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April 9, 2015

Gerard Poliquin, Secretary of the Board
National Credit Union Administration
1775 Duke Street
Alexandria, Virginia 22314-3428

Dear Mr. Poliquin:

This comment letter is sent to address our concerns regarding the proposed Risk Based Capital rule's second draft (RBC2).

Hudson River Community Credit Union is a state chartered community credit union serving 23,511 members in four counties and three cities. Four of our five branches are located in low income census tracks and 44% of our member base is low income according to the regulatory definition. Our net worth ratio as of 12/31/14 is 13.9% under the first proposal RBC1 our risk based net worth ratio would have been 17.8% and now under RBC2 it will be 21.6%. As you can see our comments are not meant to mitigate a capital position instead they are intended to provide insight into our opinion as to whether the rule is necessary and secondarily that it addresses the issue of risk based capital evaluation effectively.

First, I would question the need for the rule at all. The continual flow of rules and regulations takes time and money and inhibits our ability to serve our members. Our members do not need 85 pages (actual count) of disclosures to tell them about their variable rate home equity loan, they do not need to know each year that we continue to protect their privacy which I believe in our business it is a given and we certainly do not need to complicate the measurement of net worth. We have loan officers in our branches that sit with members explaining fully their options, answering all their questions and ensuring that the choices they make are understood and in their best interest. We do not need regulations to tell us to do that. We have ALM models run regularly and financial plans to ensure the credit union is well run and positioned to be financially strong over time.

Being a finance person I understand the level of net worth necessary will vary from credit union to credit union based on the composition of their balance sheet, their strategic plans and the economic forecast both regionally and nationally. I do believe the regulators role is to ensure credit union management is evaluating these components and addressing capital needs, not to devise a calculation to tell them how much they need. Nor should NCUA have the right to second guess a credit union's decisions about how best to allocate resources. But NCUA is insisting that it has the right to impose individual buffer requirements even for credit unions that are in compliance with proposed capital requirements.

I understand that the rule has been written and therefore an unwelcome reality we must contend with. I offer my input to the components of the rule:

- I first would like to applaud the NCUA for recognizing the issues with the first draft and for taking the time to incorporate many changes and release a second draft especially raising the threshold to \$100 million (even though I do not believe asset size is a true indication of complexity), lowering the requirement to 10%, including the entire ALLL account, and delaying compliance to January 1, 2019.
- **Interest Rate Risk**: You have removed IRR from the proposed rule and asked for comments on alternative approaches that could be taken in the future to reasonably account for IRR. Interest rate risk models are very complex and are highly driven by subjective assumptions. It is my opinion they are not anything that could or should be regulated in any way, shape or form. I do believe credit unions need to utilize these models to ensure the credit union is positioned well and I do believe regulators can ensure they are running them and using them to that end.
- **Complex credit union**: Asset size is not a good indication of complexity. Product lines, investment types and product features are better indications of complexity. Things like CMO's, derivatives, Indirect loans, interest only loans, member business loans, embedded options and repurchase transactions are better indicators of complexity.
- **Examiner subjectivity**: Regulations need clarity and specificity in order to be effective. Subjectivity is opinion based, inconsistent and unclear. It will simply create an environment of conflict.
- **RBS Numerator**: need to include supplemental capital as it is at risk as any other capital is and as such should be counted as capital.
- **Risk Weightings**: It does not make sense to weight asset categories more heavily than banks. If anything this needs to be reversed. In Dr. David Smith's & Dr. Stephen Woodbury's research done for the Filene Institute documented in a report entitled "Withstanding a Firestorm: Credit Unions vs Banks" their research concluded that "credit unions are less sensitive to the business cycle than banks. Both certainly suffer when unemployment rises, but the trajectory and magnitude of delinquencies and charge offs at banks – especially during the latest downturn- are much more pronounced." In the study they provide very clear data supporting this statement. I have enclosed a copy of the study for your reference.

I would like to thank you for considering our input to the proposed rule and welcome any requests for further clarification and/or information.

Sincerely yours,



Sue Commanda, CEO

Withstanding a Financial Firestorm: Credit Unions vs. Banks

David M. Smith, PhD

*Associate Professor of Economics and Associate Dean of Academic Affairs
Graziadio School of Business and Management, Pepperdine University*

Stephen A. Woodbury, PhD

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RESEARCH INSTITUTE



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.

