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Is the Bank Merger Wave of the 1990s Efficient?
Lessons from Nine Case Studies

Charles W. Calomiris and Jason Karceski

1 Bank Industry Trends

The U.S. banking system is undergoing dramatic consolidation. America's historical predilection for requiring the chartering of local banks and limiting the powers of commercial banks has given way to a new era of deregulation: nationwide banks with broad powers have taken over the industry after building themselves up largely through acquisitions. Is the current merger wave in American banking helping to promote efficiency by increasing the size and scope of banks, or is the bank merger wave driven by darker aspirations: the search for monopoly rents or the job security and personal perquisites of bank managers?

Researchers and industry analysts have approached this question in various ways: (1) cross-regime comparisons of historical bank performance, (2) identification of the influences that encourage bank concentration, and (3) econometric studies of the consequences of consolidation. Interestingly, these various perspectives on bank consolidation have not agreed in their assessment of the potential or actual efficiency gains from mergers and acquisitions. Econometric studies have tended not to identify large potential efficiency gains, on average, from bank mergers. Those results have sometimes been interpreted as evidence that bank mergers typically

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are attempts to reap monopoly rents or attempts by managers to improve their positions at the expense of stockholders. In contrast, cross-regime comparisons of the performance of banking systems and analyses of the forces underlying bank mergers suggest large potential and actual gains over the past five years. We argue that detailed case studies of some recent merger transactions—provided in section 2—help to resolve some of these apparent inconsistencies and are particularly useful in an industry such as banking, in which rapid changes make even the recent past a poor guide to the future.

Cross-Regime Comparisons

Historical cross-country and cross-state comparisons suggest large potential gains from current bank consolidation. Studies comparing the banking system of the United States (where regulation has been hostile to bank branching and consolidation) with the banking systems of countries whose regulatory regimes allowed bank consolidation (especially Germany and Canada) have found significant deficiencies in U.S. banks. Those deficiencies included limits on bank diversification, operating efficiency, the capacity to lend or take deposits per unit of capital, and the banking system's ability to finance large-scale industrialization during the Second Industrial Revolution of 1870–1914 (Calomiris 1993, 1995; Calomiris and Ramirez 1996). These historical shortcomings of American banking are traceable in large part to branching limitations and to other regulations that constrained American banks by keeping them small, undiversified, and narrowly focused on lending and deposit taking.

Furthermore, U.S. states that were most liberal in their regulation of bank concentration (notably California, Ohio, and North Carolina) have historically enjoyed superior banking performance (Calomiris 1993). Banks originating from those states (including Bank of America, BancOne, NationsBank, and First Union) have become industry leaders not only in size but also in profitability, innovativeness, and growth.

Consider differences in bank performance between the states of North Carolina (long a branching state) and Illinois (long a state that restricted bank branching). Illinois, by virtue of its commercial importance, might have produced nationwide leaders in banking, and yet North Carolina's banks have survived and prospered while Illinois' most prominent banks have all but disappeared. Chicago, in particular, has seen its most important local banking institutions acquired by international giants such as ABN Amro, Bank of America, Bank of Montreal, BancOne, and Citibank. With the exception of Northern Trust (and arguably First Chicago, which has merged with National Bank of Detroit), Chicago no longer has any major banking institution headquartered in Illinois. Table 1-1 reproduces a performance comparison of the rates of return on bank assets and bank equity for Illinois and North Carolina from 1984 to 1992 (a period

Table 1-1 **Bank Structure and Performance in Illinois and North Carolina, 1984–1992**

	Number of Banks		Return on Assets (%)		Return on Equity (%)	
Year	Illinois	North Carolina	Illinois	North Carolina	Illinois	North Carolina
1984	1,240	63	−0.11	0.97	−1.76	16.47
1985	1,233	63	0.63	0.98	9.55	16.82
1986	1,218	65	0.71	1.07	10.70	18.22
1987	1,209	68	−0.23	0.92	−3.88	15.38
1988	1,149	71	0.99	1.06	15.66	16.86
1989	1,119	78	0.88	0.97	13.53	15.62
1990	1,087	78	0.68	0.85	10.05	13.77
1991	1,061	81	0.67	0.74	9.40	10.99
1992	1,006	78	0.72	1.03	9.32	15.24

Source: Division of Research and Statistics, Federal Deposit Insurance Corporation, cited in McCoy, Frieder, and Hedges (1994).

coincident with the most important external acquisitions of Chicago banks). North Carolina-based institutions not only enjoyed much higher average return on equity (ROE) and return on assets (ROA) but saw much smaller fluctuations than did Illinois banks.

Superior historic performance in concentrated banking systems seems to reflect greater efficiency rather than higher rent extraction or inefficient managerial preferences for large size. Bank customers have shared in the efficiency gains from bank consolidation. Before World War I, narrowly focused unit banks in the United States offered an inferior menu of financial services to industrial firms than their German counterparts did and charged higher costs for lending and underwriting (which reflected both technological inferiority of American banks and greater rent extraction in less competitive local unit banking markets) (Calomiris 1995).

U.S. banks in rural areas were protected from competition by unit banking laws. Large fixed costs of setting up a bank—as opposed to a branch office—often ensured a local monopoly. Rural unit banks charged higher rates of interest on loans and paid less on deposits than urban banks. Branch banking regimes in other countries saw greater competition in rural areas and did not witness regional differences in loan-deposit spreads (Calomiris 1993). U.S. banks in unit banking states provided access to banking services inferior to that of rural offices in branch banking states, as measured by the number of bank offices per acre or per capita (Evanoff 1988). Shaffer's (1993) study of Canadian banking giants measured the extent to which they enjoyed market power. He concluded that the highly concentrated Canadian system (with six large banks) had been greatly competitive.

These cross-regime comparisons are telling. Since the nineteenth cen-

Table 1-2 U.S. Bank Mergers and Acquisitions, 1979–1994 (billions of 1994 $)

Year	Assets of All U.S. Banks	Assets of Banks Consolidating[a]
1979	3,257	174
1980	3,267	209
1981	3,250	180
1982	3,310	239
1983	3,398	287
1984	3,482	317
1985	3,658	368
1986	3,838	396
1987	3,823	510
1988	3,833	442
1989	3,866	327
1990	3,801	390
1991	3,707	388
1992	3,681	434
1993	3,803	329
1994	4,024	627

Source: Data for consolidating banks are derived from Berger, Saunders, Scalise, and Udell (1997), table 1A.

Note: A *family merger* is defined as a merger between banks that are owned by the same parent institution. A *merger* is defined as the consolidation of two banks within the same charter, while an *acquisition* is defined as the purchase of a bank that retained its charter.

[a]The sum of all nonfamily mergers and all acquisitions.

tury, banking systems both within and outside the United States uniformly have taken the form of large-scale, multiproduct, branch banking systems when that option was not precluded by restrictive regulations. There is strong evidence that regimes that are friendly to both consolidation and competition produce lower bank risk and higher bank productivity. Evidence from the current deregulation of U.S. banking, which we discuss below, provides a similar perspective: both banks and their customers have gained from deregulation, increased competition, and improvements in bank structure and services that have followed.

Competition and the New Face of Banking

One approach to evaluating the likely efficiency gains from the current merger wave (table 1-2) is to examine industry trends related to consolidation: to identify the origins of the merger wave and ask whether it has coincided with efficiency gains for the banking industry as a whole. The argument that increased competition motivates the recent bank merger wave and that industry performance has improved with consolidation provides some support for the view that consolidation has promoted efficiency. That is, if mergers result from competitive pressure, they are more likely value maximizing because in a highly competitive environment there

is less opportunity for rent extraction by banks and less tolerance for inefficient managerial preferences for consolidation.

Competition and Deregulation in Financial Services

Increasing competition has been an important trend in the financial services industry over the past twenty years. Initially, competition was spurred by a combination of financial innovation and deregulation in the market for deposits, both reflecting the effect of inflation on real rates of return to bank depositors. The removal of interest rate ceilings, the relaxation of reserve requirements, the entry of money market mutual funds, and the growth in the commercial paper market, however, were just the beginning. Beginning in the early1980s, state laws and federal laws consistently favored increased entry into the previously protected banking industry.

Foreign bank entry was facilitated by the single-country approach adopted by the United States (codified in 1978), which treated the operating branches of foreign banks or chartered banks in the United States the same as domestic banks. The banking distress of the early 1980s was an important source of regulatory change allowing greater domestic bank entry, through holding company purchases of banks or bank branching. Weak and failing banks motivated regulators to relax entry restrictions within and across states so that troubled banks could be acquired by banks within their state through branching or by out-of-state holding companies.

Thirty-nine states relaxed their branching laws between 1979 and 1990 (Mengle 1990). In some states, bank branching was the result of a 1988 ruling by the Comptroller of the Currency requiring that banks be granted the same branching rights as thrifts. Regional pacts among states permitted interstate branching on a limited basis through most of the country by 1990. Finally, the Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994 effectively repealed all limits on branching across states by January 1, 1997 (many states opted to comply with the act earlier).

Berger, Kashyap, and Scalise (1995, 166–67) traced the progress of interstate bank entry, state by state, over the period 1979–1994 and documented the sudden bursts of interstate entry that followed the removal of branching restrictions in each state. For the United States as a whole, the percentage of bank assets controlled by out-of-state banks rose from 2 percent in 1979 to 10 percent in 1986 and then rocketed to 28 percent by 1994. The consolidation in the banking industry over this period is remarkable. The total number of banking organizations fell from 12,463 in 1979 to 7,926 in 1994, while the percentage of assets controlled by banks with over $100 billion in assets (in 1994 dollars) rose from 9.4 percent to 18.8 percent (Berger, Kashyap, and Scalise 1995, 67).

While deregulation (especially the removal of branching restrictions) has been a key and necessary condition for the bank merger wave in the

United States, competition has been a key exogenous factor as well. Increased global competition among banks and competition from nonbank providers have spurred a reorganization of financial services worldwide. Technological changes that favor the repackaging of bank loans as securities (securitization) and computerization changes that allow greater access to consumers have been important in spurring the new global competition. As late as 1980, America's securities transactions with foreigners (gross sales and purchases of stocks and bonds) amounted to only 9 percent of the gross domestic product. By 1990, these transactions totaled 93 percent of GDP. International bank lending worldwide rose from $324 billion in 1980 to $7.5 trillion in 1991 (Crook 1992).

The importance of global competition in the new structure of the financial services industry is reflected in the international aspect of bank consolidation, affecting banks in many countries that have not shared the historic limitations on consolidation of the United States. Notable examples include Germany and Switzerland, where recent consolidations also reflect competitive pressure. Furthermore, the deregulation that has allowed bank restructuring in countries such as the United States itself largely reflects the effect of competitive pressure on regulators. In the new global environment, domestic bank regulators have been forced to choose between continuing heavy regulation of a shrinking system of banks or a healthy and deregulated domestic banking system.

Although banking distress can be credited with the relaxation of state branching laws, more fundamental long-run concerns shaped the policy of the Federal Reserve both on bank consolidation and on bank powers. The Fed's support for expanding the scale and scope of banks explicitly reflected concerns that nonbank intermediaries and foreign banks were outcompeting American commercial banks and that relaxation of regulation was necessary to give U.S. banks a fighting chance to survive. Alan Greenspan (1988, 1990, 1992), Fed chairman, has repeatedly argued that increased scale and scope in banking is essential to maintaining an internationally competitive U.S. banking sector. In a call for expanding bank powers, Greenspan (1988, 3–4) argued: "The ability of banks to continue to hold their position by operating on the margins of customer services is limited. Existing constraints, in conjunction with the continued undermining of the bank franchise by the new technology, are likely to limit the future profitability of banking. . . . If the aforementioned trends continue banking will contract either relatively or absolutely." Similarly, the Fed chairman (1990, 5) argued, "in an environment of global competition, rapid financial innovation, and technological change, bankers understandably feel that the old portfolio and affiliate rules and the constraints on permissible activities of affiliates are no longer meaningful and likely to result in a shrinking banking system."

Some of the Fed's concern about the competitiveness of American

banks reflected the boom in foreign bank entry into the United States in the late 1980s. Foreign banks received a golden opportunity for entry into American banking markets during the capital crunch of 1985–1990. Calomiris and Carey (1994) report that foreign banks' share of nonmortgage commercial and industrial (C&I) lending in the United States rose from 7 percent in 1983 to 14 percent in 1991, while the share of U.S. banks fell from 30 to 16 percent.

Nonbank competition in C&I lending has also been important. Finance companies maintained a nearly constant share of 10–12 percent from 1983 to 1993. But the share of market debt (bonds, commercial paper, and asset-backed securities) rose during the 1980s and early 1990s, from 40–41 percent in 1983–1985 to 49–52 percent during 1991–1993. Loans to small businesses—traditionally reserved almost exclusively to banks—have become a hotly contested market. Merrill Lynch, with offices throughout the United States, now boasts its status as the seventh largest lender to small businesses in the United States. In consumer banking, the credit card market has long been a highly competitive national market. But potential new providers of other retail consumer banking services now threaten to enter the national electronic market, and some of these (notably those with easy access to large customer bases, such as Microsoft) could threaten the traditional consumer niches occupied by banks.

Competition should reduce monopoly rents, enhance efficiency, and weaken the power of inefficient bank managers to determine the goals and structure of their institutions. Empirical evidence is consistent with these predictions. Keeley (1990) and Berger and Humphrey (1992) found that local bank monopolies were undermined in the 1980s by relaxation of entry restrictions. Jayaratne and Strahan (1997) determined that the relaxation of branching restrictions in the United States produced competitive pressures that cut bank operating costs and loan losses and that these advantages were largely passed on to customers in the form of lower loan interest rates. Akhavein, Berger, and Humphrey's (1997) analysis of mergers uncovered no evidence of increased market power in deposit or lending markets as a result of consolidation during the 1980s.

The link between consolidation and competition is also visible in the growth accompanying consolidation. The new competition has resulted in an increase in the number of bank offices even as it has promoted a decline in the number of banks. From 1980 to 1989, the number of banks declined by 12 percent, but the number of banking offices increased from 38,350 to 51,300. By 1994, the number of bank offices had reached 65,610. Adding automated teller machines (ATMs) to the number of bank offices significantly adds to the measured growth in points of sale of bank services. ATMs increased in number from 13,800 in 1979 to 109,080 in 1994 (Berger, Kashyap, and Scalise 1995, 79).

As Boyd and Gertler (1994) and James and Houston (1996) emphasize,

the decline in banks' share of financial assets should not be viewed as a decline in the importance of banks but rather as evidence of technological advances that have allowed banks to do more things. Despite the rapid growth in nonbank financial institutions (notably pensions and mutuals), banks' share of total financial institutions' income is roughly the same as it was in the 1960s (about 40 percent), which largely reflects the growth in fee income.

That the banking industry is not shrinking deserves emphasis. The movement to consolidation in banking is about competition and the enhancement of efficiency, not about the elimination of excess capacity. Unit banking (with its high overhead costs of setting up points of service) had restricted efficient growth. With a break from the legacy of unit banking, the costs of entry and of establishing new banking locations fell dramatically, and the capacity of the industry increased.

Retail banking and banking in less populated areas are not the only markets that have seen increased competition. Entry into cities in states with historic limits on banking has been particularly pronounced. Chicago is the prime example (Calomiris and Karceski 1994). According to the *New York Times* (February 21, 1995, C1, C9), competition in corporate lending has become so intense that some regulators are concerned that banks are no longer earning a sufficient return on large corporate lending within the United States. The *Times* reports:

> The average interest rate on a loan to a big company with a comparatively weak BB credit rating has fallen from 1.30 percentage points above Libor [London Interbank Offered Rate] in 1992 to 0.79 point above Libor at the end of last year, according to statistics compiled by the Loan Pricing Corporation. . . . Spreads for companies rated A fell from 0.40 to 0.25 point. And while statistics are not available, bankers say that rates for small businesses are declining at least that much.

The new competition is not limited to traditional banking products and services. Encroachment by new entrants into the traditional activities of U.S. banks has been a spur to deregulation of bank activities (particularly through the efforts of the Fed) and has helped to promote competition in financial services previously not provided by banks. The more competition banks received, the more they were able to convince their regulators (Congress, the Fed, and the Comptroller) to allow them to enter new areas. U.S. commercial banks have become significant players in underwriting, derivatives intermediation, venture capital finance, and mutual fund management and have begun to provide life insurance and annuities. Brewer (1989) found that bank holding companies that have taken advantage of the new permissible activities significantly have improved their risk-adjusted returns as a consequence. This consolidation wave reflects not only the demise of branching and other scale restrictions in banking but

also the desire on the part of banks to take advantage rapidly of the broadening of their new powers.

The New Era of Client-Based Universal Banking

The era of dividing the financial sector into fragmented niches, protected by regulatory entry barriers, has ended. But if the financial services industry is becoming more competitive, why are banks so keen to enter into new product lines? The answer is that commercial banking strategies are driven by a belief in the value of *relationships,* which translates into economics as *quasi rents.* Bankers have come to believe that there are strong economies of scope in combining products within a single intermediary. These economies of scope take the form not of physical production economies but rather of economies that arise in the context of relationship management. There are, for example, marketing and sales cost economies from cross-selling—a lending relationship provides an opportunity to discuss additional products with a client. There are also information and monitoring cost economies of scope in relationships. A bank providing a loan or credit enhancement already tracks a firm's performance and perhaps is enforcing a set of covenants or holding a collateral interest in the firm. Consequently, it is easier to evaluate and bear the counterparty risk of a swap with that customer or to evaluate the customer's potential for a private or public equity offering.

Because these client economies of scope provide a competitive advantage on any single transactional dimension to intermediaries that already provide other transactional or advisory services to clients and because such economies also imply costs of searching and switching on the part of clients, client economies of scope offer banks the opportunity to reap quasi rents from their relationships. As Rajan (1992) points out, however, such an ex post relationship advantage need not translate into ex ante economic profit. The competition for new relationships may imply that much of these rents will be dissipated by front-loaded concessions to customers (so-called loss leaders). Indeed, underpricing loans as a means to attract customers into a relationship (sometimes referred to as tying) has become a common practice. Bankers are trained to judge profitability not on the basis of individual transactions but rather by evaluating the total resources the bank devotes to a client (consisting predominantly of man-hours and funds) and the total fees and interest paid by the client.

This approach to commercial banking accounted for the rebirth of Continental Bank in the late 1980s and for the attractive acquisition offer it received from Bank of America in 1994. After its demise and rescue by the government in 1984, Continental shed its retail operations and outsourced its noncore functions to focus on its core operations in corporate banking. The bank's niche was defined not as a set of products per se but rather as a set of employees (and hence a base of knowledge about certain

customers) and as a type of client it wanted to have. Continental's internal training program emphasized total client profitability, the sharing of information within and across client teams and deal teams within the bank, and the development of special internal accounting to allocate overhead costs and measure client profitability. Continental's strategy was to use new products as a way to lock in a "share of mind"—to move from simple to complex transactional services and to provide financial and business advisory services so that clients would rely more on the bank. By acquiring Continental and moving its headquarters of corporate banking to Chicago, Bank of America expressed its confidence in that approach.

The new emphasis on the economics of relationships, as opposed to productivity or profitability measured at the level of the product or service, is not unique to Continental. Chase's motto, "The right relationship is everything," bespeaks the same approach. Harris Bank's "Vision 2002" is also based on a relationship-focused strategy, in determining both the combination of services and the location of its branches (Calomiris and Karceski 1994, 55–59; 1995, 14–26). Similarly, BancOne's profitability accounting emphasizes tracking overhead expenditure and evaluating the value of product lines in light of general client relationships (McCoy, Frieder, and Hedges 1994). McCoy and his coauthors devote an entire chapter of their book to relationship banking ("The New Search for Growth: Relationship Banking"). In explaining the value of relationships, they explicitly point to the importance of quasi rents resulting from search and switch costs, though they use a different language (p. 18): "Capturing a greater share of existing customers' wallets through relationships has the potential of raising profitability significantly and locking in a bank's customer base. That is, if customers maintain several products and significant balances with a given bank, they will be less likely to switch to a competitor."

Bankers clearly agree with this assessment and have been aggressive advocates of the deregulation of bank powers. Banks were successful in 1996 and 1997 in pushing for substantial relaxation of firewalls that had separated the activities of underwriting (section 20) affiliates and banks and in broadening the range of permissable transactions in nonbank affiliates. Recently, one of the most prominent bank industry representatives (the Bankers' Roundtable) has advocated the rolling back of deposit insurance protection for banks to make it possible for Congress to grant even greater powers to bank holding companies (Bankers' Roundtable 1997).

New banking powers not only permit banks to provide new services to customers, they also give banks greater flexibility in meeting customers' financing needs. During the 1980s and early 1990s, for example, some of the largest bank holding companies (including Citicorp, Chase, Chemical, First Chicago, Continental, Norwest, J. P. Morgan, and Bank of America)

earned a substantial fraction of their earnings from private equity investments.

It is hard to find bankers opposed to relationship-based strategy. The most prominent contrarian had been Bankers Trust, which had long espoused a transactional vision of banking and had argued that profitable relationship banking had been undermined by competition. The view that competition had undermined the profitability of relationship banking—held by some academics and journalists as well as Bankers Trust executives—failed to distinguish between the old (disappearing) monopoly rents of noncompetitive banking and the new quasi rents of universal banking. That confusion led Bankers Trust to discount the value of a client-based strategy and to see its business as a sequence of independent transactions. In the wake of large losses in trading and derivatives deals in Latin America and the United States, Bankers Trust has changed management and strategy. In 1995–1997, management focused on reducing the importance of trading activities and increasing the emphasis on relationship banking.

