obvious. Although banks in statewide branching states tend to be larger than those in limited branching states, much of their growth occurs through entry into new local markets. Clearly, the direct effect of such entry by outside banks is to lower local concentration. Moreover, local banks

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desiring to open additional offices are not confined to their local market. For reasons of risk diversification or simply because they see more profitable opportunities elsewhere, local banks too will be likely to channel some of their growth into other markets. This is precisely what occurred in Virginia after it adopted statewide branching in 1962, although the deconcentration of local markets was limited by the restriction that branching outside the home office county be through merger only [49].

Prices of banking services

The aspects of the banking business that are of concern to the public are the availability, the quality, and the prices of the banking services they use. Although the relationship between bank market structure and the prices of banking services has been investigated in a number of studies, some have not adequately separated the influence of branching from those of concentration or other measures of market structure, and of other factors, such as risk, regional differences in growth rates, etc. Of course, to the extent that differences in market concentration are themselves functionally related to differences in branching restrictions, it would lead to faulty policy conclusions to treat the effects of branching and concentration as though they were wholly independent influences on bank performance. On the other hand, much of the effect of branching on concentration is due to the particular features of existing branching laws, and is not inherent in branching per se.

The confusion that often results from failure to make this distinction suggests the necessity of identifying the precise channels—and the directional flows of the influence within each channel—through which branching might affect the prices of banking services. There are at least five distinguishable channels through which branching might affect the prices of banking services.

The first of these channels is the effect of branch banking on the concentration of resources. Its importance depends to a great extent on the nature of existing branching restrictions and the regulatory criteria by which applications for branching permits are judged.

Second, branching might affect the pricing policies of banks desiring to exclude new competition from their markets by facilitating potential entry into those markets. In a state without geographical branching restrictions or home office protection, the possibility that a branch bank can enter any market de novo can have a powerful effect on the pricing of banking services—even in one-bank towns.

Third, branching may affect the prices of banking services through its effect on the internal operating efficiency of banks. It is clear that any significant differences in operating costs between branch and unit banks could have a profound effect on the pricing of banking services, whatever the competitive environment they face.

Fourth, branching may affect the prices of banking services by reducing the costs of information, transaction costs, and other impediments to the allocation of funds to their most profitable uses among geographically separated banking offices.

Finally, by reducing the risks associated with lending through geographical diversification and by reducing the amount of liquid assets a bank must keep on hand to meet deposit withdrawals, branching may affect the interest rates on loans. Branching enables a bank to make loans to a wide variety of borrowers in widely separate locations and reduces the bank's vulnerability to loan losses resulting from local economic difficulties. Similarly, branching permits shifting vault cash to any office in the system, and reduces variability in deposits because of a greater number of depositors. In combination, these factors may reduce the amount of assets a branch bank needs to keep in liquid form and thereby

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enable it to make more loans.

The relative importance of each of these influences on the pricing behavior of banks is difficult to determine—and their net effect is correspondingly difficult to predict. Nevertheless, keeping them in mind may help one better understand the mixed or contradictory results of many studies of the effects of branching on pricing behavior.

Interest rates on commercial loans. One of the earliest systematic studies of pricing policies of branch and unit banks compared data on unsecured commercial loans in several loan-size and borrower-size categories from 34 banks in seven New England cities in which a unit bank competed with a branch of a large bank [22]. In more than three-fourths of the comparisons, the unit bank charged a lower rate; in three comparisons, the rates were equal. Because the interest rate data for each branch bank were averages of rates charged by the bank at all offices, the validity of the study depends heavily on the assumption—usually found to be true—that each branch of the same bank charges identical rates. Nevertheless, the one-sidedness of the results is striking. The problem of distinguishing a separate effect due to concentration was circumvented by comparing branch and unit banks in the same city and presumably subject to the same market forces.

