

Finding Meaning in Mergers

by

Robert R. Moore

Senior Economist and Policy Advisor

and

Thomas F. Siems

Senior Economist and Policy Advisor

July 9, 1998

Financial Industry Studies Department

Federal Reserve Bank of Dallas

Finding Meaning in Mergers

It seems a day doesn't go by without hearing the mention of another big merger deal. But are such deals good or bad? Will consumers have fewer choices? Will competition be threatened? It can be very confusing.

Our goal in this presentation today is to break through all the confusion and focus on finding meaning in mergers.

Overview

Are firms merging just to get bigger? And, as merging firms grab greater market share, are individual freedoms threatened because bigger is perceived as greater concentration of power? Well, as we will see, there are a number of very good reasons why firms merge and some important factors driving consolidation today.

This year is sure to be a record year for merger activity, with nearly \$950 billion in deals announced already through June. This total already surpasses all of 1997's record \$920 billion in mergers. In just the past three months, we have witnessed eight of the nine biggest merger deals ever announced involving U.S. companies (see Figure 1). Four of these mergers involve U.S. commercial banking organizations; other megamerger deals have been announced in telecommunications, the automotive industry, and biotechnology.

Figure 1

Biggest Merger Deals

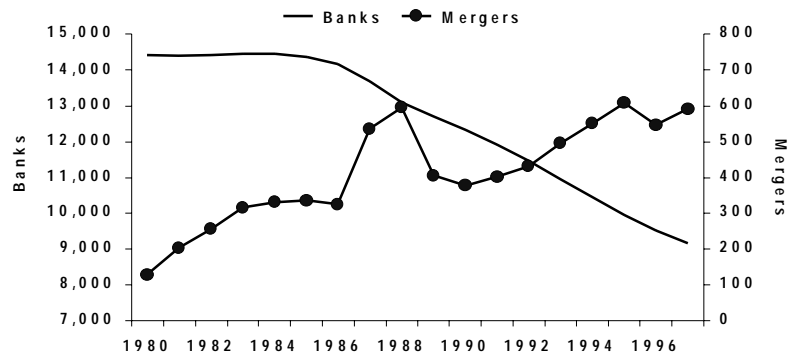
| <i>Merging Institutions</i> | <i>Deal Value (Billions)</i> | <i>Announcement Date</i> |
|-----------------------------------|------------------------------|--------------------------|
| Travelers - Citicorp | \$73 | April 6, 1998 |
| SBC Communications - Ameritech | 60 | May 11, 1998 |
| NationsBank - BankAmerica | 59 | April 13, 1998 |
| AT&T - TCI | 48 | June 24, 1998 |
| WorldCom - MCI Communications | 37 | November 10, 1997 |
| Daimler-Benz - Chrysler | 36 | May 7, 1998 |
| American Home Products - Monsanto | 35 | June 1, 1998 |
| Wells Fargo - Norwest | 34 | June 8, 1998 |
| BancOne - First Chicago NBD | 26 | April 13, 1998 |

Our focus is on the banking industry, which we will treat like a case study. But note that much of the same philosophy and rationale for bank mergers applies to other industries as well.

For the U.S. banking industry, the current consolidation wave started nearly 15 years ago. In 1984, there were roughly 14,500 banks in the United States. Today, there are around 9,000. While there have been some failures, most of this consolidation has come through bank mergers and acquisitions (see Figure 2).

Figure 2

U.S. Banking Industry



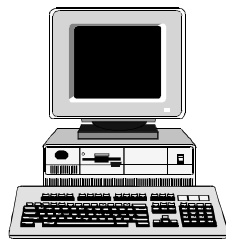
What's Driving Mergers?

Ask a dozen economists and you're likely to get two dozen answers on why companies are merging today. However, we see two primary factors affecting the need for firms to remain competitive: technology and deregulation (see Figure 3).

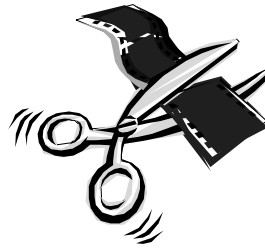
Figure 3

Two Primary Factors Driving Merger Mania

■ Technology



■ Deregulation



Technology has blurred the lines of specialization among financial intermediaries. As a result, many merger partners today are creating financial supermarkets, where customers can have one-stop financial services. These players hope to provide greater efficiencies through better information flows and lower transaction costs. Technological improvements also mean more change and the breakdown of traditional barriers, such as geography and product offerings.

