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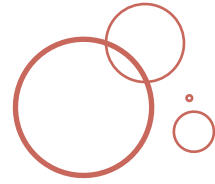
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# Characteristics of Credit Union Mergers: 1984–2008

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*Progress is the constant replacing of the best there is with something still better!*

— ***Edward A. Filene***

Deeply embedded in the credit union tradition is an ongoing search for better ways to understand and serve credit union members. Open inquiry, the free flow of ideas, and debate are essential parts of the true democratic process.

The Filene Research Institute is a 501(c)(3) not-for-profit research organization dedicated to scientific and thoughtful analysis about issues affecting the future of consumer finance. Through independent research and innovation programs the Institute examines issues vital to the future of credit unions.

Ideas grow through thoughtful and scientific analysis of top-priority consumer, public policy, and credit union competitive issues. Researchers are given considerable latitude in their exploration and studies of these high-priority issues.

The Institute is governed by an Administrative Board made up of the credit union industry's top leaders. Research topics and priorities are set by the Research Council, a select group of credit union CEOs, and the Filene Research Fellows, a blue ribbon panel of academic experts. Innovation programs are developed in part by Filene i<sup>3</sup>, an assembly of credit union executives screened for entrepreneurial competencies.

The name of the Institute honors Edward A. Filene, the “father of the U.S. credit union movement.” Filene was an innovative leader who relied on insightful research and analysis when encouraging credit union development.

Since its founding in 1989, the Institute has worked with over one hundred academic institutions and published hundreds of research studies. The entire research library is available online at [www.filene.org](http://www.filene.org).



We would like to thank George Hofheimer and Josey Siegenthaler (Filene Research Institute) and the Filene Research Council for their valuable comments and suggestions, and the NCUA and CUNA for their assistance with data collection.



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By George A. Hofheimer,  
*Chief Research Officer*

This report expands upon a 2008 Filene report entitled *Credit Union Costs and Consolidations*, wherein Jim Wilcox concluded that economies of scale will significantly influence credit unions' financial and nonfinancial performance for the foreseeable future. Wilcox went on to say that while scale is not the only key to future credit union success, it will remain a very significant lever for most consumer finance institutions. Credit unions can gain economies of scale in a number of ways, including large-scale collaboration, mergers, and organic growth. Industry watchers (including Filene) spend a good deal of time exploring collaboration and organic growth, but very little attention is paid to long-term credit union merger trends. In this report, the research team of Jim Wilcox and Luis Dopico has filled the void by constructing and analyzing the most definitive database on credit union mergers from 1984 to the present. Distilling these long-term trends helps us understand what the future mergers landscape may hold.

## What Did the Researchers Discover?

The research team took a great deal of care (and time) to analyze this database backwards, forwards, and sideways, resulting in hundreds of data points. While you'll no doubt find these data helpful at some point in the future, the following bullet points prioritize the key findings that can be of use to you today:

- The National Credit Union Administration (NCUA) has identified 12,485 credit union mergers during 1971–2008 (or 2.3% of credit unions per year), accounting for most of the reduction in the number of credit unions from its peak of 23,866 in 1969 to 8,147 in 2008. More than one-third of the credit unions in operation in 2008 had participated in at least one merger during 1979–2008.
- During 1984–2008, credit union mergers transferred members and assets from institutions that, on average, performed less well (the targets) to other institutions that, on average, performed far better (the acquirers). Better performance is defined as (a) lower noninterest expenses (4.36% vs. 3.12%), (b) lower loan rates (with interest income of 8.23% vs. 7.60%), (c) higher rates on savings products (interest expense of 3.66% vs. 3.98%), (d) lower provisions for loan losses (0.86% vs. 0.36%), (e) higher ROA (0.08% vs. 1.00%), and (f) higher merger-adjusted asset growth (0.17% vs. 10.11%).<sup>1</sup>
- The assets of targets totaled \$37.3 billion (B) (\$46.4B in 2008 dollars) during 1984–2008. Targets held a very small fraction of assets in federally insured credit unions (FICUs), 0.39% per year,

and were much smaller than their acquirers, which held 10.27% per year.

- While the overwhelming majority of targets were tiny or very small during 1984–2008 (7,867 targets, or 89.8%, held under \$10 million [M] in assets), 20.5% of targets' assets were concentrated in just 47 medium-sized targets (i.e., with \$100M–\$1B in assets). However, few targets (224, or 2.6%) had large acquirers (over \$1B). Instead, smallish credit unions (\$10M–\$100M) acquired most targets (4,465, or 50.9%) and medium-sized credit unions (\$100M–\$1B) acquired the most of targets' assets (55.7%).<sup>2</sup>
- Across asset sizes, acquirers have higher noninterest expenses per assets than similarly sized nonmerging FICUs. Some acquirers, smaller ones in particular, seem to use mergers as a key tool to jump-start growth and lower their average cost of operations.
- While most targets were much smaller than their acquirers during 1984–2008 (6,405 targets, or 73%, were less than one-tenth as large), 21% of targets' assets were concentrated in 437 mergers of equals, which we define as mergers where the target was at least half as large as the acquirer. While mergers of equals among credit unions larger than \$100M are now becoming more common, they were relatively rare in the analysis period.
- Voluntary mergers (i.e., mergers that did not receive formal assistance from the NCUA) have been the main mechanism for credit union exits, totaling 8,209 targets, or 2.81% of FICUs annually, and 0.37% of FICU assets annually during 1984–2008.

## Practical Implications

Credit union mergers are unlikely to fade away in the foreseeable future. In fact, we can expect the pace and types of credit union consolidation to *increase* over the next several years. I say this because a number of factors (competitive, economic, and regulatory) all point toward a more intense external environment. This study illustrates the influence dramatic external events such as the savings and loan crisis, major changes to the credit union regulatory landscape, and the severe 1980 recession have had on the pace of credit union mergers. It is safe to assume these past events will be dwarfed by what credit unions are experiencing today or will be experiencing in the future. In short, managing the credit union merger process is a competency that will likely impact more credit unions and on a much larger scale.

We already have seen recent announcements of and actual mergers between very large and similarly sized credit unions. You may very well view the time period from 1969 (when the number of credit

unions peaked) to 2008 as the proving ground for building up a merger competency. To date the target–acquirer story has been fairly straightforward: a large, healthy credit union merges with a smaller, unhealthy credit union. Now the situation is likely to become much more complex. As a result, credit unions may become more preemptive and seek out merger partners before trouble appears on their balance sheets.

While the future of credit union mergers may look very different than their past, it is instructive to reflect on the wisdom of Mark Twain, who once said, “History doesn’t repeat itself, but it does rhyme.” The timeless elements of the credit union merger story will likely include the most important reason for a merger in the first place: better service to credit union members.





### Luis G. Dopico

Luis G. Dopico is a consultant for Macrometrix of Alamo, California, and a frequent researcher with the Filene Research Institute. He earned a BA in economics and mathematics from the University of Southern Mississippi and a PhD in economics from Auburn University in Alabama.

His ongoing research focuses on capital regulation, failures, charter conversions, economies of scale, and mergers and acquisitions in cooperative and stock-owned depository institutions, as well as macroeconomic conditions, housing, and consumer markets. His past research has addressed bank stock prices, interstate banking, bank regulation across countries, collateralized debt markets, and exchange rates. He has performed research for the Credit Union National Association, the National Association for Business Economics, Moody's, Mellon Capital Management, the Small Business Administration, PricewaterhouseCoopers of Argentina, the Federal Reserve, and many individual credit unions and credit union organizations. His research has been published in the *Journal of International Financial Markets, Institutions and Money*; *International Review of Finance*; *Corporate Finance Review*; and *Essays in Economic and Business History*.



### James A. Wilcox

James A. Wilcox is the Lowrey Professor of Financial Institutions, Haas School of Business, University of California, Berkeley. Professor Wilcox is a member of the inaugural group of Filene Research Fellows and a frequent researcher with the Filene Research Institute. From 1999 to 2001 he served as chief economist at the Office of the Comptroller of the Currency. He has also served as senior economist for the President's Council of Economic Advisors, as an economist for the Board of Governors of the Federal Reserve System, and as chair of the Finance Group at the Haas School. He received his PhD in economics from Northwestern University.

At the Haas School, Professor Wilcox teaches courses on risk management at financial institutions, financial markets and institutions, and business conditions analysis. He has written widely on bank lending, credit markets, real estate markets, monetary policy, and business conditions. His research has addressed reform of deposit insurance, the causes and consequences of the Gramm-Leach-Bliley Act, the effects of mergers on bank executives, the ability of banks to reduce costs following mergers, the differences in bank supervision and regulation around the world, the effects of bank loan losses and



capital pressure on lending and small businesses, demographic effects on residential real estate prices, and the efficiencies and credit effects of electronic payments. His articles have been published in leading academic journals, including the *American Economic Review*; *Journal of Finance and Accounting*; *Journal of Economic Perspectives*; *Journal of Money, Credit and Banking*; *Journal of Banking and Finance*; *Journal of Housing Economics*; and *Review of Economics and Statistics*.

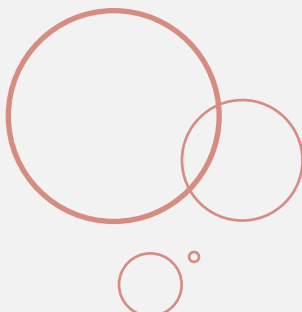


## CHAPTER 1

### Introduction



*This analysis of credit union mergers from 1984–2008 includes key financial data across several merger-related groupings including: Acquirers vs. targets and nonmerging credit unions, smaller and larger credit unions, mergers of equals vs. mergers where the institutions' sizes differ greatly, and assisted mergers vs. unassisted mergers.*





In Wilcox (2008), we examined in depth (1) how throughout 1980–2006 larger credit unions on average had lower noninterest expense per assets (NIEXP) than smaller credit unions, (2) the characteristics of credit unions engaging in mergers in 2006, and (3) the short-term impacts of those mergers on the resulting institutions. Here we extend our analysis of the characteristics of credit unions in mergers to 1984–2008, the longest period for which we could find reliable data.<sup>3</sup> We explore key financial data across credit unions classified in several merger-related groupings including:

- Acquirers vs. targets and nonmerging credit unions.
- Smaller vs. larger credit unions.
- Mergers of equals vs. mergers where the institutions' sizes differ greatly.
- Assisted mergers vs. unassisted mergers and other exits.

In Chapter 2, we present how many credit unions have merged and how many merger partners individual credit unions have had in recent decades. In Chapter 3, we compare the characteristics of FICUs participating in mergers (both acquirers and targets) and those of “nonmerging” FICUs during 1984–2008. We find that, on average, credit union mergers transfer members and assets from institutions that perform less well (the targets) to far better-performing institutions (the acquirers) that have lower noninterest expenses, are safer and more dynamic, and provide members with better value (e.g., lower loan rates and higher rates on savings products). However, mergers do not identify acquirers as star performers with better performance than nonmerging FICUs.

In Chapter 4, we compare the characteristics of acquirers, targets, and nonmerging FICUs across asset sizes during 1984–2008. We find that the overwhelming majority of targets were tiny or very small, but a substantial fraction of targets' assets were concentrated in relatively few larger mergers. While acquirers are larger than their targets, relatively few mergers had large acquirers. Instead, medium-sized credit unions acquired most of targets' assets. Also, while overall

averages for acquirers and nonmerging FICUs were very similar, we find that, across asset sizes, acquirers had higher NIEXP than similarly sized nonmerging FICUs. Some acquirers, smaller ones in particular, use mergers as a key tool to jump-start growth and lower their average cost of operations. In Chapter 5, we compare the characteristics during 1984–2008 of targets classified by their size relative to their acquirers. We find that most merger targets were far smaller than their acquirers, but a substantial fraction of targets' assets were concentrated in mergers where the target was not much smaller than the acquirer. Since targets that are much smaller than their acquirers tend to deliver value to their members far less well, the incentive for credit unions to merge with much larger partners is, in most cases, straightforward. While mergers of equals among credit unions larger than \$100M are becoming more common, they remain relatively rare and are largely explained by the growing number of larger credit unions.

In Chapter 6, we briefly describe several mechanisms through which the number of credit unions can be reduced (i.e., exits)<sup>4</sup> and compare the characteristics of credit unions undergoing each mechanism during 1984–2008. Unassisted mergers were the main mechanism for credit union exits, far outweighing all other exits combined both by number of credit unions and by assets. Across many measures, targets in assisted mergers performed (1) far more poorly than targets in unassisted mergers and (2) broadly similarly to credit unions in liquidations and purchase and assumptions (P&As). Regulators rely extensively on P&As for larger credit unions during troubled times.

In Chapter 7, we briefly summarize the report and present some implications. The merging of credit unions is a well-established practice that is unlikely to fade away in the foreseeable future. During 1984–2008, credit union mergers transferred members and assets from institutions that performed less well to other institutions that, on average, performed far better across a wide variety of measures

including noninterest expenses, loan rates, rates on savings products, provisions for loan losses, and merger-adjusted asset growth. As a result of years of consolidation, more than one-third of the credit unions in operation in 2008 had participated in at least one merger during 1979–2008. However,

the magnitude of the credit union merger process should be kept in perspective, since targets held a very small fraction of FICU assets, approximately 0.39% per year.

During 1984–2008, credit union mergers transferred members and assets from institutions that performed less well to other institutions that, on average, performed far better across a wide variety of measures including noninterest expenses, loan rates, rates on savings products, provisions for loan losses, and merger-adjusted asset growth.





## CHAPTER 2

### How Many Credit Unions Have Merged?



*The NCUA identified 12,485 credit union mergers during 1971–2008 (2.3% of credit unions per year), accounting for most of the reduction in the number of credit unions from its peak of 23,866 in 1969 to 8,147 in 2008.*





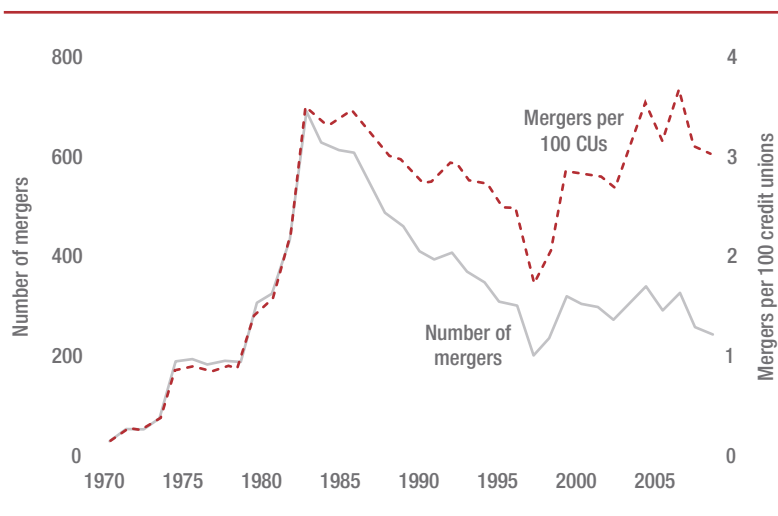
In this chapter, we present how many credit unions have merged and how many merger partners individual credit unions have had in recent decades. The NCUA identified 12,485 credit union mergers during 1971–2008 (2.3% of credit unions per year), accounting for most of the reduction in the number of credit unions from its peak of 23,866 in 1969 to 8,147 in 2008. As a result of years of consolidation, more than one-third of the credit unions in operation in 2008 had participated in at least one merger during 1979–2008.