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David M. Smith, PhD

Prior to obtaining his PhD in economics at Michigan State University in 1997, David M. Smith worked for seven years as a manager in the insurance industry. Since completing his academic credentials, Smith has consulted for various industries, specializing in the computer, financial services, medical, and nonprofit sectors. His economic expertise includes the areas of labor pay and productivity, forecasting, and analysis of specific labor markets. A labor economist with an applied focus, Smith has published numerous articles in both academic and practitioner journals. His research on credit unions has been used in arguments before the U.S. Supreme Court as well as in state legislative hearings. Smith is frequently quoted by the media, including most recently the *Chicago Tribune*, the *Los Angeles Times*, Fox News, *USA Today*, the *New York Times*, and the *Investor's Business Daily*. Smith is currently an associate professor of economics and associate dean of academic affairs at Pepperdine University's Graziadio School of Business and Management.



Stephen A. Woodbury, PhD

Stephen A. Woodbury is a professor of economics at Michigan State University and a senior economist at the W.E. Upjohn Institute in Kalamazoo, Michigan. He has held faculty appointments at Pennsylvania State University and the University of Stirling (U.K.), was deputy director of the Advisory Council on Unemployment Compensation (U.S. Department of Labor) during 1993–94, and is a past president of the Midwest Economics Association. His research has focused on employee benefits and policies to assist unemployed workers. His books include *Search Theory and Unemployment* (co-edited with Carl Davidson, 2002), *Employee Benefits and Labor Markets in Canada and the United States* (co-edited with William Alpert, 2000), and *The Tax Treatment of Fringe Benefits* (co-authored with Wei-Jang Huang, 1991). He did his undergraduate work at the University of Pennsylvania and Middlebury College, and received his PhD in economics from the University of Wisconsin–Madison in 1981.

We thank NCUA and CUNA for making data available for this study.

By Ben Rogers,
Research Director

Keeping up with the Joneses is a familiar North American feeling. When a new car appears next door, you want it. When your daughter's playmate enrolls in private school, you want in. Rightly or wrongly, the sideways glances and scorekeeping come with the culture. And the feelings are not much different in financial services. For the sake of broad comparison, let's call credit unions the Carters and banks the Joneses.

The Great Recession has been excruciating for the Carters and the Joneses alike. The Carters have lost hard-earned savings, have suffered painful pay cuts, and have been forced to stop eating out. But while the Carters didn't make as much as the Joneses in their heyday, they have also lost much less in the downturn. In general terms, the Carters saved up before they bought, while the Joneses acquired their cars with credit and their investments on margin. Today the Carters may have to postpone that new car purchase, but the Joneses are losing their homes.

What Is the Research About?

Professors David Smith, of Pepperdine University, and Stephen Woodbury, of Michigan State University, seek to illuminate the trends that got the Carters and the Joneses to where they are today. Starting from the observation that unemployment coincides closely with loan delinquencies and charge-offs, they aim to describe how the same economic shocks treat the loan portfolios of credit unions and banks.

This report contributes to the regulatory debate by comparing the financial stability of banks and credit unions from 1986 to mid-2009, a period that covers several business cycles and ends during some of the most pronounced effects of the Great Recession. If banks and credit unions show the same delinquency and charge-off behavior through alternating rounds of the business cycle, that would argue for similar regulatory treatment of capital. If delinquency and charge-off ratios of either are more pronounced, then the more volatile group might be expected to hold more capital.

What Did the Researchers Discover?

The researchers match unemployment trends to delinquency and charge-off behavior as reported to the FDIC and NCUA. The resulting data show that credit unions are not immune but are much less susceptible to the business cycle than banks. Their lending growth moves gradually with cyclical unemployment trends, but it

is much less volatile than bank lending. Credit union highs are more restrained; credit union lows are shallower.

The researchers found quantifiable correlation between unemployment and bank lending: With every one percentage point rise in unemployment, bank lending growth declined 1.15 percentage points. Conversely, credit union lending does not correlate in a statistically significant way with the unemployment cycle. In other words, credit union lending seems to continue apace, even during downturns.

What Are the Implications for Credit Unions?

