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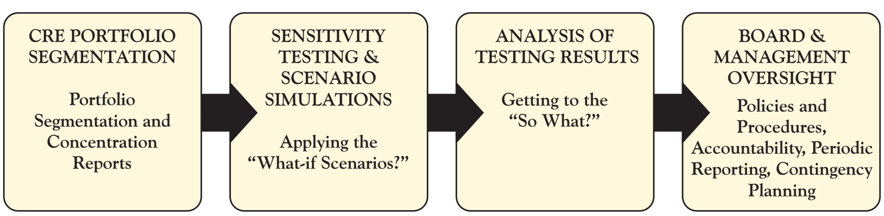
Federal Reserve Bank of Philadelphia

Stress Testing: A Risk Management Tool for Commercial Real Estate Loan Concentrations, Part II

by James Adams, Supervising Examiner, and Sharon D. Wells, Assistant Examiner

Last quarter, in response to the well-publicized regulatory guidance highlighted in SR Letter 07-01, *Interagency Guidance on Concentrations in Commercial Real Estate*, we introduced Part I of a three-part series on commercial real estate (CRE) portfolio stress testing for community banks.[1] Part I introduced the benefits of stress testing and emphasized the need for institutions to quantify the impact of changes in economic conditions, asset quality, earnings, and capital. A multi-phase approach was suggested, grounded by strong management information systems and CRE portfolio segmentation capabilities.



This second part discusses a number of suggestions for testing specific segments of the CRE portfolio and analyzing the results. At this point in the process, we assume that loan portfolio segmentation and aggregation capabilities have been established.

Stress Testing Individual Sectors of the CRE Portfolio

The most vulnerable sectors in today's market are likely to be commercial loans tied to residential housing development activities (i.e., land acquisition and development, condominium construction/conversion, and speculative residential construction financing). However, given other emerging market

[1]SR Letter 07-01, *Interagency Guidance on Concentrations in Commercial Real Estate*, available on the Board of Governors' website at <www.federalreserve.gov/boarddocs/srletters/2007/SR0701.htm>.

continued on page 14

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Federal Reserve Bank of Philadelphia

Supervision Spotlight

Bank Performance During Economic Downturns

by Michael E. Collins, Senior Vice President

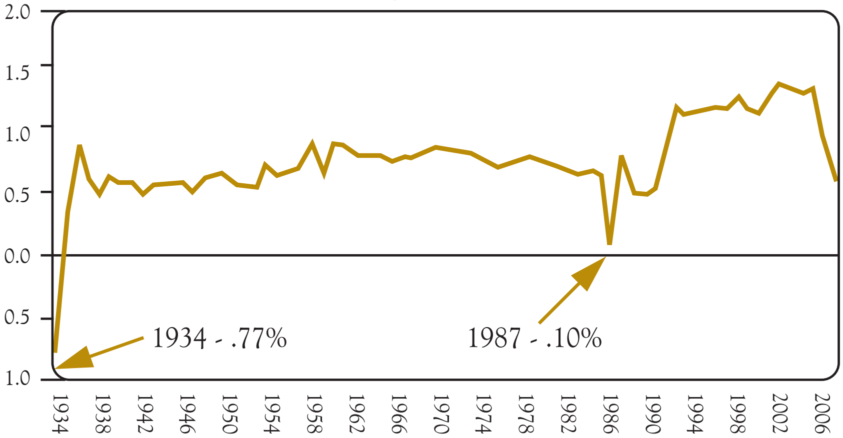
Economic downturns are an integral component of the business cycle and may be defined as alternating periods of economic expansion and contraction—or "boom and bust"—that beleaguer market economies of the modern age. During downturns, credit is harder to come by, as banks and other financial intermediaries tighten lending standards and investors shift from riskier investments to safer havens, such as cash and government securities. A severe enough contraction can lead to a period of financial turmoil, much like what we are experiencing now.

Viewed through the lens of history, periods of financial stress frequently reveal commonalities. Many factors contributing to the current episode, such as weakened underwriting standards, excessive leverage, speculation, and regulations that failed to keep pace with financial innovation, were also present during the Great Depression of the 1930s and, more recently, the Savings and Loan Crisis of the 1980s/1990s. Each episode, however, plays out in its own unique way, setting it apart from those that preceded it.