Figure 1 presents the annual evolution of the number of credit union mergers reported by the NCUA during 1971–2008.<sup>5</sup> Throughout this report, we largely emphasize financial conditions in the credit unions involved as the key drivers for mergers. However, changes in the legal and regulatory environment or in accounting rules often influence which credit unions can effectively engage in mergers.

Thus, as we discuss in Wilcox (2008), the number of credit union mergers per year increased steadily during the 1970s and early 1980s as the NCUA liberalized field of membership (FOM) and related merger restrictions (Burger and Dacin 1991; Burton, Birch, and Bommarito 2007; Rick 1998).

The number of mergers per year likely peaked in the early 1980s (at 706 in 1983) for several reasons. First, as FOM and merger restrictions were relaxed, a backlog of mergers that were economically recommendable but previously not permitted took place. Second, difficult economic conditions in the early 1980s led the NCUA to push credit unions into mergers that might otherwise have been liquidated (see Wilcox 2005).

*Figure 1: Number of Credit Union Mergers and Mergers per 100 Credit Unions, 1971–2008*



Sources: NCUA and CUNA (2009b).

Third, as the total number of credit unions steadily shrinks, the pool of the most obvious merger participants is also shrinking.

Similarly, the one-time sharp decline in mergers in 1997–1998 reflects federal court rulings that threatened to reverse earlier NCUA liberalizations of credit union FOMs and mergers (the number of mergers per year fell as low as 206 in 1997). In particular, on February 26, 1998, the U.S. Supreme Court ruled that the NCUA had exceeded its delegated powers in liberalizing FOMs. However, Congress quickly passed the Credit Union Membership Access Act (CUMAA), largely validating NCUA’s previous broadening of FOMs and mergers.<sup>6</sup> Since then, the number of mergers has averaged about 300 per year.

Recently, a change in accounting rules similarly, and largely inadvertently, threatened to indefinitely derail large numbers of credit union mergers. Statement of Financial Accounting Standards (SFAS) 141 required credit unions to switch from the “pooling method” to the “acquisition method” when accounting for the retained earnings in the parties to a merger. Without delving into all the accounting details, both methods broadly permit the merged entity to count retained earnings from both parties as net worth. However, in a key difference, under the acquisition method, the retained earnings from one party are not considered retained earnings for the merged entity, but are accounted under a subcomponent of net worth called “acquired equity.”

While the difference may seem negligible from an accounting point of view, the practical impacts could have been very large. Under the Prompt Corrective Action (PCA) provisions in CUMAA, credit union net worth requirements are not based on net worth itself (including all its subcomponents), but only on one subcomponent, namely retained earnings. Thus, applying the acquisition method would have meant that following a merger, credit unions could not count the retained earnings from one of the institutions toward the net worth requirements of the merged entity. In effect, for mergers of credit unions of similar size, the new institution’s net worth ratio could be halved, all but ensuring that the parties would not enter into such mergers. Seeking to prevent this unintended consequence, Congress included a provision in the Financial Services Regulatory Relief Act of 2006 that ensured that both retained earnings and acquired equity from mergers (and P&A transactions) could be counted toward net worth requirements for PCA purposes.

As we state above, part of the decline throughout the last quarter of a century in the number of credit union mergers per year simply reflects the smaller number of credit unions remaining. Thus, in



Figure 1 we also present a measure of mergers per 100 credit unions. This series is computed as the ratio of credit union mergers during one year (e.g., 2008) to the number of credit unions on December 31 of the previous year (e.g., 2007). During 1971–2008, this ratio averaged 2.3%. Like the number of mergers per year, this ratio grew until 1983 and then shrank through 1997. In recent years, despite some unavoidable variation from year to year, the ratio of mergers per 100 credit unions has been roughly stable and has averaged above 3% of credit unions per year.

We obtained the data in Figure 1 from NCUA annual reports for 1971–1984 and for 1985–2008 from the NCUA merger database. This database identifies some mergers as early as 1979. However, for its earliest years, the database does not identify the majority of mergers out of the total included in NCUA annual reports.<sup>7</sup> Thus, throughout Chapters 3–6, we concentrate on credit union mergers during 1984–2008. Annual totals from both sources are roughly similar for 1984–2008, but not identical for several reasons. For instance, dating conventions vary slightly across the two sources. Further, the merger database includes mergers among FICUs, mergers of FICUs with credit unions not federally insured, and some mergers in which neither party was federally insured.

Most credit union mergers involve two credit unions at a time. One of the two institutions is designated as “continuing” and the other as “merging.” While the separate existence of the merging credit union comes to an end, all its members, loans, other assets, savings, and other liabilities become part of the continuing credit union. However, many continuing credit unions have participated in multiple separate mergers over the years.<sup>8</sup> Credit unions find merger partners both informally through professional contacts and formally through the NCUA and consulting firms such as Merger Solutions, Callahan’s, and Nice Enterprises (Filson et al. 2008, Merger Solutions 2008b, Westerra Services 2009).

In recent years, despite some unavoidable variation from year to year, the ratio of mergers per 100 credit unions has been roughly stable and has averaged above 3% of credit unions per year.

Figure 2 presents how many credit unions each continuing credit union merged with throughout 1979–2008. Column 1 identifies various possible numbers of merging credit unions per continuing credit union (ranging from 1 to 36). Column 2 presents how many occurrences there have been of each case. For instance, 1,883 continuing credit unions have merged each with only one credit union (accounting for 19% of merging credit unions). At the other extreme, only two credit unions merged each with 36 other credit unions.<sup>9</sup> Column 3 presents how many merging credit unions

*Figure 2: Continuing and Merging Credit Unions Classified by the Number of Merging Credit Unions per Continuing Credit Union, 1979–2008*

Number of merging credit unions per continuing credit union (1)	Number of continuing credit unions (2)	Total number of merging credit unions (3)
1	1,883	1,883
2	818	1,636
3	423	1,269
4	256	1,024
5	138	690
6	114	684
7	72	504
8	38	304
9	36	324
10	21	210
11	28	308
12	17	204
13	16	208
14	7	98
15	7	105
16	6	96
17	4	68
18	1	18
19	1	19
20	1	20
21	3	63
22	1	22
23–25	0	0
26	1	26
27	1	27
28	1	28
29–33	0	0
34	1	34
35	0	0
36	2	72
<b>Total</b>	<b>3,897</b>	<b>9,944</b>

Data source: NCUA.

participated in mergers with those continuing credit unions (i.e., column 3 is the product of columns 1 and 2).

More continuing credit unions merged with more than one credit union (2,014) than with only one credit union (1,883). However, most credit unions involved in multiple mergers participated in

relatively few of them. Each of 1,497 credit unions merged with between two and four credit unions (accounting for 3,929 or 40% of mergers). Each of 398 credit unions merged with between five and nine credit unions (accounting for 2,506 or 25% of mergers). A few credit unions could be described as frequent or serial acquirers. Each of 108 credit unions merged with 10–19 credit unions (accounting for 1,334 or 13% of mergers). Each of 11 credit unions merged with 20 or more credit unions (accounting for 292 or 3% of mergers).

Figure 2 also highlights how common credit union mergers have become. During this period, many credit unions participated in mergers either as the merging party (9,944) or as the continuing one (3,897). Out of these credit unions once classified as continuing, 809 subsequently became the merging party in later mergers (158 credit unions once classified as continuing later underwent other types of exits). Thus, out of the 7,968 credit unions included in the NCUA’s December 2008 call report, 2,930 (more than one-third of institutions) participated in at least one merger during 1979–2008.

A few credit unions could be described as frequent or serial acquirers. Each of 108 credit unions merged with 10–19 credit unions. Each of 11 credit unions merged with 20 or more credit unions.

Figure 3 presents selected information for the continuing credit unions with the most merging credit unions (i.e., 20 or more) during 1979–2008. The figure presents the names of these credit unions, their city and state, their asset size on December 31, 2008, and the number of credit unions with which they have merged. Continuing

*Figure 3: Selected Information for Continuing Credit Unions with the Most Merging Credit Unions, 1979–2008*

Name of continuing credit union (1)	City, state (2)	Assets (\$M, December 2008) (3)	Number of merging credit unions (4)
American Heritage FCU	Philadelphia, PA	748	36
Corporate America Family CU	Elgin, IL	508	36
Indiana Members CU	Indianapolis, IN	1,120	34
Tremont CU	Braintree, MA	173	28
Eastern Financial Florida CU	Miramar, FL	1,690	27
Members CU	Winston-Salem, NC	201	26
Philadelphia CU	Philadelphia, PA	587	22
The Golden 1 CU	Sacramento, CA	6,971	21
Credit Union One	Ferndale, MI	743	21
Credit Union 1	Rantoul, IL	492	21
Member One FCU	Roanoke, VA	373	20

credit unions are ranked by the number of credit unions they have merged with. We present the number of credit unions that continuing institutions have merged with directly and, at this point, do not take into account whether the merging credit unions had engaged in earlier mergers. Since the number of credit unions involved is somewhat small, generalizations should be made with caution. However, frequent acquirers are not small and operate in several regions ranging from the eastern coast to the Great Lakes region and California.





## CHAPTER 3

### Comparing Acquirers, Targets, and Nonmerging Credit Unions



*On average, credit union mergers transfer members and assets from institutions that perform less well (the targets) to better-performing institutions (the acquirers) that have lower non-interest expenses, are safer and more dynamic, and provide members with better value (e.g., lower loan rates and higher rates on savings products).*





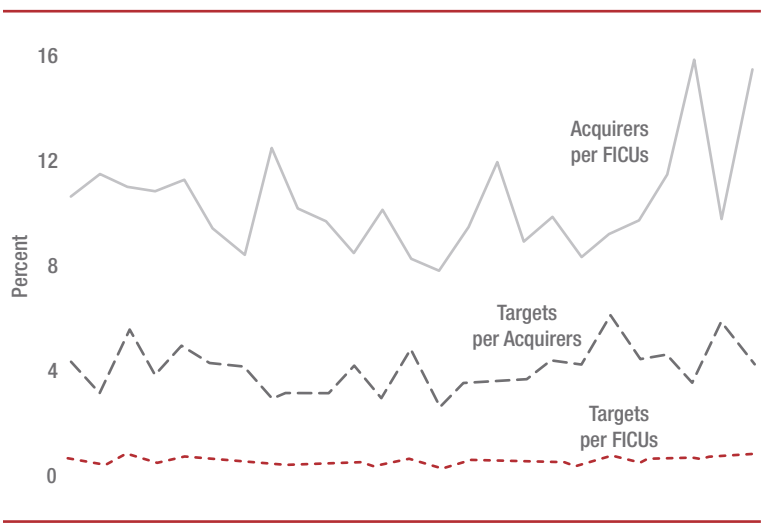
In this chapter, we compare the characteristics of FICUs participating in mergers (both acquirers and targets) and those of nonmerging FICUs during 1984–2008.<sup>10</sup> We find that, on average, credit union mergers transfer members and assets from institutions that perform less well (the targets) to better-performing institutions (the acquirers) that have lower noninterest expenses, are safer and more dynamic, and provide members with better value (e.g., lower loan rates and higher rates on savings products). However, mergers do not identify acquirers as star performers with better performance than nonmerging FICUs.

Using year-end data for all FICUs (e.g., 2007), for each credit union and year we identify a credit union as an *acquirer* if it was the larger of the credit unions engaging in a merger in the following year (i.e., 2008). We identify a credit union as a *target* if it was the smaller of the credit unions engaging in a merger. In the overwhelming majority of cases (but not all), the acquirer in each merger was also the credit union designated as continuing.<sup>11</sup> We identify a credit union as *nonmerging* if it did not engage in a merger in the following year. However, the boundary between acquirer, target, and nonmerging credit unions is, unavoidably, somewhat blurred in practice. Some credit unions may acquire other credit unions in some years (and be identified as acquirers in those years) and not acquire credit unions in other years (and thus be identified as nonmerging then). Moreover, targets are identified as nonmerging (or even as acquirers) in all years except the one in which they become a target.

The magnitude of the credit union merger process should be kept in perspective, since targets held a very small fraction of FICU assets (0.39% per year).

Figure 4 presents the annual evolution of assets in acquirers and targets, each per FICU assets, and the ratio of assets in targets to assets in acquirers during 1984–2008. The magnitude of the credit union merger process should be kept in perspective, since targets held a very small fraction of FICU assets (0.39% per year).<sup>12</sup> The

**Figure 4: Assets in Acquirers and Targets per Assets in FICUs (%) and Assets in Targets per Assets in Acquirers (%), 1984–2008**



Data sources: NCUA and CUNA.

figure also shows that targets on average were much smaller than acquirers, which held 10.27% per year.<sup>13</sup> Thus, on average, targets held 3.85% as many assets as acquirers.

Figure 5 presents selected data and financial ratios for acquirers (column 2), targets (column 3), and nonmerging FICUs (column 4) during several extended time periods (1984–1989, 1990–1999, 2000–2008, and 1984–2008, identified in column 1). We include the number of targets (panels 1 and 2), their inflation-adjusted assets (panels 3 and 4), noninterest expense (panel 5), interest income and expense

(panels 6 and 7), provisions for loan losses (panel 8), net income (or return on assets, ROA, panel 9), merger-adjusted asset growth (GROWTH, panel 10), and net worth (panel 11). The variables in panels 5–9 and 11 are expressed per assets.

Figure 1 presented the number of mergers and mergers per 100 credit unions for the longest available time period, but one for which we could obtain little data for many individual mergers. Panels 1 and 2 of Figure 5 present broadly similar data for the shorter, more recent time period of 1984–2008, for which we could obtain more detailed financial data for the credit unions in each merger.<sup>14</sup> Panel 3 shows that assets in the targets of mergers climbed steadily from \$6.4B in 1984–1989 to \$12.3B in 1990–1999 and \$27.7B in 2000–2008, totaling \$46.4B in 2008 dollars (Figure 24 in Appendix 1 provides annual data in current dollars, unadjusted for inflation). Panel 4 shows that this growth largely mimicked the growth in overall FICU assets. Thus, the percentage of assets in targets per FICU assets recently (0.46% in 2000–2008) was not much higher than that during earlier periods (0.44% in 1984–1989). The lower levels during 1990–1999 for both the number of targets per FICUs and assets in targets per FICU assets (0.31%) were largely due to the one-time slowdown in mergers surrounding the litigation in federal courts that was resolved with the passage of CUMAA. Thus, credit union mergers today appear to be a well-established process unlikely to fade away in the foreseeable future.