However, the findings of the New England study were contradicted by a study of banks in New York state [30]. In New York City, it was found that large branch banks charged the lowest rates on unsecured small business loans. Outside New York City, branch banks generally charged lower rates than unit banks. Although the relatively low rates charged in New York City probably reflect the highly competitive nature of the market—a condition only tenuously related to the extent of branching there—the differences between branch and unit rates outside New York City cannot be explained in terms of different degrees of competition. The finding that branch banks charge lower rates on unsecured small business loans was corroborated by the results of two studies of changes in rates following the acquisition of unit banks by branch systems [24, 30]. In each study, it was found that although rates were unchanged following most mergers, the number of reductions greatly exceeded the number of increases.

Taken at face value, the reported findings suggest that branch banks tend to charge lower rates on unsecured small business loans. However, two severe qualifications of this conclusion should be noted. First, branch banks tend to require higher compensating balances and to enforce them more strictly. Indeed, it was reported in the New York study that in almost all cases in which compensating balance requirements were changed after the absorption of a unit bank by a branching system, they were increased [30]. To some extent, at least, this would offset the lower nominal rates. Secondly, it has been found that branch banks typically charge similar rates at each of their offices, partly as a matter of administrative convenience, partly to avoid customer charges of discrimination [22]. Inasmuch as many of the mergers in the two studies were acquisitions of rural or suburban banks by banks in metropolitan areas, the reductions in rates simply may have reflected an extension of the lower rates prevailing in highly competitive metropolitan markets to banks in more isolated and less competitive markets, rather than any inherent advantage of branch banks.

Much of the decline in business loan rates in Nassau County, following the opening of that county to branches of New York City banks in 1961, can be explained by the "ripple effect" of the opening of new branches by banks maintaining uniform rates at all their branches. The reduction in local market concentration

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brought about by the establishment of de novo branches by banks previously unrepresented in the market probably also played a part.

Interest rates on mortgage loans. Such evidence as exists indicates that branch banks tend to charge lower interest rates on mortgage loans than unit banks in the same states [24, 30]. As in the case of unsecured business loan rates, it also has been found that mortgage rates were lowered in most cases after a unit bank was acquired and converted into a branch of a larger bank. This was the case following entry of New York City banks into Nassau County by branching [38]. Other terms on mortgage loans, including maturities and maximum amounts, also were generally liberalized following conversion of a unit bank to a branch.

Rates on consumer instalment loans. It is often asserted that branch banks are better suited than unit banks for rendering "retail" banking services. Able to establish numerous, conveniently located offices to provide the basic lending and deposit services, while retaining such specialized "wholesale" banking services as corporate trusts, commercial lending, and the issuance of large certificates of deposit as home office functions, branch banks are believed to compete more aggressively for consumer loans. The evidence generally supports this view, although it is less clear-cut than one might suppose. According to the studies already cited, branch banks tended to charge lower interest rates on unsecured instalment loans than unit banks, and the rates on such loans were usually reduced after a unit bank was converted into a branch. However, in the case of new car loans, great variations in rates were reported, with unit banks most frequently reporting lower rates [30].

Interest rates on time deposits. Evidence available on the interest rates paid on time and savings deposits by branch and unit banks is not definitive. The findings suggest that unit banks in branch banking SMSAs pay higher rates than branch banks of the same size, and it has been suggested that the higher rates paid by these unit banks are a means of overcoming the convenience disadvantage of having only one office [20]. This is plausible and is consistent with the finding in a study of deposit interest rate ceilings that banks constrained from raising interest rates on deposits will try to compete by establishing additional branches [27]. It should be pointed out, however, that unit banks pay higher rates than branch banks only within the same deposit-size classes. But there is a pronounced relationship between interest rates on time deposits and size of bank, and branch banks tend to be considerably larger [20]. On the other hand, the time deposit rates used in these studies are average effective rates calculated by dividing total interest on time deposits by total time deposits. They therefore reflect not only differences in rates paid on similar accounts, but also the difference in account sizes of banks of different sizes.