That lesson holds for emerging market risk exposure of banks, as well as domestic strategy. The losses that Bankers Trust suffered in 1994 and 1995 from its Latin American portfolio contrast with the experiences of Bank Santander, Bank of Boston, and Citibank in Latin America. Those banks have seen significant growth with far less exposure to country risk because they have established large branching networks, which they use to pursue profitable consumer and small business relationships in Mexico, Argentina, and elsewhere.

The importance of customer lending relationships and the quasi rents they create for banks through the valuable information and control technology banks enjoy (compared with arm's-length debtholders) has been widely documented in recent academic work. Over the past decade, an outpouring of empirical research has documented the special role of banks as information collectors and enforcers of contracts under asymmetric information (James 1987; James and Wier 1988; Hoshi, Kashyap, and Scharfstein, 1990a, 1990b, 1991; Booth 1991; Slovin, Sushka, and Polonchek 1993; Best and Zhang 1993; Petersen and Rajan 1994; Billett, Flannery, and Garfinkel 1995; Kashyap and Stein 1995; and Calomiris and Wilson 1997).

Focusing on customer relationships also proves important in understanding the way new entry occurs in lending markets and differences in the profitability of new and existing lenders. Calomiris and Carey (1994) argue that foreign bank entry into the U.S. corporate lending market during the 1980s reflected a cost of funds advantage on the part of foreign banks during the U.S. bank capital crunch. But foreign bank entrants suffered an information cost disadvantage, which is visible in the form and

pricing of foreign bank entry. Foreign banks were able to underprice U.S. banks significantly only in the high-quality segment of the market. For high-risk customers (where information costs are more important), foreign bank pricing was similar to that of domestic banks. Moreover, compared with domestic banks, foreign banks were much more likely to lend in the low-risk segment of the market and were much more likely to lend as passive members of syndicates or through the purchase of loans originated by domestic banks. The relationship cost advantage of domestic banks is also visible in loan performance differences. Nolle (1994) found that foreign-owned banks in the United States had much lower returns on assets in the 1990s and that this difference reflected both higher overhead costs and higher loan-loss rates for foreign banks.

Our case analyses provide evidence that this new approach to client-based universal banking is central to understanding the merger wave of the 1990s in U.S. banking and its potential efficiency gains. A bank's mixture of products and services and its locational strategy are primarily set in reference to the client base that the bank is targeting rather than according to the technological costs or synergies associated with particular sets of products or services. Thus, mergers and acquisitions should be seen in the context of client-based universal banking strategies.

Client-based strategies underlie many choices of acquisition targets in the nine case studies that we discuss. In searching for merger targets, acquiring banks may be attempting to achieve operating cost economies of scale (a primary stated goal in the cases of Firstar's acquisition of First Colonial, Roosevelt's acquisition of Farm and Home, the merger of equals between Comerica and Manufacturers and, to a lesser extent, in the cases of Firstar's acquisition of Investors, Mercentile's acquisition of United Postal, and First Chicago's acquisition of Lake Shore). But often targets were at least as important because they provided missing links in a client-based strategy. They did so sometimes by providing a branching network to a targeted group of people whom the bank felt were its natural client base (as in the cases of Harris Bank's acquisition of Suburban, First Chicago's acquisition of Lake Shore, First Bank's acquisition of Boulevard, and NationsBank's acquisition of MNC). In other cases, targets provided a quick and inexpensive means of acquiring expertise in a set of services that fit the needs of the acquiring bank's strategy (as in Mercantile's takeover of United Postal, Firstar's acquisition of Investors, and the Comerica-Manufacturers merger).

Competition, Consolidation, and Efficiency Gains in the 1990s

Given the deregulation of entry and the new client-based universal banking strategy made possible by the expansion of bank powers, competition should encourage efficient consolidation. Thus, one would expect the mergers that coincide with the heightened competition of the 1990s to

be associated with greater efficiency gains. Competition should promote efficient consolidation in two ways.

First, competition magnifies the rewards for efficiency and the penalties for incompetence. If there are economies of scale, economies of scope (for example, due to the opportunities to cross-sell products within any given bank-customer relationship), or x-efficiencies associated with managerial skill, a competitive environment will encourage those potential efficiency gains to be realized by allowing efficient strategies to produce larger relative earnings differences among competitors.

Second, because competition widens the distribution of earnings, it changes the incentives of inefficient, entrenched bank managers and makes them more willing to step aside. In a noncompetitive environment, weak managers may be insulated from stockholder discipline. If stockholders rebel against managers only when earnings are low, then even inefficient managers may do well enough in a noncompetitive environment to avoid discipline. In the face of increasing competition, poor managers who see their time running out will have an incentive to hasten their exit before the stockholders rebel and before all the franchise value of their local monopoly is eroded by competing entrants.

Thus, an emphasis on the new client-based approach to banking, along with the acceleration in competition as the result of the repeal of branching restrictions during the early to mid-1990s, suggests that motivations for mergers and the consequences of mergers during the 1990s could differ greatly from those of the preceding years. In fact, there is some evidence that the early 1990s have been a watershed not only for mergers but for bank efficiency. Despite the increased competition in lending markets, a combination of cost savings and the introduction of new fee-generating products and services seems to have produced a significant improvement in bank industry performance.

No available measure of performance for banks is ideal as a measure of long-run efficiency. Ideally, bank earnings must be adjusted for the riskiness of bank activities, and some measures of short-term trends in bank performance can reflect exogenous cyclical influences on bank loan quality or interest rates more than technological improvements. Furthermore, efficiency gains associated with increased competition may accrue to customers, not to banks, and may coincide with reductions in performance attributable to reduced monopoly rents. Thus, bank performance improvements during deregulation will understate productivity gains.

Despite these caveats, it is hard not to be impressed by the past five years' improvement in bank performance, which bankers and bank analysts interpret as a long-run improvement in productivity. Average market-to-book values for banks rose from an average of roughly unity for the period 1980–1991 to an average of 1.4 for the period 1992–1995 (James and Houston 1996). Bank earnings have also shown permanent improve-

ment. Perhaps the most popular measure of operating performance is the return on equity. As table 1-3 shows, commercial bank return on equity since 1992 has been high and stable compared even with the return in the early 1980s (before the deterioration in bank loan quality that lowered ROE in the late 1980s).

Higher bank profitability today is not driven by higher loan ratios (which are roughly constant over time). Part of the improvement in bank performance is due to a widening of net interest margin (net interest income relative to interest-earning assets). This has grown over time despite the reductions in lending spreads for corporate loans. As bankers emphasize, the key to the growth in net interest margin has been new retail lending products (such as home equity loans) that have permitted banks to move into relatively high margin consumer lending. The other primary contributor to improved bank performance has been noninterest income. Relative to assets, noninterest income has doubled over the past twelve years. While noninterest expenses (essentially salaries and wages) have risen relative to assets (because of the growth of off–balance sheet activities), the growth in noninterest expense has more than paid for itself in generating new sources of income and higher interest margins. That tradeoff is captured (albeit imperfectly) in a measure known in the banking industry as the efficiency ratio: the ratio of noninterest expense (not including chargeoffs) relative to net interest and noninterest income. In table 1-3, we report that measure, which shows virtual constancy during the period 1981–1991 but falls dramatically afterward.

One of the clearest indicators of the effects of the new competition on bank performance is the changing composition of earnings and expenses for Midwestern banks. These banks have seen a decline in net interest margin alongside growth in noninterest income and a decline in noninterest expense. That region more than any other had been characterized by branching restrictions that limited competition in local lending markets and kept banks from realizing cost savings and relationship synergies. As shown in table 1-3, banks in the Midwest saw a decline in their net interest margin from 4.57 percent in 1993 to 2.89 percent in 1997, while noninterest expenses fell from 4.18 percent of assets to 3.43 percent and noninterest income rose from 2.15 percent to 2.63 percent. The simultaneity of these changes provides evidence of improved productivity. Midwest banks found ways to improve their noninterest earnings per asset dollar while cutting their noninterest costs per asset dollar. Thus, despite declining interest margins, Midwest banks have maintained their ROE.

Of course, the cost reductions in American banking are not entirely attributable to consolidation. Changes in technology (notably the replacement of teller-originated transactions with ATMs) would have produced cost savings even without any consolidation. Nevertheless, the improvement in bank efficiency reflects favorably on the case for bank mergers in

Table 1-3 Commercial Bank Performance, 1981–1997 (percent)

Year	Asset Growth	Ratio of Loans to Assets	Net Interest Margin[a]	Ratio of Noninterest Income to Assets	Ratio of Noninterest Expense to Assets	Efficiency Ratio[b]	Return on Equity
			All U.S. Insured Domestic Commercial Banks				
1981	6.30	55.91	3.75	0.90	2.77	68.23	13.09
1982	8.30	56.82	3.82	0.96	2.93	68.94	12.10
1983	7.52	56.46	3.78	1.03	2.96	69.16	11.24
1984	7.04	57.67	3.80	1.19	3.05	68.54	10.60
1985	5.96	58.38	3.93	1.32	3.19	67.87	11.32
1986	8.47	57.86	3.81	1.40	3.22	68.80	10.23
1987	5.15	59.12	3.91	1.43	3.35	69.07	1.29
1988	4.31	59.80	4.02	1.50	3.38	67.06	11.61
1989	4.56	60.64	3.99	1.62	3.42	66.67	7.33
1990	4.74	60.53	3.94	1.67	3.49	68.16	7.29
1991	1.23	59.55	4.10	1.79	3.73	69.07	7.71
1992	1.86	57.30	4.42	1.95	3.87	66.15	12.66
1993	3.60	56.25	4.42	2.13	3.94	65.23	15.34
1994	8.33	56.06	4.38	2.00	3.76	64.94	14.64
1995	7.40	58.39	4.31	2.02	3.65	63.48	14.71
1996	5.54	59.91	4.33	2.19	3.73	62.69	14.60
			Midwestern Banks				
1993	14.86	61.49	4.57	2.15	4.18	66.37	14.70
1994	42.92	60.66	4.19	2.05	3.79	64.67	15.10
1995	11.20	61.87	3.96	2.12	3.61	63.19	14.60
1996	5.18	64.08	3.78	2.42	3.84	65.53	15.90
1997	14.28	59.85	2.89	2.63	3.43	65.28	16.00

Source: Federal Reserve Bulletin (July 1987, 538–42; June 1997, 479–81) for all U.S. banks; Value Line Investment Survey (July 4, 1997) for 1993–1996 Midwest data; 1997 data are estimates.

[a](Interest income − interest expense)/earning assets.

[b]Noninterest expense/(interest income + noninterest − interest expense).

two ways. First, it provides prima facie evidence that the cost savings programs that coincide with many bank consolidation transactions may actually be having some effect. In that regard, it is noteworthy that the Midwest region (where the regime change has been most dramatic) is also the region that has seen some of the greatest efficiency gains. Second, the evidence of dramatic improvements in bank efficiency supports the view that competitive pressures have been particularly pronounced during the merger wave, which reflects favorably on the likely motives for mergers.

Microeconometric Analyses of Bank Consolidation

From the standpoint of the preceding arguments about the likely efficiency gains from the merger wave currently transforming U.S. banking, econometric evidence of efficiency gains at the level of individual banks has been surprisingly weak. Three decades of microeconomic empirical research in banking have failed to produce clear evidence of large gains from consolidation. That fact has not done much for the reputation of academic analysis within the banking industry, where the gains from consolidation are generally regarded as beyond reasonable doubt. How have the academics arrived at their conclusions, and how might one reconcile the econometric results of these studies with other evidence (and bankers' beliefs) that consolidation is the child of competition and the mother of efficiency?

Studies that have failed to find economies of scale in banking and thus question the potential gains from consolidation are relatively easy to discount. First, under a regulatory regime that limited bank branching (the regime under which scale economies were estimated), it is not surprising that economies of scale were hard to find. If the advantages of large size include operating economies of scale (back office consolidation across bank offices), portfolio diversification, and economies associated with widespread marketing and client-access, then they depend on the ability to branch. But the branching networks that would have allowed such economies of scale to be realized were absent. Thus, past measures of realized scale economies are likely to be a poor guide to potential scale economies. Berger and Mester (1997) provide evidence consistent with that view. Using a database taken from the 1990s, they found potential scale economies significantly larger than those of previous studies.

Second, measures of inputs and outputs are controversial in banking, and incomparability across banks of different sizes in inputs and outputs makes it particularly hard to render convincing scale comparisons. Banking consultants, with access to better data, argue that economies of scale are important but are hard to identify with publicly available data. Toevs (1992) provides evidence from line-of-business data that show large economies of scale and great potential for cost savings from within-market consolidation.

Empirical studies of merger and acquisition transactions bear more di-

rectly on the question of the gains from consolidation. The results of these studies divide into two broad categories: (1) analyses of the effects of transaction announcements on stock prices of targets and acquirers and (2) analyses of postmerger bank performance through bank income and balance sheet data. Both sets of findings have tended to produce evidence of meager expected or actual postconsolidation improvement, on average. But interpreting the evidence from these studies is difficult because of a variety of problems. The pitfalls that we outline in our criticism of the extant empirical work on mergers help to motivate our use of the case-study approach.

Average Stock Price Reactions

Studies of stock price reactions to consolidation announcements (for various dates covering the period before 1992) have reported negative average returns for acquirers, positive average returns for acquirees, and a zero average change in the value of the combined institutions (Beatty, Santomero, and Smirlock 1987; James and Wier 1987; Wall and Gup 1988; Dubofsky and Fraser 1988; Kaen and Tehranian 1988; Sushka and Bendeck 1988; Cornett and Tehranian 1992; Houston and Ryngaert 1994). Should one conclude that mergers account for little of the gains in the 1990s (or before) or that measures of gains based on stock price reactions are flawed?

Studies that focus on stock price reactions and measure performance by announcement effects face several difficulties. First, stock issues (including stock swaps associated with acquisitions) tend to be associated with negative price reactions for issuers and acquirers, which is generally explained as a result of adverse-selection (pooling) problems (Myers and Majluf 1984). That interpretation suggests that it is inappropriate to view negative average price reactions to acquirers' announced acquisition plans as evidence that consolidation is value reducing.

Second, the efficiency gains from consolidation may be reaped largely by bank customers in a competitive market (as suggested by the evidence in Jayaratne and Strahan 1997). In that case, stock prices of banks might capture little of the efficiency gains of consolidation. Measures of consumer surplus (convenience, transaction cost, interest rate spreads) might be more useful measures of efficiency gains than bank stock prices or bank earnings.

Third, if acquisitions are anticipated, their positive effects on bank value may not show themselves at the announcement date. Many banks have clearly expressed their acquisition strategies (NationsBank, BancOne, and Harris Bank, for example). Acquisition announcements may provide details about timing and specific targets but less information about the future shape of the bank, which may have been known to the market before the announcement.

Fourth, a negative market reaction could itself reflect market disap-

pointment with the announced transaction because of anticipated gains for consolidation transactions if some such transactions become less likely as the result of the announced consolidation. As we argue in our analysis of Firstar's acquisitions, a possible interpretation of the market's negative reaction to Firstar's acquisition announcements is that the market believed Firstar's value-maximizing strategy was to become acquired by a larger superregional bank. Despite Firstar's impressive record before these acquisitions and despite its reasonable expectation of achieving gains through consolidation, the market may have been disappointed by the implication of these announcements for the long-run strategy of the bank.

Fifth, market reactions may reflect an incomplete understanding of the transactions. McCoy, Frieder, and Hedges (1994) contend that the nature of the gains from consolidation has changed over short periods during the past twenty years. Given the limited information from experience available in the market to judge the likely success of consolidations, market expectations may be formed largely from the record of a few transactions, which may provide an inaccurate picture of anticipated gains when the motivations for mergers are changing.

Average Postmerger Performance

Studies of postconsolidation performance often provide mixed evidence on typical cost savings and revenue gains from mergers and acquisitions. The various studies all report that acquisition targets tend to be relatively inefficient banks. They disagree, however, about the extent to which acquisitions help to realize potential efficiency gains. Results are sensitive to the type of bank being analyzed and the benchmark used for comparison. Some studies report little average performance improvement from consolidation. Berger and Humphrey (1992), for example, examined a sample of bank consolidations from 1981 to 1989 and found little realized gains from mergers. Srinivasan and Wall (1992) and Rhoades (1993a) discovered no cost savings from mergers.

More recent work suggests that mergers may produce significant revenue gains, despite scant cost savings. Akhavein, Berger, and Humphrey (1997); Berger (1997); and Peristiani (1997) found no significant cost savings from consolidations but did find increases in profits after consolidation, which largely reflected portfolio reallocations—the switch from government securities holdings to loans—or improvements in asset quality. The first and last of these studies examine data from the 1980s, while the second uses data only for the period 1991–1994. Together, those findings suggest that some combination of greater loan diversification opportunities or perhaps the profitability of lending as part of a multiproduct delivery strategy (quasi rent creation) accompanies consolidation—that is, bank management is either more willing or more able to take on lending risk than before.

Other studies of this same period do detect significant cost savings from consolidation. Spindt and Tarhan (1992a, 1992b) used a matched-sample approach to construct their performance benchmark. They concluded that large gains were realized by acquirers and that the prices paid for targets were fair measures of expected discounted future gains from the acquisition. Toevs (1992) provides a similarly optimistic perspective on cost savings, using data on lines of business rather than total banking costs. Cornett and Tehranian (1992), who confined their analysis to large bank holding companies, found large increases in postmerger performance; also, cross-sectional differences in ex post performance and cost savings were reflected in cross-sectional differences in stock market reactions to announcements.

Some differences across studies—especially the differences regarding cost savings—reflect different definitions of costs and profits. Cornett and Tehranian (1992) focused on measures that excluded interest costs but have been criticized for doing so since banks with high operating costs may be spending more on operations to avoid higher interest costs (Berger 1997). Differences in the samples of banks studied may also produce different measures of cost savings. Spindt and Tarhan's findings may reflect a high proportion of small banks in their sample.

In general, the conclusions from the performance-based studies of mergers are mixed. Still, they provide a more optimistic picture than the evidence on average stock price reactions. They also tend to emphasize potential gains from revenue increases rather than cost savings and show that those gains in revenue are not traceable to increases in market power.

The scant evidence of postmerger improvement from some performance studies may be attributable to methodological pitfalls. Some problems are similar to those encountered in the literature about reactions of stock prices—for example, the possibility that efficiency gains will not show up as net earnings improvements because of competition. Other pitfalls in measurement are peculiar to performance comparisons. First, there is a selectivity bias. Nonmerging banks (which serve as the benchmark for comparison) may be avoiding consolidation for good reason. Perhaps they are pursuing de novo branching as a method for expansion, or perhaps they are in a different service niche, where consolidation is not as useful. This selectivity bias implies that measured improvements from consolidation relative to some benchmark will understate actual improvements.

Second, lags in performance improvement may be extensive. Transactions motivated by pure cost cutting show benefits fastest, but even in these cases most industry estimates claim that cost savings take roughly three years to become fully realized. In the first year after a merger, costs often rise because of special costs from the merger itself (including special accounting charges and severance pay). Transactions motivated by strategic factors (marketing synergies or diversification) may take much longer

to show themselves. Diversification advantages may take years to appear. Revenue gains from combining services to foster more profitable client contacts may not be realized for several years. Furthermore, some acquirers deliberately pursue a slow path when integrating targets into the parent institution because they believe that doing so enhances the long-run profitability of the acquisition (through its effects on customer relationships and employee morale).

Third, during a merger wave, it is hard to construct a believable benchmark of performance to gauge the gains from consolidation, and this problem is exacerbated by the lags in realizing the gains of mergers. Panel data analysis of mergers seeks to take advantage of within-firm and across-firm differences in consolidation status to identify gains from consolidation. But, in the midst of a merger wave, banks that did not acquire an institution in a given year are still likely to have been involved in a previous consolidation or are likely to be involved in one in the near future. The econometrician faces the difficult task of identifying firm-years that should reflect the influence of consolidation as opposed to firm-years that should not. Recall that the gains of consolidation (according to bankers) show themselves in bank performance with a lag and the first year of consolidation often sees large expenses associated with the transaction itself. Thus, constructing a meaningful comparison of merging and non-merging institutions to evaluate performance consequences may be difficult. (We return to the problem of constructing counterfactual benchmarks in our case discussions.)

Fourth, because one story does not fit all bank mergers, the econometrician has difficulties in identifying the benefits of mergers. Suppose that there are many different ways in which mergers might improve efficiency (including operating cost savings, x-efficiency gains, and product sales synergies) but that any one merger typically is motivated primarily by only one of the many possible sources of gain (a supposition that we argue below is quite realistic). In that case, econometric modeling that treats all mergers as the same may lead to false conclusions. Suppose that only one in three mergers is motivated by operating cost savings. Then the measured cost savings implied by simple regression analysis of the entire sample of mergers understates by a factor of three the benefits (and overstates coefficient standard errors) from cost reduction for the subset of mergers that are motivated by cost reduction.

From the perspective of this last critique of econometric studies of cost reduction, case studies may be helpful. One benefit from an analysis of cases is the information provided about bank characteristics associated with particular merger motivations. Those characteristics can act as a set of conditioning variables to be used in econometric analysis to sort banks according to the likely motivation of their mergers.

Therefore, average measured gains from consolidation—whether mea-

sured by stock price reactions or by performance improvements—are not reliable indicators of the true average gains. That is not to say, however, that merger optimists are free to ignore these pessimistic results. In addition to the questionable findings about averages, the literature on bank mergers has reported some important cross-sectional differences, and these cross-sectional differences suggest that not all mergers have been equally value maximizing for bank stockholders.

