FYI

Competitive Considerations in Bank Mergers and Acquisitions: Economic Theory, Legal Foundations, and the Fed

Christopher L. Holder

In the past decade the U.S. banking industry has experienced major structural changes, including a significant reduction in the number of independent banking organizations. This change is partly the result of the increased pace of bank mergers and acquisitions.[1] During the twenty-year period from 1960 to 1979, mergers averaged 170 per year, with an average of $4.9 billion in total bank assets being acquired each year. In contrast, from 1980 to 1989 there was a yearly average of 498 mergers and $64.4 billion in total bank assets acquired.[2] Whatever dynamics underlie this industry consolidation, the overall result at the national level has been the increased concentration of banking resources among fewer banks. At the same time, local market share concentration levels have remained virtually unchanged during the eighties, a particularly important factor because local banking markets are the arena in which banking agencies measure competition between banks in considering antitrust issues.[3]

Consolidation in the banking industry has been a hot media topic in part because one alternative means of exit open to banks—failure—carries such negative force.[4] Ordinarily, stockholders and creditors operating in a market economy accept the risk of failure as a normal part of their investment, but in the banking system the deposit guarantees of the federal government put public funds at risk. Because any funds lost are drawn from insurance premiums

The author is an analyst in the financial section of the Atlanta Fed's research department.
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paid by the insured institutions, they in fact come only indirectly from taxpayers and consumers of bank products. Nonetheless, the savings and loan crisis has made a direct taxpayer bailout of the banking system all too conceivable. To the extent that consolidation is necessary for the U.S. banking system to remain strong and globally competitive, mergers and acquisitions are clearly preferable, as a means to this end, to large numbers of bank failures.

The Federal Reserve System, created by the Federal Reserve Act in 1913 to provide for a safer and more flexible banking and monetary system, shares responsibility for banking supervision with other federal banking agencies. Part of the Fed's responsibilities includes administration of the laws that regulate bank holding companies and supervision of state-chartered member banks. These institutions are required to obtain approval from the Federal Reserve Board of Governors prior to completing a bank merger or acquisition.[5]

The Fed does not automatically grant approval of applications for merger. Several factors are taken into account—the likely effects of the acquisition on banking competition, financial and managerial resources and prospects for the acquirer's future, the convenience and needs of the community to be served, and any other legal issues related to a particular application. In considering the competitive aspects of a proposed merger, the Fed determines the extent to which existing competition would be adversely affected by the acquisition if an acquiring bank or bank holding company already has one or more banking offices in the market in which it seeks to acquire a bank. The Fed also examines the likely effects of the acquisition on probable future, or potential, competition if the acquirer is not already represented in the markets in which the bank to be acquired operates.

To ensure that safety and soundness criteria are met, the Fed considers the financial and managerial resources and the expected future of both the acquirer and the bank to be acquired. Some of the major factors taken into account include (1) the present and future capital position, asset quality, income, liquidity, and riskiness of the acquirer, (2) the means by which the acquirer intends to finance the merger and its level of debt and ability to service that debt, and (3) the quality of the acquirer's management and any plans for improving it.

The effect of the acquisition on banking products and services in the relevant banking markets is another concern examined by the System. If new or better services or lower prices for bank services are likely to result from an acquisition, the merger is more likely to win approval. The Fed also examines an acquirer's record under the Community Reinvestment Act, such as its performance in meeting the credit needs of its community, including low- and moderate-income areas.

The dynamic nature of the U.S. banking system, the several purposes of bank regulation, and the numerous variables to be considered in each merger transaction—such as different supply and demand conditions and the unique characteristics of different geographic markets—necessitate examining mergers on a case-by-case basis. It is the purpose of this article to focus on one aspect of the Fed's analysis of bank acquisitions over the last decade: the likely effect of mergers on competition.[6] The discussion summarizes the Federal Reserve's general approach to antitrust issues over the last decade. The economic factors and legal precedents that serve as the Fed's foundation for competitive analysis and changes in those criteria over the last decade are also considered.[7] For example, regulators have taken into account that banks have faced increased competition not only from within the banking industry but also from thrifts and other financial institutions as they have experienced deregulation.

Antitrust Issues

Antitrust regulation seeks to fulfill several objectives for bank customers and the general public. One goal is to prevent monopoly prices (excess profits) in the banking industry. Another is maintaining public access to bank products and services, an issue that can be especially problematic in small markets.[8] Antitrust laws seek to avoid static (noninnovating) markets and to allow efficiency-increasing, service-enhancing mergers. In addition, antitrust regulations are connected with safety and soundness issues, including limiting Federal Deposit Insurance Corporation (FDIC) losses.

The Federal Reserve keeps the objectives and concerns of antitrust regulation in mind in analyzing the consequences of bank mergers and acquisitions on market competition. Although few deals are actually denied by regulators on competitive grounds, antitrust issues play an important role in structuring mergers and acquisitions. Many deals are restructured to include divestiture, and an unknown number of banks are deterred from even filing a merger application because of anticipated antitrust concerns.[9]

Economics of Market Structure

One of the main purposes of antitrust regulations in mergers is to prevent acquirers from earning abnormal profits at the expense of consumers within the market where the merger occurred.[10] Defining the relevant market, in terms of both product and geographic area, is crucial for analyzing the economic effects of a proposed merger. Simply defined, a market is a group of buyers and sellers that significantly influence prices, quality, and quantity of specific products and services and the geographic area in which these buyers and sellers interact. A market can also be defined as an area in which the prices of all similar (substitute) goods are dependent on each other but are unaffected by prices for goods outside of the area.

