FRBSF ECONOMIC LETTER

Number 2004-15, June 18, 2004

Banking Consolidation

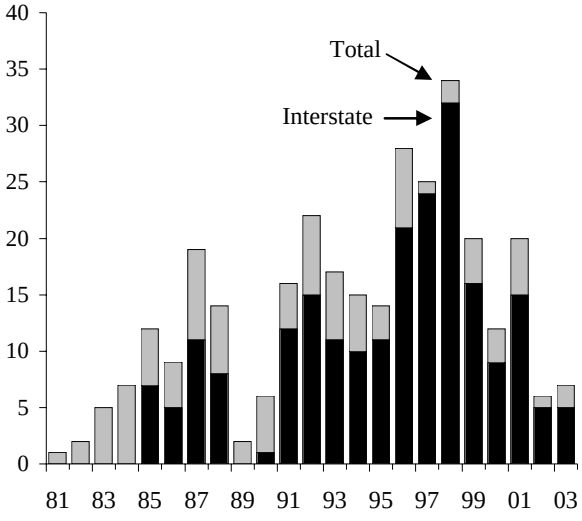
Until this year, Citigroup was the only $1 trillion banking organization in the U.S. Now, there are two more—Bank of America has merged with FleetBoston, and J.P. Morgan Chase is about to complete its merger with Bank One. These megamergers are notable not only for their size but also for the geographic scope that the new institutions will serve. Indeed, they may signal the beginning of a process for building a truly national banking franchise. As mergers continue to shape the structure of the banking industry in the U.S., this *Economic Letter* looks at the economic drivers behind them and highlights some important policy implications.

Background on recent consolidation

The Riegle-Neal Act allowed interstate branch banking beginning in 1997, and, since then, the number of large bank mergers has increased significantly. Figure 1 plots this trend along with another noteworthy trend, namely, that most of the large bank mergers in recent years involved institutions headquartered in different states; the latter point suggests that these are market-expansion mergers, where the acquirer and the target have few overlapping operations in their respective banking markets. Although the markets they serve are much bigger, so far none of these three megabanks has come close to having a banking franchise that spans all 50 states, which is now legally possible.

Another noteworthy fact about the recently announced megamergers is that the target banking companies are healthy institutions that are likely to survive as independent organizations. This is in stark contrast both to the late 1980s and early 1990s in the U.S., when many bank mergers involved relatively weak banking companies being acquired by somewhat stronger organizations, as well as to some large bank mergers abroad, most notably in Japan. Today the U.S. banking sector is in good shape, with record profits and relatively low volumes of problem loans. For example, the return on average assets in 2003 for the two merger targets, Bank One and FleetBoston, were 1.27% and 1.34%, respectively, while the top 50 bank holding companies averaged 1.28%. This suggests that the recent megamergers are not motivated by economic weakness but rather by other economic forces.

Figure 1
Large bank mergers



Note: Both targets and acquirers have more than $1 billion in total assets.

Economic forces driving megamergers

We can identify four economic forces that may be driving large bank mergers. First is economies of scale—the relationship between the average production cost per unit of output and production volume. A firm that produces a higher volume of output can see its unit cost of production decline because the costs of some of the inputs are fixed, such as administrative and overhead expenses. However, diseconomies of scale also are possible. The average production cost may start to rise when output exceeds a certain volume because it may be more costly to manage a very large firm; these costs may stem from corporate governance issues, difficulties in coordination and execution, and diminished flexibility in responding quickly to changing markets.

While banking researchers generally agree that economies of scale do exist in the industry at low levels of output, there is less agreement about whether diseconomies of scale emerge at high levels of output. Earlier studies found evidence that diseconomies of scale did occur when total banking assets exceeded roughly $10 billion; however, those results were based on banking data prior to the passage of the Riegle-Neal

Act, when banking companies operating in multiple states had to maintain separately capitalized, individually chartered bank subsidiaries in those states. The passage of Riegle-Neal allows these banking organizations to consolidate the individual state charters into a single charter, thus greatly streamlining management and operations. On the cost side, it is apparent that the cost structure of running a network of bank branches across multiple states should be more efficient than running a group of individually capitalized bank subsidiaries. On the revenue side, research on megamergers suggests that merged banks experienced higher profit efficiency from increased revenues than did a group of individual banks, because they provided customers with higher value-added products and services (Akhavein, Berger, and Humphrey 1997). Moreover, a banking organization of a certain scale may even earn a "too-big-to-fail" subsidy due to the market's perception of de facto government backing of a megabank in times of crisis. While the combination of all these factors could raise the optimal scale of large banking organizations today, it remains to be seen whether a $1 trillion bank is the "right" size.