So what is different this time around? A long period of low volatility and ample liquidity, the misaligned incentives of the originate-to-distribute model, and technical innovations that led to a virtual explosion in the structured products market helped set the stage. In this period, there was the belief that financial innovation insulated the financial system from major shocks due to the broader dispersion of risk. Banks felt encouraged to venture into unfamiliar products and geographic areas. As actual and projected losses associated with housing-related assets mounted, however, a loss of confidence in the securitization process and the ability of credit ratings agencies to assess the risk associated with complex, structured products resulted in last August's liquidity shock, which has been described as a global margin call on virtually all leveraged positions.[1] The loss of confidence that began with the struc-

[1]Governor Kevin Warsh, "Financial Market Turmoil and the Federal Reserve: The Plot Thickens," speech at the New York University School of Law Global Economic Policy Forum, New York, April 14, 2008, available online at: <www.federalreserve.gov/newsevents/speech/warsh20080414a.htm>.

Commercial Bank Return on Assets
1934 through 1Q 2008 percent



Source: FDIC

tured products market has since manifested itself as a widespread loss of confidence in the actual architecture of the financial markets themselves.

The current situation, which reflects the unwinding of a prolonged interlude of excesses, will take time, effort, and patience to fix. The market's capacity to absorb risk has been tested by the seizing up of capital markets and a contraction in lending. The liquidity crunch has resulted in banks deleveraging and tightening underwriting standards. During such periods, banks typically cut costs, seek to increase spreads, bolster fixed income, restructure their product mix, and expand business with profitable customers. Serious deterioration in the loan portfolio or strained capital ratios may lead to more severe actions, such as cutting dividends and raising capital.

While we are certainly going through a very challenging period, it's important to point out that banks have proven remarkably resilient during times of great stress. By some accounts, the United States has suffered through 12 downturns since the Great Depression.[2] With the exception of that episode, banks have managed to remain profitable throughout this period—and even during the height of the Savings and Loan Crisis from 1987 to 1991, when bank failures averaged 388 per year.

[2]U.S. Business Cycle Expansions and Contractions, National Bureau of Economic Research (NBER), available online at: <www.nber.org/cycles/>.

As economists continue to debate the whys and wherefores of today's financial turmoil and regulators and policymakers grapple with the appropriate response, financial industry participants are focused on riding out the storm while looking for strategies that will better position them to weather future downturns. Enhanced risk management is essential to this effort. Banks are encouraged to review risk management practices to ensure that risk is aligned across the organization, matches up with business strategies, optimizes capital allocation, and facilitates regulatory compliance.

As part of this process, banks should perform due diligence to understand the risks inherent in new or complex products and conduct robust independent stress testing that considers low probability but highly adverse conditions. The current turmoil also highlights the importance of diversification and capital buffers to provide protection during challenging economic conditions. Historical evidence supports that banks, especially small community banks, that are not diversified and that are exposed to serious risk can quickly deplete equity accumulated during better times.[3] At the same time, banks that rely on core deposits versus wholesale funding are better able to withstand downturns.

[3]Myer, Andrew P., and Yeager, Timothy J., "Are Small Rural Banks Vulnerable to Local Economic Downturns?," Federal Reserve Bank of St. Louis *Review*, March/April 2001, available online at: <research.stlouisfed.org/publications/review/01/03/0103am.pdf>.

continued on page 18

Michael E. Collins, Senior Vice President

How Effective Are the Whistleblower Provisions of Sarbanes-Oxley?

by Mary G. Sacchetti, Senior Enforcement Specialist

In an effort to avert future corporate scandals, certain whistleblower provisions were implemented with the Sarbanes-Oxley Act of 2002 (SOX) to encourage employees to come forward with allegations of financial wrongdoings within public corporations. The law specifies that an employee will be protected for providing information to, causing information to be provided to, or assisting in an investigation by a federal regulatory or law enforcement agency, a member or committee of Congress, or an internal investigation by the company. Given the fact that tips remain the most prevalent source of fraud detection, it is interesting to consider whether the whistleblower provisions of SOX are being widely used, and, if so, do the provisions within SOX seem to be effective in protecting the whistleblowers?[1]

The Whistleblowing Process Defined

Specifically, Section 806 of SOX (18 U.S.C. 1514A) was intended to protect employees of public corporations from retaliation or adverse employment consequences from their employer for reporting suspected fraudulent activity. SOX broadly defines "employee" as including any officer, employee, contractor, subcontractor, or agent of a company. To be covered under the provision, the employee needs to "reasonably" believe that the alleged misdeed constitutes a "violation of any rule or regulation of the Securities and Exchange Commission, or any provision of federal law relating to fraud against shareholders."