Deregulation has also significantly changed the way banks do business and where they do business. For example, the elimination of branching restrictions created vast geographic expansion possibilities. The relaxation of restrictions on banks' securities activities was a move toward expanded powers, further blurring the traditional distinction with investment banking. Even the proposed Citicorp–Travelers combination looks like a challenge to current regulatory boundaries.

The two forces of technology and deregulation, working together, have resulted in what many refer to as the global economy, thereby providing more impetus to merge (see Figure 4).

Figure 4

Globalization



The mixing together of technology and deregulation has exploded to produce rapid change that increasingly blurs accepted boundaries of time, geography, language, industries, enterprises, economies and regulations.

The Chrysler deal with Daimler-Benz highlights the trend toward globalization. In Europe, the soon-to-be-launched euro and the move toward a common market have already brought on a wave of cross-border mergers among European banks.

As market-oriented economies continue to break down trade barriers and adopt policies that attract investors, more firms will seek opportunities to expand by partnering and aligning themselves with established companies. That's globalization. We have already seen some cross-border mergers involving U.S. banks and think that even greater activity might be right around the corner.

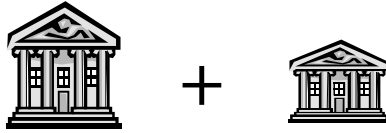
Types of Mergers

As shown in Figure 5, merging institutions can be classified into two types: mergers of unequals (the acquisition of one firm by another firm that is typically much larger and stronger) and mergers of equals (the so-called megamergers, of which the large megabank deals are typical).

Figure 5

Bank Consolidation

■ Mergers of unequals (acquisitions)



■ Mergers of equals (megamergers)



Mergers of Unequals

What does the reduction in the number of banks through acquisition mean for the industry? Believers in free enterprise argue that market forces tend to eliminate firms that aren't providing what consumers want. So, if that's an accurate picture of things, the reduction in the number of banks would be a good thing.

To see whether bank mergers fit the free enterprise picture, a recent study by Bob Moore examined the characteristics of independent banks. Statistical analyses were then done to see what characteristics affected the probability of a bank's being acquired.

Interestingly, bank acquisitions tended to conform, at least statistically, to a "survival of the fittest" view. While there are certainly exceptions, the tendency was for less profitable banks to be acquired. When a less profitable bank is acquired, it creates the possibility of improved performance.

Relatively slow-growing banks also tended to be acquired; that's consistent with acquirers buying banks where there's potential for increasing franchise value by accelerating growth. Also, banks with a smaller market share tended to be targets. The low market share could reflect a lack of success in the marketplace, suggesting room for improvement that could attract acquirers.

A lower capital ratio also tended to attract acquirers; the acquirer may increase the value of the bank by infusing additional capital into the acquired bank. Finally, banks that devote a smaller fraction of their assets to lending tended to attract acquirers; an acquirer may increase the value of the bank by redirecting the acquired bank's portfolio toward more lending. Taken together, all these factors point toward relatively weaker banks attracting acquirers.

Mergers of Equals

Because most organizations that merge claim that the combination of the two firms is better than the two standing alone, research on mergers generally focuses on where these improvements appear. The combination of two firms into one, as shown in Figure 6, can raise profits through either what economists refer to as cost efficiencies (on the input side) or revenue efficiencies (on the output side).