Several important implications emerge from this quantitative comparison between banks and credit unions:

- Credit unions are less sensitive to the business cycle than banks. Both certainly suffer when unemployment rises, but the trajectory and magnitude of delinquencies and charge-offs at banks—especially during the latest downturn—are much more pronounced.
- Because credit unions appear to be about 75% as sensitive to macroeconomic shocks as banks, regulators should consider imposing lower capital requirements to account for the lower risk.
- More open charters do not seem to have made credit unions more risky. Despite gradual moves away from closed charters following the passage of the Membership Access Act, credit unions in general seem to have retained conservative portfolio strategies.

Credit unions' tax exemption is an important contributor to rate-setting. But beyond that, the authors surmise that the member-owned governance structure of credit unions leads them to less risky strategies. And because their strategies tend to be less risky, credit unions can offer generally better rates to members. For-profit banks are driven by their governance structure to take on more risk in search of higher rewards, which explains both their outsize growth and their deeper losses.

Both the Carter and the Jones families are hurting. The Carters are less hurt, but historical comparisons suggest that the Joneses may start living large again at the first sign of stability. Nevertheless, the trends of the last three years should push the Carters to ask how much, and in what ways, do they really want to keep up with the Joneses.

1. Introduction

After a financial crisis that has contributed to a severe recession, there is a widespread consensus that our regulatory system failed us and there is a need for reregulation of our financial system. Some are calling for a simpler system, one that may lead to a single regulator model for financial services (Hofheimer 2009). In light of this possibility, it is useful to consider the extent to which credit unions should be regulated differently than banks. Issues that have been debated in the past include whether credit unions should have a separate share insurance fund and whether the capital requirements of credit unions should differ from those of banks.

This report contributes to the debate on regulating credit unions by comparing the financial stability of banks and credit unions from 1986 to 2009, a period that covers more than two business cycles: from the mid-1980s economic recovery from the 1982 recession, through the 1991–92 recession, to the 2001–2 economic downturn, and concluding with the recession that began in December 2007. We compare the loan performance of banks and credit unions over this time period, with the objective of comparing the resiliency of banks and credit unions to economic stress.

We focus on two key dependent variables—loan delinquencies and net charge-offs—and examine the sensitivity of these variables to a key business cycle indicator, the unemployment rate. We use these data to examine whether the loan delinquencies and charge-offs of credit unions are less sensitive to business cycle downturns than the loan delinquencies and charge-offs of banks. Similar observed performance of the delinquencies and charge-offs of banks and credit unions over the business cycle would support similar regulatory treatment of the two types of financial institutions, whereas differential performance would suggest the opposite. The report proceeds as follows: Section 2 reviews prior work that has compared differences in loan portfolios between banks and credit unions. Section 3 reveals

Credit unions and banks have fundamentally different governance structures, which in turn generate different incentives to assume risk.

some data on delinquencies and charge-offs from banks and credit unions over the past 23 years. Section 4 looks at loan growth rates over the business cycle, and Section 5 presents the statistical analysis and key

results. Section 6 delves into some data on loan growth rates and also looks at state-specific factors. Section 7 concludes with implications for regulating credit unions.

2. Loan Portfolios

Prior work has examined differences in loan portfolios between banks and credit unions and constructed economic models to explain why we might expect differences to exist (see Kane 1989; Smith, Cargill, and Meyer 1981; and Smith 1984). One of the conclusions from these studies is that credit unions can be expected to take on less risk than banks. This is one of the reasons that loans offered by credit unions tend to have lower rates than similar loans offered by banks (Feinberg and Rahman 2006).

Why would credit unions take on less risk than banks? Credit unions and banks have fundamentally different governance structures, which in turn generate different incentives to assume risk. In banks, authority for hiring and managing the CEO rests with a board of directors who are elected by shareholders on the basis of share holdings in the bank. There is no guarantee that either the board or the CEO will represent the interests of shareholders perfectly, but the CEO does have a strong incentive to maximize bank profits. As a result, shareholders will have a well-diversified portfolio of stocks, and their investment risk should be buffered by the range of investments in the portfolio. Deposit insurance also reduces the level of risk to shareholders. When a bank increases the risk of its assets, it can expect a higher average return, but it does not pay its depositors more to reflect this increased risk, because deposit insurance insulates it from its increased risk.