For example, consider the case of two merchants who sell essentially the same product at similar, but not necessarily identical, prices (as banks do). One merchant is located on the north side of town and draws customers entirely from that area while the other merchant, located on the south side of town, draws customers exclusively from the south side. Because these merchants have no common customers, it might seem that they operate in separate markets. That assumption is not necessarily correct, however. To determine whether they are operating in the same market it is necessary to observe buyers' responses to a nontrivial and nontransitory price change in the good being sold. Suppose that one of the merchants—the one on the north side of town—raised the price of the product being offered. If this price change did not affect demand for the comparable good offered by the southside merchant, who did not change prices, the two would be functioning in separate markets. However, if some customers were willing to switch the store from which they buy, the merchants would be in the same market and would be direct competitors, even though they previously had currently drawn their customer base from separate areas.

Besides direct competition, the potential for competition is an important factor in determining markets. A potential competitor is one who would have to make an entry decision, and thus incur entry costs, before competing in a particular market. Because potential competitors help deter the exercise of market power (a single buyer's or seller's ability to influence the price of its product or service) within a market, their presence enhances competition. The degree to which they can forestall anticompetitive behavior is directly related to the proportions of obstacles—the size of entry costs and the existence of legal barriers to entry—standing between the potential competitors and entry. The lower the entry costs, or the fewer the legal restrictions on entry, the more potential competition contributes to sustaining competition within a market. Unfortunately, the importance of potential competition cannot be assessed numerically with the currently available empirical data.

In measuring the effects of either direct or potential competition in markets, it is necessary to determine the degree of substitutability between products—in economic terms, the cross-elasticities of supply and demand. The cross-elasticity of supply indicates the relationship between the produced quantity of one good and a change in the price of another. The cross-elasticity of demand indicates the relationship between the demanded quantity of one product and a change in the price of another. The more responsive the quantity of one product produced or demanded is to a change in price of another product, the higher the cross-elasticities and the more those products are viewed as substitutes (see Frederic M. Scherer 1990 or Jean Tirole 1988).

However, cross-elasticities alone cannot precisely determine markets. For one thing, cross-elasticities are difficult to estimate, and current theory does not define specific numerical levels at which a product becomes an adequate substitute for another product and would be included in the market. Another issue is that of the time frame in which customers and suppliers might switch products—that is, switching products may not be possible in the short term. In addition, the price changes that would induce buyers or sellers to substitute must take into account the relative prices of products and transactions costs. In practice, only those producers that might have a direct and immediate effect on competition are included in the market. The manner in which markets are currently defined by the Fed is discussed later.

Once the relevant market has been determined, competition within the market must be assessed. To do so, federal banking agencies apply theories developed in the field of industrial organization, the area of applied economics that seeks to explain the behavior of firms in a market. In particular, the agencies rely heavily on the concept known as the structure-conduct-performance (SCP) paradigm, which contends that the structure of a market indicates the amount of competition among firms in that market.[11] In this view, market structure is considered to be affected by the basic conditions underlying an industry, such as demand and supply functions and legal constraints. In turn, market

Box 1
Determination of Geographic Markets

The Supreme Court's decision in the 1963 Philadelphia National Bank case—to consider a bank's geographic market to be its local area—remains the foundation of the Fed's delineation of geographic markets. The Fed attempts to define markets in terms of the area in which buyers and sellers can interact without significant transaction costs. Because the market is the basis for calculating the structural effects of a proposed merger, this market definition is often crucial in deciding whether a merger is permissible under antitrust laws.[1]

The job of determining local banking market definitions at the Fed falls to the twelve Federal Reserve Banks, with procedures and guidance from the Board. Recent national studies of consumer and business behavior and local market surveys by various Reserve Banks confirm that the Board's definition of a market as a local banking market is still current (see Gregory E. Elliehausen and John D. Wolken 1990, 1992). The following discussion reviews some of the factors considered by the Reserve Banks in defining banking markets. While their general approach is similar, some Reserve Banks may give greater or less emphasis to certain factors. The Board's staff coordinates general consistency among Reserve Bank definitions. The approach discussed here is that used by the Federal Reserve Bank of Atlanta.

Empirical evidence indicates that convenience is an important determinant in an individual's selection of a financial institution and that many people maintain their primary banking relationships near where they live or work.[2] Commuting patterns are therefore important for identifying an integrated market area. Metropolitan Statistical Areas (MSAs) or Ranally Metro Areas (RMAs) are generally used as a first approximation in delineating urban markets, and county boundaries help define rural markets. MSAs are areas consisting of a central city (or Census Bureau–defined urbanized area) and its dependent fringes. RMAs are similar, made up of areas that contain at least seventy people per square mile and have at least 20 percent of the labor force commuting into the RMA's central city for employment. RMAs are not, however, restricted to following county borders, as are MSAs.[3]

Although RMAs and county boundaries form a good first approximation of market boundaries, other factors also help determine a final market definition. One of the most important is the actual banking patterns of bank customers. This information is obtained partly through interviewing bank and thrift managers, whose detailed knowledge of the customer base can sometimes provide unique insights into market dynamics. In addition, banks often keep detailed records of customer demographics, such as customer addresses analyzed by zip code. Surveys of consumers and small businesses are also conducted to identify actual banking patterns.

Another important question to address in delineating markets is whether there is a continuous chain of development between two areas. For instance, consider three banks, A, B, and C. Bank A does not compete directly with Bank C, but both Bank A and Bank C compete with Bank B. Because Bank A's pricing policies directly influence those of Bank B and indirectly influence those of Bank C, all three banks are considered to be in one market. The fact that prices tend toward equalization within a market makes evidence of pricing discrepancies useful in determining a market's boundaries. Two areas are viewed as becoming more integrated if there are indicators like road construction between the areas and new residential subdivisions and planned commercial development involving both areas. In addition, natural or political barriers that may prohibit integration of two areas are considered in defining markets.

Information regarding the ease with which customers can shift banking relationships is also important for determining markets. U.S. Census Bureau data are used to track commuting between counties. Other items that may be helpful are traffic counts, transportation routes (number, condition, approximate commuting time and distance, existence of controlled access roads, and so forth), major employers in the area and information on where their employees live, and the growth of population compared with employment and public transportation routes.