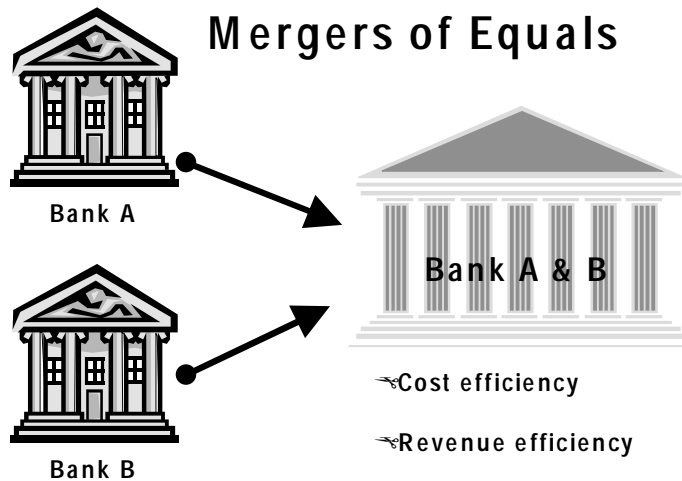
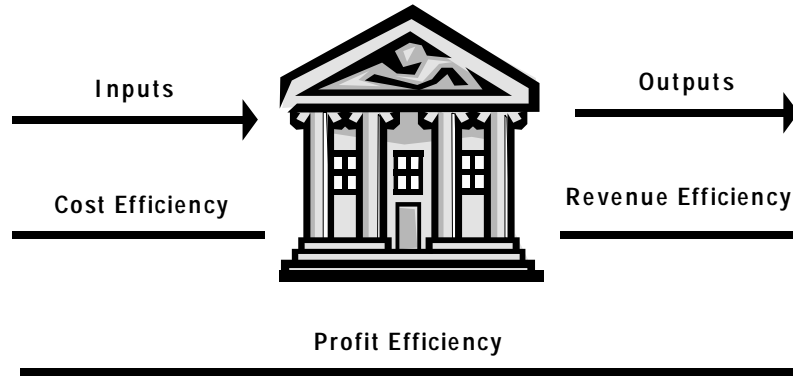


Figure 6

Cost efficiencies are often given as a primary reason to merge, but, at least in banking, these efficiencies are not often found in the academic literature. This is most likely because cost efficiency changes do not take into account the revenue effects of changes in outputs that often occur after a merger. So, a more comprehensive measure has been developed, which economists call profit efficiency (see Figure 7). Profit efficiency includes all the cost-efficiency changes plus the revenue effects of changes in output. Using this measure, profit efficiency improvements have been found for megamergers. The combined banks often shift their product mix to more loans, a higher valued product.

Figure 7

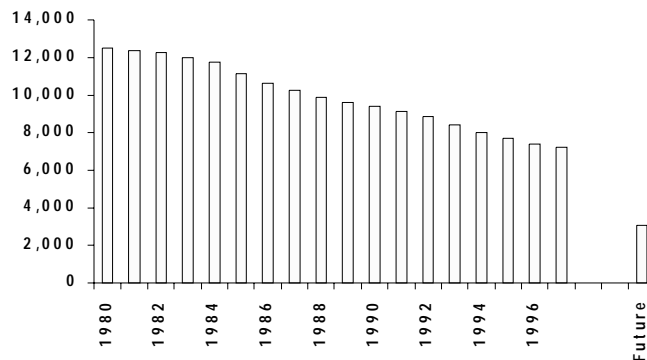
Cost Efficiency vs. Profit Efficiency



For the U.S. banking industry, continued consolidation might eventually result in around 3,000 banks, with a handful of gargantuan superbanks competing simultaneously with many smaller community banks (see Figure 8). In fact, the end result might be analogous to retailing, where we have giant outlet stores and department stores on one hand and specialized, single-location boutiques on the other, *all* surviving in the marketplace.

Figure 8

Number of U.S. Banking Organizations



Are There Any Concerns?

So far, we have argued that bank consolidation has been going on for some time and is expected to continue. The major forces driving consolidation are technological

change and changes in public policy. These forces have worked together to result in a more competitive global economy that also works to drive consolidation.

Additionally, research indicates that the merging of firms results in the migration of businesses and assets into the hands of the strongest management teams. And there is evidence that increased profit efficiencies often result.

Now, are there any concerns? Yes. Instead of improving efficiencies to increase profits, what if a bank could gain significant market power and eliminate competitive pressures in its primary market? And what if fewer banks means less credit availability, particularly for small businesses? And what if a bank becomes so large that the government would not, could not, possibly allow it to fail?

Effect of Mergers on Competition in Banking

The first major policy concern about the recent merger wave is the effect of mergers on competition in the banking industry.

Concerns about uncompetitive markets have been around a long time. At the turn of the century, various U.S. laws were passed to maintain competition. One part of this antitrust policy was the Clayton Act, which prohibited mergers and acquisitions if they substantially lessen competition. That's a nice goal, because most everyone agrees that competitive markets are a good thing. But in practice, it's tricky to enforce the law because it's hard to know when a merger would "substantially" reduce competition. How can the impact of a merger on competition be quantified?

