

Concentrated Commercial Real Estate Lending in Banking: Trends and Regulatory Concerns

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Abstract

In December 2006, federal bank regulators issued a “*Joint Guidance*”¹ to address regulatory concerns regarding the additional risks incurred by banks with balance sheet concentrations in commercial real estate. The *Guidance* “provides supervisory criteria, including numerical indicators, for identifying institutions with potentially significant CRE loan concentrations that may warrant greater supervisory scrutiny.”² The FDIC’s “numerical indicator” takes the form of an algorithm that uses Call Report data to generate a “regulatory flag” signaling concentrated lending patterns. We apply the regulatory algorithm to Call Report data for all FDIC Banks over a period of eight consecutive quarters, from 2007Q4 through 2009Q3, and analyze trends in concentrations and regulatory capital measures. By comparing trends in concentration and regulatory capital in all FDIC-insure banks to those in the banks that have failed during the same period, we confirm two regulatory concerns: 1) while only a relatively small proportion of banks with concentrations have failed, the vast majority of banks that have failed have concentrations of CRE assets; and 2) most failed banks had tier one capital ratios at levels below 8 percent and declining. In short, high concentrations of CRE and declining ratios are an accurate indicator of an “at risk” bank population.

I. Introduction

In 2008, FDIC Deputy Director Sandra Thompson wrote:

The FDIC believes that CRE can be a profitable business line for institutions; however, as with any asset exposure, significant concentrations can lead to losses and capital deficiencies in a stressed environment.³

Regulators are rightly concerned about the soundness of banks with concentrations of commercial real estate (CRE) assets⁴. Based on our review of 2007Q4 – 2009Q3 Call Report data, most failed banks would have been flagged by the test announced in the *Joint Guidance*.⁵ Moreover, high concentrations of CRE were a reliable basis for identifying the subset of the total bank population from which institutions were more likely to fail.⁶

In this paper, we review current trends in CRE concentrations at commercial banks and compare some of the key regulatory capital measures for those banks identified as having concentrated CRE portfolios with those that don’t. We use a similar analysis to review

¹ FRB, FDIC, and OCC, *Joint Guidance on Concentrations in Commercial Real Estate Lending, Sound Risk Management Practices*, December 2006. Hereinafter referred to as the “Guidance” or the “Joint Guidance.”

² Joint Press Release, December 6, 2006

³ FDIC, “Managing Commercial Real Estate Concentrations in a Challenging Environment” *Financial Institutions Letter* (FIL 22-2008) March, 2008.

⁴ We use the regulatory definition of CRE assets, which includes loans for construction and land development.

⁵ See footnote 1.

⁶ Even though only a small proportion of banks have failed, of those that did fail, a large proportion were banks with concentrations of CRE assets.

failed banks to discriminate between trends in banks that have failed with trends in those that have not.

After reviewing the data, we conclude that the announced regulatory focus on institutions with concentrated CRE portfolios is warranted. The CRE concentration test results in a reasonably accurate first-level sort for the general bank population: i.e., if a bank did not have a concentrated CRE portfolio (and was not or would not have been flagged), our analysis shows that it had a very low probability of failure.

While the CRE test did produce statistical “false positives,” in that it flagged institutions that did have concentrations but did not fail, the higher failure rate among banks with concentrations suggests that risk is higher in this population. Future failures are most likely to come from within this group than outside this group.

Institutions on this list would be well advised to pay close attention to the risks in their portfolio and anticipate that they are likely to face – if they haven’t already – additional regulatory interest in their risk management practices and compliance with risk management regulations.

In Section II, we provide a demographic analysis of all banks filing call reports, stratifying them by size and whether they meet the *Joint Guidance* test. We also look at trends in the number of banks in each size/risk cohort and provide comparisons based on size and regulatory capital ratios. In this section we also sensitize the counts to modest changes in regulatory parameters to assess the number of banks that might be considered to be “borderline” from a regulatory perspective.

