

# Chicago Fed Letter

## Risk: Keeping Ahead of the Curve—A conference summary

by Richard C. Cahill, vice president, Credit Risk Department, Federal Reserve Bank of New York; Elijah Brewer III, associate professor of finance, DePaul University; Caroline Riley, senior risk project manager, Enterprise Risk Management; and Steven VanBever, lead supervision analyst, Supervision and Regulation

The Chicago Fed's Supervision and Regulation Department, in conjunction with DePaul University's Center for Financial Services, sponsored a conference on March 6–7, 2008. The conference brought together bankers, supervisors, and academics to focus on comprehensive risk management, an extremely timely topic given the recent financial turmoil.

Comprehensive risk management can help banks mitigate risks earlier, increase coordination between business units and risk disciplines, and strengthen regulatory compliance.

After William A. Obenshain, DePaul University, opened the conference and welcomed participants, Cathy Lemieux, senior vice president, Federal Reserve Bank of Chicago, described how management of all major banking risks has become much more complex and sophisticated in recent years.<sup>1</sup> This evolution includes the development of comprehensive, firmwide approaches to managing risk. While some banks used the long period of stellar bank performance before the summer of 2007 to invest in improving risk management, other banks allowed risk management to become a lower priority than it had been. Despite the challenges of the current environment, Lemieux encouraged banks to continue to focus on long-term improvements to risk management. Doing this should reduce downside risks in the near future and promote greater financial stability in the long run.

Richard C. Cahill, then vice president, Federal Reserve Bank of Chicago, provided an overview of the recent subprime and credit market turmoil. He also posed a series of key questions to set the stage for the conference, including: What is the role of chief credit officers?, Is quantitative risk management getting too clever for its own good?, Can stress testing provide useful input to decision-makers?, Do current accounting practices still make

sense?, What is the future of rating structured products?, Can confidence in the financial system be restored?, and Will risk management keep ahead of the curve?

### Comprehensive risk management

Cahill also moderated a panel on comprehensive risk management (also known as enterprise risk management, or ERM), composed of three banks' chief risk officers and an attorney. The chief risk officers were James W. Nelson, Huntington Bancshares Inc.; Stephen V. Figliuolo, Citizens Republic Bancorp; and Beth D. Knickerbocker, Marshall and Ilsley Corp. According to Figliuolo, the purposes of ERM are to promote regulatory compliance without impeding the sales process; to identify, measure, monitor, and manage a comprehensive set of risks; to manage risk through process improvement, a proactive approach, and heightened awareness; and to make risk management part of the corporate culture. Nelson provided additional goals: to proactively address risks arising from a changing environment; to identify and communicate risks in an actionable manner; and to improve risk/return dynamics.

The three banks have adopted different structures to implement ERM. On the one hand, Huntington and Citizens Republic have opted for a centralized approach. On the other hand, Marshall and Ilsley

uses a more decentralized approach, with “risk leaders” and corresponding subject matter experts embedded in business units, accompanied by a small risk-management staff at the corporate level.

The panelists identified a number of benefits from adopting comprehensive risk management. Some of these are improved risk reduction through earlier risk mitigation, increased coordination between business units and risk disciplines, and strengthened regulatory compliance. They also identified a number of challenges to successful adoption. Senior

options, interest rate futures, and interest rate forwards—is associated with higher growth rates in C&I loans. This positive association is consistent with earlier research findings that derivative contracting and lending are complementary activities. Engaging in derivative activities allows banks to lessen their systematic exposure to changes in interest rates, so they can increase their lending activities without increasing their total risk.

It is uncertain how much banks actually use credit derivatives to manage risk and whether their credit derivatives

cushion the effects of adverse macroeconomic shocks on this relationship.

### **Blurring of credit and capital markets**

Brian D. Gordon, senior technical expert, Federal Reserve Bank of Chicago, discussed the blurring of credit and capital markets with panelists Kathryn Dick, Office of the Comptroller of the Currency; Jeff Phillips, BMO Capital Markets Corp.; and Coryann Stefansson, Federal Reserve Board. Gordon began by describing how the rise of the “originate-to-distribute” model—under which banks originate loans for the sole purpose of selling them to others—has undermined the traditionally clear distinction between credit risk and market risk. Now credit assets are common in trading books, greatly complicating risk management.