To quantify whether competition would be substantially reduced, the Department of Justice uses the so-called Herfindahl-Hirschman Index, or HHI. The HHI measures the concentration of the market—that is, the degree to which a large share of the market is concentrated among a small number of competitors. High values of the HHI indicate that a market is highly concentrated. Traditionally, a high HHI is considered a sign of an uncompetitive market, but later we'll argue that the link between the HHI and competition is pretty tenuous. The Justice Department looks at the HHI before and after a proposed merger as the initial test of whether a merger would substantially reduce competition.

But that's only the initial test. Various mitigating factors can sometimes lead the Justice Department to approve mergers that the initial HHI analysis would reject. One of the mitigating factors beyond the HHI is the competitive viability of the target firm. Suppose the target firm didn't look as if it could stay in business. Then an acquisition that eliminated that weak competitor could raise the HHI, but it wouldn't matter much if that "competitor" was destined to close anyway.

Another mitigating factor is the presence of potential competition. One source of potential competition is entry into the market by other banks. Also, if nonbank competitors such as finance companies or credit unions are especially important in the market, that additional source of competition could make the merger acceptable on competitive grounds even if the HHI said the merger would be anticompetitive.

What does the HHI say about what's been happening to concentration? The solid line in Figure 9 uses the HHI to show the trend in concentration of the U.S. banking industry over the past 10 years; the line looks at the United States as one big market, so increases in a bank's market share nationwide will cause the line to rise.

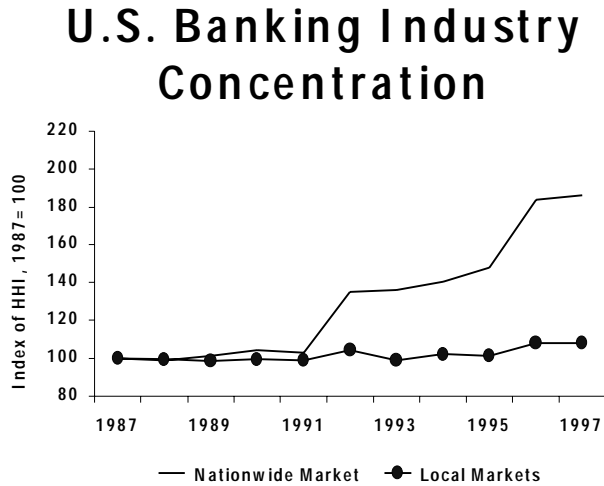


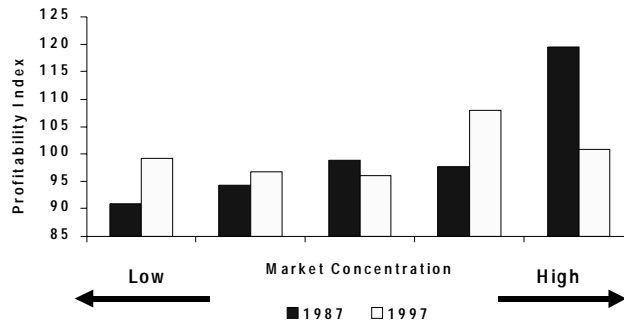
Figure 9

Traditionally, though, economists don't look at the United States as one big banking market. A lot of banking is still done locally. For example, when I moved to Dallas and was looking for a checking account, I didn't consider banking at Wells Fargo in California. So when Wells bought First Interstate in 1996, it didn't decrease competition here even though it did increase concentration at the national level. To capture the notion of local competition, the dotted line on the chart shows concentration on average for local markets across the United States. As you can see, this locally based measure of concentration has shown relatively little change over the past 10 years.

But are we sure that local market concentration even matters for bank customers? That depends on whether competition is reduced to the point where banks are earning monopoly profits to some degree. To see whether that was the case in the past, we went back to 1987 and compared the return on banking assets across markets with the markets' HHIs. The dark bars on Figure 10 show that the least concentrated markets—those on the left—tended to have lower returns on assets than the more concentrated markets—those on the right. Thus, in 1987 at least, higher concentration was correlated with higher profitability.

Figure 10

Market Concentration and Profitability



What does the correlation between market concentration and bank profitability in 1987 mean? It suggests that banks in concentrated markets were able to offer their customers uncompetitive terms—lower-than-competitive rates on deposits and higher-than-competitive rates on loans. Borrowers in those markets may have had a tough time finding credit on competitive terms. So the Justice Department’s policy of keeping an eye on the HHI when approving mergers was reasonable in 1987. Keeping the HHI low offered benefits to bank customers through better terms on loans and deposits.