In Section III, we analyze the banks that have failed between December 2007 and December 2009. We conclude in Section IV, with a review of those factors we recommend be made the subject of extra vigilance for bank executives and managers.

Section II. Trends in Concentrations of CRE Assets and Tier I Capital Ratios

A high level review of trends of bank lending and regulatory capital fails to reveal the nature of the problem. Table 1 summarizes for all FDIC entities⁷ total assets, banks with concentrations of CRE assets, and total capital, between 2007Q4 and 2009Q3. As indicated, there are fewer banks today, as well as fewer banks with concentrations of CRE assets. However, total system assets and tier 1 capital ratios have changed by only a small amount.

- Row (1) is the number of banks filing call reports and Row (2) is the net number of institutions, after consolidating multi-bank bank holding companies and eliminating domestic branches of international banks. The total number of institutions filing call reports and net number of entities have declined about 5 percent over the period studied. The number of entities with CRE concentrations (Line 8) declined by 511

⁷ See Appendix A for more detail on the counting procedures.

Table 1
Basic Trends in Bank Lending and Regulatory Capital, 2007Q4 – 2009Q3

| Row | Category | 2007Q4 | 2008Q1 | 2008Q2 | 2008Q3 | 2008Q4 | 2009Q1 | 2009Q2 | 2009Q3 |
|-----|---|--------|--------|--------|--------|--------|--------|--------|--------|
| 1 | Number of reporting entities | 8,540 | 8,502 | 8,459 | 8,391 | 8,314 | 8,256 | 8,204 | 8,108 |
| 2 | Net number after consolidations & eliminations* | 7,408 | 7,388 | 7,361 | 7,338 | 7,289 | 7,261 | 7,228 | 7,177 |
| 3 | Total assets (\$T) | 13.1 | 13.4 | 13.3 | 13.6 | 13.9 | 13.6 | 13.3 | 13.3 |
| 4 | Risk weighted assets (\$T) | 9.8 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 9.8 | 9.6 |
| 5 | Tier 1 capital | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.1 | 1.1 | 1.1 |
| 6 | Tier 1 capital ratio | 10.1% | 10.1% | 10.1% | 9.8% | 10.0% | 10.7% | 11.0% | 11.5% |
| 7 | Total commercial real estate assets (\$T) # | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 |
| 8 | Banks with concentrations of CRE assets | 2,350 | 2,316 | 2,320 | 2,300 | 2,251 | 2,114 | 1,969 | 1,839 |
| 9 | Banks without concentrations of CRE assets | 5,058 | 5,072 | 5,041 | 5,038 | 5,038 | 5,147 | 5,259 | 5,338 |

* Data are consolidated across multi-bank bank holding companies. See Appendix A for a description of the methodology.

As defined in the *Joint Guidance*. See footnote 1.

- Rows (3) and (4) show the trends in total assets and risk-weighted assets. Both have been relatively constant, as has Tier 1 capital [Row (5)] and the *mean* Tier 1 capital ratio.
- Rows (6) – (9) show trends in the balances of CRE assets and counts of institutions identified as having concentrations of CRE assets, employing the regulatory measure described in the *Joint Guidance* and detailed in Appendix A. CRE assets have been relatively stable, while the number of institutions with concentrations of CRE assets has declined by over 20 percent.

Distributions of Banks and Assets by Size

In Table 2, we stratify banks by total assets and by whether they are identified as having concentrations of CRE assets. We report three categories of distributions based on these data in Table 3. These data tell a more interesting story than the high level trends:

- Only 4 out of 46 banks with assets over \$25 billion have concentrations of CRE assets
- Over 40 percent of CRE assets are in the largest banks, and are not identified as concentrated.
- The tier of smallest banks, comprising those with less than \$100 MM in total assets, has relatively few CRE assets, and relatively few banks with concentrated portfolios. Only \$24 billion of \$1.8 trillion of CRE assets held in the banking sector are held in banks of this size.