Cross-Sectional Differences and Managerial Incentives

As in other industries (Jensen 1988; Lang, Stulz, and Walkling 1989; Shleifer and Vishny 1990, 1992; Servaes 1991; Healy, Palepu, and Ruback 1992), some bank consolidations produced noncontroversial gains. Some types of bank consolidations are received with enthusiasm by the stock market and offer clear evidence of performance improvement. Acquisitions where acquirers and targets are geographically coincident and where cost-saving opportunities are often transparent, for example, tend to enjoy more favorable market reactions (Houston and Ryngaert 1996, 1997). Some mergers offer clear, visible cost savings in the form of branch closures and payroll savings, while the advantages from strategic mergers (where management stresses product and marketing synergies or diversification) have been harder to identify empirically.

Recent literature has stressed the importance of managerial incentives for determining the success of bank consolidations. This emphasis is particularly plausible in the banking industry. In their analysis of bank profitability and survival, Gorton and Rosen (1995) emphasize that the banking industry traditionally had suffered from regulatory limits on corporate governance that insulated managers from stockholder discipline. Regulations effectively prevented competing banks (or commercial enterprises) from acquiring inefficient banks. Gorton and Rosen argue that much of the exit from banking during the 1980s reflected inefficiency and overcapacity in bank lending resulting from the previous lack of discipline over management.

Gorton and Rosen's (1995) emphasis on tolerance for poor management has been echoed in many earlier studies of bank efficiency. That literature (summarized in Evanoff and Israelevich 1991; Berger, Hunter, and Timme 1993; and Peristiani 1996) finds that much of the cross-sectional variation among banks in efficiency is attributable to x-inefficiency (poor management) rather than to differences in scale, scope, or choice of inputs. The conclusion of these studies is that an important source of efficiency gain in mergers should come from taking banks away from inefficient managers and placing bank operations in the hands of efficient management.

Studies of the gains or losses from bank mergers and acquisitions lend support to the Gorton-Rosen view that entrenched management and regulatory protection from competition explain bank inefficiency in the 1980s.

Whether one measures success by an examination of changes in bank performance after mergers or by reactions of stock prices to consolidation announcements, there is enormous variation across banks, and some variation in the benefits of consolidation can be explained by the incentives and abilities of the acquiring institutions' management.

Allen and Cebenoyan (1991) contend that the combination of the ownership share of management and the concentration of nonmanagement ownership helps to predict which consolidation transactions are most successful. They argue that managers may pursue mergers for value-maximizing reasons or, alternatively, for selfish career objectives. Whether a merger deal will be beneficial to stockholders depends on whether the incentives of managers are aligned with the interests of stockholders (through a combination of the carrot of an ownership stake and the stick of stockholder discipline). Palia (1993) concludes that managers without a large stake in their banks tend to pursue non-value-maximizing mergers for their bank's stockholders, presumably because they seek private gains from the merger. Similarly, Cornett, Palia, and Tehranian (1997) find that the structure of bank CEO compensation is an important predictor of the stock market's reaction to consolidation announcements. If bank CEOs own large stakes in their banks and have highly sensitive pay-for-performance contracts, they tend to choose acquisition targets that inspire more confidence in the stock market.

Stories of the 1980s for the 1990s?

By relating the gains from consolidation to the incentives of management, these studies offer plausible explanations for why potential advantages from consolidation are not always realized. They also suggest a possible synthesis of the contrary evidence regarding average profitability of mergers. Perhaps the potential gains from bank consolidation are great (as suggested by cross-regime comparisons), but in many cases managerial incentives prevent those gains from being realized.

What is less clear is the applicability of the evidence of postmerger performance from 1980s consolidations to the current merger wave in banking. All the aforementioned inquiries that relate managerial incentives to bank efficiency and managerial consolidation decisions use pre-1992 data, and many use samples with an even earlier end date. The problem in applying these results to the post-1992 period is that the recent period is one of far greater competition, far fewer barriers to entry, and significant improvement in performance for the industry as a whole.

The possibility that the 1990s are different from the 1980s suggests the value of examining cases from the 1990s to see if efficiency gains resulting from mergers are larger than in the 1980s. Rhoades (1993b) reported preliminary findings of unusually high cost savings from his sample of nine case studies of mergers between 1986 and 1992, with many cases drawn

from 1991 and 1992. While some of his evidence pertains to 1980s transactions, he picked those transactions because he believed they were illustrative of the sorts of transactions that characterize the new wave of mergers. The sample includes Wells-Crocker (1986), BONY-Irving (1988), First Union–Florida National (1989), Fleet/Norstar–Bank of New England (1991), Chemical–Manufacturers Hanover (1991), BankAmerica–Security Pacific (1992), Society-Ameritrust (1992), Comerica–Manufacturers National (1992), and Barnett-First Florida (1992).

As in any case analysis, one can question the representativeness of the sample. But, by selecting a set of cases that exemplify current transactions better than a representative sample of past mergers, Rhoades may actually have minimized selectivity bias for answering his question. His sample of cases was chosen according to the following criteria: large bank size (for both target and acquirer), large geographic overlap between acquirer and target, and explicitly stated motivations of cost cutting. Thus, while Rhoades's sample may have little to say about merger motivations other than cost cutting and while it may have little relevance for understanding the acquisition of small banks by large ones, it is well focused to answer the specific question of whether within-market consolidations between large banks are producing large cost savings in the 1990s. The answer seems affirmative.

The case studies we discuss below have little overlap with those studied by Rhoades (Comerica-Manufacturers is the one case common to both samples), and our cases capture a broader set of phenomena. Like Rhoades, we also provide evidence that the 1990s are different from the 1980s. In particular, we find that competitive pressures are lessening the latitude of managers and thus removing an important impediment to the realization of efficient consolidation.

2 Case Studies

In section 1 we reviewed the existing evidence on the efficiency gains from bank consolidation and pointed to several possible advantages from an examination of individual cases of recent transactions. We posed several questions that helped to motivate our case studies and which we address from the perspective of our nine examples.

To what extent does the consolidation wave reflect pure technological operating cost savings, as opposed to savings from increases in quasi rents (through improved relationship banking) or cost savings from improving the quality of management? Are mergers typically motivated by the same combination of goals, or do mergers typically reflect one goal more than others? Have the mergers of the 1990s produced efficiency gains? Do the circumstances of the cases suggest that the gains from the merger wave of the 1990s should exceed those of the 1980s? What are the lessons of these

case studies for future econometric analysis? How important in practice are the methodological problems of performance studies discussed above (for example, realization lags, one-time charges, and difficulties of constructing reliable benchmarks)? Do the cases support the methodological criticisms of using stock price reactions to infer expected gains?

To shed light on these questions, we developed nine case studies, with the assistance of teams of MBA students from the 1994 commercial bank management course taught by one of us (Calomiris) at the University of Illinois. Those case studies were originally published by Calomiris and Karceski (1995). Here we summarize and update them. After describing the way cases were selected, we provide a brief overview and evaluation of each case.

Sample Selection and Performance Criteria

Unlike Rhoades (1993b), we did not target a particular set of banks for which we knew cost cutting, or any other motivation, was the stated objective of the merger. Rather, student teams were allowed to select cases based on their own interest, with the constraint that the merger be completed between 1992 and 1994. Our sample contains an unrepresentative proportion of Midwestern banks, as the location of these banks offered more convenient access for student interviews of management.

Our intent in not constraining the mergers by type was to pull together a somewhat representative sample of cases. As it turned out, our cases differ greatly from one another. The sizes of the banks involved, their locations, their lines of business, and the motivations behind the mergers are different. Technology- or location-driven cost reductions mattered in the stated motivations for many of these mergers, but so did relationship advantages or x-efficiency gains through better management.

Analysis of Cases

Why Merge?

While all our case studies of bank mergers and acquisitions reflect common competitive pressures, the most obvious lesson of the various case studies is the multiple motivations for combining banks. The characteristics of acquirers and acquirees and the nature of their deals reflect those differences. Some deals were primarily motivated by operating cost savings, while in one case there was no possibility of reducing operating costs at all. Market access to a particular client base or location was the most important motive in some cases, sometimes as a means to cross-sell products to customers when their preexisting intermediary lacked comparative advantage in delivering those products. In one case, the managerial inefficiency of the target provided the largest potential gains from acquisition.

The first two case studies—Harris (BMO)–Suburban and First Bank–

Boulevard—exemplify how different the motivations and circumstances of a bank acquisition can be. The Harris takeover of Suburban was, in essence, the acquisition of a reasonably successful suburban Chicago banking franchise by a large Chicago city franchise with an aggressive strategy to buy customer relationships. Harris and Suburban continued to operate independently after the takeover, and there was virtually no opportunity for cost reduction through operating cost savings, executive salaries, or x-efficiency gains. Executives and directors were not eliminated to save overhead costs. The two banks and their managers had worked with one another for many years in the context of a correspondent relationship. The acquisition was a friendly, unsolicited offer made at a high premium. Suburban was a family-owned bank in which the concentration of ownership and control was high. Concentration of control had been enhanced by the issuance of two classes of common stock. X-efficiency gains from improving managerial personnel were not anticipated.

Harris Bank's stock is not traded since it is a wholly owned subsidiary of Bank of Montreal. The stock price of Bank of Montreal showed a slight increase around the announcement date, although it would be inappropriate to attribute that change to such a small acquisition. What we can say, however, is that the Suburban acquisition and, more broadly, the first important implementation of BMO's Vision 2002 did not produce a negative reaction from the market.

In contrast, First Bank's acquisition of Boulevard followed Boulevard's managers' decision to sell an extremely inefficient bank to the highest bidder. Boulevard was the most inefficient bank in Chicago at the time of its acquisition. In a sample of forty-four banks in the Chicago area, Calomiris and Karceski (1994) found that Boulevard ranked at or near the bottom according to every performance measure, including ROE (forty-second), ROA (forty-second), net interest spread (thirty-sixth), and efficiency ratio (forty-fourth). Boulevard's management—which had long avoided takeover—decided in the summer of 1993 that its best option was to sell the bank. Management voluntarily placed the bank on the auction block two months after establishing lucrative golden parachutes. One way to interpret that decision is that Boulevard's management understood that its franchise value to an acquirer was on a declining path. If it did not sell, it would be out-competed by existing banks or de novo entrants and would face continuing losses of customers and charter value. Under those circumstances, entrenched management decided to exit (taking with it a significant share of the bank's existing charter value) rather than maintain a hold on a declining institution.

While Boulevard shareholders benefited from the deal, entrenched management clearly extracted enormous rents as the price for allowing the shareholders to profit from the merger. The winning bid for Boulevard

contained a relatively small acquisition premium, and the winning bidder was a regional bank from a different city that specialized in trimming the costs of takeover targets. In the Boulevard deal, the acquirer looked to achieve significant cost cutting, partly through widespread layoffs. Not only did Boulevard's stock appreciate as the result of its placing itself on the auction block; First Bank also saw a modest increase in its stock price (1.1 percent absolutely and 1.7 percent relative to the Standard and Poor's financial index in the two days following the acquisition announcement).

The new competitive pressures of the 1990s encouraged both of these acquisitions, but the channels through which competition operated were different. While both deals were justified by anticipated synergies—cross-selling opportunities in the Harris-Suburban transaction and cost-cutting opportunities in the First Bank–Boulevard deal—those potential efficiency gains do not explain the timing of the acquisitions. In the case of Boulevard, the exit strategy of inefficient management, which determined the timing of the deal, had changed as the result of deregulation and competition. In the Harris-Suburban case, Bank of Montreal's aggressive Vision 2002 relationship-based strategy for Harris to seize market share, which was set in motion in 1992, was the determining factor.

The other seven deals reflect somewhat different motives and circumstances. Table 2-1 summarizes some salient features of each of the nine case studies, and a slightly more detailed summary of each case appears in separate "deal at a glance" exhibits (tables 2-2 through 2-10). Although common themes run through many of the cases, the variation across the cases is at least as striking as the similarities.

Two cases are virtually simultaneous acquisitions by Firstar. They share some important features. In both cases, the targets were mortgage specialists, and Firstar's motivation for acquiring them was expansion of market share in the important Chicago and Twin Cities areas. According to Firstar management, the choice of targets reflected some anticipated cost savings but also cross-selling opportunities. Especially in the case of the acquisition of Investors, management claimed that Investors had special skills in mortgage intermediation but could not realize its full potential because of limited financial resources. Firstar had both the capital and the customer network to allow a significant expansion of mortgage intermediation by Investors' mortgage group. In both acquisitions, Firstar expected to retain the management of the preexisting banks, which it regarded as capable.

Both of Firstar's acquisitions coincided with strong negative reactions in the stock market. The market's negative reactions seem surprising, given Firstar's positive track record of successful acquisitions in the years immediately before these deals, which had demonstrated its ability to realize cost savings and revenue gains from acquiring banks.

As noted in our critique of market reactions as measures of potential

Table 2-1 Key Aspects of Nine Case Studies

Acquirer-Target	In-Market or Across-Market Deal	Relative Size of Acquirer to Target	Motivation for the Deal		Who Initiated the Deal?	Were There Multiple Bidders?	Were There Managerial Parachutes?	Size of the Takeover Premium	Stock Market Reaction		
			Acquirer	Target					Acquirer	Target	Overall
Harris-Suburban	In	Much larger	Expansion according to Vision 2002	Could not turn down such a high premium	Acquirer	No	No	High	Slightly positive	Large positive	Slightly positive
First Bank–Boulevard	Across	Much larger	Entry into the Chicago market	Loan loss problems, entrenched management	Target	Yes	Yes	Low	Slightly positive	Large positive	Positive
Firstar–First Colonial	In and across	Much larger	Increased share in Chicago market	Concerned about the difficulty of keeping a small bank profitable	Target	Yes	No	Average	Negative	Negligible	Negative
Firstar-Investors	In	Much larger	Increased share in Minnesota market	Concerned about the difficulty of keeping a small bank profitable	Target	No	No	Average	Slightly negative	Large positive	Slightly negative
First Chicago–Lake Shore	In	Much larger	Increased share in affluent Chicago market	High takeover premium	Target	Yes	Yes	High	Slightly negative	Large positive	Slightly negative

(*continued*)

Table 2-1 (continued)

Acquirer-Target	In-Market or Across-Market Deal	Relative Size of Acquirer to Target	Motivation for the Deal		Who Initiated the Deal?	Were There Multiple Bidders?	Were There Managerial Parachutes?	Size of the Takeover Premium	Stock Market Reaction		
			Acquirer	Target					Acquirer	Target	Overall
Comercia–Manufacturers National	In	Same—merger of equals	Concerned about potentially hostile acquirer in the future, revenue and cost synergies	Concerned about potentially hostile acquirer in the future, revenue and cost synergies	Unknown	No	Yes	Negligible	Large positive	Large positive	Large positive
NationsBank–MNC	Across	Much larger	Entry into Northeastern U.S. market	Severe real estate loan losses	Target	Yes	Unknown	Low	Slightly positive	Positive	Slightly positive
Roosevelt Financial–Farm & Home	In	Slightly larger	Expand to remain independent in the long run	Problems containing costs; concerns over long-run profitability	Target	Yes	Yes	High	Slightly negative	Large positive	Positive
Mercantile–United Postal	In	Much larger	Increased share in Missouri market	Concerned about potentially hostile acquirer in the future	Unknown	No	Yes	Average	Slightly negative	Large positive	Slightly positive

Source: Authors.

Table 2-2 Harris Bankcorp's Acquisition of Suburban Bancorp, 1994

Nature of the Deal: Acquisition

Buyer: Harris Bankcorp, Inc., with the help of its parent, Bank of Montreal (BMO)

Headquarters:	Chicago
Total assets:	$13.1 billion (12/31/93), BMO—$102 billion (9/31/94)
ROA:	0.90% (year ended 12/31/93)
ROE:	12.31% (year ended 12/31/93)
Tier 1 capital:	9.00% (12/31/93)
Efficiency ratio:	75.29% (year ended 12/31/93)

Target: Suburban Bancorp, Inc.

Headquarters:	Palatine, Illinois (a Chicago suburb)
Total assets:	$1.47 biliion (9/31/94)
ROA:	1.18% (year ended 12/31/93)
ROE:	15.28% (year ended 12/31/93)
Tier 1 capital:	14.52% (12/31/93)
Efficiency ratio:	67.76% (year ended 12/31/93)
Announcement Date:	April 18, 1994
Completion Date:	October 1, 1994

Accounting Method: Pooling of Interests

Financial Terms: Stock swap—each share of Suburban Bancorp stock was exchanged for 3.9352 shares of Bank of Montreal. The total cost of the takeover was $224 million.

Motivation: Harris made an unsolicited offer for Suburban on March 23, 1994, to expand its presence in the Chicago market according to BMO's Vision 2002 plan. No synergies were created other than cross-selling to existing Suburban customers.

Other Notes: Harris paid a high premium for Suburban (2.42 times book value) and received a bank with a strong balance sheet and a similar organizational culture built around decentralized management. The takeover was friendly, and there were no other bidders.

Market Reaction

BMO: There was little, if any, reaction because of the large difference in size between BMO and Suburban. BMO stock fell 1.94% to C$25.25 on April 18, 1994, while the Dow Jones Canadian Stock Index dropped 1.61% on the same day.

Suburban: Suburban shares jumped dramatically on news of the takeover. The stock closed at $66 on April 18, 1994, representing a 33% daily gain as well as a 65% eight-day gain (information about the deal may have been leaked during the previous week).

Source: Authors.

efficiency gains, one interpretation of a negative response to an acquisition announcement is that the announcement disappoints another market expectation. In this case, before Firstar's acquisition announcements, the market may have been expecting Firstar to position itself as an acquiree rather than as an acquirer. In the areas where Firstar operates, it suffers a size disadvantage relative to competing giants like Norwest and First Bank System in the Twin Cities and Harris (Bank of Montreal), BankAmerica, Lasalle (ABN Amro), and others in Chicago. As interstate branching becomes a reality, Firstar could suffer an increasing competitive disadvantage due to its limited size. Attempting to grow itself into the position to compete in the future may have been seen as an indication of an unwillingness to maximize its franchise value by allowing itself to be acquired.

Table 2-3 First Bank System's Acquisition of Boulevard Bancorp, 1994

Nature of the Deal: Acquisition	
Buyer: First Bank System Inc. (FBS)	
Headquarters:	Minneapolis
Total assets:	$26.4 billion (12/31/93)
ROA:	1.17% (year ended 12/31/93)
ROE:	13.8% (year ended 12/31/93)
Efficiency ratio:	59.8% (year ended 12/31/93)
Target: Boulevard Bancorp, Inc.	
Headquarters:	Chicago
Total assets:	$1.6 billion (3/25/94)
ROA:	0.45% (year ended 12/31/93)
ROE:	6.44% (year ended 12/31/93)
Tier 1 capital:	6.91% (12/31/93)
Efficiency ratio:	83% (year ended 12/31/93)
Announcement Date:	August 16, 1993
Deadline for Bids:	September 22, 1993
Takeover Announcement Date:	September 30, 1993
Completion Date:	March 26, 1994
Accounting Method: Purchase	

Financial Terms: Stock swap—each share of Boulevard stock was exchanged for 0.8132 shares of FBS stock. FBS repurchased and exchanged 6.2 million shares at a total cost of $206.2 million.

Motivation: Boulevard put itself up for sale, after establishing a lucrative $3.7 million golden parachute on June 21, 1993. First Bank submitted the highest bid, facilitating its entrance into the critical Chicago market.

Other Notes: FBS paid only a 10% premium above Boulevard's stock price. Boulevard was suffering from some commercial realty loan losses and inefficient operations. The low takeover premium may have been the result of other banks' inability or unwillingness to fix Boulevard's problems, as well as the golden parachutes.

Market Reaction

First Bank: Even with the large difference in size, FBS's stock went up 1.14% in the two days ended September 30, 1993, while the S&P 500 fell 0.56%. The combined market value of FBS and Boulevard declined less than the S&P financial index during the year ending March 25, 1994.

Boulevard: Boulevard's share price went up almost 31% from the end of June to mid-August 1993, including a 7.53% increase in the two days ending September 30, 1993.

Source: Authors.

First Chicago's acquisition of Lake Shore is a unique example of a large, local Chicago franchise acquiring a successful small bank catering to the affluent retail market around Michigan Avenue. Lake Shore's interest in becoming acquired was the result of a managerial shakeup that brought in a new CEO who felt that the value-maximizing strategy of the bank was to allow itself to become acquired. This suggestion was greeted initially with some alarm by Lake Shore's board of directors. But the board changed its view once the potential profitability to shareholders became apparent. Clearly, Lake Shore was not a bank with entrenched, inefficient management. It was a successful bank that decided that the best use of its

Table 2-4 Firstar's Acquisition of First Colonial Bankshares, 1995

Nature of the Deal: Acquisition

Buyer: Firstar Corporation	
Headquarters:	Milwaukee
Total assets:	$15.1 billion (12/31/94)
ROA:	1.51% (year ended 12/31/94)
ROE:	17.0% (year ended 12/31/94)
Tier 1 capital ratio:	8.20% (12/31/94)
Efficiency ratio:	60.6% (year ended 12/31/94)
Target: First Colonial Bankshares Corporation (FCBC)	
Headquarters:	Chicago
Total assets:	$1.8 billion (9/30/94)
ROA:	0.96% (year ended 12/31/94)
ROE:	11.0% (year ended 12/31/94)
Overall capital ratio:	11.67% (12/31/93)
Efficiency ratio:	74% (year ended 12/31/94)
Takeover Announcement Date:	July 29, 1994
Approval Date:	January 31, 1995

Accounting Method: Pooling of Interests

Financial Terms: Stock swap—each share of FCBC common stock was exchanged for 0.7725 shares of Firstar common stock, and each share of FCBC preferred stock was exchanged for one share of Firstar preferred stock. Firstar exchanged about 6.5 million shares of common stock, and the total cost of the deal was about $314 million.