The governance structure of credit unions produces quite different risk incentives. In credit unions, the authority to hire and manage the CEO also rests with the board, but the board is elected by the members of the credit union on a one-person, one-vote basis. Also, board members are not compensated for their service. Their primary incentive is to satisfy members, which creates multiple objectives, instead of a single goal of profit maximization. A credit union could increase its net income by assuming more loan risk with a higher expected return, and then rely on federal insurance to avoid a higher cost of funds.¹ However, the gains from this strategy would not be concentrated among a small group of investors, as in a bank. In addition to this, credit unions have no separate group of stockholders and no ability to use stock options to motivate management to take potentially profitable risks.

Previous studies have supported the prediction that stock-owned institutions take greater risks than mutually owned institutions. Esty (1997) showed that savings and loan institutions in the 1980s that converted from mutual to stock ownership increased their level of investments in risky assets and experienced increased profit variability. Saunders, Strock, and Travlos (1990) reached a similar conclusion when comparing a sample of stockholder- and managerially

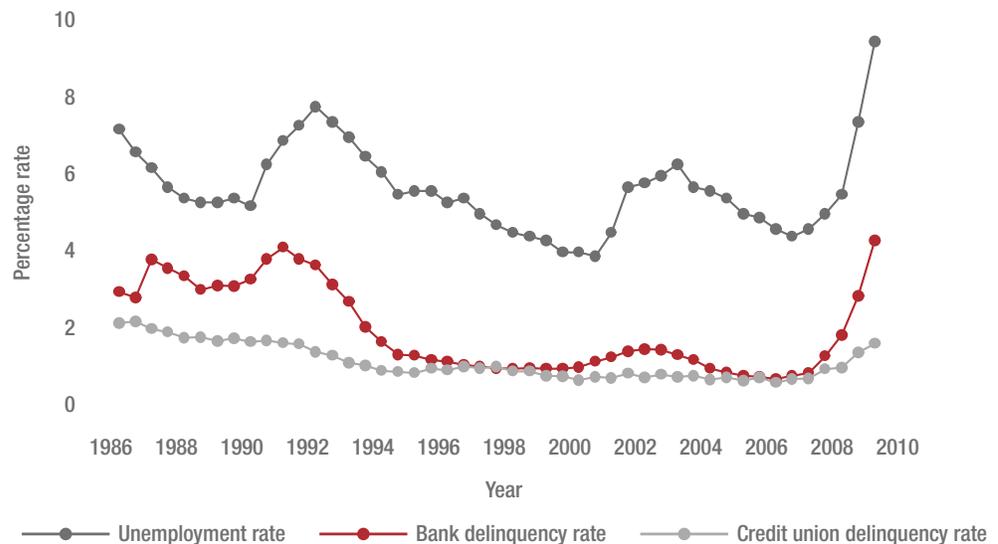
controlled banks from 1979 to 1982. The present study extends this research by studying credit unions and banks.

3. The Business Cycle, Delinquencies, and Charge-offs

A recession is defined as two or more quarters of declining GDP. One useful measure of the health of the economy is the unemployment rate, since it is inversely correlated with GDP.² Figure 1 displays a time series of the U.S. unemployment rate, captured in June and December, from 1986 to 2009. The figure illustrates more than two full business cycles, starting in the middle of the 1980s recovery from the 1981–82 recession and ending in mid-2009, during a time of particular economic turmoil. The 1991–92 recession led to a peak-to-trough GDP loss of 1.4%, corresponding to an approximately 2% trough-to-peak increase in the unemployment rate. Though not fully captured in these data, the 2007–9 recession led to a peak-to-trough GDP loss of 3.9% and a more than 5% trough-to-peak increase in the unemployment rate. As we study loan performance under economic stress, using the unemployment rate has an intuitive appeal, since job loss at the individual level can often lead to one becoming delinquent in meeting financial obligations, including loans.