Table 2
Number of Banks, Total Assets, and Total CRE Assets, 2009Q3

| Asset Class | Number of Banks | | | Total Assets (\$B) | | | Total CRE Assets (\$B) | | |
|-----------------|-----------------|-------------|-------|--------------------|-------------|----------|------------------------|-------------|---------|
| | W/o Concen | With Concen | Total | W/o Concen | With Concen | Total | W/o Concen | With Concen | Total |
| Over \$25 B | 42 | 4 | 46 | \$9,544 | \$224 | \$9,768 | \$788 | \$79 | \$867 |
| \$5B - \$25B | 74 | 40 | 114 | \$787 | \$376 | \$1,163 | \$138 | \$142 | \$279 |
| \$100 MM - \$5B | 3,003 | 1,539 | 4,542 | \$1,265 | \$915 | \$2,180 | \$303 | \$390 | \$693 |
| Under \$100 MM | 2,219 | 256 | 2,475 | \$118 | \$18 | \$136 | \$17 | \$7 | \$24 |
| Total | 5,338 | 1,839 | 7,177 | \$11,715 | \$1,533 | \$13,247 | \$1,246 | \$618 | \$1,863 |

Table 3
Percent Distributions of Banks by Size and Assets, 2009Q3

| Asset Class | Percent of Each Asset Class | | Percent of Total Assets | | Percent of CRE Assets | |
|-----------------|-----------------------------|-------------|-------------------------|-------------|-----------------------|-------------|
| | W/o Concen | With Concen | W/o Concen | With Concen | W/o Concen | With Concen |
| Over \$25 B | 91% | 9% | 72% | 2% | 42% | 4% |
| \$5B - \$25B | 65% | 35% | 6% | 3% | 7% | 8% |
| \$100 MM - \$5B | 66% | 34% | 10% | 7% | 16% | 21% |
| Under \$100 MM | 90% | 10% | 1% | 0% | 1% | 0% |
| Total | 74% | 26% | 88% | 12% | 67% | 33% |

- The two middle (smaller and mid-sized) tiers hold banks where CRE assets are concentrated and where there is a disproportion of banks with concentrations. More than one-third of the banks between \$100 MM and \$25 B in assets have such concentrations. This is also the size range where most concentrations occur. Of the 1,839 banks with concentrations of CRE assets, 1,344 are in these two asset tiers.

One conclusion from the data analyzed thus far is as follows: risk and concentration are correlated. Otherwise, all banks would report the same risks per dollar of CRE lending and the largest charge-offs would have occurred in the largest banks; instead, the banks most exposed and reporting the highest rates of charge-off are the smaller to mid-sized banks with concentrations of these assets.⁸

Concentration and Tier 1 Capital Ratio Trends

Figure 1 displays the trends in a key regulatory target for all banks, divided between those with and those without concentrations of CRE assets. As the graph indicates, in less than two years, there has been a dramatic increase in the proportion of banks with concentrations of CRE assets that are also below the key Tier 1 capital ratio of 8%. Between 2007Q4 and 2009Q3, this population of banks has more than quintupled. By comparison, for banks without CRE concentrations, the increase is relatively small.

⁸ A more refined stratification of the data also supports this conclusion.

Figure 1
Percentage of Banks with Tier 1 Capital Ratios Under 8%, 2007Q4 – 2009Q3