Motivation: FCBC was less profitable and efficient than its peers in the early 1990s. Management felt it would be difficult for FCBC to remain independent and profitable over the long run. With its long tradition of expansion through acquisitions, Firstar wanted to expand significantly and consolidate its Chicago operations.

Other Notes: Firstar paid a premium of 1.90 times book value. There were multiple bidders, and the deal was friendly.

Market Reaction

Firstar: Firstar's common stock price fell significantly after the announcement. The stock dropped 3.6% on August 1, 1994, while the S&P 500 fell by less than 0.1%. From July 4 through August 12, Firstar declined 4.8%, though the S&P 500 was up 3.5%.

First Colonial: Surprisingly, FCBC's common stock price did not increase on news of the takeover. The stock dropped 1.6% on August 1, 1994, and was unchanged from July 4 through August 12.

Source: Authors.

franchise value—its highly desirable customer relationships—was to sell them to an acquirer. Many banks bid for Lake Shore, which was able to command a handsome premium from First Chicago. First Chicago claimed to see opportunities to both expand its retail market share and cut costs by combining its operations with its acquiree. The market's reaction to First Chicago's acquisition was slightly negative both for First Chicago and for the combined entity in the two days following the announcement.

The merger between Comerica and Manufacturers National is a unique case among the nine: it was a merger of equals. Both banks were in the

Table 2-5 Firstar's Acquisition of Investors Bank Corporation, 1995

Nature of the Deal: Acquisition

Buyer: Firstar Corporation	
Headquarters:	Milwaukee
Total assets:	$15.1 billion (12/31/94)
ROA:	1.51% (year ended 12/31/94)
ROE:	17.0% (year ended 12/31/94)
Tier 1 capital ratio:	8.20% (12/31/94)
Efficiency ratio:	60.6% (year ended 12/31/94)
Target: Investors Bank Corporation	
Headquarters:	Minneapolis/St. Paul
Total assets:	$1.4 billion (5/1/95)
ROA:	1.03% (year ended 12/31/94)
ROE:	21.6% (year ended 12/31/94)
Tier 1 capital ratio:	6.41% (12/31/93)
Efficiency ratio:	61.2% (year ended 12/31/94)
Announcement Date:	August 19, 1994
Completion Date:	May 1, 1995

Accounting Method: Pooling of Interests

Financial Terms: Stock swap—each share of Investors common stock was exchanged for 0.8676 shares of Firstar common stock, and each share of Investors preferred stock was exchanged for $27.50 in cash. The total cost of the takeover was $106 million.

Motivation: Investors started to consider putting itself up for sale in late 1993. The size and expertise of Investors mortgage banking division were particularly attractive to Firstar, which wanted to diversify its holdings. Management expects some cross-selling opportunities and eventual efficiency gains.

Other Notes: Piper Jaffray estimated the takeover premium at 21.8%, slightly above average for the takeover of a similarly sized Midwest thrift. The deal was friendly, and there were no other bidders.

Market Reaction

Firstar: Firstar's common stock price fell after the announcement. In the week after the announcement, Firstar's stock dropped 0.4%, while the S&P financial index was up 2.2%. From July 15 to August 19, the stock fell by 5.16% (S&P financial index rose 0.88%), though this was partially the result of the announcement of the Firstar–First Colonial deal on July 29, 1994.

Investors: Investors' share price drastically increased with the takeover. In the week after the announcement, Investors' stock climbed 3.06%, and from July 15 through August 19, the share price rose 30.67%.

Source: Authors.

middling size category, and their futures as independent franchises—like those of Firstar and First Chicago—were in doubt. Despite the fact that the merger can be understood partly as a defensive action against future acquisition, management argued that there were strong cost-saving opportunities and product complementarities between the two banking organizations that made the merger desirable. As the result of the acquisition, 1,800 jobs were eliminated (mainly through attrition and early retirement).

Product complementarities within the context of relationship building were also key to the motivations of management; management at both

Table 2-6 First Chicago's Acquisition of Lake Shore Bancorp, 1994

Nature of the Deal: Acquisition

Buyer: First Chicago Corporation (FCC)	
Headquarters:	Chicago
Total assets:	$56.9 billion (12/31/93)
ROA:	1.50% (year ended 12/31/93)
ROE:	23.0% (year ended 12/31/93)
Tier 1 capital ratio:	8.80% (12/31/93)
Efficiency ratio:	54.2% (year ended 12/31/93)
Target: Lake Shore Bancorp	
Headquarters:	Chicago
Total assets:	$1.3 billion (7/8/94)
ROA:	1.03% (year ended 12/31/93)
ROE:	10.04% (year ended 12/31/93)
Tier 1 capital ratio:	10.02% (12/31/93)
Efficiency ratio:	62.7% (year ended 12/31/93)
Announcement Date:	September 21, 1993
Takeover Announcement Date:	November 22, 1993
Completion Date:	July 8, 1994

Accounting Method: Pooling of Interests

Financial Terms: Stock swap based on FCC's twenty-day average closing share price just prior to the official completion date. Each share of LSB stock was exchanged for 0.625 shares of FCC stock. FCC issued about 6.2 million shares at a cost of $323 million.

Motivation: Lake Shore decided to put itself up for sale since its performance and the heated acquisition market afforded a high takeover premium. FCC won the bidding war and received a highly visible and consistently profitable bank in downtown Chicago.

Other Notes: FCC paid a high premium for Lake Shore (2.5 times book value), partially caused by bids from as many as fifteen other institutions. This was a friendly takeover. Some top LSB managers exercised golden parachutes.

Market Reaction

First Chicago: There was little, if any, reaction due to the large difference in size between FCC and LSB. The combined market value of FCC and LSB dropped slightly relative to the S&P Financial index from May 1993 to June 1994.

Lake Shore: LSB's share price rose dramatically in late August 1993 as word leaked out that Lake Shore was looking for a buyer. Over the three-month period beginning in mid-August 1993, LSB's shares went up by 30%.

Source: Authors.

banks viewed the development and maintenance of long-term relationships with customers as central to their strategies. An important product complementarity between the two banks that management expected to develop as the result of the merger was the cross-selling of trust services to the managers of corporate customers. Comerica had the better trust service division, while Manufacturers had the more valuable corporate relationships. The market reaction to the merger announcement was positive for both Comerica and Manufacturers. Stock prices of each entity, and thus of the combined entity, jumped nearly 16 percent in the two days following the announced merger.

Table 2-7 Comerica and Manufacturers National—A Merger of Equals, 1992

Nature of the Deal: Merger

Buyer: Comerica Inc.	
Headquarters:	Detroit
Total assets:	$14.4 billion (12/31/91)
ROA:	1.06% (year ended 12/31/91)
ROE:	15.90% (year ended 12/31/91)
Tier 1 capital ratio:	6.60% (12/31/91)
Efficiency ratio:	71.1% (year ended 12/31/91)
Target: Manufacturers National Bank	
Headquarters:	Detroit
Total assets:	$13.5 billion (12/31/91)
ROA:	1.02% (year ended 12/31/91)
ROE:	15.31% (year ended 12/31/91)
Tier 1 capital ratio:	6.68% (12/31/91)
Efficiency ratio:	64.0% (year ended 12/31/91)
Announcement Date:	October 28, 1991
Completion Date:	June 18, 1992

Accounting Method: Pooling of Interests

Financial Terms: Stock swap—each of the 31.2 million outstanding shares of Manufacturers common stock was exchanged for 0.81 shares of Comerica common stock.

Motivation: Both banks were concerned about being targets of future, possibly hostile takeover activity. Comerica and Manufacturers had similar corporate cultures that emphasized long-term customer relationships. The banks' areas of expertise complemented each other well, allowing for cross-selling and additional market share expansion opportunities.

Other Notes: There were no other interested parties involved in the negotiations, and the deal was friendly. About 1,800 jobs were cut, but most of this reduction in force was facilitated through early retirement and normal attrition.

Market Reaction

Comerica: In the five-day period ended November 1, 1991, Comerica's stock price jumped 15.5% compared with a corresponding increase in the S&P financial index of 3.4% over the same period.

Manufacturers: In the five-day period ended November 1, 1991, Manufacturers National's stock price increased 15.9%.

Source: Authors.

NationsBank's acquisition of Maryland National Corporation combined a large, high-performance bank with a struggling, middling-sized institution. Maryland National found itself in dire straits as a result of overexposure to local real estate loan losses. The main attraction for NationsBank was gaining a foothold in a region that it had targeted for expansion. Acquiring distressed institutions at low cost has been a key feature of NationsBank's strategy for interregional expansion; knowing how to structure and execute such acquisitions is considered a comparative advantage of NationsBank. Maryland National was not considered a desirable takeover for many banks because of its loan portfolio problems.

NationsBank's strong bargaining position allowed it to pay a small premium over book value and attach stringent conditions to its offer, giving it

Table 2-8 Takeover of MNC Financial by NationsBank, 1993

Nature of the Deal: Acquisition

Buyer: NationsBank Corporation	
Headquarters:	Charlotte
Total assets:	$118.1 billion (12/31/92)
ROA:	1.00% (year ended 12/31/92)
ROE:	15.8% (year ended 12/31/92)
Shareholders' equity to total assets:	6.62% (12/31/92)
Noninterest expense to total assets:	3.36% (year ended 12/31/92)
Target: Maryland National Corporation (MNC)	
Headquarters:	Baltimore
Total assets:	$16.5 billion (9/30/93)
ROA:	0.60% (year ended 12/31/92)
ROE:	7.8% (year ended 12/31/92)
Shareholders' equity to total assets:	7.84% (12/31/92)
Noninterest expense to total assets:	4.30% (year ended 12/31/92)
Announcement of Initial Agreement:	July 17, 1992
Exercise of the Full Purchase Option:	February 18, 1993
Completion Date:	October 1, 1993

Accounting Method: Pooling of Interests

Financial Terms: NationsBank initially paid $200 million for a 17% stake in MNC through preferred stock along with an option to acquire the remaining 83% within five years. Upon exercise of this option, MNC shareholders had the option to exchange each share of MNC stock for $15.17 in cash or 0.2985 shares of NationsBank common stock. This resulted in an extra cost to NationsBank of about $700 million, including the issuance of up to 13.6 million new shares.

Motivation: MNC initiated the deal, driven by an overexposure to real estate risk in the Maryland–Washington, D.C., area. NationsBank seized the opportunity to establish a stronghold in the Northeastern region of the United States.

Other Notes: NationsBank paid a low takeover premium (about 1.25 times MNC's book value). MNC was eager to be acquired, and other large banks were wary of potential hidden problems with MNC's real estate holdings.

Market Reaction

NationsBank: The reaction was positive. NationsBank stock rose 6.1% during the two days surrounding the bank's decision to purchase all of MNC.

MNC: The reaction was positive and remarkably noise free. MNC stock took a one-time jump of 9.7% between February 18 and 19, 1993, and increased just slightly thereafter.

Source: Authors.

the option to cancel the agreement if large, hidden loan problems became apparent. The low price of the acquisition and its locational advantage for NationsBank produced an unusually positive appreciation (6.1 percent) of the acquirer's stock over the two days following its announcement.

Mercantile's acquisition of United Postal Bancorporation saw the absorption of a small S&L by one of the dominant regional banks operating in the same market (St. Louis). The closing of overlapping branch facilities would provide some opportunity for operating cost savings. But United Postal was attractive to Mercantile primarily because of its comparative advantage in mortgage retailing, which reflected its innovative and effi-

Table 2-9 **Purchase of Farm & Home by Roosevelt Financial Group, 1994**

Nature of the Deal: Acquisition

Buyer: Roosevelt Financial Group, Inc. (RFG)	
Headquarters:	St. Louis
Total assets:	$4.47 billion (12/31/93)
ROA:	0.90% (year ended 12/31/93)
ROE:	18.2% (year ended 12/31/93)
Tier 1 capital ratio:	2.73% (12/31/93)
Efficiency ratio:	36.86% (year ended 12/31/93)
Target: Farm & Home Financial Corporation (F&H)	
Headquarters:	St. Louis
Total assets:	$3.57 billion (12/31/93)
ROA:	0.24% (year ended 12/31/93)
ROE:	4.83% (year ended 12/31/93)
Tier 1 capital ratio:	2.29% (12/31/93)
Efficiency ratio:	69.87% (year ended 12/31/93)
Takeover Announcement Date:	December 3, 1993
Completion Date:	June 30, 1994

Accounting Method: Pooling of Interests

Financial Terms: Stock swap—each share of F&H common stock was exchanged for 0.67 shares of RFG common stock. The total cost of the takeover was about $258 million, and RFG issued about 18 million common shares.

Motivation: Hired by F&H to provide advice on strategic alternatives, Bankers Trust recommended that F&H look for an acquirer. RFG was expanding its holdings rapidly to achieve a size that would allow it to remain independent over the long run. The deal was motivated more by cost-cutting opportunities than by prospects for revenue growth.

Other Notes: RFG paid a premium of 40% above current market value at the time of the announcement. The deal was friendly, and there was probably at least one other bidder.

Market Reaction

Roosevelt: There was little market reaction to the deal. In the two-week period from November 24 through December 8, 1993, RFG's stock price was unchanged, while the S&P financial index increased 3.76% over the same period.

Farm & Home: There was a large positive reaction to the takeover announcement. In the two-week period from November 24 through December 8, 1993, F&H's common stock price went up by 44.1%.

Source: Authors.

cient management. Mercantile hoped to see cross-selling opportunities, particularly between consumer credit and mortgage credit. Thus, the acquisition largely sought to combine Mercantile's existing customer network with the technical skills of United Postal's mortgage unit.

The capital gains enjoyed by United Postal's stockholders illustrate the magnitude of the potential gains to the skillful management of a retail mortgage business. Its stock-holders enjoyed a 600 percent capital gain on their investment over only eighteen months. Mercantile's stock price showed little or no relative decline on the announcement of the deal (its stock price remained unchanged, but other financial stocks rose by an

Table 2-10 Mercantile's Takeover of United Postal, 1994

Nature of the Deal: Acquisition

Buyer: Mercantile Bancorporation

Headquarters:	St. Louis
Total assets:	$12.2 billion (12/31/93)
ROA:	0.97% (year ended 12/31/93)
ROE:	13.0% (year ended 12/31/93)
Tier 1 capital ratio:	11.06% (12/31/93)
Efficiency ratio:	64.0% (year ended 12/31/93)

Target: United Postal Bancorporation, Inc. (UPBI)

Headquarters:	St. Louis
Total assets:	$1.3 billion (12/31/93)

No data are available for UPBI since the firm went public in 1992.

Takeover Announcement Date:	August 17, 1993
UPBI Shareholder Approval Date:	December 16, 1993
Completion Date:	February 2, 1994

Accounting Method: Pooling of Interests

Financial Terms: Stock swap—each share of UPBI stock was exchanged for 0.6154 shares of Mercantile stock. The total cost of the takeover was $177 million.

Motivation: Mercantile was engaged in a series of acquisitions in the early 1990s in response to regulatory changes that increased competition in Missouri banking. United Postal realized it was too small to remain independent and so chose to agree to the merger with Mercantile.

Other Notes: Mercantile paid a premium of 27% over UPBI's market value as of August 16, 1993. There were no other bids, and the deal was friendly.

Market Reaction

Mercantile: There was little market reaction to the deal, especially since the total market value of UPBI was only about 12% of Mercantile's total market capitalization at the time of the announcement. In the two-day trading period ending August 20, 1993, Mercantile's stock price was unchanged, while the S&P financial index was up about 2%.

United Postal: There was a large positive reaction to the takeover announcement. In the two-day trading period ending August 20, 1993, UPBI stock went up 18%. Original UPBI shareholders (those who purchased shares during the IPO in the middle of 1991) had a capital gain of about 600% over an eighteen-month holding period.

Source: Authors.

average of 2 percent over the two-day postannouncement window). The value of the combined entity increased slightly on the announcement of the merger.

The final case is the friendly combination of two Missouri thrift institutions of similar size, Roosevelt Financial (the acquirer) and Farm & Home Financial. The predicted gains from the merger were cost reductions. The acquiree was suffering high costs and poor earnings and was searching for a suitor that could provide cost savings and the resources to permit continuing growth. The acquirer was pursuing acquisitions to cut average cost. The stock market reaction to the announced acquisition was highly favorable. Roosevelt's stock price was essentially unchanged, while Farm

& Home's stock price rose 44 percent over the two weeks following the announcement. The value of the combined entity thus rose significantly.

Were Acquirers' Advertised Gains Real?

To evaluate these cases, we ask whether acquirers' claims of anticipated efficiency gains from the mergers were plausible ex ante and whether ex post results are consistent with those claims. Our perspectives on these questions are based on available public data. The availability of relevant information is not identical across cases. Nevertheless, we can address these questions reasonably well in most cases. In evaluating whether acquirers' claims were plausible ex ante, we look at the performance of acquirers at the time of the acquisition announcement. Were acquirers relatively efficient banks with relatively high franchise value (and thus likely able to realize potential gains), or were they struggling institutions attempting to expand their size to discourage would-be acquirers? Were acquisitions associated with improvements in relative performance?

Tables 2-11 through 2-17 examine pre- and postmerger performance for our list of acquirers and acquirees, sometimes at the bank holding company level and, where available and relevant, at the chartered bank level. In each case, we compare our list of banks with constructed benchmarks that provide the most relevant comparisons. We emphasize that our goal is not to prove the advertised benefits of these mergers but rather to ask whether acquirers' claims were plausible in light of available evidence and to investigate whether and to what extent our case studies confirm the broader methodological critiques of earlier studies, outlined previously.

Harris-Suburban

Harris's acquisition of Suburban provides a unique opportunity to gauge the potential value of cross-selling synergies as the motivation for bank mergers. This acquisition achieved virtually no cost reductions through the consolidation of operations or management since Harris's strategy with Suburban (and other acquirees) has been to preserve the independence and separateness of existing management. Furthermore, Harris acquired no other banks between 1990 and 1996 (in part because of regulatory pressures on Harris to improve its compliance with the Community Reinvestment Act before continuing its expansion plans). Thus, measured postmerger gains through 1996 are not complicated by additional acquisitions. (In 1997, Harris acquired Household Bank, adding fifty-four banking locations and bringing to fruition its Vision 2002 goal of a 140-branch distribution network five years ahead of schedule.)

The Harris-Suburban transaction is of particular interest given the natural suspicion with which many observers of corporate mergers greet the idea of revenue synergies. In other industries, acquisitions that lack visible opportunities for cost reduction—typically justified by revenue synergies

Table 2-11 Postmerger Performance of Harris-Suburban, 1992–1997 (percent)

Year and Bank	Asset Growth	Loans to Assets	Net Interest Margin	Noninterest Income to Assets	Noninterest Expense to Assets	Efficiency Ratio[a]	Return on Equity	Earnings per Share ($)
1992								
Harris (BHC)[b]	1.39	53.81	3.49	2.55	4.30	77.08	12.71	16.99
Harris banks[c]		53.86	4.16	2.75	4.89	70.90	14.01	NA
Suburban + 12[d]		52.89	4.22	1.00	3.11	64.88	14.04	NA
Suburban only		41.71	4.14	0.88	2.97	62.78	18.94	NA
Ten unaffiliated banks[e]		39.04	3.91	0.63	2.69	63.30	14.10	NA
Lasalle banks[f]		55.60	3.24	0.67	2.36	65.49	8.83	NA
Firstar Bank, Illinois[g]		55.63	4.54	1.70	4.10	70.93	14.27	NA
First National Bank of Chicago[h]		43.03	2.56	1.85	3.56	91.71	−17.10	NA
1993								
Harris (BHC)	−0.62	58.90	3.48	2.58	4.22	75.29	12.31	17.64
Harris banks	5.43	55.09	3.74	2.50	4.52	72.33	11.74	NA
Suburban + 12	5.35	51.89	4.11	1.06	3.12	65.21	13.89	NA
Suburban only	9.82	43.71	3.92	0.90	3.17	69.27	16.61	NA
Ten unaffiliated banks	10.94	39.73	4.05	0.71	2.78	62.24	15.28	NA
Lasalle banks	15.43	58.43	3.34	0.68	2.28	60.78	10.62	NA
Firstar Bank, Illinois	55.76	60.64	4.81	1.15	3.42	62.33	19.08	NA
First National Bank of Chicago	8.31	37.60	2.43	2.96	3.56	72.94	11.14	NA
Midwest banks[i]	14.86	61.49	4.57	2.15	4.18	66.37	14.70	NA

(*continued*)

Table 2-11 (continued)

Year and Bank	Asset Growth	Loans to Assets	Net Interest Margin	Noninterest Income to Assets	Noninterest Expense to Assets	Efficiency Ratio[a]	Return on Equity	Earnings per Share ($)
1994								
Harris (BHC)	8.70	57.88	3.52	2.21	4.25	80.60	9.70	14.60
Harris banks	13.48	52.71	3.57	2.20	4.42	76.74	11.21	NA
Suburban + 12	4.84	53.04	4.18	0.91	3.02	64.30	15.63	NA
Suburban only	12.32	44.11	3.93	0.82	2.88	64.72	18.82	NA
Ten unaffiliated banks	3.60	42.74	4.07	0.64	2.75	62.67	12.15	NA
Lasalle banks	15.32	59.48	3.49	0.61	2.21	58.13	10.94	NA
Firstar Bank, Illinois	95.96	56.65	4.66	1.09	3.27	61.25	15.25	NA
First National Bank of Chicago	23.34	35.88	2.12	1.43	2.51	83.16	5.24	NA
Midwest banks	42.92	60.66	4.19	2.05	3.79	64.67	15.10	NA
1995								
Harris (BHC)	9.13	61.35	3.39	2.18	3.61	70.42	13.60	22.13
Harris banks	5.75	58.14	3.53	2.03	3.79	68.11	13.71	NA
Suburban + 12	13.68	53.04	3.73	0.79	2.64	62.45	15.13	NA
Suburban only	17.70	46.32	3.44	0.72	2.45	62.16	16.13	NA
Ten unaffiliated banks	7.68	43.49	3.74	0.68	2.65	63.97	12.64	NA
Lasalle banks	28.07	61.23	3.30	0.53	2.29	63.87	8.07	NA
Firstar Bank, Illinois	194.28	51.10	4.35	0.88	3.81	78.35	3.90	NA
First National Bank of Chicago	16.03	32.64	2.14	1.50	2.52	82.73	5.12	NA
Midwest banks	11.20	61.87	3.96	2.12	3.61	63.19	14.60	NA
1996								
Harris (BHC)	10.72	62.55	3.34	1.92	3.46	71.78	11.50	19.10
Harris banks	14.11	58.71	3.41	1.76	3.47	67.08	10.46	NA

Suburban + 12	9.02	63.70	3.73	0.77	2.59	61.41	15.74	NA
Suburban only	9.71	59.36	3.57	0.70	2.37	58.60	16.26	NA
Ten unaffiliated banks	10.33	48.90	3.81	0.75	2.75	64.33	11.75	NA
Lasalle banks	11.60	62.67	2.98	0.58	2.13	63.43	8.95	NA
Firstar Bank, Illinois	−4.48	50.80	4.13	0.97	3.18	67.06	12.39	NA
First National Bank of Chicago	4.58	44.61	2.76	1.28	2.26	67.44	8.18	NA
Midwest banks	5.18	64.08	3.78	2.42	3.84	65.53	15.90	NA
1997 (estimated)								
Harris (BHC)	15.75	56.00	3.27	1.77	3.16	68.53	11.13	NA
Harris banks	17.04	56.11	3.39	1.78	3.45	66.70	11.48	NA
Suburban + 12	−0.10	65.49	3.99	0.80	2.55	56.69	19.15	NA
Suburban only	1.18	61.80	3.87	0.77	2.44	55.28	19.02	NA
Ten unaffiliated banks	9.50	49.74	3.45	0.69	2.50	64.66	10.21	NA
Lasalle banks	13.43	62.35	3.26	0.81	2.38	61.50	11.06	NA
Firstar Bank, Illinois	−5.87	51.62	3.94	0.75	2.86	65.22	13.18	NA
First National Bank of Chicago	19.12	42.51	2.50	1.23	2.17	68.91	8.88	NA
Midwest banks	14.28	59.85	2.89	2.63	3.43	65.28	16.00	NA

Source: Holding company data are taken from annual reports; chartered bank data are from Federal Reserve *Call Reports.* The 1997 statistics are estimates based on first-quarter results.