Differing results are the product of studies seeking to determine whether unit banks in unit-banking SMSAs generally pay higher rates than unit banks in branch-banking SMSAs. It appears that the time deposit rates paid by unit banks in branch-banking SMSAs more closely resemble the rates paid by unit banks in unit-banking areas than the rates paid by the branch banks against which they are competing [14, 24]. Particularly in view of the functional relationship between branching and bank size, existing evidence does not provide a firm basis for evaluating the effects of branching on time deposit rates.

Service charges on demand deposits. The most firmly established generalization that has emerged from recent empirical studies is that branch banks tend to have higher service charges on demand deposits than do unit banks. Branch banks impose higher service charges than unit banks competing in the same market [24, 30]; con-

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version of a unit bank to a branch bank is usually followed by an increase in service charges; the entry of New York City banks into Nassau County by de novo branching induced most local unit banks to increase their service charges [38].

Less intense competition attributable to the higher concentration associated with branch banking is one explanation that has been offered for the higher service charges imposed by branch banks. If this were true, however, it should show up in the other prices charged by branch banks and this does not appear to be the case. Another possible explanation is that branch banks have a better knowledge of their costs than unit banks, and branch banks, therefore, price demand deposit services to cover their full costs. This is a possibility, but it is not clear why it should be true. An explanation that was offered some years ago argued that processing checking accounts was a largely manual operation and that economies of large output were difficult to achieve in this operation [20]. But subsequent studies using data from the Federal Reserve Functional Cost Analysis Program have shown this to be false.

An alternative explanation that, though consistent with most of the evidence, needs further testing is that branching generally produces a *more* competitive environment in which most banking services are priced at or near their marginal costs. That being the case, branch banks are unable to maintain service charges that cover only a small portion of checking account processing costs, as many unit banks in isolated markets are wont to do. The question warrants further research.

Lending policies and mobility of funds

One of the most emotional controversies surrounding branch banking has to do with how branch banks allocate their funds. At issue are both a question of fact and a value judgment. The question of fact has to do with whether branch banks shift funds from one branch to another, or from branches to the home office, in order to increase profits. The value judgment has to do with whether branch banks should do this.

For years, opponents of branch banking have argued that branch banks established branches simply for the purpose of gathering deposits—that they "siphoned" funds from residential areas and rural towns for the purpose of providing credit to the bank's large corporate customers [25, 27, 36]. Moreover, even to the extent that they lend through their branches, branch banks are alleged to apply impersonal credit standards that give little weight to the applicant's character or to any consideration other than collateral. The result is that depositors' funds, instead of being made available to aid the development of their own communities, are funneled to the large cities. One alleged result is chronically depressed economic conditions in rural areas. Though originally argued by some farm organizations and independent bankers, this complaint has been taken up in recent years by consumer groups.

First, the question of fact. It has been established that branch banks operate some branches as net deposit-gathering offices, while other offices are primarily lending outlets. Two separate studies confirm this by showing great variations in loan-to-deposit ratios among the branches of a large California bank [28] and among branch banks in New York state [32]. Some branches were found to have much lower loan-to-deposit ratios than any unit bank in the studies, while others had ratios much higher than any unit bank. Moreover, earlier studies in New England and New York state [22, 30] both reported that branch banks were less active than unit banks in making unsecured business loans.

On the other hand, virtually every study of branch bank lending has shown that, overall, branch banks have con-

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siderably higher loan-to-deposit ratios than unit banks [2, 14, 22, 24, 28, 30, 46, 56]. In the California study, this was found to be true of the branches alone, even without taking into account the ratio for the home office [28]. The New York state study found that out-of-town branches tended to have lower loan-to-deposit ratios than unit banks in the same area, but that the differences were not significant [32]. An earlier New York state study indicated that the out-of-town branches of larger banks had higher loan-to-deposit ratios than the bank as a whole [30]. Moreover, after most acquisitions of unit banks by branch banks, both the dollar volume of loans and the loan-to-deposit ratio of the acquired office increased. In short, while there is evidence that the deposits of some communities are used to make loans in other communities under branch banking, there is no evidence that communities other than the home office city of the branch bank experience "siphoning" in the aggregate.