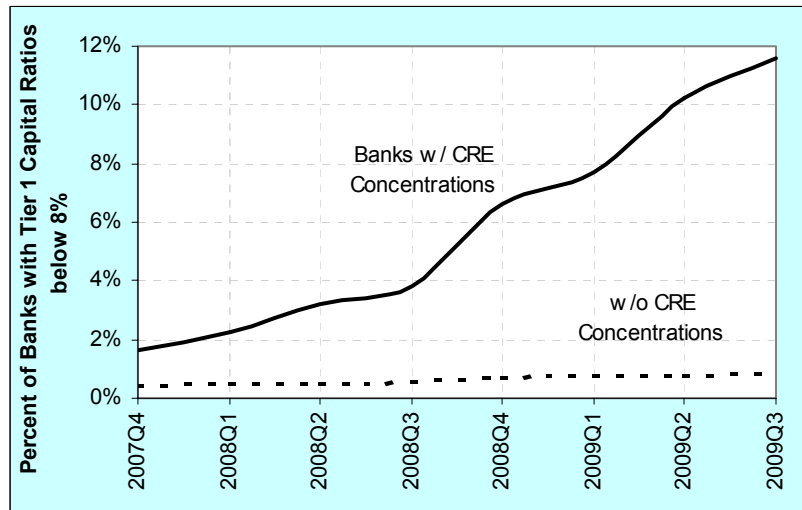


Table 4 expands the analysis underlying Figure 1. Banks are segregated, first between those with and those without CRE concentrations and then the two populations are tiered further by the published capitalization thresholds for Tier I capital: 4%, 6%, and 8%. As of 2009Q3 there were 257⁹ banks in this category and about a quarter of these had ratios below 8 percent

Table 4
Tier I Capital Ratio Trends, 2007Q4 – 2009Q3

| Measure | 2007Q4 | 2008Q1 | 2008Q2 | 2008Q3 | 2008Q4 | 2009Q1 | 2009Q2 | 2009Q3 |
|---|--------|--------|--------|--------|--------|--------|--------|--------|
| Number of banks with concentrations of CRE assets and Tier I capital ratios: | | | | | | | | |
| Negative | 0 | 1 | 0 | 2 | 6 | 10 | 17 | 10 |
| Less than 4% | 4 | 3 | 7 | 13 | 29 | 35 | 60 | 57 |
| Less than 6% | 9 | 12 | 17 | 31 | 58 | 84 | 111 | 112 |
| Less than 8% | 38 | 52 | 75 | 88 | 149 | 163 | 202 | 213 |
| Median Tier 1 capital ratio | 10.9% | 10.8% | 10.7% | 10.6% | 10.4% | 10.6% | 10.6% | 10.8% |
| Total number of banks in group | 2,350 | 2,316 | 2,320 | 2,300 | 2,251 | 2,114 | 1,969 | 1,839 |
| Number of banks without concentrations of CRE assets and Tier I capital ratios: | | | | | | | | |
| Negative | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Less than 4% | 1 | 2 | 2 | 1 | 0 | 1 | 2 | 3 |
| Less than 6% | 2 | 2 | 2 | 4 | 6 | 14 | 13 | 14 |
| Less than 8% | 21 | 25 | 24 | 28 | 35 | 40 | 39 | 44 |
| Median Tier 1 capital ratio | 16.0% | 16.0% | 15.7% | 15.6% | 15.2% | 15.2% | 14.9% | 14.9% |
| Total number of banks in group | 5,058 | 5,072 | 5,041 | 5,038 | 5,038 | 5,147 | 5,259 | 5,338 |

⁹ This is the sum of 213 banks with concentrations and 44 banks without concentrations.

What are the data telling the regulators? The relative capital levels at banks with concentrations of CRE assets are deteriorating, both absolutely and relatively, faster when compared to those without CRE concentrations. Banks with concentrated CRE assets are not the only institutions "at risk", and while CRE concentrations alone are not an accurate predictor of write-offs, capital ratio declines, and failure *at an individual institution*, the record leads us to expect that banks with concentrated CRE do comprise the single population from which the vast majority of tomorrow's failed institutions will come and to which increased regulatory and management attention should be paid.

Geographic Distribution of CRE Assets by State¹⁰

How are CRE assets distributed by state? Are banks with concentrated CRE assets concentrated in a few states, or proportionally across all states? We evaluated these questions by stratifying the 2009Q3 call report data by state. We found that:

- There is no correlation between CRE assets concentrations and the absolute number of bank headquarters domiciled in a state.
- Most CRE assets (by dollars) are held by banks in a relatively small number of states..
- Banks with high CRE concentrations and low Tier I capital ratios are located in relatively small number of states.
- Surprisingly, the two populations are not, for the most part, in the same states.