[a]Noninterest expense/(interest income + noninterest income − interest expense).

[b]Harris bank holding company.

[c]Includes all Chicagoland chartered banks within Harris (the parent bank, the twelve Harris independent banks, and Suburban).

[d]Same as note c but excludes parent bank.

[e]Aggregate of unaffiliated Chicago banks constructed by the authors as a nonconsolidation benchmark (see text for details).

[f]Aggregate of Lasalle's Chicagoland chartered banks (comparable to Harris banks).

[g]Illinois chartered bank of Firstar.

[h]Parent chartered bank of First Chicago.

[i]Value Line Midwest bank index from table 1-3.

Table 2-12 **Postmerger Performance of First Bank and NationsBank, 1992–1996 (percent)**

Year and Bank	Asset Growth	Loans to Assets	Net Interest Margin	Noninterest Income to Assets	Noninterest Expense to Assets	Efficiency Ratio[a]	Return on Equity	Earnings per Share ($)
1992								
First Bank[b]	4.20	71.76	4.54	2.97	4.32	64.70	16.40	3.26
NationsBank[b]	7.02	61.59	3.82	1.62	3.36	65.96	15.83	2.30
U.S. banks	1.86	57.30	4.42	1.95	3.87	66.15	12.66	NA
1993								
First Bank	11.63	72.99	4.69	2.84	3.93	59.80	13.80	2.47
NationsBank	33.57	58.35	3.23	1.33	2.72	63.71	15.00	2.89
Midwest banks[c]	14.86	61.49	4.57	2.15	4.18	66.37	14.70	NA
U.S. banks	3.60	56.25	4.42	2.13	3.94	65.23	15.34	NA
1994								
First Bank	4.21	73.20	4.74	2.82	4.02	64.00	17.60	2.14
NationsBank	7.56	60.95	3.38	1.53	2.91	63.29	16.10	3.06
Midwest banks	42.92	60.66	4.19	2.05	3.79	64.67	15.10	NA
U.S. banks	8.33	56.06	4.38	2.00	3.76	64.94	14.64	NA
1995								
First Bank	−1.96	80.28	4.91	2.38	3.67	53.90	21.30	4.11
NationsBank	10.43	62.48	3.20	1.64	2.76	60.56	17.10	3.56
Midwest banks	11.20	61.87	3.96	2.12	3.61	63.19	14.60	NA
U.S. banks	7.40	58.39	4.31	2.02	3.65	63.48	14.71	NA
1996								
First Bank	10.96	74.35	3.89	2.38	3.32	52.89	23.80	5.25
NationsBank	−0.80	66.00	3.75	1.96	3.05	56.79	17.95	4.00
Midwest banks	5.18	64.08	3.78	2.42	3.84	65.53	15.90	NA
U.S. banks	5.54	59.91	4.33	2.19	3.73	62.69	14.60	NA

Source: Holding company data are taken from annual reports; chartered bank data are from Federal Reserve *Call Reports.*

[a]Noninterest expense/(interest income + noninterest income − interest expense).

[b]Bank holding company.

[c]Value Line Midwest index from table 1-3.

Table 2-13 Postmerger Performance of Firstar, 1992–1997 (percent)

Year and Bank	Asset Growth	Loans to Assets	Net Interest Margin	Noninterest Income to Assets	Noninterest Expense to Assets	Efficiency Ratio[a]	Return on Equity	Earnings per Share ($)
1992								
Firstar (BHC)[b]	6.99	74.54	5.11	2.39	3.33	64.04	17.40	2.50
U.S. banks[c]	1.86	57.30	4.42	1.95	3.87	66.15	12.66	NA
Firstar Bank, Illinois[d]		55.63	4.54	1.70	4.10	70.93	14.27	NA
First Colonial (BHC)[e]	−3.30	63.00	4.45	1.38	4.09	75.41	8.73	1.08
Ten unaffiliated banks[f]		39.04	3.91	0.63	2.69	63.30	14.10	NA
1993								
Firstar (BHC)	4.75	78.48	5.04	2.56	2.67	62.56	18.60	2.99
Midwest banks[g]	14.86	61.49	4.57	2.15	4.18	66.37	14.70	NA
U.S. banks	3.60	56.25	4.42	2.13	3.94	65.23	15.34	NA
Firstar Bank, Illinois	55.76	60.64	4.81	1.15	3.42	62.33	19.08	NA
First Colonial (BHC)	1.45	59.98	4.44	1.38	3.95	73.04	8.83	1.15
Ten unaffiliated banks	10.94	39.73	4.05	0.71	2.78	62.24	15.28	NA
1994								
Firstar (BHC)	9.50	78.83	4.89	2.26	2.79	60.61	17.00	2.98
Midwest banks	42.92	60.66	4.19	2.05	3.79	64.67	15.10	NA
U.S. banks	8.33	56.06	4.38	2.00	3.76	64.94	14.64	NA
Firstar Bank, Illinois	95.96	56.65	4.66	1.09	3.27	61.25	15.25	NA
Ten unaffiliated banks	3.60	42.74	4.07	0.64	2.75	62.67	12.15	NA
1995								
Firstar (BHC)	26.93	65.89	4.55	2.18	3.24	61.5	15.11	3.00
Midwest banks	11.20	61.87	3.96	2.12	3.61	63.19	14.60	NA
U.S. banks	7.40	58.39	4.31	2.02	3.65	63.48	14.71	NA
Firstar Bank, Illinois	194.28	51.10	4.35	0.88	3.81	78.35	3.90	NA
Ten unaffiliated banks	7.68	43.49	3.74	0.68	2.65	63.97	12.64	NA

(*continued*)

Table 2-13 (continued)

Year and Bank	Asset Growth	Loans to Assets	Net Interest Margin	Noninterest Income to Assets	Noninterest Expense to Assets	Efficiency Ratio[a]	Return on Equity	Earnings per Share ($)
1996								
Firstar (BHC)	3.11	66.76	4.51	2.30	3.36	58.18	15.95	3.36
Midwest banks	5.18	64.08	3.78	2.42	3.84	65.53	15.90	NA
U.S. banks	5.54	59.91	4.33	2.19	3.73	62.69	14.60	NA
Firstar Bank, Illinois	−4.48	50.80	4.13	0.97	3.18	67.06	12.39	NA
Ten unaffiliated banks	10.33	48.90	3.81	0.75	2.75	64.33	11.75	NA
1997 (estimated)								
Firstar Bank, Illinois	−5.87	51.62	3.94	0.75	2.86	65.22	13.18	NA
Ten unaffiliated banks	9.50	49.74	3.45	0.69	2.50	64.66	10.21	NA
Midwest banks	14.28	59.85	2.89	2.63	3.43	65.28	16.00	NA

Source: Holding company data are taken from annual reports; chartered bank data are from Federal Reserve *Call Reports.* The 1997 statistics are estimates based on first-quarter results.

[a]Noninterest expense/(interest income + noninterest income − interest expense).

[b]Firstar bank holding company.

[c]Aggregate of all chartered U.S. banks from table 1-3.

[d]Firstar Bank, Illinois, an Illinois chartered bank.

[e]First Colonial bank holding company.

[f]Aggregate of all unaffiliated Chicago banks constructed by the authors as a nonconsolidation benchmark (see text for details).

[g]Value Line Midwest bank index from table 1-3.

Table 2-14 **Postmerger Performance of First Chicago, 1992–1997 (percent)**

Year and Bank	Asset Growth	Loans to Assets	Net Interest Margin	Noninterest Income to Assets	Noninterest Expense to Assets	Efficiency Ratio[a]	Return on Equity	Earnings per Share ($)
1992								
First Chicago Corp. (BHC)[b]	4.18	44.45	2.61	3.02	3.57	71.90	3.40	0.64
First National Bank of Chicago[c]		43.03	2.56	1.85	3.56	91.71	−17.10	NA
American National Bank[d]		64.83	4.36	1.60	2.99	55.37	11.26	NA
U.S. banks[e]	1.86	57.30	4.42	1.95	3.87	66.15	12.66	NA
Ten unaffiliated banks[f]		39.04	3.91	0.63	2.69	63.30	14.10	NA
1993								
First Chicago Corp. (BHC)	3.83	38.69	2.61	4.19	3.27	54.20	23.00	8.43
First National Bank of Chicago	8.31	37.60	2.43	2.96	3.56	72.94	11.14	NA
American National Bank	17.95	64.08	4.36	1.58	3.10	56.58	12.48	NA
Midwest banks[g]	14.86	61.49	4.57	2.15	4.18	66.37	14.70	NA
U.S. banks	3.60	56.25	4.42	2.13	3.94	65.23	15.34	NA
Ten unaffiliated banks	10.94	39.73	4.05	0.71	2.78	62.24	15.28	NA
1994								
First Chicago Corp. (BHC)	12.65	48.93	2.62	2.28	2.86	59.90	5.46	3.62
First National Bank of Chicago	23.34	35.88	2.12	1.43	2.51	83.16	5.24	NA
American National Bank	12.20	74.21	4.72	1.45	3.12	56.04	15.03	NA
Midwest banks	42.92	60.66	4.19	2.05	3.79	64.67	15.10	NA
U.S. banks	8.33	56.06	4.38	2.00	3.76	64.94	14.64	NA
Ten unaffiliated banks	3.60	42.74	4.07	0.64	2.75	62.67	12.15	NA
1995								
First Chicago Corp. (BHC)	90.33	52.81	2.63	2.12	2.90	56.35	14.30	3.45
First National Bank of Chicago	16.03	32.64	2.14	1.50	2.52	82.73	5.12	NA
American National Bank	6.11	78.28	5.06	1.19	3.17	55.94	14.69	NA
Midwest banks	11.20	61.87	3.96	2.12	3.61	63.19	14.60	NA

(*continued*)

Table 2-14 (continued)

Year and Bank	Asset Growth	Loans to Assets	Net Interest Margin	Noninterest Income to Assets	Noninterest Expense to Assets	Efficiency Ratio[a]	Return on Equity	Earnings per Share ($)
U.S. banks	7.40	58.39	4.31	2.02	3.65	63.48	14.71	NA
Ten unaffiliated banks	7.68	43.49	3.74	0.68	2.65	63.97	12.64	NA
1996								
First Chicago Corp. (BHC)	−14.25	62.14	2.76	2.44	3.11	59.87	17.00	4.32
First National Bank of Chicago	4.58	44.61	2.76	1.28	2.26	67.44	8.18	NA
American National Bank	24.05	81.09	4.46	1.09	2.72	53.84	15.51	NA
Midwest banks	5.18	64.08	3.78	2.42	3.84	65.53	15.90	NA
U.S. banks	5.54	59.91	4.33	2.19	3.73	62.69	14.60	NA
Ten unaffiliated banks	10.33	48.90	3.81	0.75	2.75	64.33	11.75	NA
1997 (estimated)								
First Chicago National Bank	19.12	42.51	2.50	1.23	2.17	68.91	8.88	NA
Midwest banks	14.28	59.85	2.89	2.63	3.43	65.28	16.00	NA
Ten unaffiliated banks	9.50	49.74	3.45	0.69	2.50	64.66	10.21	NA

Source: Holding company data are taken from annual reports; chartered bank data are from Federal Reserve *Call Reports.* The 1997 statistics are estimates based on first-quarter results.

[a]Noninterest expense/(interest income + noninterest income − interest expense).

[b]First Chicago's holding company.

[c]Main chartered bank within the holding company.

[d]FCC's specialist in middle-market business lending.

[e]Aggregate of all chartered U.S. banks from table 1-3.

[f]Aggregate of all unaffiliated Chicago banks constructed by the authors as a nonconsolidation benchmark (see text for details).

[g]Value Line Midwest bank index from table 1-3.

Table 2-15 Postmerger Performance of Comerica, 1992–1996 (percent)

Year and Bank	Asset Growth	Loans to Assets	Net Interest Margin	Noninterest Income to Assets	Noninterest Expense to Assets	Efficiency Ratio[a]	Return on Equity	Earnings per Share ($)
1992								
Comerica (BHC)[b]	0.55	65.81	4.73	1.51	4.07	76.90	12.10	1.99
Old Kent (BHC)[b]	4.97	60.06	4.81	1.44	3.53	64.00	16.25	2.57
U.S. banks[c]	1.86	57.30	4.42	1.95	3.87	66.15	12.66	NA
1993								
Comerica (BHC)	2.74	67.22	4.65	1.65	3.76	68.00	15.94	2.85
Old Kent (BHC)	5.62	56.37	4.82	1.46	3.73	62.70	16.65	2.90
Midwest banks[d]	14.86	61.49	4.57	2.15	4.18	66.37	14.70	NA
U.S. banks	3.60	56.25	4.42	2.13	3.94	65.23	15.34	NA
1994								
Comerica (BHC)	15.48	64.26	4.32	1.43	3.31	64.50	16.74	3.28
Old Kent (BHC)	10.73	59.15	4.63	1.35	3.74	63.60	16.04	3.02
Midwest banks	42.92	60.66	4.19	2.05	3.79	64.67	15.10	NA
U.S. banks	8.33	56.06	4.38	2.00	3.76	64.94	14.64	NA
1995								
Comerica (BHC)	12.78	66.43	4.19	1.46	3.06	60.09	16.46	3.54
Old Kent (BHC)	13.93	61.94	4.46	1.55	3.66	64.38	14.58	3.11
Midwest banks	11.20	61.87	3.96	2.12	3.61	63.19	14.60	NA
U.S. banks	7.40	58.39	4.31	2.02	3.65	63.48	14.71	NA
1996								
Comerica (BHC)	−3.56	76.62	4.54	1.48	3.39	64.21	15.98	3.55
Old Kent (BHC)	8.33	64.02	4.41	1.68	3.42	64.44	15.86	3.39
Midwest banks	5.18	64.08	3.78	2.42	3.84	65.53	15.90	NA
U.S. banks	5.54	59.91	4.33	2.19	3.73	62.69	14.60	NA

Source: Holding company data are taken from annual reports; chartered bank data are from Federal Reserve *Call Reports.*

[a]Noninterest expense/(interest income + noninterest income − interest expense).

[b]Bank holding company.

[c]Aggregate of all chartered U.S. banks from table 1-3.

[d]Value Line Midwest bank index from table 1-3.

Table 2-16 **Postmerger Performance of Mercantile and Roosevelt, 1992–1996 (percent)**

Year and Bank	Asset Growth	Loans to Assets	Net Interest Margin	Noninterest Income to Assets	Noninterest Expense to Assets	Efficiency Ratio[a]	Return on Equity	Earnings per Share ($)
1992								
Roosevelt (BHC)[b]	4.92	38.91	2.22	0.51	1.66	65.86	11.11	0.88
Mercantile (BHC)[b]	15.54	61.93	4.34	1.42	3.47	65.00	11.95	2.42
Boatmen's (BHC)[b]	8.45	52.93	4.35	1.86	3.47	66.37	14.20	2.42
U.S. banks[c]	1.86	57.30	4.42	1.95	3.87	66.15	12.66	NA
1993								
Roosevelt (BHC)	25.77	35.18	2.39	0.19	1.30	55.08	12.86	1.11
Mercantile (BHC)	5.01	60.03	4.55	1.52	3.56	64.00	13.00	2.79
Boatmen's (BHC)	9.27	54.55	4.46	1.92	3.69	68.98	15.42	2.78
Midwest banks[d]	14.86	61.49	4.57	2.15	4.18	66.37	14.70	NA
U.S. banks	3.60	56.25	4.42	2.13	3.94	65.23	15.34	NA
1994								
Roosevelt (BHC)	11.02	36.43	2.26	−0.13	1.37	71.27	5.85	0.48
Mercantile (BHC)	1.80	62.12	4.55	1.42	3.39	59.00	15.82	3.22
Boatmen's (BHC)	6.13	56.74	4.35	1.87	3.52	65.07	16.14	3.17
Midwest banks	42.92	60.66	4.19	2.05	3.79	64.67	15.10	NA
U.S. banks	8.33	56.06	4.38	2.00	3.76	64.94	14.64	NA

1995								
Roosevelt (BHC)	6.89	39.70	2.19	−0.29	0.97	57.17	4.60	0.56
Mercantile (BHC)	9.40	64.46	4.25	1.56	3.01	56.69	16.05	3.74
Boatmen's (BHC)	2.51	58.64	4.26	2.01	3.56	65.04	15.88	3.41
Midwest banks	11.20	61.87	3.96	2.12	3.61	63.19	14.60	NA
U.S. banks	7.40	58.39	4.31	2.02	3.65	63.48	14.71	NA
1996								
Roosevelt (BHC)	−13.50	55.13	2.49	−0.46	1.58	87.94	1.10	0.13
Mercantile (BHC)	19.42	67.27	4.20	1.58	3.36	62.88	11.90	3.10
Midwest banks	5.18	64.08	3.78	2.42	3.84	65.53	15.90	NA
U.S. banks	5.54	59.91	4.33	2.19	3.73	62.69	14.60	NA

Source: Holding company data are taken from annual reports; chartered bank data are from Federal Reserve *Call Reports.*

[a]Noninterest expense/(interest income + noninterest income − interest expense).

[b]Bank holding company.

[c]Aggregate of all chartered U.S. banks from table 1-3.

[d]Value Line Midwest bank index from table 1-3.