In addition to examining commuting patterns for what they indicate about customers' ease in shifting banking relationships, it is helpful to consider the extent to which residents and businesses in one area rely on another area for goods, services, and entertainment. This assessment is based on several indicators, including (1) location of major retailers, (2) location of major service providers (hospitals, airports, colleges, and universities), (3) media coverage patterns (newspaper circulation patterns, radio and television coverage patterns) and bank and thrift advertising patterns, (4) mall surveys showing where customers live, and (5) local (toll-free) calling areas.

Market definition in antitrust analysis is not an exact science. Each market has a unique set of economic, legal, and political conditions. In practice, market delineation must rely on secondary and anecdotal evidence. Markets are not static, and changes in demand and supply factors cause the shifting of market boundaries over time.

Notes

1. For a review of the economic literature on geographic market delineation, see Wolken (1984).
2. For a bibliography and further details, see King (1982) or Wolken (1984).
3. The Office of Management and Budget (OMB) establishes the official requirements for defining MSAs; see "Revised Standards for Defining Metropolitan Areas in the 1990's," *Federal Register* 55 (March 30, 1990). See also Jerry J. Donovan, "A Primer on MSAs," Federal Reserve Bank of Atlanta *Regional Update* 5 (January-March 1992). RMAs are Rand McNally and Company's definitions of the metropolitan areas of the nation's major cities. For more information see *Rand McNally: 1992 Commercial Atlas and Marketing Guide*.

structure, consisting of the number, size distribution, and market shares of firms, influences the conduct of firms. This conduct—for example, the degree of competition or collusion between firms—determines the firms' performance, measured by profits or prices. The SCP paradigm implies that the fewer the number of firms and the greater their market shares, the more likely it is that those firms have the potential to earn abnormal profits (defined as profits greater than those that would be earned in a perfectly competitive market or as profits exceeding those commensurate to the level of the firm's risk). Banks' abnormal profits imply costs to the public that antitrust regulation seeks to avoid. Estimation of the SCP model for the U.S. banking industry has generally shown that a statistically significant and positive relationship does exist between market concentration and profitability.[12]

Legal Framework

The standards by which the Fed assesses the competitive effects of mergers and acquisitions comes from the Bank Holding Company Act (1956) and the Bank Merger Act (1960) and their amendments in 1966. These acts require federal banking agencies to consider the probable effects on competition of proposed mergers. If a merger is expected to have a substantially adverse impact on competition, the application is to be denied unless the anticompetitive effects of a merger are clearly outweighed by its favorable impact on the convenience and needs of the community. However, neither piece of legislation specifies precise standards for ensuring market competitiveness. In addition, once a merger or acquisition is approved by the appropriate federal banking agency, the Department of Justice has thirty days in which to file suit if it believes the transaction would violate antitrust statutes. If a suit is filed, the merger is automatically stopped pending resolution of legal action.

In a case involving the Philadelphia National Bank in 1963, the Supreme Court clarified the means by which regulators should measure competition.[13] This ruling established three major legal precedents still used by the Federal Reserve. First, the court confirmed that the Sherman and Clayton Antitrust Acts apply to banking, and the court used market structure (as defined above) as an indicator of competition within the market. Secondly, the ruling determined that the "cluster of products (various kinds of credit) and services (such as checking accounts and trust administration) denoted by the term 'commercial banking'. . . composes a distinct line of commerce" for Clayton Act purposes. Third, the sections of the country affected by an acquisition (the geographic market) must be taken into account. The court opined that "in banking, as in most service industries, convenience of location is essential to effective competition. Individuals and corporations typically confer the bulk of their patronage on banks in their local community; they find it impractical to conduct their banking business at a distance."

Product Market. In determining the relevant product market in which to assess the probable competitive effects of a bank acquisition or merger, the Supreme Court, in the Philadelphia National Bank case, determined that commercial banking is the appropriate line of commerce. The court stated that "the cluster of products . . . and services" provided by commercial banks is unique relative to other institutions, including thrifts. This conclusion was based partially on the fact that, by law, only commercial banks could offer demand deposits at the time. In addition, it was recognized that the availability of a package of products and services at a single institution provided a customer convenience and value that surpasses the economic significance of these products and services individually. In measuring this cluster of services, the court used deposits as a proxy for estimating market share.[14]

Geographic Market. Once the appropriate product market has been determined, the relevant geographic market in which competition occurs must be defined.[15]

In the Philadelphia National Bank case the Supreme Court ruled that the market consisted of that area "in which the seller operates, and to which the purchaser can practicably turn for supplies."[16] The Court also concluded that convenience factors tended to localize markets in banking. Accepting that at least some consumers and small businesses are limited to their communities for banking services, the standard has been that local markets are the correct area in which to measure the effects of competition between depository institutions.[17]

The Fed

In his 1991 testimony before the Committee on Banking, Finance, and Urban Affairs, John P. LaWare, a member of the Board of Governors of the Federal Reserve System, stated that the "primary objectives of public policy in this area [antitrust] should be to help manage the evolution of the banking industry in ways that preserve the benefits of competition for the consumers of banking services, and to ensure a safe, sound and profitable banking system" (LaWare 1991). With this objective in mind, and given current antitrust laws and judicial precedents, the Federal Reserve analyzes competition, using market structure (concentration) as an important measure of competition and using the concept of a cluster of banking products in a local geographic market.[18]

The Fed's process of analyzing a bank merger's effects on competition begins at one of the twelve Federal Reserve Banks, which are delegated most analysis, data-gathering, and recommendation functions because of the unique information they can access. As a result of their functions, the Reserve Banks are aware of local factors in their districts that might serve to integrate or separate market areas. In addition, the Reserve Banks have, or can acquire from local sources, knowledge of special factors that may reinforce or mitigate public losses through anticompetitive impacts of a proposed merger. For example, information on subtle issues, such as mortgage market concentration, is readily available to the Reserve Banks, which can make use of banker contacts and surveys of local businesses and consumers.[19]