Figure 2 below displays the distribution of CRE assets, by state, for 2009Q3. As shown, the distribution of CRE assets by state does not follow the distribution of banks (headquarters) by states. As indicated in the bottom of three panels, CRE assets are more concentrated than the number of banks by state.¹¹

Another way to look at these data is to rank the states by the number of banks and size of CRE portfolios. As shown in table 5 (next page) there are only four states in common (indicated in bold) between the two lists. Extending the count to the top 20 banks extends this only by four additional states.

¹⁰ Data is based on address of reporting entity. To analyze distribution by states, we did not consolidate reporting entities for multi-bank BHCs.

¹¹ We suspect that distributions of banks by state are in many instances the legacy of unit banking laws.

Figure 2
Distribution of CRE Assets and Reporting Banks by State, 2009Q3

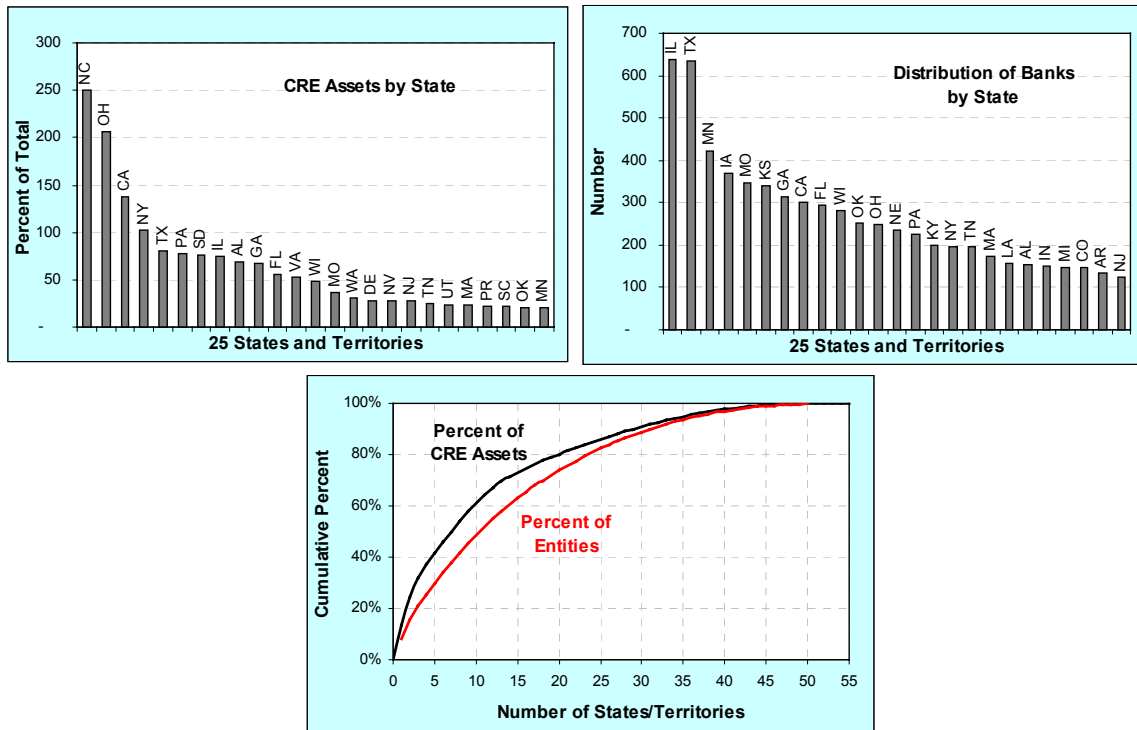


Table 5
Top 10 States Ranked by Number of Banks and CRE Assets

| Banks | CRE Assets |
|-----------|------------|
| IL | NC |
| TX | OH |
| MN | CA |
| IA | NY |
| MO | TX |
| KS | PA |
| GA | SD |
| CA | IL |
| FL | AL |
| WI | GA |

* **Bold** indicates states common to both categories

We can provide a similar comparison by ranking states with the concentrations of CRE assets and Tier I capital ratios below 8 percent. As shown in Figure 3, those banks that meet these criteria are located in a handful of states. But as shown in table 6, if these states are ranked and compared with those states ranks by banks with the most CRE assets, there are only three states in common: Illinois, Georgia, and California.