Phillips outlined the various factors contributing to the recent financial turmoil, including excess global liquidity, the subprime mortgage bubble, and banks’ creation of structured finance products and off-balance-sheet vehicles. He also described the “tsunami effect” of investors recoiling from risk, as well as the ongoing process of deleveraging (i.e., the reduction of financial instruments or borrowed capital previously used to increase the potential return of an investment).

Dick described how, in response to changes in the industry, her agency several years ago merged previously distinct units dedicated to credit risk and capital markets. She argued that this would improve the quality of supervisory policies as well as examiner skill sets. Stefansson noted other ways in which bank supervision was responding to market developments, such as the Basel II capital accord.<sup>5</sup> The panel discussion centered on the uses of ratings by investors and regulators and how these might be improved.

One example of the blurring of credit and capital markets is the “dual market-maker.” As Linda Allen, City University of New York (CUNY), explained, this refers to a financial intermediary that simultaneously serves as a lead arranger for a syndicated bank loan and acts as an equity marketmaker for the borrowing firm’s stock.<sup>6</sup> Theoretical models imply that in a competitive market, the

## **Current practices in structured finance have created serious incentive problems that need to be addressed.**

management across the company must support and “buy in” to the approach. In addition, staffing is difficult—i.e., obtaining personnel with both the technical skills and the softer skills necessary to influence the organization. Finally, the subjectivity and uncertainty of risk, compared with the certainty of return, make risk mitigation inherently difficult.

David M. Simon, an attorney with Wildman, Harrold, Allen, and Dixon LLP, concluded with a presentation on two litigation risks that lenders should manage: lender liability claims and the preservation of electronic information in connection with litigation. Some of the lessons learned from the 1980s and 1990s about lender liability claims are to adhere to internal policies relating to the transaction, to ensure contracts are carefully drafted and signed, and to adhere to standards of personal and corporate integrity.

### **Industry use of risk-management instruments**

Beverly Hirtle, Federal Reserve Bank of New York, led a session on the banking industry’s use of risk-management instruments. James T. Moser, Commodity Futures Trading Commission, documented a direct relationship between interest rate derivatives use by U.S. banks and growth in their commercial and industrial (C&I) loan portfolios.<sup>2</sup> More specifically, the aggregate use of derivative instruments—in particular, interest rate

positions reduce or increase systemic risk. Bernadette A. Minton, Ohio State University, examined the extent to which larger U.S. bank holding companies (BHCs) use credit derivatives to hedge.<sup>3</sup> Only 23 larger BHCs out of 395 used credit derivatives. In addition, the typical position in credit derivatives was for dealer activities rather than for hedging credit exposures from loans. Overall, the use of credit derivatives by banks to hedge loans is limited because of adverse selection, moral hazard problems, and the inability of banks to use hedge accounting when using credit derivatives.

Use of derivatives can decrease the effects of internal funds volatility on loan growth, allowing users to grow loans faster. Timothy P. Opiela, DePaul University, examined the relationship between loan growth and internal funds for BHCs that were categorized as users and nonusers of derivatives.<sup>4</sup> Opiela showed that the loan growth of users is weakly related to fluctuations in internal funds compared with that of nonusers. Additionally, the internal funds–loan growth relationship for users is less responsive to macroeconomic shocks relative to that for nonusers. Past research has shown that BHCs that use derivatives have higher loan growth than those that do not. Opiela’s results showed that an advantage of derivatives use is that it weakens the relationship between volatile internal funds and loan growth. That is, derivatives usage can

informed dual marketmaker becomes a natural liquidity provider and helps reduce the bid-ask spread in both the equity and the loan markets. However, when the dual marketmaker becomes an information monopolist, exploitation of an informational advantage could drive out other, less informed marketmakers and increase spreads.