Figure 1 also plots semiannual data on the delinquency rates of banks and credit unions from 1986 to 2009.³ A bank loan is considered delinquent when it is 90 or more days past due, and a credit union

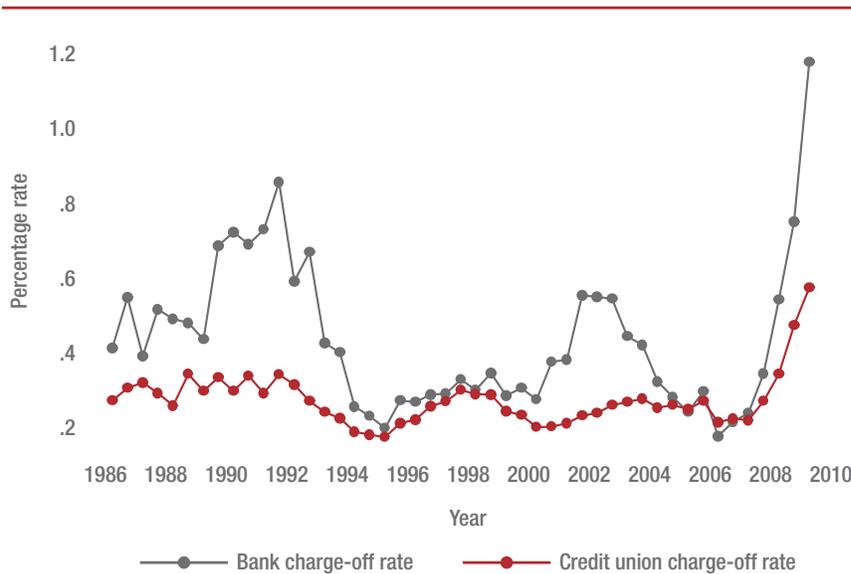
Figure 1: Unemployment and Delinquency Rates



Sources: Federal Reserve Bank, 1986–2009, Commercial Bank and Bank Holding Company Database; Credit Union National Association, 1986–2009, Madison, WI; U.S. Department of Labor, Bureau of Labor Statistics, 1986–2009, Washington, DC.

loan is considered delinquent when it is 60 or more days past due.⁴ Both the bank and credit union delinquency rates appear to track the unemployment rate closely. Three features of the delinquency rate time series are worth noting: First, bank delinquency rates are generally higher than credit union delinquency rates, though there appears to be a level of convergence over the time period studied. Second, prior to the recession commencing in December 2007, there appears to be a downward trend in both bank and credit union delinquency. Third, delinquency rates for banks appear to be more sensitive to the business cycle than credit union delinquency rates. In addition, there appears to be a slight lag between unemployment and loan delinquency, which is consistent with the unemployment rate serving as an indicator of lagging economic health. In other words, when the economy enters a downturn, the unemployment rate is one of the last economic indicators to turn negative; similarly, during an economic recovery, the unemployment rate lags the recovery of GDP growth.

Figure 2: Charge-off Rates for Banks and Credit Unions



Sources: Federal Reserve Bank, 1986–2009, Commercial Bank and Bank Holding Company Database; Credit Union National Association, 1986–2009, Madison, WI.

Figure 2 displays semiannual data on bank and credit union net charge-off rates over the period of consideration. Net charge-offs represent loans removed from a balance sheet as uncollectible, less amounts recovered from loans previously charged off. Figure 2 shows that bank charge-off rates are higher than credit union charge-off rates for the early part of the period under consideration, although the rates appear to converge in the mid to late 1990s. This was a period of economic expansion, and both types of financial institutions

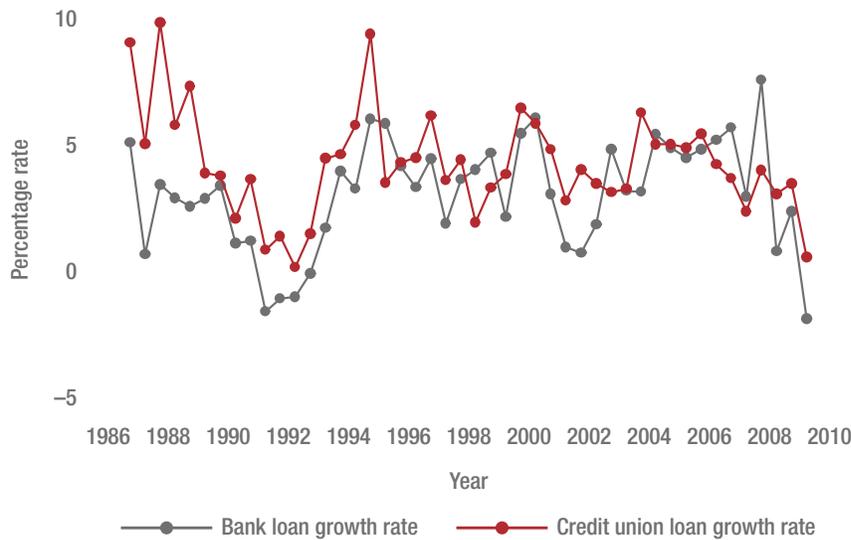
experienced low charge-off rates. As with the delinquency time series, the bank charge-offs appear to be more sensitive to the business cycle than credit union charge-offs.