Figure 3

Distribution of Banks with Low Tier I Capital Ratios

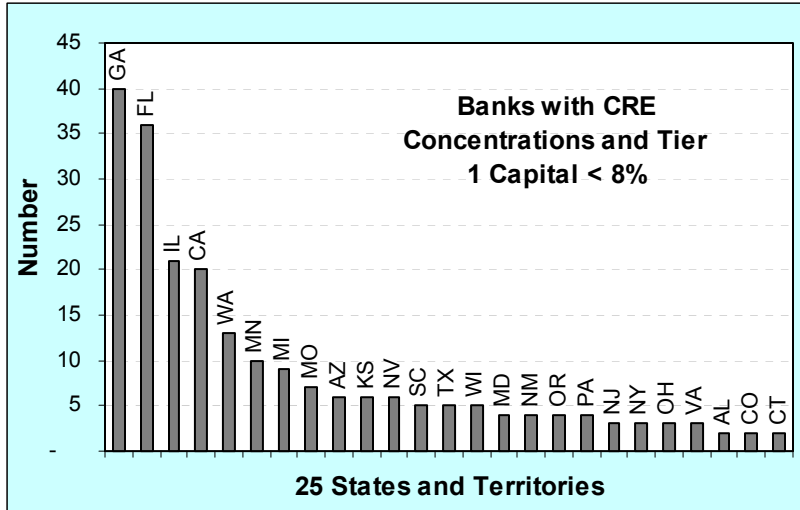


Table 6

Top 10 States Ranked by Number of CRE Assets and Tier I Capital Ratios below 8%

| CRE Assets | Banks with Tier I Capital Below 8% |
|------------|------------------------------------|
| NC | GA |
| OH | FL |
| CA | IL |
| NY | CA |
| TX | WA |
| PA | MN |
| SD | MI |
| IL | MO |
| AL | AZ |
| GA | KS |

* **Bold** indicates states common to both categories

Sensitivity of the Concentration Algorithm to Various Parameters

As described in Appendix A, the determination of whether an individual bank has a concentration of CRE assets is dependent on the interaction of three factors. These are:

- 1) A CRE asset growth rate over the past three years equals or exceeds 50 percent
- 2) Construction, land development, and other land assets equal to or exceeding the bank's total capital¹²
- 3) Total CRE assets equals or exceeds 300 percent or more of the institution's total capital

How sensitive is the count of banks with concentrated CRE assets to the precise thresholds (.5, 1, and 3) specified in the *Joint Guidance*? To analyze this question, we reduced¹³ each factor by 10%, and then by 20%, first alone and then in combination with the other two factors and tabulated the number of banks that would then be flagged as concentrated. These results are shown in Table 8 below and indicate that there is sensitivity in the factors, with the most sensitivity to changes in factor 2 and the least sensitivity to changes in factor 1.