In this process the Reserve Bank first identifies the relevant geographic market and then conducts an initial structural screening, including calculation of market shares and the market's Herfindahl-Hirschman Index (HHI). (See the box on page 26 for a discussion of the factors considered by the Federal Reserve Bank of Atlanta in defining banking markets.) The HHI is calculated by summing the squares of each firm's market shares. (See the box below for a practical example of how the HHI is calculated.) If no serious issues are raised—that is, if the HHI and market shares are within acceptable limits—the Reserve Bank generally approves the application for merger. However, if structural measures exceed benchmark levels, the transaction is deemed to have possible anticompetitive effects. Reserve Bank and Board staff findings and recommendations are then subject to review by the Board of Governors, which makes the final decision based on all factors laid out in the governing laws.[20]

In deciding if a merger potentially involves significant anticompetitive issues and therefore cannot be delegated to the Reserve Bank, the Board uses guidelines similar to those established by the Department of Justice.[21] (See the box on page 32 for a brief discussion of the Department of Justice's activity in recent years.) Although the numerical guidelines the Board uses are admittedly somewhat arbitrary, they do provide a consistent approach to antitrust enforcement, reducing the costs of uncertainty associated with applying antitrust laws.

Box 2
Calculation of the Herfindahl-Hirschman Index

The Fed currently relies extensively on a measure of market concentration—the Herfindahl-Hirschman Index—specified by the Department of Justice in its 1982 merger guidelines.[1] The HHI is calculated by summing the squares of the market share of each firm: HHI = $\Sigma[x(i)/x]^2$, where $x(i)$ is the total deposits of firm i, and x is the total deposits of all firms in the market.

The HHI is generally considered to be better than other concentration measures (such as market-share concentration ratios) because it captures both the number and size distribution of all firms in the market.[2] The calculation of HHIs in practice is illustrated by analyzing two markets in a recently approved Board case in which Barnett Banks, Inc. (Barnett) proposed to acquire First Florida Banks, Inc. (First Florida).[3]

The first market to be considered is the North Lake/Sumter banking market, defined by the Federal Reserve Bank of Atlanta as Sumter County, Florida, plus that

portion of Lake County north of the Florida Turnpike. A total of eight banks with $1.58 billion in deposits competed in this market. In addition, there were four thrift institutions holding $405 million in deposits (see Table 1). To compute the HHI, first calculate the market shares of each firm, using bank deposits only (column 4) and bank-plus-thrift deposits at half weight (column 5).[4] For instance, Barnett has a banks-only market share of 24.09 percent and a thrifts-at-half-weight market share of 21.36 percent {381,589/[1,584,019 + (0.5 • 405,215)]}. These market shares squared indicate each firm's contribution to the market's HHI (columns 6 and 7). For example, Barnett Bank adds 580 points (24.09 • 24.09) to the market's banks-only HHI and 456 points (21.36 • 21.36) to the market's thrifts-at-half-weight HHI. To calculate the HHI for the market, sum each firm's contribution to the HHI. In Table 1 the market's banks-only HHI is 1,801 and its thrifts-at-half-weight HHI is 1,468.[5]

To calculate the structural changes that would occur after a merger, add First Florida's $39.7 million in deposits to Barnett's $381.6 million in deposits to get the total amount of deposits for the combined institution. This new deposit total of $421 million represents a new banks-only market share of 26.60 percent [(381,589 + 39,707)/1,584,019] and a new thrifts-at-half-weight market share of 23.58 percent {(381,589 + 39,707)/[1,584,019 + (0.5 • 405,215)]}. Barnett's contribution to the banks-only HHI becomes 708 points (26.60 • 26.60), increasing the market's banks-only HHI by 121 points to 1,922. Barnett's contribution to the thrifts-at-half-weight HHI becomes 556 points (23.58 • 23.58), increasing the market's thrifts-at-half-weight HHI by 95 points to 1,563.

Because the applicable guidelines (the 1,800/200 rule with thrifts at 50 percent weight) were not breached, the Fed would generally conclude that this merger would have no significant anticompetitive effect in the North Lake/Sumter banking market.

To illustrate what happens when competitive guidelines are breached, consider another market in which Barnett and First Florida competed, the Highlands County banking market. Delineated by the county's borders, this market had a total of six banks competing for $691.4 million in total deposits. In addition, five thrifts operated in the market, holding $366.9 million in total deposits (see Table 2). Again calculate the market share of each institution, first with banks-only deposits, then adding thrift deposits at half weight. Then calculate each firm's contribution to the market's HHI, summing to get a total premerger HHI of 2,359 (with thrifts at half weight). Next, add First Florida's deposits to Barnett's and recalculate the market shares and HHIs. This market would have a

Table 1
North Lake/Sumter Banking Market
(Deposits as of June 30, 1991)

	Total Deposits ($000)		Market Share		HHI	
Depository Institution	Banks	Thrifts	Banks Only	Thrifts 50%	Banks Only	Thrifts 50%
Barnett Banks, Inc.	381,589		24.09	21.36	580	456
First Union Corporation	321,203		20.28	17.98	411	323
SunTrust Banks, Inc.	312,120		19.70	17.47	388	305
Citi-Bancshares, Inc.	286,550		18.09	16.04	327	257
First FS&LA of Lake County		205,305		5.75	0	33
First Family FS&LA		154,157		4.31	0	19
UniSouth, Inc.	114,593		7.23	6.41	52	41
First National Bank of Mt. Dora	82,314		5.20	4.61	27	21
BankFirst	45,943		2.90	2.57	8	7
First Florida Banks, Inc.	39,707		2.51	2.22	6	5
Mid-State Federal Savings Bank		24,198		0.68	0	0
Citizens Federal Savings Bank		21,555		0.60	0	0
TOTAL	1,584,019	405,215	100	100		
Premerger HHI					1,801	1,468
Postmerger HHI					1,922	1,563
Change in HHI					121	95