Overall, the data we present in Figure 5 confirm that many of our earlier findings regarding mergers in 2006 (see Wilcox 2008) broadly



*Figure 5: Selected Data and Financial Ratios for Acquirers, Targets, and Nonmerging FICUs in 1984–1989, 1990–1999, 2000–2008, and 1984–2008*

	Time period (1)	Acquirers (2)	Targets (3)	Nonmerging FICUs (4)
1. Number of targets	1984–1989	—	2,981	—
	1990–1999	—	3,154	—
	2000–2008	—	2,634	—
	<b>1984–2008</b>	<b>—</b>	<b>8,769</b>	<b>—</b>
2. Number of targets per FICUs (%)	1984–1989	—	3.39	—
	1990–1999	—	2.59	—
	2000–2008	—	3.15	—
	<b>1984–2008</b>	<b>—</b>	<b>2.98</b>	<b>—</b>
3. Assets in targets (\$ million, 2008 dollars)	1984–1989	—	6,353	—
	1990–1999	—	12,345	—
	2000–2008	—	27,682	—
	<b>1984–2008</b>	<b>—</b>	<b>46,380</b>	<b>—</b>
4. Assets in merging and nonmerging FICUs per assets in FICUs (%)	1984–1989	10.67	0.44	88.89
	1990–1999	9.55	0.31	90.14
	2000–2008	10.79	0.46	88.75
	<b>1984–2008</b>	<b>10.27</b>	<b>0.39</b>	<b>89.34</b>
5. Noninterest expense per assets (NIEXP, %)	1984–1989	3.32	4.83	3.09
	1990–1999	3.10	4.25	3.07
	2000–2008	3.02	4.16	3.21
	<b>1984–2008</b>	<b>3.12</b>	<b>4.36</b>	<b>3.13</b>
6. Interest income per assets (%)	1984–1989	10.09	11.05	10.11
	1990–1999	7.80	8.51	7.83
	2000–2008	5.72	6.04	5.73
	<b>1984–2008</b>	<b>7.60</b>	<b>8.23</b>	<b>7.62</b>

apply to mergers during the extended time period of 1984–2008. In particular, mergers transfer members from targets with higher NIEXP (4.36%) to acquirers with lower NIEXP (3.12%). This process should be viewed as broadly welcome for members, since institutions with higher NIEXP tend to charge higher loan rates, pay lower rates on savings products, and, being less attractive, tend to grow more slowly. Compared with acquirers, targets charged higher rates on loans (interest income was 0.63% higher) and paid less on savings products (interest expense was 0.32% lower). Targets also appear to have managed risk far less well than acquirers, combining higher provisions for loan losses (0.86% vs. 0.36%) and lower GROWTH (0.17% vs. 10.11%) over the extended time period of 1984–2008. In sum, mergers identify targets as smaller, higher-NIEXP credit unions and transfer their members to larger, lower-NIEXP acquirers where members receive better value (see also Wirz 2008).

*Figure 5: Selected Data and Financial Ratios for Acquirers, Targets, and Nonmerging FICUs in 1984–1989, 1990–1999, 2000–2008, and 1984–2008 (continued)*

	Time period (1)	Acquirers (2)	Targets (3)	Nonmerging FICUs (4)
7. Interest expense per assets (%)	1984–1989	6.05	5.57	6.12
	1990–1999	4.01	3.81	4.01
	2000–2008	2.55	2.21	2.39
	<b>1984–2008</b>	<b>3.98</b>	<b>3.66</b>	<b>3.94</b>
8. Provisions for loan losses per assets (%)	1984–1989	0.31	0.86	0.29
	1990–1999	0.39	0.97	0.36
	2000–2008	0.36	0.75	0.34
	<b>1984–2008</b>	<b>0.36</b>	<b>0.86</b>	<b>0.34</b>
9. Net income per assets (ROA, %)	1984–1989	0.94	0.26	1.01
	1990–1999	1.10	0.13	1.06
	2000–2008	0.92	–0.08	0.88
	<b>1984–2008</b>	<b>1.00</b>	<b>0.08</b>	<b>0.98</b>
10. Merger-adjusted asset growth (GROWTH, %)	1984–1989	15.13	2.31	15.65
	1990–1999	8.10	–2.12	7.49
	2000–2008	9.00	1.30	7.84
	<b>1984–2008</b>	<b>10.11</b>	<b>0.17</b>	<b>9.58</b>
11. Net worth per assets (%)	1984–1989	6.00	6.06	6.62
	1990–1999	8.87	8.83	9.28
	2000–2008	10.52	11.50	11.20
	<b>1984–2008</b>	<b>8.77</b>	<b>9.13</b>	<b>9.33</b>

Note: Throughout the report, financial data presented for mergers, acquirers, targets, and nonmerging FICUs for any given year (e.g., 2008) are as of December 31 of the last year in which acquirers and targets reported data separately (i.e., the previous year or, in this example, 2007).

Data sources: NCUA and CUNA.

However, we do not find that mergers identify acquirers as “star performers” that are particularly more adept than nonmerging FICUs. Over extended periods of time, acquirers and nonmerging FICUs display broadly similar average values for NIEXP (3.12% vs. 3.13%), interest income (7.60% vs. 7.62%), interest expense (3.98% vs. 3.94%), provisions for loan losses (0.36% vs. 0.34%), ROA (1.00% vs. 0.98%), and GROWTH (10.11% vs. 9.58%).

Mergers transfer members from targets with higher NIEXP (4.36%) to acquirers with lower NIEXP (3.12%). Compared with acquirers, targets charged higher rates on loans (interest income was 0.63% higher) and paid less on savings products (interest expense was 0.32% lower). Targets also appear to have managed risk far less well than acquirers, combining higher provisions for loan losses (0.86% vs. 0.36%) and lower GROWTH (0.17% vs. 10.11%) over the extended time period of 1984–2008.

Overall we find our results to be broadly consistent with the reasons merger consultants put forth to explain why credit unions may

decide to merge. Below we list some of these reasons (Filson et al. 2008, Merger Solutions 2008b, Westerra Services 2009):

- To deepen relationships and improve convenience for the members of each credit union by providing them access to the other credit union's offerings, including (1) branch networks, (2) delivery mechanisms, and (3) products and services (other loan types, insurance, brokerage, etc.).
- To diversify credit risk and lower costs through economies of scale by (1) combining the two memberships and FOMs (especially if they do not overlap geographically), and (2) combining back-office operations.
- To add or supplement talent (e.g., when management in one institution is retiring or is otherwise not sufficiently motivated).
- To provide members of small, poorly performing targets the lower loan rates, higher rates on savings products, greater variety of services, technology platform, and delivery mechanisms of their larger, better-performing acquirers.
- To allow pairs of smaller merger partners to reach a minimum size below which certain activities are prohibitive.
- To solve problems of lack of capital in troubled targets.

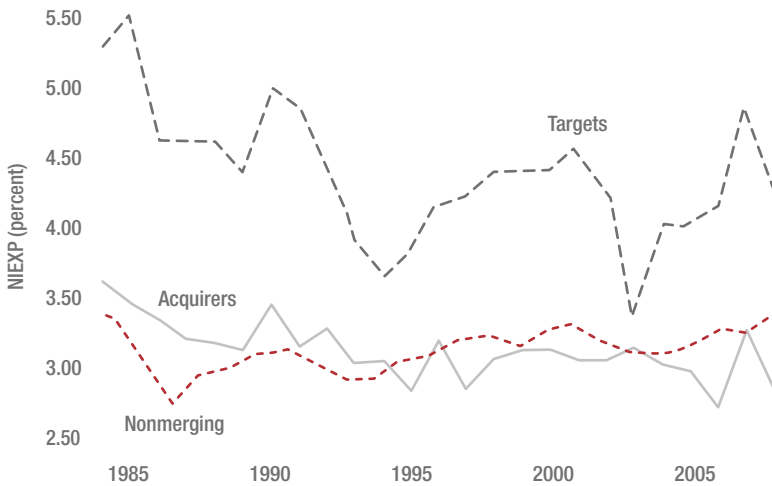
In Figures 6–10, we present in more detail the annual evolution of several key variables for acquirers, targets, and nonmerging FICUs during 1984–2008.

Figure 6 presents the annual evolution of NIEXP. As we discuss above, acquirers consistently had far lower NIEXP than their targets. The figure also shows that while acquirers had higher NIEXP (3.32%) than nonmerging FICUs (3.09%) during the earlier period of 1984–1989, acquirers had lower NIEXP (3.02%) than nonmerging FICUs (3.21%) in the more recent period of 2000–2008. The seemingly growing advantage of acquirers over nonmerging FICUs can largely be explained by the fact that FICUs playing the role of acquirers have shifted toward larger sizes faster than nonmerging FICUs. During this extended period, FICUs playing the role of acquirers shifted from average asset sizes of \$19M in 1984 to \$464M in 2008. While nonmerging FICUs and targets also became larger, they did not grow as large as acquirers. Nonmerging FICUs grew from \$5M to \$84M and targets grew from \$1M to \$17M. As we show in Wilcox (2008), on average, larger FICUs tend to have lower NIEXP.

The seemingly growing advantage of acquirers over nonmerging FICUs can largely be explained by the fact that FICUs playing the role of acquirers have shifted toward larger sizes faster than nonmerging FICUs.

Figure 7 presents the annual evolution of provisions for loan losses per assets in acquirers, targets, and nonmerging FICUs during

**Figure 6: Noninterest Expense per Assets (NIEXP, %) in Acquirers, Targets, and Nonmerging FICUs, 1984–2008**



Note: The decline in targets' NIEXP in 2003 is explained in part by the inclusion in that average of the target of the merger of equals of two medium-sized FICUs (TRW Systems, with \$491M in assets and NIEXP of 2.78%, and Western, \$478B and 3.10%). Western's assets account for 17% of all targets' assets in 2003.

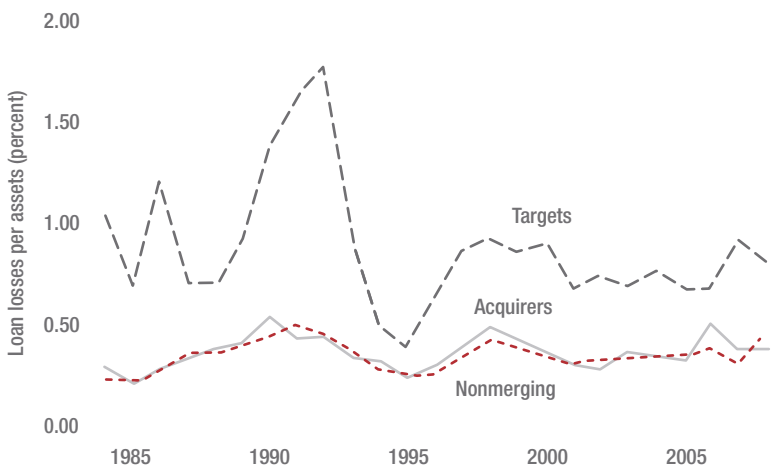
Data sources: NCUA and CUNA.

1984–2008. As we mention above, provisions were substantially higher in targets (0.86%) than in both acquirers (0.36%) and nonmerging FICUs (0.34%). These findings highlight that both assisted and unassisted mergers are often an exit mechanism for credit unions whose loans turn out to be higher-risk than initially hoped for. Further, the periodic spikes in provisions among targets of both unassisted and assisted mergers highlight that the precise boundary between assisted mergers and the most troubled unassisted mergers may often be blurred. For instance, provisions for loan losses in 1992 were very high for unassisted mergers (1.71%),

for assisted mergers (2.23%), and (as shown in Figure 7) for all mergers (1.78%). In many cases, the difference between assisted mergers and the most troubled unassisted mergers may be the difference between managers waiting for regulators to push the inevitable recognition of problems and managers deciding to jump before regulators are forced to act. Chapter 6 compares in further detail the

characteristics of credit unions in assisted and unassisted mergers, and those in other exits.

**Figure 7: Provisions for Loan Losses per Assets (%) in Acquirers, Targets, and Nonmerging FICUs, 1984–2008**



Data sources: NCUA and CUNA.

Figure 8 presents the annual evolution of merger-adjusted asset growth (GROWTH) in acquirers, targets, and nonmerging FICUs during 1984–2008. We define GROWTH as the percentage growth between (1) the sum of assets in the credit unions involved in a merger on the December 31 of the last year in which they report data separately and (2) the assets reported by the continuing credit union on the following December 31

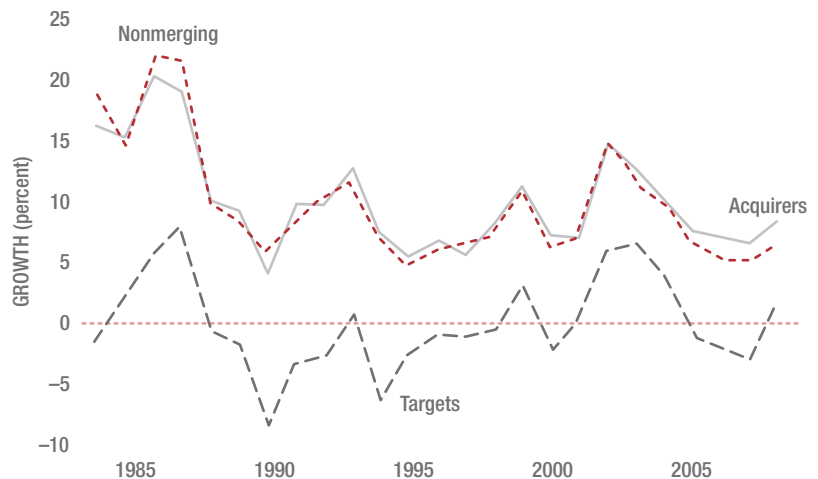
(i.e., once the merging credit union ceased to report data separately).<sup>15</sup>

If a credit union is managed in the best interest of its members, its key goals should be to deliver attractively priced loans (i.e., ones with lower interest rates) and savings products (i.e., ones with higher interest rates) and a broad selection of attractively priced services. Asset growth should not be a goal of a credit union per se. A credit union could try to generate fast asset growth in the short term by underpricing loans relative to their risk (i.e., using poor underwriting practices) and by overpaying on savings products. Such a policy could deliver fast growth but would be unlikely to be sustainable and could lead to the institution's failure when poorly underwritten loans, predictably, defaulted in large numbers. Thus, many regulators view particularly fast growth as a sign of higher risk. However, credit unions that meet their goals and deliver products and services that are attractively (but safely) priced are likely to attract more business from existing and new members and hence to grow faster. Thus, while growth should not be an end in itself, higher (but not extreme) growth rates typically are a sign that a credit union is delivering products and services that are attractive to its members.

In Wilcox (2008), we differentiate between (1) internal (or organic) growth, (2) external growth (or growth from mergers), and (3) total (or simple) growth, which is the sum of internal and external growth. Internal growth is most likely to be driven by providing attractively priced products and services that lead existing members to have more products with their credit union or that attract new members. Throughout this report, we emphasize GROWTH instead of total (or simple) growth because GROWTH is likely a better proxy of

In many cases, the difference between assisted mergers and the most troubled unassisted mergers may be the difference between managers waiting for regulators to push the inevitable recognition of problems and managers deciding to jump before regulators are forced to act.

*Figure 8: Merger-Adjusted Asset Growth (GROWTH, %) in Acquirers, Targets, and Nonmerging FICUs, 1984–2008*



Data sources: NCUA and CUNA.

internal growth (and of a credit union’s attractiveness to existing and new members) than total (or simple) growth.

As we mention above, targets during 1984–2008 had on average far lower GROWTH (0.17%) than acquirers (10.11%). Again, targets’ higher NIEXP, poor lending records (i.e., higher loan loss provisions), higher loan rates, and lower rates on savings products likely combined to make their institutions less attractive to members, explaining their chronically lower GROWTH.

Nonmerging FICUs’ GROWTH (9.58%) was roughly similar to that of acquirers during this extended period. However, while acquirers had slightly lower GROWTH (15.13%) than nonmerging FICUs (15.65%) during 1984–1989, acquirers

While acquirers had slightly lower GROWTH (15.13%) than nonmerging FICUs (15.65%) during 1984–1989, acquirers had somewhat higher GROWTH (9.00%) than nonmerging FICUs (7.84%) during 2000–2008.