Less can be said of the value judgment regarding the desirability of siphoning. However, it should be remembered that the interests of borrowers and depositors in a community need not coincide. The depositor may be interested in the highest possible yield on his deposits, the borrower in getting loans at a favorable rate. Clearly, economic efficiency, in the sense of maximizing society's total production of goods and services, would be served by allocating funds to where they earn the highest return. Nevertheless, it may be legitimate to object to siphoning on the grounds of distributional equity or—if this could be shown to be the case—because siphoning contributes to an undesirable concentration of resources in particular markets or in the economy as a whole.

Conclusions

On the basis of the broad range of evidence surveyed in this article, it would appear that branch banking is associated with a number of positive results in terms of availability of banking facilities and prices of banking services. Although the evidence on relative operating efficiency of branch and unit banks is not conclusive, inefficiency, of itself, is not a sufficient reason to prohibit one form of banking or the other. The discipline of the marketplace should be relied upon to eliminate inefficient firms.

Unless accompanied by safeguards against excessive concentration in local markets, however, the adoption of branch banking could prove to be a costly mistake from the standpoint of the public. Aside from the need for vigilance on the part of state and federal banking agencies in approving mergers and branching permits, there is a need for care in designing geographical restrictions on branching.

Ironically, the major criticism of existing geographical restrictions on branching has not been that they lead to concentration in local markets but rather that the county boundaries specified in most state branching statutes do not correspond with the realities of local banking markets. Such markets may cut across county, or even state, boundaries. They may or may not coincide with branching areas defined by a specified radius from the home office. The large discrepancies between political and economic boundaries have led to a number of proposals to make the areas within which banks are free to branch correspond more closely to local banking markets, either by dividing the state into a number of banking districts approximating trade areas or simply by relaxing present restrictions to allow branching within a larger area [4, 13].

Despite the near universality of this approach, it is based on the apparently un-

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questioned assumption that the area within which branching is permissible should coincide with the local banking market. An alternative approach to branching regulation that would appear to better serve the ends of preserving competition in banking and in limiting the dominance of one or a few institutions would be to restrict the number of branches a bank might have within a given area—say, a township, county, or other political subdivision, or an area of a given number of square miles—but not to restrict the areas within which banks might establish branches. The number of offices that a bank could open within each such given area might be related to the population of the area or some measure of its economic activity, or might be limited to some percentage of total banking offices in the area.

Such an approach would effectively preclude a bank from achieving a monopoly position by anticipating areas of growth and preempting profitable locations for banking offices in a local market. It would encourage banks, instead, to expand by branching outside the immediate vicinity of their home office, thereby tending to reduce local market concentration elsewhere. Finally, because it would not put an arbitrary upper limit on the overall growth of the bank, it would not stifle initiative or frustrate the desire to expand. Thus, it should be compatible with the achievement of all important economies of scale in banking.

That such an approach to branching regulation has rarely been suggested [43] and never adopted suggests that maintaining competition is not the real goal underlying branching restrictions. Other goals served by existing branching restrictions that, in whole or in part, may conflict with the encouragement of competition are the desire to restrict the absolute size of banks in order to limit their political influence, and the desire to protect existing institutions from direct rivalry with competitors that are either more efficient or that are in a position to employ what are felt to be "unfair" methods of competition. These are difficult questions that are not dealt with in this article but which must be faced by any state contemplating change in its branching laws.

It has recently been suggested that prospective developments in the payments mechanism—electronic transfers of funds, direct deposit of payrolls, and wider use of pre-authorized credit—will reduce the need for customers to visit their banks frequently and, though not resolving the branching controversy, will make it academic. Over a period of decades, this may turn out to be true. For the immediate future, however, pressures for permitting branch banking in states where it is now prohibited and relaxing restrictions in states where it is already a fact, probably will increase. Not only bankers and legislators, but citizens in every walk of life should begin now to consider what configuration of the banking system they would like to see come to pass.

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