Table 2-17 **Bank Stock Performance, 1990–1996**

	One-Year Return (Dec.)						Two-Year Return (Dec.)	
	1990	1991	1992	1993	1994	1995	1992–1993	1994–1995
Suburban	−48.1	94.5	42.1	27.6			81.3	
First Bank	−17.4	92.2	21.2	13.0	11.6	54.4	37.0	72.3
Boulevard	−47.4	8.2	9.4	64.5			80.0	
Firstar	−8.9	77.5	33.9	0.6	−9.4	53.7	34.7	39.2
First Colonial	−39.5	54.6	0.0	28.4	9.5		28.3	
Investors	−25.0	150.0	31.1	94.2	−14.4		154.6	
First Chicago	−51.7	62.4	54.8	21.4	14.8	49.8	87.9	71.9
Lake Shore	−42.9	41.8	32.5	25.4			66.1	
NBD	7.9	40.1	13.7	−6.1	−4.4	51.6	6.8	45.0
Comerica	−7.1	29.3	23.7	−13.7	−4.1	70.9	6.8	64.0
Manufacturers	−9.5	94.1						
Old Kent	−13.2	55.9	51.4	−8.9	4.9	47.9	37.9	55.2
NationsBank	−48.3	84.8	30.6	−1.4	−4.4	59.8	28.7	52.7
MNC Financial	−84.0	50.0	164.1					
Mercantile	−14.0	87.1	32.5	−4.3	7.4	51.8	26.8	63.0
United Postal				73.5				
Roosevelt	−42.1	80.3	167.1	55.0	7.7	33.5	314.0	43.8
Farm & Home	−42.4	153.8	27.8	79.4			129.3	

	Market-to-Book Value (End-of-April)						
	1990	1991	1992	1993	1994	1995	1996
Suburban	0.75	0.63	1.12	1.55	1.62		
First Bank	1.00	1.43	1.87	1.64	1.91	2.18	3.05
Boulevard	1.42	0.90	0.66	0.87			
Firstar	1.06	1.17	1.72	1.94	1.92	1.61	2.26
First Colonial	1.26	1.23	1.07	1.19	1.75		
Investors					1.36	1.62	
First Chicago	0.83	0.69	0.92	1.20	1.30	1.27	1.64[a]
Lake Shore	2.26	1.47	1.67	1.98	2.46		
NBD	1.27	1.53	1.68	1.72	1.46	1.49	
Comerica	1.00	1.20	1.00	1.73	1.57	1.40	1.98
Manufacturers	0.99	1.23	1.83				
Old Kent	1.13	1.14	1.67	1.94	1.61	1.55	1.74
NationsBank	1.30	1.28	1.82	1.56	1.42	1.26	1.87
MNC Financial	1.05	0.42	0.77	0.97			
Mercantile	0.97	1.11	1.53	1.44	1.76	1.55	1.94
Roosevelt	0.54	0.48	0.78	2.24	1.45	1.45	1.91
Farm & Home	0.26	0.27	0.63	0.69			

Source: Prices and shares are from Center for Research in Securities Prices (CRSP). Book values (which exclude preferred stock) are from annual reports and are prior December figures.

Note: Returns are defined in percentage terms. The use of April stock prices allows comparisons of book values and market values after book value statistics had been made public.

[a]For 1996, the market-to-book ratio for First Chicago is for First Chicago–NBD.

—often have performed poorly and may have been motivated more by managerial rent seeking than by profit maximization. Are cross-selling opportunities in banking real or just the newest justification for managerial empire building? Of our nine cases, Harris-Suburban provides the clearest window to view that question.

Harris's management regards the Suburban merger as a success story. According to Charles Tonge, the operating officer responsible for implementing Harris's takeover strategy in the Chicago area, revenue growth at Suburban (the key objective for the acquisition) has exceeded preacquisition expectations. The primary sources of revenue growth envisioned at the time of the merger were (1) combining Suburban's comparative advantage in access to low-cost deposits and customer relationships with Harris's other banking affiliates' comparative advantage in marketing and originating loans to increase Suburban's loan-to-asset ratio and the net interest margin for the new combined entity and (2) boosting fee income by bringing Harris's expertise in trust and asset management to Suburban's customers and by combining Harris's expertise in residential mortgage origination and resale with Suburban's mortgage origination opportunities. According to Tonge, home equity lending, asset management services, and other new products and services have permitted significant cross-selling and up selling (which he defines as moving existing customers up to longer-term, higher-margin products and services, in addition to simply selling them more products and services).

Tonge believes Harris's success reflected not only the types of revenue synergies that the bank planned to exploit, but the strategic decisions made about how to do so.

> In order of importance, the three key strategic decisions were, first, to target rapid growth to lock in customer relationships before other entrants had a chance; second, to set the right incentives for the bank presidents [of the acquired affiliates] by granting them separate accounting and managerial independence and rewarding high growth rather than simply current ROE; and third, to keep acquisition costs down by demonstrating a commitment to de novo branching as a potential alternative to acquisition. (Tonge 1997)

Tonge also emphasizes that the future profitability of Harris's Chicagoland operations will depend on its ability to cut costs by promoting PC (personal computer) banking, now in its infancy.

Harris's growth reflects not only its newly acquired customer base but the new customers that its expanded network has allowed it to attract. In terms of household contacts, the acquisition of Suburban coincided with a remarkable internal growth in Harris's customer base of roughly 30,000 households per year over and above those acquired directly in its acquisi-

tions, according to internal bank calculations. With its recent acquisition of Household, Harris now serves over 800,000 households, or one-fifth of all Chicagoland households (compared with one-fourteenth in 1994).

Tonge sees the primary advantages from the acquisition as combining Suburban's customer contacts and deposit accounts with the lending expertise developed in Harris's pre-Suburban Chicagoland acquisitions (which we label the twelve Harris community banks). To investigate that claim, in table 2-11 we report performance measures for Harris in four different ways: for the holding company as a whole, for the Chicagoland chartered banks within the holding company taken together (the parent bank, plus the twelve independents, plus Suburban), for Suburban plus the twelve independents taken together, and for Suburban alone. Maintaining separate charters for its acquired banks permits this decomposition. Being a subsidiary of the Bank of Montreal, however, precludes the use of market-based benchmarks (stock returns or market-to-book value ratios).

For purposes of comparison, we report several performance benchmarks. One of those benchmarks is a composite of ten unaffiliated Chicagoland banks, each of which had assets in excess of $250 million in 1993 (with aggregate assets of $7.25 billion in that year) and remained independent from 1991 through 1996. While this constructed composite may have some survivorship bias, we found that the 1993 ROE for the composite equaled the median of Chicagoland banks in 1993. Thus, the intertemporal changes experienced by this group represent a reasonable counterfactual of what Suburban's changes would have been had it remained independent. The other benchmarks for comparison are the S&P Midwest banking industry composite and several individual Chicagoland banks. Of these individual banks, Lasalle is most like Harris—it is owned by Dutch giant ABN Amro and has pursued an aggressive strategy of seizing market share by acquisitions in recent years. Firstar Bank Illinois and First National Bank of Chicago are included for comparison because their primary business is retail banking in Chicago.

As table 2-11 shows, Suburban enjoyed rapid postacquisition loan and revenue growth during 1995 and 1996. Over those two years, total assets grew from $1.5 billion to $1.9 billion, while the loan-to-asset ratio rose from 44.1 percent to 59.4 percent. The comparable increases for the composite of Suburban and the twelve Harris independents were $5.7 billion from $4.6 billion in total assets and 63.7 percent from 53.0 percent in the loan-to-asset ratio. Compared with other banks, the loan growth of Harris's retail banking affiliates has been large. The composite of ten unaffiliated Chicagoland banks saw lower asset growth than Suburban (or Suburban plus the twelve Harris independents) and less increase in the loan-to-asset ratio. Only Lasalle Bank, which has pursued a similar

revenue-oriented acquisition strategy, has seen higher asset growth than Suburban (or Suburban-cum-Harris independents) and has reached a comparably high loan-to-asset ratio.

The growth in assets and customers achieved by Harris's independent retail banking affiliates was achieved without sacrificing net interest margin and alongside reductions in the ratio of noninterest expenses to total assets. That is, loan growth has not been achieved by reducing the profitability of lending or by spending a lot of resources to attract low-cost deposits (through large noninterest expenses). The combination of high margins and high loan growth has resulted in high ROE and an improved (lowered) efficiency ratio.

While these facts seem to bear out Harris's claims for the profitability of its revenue-oriented acquisition strategy, the parent bank has not gained as much as its affiliates have, and one can question whether some costs of growing the affiliates may have been borne by the parent bank. Taken as a whole, Harris's Chicagoland banking operation (that is, the parent bank plus Suburban plus the twelve Harris independents) has shown ROE comparable to that of the ten unaffiliated banks, although Harris outperformed Lasalle and First National Bank of Chicago.

There are two ways to read the evidence on Harris. According to a sanguine view, Harris's rapid loan growth and the new customer relationships that it has captured will now set the stage for growth in total ROE through future growth in revenue per customer. According to that view, the low current profitability of Harris and of other banks based in Chicago (compared with the rest of the Midwest) reflects the aggressive competition for market share today to lock in valuable relationships for the future. An alternative, jaundiced view would point more skeptically to the low current ROE of Harris taken as a whole and question the future growth in the profitability of retail banking in Chicagoland and the desirability of having invested the Bank of Montreal's capital there. Whatever one's view, however, Harris seems to have achieved its short-term asset and revenue growth goals for its independents in the mid-1990s through its acquisition strategy. Whether those goals were wisely chosen remains to be seen.

First Bank–Boulevard and NationsBank-MNC

Because First Bank does not maintain a separate Illinois state bank charter, it is not possible to examine the postmerger performance of the Chicago operations of First Bank–Boulevard. By any measure, however, First Bank's expansion strategy is extremely successful. If Boulevard needed a high-performance acquirer to lower its costs and boost its revenue, First Bank seems to fit that description.

At the time of its acquisition of Boulevard in early 1994, First Bank had a market-to-book ratio of 1.91 (one of the highest in the industry). From

January 1994 through December 1995, First Bank's stockholders received a two-year return of 72.3 percent, and its market-to-book ratio rose to 3.05 by April 1996. As shown in table 2-12, First Bank's ROE in 1995 and 1996 are far above nationwide or Midwest benchmarks, and its earnings per share more than doubled from the end of 1993 to the end of 1996. This exceptional performance from the end of 1993 to the end of 1996 reflects a combination of a dramatic fall in noninterest expenses relative to assets, a persistently high net interest margin, and growth in noninterest income that has kept pace with asset growth.

First Bank continues to expand aggressively. In March 1997, it announced the acquisition of the Oregon-based U.S. Bancorp (in an $8.8 billion stock swap), which was greeted favorably by the stock market (the stock of both banks rose on the announcement). This marks a new phase of westward expansion for First Bank.

Like First Bank, NationsBank does not maintain a separate charter that can be linked to the former operations of MNC. Instead, one has to gauge NationsBank's acquisition success by looking at its general performance. NationsBank has been one of the most aggressive acquirers in the country (see table 2-18). It has grown through acquisitions from $118 billion in assets in 1992 to $186 billion at the end of 1996. As table 2-12 shows, that growth has been accompanied by an unusually high ROE (17.95 percent in 1996), by a near doubling of its earnings per share, and by an impressive efficiency ratio of 56.95 percent.

NationsBank's market-to-book ratio in 1993 was 1.56, and it has remained below other banking system leaders since 1993 (as shown in table 2-17). The weakness in NationsBank's market-to-book value during the 1990s does not reflect declining profit or operating inefficiency but rather its willingness to pay high prices for some of its largest acquisitions. NationsBank paid 2.7 times book value (almost 50 percent more than the contemporaneous stock price) for Boatmen's Bank in August 1996 (at a time when 2 times book value was the norm for similar acquisitions), and in September 1997 NationsBank purchased Barnett Bank for 4 times book value. In the first transaction, its stock price declined roughly 8 percent when the acquisition was announced, and in the second case, its stock price declined nearly 6 percent on the announcement. NationsBank's management has defended these purchases and continues to disagree with skeptical market analysts in its projected cost savings and revenue growth from these acquisitions. In January 1997, for example, one market analyst forecasted roughly $50 million dollars less in earnings growth and expense reduction for 1997 than NationsBank's management (*Wall Street Journal,* January 14, 1997, A3). In addition to disagreeing with these forecasts, NationsBank has been putting its money where its mouth is: in 1996, it repurchased over 17 million shares (a significant proportion of the 98 mil-

lion shares issued in the Boatmen's acquisition), and it announced and followed through on plans to repurchase more than 11 percent of its outstanding common stock in 1997.

Some market analysts agree with NationsBank's view that these mergers will create more value than they have cost NationsBank's stockholders. The May 10, 1997, *Standard and Poor's Stock Reports* issued by a buy recommendation for NationsBank, based in large part on the perceived benefits from the Boatmen's acquisition. In its October 14, 1996, buy recommendation, Gerard Klauer Mattison & Co. argued that NationsBank's projections in its acquisition of Boatmen's were achievable for NationsBank but not for other would-be acquirers that lack its breadth and efficiency. It based that view largely on the opportunities for improved marketing and revenue growth from the purchase:

> We view NB as the most undervalued major bank stock. . . . Without question, one of the most controversial mergers in banking history, the NB/BOAT deal has many hidden positives. Thus, while many investors and other banking observers criticized the deal strongly, we applaud it. . . . Boatmen's is a "linchpin" strategic acquisition for NB. Its geographic fit is ideal, adding seven new states and deepening penetration in two others. The market shares are mostly very high, and the potential for cost cutting and cross-selling is very large. . . . We see a strong opportunity for NB to enhance revenues by selling products to the undermarketed BOAT customer base (1, 3, 9, 12).

Firstar's Acquisitions

Firstar's acquisitions in 1995 did not result in the dilution of earnings per share or in substandard performance in comparison with other Midwestern banks, as shown in table 2-13. While the negative market reaction to its expansion strategy resulted in a 9.4 percent stockholder return for 1994, Firstar's 1995 stock return was 53.7 percent. Firstar is not as highly prized a franchise as First Bank, but its April 1995 market-to-book ratio (1.61) still exceeded the nationwide average of 1.55, and its book-to-market ratio rose significantly in 1996, exceeding its value in April 1994 (before our two acquisition announcements).

The consequences of Firstar's acquisition of First Colonial can be gauged in greater detail. That acquisition resulted in a tripling of Firstar's Illinois operations during 1995, which is visible in its separately chartered Illinois bank. Data on that bank permit an evaluation of Firstar's ability to reap the cost savings that it had projected. One-time charges in 1995 raised noninterest expenses for that year, but noninterest expenses relative to assets have subsequently fallen faster than comparable benchmarks (from 3.3 percent of assets at the end of 1994 to 2.9 percent of assets in early 1997).

Thus, from the perspective of cost cutting, the First Colonial transac-

tion seems to have resulted in improved efficiency. That conclusion is further supported by the fact that the decline in expenses did not coincide with a reduction in net interest margin (given the production complementarity between increases in net interest margin and increases in physical expenses). Firstar Illinois' first-quarter 1997 ROE of 13.2 percent is significantly higher that the 10.8 percent (size-weighted) ROE of the combination of Firstar Illinois and First Colonial in 1993.

The Firstar–First Colonial merger, however, did result in a decline in assets in 1996 and a slight decline in the loan-to-asset ratio. The acquisition of First Colonial produced surprising widespread defections of its loan officers, who moved to other banks and took many customers with them. Those reactions reflected the reduced autonomy of loan officers following Firstar's centralization of control over its acquiree's loan portfolio. Thus, while Firstar is posting a reasonable ROE in comparison with other Chicago-land banks and has achieved significant cost savings, it was blindsided by employee morale problems that hampered its revenue growth.

The Firstar Illinois experience reflects well on Harris Bank's approach to acquisition, which emphasizes preserving acquiree autonomy (at least during the initial postacquisition period). Someday Harris may choose to consolidate its acquirees (after having cemented customer relationships between customers and the parent through up-selling and cross-selling) at little cost to its loan portfolio. But the difference in the growth performance of Firstar and Harris acquirees suggests that the preservation of local autonomy may be crucial to maintaining postacquisition revenue growth.

Did the negative stock price reaction to Firstar's expansion strategy in 1994 reflect market anticipation of Firstar's postacquisition problems? Probably not. First, market reaction was negative for both acquisitions, while only the First Colonial acquisition resulted in stalled revenue growth. Second, it would be hard to argue that the market foresaw a personnel problem that the bank itself had not anticipated. It is more plausible that the negative reaction of the market to Firstar's expansion strategy in 1994 reflected market disappointment that Firstar had not positioned itself to be acquired, rather than concerns about Firstar's ability to achieve cost reductions or maintain above-average performance.

First Chicago–Lake Shore

First Chicago is probably the most obvious "suspect" acquirer. In six of our nine cases, price reactions were positive for the combined entity. In four of those six cases, price reactions were positive for both banks involved in the merger. The three cases of negative price reactions for combined entities were the two Firstar cases and First Chicago's acquisition of Lake Shore. While we have argued that Firstar's stock price decline did not reflect market views about the efficiency gains from its acquisitions, in

the case of First Chicago it is easier to make an argument that the market reasonably doubted First Chicago's ability to create value through an acquisition.

In analyzing First Chicago's performance, it is important to distinguish the local banking operations of First Chicago's parent bank in Chicago (First National Bank of Chicago) from the operations of the rest of the holding company (which include major profit centers that operate as separate entities, such as its private equity affiliate, its middle-market lender—American National Bank—and its Delaware-based credit card bank). In 1994, 45 percent of First Chicago's net income came from credit card banking profits; American National and venture capital profits accounted for another 24 percent of holding company net income. While one could argue that some gains from the Lake Shore acquisition would show up in First Chicago's nonbank affiliates, the primary gains anticipated from the acquisition of Lake Shore entailed retail bank cost cutting, and thus it seems reasonable to ask whether First National Bank of Chicago (FNBC) was up to the task of enhancing the efficiency of Lake Shore.

At the holding company level, First Chicago has seen improvement in its market-to-book value over the 1990s, which largely reflected credit card profits, private equity earnings, and (in 1995 and 1996) its merger with National Bank of Detroit (NBD), which enjoyed a higher market-to-book ratio. The volatility of the holding company's profits indicates that the sources of holding company profitability have been dissimilar from many other banks. Moreover, the data in table 2-14 indicate that First Chicago's banking flagship—FNBC—was inefficient and unprofitable before the acquisition of Lake Shore. While First Chicago's holding company earned a 1993 ROE of 23 percent before acquisition, FNBC's ROE was only 11.14 percent in that year, and FNBC's 1992 ROE had been −17.10 percent. FNBC's efficiency ratio was extremely poor at 91.7 percent in 1992 and 72.9 percent in 1993.

In December 1995, First Chicago entered into a merger of equals with National Bank of Detroit (NBD) in an effort for its management to remain at least partly in control of its struggling franchise. Despite high ROE and improved efficiency and earnings per share after the FCC-NBD merger, FNBC performance has remained lackluster. There is little evidence to suggest that FCC's merger with NBD will lead to efficiency gains in First Chicago's core banking operations. Since 1994, ROE at FNBC has remained persistently below those of relevant benchmarks.

Thus, First Chicago's performance and consolidation history might be seen as evidence that it is pursuing a survival and acquisition strategy that favors managerial independence (and perquisites) over stockholder profits. While we do not claim to offer proof of that proposition, the facts for this case are at least consistent with many of the claims of the consolidation pessimists.

Comerica-Manufacturers

The 1992 merger of equals between Comerica and Manufacturers produced some one-time expenses in 1992, but subsequent growth and performance have been good. Table 2-15 presents data for Comerica-Manufacturers as a combined entity, from the year before the merger through 1996. We compare Comerica-Manufacturers' performance with that of Old Kent Bank, the other major bank holding company operating primarily in Michigan during this period. Old Kent has been a fast-growing and successful bank and has expanded through acquisition and de novo branching during the 1990s, both within Michigan and into Indiana and Illinois. Thus, it does not provide a counterfactual nonconsolidation benchmark against which to measure the effects of the merger of Comerica and Manufacturers. Nevertheless, the comparison with Old Kent is useful for gauging how disruptive the merger of equals has been. Some industry analysts are skeptical of the advantages of such mergers because of potential difficulties in integrating management and operations that can slow progress and reduce performance.

Comerica-Manufacturers and Old Kent have had similar experiences over the period 1993–1996. They have grown at similar rates and enjoyed similarly high net interest margins, high ROEs, and low efficiency ratios. The earnings-per-share growth has been high in both franchises. The market-to-book ratios of Comerica and Old Kent have been comparable over the past few years as well. We conclude from this comparison that the Comerica-Manufacturers merger of equals has successfully avoided potential problems of integrating management and operations.

Mercantile–United Postal and Roosevelt–Farm & Home

The two St. Louis 1994 acquisition cases are best considered together (see table 2-16), particularly because Mercantile ended up acquiring Roosevelt in 1997. Boatmen's Bank (which was acquired by NationsBank and thus filed no annual report for 1996) appears as a St. Louis banking benchmark against which to gauge the performance of these acquisitions. Boatmen's itself is not an ideal nonmerger counterfactual; it has been actively engaged in acquisitions over the past decade, particularly in the Southwest. We also include the Midwest regional benchmark.

Before reviewing Roosevelt's accounts, we point out that these accounts have changed dramatically from one annual report to the next: note the difference in reported 1993 ROE from the 1993 income statement (given in table 2-9) and the 1993 ROE reported in the 1996 annual report (in table 2-16). Given the dramatic changes in the way accounts have been reported, we suggest caution when using the balance sheet and income statement data that we report for Roosevelt in table 2-16. In particular, 1996 ROE was substantially reduced by one-time charges. Those charges included a

regulatory charge (faced by all thrifts) to recapitalize the thrift deposit insurance fund and a payment to terminate certain swap transactions.

From the perspective of some of our indicators, Roosevelt's postacquisition performance during 1995 and 1996 was disappointing when compared with that of Mercantile and other U.S. banks. As with other thrifts, Roosevelt's net interest margin and fee income have remained low compared with those of banks. Roosevelt–Farm & Home's ROE, earnings per share, and noninterest income growth all declined after they were combined. Its stock returns for 1994 and 1995 were 7.7 percent and 33.5 percent, respectively (a two-year return of 43.8 percent). While in some absolute sense this two-year return is respectable, compared with other banks in our sample it was a bit low. The two-year return for Mercantile over 1994 and 1995, for example, was 63 percent. Compared with our list of acquirers (table 2-17), only Firstar had a comparably low two-year return (39.2 percent); two-year returns for other acquirers ranged between 52.7 percent (NationsBank) and 72.3 percent (FirstBank).