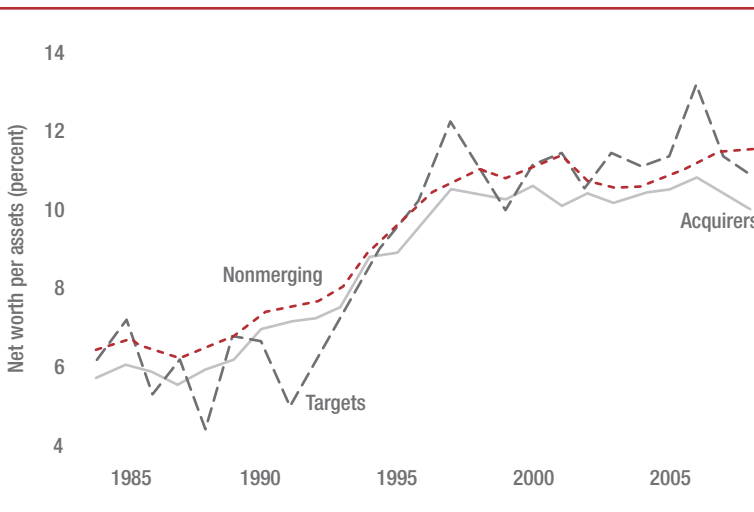
had somewhat higher GROWTH (9.00%) than nonmerging FICUs (7.84%) during 2000–2008. As we discuss above, the seemingly growing advantage of acquirers over nonmerging FICUs can largely be explained by the fact that FICUs playing the role of acquirers have shifted toward larger sizes faster than nonmerging FICUs. As we show in Chapter 4, on average, larger FICUs tend to grow faster.

Figure 9 presents the annual evolution of net worth per assets (i.e., the net worth ratio) in acquirers, targets, and nonmerging FICUs during 1984–2008. All three series display a large increase in net worth ratios from about 6% in the mid 1980s to about 11% in the mid 2000s. These increases largely mirror the larger emphasis on

capital levels in depository institutions following the savings and loan crisis of the 1980s and international agreements (e.g., Basel) calling for higher bank capital requirements worldwide (see Wilcox 2007c). The timing of the increase in credit union net worth ratios is particularly noteworthy since it matches increases in the banking industry and it almost completely precedes the introduction of formal net worth requirements for credit unions in 1998 with the passage of CUMAA.<sup>16</sup>

While net worth ratios during the 2000s were markedly higher than during the 1980s across all

**Figure 9: Net Worth per Assets (%) in Acquirers, Targets, and Nonmerging FICUs, 1984–2008**



Data sources: NCUA and CUNA.

three groups of FICUs, the size of the increases in net worth ratios varied, highlighting a profound shift in the motivation for many mergers. Until the early 1990s, coinciding with large numbers of assisted mergers and other failures, a large fraction of targets had much lower net worth ratios than acquirers and, particularly, nonmerging FICUs. Mergers, whether formally assisted or unassisted, were often undertaken to transfer members to viable institutions before the merging credit union formally failed (see Wilcox 2005). While targets' net worth (6.06%) was lower than that of nonmerging FICUs (6.62%) during 1984–1989, both ratios were lower than today's minimum net worth requirement for well capitalized credit unions of 7%.

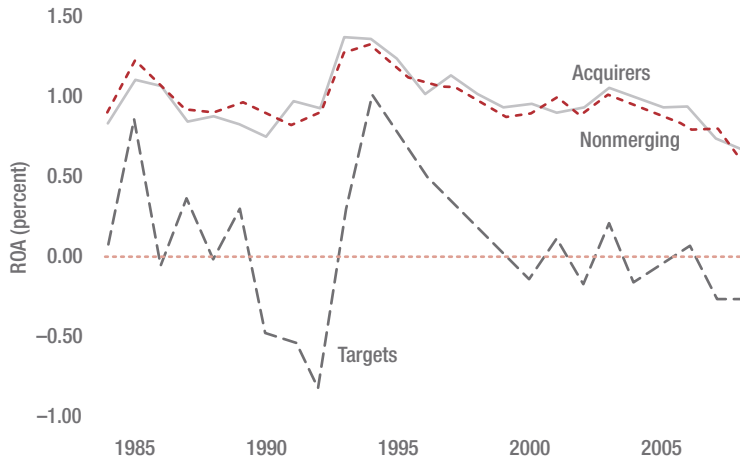
Until the early 1990s, coinciding with large numbers of assisted mergers and other failures, a large fraction of targets had much lower net worth ratios than acquirers and, particularly, nonmerging FICUs. Mergers, whether formally assisted or unassisted, were often undertaken to transfer members to viable institutions before the merging credit union formally failed.

Since the mid-1990s, coinciding with much smaller numbers of failures, far fewer credit unions have merged due to short-term financial distress or to avoid imminent insolvency. Instead, during 2000–2008, targets on average had higher net worth ratios (11.50%) than either their acquirers (10.52%) or nonmerging FICUs (11.20%). However, burdened with high NIEXP and having no clear plans as to how to become more attractive to existing or new members, many credit unions have concluded that they faced slow stagnation if not outright decline. For many of these credit unions, mergers seem the clearest path to providing their members with more attractively priced and broader selections of products and services (Bartoo 2008, Rick 1998).

Since the mid-1990s, coinciding with much smaller numbers of failures, far fewer credit unions have merged due to short-term financial distress or to avoid imminent insolvency. For many of these credit unions, mergers seem the clearest path to providing their members with more attractively priced and broader selections of products and services.

Figure 10 presents the annual evolution of ROA<sup>17</sup> in acquirers, targets, and nonmerging FICUs during 1984–2008. While ROA is a key financial ratio in the management of financial institutions, it has substantially different meanings for stock-owned banks and member-owned credit unions. In stock-owned banks, net income represents the funds (or profits) available to stockholders once some customers have made various payments (for loans, services, etc.) and other customers (along with various employees, investors, and suppliers) have received various payments (for deposits, wages, bonds, supplies, etc.).

*Figure 10: Return on Assets (ROA, %) in Acquirers, Targets, and Nonmerging FICUs, 1984–2008*



Note: Again highlighting the sometimes blurred boundary between assisted and unassisted mergers, the sharp decline in ROA during the early 1990s affected targets of both assisted and unassisted mergers. For instance, ROA in 1992 was  $-0.74\%$  for unassisted mergers,  $-1.50\%$  for assisted mergers, and (shown above)  $-0.84\%$  for all mergers.

Data sources: NCUA and CUNA.

In turn, net income may be distributed to stockholders as dividends or it may be retained as capital to buttress the institution’s solidity, meet capital requirements, and finance future growth.

In contrast, among credit unions, members are both customers and owners. Members may receive the benefits of ownership through lower loan rates and higher rates on savings products (as well as through broader selections of attractively priced services). The difference between the rates that members can get on loans and savings products at their credit union and at other alternatives is roughly the economic equivalent of the dividends that stockholders receive from banks. However, dividends paid to bank stockholders are paid out of net income, not affecting the current quarter’s ROA. In contrast, among credit unions, lower loan rates and higher rates on savings products reduce reported net income and ROA. Thus, a credit union’s ROA turns out to be roughly equivalent to a bank’s “addition to retained earnings” (i.e., to a bank’s net income minus dividends). Thus, higher ROAs in stock-owned banks mean higher profits for their owners, some of which will be paid out immediately as dividends and some of which will be retained to finance future growth. In contrast, higher ROAs in credit unions mean, strictly, that more funds are being set aside to buttress the solidity of the institution, meet capital requirements, and finance future growth.



As we mention above, during 1984–2008 targets had far lower (and more volatile) ROAs (averaging 0.08%) than acquirers (1.00%). By themselves, low ROAs are not evidence of poor management and performance by targets. Since many targets had high net worth ratios and experienced low growth, their levels of net worth would likely have been sufficient for the foreseeable future. Members of these credit unions would have been better off if their institutions had targeted low loan rates and high rates on savings products instead of focusing on high ROAs. However, as we show above, targets' lower ROAs are not signs that they are offering their members attractively priced products, but rather the result of high NIEXP.

Nonmerging FICUs' ROA (0.98%) was roughly similar to that of acquirers during this extended period. However, while acquirers had lower ROA (0.94%) than nonmerging FICUs (1.01%) during 1984–1989, acquirers had higher ROA (0.92%) than nonmerging FICUs (0.88%) during 2000–2008. The switch in the direction of the gap between the ROAs of acquirers and nonmerging FICUs likely mimics the similar switch in the gap for GROWTH. As we discuss above, the seemingly growing advantage of acquirers over nonmerging FICUs can largely be explained by the fact that FICUs playing the role of acquirers have shifted toward larger sizes faster than nonmerging FICUs. Faster-growing institutions need commensurately higher ROAs to prevent their net worth ratios from falling to levels that might be worrisome to either management or regulators.

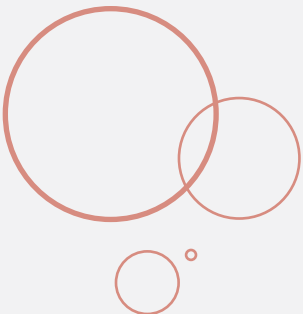


## CHAPTER 4

### Comparing Credit Unions in Mergers across Asset Sizes



*An overwhelming majority of targets were rather small, but a substantial fraction of targets' assets were concentrated in relatively few larger mergers. Medium-sized credit unions acquired most of targets' assets. Across asset sizes, acquirers had higher NIEXP than similarly sized nonmerging FICUs.*





In this chapter, we compare the characteristics of acquirers, targets, and nonmerging FICUs across asset sizes during 1984–2008. We find that the overwhelming majority of targets were rather small, but a substantial fraction of targets’ assets were concentrated in relatively few larger mergers. While acquirers were larger than their targets, relatively few mergers had large acquirers. Instead, medium-sized credit unions acquired most of targets’ assets. Also, while overall averages for acquirers and nonmerging FICUs were very similar, we find that, across asset sizes, acquirers had higher NIEXP than similarly sized nonmerging FICUs. Some acquirers, smaller ones in particular, use mergers as a key tool to jump-start their growth and lower their average cost of operations.

Figure 11 presents selected data and financial ratios for mergers across asset size groups during 1984–2008. Column 1 identifies the asset size groups we use throughout this report. We classify FICUs under \$1M in assets as tiny, with \$1M–\$10M as very small, with \$10M–\$100M as smallish,<sup>18</sup> with \$100M–\$1B as medium-sized, and with over \$1B as large. Boundaries across asset size groups are adjusted for inflation and expressed in 2008 dollars for all years. The data we present include the total number of targets (panels 1 and 2) and their inflation-adjusted assets (panels 3 and 4); and NIEXP (panel 5) and GROWTH (panel 6) for nonmerging FICUs (column 2), targets (column 3), and acquirers (column 4). While column 3 presents targets classified by their own asset size, column 5 presents targets classified by the size of their acquirers. For instance, the top cell in column 3 shows that 4,091 tiny FICUs were targets during this period. In contrast, the top cell in column 5 shows that 114 FICUs were acquired by tiny FICUs.

Panels 1 and 2 of column 3 show that during 1984–2008 the overwhelming majority of targets were small. Almost half of targets (4,091 or 46.7%) were tiny. Almost another half (3,776 or 43.1%) were very small. Less than a tenth (855 or 9.8%) were smallish. Very few (47 or 0.5%) were medium-sized, and none were large.<sup>19</sup> Panels 3 and 4 of column 3 show that while the smallest targets were the

*Figure 11: Selected Data and Financial Ratios for Acquirers, Targets, and Nonmerging FICUs across Asset Size Groups, 1984–2008*

	Asset size group (1)	Nonmerging FICUs (2)	Targets (3)	Acquirers (4)	Targets, classified by size of acquirers (5)
1. Number of targets	\$0–\$1M	—	4,091	—	114
	\$1M–\$10M	—	3,776	—	1,563
	\$10M–\$100M	—	855	—	4,465
	\$100M–\$1B	—	47	—	2,403
	Over \$1B	—	—	—	224
	<b>All sizes</b>	—	<b>8,769</b>	—	<b>8,769</b>
2. Percentage of targets	\$0–\$1M	—	46.7	—	1.3
	\$1M–\$10M	—	43.1	—	17.8
	\$10M–\$100M	—	9.8	—	50.9
	\$100M–\$1B	—	0.5	—	27.4
	Over \$1B	—	—	—	2.6
	<b>All sizes</b>	—	<b>100.0</b>	—	<b>100.0</b>
3. Assets in targets (\$ million, 2008 dollars)	\$0–\$1M	—	1,748	—	27
	\$1M–\$10M	—	12,591	—	1,526
	\$10M–\$100M	—	22,515	—	14,150
	\$100M–\$1B	—	9,526	—	25,850
	Over \$1B	—	—	—	4,827
	<b>All sizes</b>	—	<b>46,380</b>	—	<b>46,380</b>
4. Percentage of targets' assets	\$0–\$1M	—	3.8	—	0.05
	\$1M–\$10M	—	27.1	—	3.3
	\$10M–\$100M	—	48.6	—	30.5
	\$100M–\$1B	—	20.5	—	55.7
	Over \$1B	—	—	—	10.4
	<b>All sizes</b>	—	<b>100.0</b>	—	<b>100.0</b>
5. Noninterest expense per assets (NIEXP, %)	\$0–\$1M	4.24	5.20	5.21	6.14
	\$1M–\$10M	3.74	4.67	4.29	4.72
	\$10M–\$100M	3.49	4.23	3.82	4.44
	\$100M–\$1B	3.08	3.65	3.24	4.30
	Over \$1B	2.39	—	2.56	4.68
	<b>All sizes</b>	<b>3.13</b>	<b>4.36</b>	<b>3.12</b>	<b>4.36</b>
6. Merger-adjusted asset growth (GROWTH, %)	\$0–\$1M	2.14	–7.30	1.62	–9.84
	\$1M–\$10M	5.99	–1.81	6.46	–2.30
	\$10M–\$100M	7.89	0.92	8.09	–0.10
	\$100M–\$1B	9.97	6.78	10.12	0.67
	Over \$1B	12.29	—	10.08	–1.57
	<b>All sizes</b>	<b>9.58</b>	<b>0.17</b>	<b>10.11</b>	<b>0.17</b>

Data sources: NCUA and CUNA.

most numerous, somewhat larger targets held larger shares of targets' assets. Thus, tiny targets held relatively few assets (\$1.7B or 3.8% of targets' assets). Very small targets held \$12.6B (or 27.1%). Smallish assets held almost half of targets' assets (\$22.5B or 48.6%). Medium-sized targets, though few in numbers, held about a fifth of targets' assets (\$9.5B or 20.5%).

Column 5 of panel 1 highlights that large institutions were acquirers in a relatively small fraction of mergers. Acquirers were tiny in 114 mergers (1.3% of mergers), very small in 1,563 mergers (17.8%), smallish in 4,465 mergers (50.9%), medium-sized in 2,403 mergers (27.4%), and large in 224 mergers (2.6%). Column 5 of panel 4 shows that larger institutions also acquired relatively small shares of targets' assets. Tiny FICUs acquired \$0.03B (or 0.05%) of targets' assets. Very small FICUs acquired \$1.5B (or 3.3%). Smallish FICUs acquired \$14.2B (or 30.5%). Medium-sized FICUs acquired over half of targets' assets (\$25.9B or 55.7%). Large FICUs acquired \$4.8B (or 10.4%).

Almost half of targets (4,091 or 46.7%) were tiny. Almost another half (3,776 or 43.1%) were very small. Less than a tenth (855 or 9.8%) were smallish. Very few (47 or 0.5%) were medium-sized, and none were large.