Allen said that equity markets are more liquid in the presence of a dual marketmaker. Her research found evidence for a liquidity enhancement effect in the more competitive equity market and a negative liquidity effect in the less competitive syndicated bank loan market *with* the presence of dual marketmakers. Overall, the likelihood of a dual marketmaker increases with profitable trading opportunities in both markets.

### Securitization and the mortgage market

Douglas D. Evanoff, vice president, Federal Reserve Bank of Chicago, moderated a panel on securitization and the mortgage market. James D. Shilling, DePaul University, analyzed moral hazard and adverse selection for subprime lending and securitization.<sup>7</sup> The fact that the first-loss position in subprime mortgage securitizations is no longer necessarily kept by the loan originator raises the potential for moral hazard and adverse selection. This raises the possibility of tiered pricing in the subprime asset-backed security (ABS) market—a process where the market attempts to separate originators with higher-quality loans from those with lower-quality loans.

Shilling noted that his research used high loan denial rates to identify subprime lenders with good underwriting practices and low loan denial rates to identify those with less stringent underwriting. When these data were matched to yields on subprime ABSs and to spreads on credit default swaps for home equity issuers, the results provided evidence of tiered pricing.

Christopher J. Mayer, Columbia University, studied agency conflicts in securitization, based on analysis of data from commercial mortgage-backed securities.<sup>8</sup> Under securitization, agents perform functions that would alternatively be performed by a

vertically integrated lender with ownership of a whole loan. To alleviate agency conflicts in managing troubled loans, underwriters often sell the first-loss position to special servicers, who handle delinquencies and defaults. When holding the first-loss position, special servicers appear to behave more efficiently. They make fewer costly transfers of delinquent loans to special servicing, and they liquidate a higher percentage of loans.

Despite the advantages of this practice, it is not used in residential mortgage-backed securities, including those backed by subprime mortgages. As a result, servicers of subprime mortgages are seriously conflicted. They earn low fees and have no “skin in the game.” To mitigate incentive problems, Mayer recommended that servicers should be encouraged to sell mortgages whenever possible. In addition, he argued that the government should help in restarting the residential mortgage market and refinancing as many viable loans as possible. Finally, when the securitization market returns to normal, servicers and originators must be given a stake in the outcome of their work.

According to Joseph R. Mason, Drexel University, many of the current difficulties in residential mortgage-backed securities and collateralized debt obligations arose because of a misapplication of agency ratings.<sup>9</sup> The large ratings agencies often have an array of conflicting incentives. Furthermore, the process of creating these securities requires the rating agencies arguably to become part of the underwriting team, leading to legal risks and even more conflicts. In addition, there are fundamental differences between rating structured finance products and rating traditional products such as corporate debt. One of Mason’s policy recommendations is to remove the quasi-official status given to the agencies’ structured finance ratings by the Employee Retirement Income Security Act (ERISA) and the Basel II capital standards; the ratings’ current status encourages investors to rely uncritically on them. Another recommendation is to increase supervision of the rating agencies as a condition for relying on their ratings.

### Looking ahead

In a keynote address, Eric S. Rosengren, president and CEO, Federal Reserve Bank of Boston, offered some “early lessons” from the ongoing financial turmoil.<sup>10</sup> He suggested that markets need to differentiate ratings on assets such as corporate securities from ratings on assets whose ratings histories and price drivers may be quite different (and less well understood), e.g., certain mortgage-related securities. He also suggested that, if housing prices continue to fall, policymakers will need to increasingly consider programs for those with negative as well as positive equity in their houses. Finally, in light of recent difficulties in pricing complex financial instruments, he questioned whether such complexity was necessary and whether some instruments should be more standardized or possibly moved from dealer markets to exchange-traded instruments.

