

# Banking on the Basel

The housing market collapse is linked with a liquidity crisis in the banking industry of headline proportions. While this is calling into question bankers' abilities to measure and manage risk, a restructuring is in the works that will lead to stronger risk management practices at banks and over time could help alleviate lending tightness. Investors keen enough to identify the impacts on individual banks could experience a windfall as well.

On June 26, the four federal bank regulatory agencies released a Notice of Proposed Rulemaking (NPR) that recommends changes in the way banks calculate capital adequacy—the amount of excess<sup>1</sup> a bank needs to hold against a loan in case it defaults. This regulation is called Basel II and has two parts—Advanced, only for the largest 12 banks, and Standardized, for the other 7,500 banks in the country.

Second Pillar Consulting (SPC)—the authors of this article—interpreted these new rules and found that Standardized Basel II compliance will deliver significant capital savings to many financial institutions: half of the 7,500 banks and thrifts in the United States will see regulatory capital savings of at least 4.5%, and a quarter will save at least 8.6%. However, 22% will not see any capital benefit. The statistics for Ohio-based banks are better than the national average: 92.7% of the 247 Ohio-based banks can potentially gain capital relief.

Banks with portfolios predominantly comprised of mortgages see the biggest benefits. Ironically, banks with lower profitability will also benefit because of the way the formulas calculate capital required for operational risk. Bank customers may also see several changes as a result of these new rules.

The proposed rules provide capital relief for commercial real estate and industrial loans less than a million dollars. Therefore, lenders may be willing to provide more of these loans at more favorable terms, benefitting small and medium business owners. Further, home buyers who are willing to put at least 20% down on their home may receive more favorable lending terms. However, home buyers only able to put 5% or less down will find it harder to obtain a loan at favorable terms, if at all.

Regulators proposing less required capital during a banking crisis seems rather strange.<sup>2</sup> The catch is: in order for banks to qualify, they must demonstrate excellence in risk

management. It is the proverbial case of the carrot and stick. Therefore, while these changes lead to lower levels of capital, they will lead to better risk management practices at banks—something all would agree is important in the current environment.

## *The Legislation*

In 1988, a group of international bank regulators gathered in Basel, Switzerland to establish rules which all banks would use to calculate capital adequacy.<sup>3</sup> These rules were coined the “Basel Accord” and established risk-weight categories for various assets. However, these rules quickly became outdated with the myriad of new risk exposures banks began putting on and off their balance sheets. Further, these rules were not sensitive to risk, and banks were therefore required to hold the same level of capital for a loan made to General Electric as a loan to Joe’s Corner Pizza.

In 1996, regulators began a movement to overhaul the Basel Accord in what would become known as “Basel II.” The purpose of Basel II was to recognize advancements in risk management, especially superior modeling techniques, and the need to link the amount of capital to risk. Therefore, under the new rules, a loan to a highly rated company like General Electric would require less capital than a loan to Joe’s Corner Pizza, a company that may have very little credit history.

Besides changing the formulas, the new rules have two other parts or “pillars.” Pillar One is what we’ve been discussing, or the changes to the formulas that measure regulatory capital adequacy. It also includes capital charges for market and operational risk—market risk arises from changes in interest rates and asset prices while operational risk is exposure to fraud, system failure, or physical loss. Pillar Two recommends stronger risk measurement and management. Banks will not be allowed to use these new formulas unless they can demonstrate to examiners a strong ability

<sup>1</sup>The riskier the loan, the greater the excess. In addition, banks may hold excess for other risks such as fraud, system failure, or law suits. Regulatory capital adequacy is determined by bank examiners and is based upon formulas.

<sup>2</sup>European legislators approved these rules and banks implemented them last year. Therefore, to create international parity, American banks need to catch up. Believe it or not, even though the U.S. regulators were behind the changes, the rule making process has taken longer in the United States than Europe because of our legislative system and the revision to allow for Standardized, which was always an option under the international rules.

<sup>3</sup>Why are regulators proposing a new method to calculate capital adequacy? Initially, U.S. regulators only offered the advanced approach to the largest dozen banks. However, a 2006 study found that the largest banks would receive a 26% reduction in capital putting smaller banks at a competitive disadvantage. The compromise was the new Standardized rules. See “Summary Findings of the Fourth Quantitative Impact Study,” FFIEC, <http://www.occ.treas.gov/ftp/release/2006-23a.pdf>

to measure and manage risk. Finally, Pillar Three requires that banks provide a greater amount of public information so investors can better understand the capital adequacy of the bank.