Panels 5 and 6 further explore NIEXP and GROWTH in acquirers, targets, and nonmerging FICUs across asset size groups. Some of our findings are broadly as expected; others less so. Among the least surprising findings is that larger institutions typically had lower NIEXP and higher GROWTH than smaller institutions among each of acquirers, targets, and nonmerging FICUs (see also Wilcox 2008). The gap between tiny and large nonmerging FICUs was rather large for both NIEXP ( $1.85\% = 4.24\% - 2.39\%$ ) and GROWTH ( $10.15\% = 12.29\% - 2.14\%$ ). The gap between tiny and large acquirers was also large for both NIEXP ( $2.65\% = 5.21\% - 2.56\%$ ) and GROWTH ( $8.46\% = 10.08\% - 1.62\%$ ). These gaps likely serve as an incentive for future mergers among both former acquirers and nonmerging FICUs. The gaps between tiny and medium-sized targets (there were no large targets) were also large for both NIEXP ( $1.55\% = 5.20\% - 3.65\%$ ) and growth [ $14.08\% = 6.78\% - (-7.30\%)$ ].

Also unsurprising is that the NIEXP and GROWTH advantages between acquirers and targets holds quite consistently across asset size groups. Thus, very small acquirers on average had lower NIEXP (4.29%) and faster growth (6.46%) than very small targets (4.67% and -1.81%, respectively). Medium-sized acquirers on average also had lower NIEXP (3.24%) and faster growth (10.12%) than medium-sized targets (3.65% and 6.78%, respectively). The differences are even larger if instead of comparing acquirers (column 4)

with targets of similar size (column 3), we compare acquirers with their actual targets (column 5). For instance, large acquirers had much lower costs (2.56%) and faster growth (10.08%) than their targets (4.68% and -1.57%, respectively). Tiny acquirers, while having high NIEXP and slow growth themselves, had lower NIEXP (5.21%) and faster growth (1.62%) than their targets (6.14% and -9.84%, respectively).

Among the more surprising findings is that, while overall averages for many financial characteristics were broadly similar for acquirers and nonmerging FICUs, examining these two sets of credit unions across asset sizes reveals some important differences. For instance, acquirers had somewhat higher NIEXP than nonmerging FICUs of similar asset sizes. The gap in NIEXP between large acquirers and large nonmerging FICUs is sizable ( $0.17\% = 2.56\% - 2.39\%$ ). The gap is even larger for smaller asset sizes, reaching  $0.97\%$  ( $5.21\% - 4.24\%$ ) between tiny acquirers and tiny nonmerging FICUs.<sup>20</sup>

Further, acquirers' higher NIEXP does not seem to have been associated with success in delivering a higher level of service that was somehow more attractive to members. While GROWTH is not the only measure of how attractive a credit union is, acquirers' higher NIEXP was not matched by higher GROWTH. Panel 6 shows that, across asset sizes, GROWTH was not consistently higher among acquirers than among nonmerging FICUs. In particular, large nonmerging FICUs on average grew considerably faster (12.29%) than large acquirers (10.08%).

Unmatched by faster internal growth, acquirers' higher NIEXP likely means that the average acquirer is not more "dynamic" or attractive

to members than the average nonmerging FICU. Thus, for some acquirers, and for smaller ones in particular, mergers appear as a key tool for jump-starting their growth (e.g., expanding their FOM) and lowering the average costs of their operations (i.e., by deploy-

ing some fixed costs over a larger asset base). Again, while acting as acquirers typically means credit unions are trying to improve their services, mergers do not necessarily identify them as star performers.

Many of the patterns we present in Figure 11 remained broadly unchanged throughout 1984–2008 (e.g., larger institutions tended to have lower NIEXP and faster asset growth rates). However, some patterns are shifting, albeit slowly, throughout this extended time period. As the number of smaller credit unions steadily shrinks and

Acquirers' higher NIEXP does not seem to have been associated with success in delivering a higher level of service that was somehow more attractive to members. While GROWTH is not the only measure of how attractive a credit union is, acquirers' higher NIEXP was not matched by higher GROWTH.

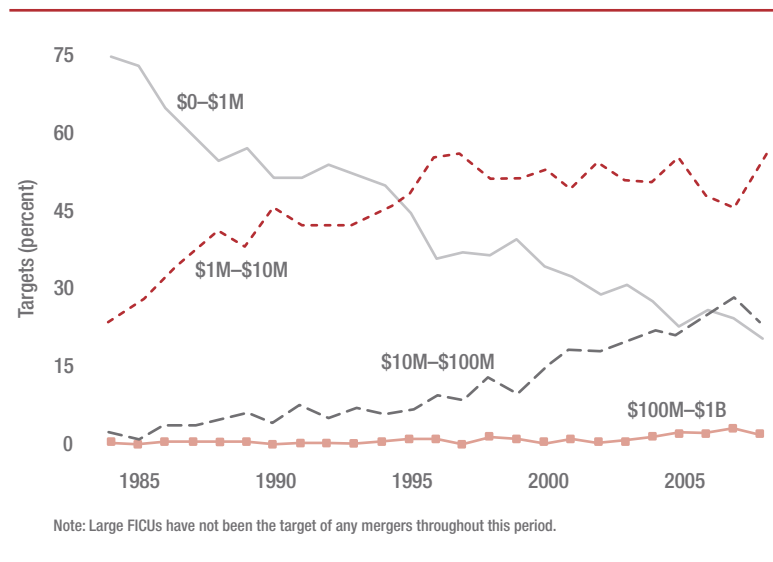
assets and credit unions shift to larger asset size groups (see Wilcox 2008), the profile of credit unions in mergers is shifting toward larger institutions. Figures 12–18 explore these changes in detail.

Figure 12 presents the annual evolution of the percentage of targets across asset size groups during 1984–2008. While most targets continued to be small in size, targets slowly grew larger in size. Thus, the fraction of tiny targets steadily shrunk from three-quarters in the mid-1980s to about one-fifth recently. However, very small FICUs still account for slightly under half of targets. The fraction of targets accounted for by smallish FICUs grew from almost negligible to about a quarter of the total. Medium-sized targets are becoming more common but still represent a very small percentage of the total (under 3% in 2008).

Figure 13 presents the annual evolution of the percentage of targets’ assets across asset size groups during 1984–2008. While tiny FICUs may have been (and still remain) rather numerous, they have not accounted for a large fraction of targets’ assets for the last several decades. Thus, the fraction of assets in tiny targets has steadily fallen from about one-fifth to under 1%. While very small FICUs held about half of targets’ assets until the early 1990s, their share of assets has since steadily declined to about 10%. Smallish FICUs have long been the main source of targets’ assets, having provided about half of targets’ assets from the early 1990s until very recently. More targets’ assets are coming from larger and larger FICUs. While there were no medium-sized targets in many individual years until the year 2000, the share

As the number of smaller credit unions steadily shrinks and assets and credit unions shift to larger asset size groups (see Wilcox 2008), the profile of credit unions in mergers is shifting toward larger institutions.

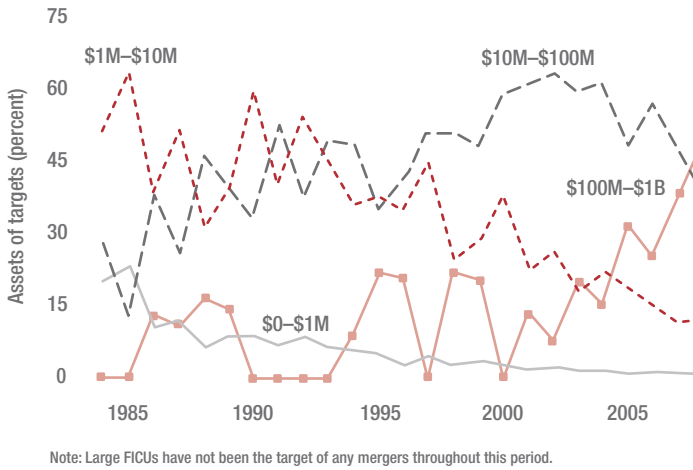
*Figure 12: Percentage of Targets across Asset Size Groups, 1984–2008*



Data sources: NCUA and CUNA.

Assuming, for simplicity, that no new FICUs are formed and that no tiny FICUs grow larger, at this rate the number of tiny FICUs will be halved every nine years.

**Figure 13: Percentage of Targets' Assets across Asset Size Groups, 1984–2008**



Data sources: NCUA and CUNA.

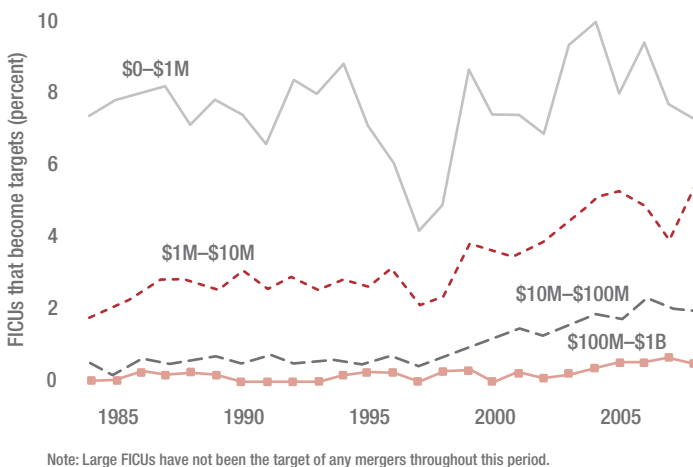
of targets' assets from medium-sized FICUs has since steadily grown to about one-half.

Figure 14 presents the annual evolution of the percentage of FICUs in each asset size group that became targets within each year during 1984–2008 (i.e., the merger rate). The figure shows that smaller FICUs become targets more often than larger ones. The merger rate for tiny FICUs averaged about 7.5% during this time period with only a slight decline in the mid 1990s, around the passage of CUMAA. Assuming, for simplicity, that no new FICUs are formed and that no tiny FICUs grow larger, at this rate the number of tiny FICUs will be halved every nine years.

While larger FICUs become targets far less often than their smaller peers, larger FICUs are becoming targets more often. The merger rate has climbed from about 2% to about 4% for very small FICUs, from about 0.5% to about 2% for smallish FICUs, and from 0% to about 0.5% for medium-sized FICUs. While merger

rates are increasing for larger FICUs, mergers alone seem unlikely to change the shape of the credit union system as one with thousands of institutions in the foreseeable future. For instance, a merger rate of 1% would imply that about 70 years would have to elapse in order for the number of medium-sized FICUs to fall by one-half.

**Figure 14: Percentage of FICUs that Become Targets Each Year (i.e., Merger Rate) across Asset Size Groups, 1984–2008**



Data sources: NCUA and CUNA.

Figure 15 presents the annual evolution of the percentage of FICUs in each asset size group that are acquirers within each year during 1984–2008 (i.e., the acquisition rate). Larger FICUs are substantially more likely to be acquirers than smaller FICUs. During this period, about 15% of large FICUs acquired other credit unions each year.<sup>21</sup> Acquisition rates among large FICUs were volatile early

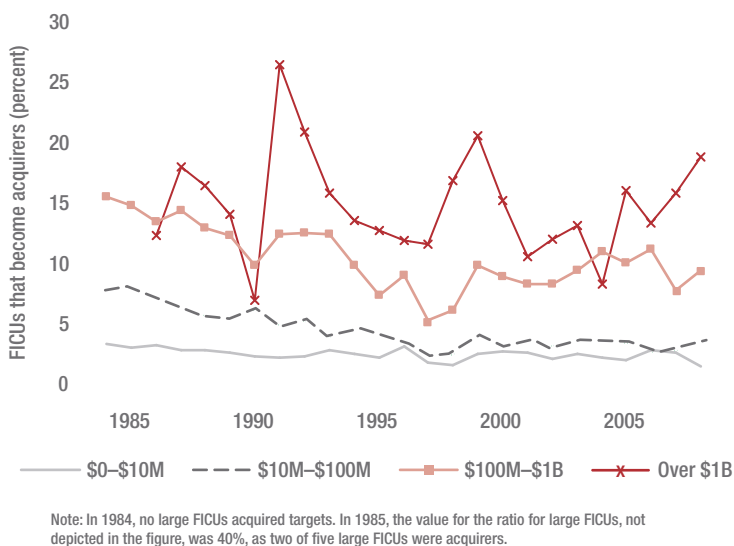


Acquisition rates among large FICUs were volatile early on, largely because the number of large FICUs used to be rather small, ranging from 4 in 1984 to 52 in 2000. As the number of large FICUs has grown, the ratio has become less volatile.

on, largely because the number of large FICUs used to be rather small, ranging from 4 in 1984 to 52 in 2000. As the number of large FICUs has grown, the ratio has become less volatile. Figure 15 also shows that acquisition rates are falling among smaller asset size groups. During this period, acquisition rates have fallen from about 15% to about 10% for medium-sized FICUs, from about 8% to about 3% for smallish FICUs, and from about 3.5% to about 1.5% for very small and tiny FICUs.<sup>22</sup> However, these findings again highlight that while smaller FICUs are slowly becoming less likely to be acquirers, the ranks of acquirers continue to include many small institutions.

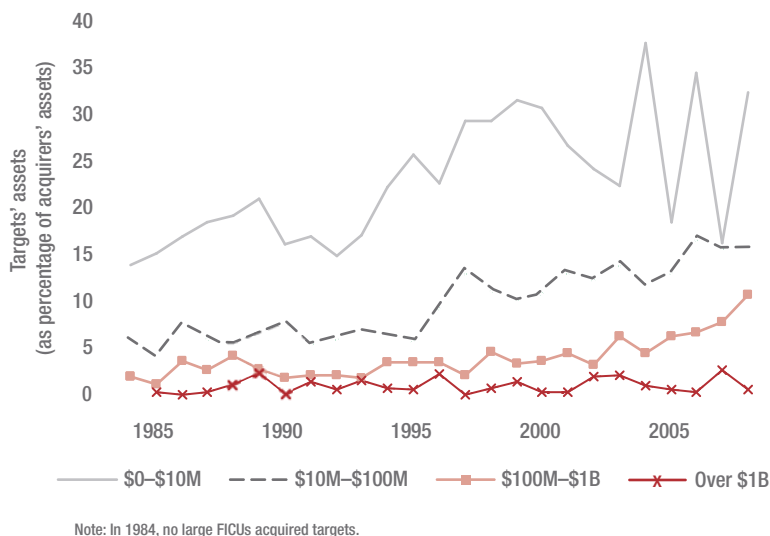
Figure 16 presents the annual evolution of targets' assets as a percentage of acquirers' assets across asset size groups during 1984–2008. The figure shows that assets from mergers contributed less to the total assets of larger acquirers and more to the total assets of smaller acquirers. The figure also shows that, among smaller acquirers, mergers are delivering a growing fraction of assets. Targets' assets as a percentage of acquirers' assets have increased from about 15% to, on average,<sup>23</sup> about 25% for tiny and very small acquirers, from about 5%

*Figure 15: Percentage of FICUs that Are Acquirers Each Year (i.e., Acquisition Rate) across Asset Size Groups, 1984–2008*



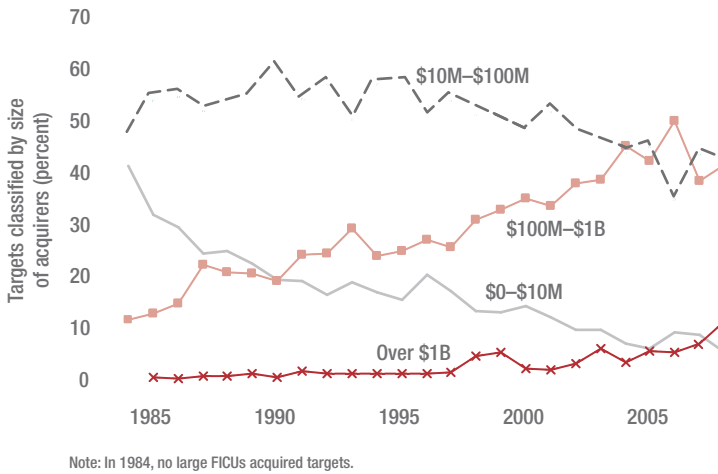
Data sources: NCUA and CUNA.