The second economic force is economies of scope—a situation where the joint costs of producing two complementary outputs are less than the combined costs of producing the two outputs separately. This may arise when the production processes of both outputs share some common inputs, including both capital (such as the actual building the bank occupies) and labor (such as bank management). The passage of the Gramm-Leach-Bliley Act (GLB) in 1999 changed the scope of permissible financial activities for banking organizations. In the past, banking organizations were not allowed to engage in securities activities except on a limited, case-by-case basis through their so-called Section 20 subsidiaries. Also, general insurance activities were not permitted for banking firms, except in very small towns with fewer than 5,000 residents. GLB allows banking organizations to expand into securities and insurance activities in a much more straightforward way (see Furlong 2000 for more details). Although the two recently announced megamergers mainly involve combining banking activities, the potential of scope economies among banking, securities, and insurance could further increase the optimal size of a large banking organization today compared to pre-GLB days.

The third economic force is the potential for risk diversification. Research suggests that geographic expansion would provide diversification benefits to a banking organization not only by reducing its portfolio risk on the asset side, but also by lowering its funding risk on the liability side, as it spreads funding activities over a larger geographic area (Hughes, Lang, Mester, and Moon 1999). Furthermore, research suggests that product expansion could yield diversification benefits, most notably between banking and securities activities, while less so between banking and insurance (see the survey article by Kwan and Laderman 1999). Thus, a bigger bank is expected to be less vulnerable to economic shocks, and that alone could reduce its cost of capital, further compounding the benefits of scale and scope economies that come only from the production process.

The fourth economic force involves the bank managements' personal incentives. These may include the desire to run a larger firm and the desire to maximize their own personal welfare. Empirical research has shown that managerial compensation and perquisite consumption tend to rise with firm size. Research on stock market reactions to megamerger announcements in the 1990s suggests that, on average, the market did not view mergers of publicly owned banking companies as providing a significant gain to total shareholders' wealth of the combined company (Kwan and Eisenbeis 1999). The muted market response to merger announcements raises questions about the true magnitude of the net economic benefits underlying large bank mergers.

Policy implications

First and foremost, bank mergers have the potential to raise antitrust concerns, which must be resolved satisfactorily before being approved. Because bank mergers can alter banking market structure and because market structure influences banking competition and hence the price of banking services to customers, all bank merger applications are scrutinized by banking regulators. In addition, the Department of Justice has the authority to challenge any mergers that are deemed harmful to competition. Research suggests that the markets for many banking products and services remain local in nature, despite the advances in information technology and electronic commerce (Rhoades 2000). In fact, the recent market-expansion megamergers themselves are testimony to the importance these large banking organizations attach to maintaining a local market presence. Thus, the current regulatory practices of defining banking markets locally in evaluating the effects of proposed mergers on competition seem justified. When a proposed merger is found to result in an unacceptably high level of concentration in local banking markets, divestitures in those markets are often required as a condition for regulatory approval in order to preserve meaningful competition. Looking at western states, Laderman (2003) found that changes in concentration of local banking markets were quite modest despite the large degree of consolidation in banking over the past 20 years.

In addition to concerns about banking concentration effects on local market competition, existing banking legislation also limits banking concentration at the national level. Perhaps motivated by the fear of concentration of banking power, the Riegle-Neal Act prohibits any merger or acquisition that results in a combined banking organization controlling more than 10% of the total amount of deposits of insured depository institutions in the U.S. A banking organization could exceed the deposit cap through internal growth, but it would not be allowed to engage in any more mergers or acquisitions. While the combined Bank of America and FleetBoston organization would control about 9.9% of the national deposit share, it is still not yet close to being a truly national bank. Thus, the drive toward building a truly nationwide franchise could be severely constrained by current law. As banking organizations get closer to the cap, policymakers will face growing pressure to reconsider both the merits of the deposit cap and the best way to accomplish the associated public policy goals.

The creation of megabanks also heightens concerns about systemic risk. When banking activities are concentrated in a few very large banking companies, shocks to these individual companies could have repercussions to the financial system and the real economy. The desire to limit systemic risk may lead policymakers to maintain some kind of cap on banking concentration at the national level.