But what does the relationship between concentration and profitability look like now? The light bars on the chart show that the relationship between concentration and profitability had become much weaker by 1997. Notice that on the far right, where markets with the highest concentration are, profitability was boosted more in '87 than in '97.

Comparing the 1987 and 1997 results shows that being in a market with few measured competitors does not boost profits as much as it did a decade ago. Thus, being in a concentrated market does not give banks the pricing power it once did. Why is that?

The key may be that traditional ways of measuring competition may not be as accurate now as they once were. I said earlier that I didn’t look to out-of-state banks when I opened my checking account some years ago. But technology is making it easier to compete over long distances. When I recently wanted the best CD rate, I went to www.bankrate.com and found that a bank in New York offered the best rate at the time. That bank offered an 800 number, so it was easy to transact with them despite the distance involved. The point is that traditional measures of competition did not include this New York bank as a measured competitor in the Dallas banking market, but in fact the distant bank is a competitor. Thus, traditional antitrust analysis based on local

banking markets is not as useful for merger approval as it was a decade ago. Moreover, if we treat the United States as one big banking market, then the nationwide HHI remains far below the levels commonly associated with antitrust concerns.

Taken together, the evidence points to a banking industry that continues to benefit from the presence of vigorous competition. Thus, worries about monopoly power in banking have been overblown.

Effect of Mergers on Small Business Credit Availability

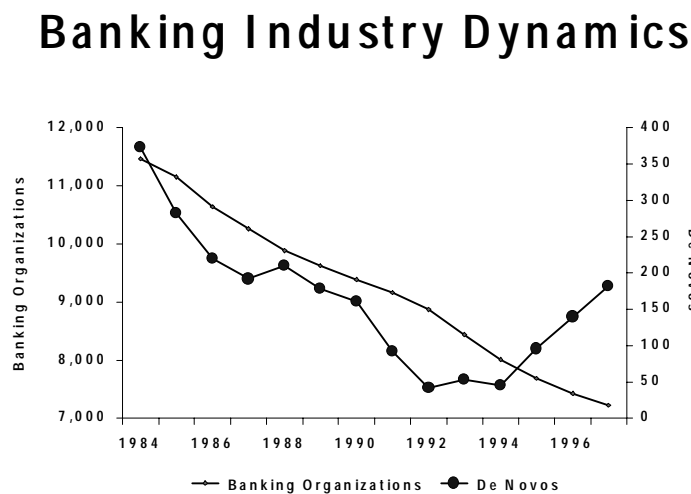
The second concern about the recent merger wave is the effect of mergers on small business credit. Research conducted at the Boston Fed found that the direct effects of mergers on small business credit are small; after mergers, the combined banks increase small business lending about as often as they cut small business lending.

Also, there are alternatives to bank credit for small businesses. Research at the Board of Governors found that these nonbank alternatives are growing in importance. Finance companies, leasing companies, and trade credit provide alternatives to bank credit.

Finally, getting back to the banking industry itself, Bob Moore and Ed Skelton did some research that found banking industry dynamics are helping to ensure service to all niches of the banking market, including small business credit.

While the number of banking organizations continues to fall, as shown by the solid line in Figure 11, the industry is dynamic. Part of that dynamic is the emergence of new or “de novo” banks, shown on the chart by the dotted line. The number of de novos had been declining for years, but started to increase in 1995. New banks represent new competitors and potential new sources of small business credit.

Figure 11

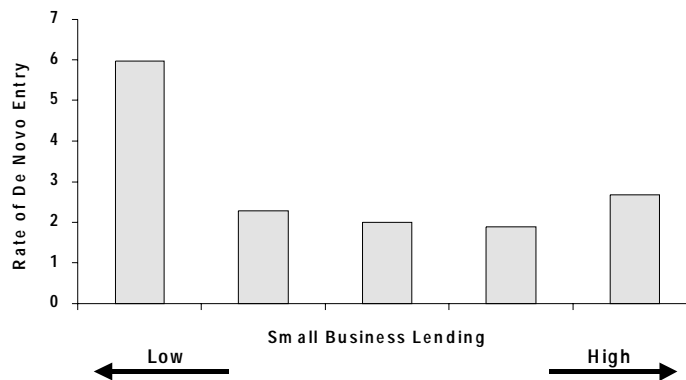


De novos do what any entrepreneur does: look for markets that have an unmet need and profit by filling that need. One of the areas that de novos tend to emphasize is lending to small businesses.