*Figure 16: Targets' Assets as a Percentage of Acquirers' Assets across Asset Size Groups, 1984–2008*



Data sources: NCUA and CUNA.

**Figure 17: Percentage of Targets Classified by the Size of Their Acquirers, 1984–2008**



Data sources: NCUA and CUNA.

to about 15% for smallish acquirers, and from about 2% to about 10% for medium-sized acquirers. For large acquirers, this ratio has remained rather small, between 0% and 3%.

Figure 17 presents the annual evolution of the percentage of targets classified by the size of their acquirers during 1984–2008. While the fraction of targets acquired by larger acquirers is slowly growing, smaller institutions still play a rather large role as acquirers. Also, while the share of targets acquired by tiny and very small FICUs has fallen from about 40% to under 10%, the share acquired by smallish FICUs has only fallen from about 50% to

about 40%. In contrast, the share acquired by medium-sized FICUs has steadily risen from about 10% to about 40%. The share acquired by large FICUs continues to be rather small, having grown from about 0% to about 10%.

Figure 18 presents the annual evolution of the percentage of targets’ assets classified by the size of their acquirers during 1984–2008.

While small credit unions continue to acquire a large percentage of targets, they play a far smaller role in acquiring targets’ assets. The share of targets’ assets acquired by tiny and very small FICUs has fallen from

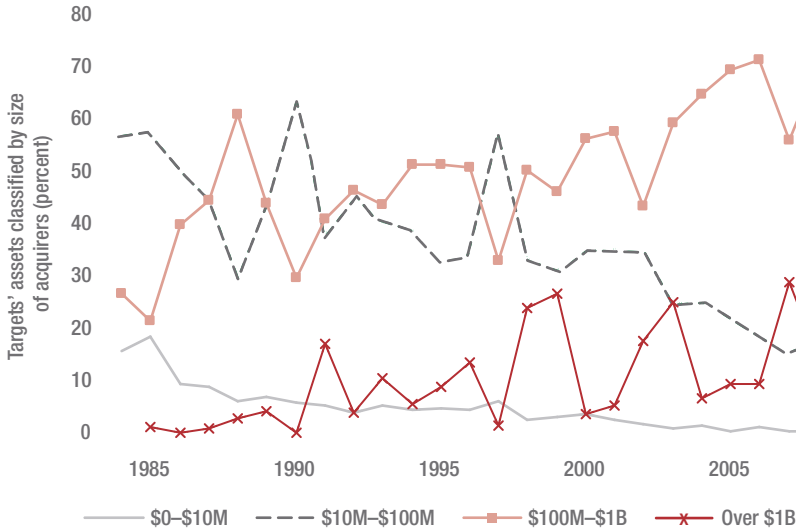
about 15% to almost 0%. The share acquired by smallish FICUs has fallen from about 50% to under 20%. The share acquired by medium-sized FICUs has increased from under 30% to about 60%.

While large FICUs acquired a very small share of targets, theirs often included the largest targets, and thus they could hold a considerable share of targets’ assets. Since the number

While the fraction of targets acquired by larger acquirers is slowly growing, smaller institutions still play a rather large role as acquirers.

The share of targets’ assets acquired by tiny and very small FICUs has fallen from about 15% to almost 0%. The share acquired by smallish FICUs has fallen from about 50% to under 20%. The share acquired by medium-sized FICUs has increased from under 30% to about 60%.

*Figure 18: Percentage of Targets' Assets, Classified by the Size of Their Acquirers, 1984–2008*



Note: In 1984, no large FICUs acquired targets.

Data sources: NCUA and CUNA.

of mergers involving both large acquirers and the largest of targets is relatively small, their share of targets' assets remains fairly volatile. The share of targets' assets acquired by large FICUs has increased from under 5% to often topping 20%.

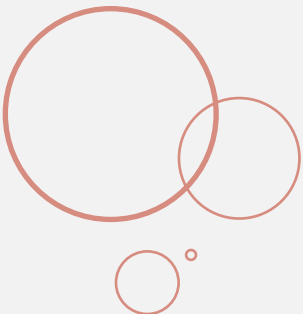


## CHAPTER 5

### Comparing Mergers of Equals, Acquisitions, and Absorptions



*Most merger targets are far smaller than their acquirers, but a substantial fraction of targets' assets are concentrated in mergers where the target is not much smaller than the acquirer. While mergers of equals among medium-sized credit unions are becoming more common, they remain relatively rare.*





In this chapter, we compare the characteristics during 1984–2008 of targets classified by their size relative to their acquirers. We find that most merger targets were far smaller than their acquirers, but a substantial fraction of targets' assets were concentrated in mergers where the target was not much smaller than the acquirer. Since targets that are much smaller than their acquirers tend to deliver value to their members far less well, the incentive for credit unions to merge with larger partners is, in most cases, straightforward. While mergers of equals among medium-sized credit unions are becoming more common, they remain relatively rare and are largely explained by the growing number of medium-sized credit unions.

As highlighted by Burton, Birch, and Bommarito (2007), the term “credit union merger” includes what may be very different types of transactions. Following Wilcox

(2008), we use the relative size of target and acquirer to classify mergers into three groups:

(1) *mergers of equals*, where the target holds at least 50% as many assets as the acquirer,

(2) *acquisitions*, where the target holds between 10% and 50% as many assets as the acquirer, and (3) *absorptions*, where the target holds less than 10% as many assets as the acquirer.<sup>24</sup> Mergers of equals may be the most complex, with the parties involved often choosing to meld different corporate cultures, management teams, and information systems, rather than imposing one set of systems on the other institution (Filson et al. 2008). In acquisitions, the choice of what set of systems to maintain is often clear, but the merger process may still be involved. In contrast, in absorptions it is likely that the processes, systems, and personnel of the acquirer will be largely unaffected by the merger, since the target is closer to being absorbed by rather than merged with the larger institution.

Since targets that are much smaller than their acquirers tend to deliver value to their members far less well, the incentive for credit unions to merge with larger partners is, in most cases, straightforward.

Figure 19 presents the number of targets classified by the relative size of targets and acquirers (panels 1 and 2), their inflation-adjusted assets (panels 3 and 4), average assets (panel 5), NIEXP (panel 6), and GROWTH (panel 7) for 1984–1989, 1990–1999, 2000–2008, and 1984–2008. Panels 1 and 2 show that absorptions have been the most common type of merger by far, totaling 6,405 mergers (73% of mergers). Acquisitions totaled 1,927 mergers (22%). Mergers of equals have been by far the least common type of merger, totaling 437 mergers (5%). The panels also show that while mergers of equals and acquisitions have become relatively more common recently, absorptions continue to dominate merger counts.

*Figure 19: Selected Data and Financial Ratios for Absorptions, Acquisitions, and Mergers of Equals in 1984–1989, 1990–1999, 2000–2008, and 1984–2008*

	Time period (1)	Absorptions (2)	Acquisitions (3)	Mergers of equals (4)	Mergers of equals, over \$100M (5)
<b>1. Number of targets</b>	1984–1989	2,217	629	135	3
	1990–1999	2,364	647	143	2
	2000–2008	1,824	651	159	11
	<b>1984–2008</b>	<b>6,405</b>	<b>1,927</b>	<b>437</b>	<b>16</b>
<b>2. Percentage of targets</b>	1984–1989	74.37	21.10	4.53	0.10
	1990–1999	74.95	20.51	4.53	0.06
	2000–2008	69.25	24.72	6.04	0.42
	<b>1984–2008</b>	<b>73.04</b>	<b>21.98</b>	<b>4.98</b>	<b>0.18</b>
<b>3. Assets (\$ million, 2008 dollars)</b>	1984–1989	2,563	2,397	1,392	537
	1990–1999	5,605	5,001	1,740	231
	2000–2008	9,055	11,923	6,704	3,701
	<b>1984–2008</b>	<b>17,223</b>	<b>19,321</b>	<b>9,836</b>	<b>4,469</b>
<b>4. Percentage of assets in targets</b>	1984–1989	40.35	37.74	21.91	8.45
	1990–1999	45.40	40.51	14.09	1.87
	2000–2008	32.71	43.07	24.22	13.37
	<b>1984–2008</b>	<b>37.13</b>	<b>41.66</b>	<b>21.21</b>	<b>9.64</b>
<b>5. Average asset size (\$ million, 2008 dollars)</b>	1984–1989	1.2	3.8	10.3	179.0
	1990–1999	2.4	7.7	12.2	115.6
	2000–2008	5.0	18.3	42.2	336.4
	<b>1984–2008</b>	<b>2.7</b>	<b>10.0</b>	<b>22.5</b>	<b>279.0</b>
<b>6. Noninterest expense per assets (NIEXP, %)</b>	1984–1989	5.06	4.81	4.41	3.82
	1990–1999	4.46	4.13	4.00	4.65
	2000–2008	4.69	4.00	3.79	3.94
	<b>1984–2008</b>	<b>4.69</b>	<b>4.26</b>	<b>4.03</b>	<b>4.06</b>
<b>7. Merger-adjusted asset growth (GROWTH, %)</b>	1984–1989	1.10	2.14	5.10	8.98
	1990–1999	-3.67	-1.55	4.36	0.87
	2000–2008	-2.35	2.20	5.15	8.22
	<b>1984–2008</b>	<b>-2.05</b>	<b>0.69</b>	<b>4.84</b>	<b>6.98</b>

Data sources: NCUA and CUNA.

Panels 3 and 4 show that while few in number, mergers of equals accounted for a substantial share of assets in targets (\$9.8B or 21%). Acquisitions accounted for the most assets in targets (\$19.3B or 42%). While the most numerous, absorptions did not hold the most assets in targets (\$17.2B or 37%). Panel 5 shows that average sizes were largest for mergers of equals (\$22.5M), in between for acquisitions (\$10.0M), and smallest for absorptions (\$2.7M). While total assets involved and average asset sizes grew for all types of targets, absorptions' share of targets' assets has fallen markedly over the last two decades. (All figures in this paragraph are adjusted for inflation and expressed in 2008 dollars.)

Absorptions have been the most common type of merger by far, totaling 6,405 mergers (73% of mergers). Acquisitions totaled 1,927 mergers (22%). Mergers of equals have been by far the least common type of merger, totaling 437 mergers (5%).

Panels 6 and 7 also show that credit unions that were absorbed not only tended to be smaller but also had higher NIEXP (4.69%) and slower GROWTH (-2.05%) than other targets. Conversely, credit unions that participated in mergers of equals not only tended to be larger but also had lower NIEXP (4.03%) and faster GROWTH (4.84%). Credit unions that were acquired fell in between, with NIEXP of 4.26% and GROWTH of 0.69%. In essence, absorptions and acquisitions are two of the key means through which the least dynamic credit unions cease to operate independently, transferring their members and assets to lower-NIEXP, larger, faster-growing institutions where members receive better value. Sharply higher NIEXP and lower GROWTH rates among targets of absorptions and acquisitions likely also imply that those mergers are entered into with a greater sense of urgency and with the clearest promise of gains in service for members of targets. Similarly, Fried, Lowell, and Yaisawarng (1999) argue that merger partners (particularly the smaller target) are more likely to benefit from a merger the more different they are in size.

Sharply higher NIEXP and lower GROWTH rates among targets of absorptions and acquisitions likely also imply that those mergers are entered into with a greater sense of urgency and with the clearest promise of gains in service for members of targets.

In contrast, mergers of equals, as their name implies, involve similarly sized institutions coming together to seek gains from economies of scale and customer convenience (e.g., making branches and services from each of the two credit unions available to the members of the other credit union).<sup>25</sup> While the potential gains to members in mergers of equals may be real, the gains are often less obvious than they are with other types of mergers, partially explaining why

mergers of equals are the least common. Among the reasons mergers of equals are rare, the consulting firm Merger Solutions cites director angst, loss of control, and difficulties in negotiating management ranks and in showing strong member benefits, since “most credit unions of equal size have similar services, technologies, and strategic focus” (Rubenstein 2008).

Column 5 of Figure 19 explores whether mergers of equals among larger FICUs are becoming more common. Panel 1 displays the number of mergers of equals among FICUs larger than \$100M across several time periods (the \$100M boundary has been adjusted for inflation and is expressed in 2008 dollars). Clearly, mergers of equals among larger credit unions are becoming more common, with the count increasing from 3 in 1984–1989 to 11 in 2000–2008. Despite the increase, such mergers remain relatively rare, accounting for less than 0.5% of mergers (see panel 2). Moreover, a large part of that increase reflects not necessarily mergers of equals becoming more

Clearly, mergers of equals among larger credit unions are becoming more common, with the count increasing from 3 in 1984–1989 to 11 in 2000–2008. Despite the increase, such mergers remain relatively rare, accounting for less than 0.5% of mergers.

common among existing larger credit unions but, rather, there being a greater number of larger credit unions. (The average number of FICUs larger than \$100M was 476 in 1984–1989 and 1,165 in 2000–2008.) Also, panel 4 shows that while the percentage of assets in the targets

of mergers of equals among FICUs larger than \$100M was higher in 2000–2008 (13.37%) than it was in 1984–1989 (8.45%), these transactions still comprise a fairly small percentage of targets’ assets.

As the number of larger credit unions continues to grow in the years ahead, it is likely that there will be increased numbers of (1) mergers among larger credit unions in general, and (2) mergers of equals among larger credit unions in particular. However, it seems likely that the key driver in most mergers will continue to be sharp differences in performance among the parties to a merger. Thus, for the

It seems likely that the key driver in most mergers will continue to be sharp differences in performance among the parties to a merger.

foreseeable future, acquisitions and absorptions will continue to dominate both the number of mergers and the percentage of targets’ assets involved in mergers. In 2009, Suncoast Schools (with \$6B in assets) and

GTE (\$1.8B) announced their intention to merge (CUNA 2009a). If the merger is completed, it will lead to the first merger in which the target fits our definition of large (i.e., over \$1B in assets). Even in that case, however, the merger would not be one of equals, since one institution is significantly larger than the other.





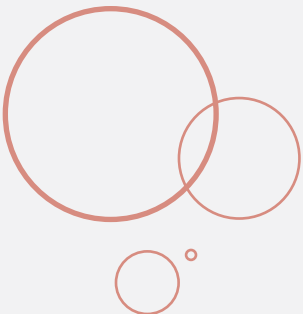


## CHAPTER 6

### Comparing Assisted and Unassisted Mergers and Other Exits



*Unassisted mergers are the main mechanism for credit union exits, far outweighing all other types of exits. Across many measures, targets in assisted mergers perform far more poorly than targets in unassisted mergers and broadly similarly to credit unions in liquidations and P&As.*





In this chapter, we briefly describe several mechanisms by which the number of credit unions can be reduced (i.e., exits) and compare the characteristics of credit unions undergoing each mechanism during 1984–2008. Unassisted mergers were the main mechanism for credit union exits, far outweighing all other exits combined both by number of credit unions and by assets. Across many measures, targets in assisted mergers performed far more poorly than targets in unassisted mergers and broadly similarly to credit unions in liquidations and P&As. Regulators rely extensively on P&As for larger credit unions during troubled times.