## The Model

The NPR<sup>4</sup> was released on June 26th and banks have until October 27th to respond, with the final rules going into effect in 2009. To assess the overall impact of Standardized compliance, SPC built a model that calculates prospective capital requirements for each U.S. bank.<sup>5</sup> The new rules assign risk weights for mortgages based upon the loan-to-value (LTV) of the loan. The lower the LTV, the lower the risk of loss for the lender, and hence a lower capital charge. This type of information is not publicly available for an individual bank. Therefore, SPC used information from the 2004 Federal Reserve Board Survey of Consumer Finances that

Consolidated LTV Net of PMI	Proportion of Industry Loans	Standardized Risk Weight
< 60%	54.3%	20%
60% to 80%	26.7%	35%
80% to 85%	10.9%	50%
85% to 90%	3.0%	75%
90% to 95%	2.8%	100%
> 95%	2.2%	150%
Total / Weighted Average	100.0%	34%

Source: Federal Reserve Board Survey of Consumer Finances, 2004; Second Pillar Consulting estimates

reports the amount of loans in the various LTV buckets. The industry distribution is shown in Table 1.<sup>6</sup> Line one of the table indicates that 54.3% of all first lien mortgages in the United States have an LTV less than 60%. Mortgages in this category are considered the safest in terms of risk exposure and thus have a required risk weight of 20%, a huge break for banks because the previous risk weight for all mortgages was 50%. The bottom of the table shows that 2.2% of loans had LTVs greater than 95% which under the new rule are charged a risk weight of 150%. The industry weighted-average risk weight for all first-lien exposures is 34%, a significant reduction from the 50% risk weight required by current rules.<sup>7</sup>

The proposed rules are a much better method of linking required capital to risk because of

the LTV feature which varies capital based upon the inherent risk of the loan. Individual bank results will vary, being higher or lower depending upon whether their LTVs are higher or lower than the national average.

## Results

Overall, 92.7% of the 247 Ohio banks examined would be eligible for a reduction in required regulatory capital under the new legislation. An average Ohio bank with a median asset value of \$117 million would experience a \$1 million reduction in capital, or 6.6%. The maximum savings would be obtained by Columbus First Bank of Worthington, a \$55 million asset bank that would experience a capital reduction of \$2.4 million, or 30%. The bank faring the worst would be FDS Bank of Mason, a bank with \$97 million in assets which would have to hold \$2.1 million in additional capital, or an extra 7.2%. Because of the increase in capital, we would anticipate that FDS Bank would continue to remain on the current regulatory regime and therefore would have no change in regulatory capital. What FDS may face is increased competitive pressure from peers that do qualify.

Next, SPC examined the 20 Ohio banks obtaining the highest percentage of capital relief and contrasted them against the lowest 20 banks.

Tables 2 and 3 display the banks experiencing the highest and lowest changes in regulatory capital as a result of the

Name	City	Asset Size (thousands)	Dollar Change (thousands)	Percentage Change	Gross Income Margin
Columbus First Bank	Worthington	\$55,100	\$2,370	30.3%	0.9%
CBank	Cincinnati	\$22,802	\$3,217	28.0%	2.3%
First Bexley Bank	Bexley	\$66,133	\$2,605	27.9%	2.5%
Independence Bank	Independence	\$164,066	\$3,219	22.1%	3.1%
Nationwide Bank	Columbus	\$1,410,354	\$26,629	21.6%	2.3%
Ohio Central Savings	Dublin	\$68,042	\$971	21.2%	1.8%
Waterford Bank, N.A.	Toledo	\$76,248	\$4,066	20.9%	0.7%
Emerald Bank	Dublin	\$55,697	\$1,244	19.2%	1.9%
Insight Bank	Columbus	\$47,985	\$1,769	18.7%	3.8%
Lake National Bank	Mentor	\$72,201	\$1,483	18.4%	2.6%
CenterBank	Milford	\$77,282	\$913	18.0%	2.6%
Buckeye Community Bank	Lorain	\$160,157	\$2,390	17.9%	3.0%
Citizens National Bank of Southwestern Ohio	Dayton	\$95,799	\$1,245	17.2%	3.4%
Westfield Bank, FSB	Westfield Center	\$342,342	\$4,588	17.0%	3.0%
Mt. Victory State Bank	Mount Victory	\$13,573	\$283	16.9%	4.3%
Cooper State Bank	Columbus	\$43,970	\$1,601	16.6%	3.2%
First Place Bank	Warren	\$3,283,975	\$36,574	16.3%	2.8%
Liberty Bank, National Association	Beachwood	\$159,361	\$3,160	16.1%	5.9%
Third Federal Savings and Loan Association of Cleveland (MHC)	Cleveland	\$10,432,187	\$193,609	16.1%	2.0%
First Federal Community Bank	Dover	\$179,804	\$2,565	15.9%	3.9%
Averages		\$841,353	\$14,725	19.8%	2.8%

Source: Based upon Second Pillar estimates and Call Report or TFR data

<sup>4</sup><http://frwebgate5.access.gpo.gov/cgi-bin/PDFgate.cgi?WAISSdocID=60005450023+1+1+0&WAISSaction=retrieve>

<sup>5</sup>SPC obtained most of the necessary bank-specific data from publicly available data in the first quarter of 2008 call reports, Y-9, and TFR filings, though SPC made assumptions when the Standardized rule required information not currently disclosed.