4. Loan Growth

The existing data thus far suggest that credit unions are less sensitive to economic downturns than banks. As further evidence of this, we construct a measure of loan growth for banks and credit unions

from 1986 to 2009. If banks are more responsive to economic conditions, we would expect that banks would have lower periods of

Figure 3: Loan Growth Rates: 1986–2009



Sources: Federal Reserve Bank, 1986–2009, Commercial Bank and Bank Holding Company Database; Credit Union National Association, 1986–2009, Madison, WI.

growth rates during economic downturns, relative to credit unions. Figure 3 presents the data on loan growth from 1986 to 2009. The data reveal that loan growth rates dip lower for banks during recessions, even turning negative in the early 1990s recession. Credit unions seem to follow a similar pattern, but an econometric analysis discussed in the next section reveals a difference between the sensitivity of loan growth rates for banks and the sensitivity of loan growth rates for credit unions to the business cycle. From a public policy standpoint, economists

recognize that investment spending (and hence lending) plays a key role in economic recoveries; thus the availability of credit during an economic downturn can play a key stabilizing role in the economy.

5. Comparing Resiliency between Banks and Credit Unions

Although the figures presented thus far suggest a difference between bank and credit union loan performance in economic downturns, an econometric analysis is necessary to confirm and quantify the differences. Call report data are available on a state-level basis, and the unemployment rate is as well, which allow for a unique panel data set to be constructed that includes 2,397 observations (51 states over 47 time periods). This panel data set offers some unique advantages when conducting this sort of analysis. Using an econometric estimator called “fixed effect,” we are able to control for the state-specific and time period factors, thereby isolating the impact of the variable of interest, the unemployment rate.

First, we are interested in measuring the approximate percentage change in bank and credit union delinquencies resulting from a one percentage point increase in the unemployment rate.⁵ We will refer to this measure as β , and this is the parameter that is of central interest, as it offers an estimate of the degree to which delinquencies

are sensitive to measurable fluctuations in economic conditions. Comparison of the estimated β coefficients between bank and credit unions tests the hypothesis that banks are more sensitive than credit unions to the business cycle. Differences in states are controlled for in the analysis, but in Section 6 these state-specific differences are detailed. Other controls include a time period effect that captures nationwide economic conditions and other time-period-specific factors that may affect delinquencies, as well as a control for the level of loans outstanding.

Delinquencies are only one measure of the extent to which financial institutions may be stressed. An alternative measure is the charge-off rate. Indeed, it may be argued that the charge-off rate is more important than delinquencies to understanding the impact of business cycles on banks and credit unions, because charge-offs are the ultimate outcome of delinquent loans and are directly related to financial performance. Thus, we conduct a similar fixed-effects analysis for charge-offs.

Timing needs to be considered carefully when estimating relationships between loan performance and economic conditions. Though slightly lagging, unemployment tends to be reasonably coincident with the business cycle, whereas delinquencies and charge-offs tend to lag the business cycle. If changes in economic activity affect the health of financial institutions with a lag, then regressing delinquencies or charge-offs in period t on unemployment in time t would not properly capture the process. In fact, an increase in unemployment could have an impact on loan delinquencies and defaults that is distributed over several periods. For example, consider the impact of an individual spell of unemployment on a household's financial status. If an individual becomes unemployed, he or she may claim and receive unemployment insurance benefits for at least 26 weeks in

The estimates suggest that a one percentage point increase in the unemployment rate leads to a 16.2% increase in charge-offs at credit unions.

most states. In addition, he or she may have savings to provide a cushion against financial insolvency (Gruber 1999). Individual spells will differ, and thus the impact of unemployment in the aggregate could

be distributed over several months. With unemployment insurance and private savings, it seems likely that the impact of an increase of unemployment on loan delinquencies occurs not in period t alone but in future periods as well.