Figure 20 presents selected data and financial ratios for several exit mechanisms across several time periods. Exit mechanisms include unassisted mergers (column 2), assisted mergers (column 3), P&As (column 4), involuntary liquidations (column 5), voluntary liquidations (column 6), and conversions into non-credit unions.<sup>26</sup> We present data for several time periods, identified in column 1: 1984–1994 (an early period with many credit union failures), 1995–2006 (a period with relatively few credit union failures), 2007–2008 (encompassing the beginning of the financial crisis of the late 2000s), and 1984–2008. The data we present include totals or averages for the number of the various types of exits (panel 1), inflation-adjusted assets of exiting institutions<sup>27</sup> (panels 2 and 3), NIEXP (panel 4), provisions for loan losses (panel 5), net income (ROA, panel 6), GROWTH (panel 7), and net worth (panel 8). The data in panels 4–6 and panel 8 are expressed per assets.

A key difference between mergers and liquidations is that, whereas both result in (at least) one fewer credit union, in mergers the members of the discontinued institution continue to be served by a credit union. While the separate existence of the merging credit union(s) comes to an end, all the members, loans, other assets, savings, and other liabilities of the merging credit union become part of the continuing credit union. Mergers are classified as *unassisted* if they do not receive formal financial assistance from the NCUA. Mergers are classified as *assisted* if the NCUA provides any of various forms of

*Figure 20: Selected Data and Financial Ratios for Unassisted and Assisted Mergers and Other Exits in 1984–1994, 1995–2006, 2007–2008, and 1984–2008*

	Time period (1)	Unassisted mergers (2)	Assisted mergers (3)	P&As (4)	Involuntary liquidations (5)	Voluntary liquidations (6)
1. Number of exits	1984–1994	4,336	481	192	370	165
	1995–2006	3,357	71	71	82	136
	2007–2008	516	8	12	11	8
	<b>1984–2008</b>	<b>8,209</b>	<b>560</b>	<b>275</b>	<b>463</b>	<b>309</b>
2. Assets (\$ million, 2008 dollars)	1984–1994	10,199	1,612	2,937	1,657	395
	1995–2006	25,607	333	452	220	73
	2007–2008	8,586	43	1,704	41	3
	<b>1984–2008</b>	<b>44,392</b>	<b>1,989</b>	<b>5,093</b>	<b>1,918</b>	<b>472</b>
3. Percentage of assets in FICUs	1984–1994	0.33	0.05	0.09	0.05	0.01
	1995–2006	0.37	0.01	0.01	0.003	0.001
	2007–2008	0.57	0.002	0.11	0.003	0.0002
	<b>1984–2008</b>	<b>0.37</b>	<b>0.03</b>	<b>0.05</b>	<b>0.03</b>	<b>0.01</b>
4. Noninterest expense per assets (NIEXP, %)	1984–1994	4.47	5.74	5.46	4.87	3.34
	1995–2006	4.08	5.79	6.47	5.81	5.86
	2007–2008	4.51	6.70	3.72	3.25	3.48
	<b>1984–2008</b>	<b>4.29</b>	<b>5.84</b>	<b>5.78</b>	<b>5.19</b>	<b>4.67</b>
5. Provisions for loan losses per assets (%)	1984–1994	0.91	2.15	3.30	5.39	0.46
	1995–2006	0.66	5.50	5.89	3.32	0.36
	2007–2008	0.80	13.14	5.72	0.84	0.24
	<b>1984–2008</b>	<b>0.78</b>	<b>4.64</b>	<b>4.74</b>	<b>4.03</b>	<b>0.39</b>
6. Net income per assets (ROA, %)	1984–1994	0.26	-1.31	-3.25	-4.71	0.41
	1995–2006	0.20	-5.28	-5.74	-2.83	-2.22
	2007–2008	-0.23	-11.77	-5.56	-0.06	-2.17
	<b>1984–2008</b>	<b>0.19</b>	<b>-4.05</b>	<b>-4.63</b>	<b>-3.43</b>	<b>-1.17</b>
7. Merger-adjusted asset growth (GROWTH, %)	1984–1994	0.52	-8.00	-11.37	-0.33	30.34
	1995–2006	1.08	-11.32	-6.91	-2.24	-32.01
	2007–2008	-0.47	-17.15	-8.68	-1.79	-14.29
	<b>1984–2008</b>	<b>0.71</b>	<b>-10.32</b>	<b>-9.01</b>	<b>-1.36</b>	<b>-6.07</b>
8. Net worth per assets (%)	1984–1994	7.06	2.51	-1.42	-1.43	12.64
	1995–2006	11.33	4.65	-1.20	7.12	27.25
	2007–2008	11.31	2.08	5.45	10.82	17.93
	<b>1984–2008</b>	<b>9.45</b>	<b>3.50</b>	<b>-0.77</b>	<b>3.65</b>	<b>20.72</b>

Data sources: NCUA and CUNA.

assistance to help the merger take place. When the NCUA determines that a credit union is no longer viable and would otherwise be liquidated, the NCUA may ask a healthier credit union to merge with it to ensure that all members continue to be served by a credit union. To avoid burdening the healthier credit union, the NCUA may, for instance, guarantee (in full or in part) some of the assets (e.g., loans) of the less healthy credit union (see Wilcox 2005).

In the liquidation of a credit union, the institution ceases to exist. A credit union may initiate its liquidation *voluntarily* (i.e., without explicit prompting by regulators) through votes by its board and members. In this case, the credit union would sell its assets (e.g., loans) to third parties, including other credit unions; repay both members' balances and creditors; and distribute any remaining funds among members. However, many liquidations are *involuntary*, initiated by regulators to limit future losses in credit unions thought to be no longer able to operate viably. In involuntary liquidations, the sale of the credit union's assets is often not enough to cover member (and depositor) balances. In those cases, the repayments received may be capped at insurance limits and may be partially covered by the credit union's share (or deposit) insurer.

P&As are a hybrid transaction somewhere between liquidations and mergers. (Some sources include P&As as a subset of liquidations.) In P&As, most (but not all) of the credit unions' assets, members, and liabilities are sold to (i.e., purchased by) or transferred to (i.e., assumed by) one or more other credit unions. Unlike in an unassisted merger, however, the purchasing credit union in a P&A is legally responsible only for the specific assets it buys and the liabilities it assumes, not for all assets and liabilities in the exiting credit union.

Panels 1–3 in Figure 20 show that unassisted mergers were the main mechanism for credit union exits during 1984–2008. During this period, the NCUA identified 8,209 unassisted mergers (or 2.81% of FICUs annually). Targets in those mergers totaled \$44.4B in assets (0.37% of FICU assets annually). Other exits included far fewer credit unions and assets. The NCUA identified 560 assisted mergers (with \$2B in assets), 275 P&As (\$5.1B), 463 involuntary liquidations (\$1.9B), and 309 voluntary liquidations (\$0.5B).<sup>28</sup> To help assess the relative importance of unassisted mergers, we define “other exits” as the sum of assisted mergers, P&As, and involuntary and voluntary liquidations. Compared with unassisted mergers, other exits accounted for far fewer credit unions (1,607 or 0.51% of FICUs annually) and assets (\$9.5B or 0.11% of FICU assets annually). (All asset values in this paragraph are adjusted for inflation and expressed in 2008 dollars. Values are presented unadjusted for inflation in Figure 24 in Appendix 1.)

Panels 4–8 compare several financial ratios across types of exits and over time. Chapter 3 showed that targets in mergers are less dynamic or attractive to members than nonmerging FICUs. As we have shown throughout this report, there can be wide differences across credit unions in different types of mergers. In particular, targets in assisted mergers perform (1) far less well than targets in unassisted mergers and (2) broadly similarly to other failures (i.e., P&As and involuntary

liquidations) across many performance measures.<sup>29</sup> Thus, targets in unassisted mergers appear to have been far healthier than credit unions in exits identified as failures (i.e., assisted mergers, P&As, and involuntary liquidations) across many financial ratios, including NIEXP (4.29% for unassisted mergers vs. 5.84%, 5.78%, and 5.19% for the three types of failures), provisions for loan losses (0.78% vs. 4.64%, 4.74%, and 4.03%), ROA (0.19% vs. -4.05%, -4.63%, and -3.43%), GROWTH (0.71% vs. -10.32%, -9.01%, and -1.36%), and net worth (9.45% vs. 3.50%, -0.77%, and 3.65%).

Not surprisingly, Figure 20 also shows that credit unions in voluntary liquidations were not healthy, with negative ROA (-1.17%) and negative GROWTH (-6.07%). These institutions, however, appear to have been far healthier than exits identified as failures, having substantially lower NIEXP (4.67%) than those in the three types of failures. While liquidation is inevitably an unpleasant prospect and a recognition of an inability to provide competitive service to members, these liquidations do appear to have been voluntary in

some sense. Even if members were not receiving outstanding service, the financial conditions of these institutions imply that the liquidations were not forced by short-term difficulties and might have been postponed.

Targets in unassisted mergers appear to have been far healthier than credit unions in exits identified as failures (i.e., assisted mergers, P&As, and liquidations) across many financial ratios.

Thus, provisions were lower (0.39%) than in all three types of failures and in targets of unassisted mergers. Similarly, the net worth ratio of these institutions was very high (20.72%), implying that members might have received liquidation checks (often modest ones) in addition to the balances in their savings products.

Figure 21 presents the annual evolution during 1984–2008 of assets in the targets of unassisted mergers, in conversions to non-credit unions, and in other exits, each per FICU assets. We include as conversions closely related transactions such as: (1) mergers of a credit union with a thrift where the continuing institution was a mutual thrift—e.g., the 2008 merger of Northeast Community Credit Union with Havervill Bank (CUNA 2008), (2) transactions legally classified as voluntary liquidations where almost all assets and liabilities were purchased or assumed by a thrift—i.e., AAL Credit Union and AAL Members Credit Union merging in 2001 with AAL Bank & Trust, and (3) mergers of a credit union with a thrift where the continuing institution was a stock thrift—i.e., the 2006 merger of Nationwide FCU and Nationwide Bank. During 1995–2008, there were 34 conversions of credit unions into other depositories (and related transactions) with \$7.8B in assets (\$8.9B in 2008 dollars). The exit of credit union assets through conversions averaged

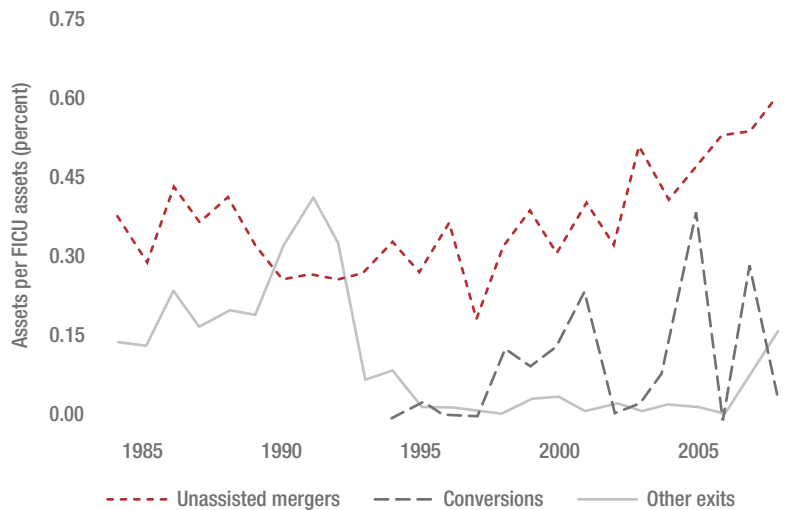
0.10% of FICU assets per year during 1995–2008 (0.06% for 1984–2008) and compares with FICU asset growth during the same time period(s) of 7.54% (and 9.59%).<sup>30</sup>

Panels 1–3 of Figure 20 and Figure 21 show that other exits were far more common and held far more assets during 1984–1994, which was a more troubled time for depository institutions, than during the macroeconomically more sedate period of 1995–2006 (see also Wilcox 2005 and 2007b).

However, while other exits are typically far fewer in number than unassisted mergers, regulators rely extensively on P&As for larger credit unions during troubled times. For instance, P&As alone accounted for 0.26% of FICU assets in 1991, almost outweighing assets in unassisted mergers. Similarly, P&As are again beginning to account for a large fraction of FICU assets during the financial crisis of the late 2000s. P&As accounted for 0.08% of FICU assets in 2007—with the failures of, among others, Huron River Area (with \$363M in assets) and New Horizons Community (\$174M)—and for 0.15% in 2008—with the failures of, among others, Cal State 9 (\$339M), Valley (\$294M), Norlarco (\$287M), Sterlent (\$102M), and Kaiperm (\$95M).

Also, Figures 20 and 21 present a dichotomy, common in credit union data, between numbers of credit unions and assets. During 1984–2008, exits (including conversions into non-credit unions) were rather numerous, totaling 9,850, or 3.33% annually (2.81% for unassisted mergers + 0.51% for other exits + 0.01% for conversions into non-credit unions).<sup>31</sup> However, since many exiting institutions tend to be smaller than average FICUs, exits accounted for a far smaller fraction of FICU assets annually (0.54% = 0.37% + 0.11% + 0.06%).

*Figure 21: Assets in Targets of Unassisted Mergers, Conversions, and Other Exits, Each per FICU Assets (%), 1984–2008*



Note: Assets for mergers and other exits taking place in each year are reported as of the last December 31 (i.e., that in the previous year) before the credit union stopped reporting data.

Source: NCUA.

While other exits are typically far fewer in number than unassisted mergers, regulators rely extensively on P&As for larger credit unions during troubled times.



## CHAPTER 7

### Summary and Implications



*The merging of credit unions is a well-established practice that is unlikely to fade away in the foreseeable future. Credit union mergers have transferred members and assets from credit unions that performed less well to better-performing ones. As a result of years of consolidation, more than one-third of the credit unions in operation in 2008 had participated in at least one merger during 1979–2008.*







In this report, we have explored in depth the characteristics of credit unions engaging in mergers in 1984–2008. The NCUA identified 12,485 credit union mergers during 1971–2008 (or 2.3% of credit unions per year), accounting for most of the reduction in the number of credit unions from its peak of 23,866 in 1969 to 8,147 in 2008. During 1984–2008, assets in merger targets totaled \$37.3B in assets (\$46.4B in 2008 dollars).

During 1984–2008, credit union mergers transferred members and assets from institutions that performed less well (the targets) to far better-performing institutions (the acquirers) that, on average, had lower NIEXP (4.36% vs. 3.12%), lower loan rates (with interest income of 8.23% vs. 7.60%), higher rates on savings products (interest expense of 3.66% vs. 3.98%), lower provisions for loan losses (0.86% vs. 0.36%), higher ROA (0.08% vs. 1.00%), and higher GROWTH (0.17% vs. 10.11%) (each ratio is expressed per assets).

While the overwhelming majority of targets were rather small during 1984–2008 (7,867 targets, or 89.8%, held under \$10M in assets), 20.5% of targets' assets were concentrated in just 47 medium-sized targets. However, few targets (224 or 2.6%) had large acquirers. Instead, smallish credit unions acquired most targets (4,465 or 50.9%) and medium-sized credit unions acquired the most of targets' assets (55.7%) (all figures in this paragraph are adjusted for inflation and expressed in 2008 dollars). Across asset sizes, acquirers had higher noninterest expenses per assets than similarly sized nonmerging FICUs. Some acquirers, smaller ones in particular, use mergers as a key tool to jump-start growth and lower their average cost of operations.