<sup>6</sup>Data are derived from the 2004 Federal Reserve Board Survey of Consumer Finances

<sup>7</sup>Recognize that this data is from a 2004 survey and the explosion in high LTV lending started in 2005 and 2006.

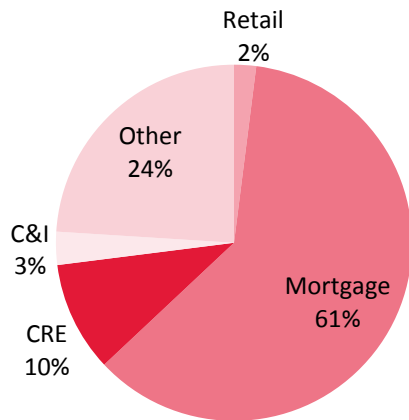
**Table 3. Ohio Banks with the Lowest or Negative Percentage Changes in Regulatory Capital**

Name	City	Asset Size (thousands)	Dollar Change (thousands)	Percentage Change	Gross Income Margin
First National Bank of Bellevue	Bellevue	\$96,707	\$126	1.2%	4.9%
Bramble Savings Bank	Milford	\$57,043	\$55	1.2%	2.7%
Rockhold, Brown & Company Bank	Bainbridge	\$ 34,652	\$44	1.2%	4.8%
First National Bank of Powhatan Point	Powhatan Point	\$21,774	\$17	0.6%	4.0%
Community National Bank	Franklin	\$123,629	\$20	0.2%	5.7%
Home Federal Savings and Loan Association of Niles	Niles	\$101,123	\$(13)	-0.1%	2.5%
Rurban Financial Corp.	Defiance	\$571,733	\$(476)	-0.7%	7.3%
Covington Savings & Loan Association	Covington	\$62,986	\$(121)	-0.9%	3.7%
Bartlett Farmers Bank	Bartlett	\$46,757	\$(54)	-1.1%	4.8%
National Bank of Montpelier	Montpelier	\$109,193	\$(216)	-1.1%	3.5%
Woodsfield Savings Bank	Woodsfield	\$32,179	\$(60)	-1.8%	3.3%
AmTrust Bank	Cleveland	\$17,301,384	\$(34,232)	-2.3%	2.9%
Hamler State Bank	Hamler	\$60,901	\$(238)	-2.5%	2.9%
Citizens National Bank of Woodsfield	Woodsfield	\$54,116	\$(197)	-2.7%	4.7%
Spring Valley Bank	Wyoming	\$68,224	\$(803)	-3.4%	6.2%
Belmont Savings Bank	Bellaire	\$237,014	\$(1,414)	-3.9%	2.2%
Farmers Savings Bank	Spencer	\$218,188	\$(2,143)	-4.1%	3.4%
Pataskala Banking Company	Pataskala	\$27,498	\$(174)	-5.1%	6.1%
Union Banking Company	West Mansfield	\$76,421	\$(329)	-5.3%	1.5%
FDS Bank	Mason	\$96,778	\$(2,121)	-7.2%	5.2%
Averages		\$1,015,873	\$(2,234)	-2.1%	4.1%

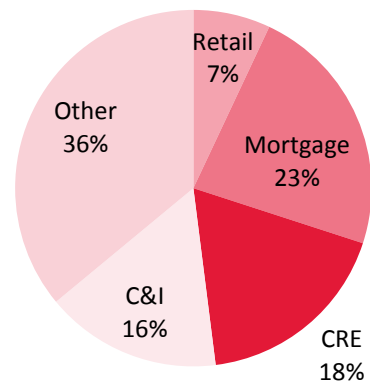
Source: Based upon Second Pillar estimates and Call Report or TFR data

new legislation. A deeper dive into the results indicates that asset mix is a major driver of changes in capital. The banks benefitting the most have a substantial concentration in mortgage lending of 61% compared to 23% for the banks least benefitting. The highest percentage gain banks have a lower concentration in commercial real estate (CRE) and commercial and industrial (C&I) lending at 10% and 3% respectively. Compare this to the lower tier banks that have CRE and C&I concentrations of 18% and 16%. Under the new rules, only CRE and C&I exposures to borrowers

**Asset Mix of Highest Percentage Gain Banks**



**Asset Mix of Lowest Percentage Gain Banks**



less than \$1 million will receive capital relief; therefore, many of the banks in the lower tier are anticipated to have exposures greater than \$1 million that do not qualify.