That is not to say, however, that the acquisition was a failure. Roosevelt had seen enormous growth in its market-to-book value before acquisition (from 0.48 in April 1991 to 2.24 in April 1993). While its market-to-book ratio declined to 1.45 in 1994 and 1995, it rebounded by April 1996. It is unclear whether the high market-to-book ratio in 1996 reflected greater efficiency at Roosevelt or market expectations of the takeover of Roosevelt (which subsequently took place). There is some evidence, however, that Roosevelt was beginning to turn the corner on its performance before being acquired. *Standard and Poor's Stock Reports* (April 23, 1997) noted improvements in net interest margin, in asset quality, and in fee income in the first quarter of 1997 and argued that the acquisition price per share of $22 (nearly $5 higher than the April 1996 price) offered by Mercantile was justified, given the 1997 improvements in Roosevelt's performance.

Mercantile has been an active acquirer throughout 1995 and 1996, as is apparent in table 2-18, and it would be virtually impossible to measure the contribution of United Postal to Mercantile's performance. Mercantile's many acquisitions (with accompanying transitory merger expenses) also make it difficult to gauge the long-term gains from its acquisitions. Nevertheless, in contrast to Roosevelt's weak postacquisition performance, Mercantile has done reasonably well. It has avoided dilution of earnings per share since the acquisition, has maintained above-average ROE and efficiency in 1994 and 1995 (relative to the Midwest benchmark), and has kept pace with Boatmen's Bank during those years. Its unusually high growth in assets of 19.4 percent in 1996, due to several acquisitions (table 2-18), produced some one-time noninterest expenses that depressed 1996 ROE, but long-run indicators of performance unrelated to these one-time charges (net interest margin, loans-to-assets, and noninterest income) all remain strong. Mercantile's market-to-book value remained high from 1992 to 1996.

Table 2-18 Mergers and Acquisitions, 1990–1997

Pretransaction Acquisitions		Transaction		Posttransaction Acquisitions	
			Harris Bankcorp		
4/27/90	Libertyville Savings and Loan	10/1/94	Suburban Bancorp	7/96	Household Bank
10/90	Frankfort Bankshares, Inc.				
			FirstBank		
12/18/90	Northern Cities Bancorporation, Inc.	3/26/94	Boulevard Bancorp, Inc.	4/29/94	First Financial Investors, Inc.
6/30/92	Siouxland Bank Holding Company			9/9/94	United Bank of Bismarck
12/18/92	Western Capital Investment Corp.			9/30/94	Green Mountain Corporation, Inc.
12/31/92	Bank Shares Incorporated			1/24/95	Metropolitan Financial Corporation
5/93	Colorado National Bankshares			3/16/95	First Western Corporation
6/28/93	Republic Acceptance Corporation			11/1/95	First Bank of Omaha
2/28/94	American Bancshares of Mankato			11/1/95	Southwest Bank
				2/6/96	FirsTier Financial
				3/20/97	U.S. Bancorp
			Firstar		
1/90	Bank of Park Forest	1/31/95	First Colonial Bankshares Corporation	1/29/96	Harvest Financial Corporation
7/90	First Western Bank of St. Louis Park	5/1/95	Investors Bank Corporation		
8/90	State Bank of Elkhorn				
4/91	Bank of Iowa, Inc.				
12/91	Northwestern State Bank				
6/92	First National Bank of Geneva				
8/92	Citizens National Bank of Lake Geneva				
9/92	Federated Bank				
2/93	DSB Corporation				
8/93	Bank of Athens				
10/94	First Southeast Banking Corporation				

(*continued*)

Table 2-18 (continued)

Pretransaction Acquisitions		Transaction		Posttransaction Acquisitions	
			First Chicago		
9/90	Purchase from RTC	7/8/94	Lake Shore Bancorp	12/1/95	NBD Corporation
91	Purchase from RTC			6/6/96	Barrington Bancorp. Inc.
			Comerica		
9/28/90	Empire FSB of America	6/18/92	Manufacturers National	11/92	Fortune Financial
1/14/91	Plaza Commerce Bancorp		Corporation	12/31/92	Hibernia National Bank of Texas
7/3/91	InBancshares			2/93	Sugar Creek National Bank
11/91	Midlantic National Bank & Trust Co.			5/93	Nasher Financial Corporation
				5/93	NorthPark National Corporation
				7/93	Fidelity National Bank
				3/30/94	Pacific Western Bancshares
				8/4/94	Lockwood Banc Group, Inc.
				3/28/95	University Bank & Trust Company
				6/26/95	W.Y. Campbell & Company
				9/6/95	Professional Life Underwriters Services
				12/95	QuestStar Bank, N.A.
				1/96	Metrobank California
			NationsBank		
2/1/93	Chrysler First Inc.	10/1/93	MNC Financial Inc.	12/7/93	U.S. WEST Financial Services Inc.
7/2/93	Chicago Research and Trading			11/7/94	Consolidated Bank, N.A.
				11/94	RHNB Corporation
				11/28/94	Corpus Christi NationalBank
				12/13/95	Intercontinental Bank
				12/21/95	North Florida Bank Corporation
				1/9/96	Bank South Corporation

				1/10/96	CSF Holdings, Inc.
				1/31/96	Sun World, N.A.
				5/29/96	Charter Bancshares Inc.
				1/7/97	Boatmen's Bancshares, Inc.
				8/30/97	Barnett Bank (announced)
		Roosevelt Financial Group			
3/19/90	Home Federal Savings	6/30/94	Farm & Home Financial Corporation	10/20/95	WSB Bancorp Inc.
10/18/91	Hannibal Mutual Loan and Building			12/29/95	Kirksville Bancshares, Inc.
10/9/92	Conservative Bank			7/1/97	RFG taken over by Mercantile Banc.
10/9/92	First Granite Savings and Loan				
6/11/93	First Nationwide Bank of San Francisco				
11/8/93	Home Savings of America				
4/22/94	Home Federal Bancorp of Missouri, Inc.				
		Mercantile Bancorporation			
12/5/91	Old National Bancshares, Inc.	2/2/94	United Postal Bancorp, Inc.	1/3/95	UNSL Financial Corporation
4/30/92	Ameribanc, Inc.			1/3/95	Wedge Bank
6/92	American Bank of St. Louis			5/1/95	Central Mortgage Bancshares, Inc.
7/92	American Bank of Franklin County			5/1/95	TCBankshares, Inc.
1/4/93	MidAmerican Corporation			7/7/95	Plains Spirit Financial Corporation
1/4/93	Johnson County Bankshares, Inc.			8/1/95	Southwest Bancshares, Inc.
4/1/93	First National Bank of Flora			1/2/96	Hawkeye Bancorporation
9/1/93	Mt. Vernon Bancorp, Inc.			1/2/96	First Sterling Bancorp
1/3/94	Metro Bancorporation			2/9/96	Security Bank of Conway
				3/7/96	Metro Savings Bank
				4/25/97	Mark Twain Bancshares
				7/1/97	Roosevelt Financial Group

Source: Authors.

While Roosevelt's postacquisition performance was somewhat disappointing, its acquisition by a successful acquirer in 1997 (Mercantile) illustrates why the efficiency of bank mergers must be judged in a dynamic context. Inevitably, some mergers will be less successful than others. The important question for economic efficiency is not what proportion of mergers are successful, but rather whether unsuccessful franchises (including those that result from previous mergers) are quickly identified and absorbed by successful institutions. One lesson of our St. Louis cases is the speed with which a disappointing merger can turn an acquirer into a target.

3 Conclusion

What have we learned from our case studies of bank consolidation during the 1990s? What do our cases have to say about the efficiency of the recent bank consolidation wave, and what lessons do they offer for future empirical work?

Four lessons about the recent wave of bank consolidation should be stressed. First, our nine cases largely support the view that bank mergers in the 1990s have created value. For the most part (with the exception of First Chicago and possibly Roosevelt), acquirers seem to have achieved gains that they claimed they could achieve ex ante. In the case of Roosevelt, a weak acquirer rapidly became the target of a successful acquirer. First Chicago's use of consolidation as a tool to retain managerial independence (possibly at the expense of stockholders) is the exception rather than the rule.

Second, not all the remaining mergers were pure success stories. Firstar's acquisition of First Colonial achieved the gains that it expected, but it suffered from losses in revenue growth due to the unexpected defection of loan officers. The lesson of that merger is that the single-minded pursuit of physical cost savings may be an inadequate strategy. A bank's resources are almost entirely its staff; successful relationship banking depends on the careful management of the bank's human resources.

Third, while First Chicago's case illustrates that managerial incentives may still limit efficiency gains for some mergers, the behavior of the management of our targets (notably those of Boulevard and Lake Shore) illustrates how competition has changed managerial incentives in the 1990s. In the case of Boulevard, highly inefficient, previously entrenched management surrendered the franchise in the face of increased competition. In the case of Lake Shore, the new CEO's first action was to convince his board of directors that the value-maximizing strategy for the bank was to put itself on the market.

Fourth, our study of Harris's acquisition of Suburban illustrates that revenue synergies can be legitimate motivations for consolidation. That

is, even mergers that offer no opportunities for cost savings can lead to significant improvements by means of cross-selling and up-selling to boost loan growth, net interest margin, and fee income.

Our case studies offer three additional lessons from a methodological standpoint. First, stock price reactions to consolidation announcements (which tended to be positive for combined entities in our cases) do not offer a reliable guide to expected or actual productivity gains from consolidations. In our two Firstar cases, cost-saving acquisitions undertaken by a bank with a track record of successful similar acquisitions were greeted with negative stock price reactions. As we have argued, those reactions are better viewed as market disappointment that Firstar itself was not placed on the market rather than as market skepticism over value creation from acquisition.

Not only do stock price reactions have multiple interpretations; in a rapidly changing environment, the profitability estimates that underlie market reactions are much more prone to error. The strong positive reaction to Roosevelt's acquisition of Farm & Home, for example, and the rapid appreciation of Roosevelt's stock in the year before the merger announcement were followed by somewhat disappointing postmerger performance. NationsBank's open disagreement with some market analysts in the past two years (and its aggressive stock repurchase program) illustrates the potential for significant disagreement in the midst of dramatic change.

A second methodological lesson for empirical studies of the productivity gains from mergers is that they should focus on the dynamics of the consolidation process, rather than add up the numbers of failed and successful mergers that occur. If disappointing mergers are quickly corrected by subsequent transactions (as in the case of Roosevelt–Farm & Home), empirical work that focuses on the relative frequency of failed and successful mergers may substantially overstate the costs of consolidation and thus understate the net long-run productivity benefits from such transactions.

A final methodological lesson from our cases is the practical difficulty of constructing useful nonconsolidation benchmarks for panel data analysis of the gains from consolidation. In our critique of existing empirical work in section 1, we argued that there were many potential pitfalls in constructing counterfactual benchmarks to measure the gains from consolidation. In our case analyses, some of those pitfalls became apparent. Should postmerger performance be analyzed at the level of the holding company or the chartered bank? Should the comparison be restricted to the local acquired bank or to the wider franchise, which may operate throughout a state or across state lines? How does one perform comparisons when some banks choose to consolidate bank charters within states and across states lines (such as NationsBank and First Bank), while others (such as Harris) choose not to do so? How can one isolate the effects of mergers in an environment where so many mergers are occurring, where

the size of one-time (as opposed to permanent) costs is unclear, and where the time-lag of implementing cost savings may be several years?

We hope that future microeconometric work will worry more about these questions. Future work should also follow Jayaratne and Strahan's (1997) example of broadening the measurement of efficiency changes in banking to encompass consumers' gains from increasing competition, which may lower bank profitability in the midst of deregulation. In the meantime, the overarching lesson from our cases is that when gauging the productivity gains from bank consolidation, one should attach less weight to panel studies of stock price reactions or postmerger performance and more weight to the relatively sanguine cross-regime studies of the benefits of consolidation.

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Comment Christopher James

Introduction

The academic literature on the value gains from bank mergers creates a troubling paradox. Empirical studies examining the stock market reaction to merger announcements and the performance of banks after acquisitions find, on average, no significant gain in value or improved operating performance. On average the empirical evidence indicates that acquired firms gain at the expense of the acquiring firm. Moreover, there appears to be little in the way of improved operating performance for the merged firms relative to industry peers following the acquisition. However, despite any apparent value gains, mergers in banking continue at a rapid pace. The lack of econometrics evidence of efficiency gains is even more troubling in light of the fact that an important impetus for consolidation has been the removal of geographic and product market entry restrictions that are generally believed to impede operating efficiency and bank profitability.

The paper by Calomiris and Karceski attempts to reconcile these conflicting facts through an in-depth analysis of nine bank mergers in the 1990s. Case studies, the authors argue, can uncover value gains that are difficult to estimate and identify using standard large sample econometrics tools. Specifically, they argue that average measured gains from mergers—whether measured by stock price reactions or performance improvements—are not reliable measures of the true gains from acquisitions. Part of the problem lies in the data used in large sample studies. For example, ex post performance gains are often measured using accounting data. However, accounting measures of performance may not capture the economic gains from mergers. Moreover, mergers often involve restructuring costs that can mask operating gains that may take a considerable amount of time to be achieved.

An alternative measure of performance is the stock returns of the bidder and target around the time the acquisition is announced. The change in the combined market value of the acquired and acquiring bank, the argument goes, provides a measure of the expected gains from the acquisition. However, studies using stock returns have their own set of problems. Important among them is that stock returns only measure the value of *new* information revealed at the time the merger is announced. However, to the extent that the merger is anticipated, the stock price reaction to the merger will provide a downward biased estimate of the value created (or destroyed) by the acquisition.

A second reason large sample studies may fail to identify value gains is that there may be important cross-sectional differences in the source of

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merger gains that are difficult to identify or estimate using standard econometric tools. Specifically, the literature suggests that the motives for bank mergers are quite varied—ranging from cost savings to revenue enhancement to so-called managerial hubris. Failure to condition on these differences may lead to average measures of performance providing unreliable measures of the actual gains from acquisitions.

Given these problems with large sample studies, Calomiris and Karceski argue that to understand the gains from mergers requires a case-by-case analysis. Their goal is to document that the source of merger gains varies cross sectionally and through time. Moreover, they argue that, by conditioning on the motive for the merger and by examining performance changes in the context of the different motives, the real efficiency effects of the merger wave of the 1990s can be uncovered.

While I am extremely sympathetic to a case study approach, the lessons learned from the authors' nine case studies are quite limited. As I discuss below, the primary benefit of case studies is their ability to reconcile the contradictory finding of large sample empirical studies. Are the performance measures used misleading or are the real efficiency gains simply not there? In particular, the goal should be to explain why, in the face of what the authors believe to be significant efficiency gains from mergers, large sample studies provide such weak evidence of efficiency gains. The challenge here is to structure clinical studies in a way that allows the researcher to go from the specific to the general (or at least learn more about the shortcomings of large sample studies). For example, clinical studies have the potential to identify conditioning variables that can be used in large sample studies to sort mergers based on their motivation and likely sources of gains. Alternatively, clinical studies may permit us to better understand the timing of performance gains from acquisitions and the circumstance in which accounting measures of performance are misleading.

In my discussion I focus on why the large sample empirical studies fail to find significant value gains from mergers. I also discuss how clinical studies might be used to provide evidence to improve large sample econometric studies. Finally I discuss some of the lessons that can be learned from the cases Calomiris and Karceski study.

Measuring the Gains from Bank Acquisitions

Academic studies of merger-related gains in banking follow one of two approaches. The first approach compares accounting performance of the merged banks to a benchmark of either premerger performance or a group of comparable banks that were not involved in merger activity. In these studies, mergers are assumed to result in improved performance if the postmerger performance of the combined banks exceeds the performance of either comparable banks or the pro forma performance of the merging banks before the merger. Studies based on accounting data focus on three

measures of performance: operating income, cash flows, and operating costs.

The second approach to analyzing merger gains examines the stock price performance of the bidder and the target firm around the announcement of an acquisition. A merger is assumed to be value enhancing if the combined value of the bidder and the target increase following the merger announcement. However, with the exception of several recent papers, most studies examine the abnormal returns of the bidder and the target separately, making an assessment of the overall gains from the acquisition difficult.

What do these studies show? Looking first at the studies that examine stock returns, there is little evidence that mergers are value enhancing. Specifically, all studies find a significant increase in the value of the target (on the order of 15 percent in the two days around the merger announcement) and most find a decrease in the value of the bidder (of about 2 percent). Since the acquiring banks are on average significantly larger than the acquired bank, the combined value of the bidder and target declines slightly on the announcement of the merger. Overall the studies based on stock returns suggest no increase in value resulting from the merger.[1]

As Calomiris and Karceski point out, there are several reasons why measures of gains based on stock returns may be flawed. First, merger announcements mix information concerning the proposed acquisition with information concerning the financing of the acquisition. Since most bank acquisitions are financed with stock and since stock issues are, in general, associated with a negative stock price reaction for issuers, the returns to bidding firms may understate value gains anticipated from the merger. Consistent with this view Houston and Ryngaert (1997) find that the returns to bidders are significantly greater in mergers financed with cash or debt than in mergers financed with stock. However, even for cash offers, bidders continue to earn negative abnormal returns, suggesting that the adverse consequences of using stock to finance the acquisition do not offset positive returns to bidders associated with acquisitions.

A second reason abnormal return studies may not accurately reflect the value gains is that acquisitions are largely anticipated so that the positive effects on bank value do not show themselves on the announcement date. This problem may be particularly important for bank acquisitions in the late 1980s and the 1990s because many banks clearly expressed a strategy to grow through acquisitions. It seems unlikely, however, that the negative stock price performance of bidding firms can be explained by the acquisition being anticipated. Pre-announcement leakage is likely to attenuate the announcement day returns but not change what would be positive

1. See for example Houston and Ryngaert (1994), Cornett and De (1991), James and Wier (1987), Cornett and Tehranian (1992), and more recently DeLong (1998).

returns to bidders into negative announcement day returns. Pre-announcement leakage may also effect target returns since there is considerable speculation concerning potential targets prior to an acquisition. This attenuation bias together with the attenuation of bidder returns may result in positive though insignificant abnormal returns for the combined banks on the announcement day. Unfortunately this issue has not been addressed in the literature.[2] This may be a fruitful area for future research where the results of clinical studies may be particularly helpful.

A final problem with event studies is that the negative stock market reaction of bidding firms may reflect disappointment with the announced transaction because it conveys information that the bidding firm is less likely to be acquired in the future. This clearly has been a factor in several acquisitions (most notably the recent acquisition by SunTrust of Crestar Financial Corporation, which led to a decline of about 10 percent in the value of SunTrust shares). However, it is unlikely that the market's disappointment with a few potential targets' becoming acquirers can explain the negative average returns to bidding firms.

Overall it seems unlikely that these problems are important enough to mask a significant increase in the average value of acquired and acquiring firms resulting from mergers. However, this conclusion does not imply that efficiency gains are limited or that a number of acquisitions may not create value for bank shareholders. As Calomiris and Karceski point out, efficiency gains from acquisitions may accrue to bank customers in a competitive market. If this is the case, then the small positive return to the combined entity may simply reflect the fact that the bank captures only a small fraction of the gains. More important, cross-sectional studies of the abnormal returns from acquisitions reveal significant differences in the combined returns to bidders and targets across mergers. For example, Houston and Ryngaert (1994) find the value weighted returns to bidder and target is increasing in the degree of market overlap between the acquired and the acquiring banks, the percentage of the acquisition financed with cash or conditional stock, and the profitability of the bidder prior to the acquisition.[3] In a recent paper, DeLong (1998) finds that a positive and statistically significant return for mergers involves both geographic focus (where acquiring and acquired bank are headquartered in the same state) and activity focus (where the stock returns of the acquired and acquiring firms

2. Several studies attempt to control for this by measuring the abnormal returns of target firms from the date it is announced that a bank is a potential target (see, e.g., Houston and Ryngaert 1994). Controlling for pre-announcement leakage, the combined value gain of the bidder and target is not significantly different from zero.

3. Conditional stock offers involve financing the acquisition with common stock, but making the number of shares issued a function of the future price of the bidder's stock. Conditional stock issues may be a way for bidders to communicate that good news may be revealed before the deal is closed (or warrant that bad news will not be revealed).

are highly correlated in the twelve months preceding the merger). In contrast, DeLong finds that diversifying mergers destroy value.

The cross-sectional variation in abnormal returns suggests that there may be a number of "good" acquisitions (at least from the standpoint of bank shareholders). For example, the fact that returns are increasing in the degree of market overlap suggests that mergers involving cost savings or the creation of market power add value for shareholders. Unfortunately, without detailed information concerning the anticipated gains from the merger, it is impossible to distinguish between these two alternatives.

Given the inability of stock price performance studies to determine whether mergers create real economic value and the sources of such value gains, researchers have turned to examining postmerger performance using accounting data.[4] However, studies of postmerger performance also provide weak evidence of an overall improvement in performance. For example, Cornett and Tehranian (1992) find a small but significant increase in postmerger operating cash flows compared with the performance of banks not engaged in merger activity. However, their results appear to be sensitive to the banks used as a benchmark. Specifically, Cornett and Tehranian use as a benchmark a group of publicly traded banks that did not engage in any merger activity during the comparison period. However as Pilloff (1996) points out, a more appropriate benchmark is the performance of banks that are located in the same region as the merging banks. Accounting for regional differences in performance, Pilloff finds no significant improvement in operating performance.

Methodological problems may partly explain why performance studies provide little evidence of performance gains. The most important among these is the difficulty in constructing a good benchmark and the timing of performance gains. As Calomiris and Karceski point out, there is selectivity bias in the sample of comparable banks. Banks that do not merge may be doing so for good reason. For example nonmerging banks may have chosen internal growth or may have been involved in prior merger activity. The problem of finding a suitable benchmark is particularly important in banking during the last decade precisely because the industry was involved in a merger wave.