The lag may be even greater for charge-offs, because financial institutions usually charge off loans only when they are long overdue. In the current analysis we capture the impact of unemployment in two

time periods—both in the contemporaneous six-month period under consideration (t) and in one future period ($t + 1$).⁶

Row 1 of Figure 4 reports the results of the estimating β for delinquency rates. The estimates suggest that a one percentage point increase in the unemployment rate leads to a 21.3% increase in the level of delinquencies for banks and an 11.2% increase in the level of delinquencies for credit unions. This difference between banks and credit unions in sensitivity to economic conditions (21.3% vs. 11.2%) is statistically significant, suggesting that banks are approximately twice as sensitive as credit unions to changes in the unemployment rate.

Figure 4: Quantifying Resiliency to Economic Downturns

β	Banks	Credit unions
Delinquency rate	21.3%	11.2%
Charge-off rate	20.9%	16.2%

Row 2 of Figure 4 reports the results of the estimating β for charge-offs. The estimates suggest that a one percentage point increase in the unemployment rate leads to a 20.9% increase in the level of charge-offs for banks and a 16.2% increase in the level of charge-offs for credit unions. Once again, this difference between

banks and credit unions in sensitivity to economic conditions (20.9% vs. 16.2%) is statistically significant, suggesting that credit unions are about 75% as sensitive to the business cycle as banks.

This result could have important implications for differential capital requirements for banks and credit unions. For example, if banks are required by statute to hold 8% capital to be adequately capitalized, credit unions should hold 6% to be comparably shielded from economic shocks and downturns. Requiring both credit unions and

banks to meet the *same* capital requirements does not seem to reflect the underlying risks.

A potential weakness of the above analysis is that the type and mix of loans differ from credit unions to banks, and one

Banks and credit unions have different loan portfolios and differ in their resilience to business conditions for the same reason—they differ in the degree to which they are willing to accept risk.

could argue that these differences should be controlled for in the empirical analysis. However, because the reporting requirements in the call reports differ for banks and credit unions, and because these requirements have changed over the period covered in this study, a consistent set of controls is not available. Even if such controls were available, it may not be desirable to include them. Banks and credit unions have different loan portfolios and differ in their resilience to business conditions for the same reason—they differ in the degree to which they seek out and are willing to accept risk. Thus it would not be proper to try to explain the same thing—or one variable that serves as a proxy for another—in an econometric analysis.

It should be noted that while the impact of unemployment is captured over two periods, most of the effect of an increase in unemployment is contemporaneous. Although this appears to be consistent with the figures presented earlier, it poses a puzzle. As mentioned earlier, the labor market is usually viewed as a concurrent indicator of economic activity, and we might expect the impact of unemployment on delinquencies and charge-offs to occur with a lag. However, the finding of a strong contemporaneous relationship may reflect the regulatory environment of financial institutions. If federal regulators subject banks and credit unions to more scrutiny at the first sign of an economic downturn, then both types of institutions would be required to strengthen lending standards and charge off more loans at the first sign of economic weakness.

6. Differences in Loan Growth Rates and State-Specific Factors

As further evidence of the differences in institution resiliency to economic downturns, we return to the data presented in Figure 3 on changes in loan growth rates. In a simple linear regression of loan growth rates on the unemployment rate over the 47 periods considered, the data suggest that a 1% increase in the unemployment rate leads to a 1.15 percentage point decrease in the loan growth rate for banks. This estimate is statistically significant at the 95% level. The estimate for credit unions is not statistically different from zero; thus we cannot say with confidence that credit union loan growth rates are correlated with the business cycle. This is further evidence that credit unions are much less sensitive to the business cycle relative to banks.

The analysis thus far has controlled for differences in states, focusing on the impact of unemployment. However, data on state-specific factors are also of interest, since they have particular implications for the financial institutions within those states. Figure 5 presents results of the “state effect” for credit unions when estimating the sensitivity of charge-off rates to unemployment rates. When disaggregating the data, the results become somewhat more tenable since we are focusing on a smaller set of observations. Nevertheless, we are able to categorize the state effect for credit unions into three categories: (1) those that are less sensitive to the business cycle than the national estimates for credit unions (8.6%–16.1% sensitivity to the unemployment rate), (2) those that are more sensitive than the national estimates for credit unions, but less sensitive than the national estimates for banks (between 16.2% and 20.9%), and (3) those that are highly sensitive to the business cycle, above the national estimates for banks (between 21.0% and 31.7%).