Table 2
Highlands County Banking Market
(Deposits as of June 30, 1991)

Depository Institution	Total Deposits ($000)		Market Share		HHI	
	Banks	Thrifts	Banks Only	Thrifts 50%	Banks Only	Thrifts 50%
Barnett Banks, Inc.	383,714		55.50	43.86	3,080	1,924
Huntington FSB		174,365		9.97		99
First Union Corporation	97,053		14.04	11.09	197	123
SunTrust Banks, Inc.	89,298		12.92	10.21	167	104
BancFlorida, FSB		73,437		4.20		18
Home Savings Bank, FSB		73,385		4.19		18
First Florida Banks, Inc.	57,525		8.32	6.58	69	43
Highlands Independent Bank	32,927		4.76	3.76	23	14
NationsBank Corporation	30,883		4.47	3.53	20	12
Goldome FSB		28,918		1.65		3
Harbor FS&LA		16,777		0.96		1
TOTAL	691,400	366,882	100	100		
Premerger HHI					3,556	2,359
Postmerger HHI					4,479	2,936
Change in HHI					923	577

postmerger thrifts-at-half-weight HHI of 2,936, producing a change in the HHI of 577 points.

This change of 577 points in a highly concentrated market exceeds the applicable 1,800/200 rule with thrifts at half weight, and the Reserve Bank would have had to notify Board staff that applicable guidelines were breached and that the merger was potentially anticompetitive. At this point, both Reserve Bank staff and the Board staff would have conducted an in-depth analysis of the likely effect of the merger within the market.[6] Such an analysis would involve considering a variety of factors such as market attractiveness, potential competition, the financial strength of the target firm, and so forth.

Notes

1. The HHI was developed independently by Orris C. Herfindahl, "Concentration in the U.S. Steel Industry," Ph.D. diss., Columbia University, 1950, and by Albert O. Hirschman, *National Power and the Structure of Foreign Trade* (Berkeley and Los Angeles: University of California Press, 1945).
2. The three- or four-firm concentration ratio, which was used extensively by the Department of Justice and federal banking agencies in the past, ignored the competitive influence of banks not ranked in the top three or four of the market. For an empirical justification of why the HHI might be preferred to firm concentration ratios, see Rhoades (1985b).
3. "Barnett Banks, Inc." *Federal Reserve Bulletin* 79 (1993): 44.
4. The Board's use of thrifts at half weight is discussed on page 31.
5. Notice the substantial difference the inclusion of thrift deposits makes. The market is highly concentrated using bank-only deposits but only moderately concentrated with thrift deposits at 50 percent weight.
6. In the above merger, Barnett committed to divest the only First Florida branch in the market in order to mitigate potentially adverse competitive effects. In light of this divestiture the Board concluded that consummation of the proposed merger would not affect competition in the Highlands County market.

Criteria for Judging Potential Anticompetitive Effects

This article examines all bank merger applications considered by the Federal Reserve System for potentially significant competitive issues during the decade from December 1982 until December 1992. It does not examine applications in which a thrift was to be acquired or merger proposals filed with another federal regulator. In determining whether a particular application entailed potentially significant competitive issues, both Department of Justice merger guidelines and Board rules regarding delegation of authority to the Reserve Banks that were in effect when the application was filed were considered. Consequently, the data were divided into three periods (December 1982-December 1985, January 1986-June 1987, and July 1987-December 1992) in which different benchmarks were used to determine a transaction's potential anticompetitive effects.

In June 1982 the Department of Justice issued new merger guidelines applicable to the enforcement of antitrust laws in all industries. The Board first referred to these guidelines, and specifically to the HHI as a measure of concentration, in a merger decision on November 19, 1982. The Board's publication of this decision in the *Federal Reserve Bulletin* in December 1982 marks the beginning of the data period reviewed in this article.[22]

The Department of Justice guidelines established three postmerger concentration ranges to consider in determining whether a particular transaction is likely to pose a significant anticompetitive threat and thus be subject to in-depth economic analysis and possible challenge by the Justice Department. The Fed continues to make decisions in terms of these three ranges. A market with a postmerger HHI below 1,000 is considered unconcentrated, a market with a postmerger HHI between 1,000 and 1,800 is moderately concentrated, and a market with a postmerger HHI greater than 1,800 is a highly concentrated market. The Department of Justice stated that it was more likely than not to challenge transactions that would result in a change greater than 100 points in a moderately concentrated market and was also likely to challenge mergers producing a change greater than 100 points in a highly concentrated market. Depending on the postmerger concentration of the market, the size of the resulting increase in concentration, and the presence or absence of several other factors relating to the market, the Department of Justice might decide to challenge an approval on the basis of a change between 50 and 100 points in a highly concentrated market.

For the purposes of this article, a merger was flagged as potentially raising competitive issues unless it fell clearly in a category the Department of Justice was unlikely to challenge. For the data sample from December 1982 to December 1985, this set includes mergers in markets that were moderately concentrated (as defined above) and resulted in a change greater than 100 points and mergers in a highly concentrated market effecting a change of at least 50 points.

In February 1985 the Department of Justice informed the Office of the Comptroller of the Currency (OCC) that it would not, ordinarily, challenge a bank merger unless there was an HHI change of at least 200 points in a highly concentrated market.[23] This increase in concentration benchmarks was intended explicitly to recognize competition from nondepository institutions, a factor not captured in deposit market-share data. Although the Board referred to this new rule in six applications in 1985, the new benchmark was not used consistently until 1986, as reflected in the Board's amended "Rules Regarding Delegation of Authority" to the Reserve Banks on December 17, 1985.[24] In examining data from the beginning of January 1986 until December 1992, this so-called 1,800/200 rule is the benchmark that was used to identify applications for mergers that might be significantly anticompetitive.