While most targets were much smaller than their acquirers during 1984–2008 (6,405 targets, or 73.0%, were less than one-tenth as large), 21.2% of targets' assets were concentrated in 437 mergers of equals. Since targets that are much smaller than their acquirers tend to deliver value to their members far less well, the incentive for credit unions to merge with much larger partners is, in most cases, straightforward. While mergers of equals among credit unions larger than

\$100M in assets are becoming more common, they remain relatively rare and are largely explained by the growing number of larger credit unions.

Unassisted mergers have been the main mechanism for credit union exits, totaling 8,209 targets, or 2.81% of FICUs annually and 0.37% of FICU assets annually during 1984–2008. All other exits totaled 1,641, or 0.52% of FICUs annually and 0.17% of FICU assets annually. Among other exits, regulators rely extensively on P&As for larger credit unions during troubled times.

Credit union mergers are a well-established process unlikely to fade away in the foreseeable future. During 1984–2008, credit union mergers transferred members and assets from credit unions that performed less well to better-performing ones. As a result of years of consolidation, more than one-third of the credit unions in operation in 2008 had participated in at least one merger during 1979–2008. However, the magnitude of the credit union merger process should be kept in perspective, since targets held a very small fraction of FICU assets: 0.39% per year.



## Supplementary Tables

*Figure 22: Number of Credit Union Mergers and Credit Unions, 1971–2008*

	Number of mergers	Number of credit unions		Number of mergers	Number of credit unions
1971	32	23,267	1991	405	13,967
1972	54	23,098	1992	419	13,378
1973	54	22,982	1993	377	12,949
1974	76	22,940	1994	357	12,540
1975	196	22,677	1995	315	12,209
1976	198	22,581	1996	309	11,880
1977	191	22,382	1997	206	11,658
1978	196	22,203	1998	241	11,392
1979	193	21,981	1999	327	11,016
1980	313	21,465	2000	314	10,684
1981	333	20,784	2001	304	10,355
1982	439	19,897	2002	280	10,041
1983	706	19,095	2003	315	9,710
1984	642	18,375	2004	350	9,483
1985	626	17,654	2005	301	9,011
1986	621	16,928	2006	335	8,662
1987	558	16,274	2007	263	8,396
1988	497	15,709	2008	250	8,147
1989	471	15,144	<b>Total</b>	12,485	—
1990	421	14,549			

Note: In each row, the number of credit unions listed is as of December 31 of that year. The number of credit unions is from CUNA (2009b) and includes both FICUs and NFICUs. The number of mergers in each year is from NCUA annual reports for 1971–1984 and from the NCUA mergers database for 1985–2008. Mergers include those among FICUs, FICUs with NFICUs, and some among NFICUs. The ratio of mergers per 100 credit unions in Figure 1 compares the number of mergers in each year to the number of credit unions on December 31 of the previous year. The number of credit unions in 1970 was 23,687.

Data sources: NCUA and CUNA (2009b).

*Figure 23: Number of FICUs Undergoing Unassisted and Assisted Mergers, P&As, Involuntary and Voluntary Liquidations, and Conversions, and Number of FICUs, 1984–2008*

	Unassisted mergers (1)	Assisted mergers (2)	P&As (3)	Involuntary liquidations (4)	Voluntary liquidations (5)	Conversions (and related transactions) (6)	Number of FICUs (7)
1984	472	61	8	30	—	—	15,547
1985	486	43	1	34	—	—	15,064
1986	467	62	8	34	11	—	14,546
1987	474	40	6	26	22	—	14,631
1988	395	52	15	24	18	—	14,279
1989	362	67	18	44	20	—	13,829
1990	357	65	33	54	14	—	13,343
1991	310	42	44	42	26	—	12,826
1992	360	29	37	41	29	—	12,698
1993	317	13	15	29	9	—	12,556
1994	336	7	7	12	16	—	12,293
1995	282	6	5	7	12	1	11,976
1996	287	7	8	7	14	1	11,674
1997	182	7	2	6	13	—	11,371
1998	211	4	5	6	17	5	11,217
1999	323	9	7	9	17	3	10,988
2000	284	8	11	8	12	3	10,615
2001	286	7	5	14	9	8	10,301
2002	269	1	4	8	12	1	9,974
2003	308	5	4	4	8	2	9,682
2004	324	8	10	3	6	3	9,354
2005	299	5	4	4	8	2	9,011
2006	302	4	6	6	8	1	8,688
2007	244	5	4	4	4	3	8,353
2008	272	3	8	7	4	1	8,147
<b>Total</b>	<b>8,209</b>	<b>560</b>	<b>275</b>	<b>463</b>	<b>309</b>	<b>34</b>	<b>—</b>

Note: This figure includes only exits by FICUs. Exits are assigned to the year following the last December 31 in which the institution is included in the NCUA's 5300 call reports, e.g., institutions reporting for the last time on December 31, 2007 are entered as having exited in 2008.

Data sources: NCUA and CUNA.

*Figure 24: Assets in FICUs Undergoing Unassisted and Assisted Mergers, P&As, Involuntary and Voluntary Liquidations, and Conversions, and Assets in FICUs (\$M), 1984–2008*

	Unassisted mergers (1)	Assisted mergers (2)	P&As (3)	Involuntary liquidations (4)	Voluntary liquidations (5)	Conversions (and related transactions) (6)	Assets in FICUs (7)
1984	306	47	31	36	—	—	81,561
1985	271	25	3	94	—	—	92,623
1986	483	154	57	38	14	—	112,701
1987	539	55	18	172	4	—	147,288
1988	668	158	126	17	19	—	162,065
1989	567	104	157	60	13	—	175,169
1990	478	129	167	133	160	—	183,682
1991	534	142	518	146	4	—	198,193
1992	583	86	464	178	10	—	224,467
1993	705	12	83	74	4	—	257,806
1994	898	5	205	17	5	—	276,896
1995	788	25	10	9	1	53	289,414
1996	1,109	10	27	2	6	10	306,614
1997	583	9	2	16	8	—	325,695
1998	1,084	3	4	6	8	422	351,076
1999	1,497	70	22	9	15	362	388,679
2000	1,259	12	112	19	5	535	411,388
2001	1,753	10	7	18	3	1,049	438,222
2002	1,609	6	51	47	3	41	501,545
2003	2,839	18	12	22	2	142	557,070
2004	2,462	31	89	7	1	536	610,139
2005	3,050	76	19	15	3	2,563	646,999
2006	3,554	4	18	12	4	24	678,692
2007	3,803	13	537	13	1	1,972	709,860
2008	4,619	30	1,144	27	3	96	753,463
<b>Total (\$ million, not adjusted for inflation)</b>							
<b>Total</b>	36,041	1,234	3,844	1,189	295	7,805	—
<b>Total (\$ million, adjusted for inflation, expressed in 2008 dollars)</b>							
<b>Total</b>	44,392	1,989	5,093	1,918	472	8,861	—

Note: This figure includes only exits by FICUs. Exits' assets are assigned to the year following the last December 31 in which the institution is included in the NCUA's 5300 call reports, e.g., assets for institutions reporting for the last time on December 31, 2007 are entered as the assets in exiting institutions in 2008.

Data sources: NCUA and CUNA.



## List of Abbreviations

B	Billion
CUMAA	Credit Union Membership Access Act of 1998 (also known as HR 1151)
CUNA	Credit Union National Association
FICU	Federally insured credit union
FOM	Field of membership
GROWTH	Merger-adjusted asset growth (%)
M	Million
NCUA	National Credit Union Administration
NFICU	Not federally insured credit union
NIEXP	Noninterest expense per assets (%)
P&A	Purchase and assumption
ROA	Return on assets (%)

### **Asset size groups (boundaries adjusted for inflation, expressed in 2008 dollars)**

Tiny	Under \$1M in assets
Very small	Between \$1M and \$10M in assets
Smallish	Between \$10M and \$100M in assets
Medium-sized	Between \$100M and \$1B in assets
Large	Over \$1B in assets





1. Each ratio is expressed per assets.
2. All figures in this bullet point are inflation-adjusted and expressed in 2008 dollars.
3. In future work, we plan to further expand our analysis studying both the short- and long-term impacts of mergers on credit unions for extended time periods such as 1984–2008.
4. In Wilcox (2005, 2006, 2007b, and 2008) we present detailed reviews of the history, classification, and academic literature on credit union and commercial bank failures, insurance losses, conversions, economies of scale, and mergers. Thus, in this report, we forgo presenting reviews of the academic literature on those topics again.
5. Figure 22 (in Appendix 1) displays the numerical values for the data in Figure 1.
6. H.R. 1151 was passed on April 1, 1998 by the House of Representatives by a vote of 411 yea and 8 nay and enacted into law on August 7, 2008. Wilcox (2005 and 2006) discuss further changes brought about by CUMAA.
7. According to NCUA annual reports, during 1979–1983 there were 1,984 mergers. However, the NCUA merger database identifies only 284 of those mergers (with 186 of them in 1983).
8. In some cases, several credit unions merged simultaneously, designating one credit union as continuing and the others as merging. For instance, in 2006 12 credit unions sponsored by State Farm merged into a single one (*Credit Union Times* 2006).
9. There are some multiples for which there were no occurrences. For instance, no continuing credit union merged with exactly 35 credit unions. We also group some multiples for which there were no occurrences, such as 23–25 and 29–33.
10. In Figure 1, we use the broadest available series of mergers—including mergers of FICUs with not federally insured credit unions (NFICUs), regardless of which was the continuing institution, as well as some mergers of NFICUs with other NFICUs—and the broadest count of credit unions (including NFICUs) from CUNA (2009b), since there was such a large number of NFICUs during the 1970s and much of the 1980s. Throughout the remainder of this report, however, we use only data for FICUs. When the data are available, we classify FICUs as acquirers and as targets even if the other party in the merger

was an NFICU. However, since our data for NFICUs are not as complete, we do not include NFICU acquirers and targets.

11. Reasons the smaller party in a merger may be designated as the continuing credit union include, among others, (1) both institutions being of similar size, (2) the smaller credit union having a somehow better relationship with its corporate sponsor, and (3) the smaller credit union having a somehow more attractive or prominent name and brand image.
12. Throughout the report, we compute multiyear averages as follows. First, we compute averages weighted by assets (i.e., one institution with \$10M in assets contributes as much toward an average as 10 institutions with \$1M in assets each) for each individual year. Second, we average those annual averages arithmetically (i.e., each year contributes as much as any other year independently of the number of institutions or assets in each year).
13. While there have been some mergers of several credit unions into a single entity, in the overwhelming majority of cases each merger involved one continuing and one merging credit union at a time. Thus we do not report the number of acquirers per year separately from the number of targets per year.
14. The number of mergers per year in 1984–2008 in Chapter 2 (and in Figures 1 and 22) is based on the date assigned for each merger in the NCUA merger database. Due to slight differences in dating conventions, these annual totals are different from those listed in NCUA annual reports. The number of mergers per year in the remainder of this report (Chapters 3–6) is, again, slightly different, since we assign mergers to the year following the last December 31 on which the merging credit union is included separately in NCUA 5300 call reports.
15. The GROWTH measure that we use throughout this report is not adjusted for inflation. Consumer Price Index inflation rates throughout 1984–2007 averaged 3.1% and ranged from 1.1% in 1986 to 6.1% in 1990.
16. Before 1998, credit unions were not required to maintain a minimum level of capital. Instead, credit unions were required to reserve a fraction of revenues until reserves met a prudential minimum level. However, regulations did not require credit unions to ever meet that minimum *per se* (see Wilcox 2002).
17. Throughout this report, we define return on assets (ROA) as net income throughout a year divided by assets at the end of that year.
18. We occasionally refer to credit unions with less than \$100M in assets as small, grouping together tiny, very small, and smallish credit unions into a single asset size group.

19. The merger of T&C (with \$944M in assets) and California Coast (\$907M) in 2008 came close to providing the first example of a merger where the target was “large.” If the merger between Suncoast Schools (\$6B) and GTE (\$1.8B) is completed in 2009, this merger will have a large target (CUNA 2009a).
20. The average NIEXP for acquirers (3.12%) and nonmerging FICUs (3.13%) was similar even though acquirers had much higher costs than similarly sized nonmerging FICUs across asset size groups. This is because there were proportionately more acquirers in the lower-NIEXP, larger-asset-size groups and proportionately more nonmerging FICUs in the higher-NIEXP, smaller-asset-size groups.
21. Large credit unions are clearly interested in acquiring other credit unions. The consulting firm Merger Solutions reports that 44% of credit unions with over \$1B in assets have joined its Active Acquirer Program for credit unions with the strategic goal of growth through mergers (Merger Solutions 2008a).
22. For Figures 15–18, we merge the very small and tiny groups into a single group. We merge these categories (1) because the acquisition rate was very low for tiny FICUs and (2) to reduce the number of lines in each figure.
23. The ratio of targets’ assets to acquirers’ assets among tiny and very small acquirers has become more volatile in recent years, largely because the number of acquirers per year in this asset size group is falling steadily, for instance, from 44 in 1995 to 13 in 2008.
24. In 2006, 12 medium-sized credit unions sponsored by State Farm merged into a single large institution (Wilcox 2008). The simultaneous merger of so many credit unions of such a size was almost completely unprecedented and, thus far, does not seem to have set a meaningful precedent. Moreover, these institutions were far from typical, enjoying very substantial corporate sponsor subsidies that are rare in credit unions of that size (e.g., their NIEXP averaged under 0.20% in both 2005 and 2006). Since this merger seems to have been a one-time occurrence and would fit poorly into any of the three categories we discuss in this chapter, we have omitted the merger completely from the data we present in this report. Wilcox (2008) presents summary information for the merger of the 12 credit unions sponsored by State Farm.
25. For instance, in the announced (but later abandoned) merger of Visterra and Credit Union of Southern California, the institutions anticipated about \$2M in annual savings from core

processors, headquarters, employee benefits plans, and other operational systems (Anderson 2008).

26. Involuntary liquidations, P&As, and assisted mergers are commonly classified as failures (see Wilcox 2005 and 2007b for in-depth studies of credit union and bank failures and insurance losses). We present more limited data on conversions into non-credit unions in Figures 23 and 24 (in Appendix 1).
27. Figures 23 and 24 present the annual number and assets (not adjusted for inflation) of credit union mergers and other exits during 1984–2008.
28. The AARP Credit Union accounted for \$159M (\$265M in 2008 dollars) of the total assets in voluntary liquidations during 1984–2008. AARP launched a credit union in 1988, but closed it in 1990 reporting insufficient interest from its membership (*Seattle Times* 1990).
29. Since targets in unassisted mergers account for the overwhelming majority of both targets and their assets, the average characteristics of targets as a whole (Figure 4) are broadly similar to those of unassisted mergers (Figure 20).
30. Wilcox (2006) studied the relatively recent and relatively rare phenomenon of conversions of credit unions into mutual thrifts (and subsequently stock-owned entities). Wilcox (2007a) studied the even rarer phenomenon of acquisitions of credit unions by stock-owned depositories.
31. During 1984–2008, 9,850 FICU exits compared with the launch of only 459 new credit unions. Only 113 new credit unions were formed during 1990–1999 and 68 during 2000–2008.

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