Even if mergers result in improvements in performance, the lags between the completion of mergers and the realization of operating improvements may be long and varied. Moreover, restructuring and consolidation costs may lead to a deterioration in short-term performance even though long-term performance is expected to improve. This problem is particularly important if there is cross-sectional variation of the source of merger gains. For example, mergers motivated by anticipated cost savings may result in faster improvements in operating performance than mergers mo-

4. See for example Berger (1997), Cornett and Tehranian (1992), and Pilloff (1996).

tivated by revenue synergies or diversification opportunities. This fact may lead to a significant understatement in the gains (or losses) arising from mergers.

Consistent with the results from stock price studies, performance studies suggest that there is considerable cross-sectional variation in the performance of merged banks. For example, Pilloff (1996) finds that low target profitability and high target and bidder expenses are correlated with subsequent performance improvements. Pilloff also finds, however, that although both performance changes and abnormal returns are related to premerger expenses and operating performance, the significant variables differ between the two measures. For example, performance gains are related to high target and bidder expenses, while abnormal returns are related to the difference between bidder and target expense measures. More troubling, variables that explain cross-sectional differences in abnormal returns—such as the mode of financing or the degree of market overlap—do not explain cross-sectional differences in postmerger performance. In addition, there is no consistent evidence that abnormal returns are significantly related to postmerger performance.

What can we conclude from the studies of merger gain? First, the gains from mergers appear to be significantly related to the motive behind the merger. Specifically, mergers motivated by cost savings appear to generate greater gains to bank shareholders than mergers motivated by revenue enhancement or diversification benefits. The failure of performance-based studies to provide confirming evidence on the importance of cost savings may arise from differences across mergers in the timing of cost savings. Second, gains to shareholders appear to be significantly related to how the merger is financed, suggesting that abnormal stock returns may not provide an accurate measure of the value gains associated with the merger. Finally, there appears to be significant variation in the pricing of deals and the motive for mergers over time. For example, Houston and Ryngaert (1994) provide some evidence of an improvement in bidder returns and an increase in the overall gains from acquisitions in the 1990s. For example, they find that the combined returns to bidders and targets since 1989 are positive. In contrast, the combined returns were negative in the 1980s.

Additional evidence, consistent with an improvement in the returns from mergers comes from an analysis of deal pricing in the 1980s and 1990s. For example, table 3C.1 provides summary statistics for large bank acquisitions (where the acquired bank has over $250 million in market value in 1982 constant dollars) during the period 1982–97. Notice that since 1992 there has been a decline in the premium paid over market for the acquired firm. Moreover, recent mergers are much less dilutive of earnings than mergers in the 1980s. Finally, notice that the percentage of overhead reduction needed for the deal to break even (in terms of being nondilutive of earnings per share) is much less in the 1990s than it was in the

Table 3C.1 **Bank Mergers since 1982**

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Total number of transactions	18	37	30	46	67	37	26	29	12	29	38	54	71	58	79	32
Number of intermarket transactions	2	7	2	15	28	17	16	9	4	10	9	13	24	23	17	7
Percentage of intermarket transactions	11	19	7	33	42	46	62	31	33	34	24	24	34	40	22	22
Accounting treatment																
Total number of purchases	11	27	24	28	20	10	13	13	7	11	6	9	28	13	27	7
Total number of poolings	7	10	6	18	47	27	13	16	5	18	32	45	43	45	52	25
Premium paid over market price (%)																
One day prior to announcement	46.9	33.1	33.4	29.6	19.6	27.2	28.3	33.2	41.2	30.2	33.7	17.8	20.9	23.2	18.4	20.6
One month prior to announcement	59.3	43.2	38.2	39	30.5	38	34.4	39.6	38.6	48.4	39	34.5	30	32.7	30.3	28.2
Transactions medians																
Median deal value (in millions of dollars)	72.9	76.6	52.9	82.9	55.3	102.9	92	74	49	187	105	75	52	68	56	63
Mean deal value (in millions of dollars)	92.2	130.9	99.8	156.1	172.8	290.7	229.7	192.6	99.8	539.8	253.8	192.6	123.7	630.5	390.6	615.4
Price/earnings multiple	10.4	11.8	12.3	13.2	16	16.4	15.3	14.4	13	15	15.9	15.9	16.1	17	17.9	19.4
Price/book value multiple	1.4	1.42	1.41	1.88	2.2	2.31	1.71	1.89	1.68	1.59	1.8	2.09	2.03	2.14	2.17	2.5
Price/tangible book value multiple	1.45	1.42	1.49	1.88	2.25	2.36	1.79	1.89	1.8	1.65	1.91	2.14	2.18	2.22	2.25	2.55
Fully diluted earnings-per-share dilution (%)	−6.4	−5.4	−5.5	−4.7	−4.4	−4.4	−2.5	−3.6	−1.4	−1.8	−1.7	−2.1	−1.4	−2.9	−1.9	−1.8
Premium to total deposits	4.14	3.16	4.37	7.36	10.96	10.94	5.4	8.3	8.1	6.02	7.17	10.81	10.46	11.65	12.26	16.39
Percentage of overhead to breakeven	25.3	14.7	16.9	20.7	21.6	25.7	21.7	23.7	9.8	12.6	5.2	18.2	22.4	19.7	22.1	15.7

Source: Salomon Brothers Industry Report: "Shop Til You Drop" August 1997.

1980s. Whether the improvement in deal pricing is a result of an improvement in the market for corporate control in banking (as Calomiris and Karceski argue) or a change in the motivation for mergers (cost reduction versus revenue enhancement) is an issue that deserves further research.

What Can Be Learned from Case Studies?

As discussed earlier, the primary benefit of case studies of bank mergers is to better our understanding of the source of merger gains (or losses) so as to resolve the conflicting results of large sample empirical studies. The case studies presented by Calomiris and Karceski assist us in understanding how acquisitions might add value. In particular, the main finding of their paper is that the motives for mergers in banking are quite varied. As a result, failure to condition on the motive for the acquisition may obscure performance improvements arising from the acquisition. Unfortunately the nine case studies do not enable us to go from the specific to the general. In particular, they do not identify new easily quantifiable conditioning variables that can be used in large sample studies to empirically test whether mergers add value. As a result, the conclusions one can draw from the nine case studies are similar to the conclusions one can draw from the large sample studies: certain types of acquisitions are more likely to generate value gains than others.

The next step in this area should be to undertake an in-depth analysis of a larger number of acquisitions and then use the results to test whether refined measures of the reason for the merger and a better understanding of the timing of performance changes can resolve the conflicting results of abnormal stock returns and performance studies. In this regard, analyst research reports on the anticipated gains from mergers and their forecasts of cost savings and revenue gains may be particularly useful. In a project currently underway, Joel Houston, Mike Ryngaert, and I use analyst research reports obtained through INVESTEXT together with bank annual reports and news releases to sort mergers based on what analysts believe to be the motive for the merger and the likely source of value gain (or in some cases value loss). These reports also provide a detailed description of the anticipated timing of performance changes resulting from the merger (in many cases by expense and revenue item). This examination allows us to then condition the analysis of actual performance on the stated motive for the merger and the anticipated changes in performance at the time of the merger.

Structuring clinical analysis in this way allows one to go from the specific to the general. In particular, we use our clinical studies to identify conditioning variables that can be used in large sample studies to sort mergers based on their motivation and likely sources of gains. Moreover, we are able to assess whether the failure of large sample performance studies to identify merger gains results from the failure to control for timing

differences among mergers, inappropriate classification of mergers by objective, or simply because these acquisitions have no significant effect on performance.

In addition to permitting a more refined classification of the anticipated source of merger-related gains, many of the analyst research reports provide detailed valuations of the anticipated merger gains. These valuations in turn can be related to the premium paid by the acquiring bank to evaluate the circumstances in which bidders appear to overpay. The difference between the premium paid and the value of merger-related gains can be compared to the abnormal stock price performance of the bidder to assess whether bidder returns are related to the degree of overpayment.

Our preliminary analysis indicates that analysts classify mergers into four categories: (1) cost savings arising from shared overhead expenses, (2) revenue enhancement from cross selling, (3) diversification, and (4) managerial entrenchment (mergers as an antitakeover device). Analyst assessments of the gains from acquisitions appear to be closely related to motive for the acquisition and the degree to which the merger is expected to be dilutive of earnings per share. Specifically, anticipated value gains are greatest for intramarket mergers where anticipated expense reductions are greatest. Moreover, these acquisitions tend to be the least dilutive, with earnings accretion expected within eighteen months. These acquisitions are also expected to generate the greatest earnings improvements (through both expense reduction and increases in revenue arising from cross-selling opportunities). We also find evidence of significant changes in deal pricing and the nature of acquisition in the 1990s. For example, we find a significant decline in the earnings-per-share dilution and in the percent of overhead reduction needed to recover the merger premium for acquisitions in the 1990s. In addition, the frequency of "in market" mergers increased in the 1990s (partly as a result of the completion of regional and interstate banking pacts in the late 1980s).

Conclusion

Over the past fifteen years, there has been a dramatic consolidation in the U.S. banking system. A combination of deregulation, globalization, and changing technology has induced a large number of bank mergers over this time period. Not surprisingly, this widespread consolidation has been the impetus for a large number of academic studies. While this literature has provided a number of insights, a number of important questions concerning both the motivation for bank mergers and the estimated value added from these mergers remain unanswered.

In many respects, because of the lack of detailed data, the existing literature has had a difficult time classifying the motivation for mergers and estimating the ex ante and ex post gains from bank mergers. Case studies provide important insights into merger-related gains. The challenge, how-

ever, is to structure the case studies in a way that bridges the gap between individual case studies and the existing large sample studies. In this regard, the study by Calomiris and Karceski is an important first step.

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Comment Anil K Kashyap

Charles Calomiris and Jason Karceski are to be congratulated for bringing some new evidence to the debate over the fallout from bank mergers. As they stress in their paper, there is little consensus in the literature over the impact of mergers on operating efficiency, profitability, or shareholder wealth. Given this state of affairs I expect that most researchers interested in banking will find the paper valuable and well worth reading.

In my comments, I try to accomplish three things. First, because the paper contains a wealth of data and a number of interesting conjectures

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about the direction of the industry, I start by laying out what I see as the main arguments of the paper. While I am sympathetic to many of the authors' claims, there are a couple of areas where I disagree. In the second part of my review I identify these points. Finally, I step back and offer some thoughts on how case studies can be used along with more traditional types of research. To keep things concrete these suggestions are couched in terms of the paper, but I hope it is clear how these principles could be applied to any research-oriented case work.

The Core of the Argument

As mentioned above, the motivation for this paper is the observation that, using conventional research techniques, it is hard to find evidence that mergers cut costs or raise shareholder value. I share the concern of Calomiris and Karceski that this result is troubling in light of the massive amount of consolidation that has taken place and the widespread view among practitioners that mergers are beneficial.

The authors argue that this tension is even worse than is commonly thought because there is another line of research to support the practitioners' view. Specifically, they point to the literature that looks at the efficiency of banks across regimes. These studies look both at cross-state evidence from the United States and comparisons of different countries. Calomiris and Karceski read the results as showing that consolidation is useful if it helps banks expand their diversification either through enhanced branching or expanded product lines. I suspect that skeptics will doubt the cross-country studies because they are not ceteris paribus comparisons. But the domestic evidence, particularly the comparison of the fate of banks headquartered in North Carolina and Illinois, seems harder to dismiss. Thus, I am inclined to agree with their contention that the cross-regime research suggests that there are likely to be gains from consolidation.

Against this backdrop, the authors tackle the obvious question of why conventional merger analysis provides such weak evidence regarding the gains from consolidation. They offer separate explanations for why stock price reaction studies and postmerger performance analyses might not accurately capture the gains from mergers. I review some of the details of their arguments below, but I believe it is fair to summarize their view as saying that mergers are complicated transactions in several important respects. In particular, they are difficult to analyze because they are taking place throughout the banking industry, during a period when the fundamental business of banking may be changing, and (perhaps as a result) individual organizations may have very different motivations for undertaking mergers. Because of these factors, Calomiris and Karceski believe that correctly executing any econometric work is very challenging.

Since the authors are particularly concerned about the changing aspects

of the whole industry, one theme they repeatedly stress is that data from the 1980s may not be a reliable guide about what to expect regarding later mergers. Given this view it is natural to look for data on the most recent mergers to see if it tells a different story than past studies. Moreover, the objections they raise about conventional work lead them to adopt a case study approach. Implicitly this strategy presumes that by carefully and thoroughly looking over a small number of representative cases, a clear set of patterns should emerge.

The paper's main conclusion is that seven of the nine mergers they analyze are clear success stories. In these seven cases, Calomiris and Karceski argue that the acquiring banks seem to have accomplished their (publicly) stated goals. Importantly, two of the seven ex post successful mergers were subject to negative stock price reactions at the time they were announced. Another one of these successful cases (Harris and Suburban) involved a combination of two banks that were not trying to cut costs but were seeking to boost revenue through cross selling. Turning to the two less successful cases, the authors find that one (involving First Chicago and Lake Shore Bancorp) might be well described as reflecting a preference for managerial gains at the expense of shareholders. The other unsuccessful case is complicated by the fact that the acquiring institution was itself soon taken over.

Calomiris and Karceski also offer some observations on the lessons they believe their work offers for traditional econometric analysis. They begin this discussion by saying "that stock price reactions to consolidation announcements (which tended to be positive for combined entities in our cases) do not offer a reliable guide to expected or actual productivity gains from consolidation." Next, the authors point to the importance of considering the dynamics of the consolidation process, whereby a poor acquisition may be unwound in a subsequent transaction. Finally, they highlight the difficulty of getting a control sample that can be used as a benchmark for gauging the impact of mergers.

Disagreements

On the most important point of their paper—that most of the mergers in their sample were successful—I agree with Calomiris and Karceski. However, my process for reaching this conclusion differs slightly from theirs and I also have a somewhat different vision than they do about how to build on the case research in this paper. I begin by explaining my interpretation of their results and then trace that reasoning through to draw lessons for further work.

I agree with the authors' conclusion that the postmerger performance analysis using only publicly available data is very difficult to conduct. As they emphasize, most organizations in this industry have been in a nearly constant state of flux, so that tracing out the dynamic effects of a single

transaction can be quite difficult. On the other hand, as I explain below, I am much more confident that the stock market reaction provides a reasonable measure of the deals that they are analyzing. Therefore, I believe that in assessing these deals we should put much more weight on the stock market reactions than on the postmerger performance.

Judging by the simple metric of what happened to adjusted returns, six of the nine deals in this paper were desirable. But, as Calomiris and Karceski convincingly argue, there can be problems with the event studies. I find three of the objections they highlight to be potentially serious. A first potential problem is that the stock market value of a combined entity may drop because consumers (rather than the shareholders) capture the gains from the merger. A second serious problem is that in a merger wave similar to what we have seen in the U.S. banking industry, it is hard to construct a reasonable benchmark portfolio. Finally, the market reaction might be unfavorable because even though a merger is expected to lower costs or raise revenues, the merger undertaken may not be the best option for a bank to pursue. Let's consider whether each of these complicating considerations might be important for the nine cases analyzed by Calomiris and Karceski.

The possibility that consumers rather than shareholders gain from a transaction is interesting, but we have no particular reason to believe that this possibility is important in these cases. Moreover, if consumers are benefiting from a merger, that means that the shareholder gains would understate the overall efficiency gains from the transactions. Since most of the stock market responses are already favorable, any unmeasured gains to consumers would only strengthen the presumption that these were mostly good deals. For the stock market signals to be a misleading indicator of overall efficiency, one must fear that the mergers permit banks to exercise market power in an untoward fashion. Given the characteristics of the organizations and banking markets involved in these cases, we have also no indication that this is a problem. So for these nine cases I see no reason to believe that the market reactions are significantly affected by these possibilities.

The potential biases created because of the lack of suitable benchmark banks to use for comparisons are more problematic. On the one hand, if the best organizations decide that consolidation is the only way to survive, while the industry laggards avoid being taken over and eventually fail, then merging banks will appear to outperform their peers. On the other hand, if there are different long-run strategies that are viable, so that only the best banks steer clear of mergers and pursue different options, then merging institutions will appear to underperform.

The cases in this paper suggest that management entrenchment may make things even more complicated. For instance, Boulevard was a poorly performing institution that probably deserved to be acquired or shut down

before First Bank acquired it. As Gorton and Rosen (1995) persuasively argue, such entrenchment is more likely in banking than in other industries. If the Boulevard pattern is at all typical, then there will be periods when the sample of nonmerging firms will be dragged down by banks that ought to be acquired. However, once the acquisition occurs, a quick turnaround may be difficult so that it would be hard to determine the full impact of entrenchment on the comparison of merging and nonmerging institutions.

All these possibilities lead me to agree with Calomiris and Karceski that finding comparable benchmarks is not an easy task. Nevertheless, I believe that the benchmark nonmerging institutions that they have assembled are fairly representative. For the nine mergers, therefore, the benchmarking concerns do not lead me to doubt the basic stock market reports.

Finally, we must consider what to make of situations where the market assessment is negative because a merger announcement signals that other options are being forsaken. Since I agree with the authors' assessment that this is a plausible explanation for the Firstar market reactions, settling this issue is important. To this end, it may be helpful to rephrase the question to ask how we should interpret a situation where the market prices reflect the sentiment that management has simply made a suboptimal decision.

One view is that the decision is reversible (because the merger can be cancelled or the acquired bank can later be spun off), so that investors with a long horizon may not see any wealth destroyed. By this logic one might favor waiting to see the impact on operating performance of the combined institution before deciding on the ultimate impact. This is one interpretation of Calomiris and Karceski's view, since they advocate checking whether cost savings or revenue enhancements can be identified. However, they are also willing to entertain the possibility that the market simply misunderstands the nature of some transactions—a point I discuss further in the next section. Either way, the authors favor downplaying the market reactions.

An alternative view is that once the proposed merger is announced, Firstar forecloses the option to be taken over, thereby extinguishing an option and destroying value. Since there are likely to be nonnegligible transactions costs to unwinding the merger if it is consummated, it may be impossible to recover the option. In this case, one could conclude that although the merger may lead to a local improvement, from a more comprehensive perspective the merger would not be efficient.

We do not have enough information to sort out these competing hypotheses. Absent evidence that the market systematically misprices such transactions my preference is to give the benefit of the doubt to the market. Thus, I conclude that it is possible that the Firstar mergers were ill advised, even if they did subsequently lead to cost cutting and some revenue enhancement.

Overall, it seems to me that the basic fact that market reactions were positive in six of the nine cases is fairly compelling evidence that these deals were attractive. We have no reason to believe that this finding is an artifact of problems with benchmarking the stock returns. The fact that consumer windfalls are omitted from the analysis only strengthens this view. Similarly, if one accepts the authors' view of the two Firstar deals, the outlook is even more favorable. Moreover, the other negative stock price reaction was associated with the First Chicago–Lake Shore merger. All the supporting evidence corroborates the view that this market reaction was justified.

Integrating Case Research and Conventional Research

This study offers an interesting window into nine specific deals. I suspect, however, that most banking scholars will wait for more studies before drawing any firm conclusions. Nevertheless, in the meantime, I believe that there two further contributions that could be made by further exploring the data from these nine cases.

One path worth pursuing is to flush out new hypotheses that others can test. Calomiris and Karceski already develop several interesting hypotheses from looking at these cases. For instance, they point out that NationsBank (prior to its subsequent merger with Bank of America) was planning to buy back some of its stock because the management believed that the market did not fully appreciate their acquisition strategy. As discussed above, it is also plausible to argue that the management at Firstar and market participants disagreed over which options to pursue. Obviously, one cannot develop hypotheses by scrutinizing a set of data and then test the hypotheses on the same data set. However, the possibility that the market systematically misprices certain types of transactions is interesting and merits further study.

I encourage the authors to see if they can pick out some characteristics that might predict which types of transactions are most difficult to price. For instance, they provide some evidence that there was considerable heterogeneity among the professional analysts that were following NationsBank. It is well documented in the accounting literature that analysts' sentiment is systematically overly optimistic about firms' earnings per share. It would be interesting to know more about whether analyst heterogeneity has any predictive value or whether the typical bias is less pronounced during periods of high heterogeneity.

Calomiris and Karceski also stress the idea that relationship financing and cross selling are becoming increasingly important to successful banks. This view has strong support among practioners. For instance, cross-selling opportunities are commonly cited by bank analysts that believe the Travellers and Citibank merger will be a success. While the authors find some support for the existence of synergies, I would like to see if we could

use the cases to refine our predictions regarding the success of synergy-motivated mergers. For instance, one could try to develop such predictions by systematically contrasting the Harris-Suburban and the First Chicago–Lake Shore deals.

In addition to generating and formalizing new hypotheses, more work on critiquing existing methods would be desirable. Many of the basic parameters of these deals that are described in table 2-1 are typically unavailable to researchers who are using standard public data sources. It would be very useful to see if augmenting the conventional analysis with the type of data in that table makes a difference. For instance, one could use a standard cost function approach to generate the predicted savings from the mergers. After calculating the difference between predicted and realized savings, one could check whether the unexplained cost variation is systematically related to any variables of the sort in table 2-1.

The basic idea that case studies can help generate new hypotheses and refine standard methodology is not controversial. Following through on these goals, however, is not easy. It is essential that the data are collected and organized in a systematic fashion so that comparisons across studies are possible. There is a natural temptation when one gets deep into details of particular cases to base explanations on the qualitative information that often is available from company insiders and press accounts. Progress will depend on aggregating across many studies and such aggregation depends on having tangible information that can be compared. Calomiris and Karceski have done a good job of avoiding this temptation and collecting lots of valuable data. I hope that subsequent researchers who seek to build on their work will do the same.

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