Figure 12 looks at how de novo entry relates to existing small business credit. Across the bottom of the chart, we've sorted banking markets by their small business lending. This chart shows that markets with the least small business credit—those on the far left—have the most de novo entry. That's consistent with de novos targeting markets where small business credit is relatively scarce. Thus, if mergers were to leave some need unmet, there would be a tendency for someone to come in to fill that need.

Figure 12

De Novo Entry and Small Business Lending

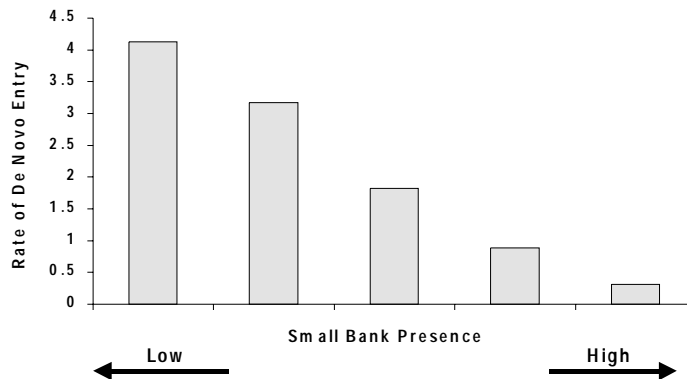


Consolidation in the banking industry has disproportionately reduced the numbers of small banks and their share of the banking market. De novos tend to be small and if that “small bank personal touch” is getting harder to find, de novos may profit by entering markets where small banks are relatively scarce.

Figure 13 sorts banking markets by the presence of small banks. The markets where the share of assets controlled by small banks is relatively low—shown on the left—tend to have a relatively large amount of de novo entry. So, de novos tend to enter where small banks are relatively scarce. Thus, banking consolidation is not going to make small banks extinct. And banking industry dynamics, along with nonbank credit providers, are likely to ensure credit availability for small businesses.

Figure 13

De Novo Entry and Small Bank Presence



What About Too-Big-to-Fail?

Besides the effect on competition and the availability of small business credit, the third major policy concern that recent bank mergers raise is the “too-big-to-fail” issue. Are the recent bank megamergers creating gigantic banks that would cause a catastrophe if they failed?

Too-big-to-fail is the idea that some banking organizations are so large they cannot be allowed to fail because their failure could harm the entire financial system. If a bank is too-big-to-fail, then all of its liabilities are effectively government insured. These guarantees are a source of ongoing policy concern. But the too-big-to-fail problem exists, regardless of megamergers.

Some of the recent megamergers are combinations of banks that are already too-big-to-fail. Those mergers are not creating a new too-big-to-fail institution. That’s worth remembering because some people claim that the desire to become too-big-to-fail is driving the current megamergers.

The bottom line is that too-big-to-fail is a continuing policy concern that deserves attention. It does not seem, though, to be the central issue in the current merger wave.

Conclusion

Mergers are indeed reshaping the financial services marketplace. Advances in technology and deregulation are creating new opportunities in the financial services industry. Mergers are helping the industry to take advantage of those opportunities.

Viewed in that light, mergers do make sense for the banking industry. Acquisitions allow strong banks to take control of relatively weaker banks. Megamergers allow banks to achieve greater profit efficiency.

Mergers would be worrisome if we were really moving toward the “First, Last, & Only National Bank.” But there are many sources of competition that ease those worries. For example, even while the number of banks continues to fall, entrepreneurs are forming new banks. Also, technology and deregulation are bringing in additional competitors, including distant banks and nonbank alternatives. Thus, mergers can play their useful role in reshaping the banking industry without risking a lack of competition.

Nor are mergers threatening the supply of small business credit. The evidence has not shown mergers causing banks to reduce their small business lending. At the same time, nonbank sources of credit are playing an increasingly important role for small businesses. And the entry of new banks is helping to maintain small businesses’ access to credit.

Finally, too-big-to-fail policy concerns exist regardless of megamergers. Steps already taken have helped to ease those concerns. Stopping the progress offered by mergers would not make sense.