Figure 5: State Effects for Credit Unions: Charge-off Rates

Relatively low-sensitivity states (β : 8.6%–16.1%)	Relatively moderate-sensitivity states (β : 16.2%–20.9%)	Relatively high-sensitivity states (β : 21.0%–31.7%)
WI	CA	NJ
VT	MS	MO
MN	WA	WY
DC	OH	UT
NC	NY	GA
ME	TX	CT
WV	AK	IN
OR	AR	OK
MI	KY	ND
RI	KS	FL
NM	PA	CO
TN	LA	HI
IL	ID	NV
MA	IA	MD
MT	AL	AZ
	SC	SD
		NE
		VA
		DE
		NH

The state effect could reflect something unique to the credit unions within a state or, more likely, something unique to the state. Indeed, in most of the high-sensitivity states, corresponding results for banks reflect a sensitivity that is *greater* than the estimate for the credit unions in those states. This suggests a state effect that negatively impacts both types of financial institutions within the state, and in most cases, banks still have a greater sensitivity to the business cycle than credit unions. Six states serve as an exception: Colorado, Connecticut, Florida, Maryland, Hawaii, and Wyoming. In these states, credit unions appear to be more sensitive to the business cycle than banks over the period of consideration.⁷

7. Summary and Implications

This report used data on U.S. banks and credit unions from 1986 to 2009 to examine the differential impact of changes in business conditions on the solvency of banks and credit unions. We collected semiannual call report data on loan delinquencies and net charge-off rates for all banks and credit unions in the United States and aggregated the data to the state level. Descriptive data suggest that credit unions are less sensitive to the business cycle than banks. Using the most

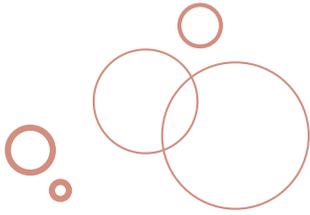
Capital requirements imposed on credit unions to cover macroeconomic shocks should be roughly three-fourths the capital requirements imposed on banks.

conservative estimates, credit unions appear to be about 75% as sensitive to macroeconomic shocks as banks.

The American Banking Association has advanced the argument that public policy toward credit unions and banks should be similar, based on the belief that the two types of institutions do not differ significantly. The findings here suggest that banks and credit unions differ in their sensitivity to the business cycle, which in turn suggests that public policy distinctions for banks and credit unions may be appropriate. One key regulatory issue is the level of capital that credit unions should maintain relative to banks. Capital is a cushion to cover the risk of unanticipated shocks, and one noteworthy shock, difficult to forecast, is an economic downturn. The analysis here suggests that credit unions are only three-fourths as sensitive as banks to macroeconomic shocks. If regulators seek to produce a roughly equivalent risk of loan losses for banks and credit unions, the results suggest that the capital requirements imposed on credit unions to cover macroeconomic shocks should be roughly three-fourths the capital requirements imposed on banks.

1. Karels and McClatchey (1999) found that risk taking among credit unions is unaffected by the availability of deposit insurance.
2. This relationship is referred to as Okun's law after the economist Arthur Okun, who proposed the relationship in 1962.
3. Although call report data are collected and reported on a quarterly basis for banks and credit unions, this is not the case for all credit unions over the entire time period studied. Thus, to be consistent, we use only semiannual data (June and December) for banks and credit unions.
4. There is another difference in how delinquency rates for banks and credit unions are usually reported. For banks, delinquencies are generally reported as a percentage of all *gross* loans, but for credit unions they are reported as a percentage of all *net* loans. To provide a more consistent comparison, we calculated the bank delinquency rate as a percentage of *net* loans.
5. To achieve this elasticity measure, we use the natural log of delinquencies and charge-offs.
6. When a greater number of time periods were considered, the econometric results revealed problems, likely reflecting collinearity in the data.
7. These results should be read with some caution, as disaggregated data will not yield results that are as reliable as the panel data studied earlier.

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