Table 8
Sensitivity of Count of Banks with Concentrated CRE Assets, 2009Q3

| Description | Factor | | | Count | % Increase |
|-----------------------|-------------|------------|------------|-------|------------|
| | 1 | 2 | 3 | | |
| No Change – Base Case | 0.50 | 1.0 | 3.0 | 1,839 | 0% |
| 1 factor by -10% | 0.45 | 1.0 | 3.0 | 1,878 | 2% |
| | 0.50 | 0.9 | 3.0 | 2,007 | 9% |
| | 0.50 | 1.0 | 2.7 | 1,931 | 5% |
| 1 factor by -20% | 0.40 | 1.0 | 3.0 | 1,927 | 5% |
| | 0.50 | 0.8 | 3.0 | 2,225 | 21% |
| | 0.50 | 1.0 | 2.4 | 2,038 | 11% |
| 2 factors by -10% | 0.45 | 0.9 | 3.0 | 2,039 | 11% |
| | 0.45 | 1.0 | 2.7 | 1,983 | 8% |
| | 0.50 | 0.9 | 2.7 | 2,094 | 14% |
| 2 factors by -20% | 0.40 | 0.8 | 3.0 | 2,135 | 16% |
| | 0.40 | 1.0 | 2.4 | 2,281 | 24% |
| | 0.50 | 0.8 | 2.4 | 2,385 | 30% |
| 3 factors by - 10% | 0.45 | 0.9 | 2.7 | 2,135 | 16% |
| 3 factors by - 20% | 0.40 | 0.8 | 2.4 | 2,483 | 35% |

* Parameter values that have been changed are indicated in **bold**.

¹² Total capital is approximately the summation of Tier 1 and Tier 2 capital

¹³ Reducing the factors increases the number of banks flagged.

When all three factors are changed, the percentage change in the number of banks exceeds the percentage change in the threshold values by over 1.5. Banks that have not been identified as having concentrations should be wary of changes made to these threshold values and on-site use of them by examiners.

Section III. Failed Banks

Technical Note: Nearly every week the FDIC adds to its list of failed banks. In order to perform the analysis in this section we looked at those that failed between January 2008 and December 2009.

We began with a list of 166 failed reporting entities. The banks were consolidated to 147 failed institutions after accounting for multi-bank bank holding companies. We analyzed the banks’ Tier 1 capital ratios from call report data in the three reported quarters prior to failure.. Figure 4 displays bank failures by month, with the reported number adjusted for multi-bank bank holding companies. Table 9 reports the Tier 1 capital ratio for the last reported call report and the quarter prior to failure. Table 10 reports the change in the Tier 1 capital ratios for the failed banks.

Figure 4
Bank Failures by Month, Jan’08 – Dec’09

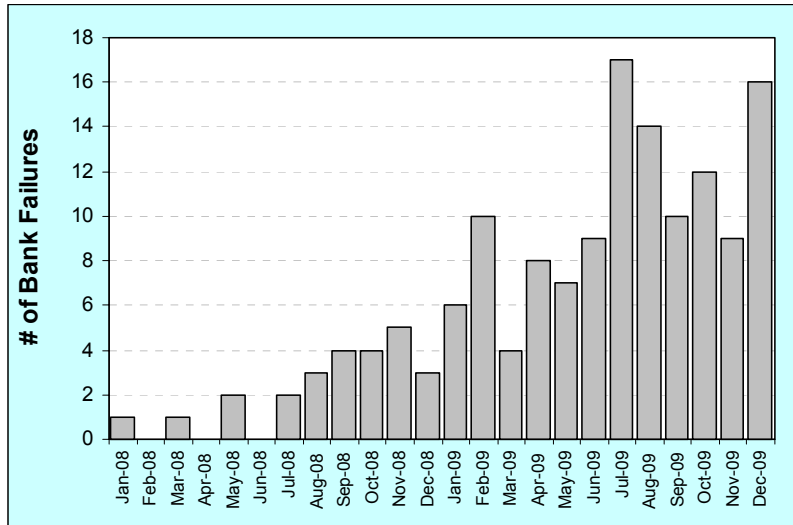


Table 9. Tier 1 Capital Ratios of Failed Banks, 2008 - 2009

| Tier 1 Capital Ratio | 1 Qtr Prior | | Last Available Rpt | |
|----------------------|-------------|----------------|--------------------|----------------|
| | with Concen | without Concen | with Concen | without Concen |
| Negative | 7 | 3 | 30 | 2 |
| 0% - 4% | 39 | 1 | 65 | 5 |
| 4% - 6% | 42 | 2 | 22 | 1 |
| 6% - 8% | 23 | 2 | 9 | 4 |
| Above 8% | 20 | 8 | 5 | 4 |
| Percent | | | | |
| Negative | 5% | 19% | 23% | 13% |
| 0% - 4% | 30% | 6% | 50% | 31% |
| 4% - 6% | 32% | 13% | 17% | 6% |
| 6% - 8% | 18% | 13% | 7% | 25% |
| Above 8% | 15% | 50% | 4% | 25% |