In the Connecticut National Bank case in 1974, the Supreme Court recognized thrifts as significant competitors for a broad range of consumer services.[25] However, the court concluded that thrifts should not, at that time, be a factor in assessing the competitive effects of bank mergers because thrifts were not competitive in the area of commercial lending. With the passage of the Depository Institutions Deregulation and Monetary Control Act (1980) and the Garn-St Germain Act (1982), which effectively deregulated the thrift industry, thrifts were authorized to compete with banks in providing the cluster of products previously unique to banking. In recognition of this increased competition, the Board began including thrifts as competitors in specific applications. By March 27, 1987, competition from thrifts had grown to such a point that the Board changed its rules regarding delegation of authority to the Reserve Banks to give thrifts a weight of 50 percent when calculating concentration numbers, to reflect both actual and potential competition from thrifts.[26] Beginning with the June 1987 decisions (published in the July 1987 *Federal Reserve Bulletin*), determinations made regarding the competitive effects of mergers were based on this assumption of 50 percent

Box 3
Department of Justice Antitrust Activities in Recent Years

The Department of Justice held a relatively relaxed view of antitrust in banking throughout much of the 1980s. Merger guidelines adopted in 1982, based on permissible market shares, generally were less restrictive than standards used previously and thus enlarged the pool of potentially valid mergers. The 1982 guidelines also established factors that could be used to justify mergers that failed the market concentration test. In 1985, recognizing the increasing importance of nonbank competitors, the Department of Justice established the 1,800/200 rule (with thrifts generally given 20 percent weight), which was quickly adopted by the other federal banking agencies (which generally give thrifts 50 percent weight). Importantly, until 1991 the Department of Justice did not challenge any merger that passed the 1,800/200 rule with thrifts at 50 percent and was approved by one of the federal agencies, even if it failed the 1,800/200 rule with thrifts at the Department of Justice's standard of 20 percent.

In 1989 the Department of Justice began taking a more aggressive approach toward bank mergers. Four large transactions since 1990 demonstrate the changes. In the first of these, late in 1990, the Federal Reserve Board approved First Hawaiian, Inc.'s acquisition of First Interstate of Hawaii, Inc.[1] The Department of Justice sued to block the transaction, citing adverse market effects for small and medium-sized businesses. Then in 1991, the Department of Justice raised strong objections to Fleet/Norstar's acquisition of the failed Bank of New England, citing concentration in three banking markets. In addition, the Department of Justice stated that the "failing firm" defense did not apply to Fleet/Norstar because there were other bidders for the Bank of New England that did not pose any competitive concerns. In a third transaction, on February 13, 1992, the Fed approved the acquisition of Ameritrust Corporation by Society Corporation despite Department of Justice objections that the proposed branches to be divested were weak.[2] The Department of Justice filed suit, citing adverse competitive effects on the availability of loans to small businesses in two counties in Ohio. The agency eventually dropped its opposition to each of these mergers after negotiating divestitures beyond those required by the Fed. In a separate case in 1992, the Department of Justice held talks with BankAmerica Corporation over its proposed acquisition of Security Pacific Corporation. However, after BankAmerica amended its application to include additional divestitures, the Department of Justice did not file to block this merger.

The new merger guidelines published in 1992 spotlight the approach the Department of Justice is now taking with respect to mergers.[3] The guidelines describe the department's five-step process currently conducted with respect to each proposed merger. First, the relevant product and geographical markets are identified, and the structural impacts within these markets are calculated. Second, specific characteristics of the market are then considered to determine whether there are antitrust concerns. Third, the timeliness, likelihood, and sufficiency of entry into the market as it relates to anticompetitive behavior are forecast. Any efficiency gains expected from the merger are calculated, and, as the last step, if the continued existence of either party is doubtful, the expected results of the failure are analyzed.

While this process sounds very similar to the Fed's, there are several important differences. First, in the transactions cited the Department of Justice did not use the cluster of services provided by commercial banks as the relevant product market but instead segregated various financial services into separate product markets.[4] Within these separate product markets, the Department of Justice's emphasis was on the market for commercial loans, especially to small and medium-sized businesses, designated according to various size definitions. Although this case-by-case approach may better reflect market realities, it also increases uncertainty among merging parties concerning the Department of Justice's likely response to a merger proposal.[5] The Department of Justice also indicated that its 1,800/200 rule applied only to the initial screening of a particular merger and that a transaction failing that benchmark was subject to closer investigation using the more restrictive 1,800/50 rule.[6] In addition, although the weighting of thrifts will continue to be determined on a case-by-case basis, the Department of Justice has indicated that it believes thrifts have substantially retreated from business banking and, therefore, deserve no weight in this product market.[7] The Department of Justice has also indicated that divestitures must introduce new and viable competitors into the market. In this regard, the agency has taken a direct hand in choosing which branches are to be divested, as opposed to the Fed's practice of allowing the applicant to select the branches for divestiture.

Notes

1. See "First Hawaiian, Inc.," *Federal Reserve Bulletin* 77 (1991): 52.
2. See "Society Corporation," *Federal Reserve Bulletin* 78 (1992): 302.

