

Basel II Will Trickle Down to Community Bankers, Consumers

By William R. Emmons, Vahe Lskavyan and Timothy J. Yeager

Discussions about capital requirements at commercial banks may not seem important to most people. Yet the latest international capital agreement may make it more difficult for some regional and community banks to survive on the one hand, while it may promote lower mortgage rates on the other hand. For these reasons alone, it's worth learning about Basel II.

On June 26, 2004, U.S. and international bank supervisors agreed in Basel, Switzerland, to a framework that alters the way some banks compute their capital requirements—that is, how much equity a bank's owners must keep in the bank. The New Basel Capital Accord, or Basel II, is scheduled for full implementation in 2008, and it will apply initially to only about 20 of the largest U.S. banking organizations.¹ Can the 7,000-plus U.S. banks that do not adopt Basel II continue with business as usual? Hardly. This scenario is akin to network television companies ignoring developments in cable TV. In fact, Basel II is likely to have significant effects on the non-adopting banks and perhaps also on consumers.

Basel I and Regulatory Arbitrage

Capital is the difference between a bank's assets and liabilities.² Minimum capital requirements promote financial stability by ensuring that shareholders have incentives to limit the bank's risk-taking. After all, shareholders suffer the first losses in the event of failure. But minimum capital standards alone may not reduce risk-taking sufficiently. Capital standards must be tied explicitly to the bank's risk. Under a risk-based framework, banks that seek high returns by holding risky assets are required by their supervisors to hold more capital. This risk-taking is an expensive proposition for the bank because the required return—what investors expect to earn—on equity is high relative to other forms of financing, such as deposits. Risk-based capital requirements, therefore, further dampen a bank's incentives for risk-taking.

In 1988, international bank regulators produced the Basel Capital Accord, or Basel I. The major innovation of Basel I, which applies to every U.S. bank, is that capital requirements are tied explicitly to credit risk. The risk-based capital ratio is computed by dividing capital by the bank's risk-weighted assets. Risk weights rise with the asset's risk so that banks with more credit risk must hold more capital.³

So why is Basel II necessary? For one thing, bankers realize it is possible to engage in a "regulatory-capital arbitrage" of Basel I. The problem is that the capital requirements are fixed *within* asset categories. The perverse result is that banks actually face incentives to hold riskier assets within each category. For example, a commercial loan to a company with low default risk receives the same risk weight as a higher-yielding loan to a company with high default risk. As a result, if a bank switches from low-risk borrowers to high-risk borrowers, its regulatory capital is unchanged, yet its risk clearly increases.



Enter Basel II

Under Basel II, capital requirements are more risk-sensitive than they are under Basel I because banks are required to assess the riskiness of their own portfolios. A loan to a low-risk firm, then, would be treated more favorably than a loan to a high-risk firm, reducing or eliminating the arbitrage incentive.

Why not extend Basel II to all U.S. banks? Basel I, along with intensive bank supervision, appears to work well for the vast majority of U.S. banks. Moreover, implementing Basel II is a complex, resource-intensive process. Banks must estimate each loan category's probability of default, the loss given default (the percentage of the loan not repaid if default occurs) and the exposure at default (the total dollar amount at risk). These difficult estimation procedures must pass regulatory scrutiny. Under Basel II, banks must also hold capital for operational risk. This risk refers to the possibility of loss from banks' exposures to problems such as internal reporting or control breakdowns, employee fraud, computer crashes or natural disasters. Operational risk is even more difficult to estimate because historical losses are not well-documented.

Despite its initial application to only a handful of the largest banks, Basel II could present significant challenges to Basel I banks. We explore three of these challenges.

Competitive Pressures

One outcome of the new accord will be credit-risk-based capital requirements that differ among banks. Banks applying Basel II's advanced approach may be able to hold less capital than other banks against certain types of historically low-risk loans, such as residential mortgages. Therefore, Basel II banks may be able to offer more competitive lending rates than Basel I banks on these mortgages. This outcome would be a boon to household mortgage borrowers, but it would be bad news for Basel I banks.⁴ They might need to look for lending opportunities in categories less affected by Basel II.

Consider two banks competing in a local market, one of which operates under Basel I while the other operates under Basel II. The top panel of the table on Page 13

shows the initial balance sheets of the banks at implementation of Basel II. Each has the same asset portfolio. Mortgages, however, receive a risk-weight of 0.5 under Basel I, but the Basel II bank has proved to its supervisor that a 0.25 weight is appropriate. Another difference is that the risk weight for all commercial loans is 1.0 under Basel I, but the average is 1.25 for this bank under Basel II. Initially, each bank has a leverage ratio—capital divided by total assets—of 10 percent and a total risk-based capital ratio of 14.3 percent.

Because of the differing capital requirements, the Basel I bank has a comparative advantage in funding commercial lending, and the Basel II bank has a comparative advantage in funding mortgages. Although community bankers may not explicitly compute their cost of capital, they will see that Basel II banks are out-bidding them on mortgages but not on commercial loans. Over time, we would expect the commercial loans to become more concentrated at the Basel I bank, while mortgages would become more concentrated at the Basel II bank. In short, Basel I banks' loan portfolios may become more concentrated in historically riskier assets as the industry adjusts to Basel II.⁵

Further Consolidation

In addition to its effect on the competitive landscape, Basel II could accelerate industry consolidation.⁶ To remain competitive, some regional banks will feel pressure to adopt Basel II. Pressure also could come from rating agencies and shareholders who remain skeptical that a Basel I bank could manage its risks as well as a bank operating under the sophisticated Basel II risk-measurement framework. Because of the complexities and resource requirements involved in collecting, warehousing and analyzing data, Basel II will create significant economies of scale—that is, large banks can do the job cheaper on a per-dollar-of-assets basis than smaller banks. Rather than spend handsomely to convert to the new capital framework, some regional banks may agree to be bought by a Basel II organization. To be sure, industry consolidation was rapid even before Basel II; this new accord introduces one more reason why regional banks may opt to merge.