The increased potential of systemic risk created by megabanks also intensifies concerns about these banks being considered "too-big-to-fail" (TBTF). In the early 1990s, the FDIC Improvement Act (FDICIA) included measures to limit the extension of TBTF to failing banks. Specifically, it mandated that the FDIC use the least cost resolution method to handle bank failures, thus greatly raising uninsured bank creditors' exposure to default risk. It appears to have led market participants to revise their views towards TBTF. This, in conjunction with the National Depositor Preference law (1993), which put depositors ahead of subordinated debt holders, may explain the research findings showing a significant increase in the sensitivity of the default risk premium of bank subordinated debt to banking organizations' underlying risks after FDICIA. However, there is still an exception in FDICIA—which can be invoked only in extraordinary circumstances—that permits the FDIC to pay off a failing bank's uninsured creditors if the use of least cost resolution would have serious adverse effects on economic conditions or financial stability. Megamergers create more such potentially systemically important banks and put a higher premium on credible policies for the orderly resolution of troubled large banking organizations—policies that limit the potential for moral hazard while containing their adverse impacts on financial markets.

Conclusions

There are a number of possible economic drivers for megamergers, from economic efficiency to the self-interest of bank management. Due to the profound changes in banking laws in the 1990s, earlier research on bank mergers may not be applicable to today's environment; therefore, it remains to be seen whether the current bank megamergers result in any measurable efficiency gains. Nevertheless, the ever-growing scale of bank mergers raises challenging policy questions, including banking concentration at the national level and systemic risk concerns, that must be addressed by policymakers in the course of promoting economic efficiency while safeguarding the nation's financial system.

Simon Kwan
Vice President, Financial Research

References

Akhavein, J.D., A.N. Berger, and D.B. Humphrey. 1997. "The Effects of Megamergers on Efficiency and Prices: Evidence from a Bank Profit Function." *Review of Industrial Organization* 12, pp. 95–139.

Furlong, F. 2000. "The Gramm-Leach-Bliley Act and Financial Integration." *FRBSF Economic Letter* 2000-10.

Kwan, S.H., and R.A. Eisenbeis. 1999. "Mergers of Publicly Traded Banking Organizations Revisited." Federal Reserve Bank of Atlanta *Economic Review* 84(4), pp. 26–37.

Kwan, S.H., and E. Laderman. 1999. "On the Portfolio Effects of Financial Convergence: A Review of the Literature." FRBSF *Economic Review* 2, pp. 18–31.

Laderman, E. 2003. "Good News on Twelfth District Banking Market Concentration." *FRBSF Economic Letter* 2003-31.

Hughes, J.P., W. Lang, L.J. Mester, and C.G. Moon. 1999. "The Dollars and Sense of Bank Consolidation." *Journal of Banking and Finance* 23, pp. 291–324.

Rhoades, S.A. 2000. "Bank Mergers and Banking Structure in the United States, 1980–98." Federal Reserve Staff Study 174.

ECONOMIC RESEARCH

FEDERAL RESERVE BANK

OF SAN FRANCISCO

P.O. Box 7702
San Francisco, CA 94120
Address Service Requested

**PRESORTED
STANDARD MAIL
U.S. POSTAGE
PAID
PERMIT NO. 752
San Francisco, Calif.**

Printed on recycled paper
with soybean inks

Index to Recent Issues of *FRBSF Economic Letter*

DATE	NUMBER	TITLE	AUTHOR
11/7	03-33	The Bay Area Economy: Down but Not Out	Daly/Doms
11/14	03-34	Should the Fed React to the Stock Market?	Lansing
11/28	03-35	Monitoring Debt Market Information for Bank Supervisory Purposes	Krainer/Lopez
12/12	03-36	Japanese Foreign Exchange Intervention	Spiegel
12/19	03-37	The Current Strength of the U.S. Banking Sector	Krainer/Lopez
12/26	03-38	Is There a Digital Divide?	Valletta/MacDonald
1/16	04-01	U.S. Monetary Policy: An Introduction, Part 1	Economic Research
1/23	04-02	U.S. Monetary Policy: An Introduction, Part 2	Economic Research
1/30	04-03	U.S. Monetary Policy: An Introduction, Part 3	Economic Research
2/6	04-04	U.S. Monetary Policy: An Introduction, Part 4	Economic Research
2/13	04-05	Precautionary Policies	Walsh
2/20	04-06	Resolving Sovereign Debt Crises with Collective Action Clauses	Kletzer
3/12	04-07	Technology, Productivity, and Public Policy	Daly/Williams
4/2	04-08	Understanding Deflation	Wu
4/9	04-09	Do Differences in Countries' Capital Composition Matter?	Wilson
4/16	04-10	Workplace Practices and the New Economy	Black/Lynch
5/14	04-11	Can International Patent Protection Help a Developing Country Grow?	Valderrama
5/21	04-12	Globalization: Threat or Opportunity for the U.S. Economy?	Parry
6/4	04-13	Interest Rates and Monetary Policy: Conference Summary	Dennis/Wu
6/11	04-14	Policy Applications of a Global Macroeconomic Model	Dennis/Lopez