Table 10. Change* in Tier 1 Capital Ratios

| Δ in Ratio | with Concen | without Concen |
|-------------------|-------------|----------------|
| Less than -5.0% | 29 | 2 |
| -5.0% -2.5% | 33 | 1 |
| Negative | 116 | 9 |
| Positive | 15 | 7 |

* Between last two reporting quarters

Together the figure and tables tell a disconcerting story:

- The vast majority of banks that failed in the past two years were identified by the regulators as having concentrations of CRE assets. 132 out of the 147 failures we analyzed were banks with such concentrations.
- Most failed banks (73%) with concentrations of CRE assets had Tier 1 capital ratios below 4 percent for the last call report available. Almost a quarter had negative Tier 1 capital ratios. 116 of these banks had declining Tier 1 capital ratios in the prior two quarters.
- Of the banks that were not identified as having concentrations, one quarter reported Tier 1 capital of over eight percent the quarter prior to failure. Another quarter had ratios above 6 percent.

IV. Conclusion

A review of call report data from 2007Q4 – 2009Q3 confirms the concerns stated by bank regulators regarding the underlying risks associated with concentrations of CRE assets, its impact on capital and the probability of subsequent failure. The vast majority of banks that have failed during this period were identified by the regulators as having concentrations. A large proportion of banks with concentrations of CRE assets have low or declining Tier 1 capital ratios. The number of banks that are failing is continuing to rise. Most importantly, the expectation is that the full brunt of the CRE charge-offs has not yet occurred.

Our analysis suggests that banks with these concentrations should proactively manage their risks and shore up any weaknesses in controls over this area that they may identify. If they don't, it is a good bet the regulators will. They are justified to be concerned. Just look at the track record.

Appendix A. Data and Methodology

There are three components to the methodology:

- Compiling call report data and consolidating information for multi-bank bank holding companies
- Calculating the “Concentration Flag” for every entity using the algorithm provided in the *Joint Guidance*.
- Elimination of about 9 banks that are domestic insured branches of international banks (e.g., “Bank of China”).

Multi-bank Bank Holding Companies

Table 1 in the main body of the paper provides data on these different categories. Approximately 1,000 or so entities are part of a multi-bank bank holding company. For the data used in this paper, the aggregations were calculated directly without any adjustments for double-counting. This methodology is consistent with the way the FDIC aggregates data for multi-bank holding companies for the data categories we utilized.

Regulatory Concentration Flags

Regulators have specified a three-factor algorithm that they use to determine whether they would be inclined to believe that a bank has a concentration of CRE assets. Their wording is:

As part of their ongoing supervisory monitoring processes, the Agencies will use certain criteria to identify institutions that are potentially exposed to significant CRE concentration risk. An institution that has experienced rapid growth in CRE lending, has notable exposure to a specific type of CRE, or is approaching or exceeds the following supervisory criteria may be identified for further supervisory analysis of the level and nature of its CRE concentration risk:¹⁴

- (1) Total reported loans for construction, land development, and other land represent 100 percent or more of the institution’s total capital; or
- (2) Total commercial real estate loans as defined in this *Guidance* represent 300 percent or more of the institution’s total capital, and the outstanding balance of the institution’s commercial real estate loan portfolio has increased by 50 percent or more during the prior 36 months.

¹⁴ Page 7, *Joint Guidance*. Footnotes defining the exact call report references are removed for clarity.