Another keynote speaker, Craig S. Donohue, CEO, CME Group, highlighted the risk-management advantages of exchange-traded products that utilize central counterparty clearing services. He linked the recent financial turmoil and the large loss announced by French bank Société Générale to certain common characteristics. These include opaque

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markets; biased or subjective valuations; a limited, bilateral trading model that limits liquidity during market stress; and a weak control environment. According to Donohue, these problems exist in part because investment banks have resisted a more centralized, transparent execution system for these products.<sup>11</sup>

The final conference panel featured Edward Kane, Boston College, who placed some of the responsibility for the current financial turmoil on the breakdown of supervisory and counterparty incentives along the entire chain of structured securitization.<sup>12</sup> He analyzed how regulatory competition encouraged supervisors, with conflicted incentives, to outsource much of their disciplinary role to credit rating firms. At the same time, this competition encouraged banks to securitize their loans in ways that pushed credit risks into areas of the financial markets where supervisors and ratings firms could not see them. He called for

establishing accountability for measuring and managing the size of safety-net subsidies as a way to remedy breakdowns in supervisory ethics.

According to Jason H. P. Kravitt, of Mayer Brown LLP, while the securitization market is now massive in asset size, it consists of a relatively small group of people. As in most capital market segments, many who work in this area are young and lack historical knowledge. Many compensation incentives are biased toward the short term. Dispersion of risk has kept individual banks from failing, but it has exposed the financial system as a whole to risks that used to be concentrated in a smaller number of financial institutions. Going forward, Kravitt predicted a return to credit basics and a more transparent, less complex market, with a smaller (but still highly important) role for securitization.

Stuart I. Greenbaum, Washington University, outlined some features of a

“new age of risk management.” He expects ERM, which was encouraged by the Sarbanes–Oxley Act of 2002 and other accounting requirements at publicly held companies, to become increasingly prominent at companies of all sizes. He also called attention to the roles that the U.S. budget deficit, trade deficit, and monetary policy played in creating a context for recent events.

In concluding comments, moderator Arthur G. Angulo, Federal Reserve Bank of New York, highlighted the challenge for supervisors to simultaneously mitigate short-term aspects of the financial turmoil and determine lessons learned for the longer term. He predicted the following issues would play a key role in the months ahead: mortgage origination, the role of the chief risk officer, disclosures to investors, and capital regulations (including their potential procyclicality).

<sup>1</sup> We thank Audrey McQuillan, supervision analyst, Federal Reserve Bank of Chicago, for assistance with this article.

<sup>2</sup> Research conducted with Fang “Jenny” Zhao, Siena College.

<sup>3</sup> Research conducted with René M. Stulz, Ohio State University, and Rohan Williamson, Georgetown University.

<sup>4</sup> Research conducted with Elijah Brewer III, DePaul University and the Federal Reserve Bank of Chicago, and Sanjay Deshmukh, DePaul University.

<sup>5</sup> See [www.federalreserve.gov/GeneralInfo/basel2/](http://www.federalreserve.gov/GeneralInfo/basel2/).

<sup>6</sup> Research conducted with Aron A. Gottesman, Pace University, and Lin Peng, CUNY.

<sup>7</sup> Research conducted with Jonathan Dombrow, DePaul University, and Gail Lee, Credit Suisse.

<sup>8</sup> Research conducted with Yingjin Hila Gan, Lehman Brothers.

<sup>9</sup> Research conducted with Joshua Rosner, Graham Fisher and Co.

<sup>10</sup> This speech, also presented to the South Shore Chamber of Commerce in March 2008, is available at [www.bos.frb.org/news/speeches/rosengren/2008/030608.htm](http://www.bos.frb.org/news/speeches/rosengren/2008/030608.htm).

<sup>11</sup> Donohue made similar points in an address to the Managed Funds Association Network in February 2008; see <http://cmegroup.mediaroom.com/file.php/196/Donohue+MFA+Speech+2122008.pdf>.

<sup>12</sup> For related ideas, see Edward J. Kane, 2008, “Regulation and supervision: An ethical perspective,” paper at Conference on Principles v. Rules in Financial Regulation, University of Cambridge, Cambridge, UK, April 11, available at [www2.bc.edu/~kaneeb/](http://www2.bc.edu/~kaneeb/).