3. See "Department of Justice and Federal Trade Commission Horizontal Merger Guidelines," April 2, 1992.
4. This was not the Department of Justice's first attempt at breaking up the "Philadelphia National" cluster. In 1985 the agency appealed a transaction that had been approved by the appropriate federal regulators, arguing that transaction accounts and small business loans were separate product lines. The Court of Appeals held that the District Court did not err when it "concluded that the government failed to factually support its claim that existing circumstances in this case warranted a departure from the definition of the relevant product market as the cluster of banking services traditionally offered in the commercial banking industry adopted by the Supreme Court in U.S. v. Philadelphia National Bank." See U.S. v. Central State Bank, 817 F.2d 22 (6th Cir. 1987).
5. In Society's acquisition of Ameritrust, the Department of Justice concluded that businesses with more than $10 million in annual sales "appear to be able to obtain loans from institutions in Detroit and Pittsburgh as well as locally" (Society Corporation Competitive Factor Report). In First Hawaiian's acquisition of First Interstate of Hawaii, the Department of Justice determined that the "unique geography" of Hawaii limited businesses with less than $50 million in annual sales in obtaining loans from nonlocal institutions (First Hawaiian, Inc., Competitive Factor Report). In BankAmerica's acquisition of Security Pacific, the Department of Justice concluded that businesses with annual sales of less than $100 million were locally limited (BankAmerica Corporation Competitive Factor Report). See Letzler and Mierzewski (1992).
6. See Report of the Department of Justice on the Likely Competitive Effects of the Proposed Acquisition by First Hawaiian, Inc. of First Interstate of Hawaii, Inc. (1990).
7. Letter from James F. Rill, Assistant Attorney General, Antitrust Division, to Hon. Alan Greenspan, Chairman, Board of Governors of the Federal Reserve System, on the application of BankAmerica Corporation to acquire Security Pacific Corporation, March 12, 1992.

weighting for all thrifts, the so-called 1,800/200/50 rule. This rule was the selection criterion used in analyzing the sample data from July 1987 through December 1992.[27]

A total of 155 applications in the sample were identified as mergers that might have significant anticompetitive effects. Of these applications, sixteen involved "prior common control," that is, an attempt to restructure ownership of two or more banks from individuals to a corporation owned by the same individuals.[28] Because none of these mergers were denied and such applications raise issues not relevant to most bank merger transactions, the applications involving prior common control appearing in the sample period were dropped from the data set.

Total Divestiture. The 139 remaining applications for mergers presenting potentially significant anticompetitive problems involved a total of 297 banking markets that exceeded the structural criteria described above. (Many bank mergers involved multiple markets, some but not all of which posed competitive problems.) In eighty-six of these markets, an applicant agreed to divest (sell) all of either its own or its target's branches in the market.

The Board (as well as other federal banking agencies and the Department of Justice) considers divestiture to be an effective way for applicants to address areas of competitive concern to regulators while allowing the nonobjectionable portion of the transaction to proceed. Generally, it is preferred that these divestitures be made to institutions not currently operating in the market, thereby insuring that the competitive structure of the market remains unchanged. However, divestiture to an in-market competitor is permissible, provided that the market's resultant structural changes are not too severe. Because total divestiture usually addresses the competitive issues involved in a market and no further factors are generally considered by the Board, these eighty-six markets were also excluded from the sample studied.

Mitigating Factors. In the remaining 211 markets the Board approved the vast majority of applications for mergers that exceeded the criteria for delegation of authority and were likely to be challenged by the Department of Justice according to its published merger guidelines. The Board cited a number of factors that mitigated the potentially significant anticompetitive effects of these transactions, as indicated by the structural numbers (HHI). Relevant issues included competition from thrifts, market attractiveness, and the financial health of the target firm. As noted earlier, the second part of this discussion, in the next issue of the *Economic Review*, will examine all of the mitigating factors discussed by the Board in applications dating from December 1982 through December 1992.

Conclusion

The increased number and size of bank mergers over the last few years, as well as the larger number of bank failures, has renewed interest in antitrust enforcement by federal authorities. The Fed, considering the public-interest protections of antitrust regulations, has adopted a two-stage approach to competitive issues in bank mergers, first determining whether a competitive problem might exist and then, if so, determining whether the proposed acquisition would have a significantly adverse anticompetitive effect. This article summarizes the Fed's general approach to antitrust analysis over the last decade. It presents the economic theory and legal framework behind the Fed's analysis and cites empirical evidence both for and against the Fed's approach.

Certain elements are essential for each evaluation: specification of the correct geographic and product markets in which competitive effects take place, determination of direct and potential competitors, and analysis of the effects of mergers on the structure of individual markets. While all merger applications are examined in light of the same criteria, the dynamic aspects of the U.S. banking industry and the several objectives of antitrust laws are such that bank merger analysis must be done on a case-by-case basis.

Notes

1. Throughout this article the terms *merger* and *acquisition* are used synonymously.
2. See Rhoades (1985a) and LaWare (1991). Numbers do not include acquisitions of failed banks. Numbers for 1988 and 1989 are estimated.
3. See LaWare (1991), who states that "over the last decade, the average proportion of bank deposits accounted for by the largest three firms in urban markets has increased by only one percentage point, and has remained virtually unchanged in rural markets. These ratios have actually declined in both types of markets since the mid-1970s."
4. Firm shrinkage is an alternative vehicle for consolidation that BankAmerica Corporation has shown can work.
5. The Federal Reserve has jurisdiction over mergers of state member banks and mergers or acquisitions by bank holding companies. The Comptroller of the Currency has primary responsibility for national banks. The Federal Deposit Insurance Corporation oversees insured state nonmember banks. In addition, section 18(c) of the Federal Deposit Insurance Act provides that "before acting on any application for approval of a merger transaction, the responsible agency . . . shall request reports on the competitive factors involved from the Attorney General and the other two banking agencies."
6. A second article, in the next issue of the Atlanta Fed's *Economic Review*, will examine all merger applications filed by state member banks or bank holding companies (applications to acquire another bank or bank holding company) that involved potentially significant competitive issues since the Board first began applying the 1982 Department of Justice merger guidelines to bank mergers in November of that year. The discussion will specifically consider mitigating factors the Board referred to in these applications.
7. The Fed's approach to antitrust issues is not the only accepted view. For instance, the Department of Justice may implement antitrust regulation slightly differently (see Guerin-Calvert and Ordover 1992). Others are critical of the application of antitrust standards to the banking industry, arguing that the current approach of regulators is antiquated and fails to recognize much of the competition currently faced by banks (see, for example, Bove 1991 and Demsetz 1973). A comprehensive analysis of the various approaches concerning antitrust issues is beyond the scope of this paper.
8. See, for example, "SouthTrust Corporation," *Federal Reserve Bulletin* 78 (1992): 769.
9. Federal agencies consider divestiture an acceptable means of reducing the anticompetitive effects of a proposed merger. Reducing the resultant market share of the acquiring bank in turn reduces the ability to exercise anticompetitive behavior in the market. Divestiture as a solution for competitive problems has become increasingly more important over the last decade because of the proliferation of large mergers, in which divestitures are small relative to the size of the entire transaction. For the Federal Reserve Board of Governor's position on the timing of divestitures see "BankAmerica Corporation," *Federal Reserve Bulletin* 78 (1992): 338.
10. For a thorough discussion of the economics of market structure see Scherer (1990) or Tirole (1988).
11. For an overview of the SCP paradigm and a review of the empirical literature, see Rhoades (1977, 1982).
12. See, for example, Hannan (1991), Berger and Hannan (1989), and Rhoades (1982). For alternative explanations of the profit-concentration relationship in banking, such as the efficiency-structure hypothesis, see Smirlock (1985), Berger (1991a, 1991b), and Hasan and Smith (1992).
13. U.S. v. Philadelphia National Bank, 374 U.S. 321 (1963).
14. Recent empirical evidence supports the use of this cluster concept in commercial banking. For instance, studies indicate that businesses and consumers tend to purchase additional products and services from the institution at which they maintain their primary checking account (see Elliehausen and Wolken 1990, 1992).