However, there is one additional disparity that drives the difference between winners and losers: profitability. Regulators have proposed calculating banks' operational risk using a formula that inputs a bank's average positive gross net income over the past three years and then multiplies it by 15%. Therefore, banks which are highly profitable will have a larger proportion of risk-weighted assets and hence receive a higher capital charge. This is observed in Tables 2 and 3 where the gross income margin for the top 20 banks is 2.8% and for the bottom tier 4.1%. This peculiar rule suggests that the most profitable banks are in some way the riskiest, a tenuous assumption at best. How regulators arrived at this formula is unknown to SPC, but we anticipate regulators will receive a high level of criticism from banks and industry groups regarding this change.

**Impact on the Median Bank in the Sample**

As an example of options that may be available to individual banks under the new rules, SPC examined the Ohio-based bank with median capital savings, First Citizens National Bank, a bank with \$219 million in assets located in Upper Sandusky, Ohio. In seeking Standardized compliance, the bank could achieve an overall capital savings of \$1.63 million, or 4.6%. If the bank releases capital to shareholders, it could issue a one-time dividend of \$5.09 per share. Instead of a dividend, the bank may choose to repurchase shares, potentially buying back 19,917 shares (based on the closing price on July 29, 2008). Share repurchase would increase earnings per share by 36 cents,

or 6.6%. Alternatively, First Citizens could grow its balance sheet by adding \$9.5 million in additional loans without having to raise additional capital.

### **Capital Relief is Not without Challenges**

Readers should not be misled that Basel II will precipitate a massive release of capital from the banking system. Recall that the new rules also require Pillar Two compliance, whereby banks must demonstrate to their regulators a high degree of risk management. This includes preparing a formal Internal Capital Adequacy Assessment Process, or ICAAP. An ICAAP memorializes a bank's risk culture, risk profile, and capital adequacy in a lengthy document. The ICAAP is more than a document, but a way of life for banks. For instance, the ICAAP must demonstrate the quality of risk management, reliability of internal controls, and adequacy of the bank's capital position. Economic capital modeling, stress testing, peer benchmarking, and scenario analysis are among the tools that regulators may require in the ICAAP.

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While Pillar One opens the door to capital savings for many, only those demonstrating strong risk management philosophy and capability will be allowed to enter. The ICAAP requirement will prevent Standardized Basel II from becoming a capital bonanza for banks unable to wisely manage an efficient capital position.

Data will also be a significant challenge for banks. LTV will no longer be a ratio displayed only on a loan document, used to approve the loan and subsequently filed in a manila folder for posterity. In the future, LTV becomes an integral ongoing measure of a bank's capital adequacy. Therefore, banks that currently do not electronically store and monitor this information will have some systems database challenges to capture this data.

Lastly, an unwillingness or unpreparedness to move towards Basel II will put a bank at a competitive disadvantage to peers who complete the process.

### **Implications for Borrowers and Investors**

Types of lending which exhibited the largest changes in capital should also observe the largest changes for borrowers. For instance, the new rule provides capital relief for commercial real estate and industrial loans less than a million dollars. Therefore, lenders may be willing to provide more of these loans at favorable terms. This could be a huge benefit to small- and medium-sized businesses. Conversely, banks might restrict their C&I and CRE exposure to any one legal entity to \$1 million.

Retail (non-commercial) exposures will experience the biggest drop in required capital under the new rules. Therefore, home buyers who are willing to put at least 20% down on their homes should receive favorable lending terms. However, as Table 1 showed, home buyers only able to put 5% or less down will find it harder to obtain a loan at favorable terms, if at all, because of the 150% required capital charge. This also means that piggyback second mortgages may become a thing of the past for high LTV borrowers.

### **Conclusions**

Basel II is the most important piece of bank capital regulation since the original accord was established twenty years ago. Until October 27th 2008, regulators will consider industry comments on the NPR and move to finalize this regulation by the middle of next year. In the midst of strained capital markets, this potential regulatory capital windfall provides real and immediate benefit to banks of all sizes—but only for those that demonstrate keen control of their risks and capital adequacy. A reasonable commitment to bolster these capabilities can yield the significant capital benefits that larger institutions are already lining up to reap.

**Second Pillar Consulting is a Glen Allen-based consulting company that helps regional and community banks navigate the new Basel II rules. Please contact Second Pillar Consulting for a free estimate of how Standardized Basel II may impact your institution. Additional information about Standardized Basel II and Enterprise Risk Management can be found at their website: [www.secondpillar.com](http://www.secondpillar.com).**



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