The extent of market consolidation arising from Basel II will depend on the cost advantage that Basel II banks can achieve over Basel I banks. The advantage may not be as great as one might think for at least two reasons. First, Basel II banks must hold capital explicitly for operational risk; Basel I banks have no explicit charge in this category. Second, and more important, banks must adhere to a minimum leverage ratio, which is not influenced by

risk-weighted assets. The leverage ratio is analogous to the alternative minimum tax (AMT) law in the United States. High-income earners may try to exploit many deductions and tax shelters, but in the end, the AMT prevents tax liabilities from falling below a certain threshold. Similarly, no matter how low-risk a Basel II bank's assets, the leverage ratio will prevent capital from falling below a certain threshold.⁷

Basel II for All?

The third challenge that Basel II may present for non-adopters is that bank supervisors may one day decide to apply the best practices from Basel II—potentially including some of the quantitative techniques—to all banks. If adopting banks successfully create sophisticated real-time risk-management infrastructures, bank supervisors may encourage non-adopters to implement similar approaches. The diffusion of Basel II risk-measurement techniques also poses challenges to Basel I bank supervisors, who must learn how to monitor these procedures.

Time to Tune In

To date, it has been easy for all but the largest banks to “tune out” whenever the conversation turned to Basel II. However, even banks that do not adopt Basel II need to pay attention to the process. Basel I banks will be competing against Basel II banks, potentially leading to fewer banks with less diversified loan portfolios. Moreover, bank supervisors may one day encourage all banks to follow in the footsteps of the trail-blazing Basel II banks. And mortgage borrowers may enjoy lower mortgage costs, thanks to an obscure agreement among international bank supervisors.

William R. Emmons is a senior economist, Vahe Lskavyan is an associate economist and Timothy J. Yeager is the supervisory policy officer at the Federal Reserve Bank of St. Louis.

ENDNOTES

- ¹ In this article, the term “bank” refers both to commercial banks and thrifts. Any U.S. bank will be eligible to use the Basel II framework if it convinces its supervisor that it can satisfy all the implementation requirements. For more information on Basel II, see Basel Committee on Bank Supervision (2004).
- ² The definition of bank capital is actually quite complex. We use this definition for simplicity.
- ³ Cash and U.S. government securities are considered perfectly safe; so, they receive a zero risk weight. Relatively safe mortgages receive a 50 percent weight. Commercial loans—part of the riskiest category—receive a 100 percent risk weight.
- ⁴ Of course, the mortgage business at Basel I banks would be unaffected by Basel II if the banks simply sell their loans. However, community and regional banks alike hold large amounts of residential mortgages on their balance sheets. At year-end 2004, residential mortgage loans accounted for approximately 30 percent of all loans at these banks.
- ⁵ Berger's (2004) study suggests the possibility of significant adverse effects on the competitive positions of larger banks not adopting Basel II.
- ⁶ See Hannan and Pilloff (2004) for a discussion of this issue.
- ⁷ Banks that are considered “well capitalized” must maintain a leverage ratio of 5 percent or above.

REFERENCES

Basel Committee on Bank Supervision. “International Convergence of Capital Measurement and Capital Standards: A Revised Framework.” Bank for International Settlements, June 2004. See www.bis.org/publ/bcbs107.htm.

Berger, Allen E. “Potential Competitive Effects of Basel II on Banks in SME Credit Markets in the United States.” Board of Governors of the Federal Reserve System (U.S.), Finance and Economics Discussion Series: 2004-12. See www.federalreserve.gov/pubs/feds/2004/200412/200412pap.pdf.

Hannan, Timothy H; and Pilloff, Steven J. “Will the Proposed Application of Basel II in the United States Encourage Increased Bank Merger Activity? Evidence from Past Merger Activity.” Board of Governors of the Federal Reserve System (U.S.), Finance and Economics Discussion Series: 2004-13. See www.federalreserve.gov/pubs/feds/2004/200413/200413pap.pdf.

Bank Profiles at Implementation of Basel II

Assets	Basel I Bank			Basel II Bank		
	(\$)	Basel I risk weight	Risk-weighted assets (\$)	(\$)	Basel II risk weight	Risk-weighted assets (\$)
Cash	10	0	0	10	0	0
Mortgages	40	0.5	20	40	0.25	10
Commercial Loans	50	1.0	50	50	1.25	60
Total assets	100		70	100		70
Capital	Basel I Bank			Basel II Bank		
Tier-1 equity	10			10		
Leverage ratio (%)	10%			10%		
Risk-based capital ratio (%)	14.3%			14.3%		

Will Basel II lead to lower mortgage rates? Perhaps. Currently, all U.S. banks operate under uniform Basel I capital guidelines so that each bank must hold a similar amount of capital for a given type of asset. When Basel II becomes effective in 2008, the minimum capital allocations may differ significantly between Basel I and Basel II banks. The risk weights from this hypothe-

tical example show that, relative to Basel I banks, Basel II banks will need to hold only half the capital for residential mortgages but 25 percent more capital for commercial loans. Consequently, Basel II banks may be able to fund home loans more cheaply than Basel I banks, while simultaneously becoming less competitive in other areas, such as commercial lending.