15. For a review of the economic literature on geographic market definition see Wolken (1984).
16. U.S. v. Philadelphia National Bank, 374 U.S. 321 (1963).
17. Recent empirical evidence supports the idea that banking markets, at least for some consumers and small businesses, are still local in nature (see Elliehausen and Wolken 1990, 1992; Hannan 1991). For another viewpoint see Dunham (1986).
18. While the courts are willing to hear arguments that the appropriate product or geographic markets have changed, it requires that this claim be factually supported, which has not yet been demonstrated in Court. See U.S. v. Central State Bank, 817 F.2d 22 (6th Cir. 1987). In addition, some products offered by banks and bank holding companies have regional, national, or even international markets. Although the Board considers nonbanking activities, only rarely are there any significant anticompetitive effects owing to the large number of competitors within these markets and their small market shares.
19. See "SouthTrust Corporation," *Federal Reserve Bulletin* 78 (1992): 769.
20. The Reserve Banks have been delegated authority to approve transactions that present no significant concerns. If a particular transaction does involve significant competitive, legal, or other issues, the application becomes nondelegated and is subject to Board review. Authority to deny a transaction rests solely with the Board. The Fed's "Rules Regarding Delegation of Authority" spell out the criteria used to determine whether an application is delegated and can be approved by the Reserve Banks or nondelegated and must be acted upon by the Board. The Fed does not structure acceptable deals, such as by adding divestitures to an applicant's original application. However, Fed staff will consult with an applicant on how to structure the application to maximize the chances of approval.
21. See U.S. Department of Justice Merger Guidelines, June 14, 1982. The Department of Justice assumed an important role in bank mergers and acquisitions when the Bank Holding Company Act (1956) and the Bank Merger Act (1960) applied the antitrust provisions of the Clayton Act to the banking industry.
22. "First Bancorp of New Hampshire, Inc.," *Federal Reserve Bulletin* 68 (1982): 769.
23. Letter from Charles F. Rule, Acting Assistant Attorney General, Antitrust Division, to Hon. C. Todd Conover, Comptroller of the Currency, on the application of First National Bank of Jackson, Jackson, Mississippi, to acquire Brookhaven Bank and Trust Company, Brookhaven, Mississippi, February 8, 1985.
24. The six 1985 application decisions in which the Board referred to the new rule were: "United Banks of Colorado, Inc.," *Federal Reserve Bulletin* 71 (1985): 647; "Marshall & Ilsley Corporation," *Federal Reserve Bulletin* 71 (1985): 663; "The Marine Corporation," *Federal Reserve Bulletin* 71 (1985): 795; "Central Wisconsin Bankshares, Inc.," *Federal Reserve Bulletin* 71 (1985): 895; "First Security Corporation of Kentucky," *Federal Reserve Bulletin* 71 (1985): 898; and "First Railroad & Banking Company of Georgia," *Federal Reserve Bulletin* 71 (1985): 963.
25. U.S. v. Connecticut National Bank, 418 U.S. 656 (1974).
26. Letter from Don E. Kline, Associate Director, Board of Governors of the Federal Reserve System, to all officers in charge of supervision at all Federal Reserve Banks, March 27, 1987.
27. The Board continues generally to use 50 percent weight for thrifts in calculating structural numbers. It may give 100 percent weight to thrifts in cases in which thrift behavior suggests that it is appropriate to do so—when thrifts are substantially exercising their banklike powers.
28. In 1978 the Change in Bank Control Act was passed requiring regulators to assess the competitive effects when an individual purchases a bank. In examining such an application, if the common control was established before 1978, the Board considers the competitive effects of the transaction(s) at that time rather than current market conditions. A traditional structural analysis based on deposit data at the time of affiliation is conducted. Other factors considered include the absolute size of the banks at the time of affiliation, the number of years that the institutions have been affiliated, and whether the affiliation existed before antitrust laws were applied to bank mergers. (Prior to the Bank Merger Act of 1960, the banking laws did not refer to competitive effects.) In addition, the Board considers any other issues that would mitigate potential anticompetitive effects of the merger.

    In denying approval of a prior common control application, the Board recognizes that any existing anticompetitive effects of the institution's affiliation cannot be reversed. A denial would, however, preserve the possibility of a reversal at some point in the future, whereas approval could perpetuate anticompetitive possibilities.

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