Any employee who reasonably believes that he or she received a retaliatory action or negative employment consequence as a result of reporting a protected activity

[1]The implementation of such provisions is warranted, since the 2006 Association of Certified Fraud Examiners (ACFE) Report to the Nation on Occupational Fraud and Abuse (ACFE Report), as in previous ACFE reports, identified tips as the most common method for detecting occupational fraud. Of the 1,134 fraud cases analyzed within the 2006 ACFE Report, 34.2% of the cases were identified by tips, with employee tips accounting for 64.1% of the allegations, followed by anonymous individuals (18%), customers (10.7%), and vendors (7.1%). Tips appeared to provide even greater value in detecting frauds totaling $1 million or larger, as they represented the primary detection method in 44.1% of the aforementioned cases.

[2]The Whistleblower Protection Program, U.S. Department of Labor, Occupational Safety and Health Administration, available online at <www.osha.gov/dep/oia/whistleblower/index.html>.

is able to file a claim with the Department of Labor's (DOL's) Occupational Health and Safety Administration (OSHA), the governing body of the provision. Upon receipt of the filing, an OSHA official must determine whether the case satisfies the requirements of the whistleblower provisions within SOX. In doing so, the OSHA official must ensure that:[2]

1. The employee or complainant filed the complaint with OSHA within 90 days from the date of the alleged violation.
2. The complainant "reasonably believed" that the company violated the law(s) specified in the statute.
3. The complainant made a prima facie showing that the "protected activity" was a "contributing factor" in the adverse employment action stated in the claim.
4. The employer was aware of the protected activity and did not demonstrate by "clear and convincing evidence" that it would have taken the same personnel action in absence of the protected behavior.

In theory, Section 806 of SOX is intended to protect a whistleblower even if their account of the alleged wrongdoing is incorrect, provided that the complainant "reasonably believed" that what they reported constituted a covered violation.

In theory, Section 806 of SOX is intended to protect a whistleblower even if their account of the alleged wrongdoing is incorrect, provided that the complainant "reasonably believed" that what they reported constituted a covered violation. Following its initial investigation, OSHA will issue its findings. For cases with merit, OSHA will issue a preliminary order and direct the complainant to be rehired. According to Daniel Westman, author of *Whistleblowing: the Law of Retaliatory Discharge*, SOX has "a very strong preference for reinstating the employee as soon as possible."[3]

Conversely, if OSHA determines that a case has no merit, the case is dismissed. Complainants or employers dissatisfied with the initial ruling from OSHA are able to appeal the decision to the next level of the DOL process, the Administrative Law Judge (ALJ). The process within OSHA, including any trial or appeal, is required to be completed within 180 days from the date the complaint was initially filed. Cases extending beyond the 180-day timeframe enable the complainant to file suit in federal district court, where the proceedings would begin again from the start.

If the complainant prevails, SOX requires that the employee be reinstated to his or her position and receive back pay with interest, as well as compensatory damages, including reasonable attorney's fees and costs, in an effort to prevent losses to the whistleblower. While SOX does not provide for either punitive damages or a jury trial, employees are able to seek such damages through court actions. Again, if either party is dissatisfied with the ALJ's rendering, they may file a petition for review by the DOL's Administrative Review Board (ARB). This review is limited to the factual determinations of the ALJ under the substantial evidence standard.[4] The ARB is the final interpreter of the whistleblower provisions at the DOL; any further proceedings may be appealed to the federal court of appeals. Other possible outcomes for each level in the DOL process may result in the complainant withdrawing his or her complaint or accepting a settlement offered by the employer.

[3] Engen, John R., "Backlash!," *Bank Director Magazine*, fourth quarter 2006, available online at <www.bankdirector.com/issues/articles.pl?article_id=11831>.

[4] Carey, Mark P., "What is a SOX claim?," available online at <www.execucite.com>.

[5] Taub, Stephen, and Reason, Tim, "Whistle-Blowers Never Win," June 8, 2007, available online at <www.cfo.com/article.cfm/9321686?f=search>.

Whistleblowing by the Numbers

While the DOL does not report its statistics, the law firm of Orrick, Herrington, and Sutcliffe LLP tracked whistleblower cases from the inception of SOX in July 2002 through fiscal year 2006 and determined that employees fared poorly at each level of the whistleblower DOL litigation process. The results of the study concluded that 947 complaints were filed with the DOL during that time frame, yet only 17 (or 1.8%) of the cases were deemed to have merit.[5]

Conversely, of the cases filed, approximately 665 (or 70.2%) were dismissed as having no merit, 138 (or 14.5%) resulted in a settlement between the complainant and the employer before the DOL provided a ruling, and 126 (or 13.3%) were withdrawn by the complainant. The study further concluded that only six of the cases made their way through the DOL appeals process and survived the first level of appeal (ALJ level), and no complainants have prevailed at the highest level of appeal (ARB level).

Richard E. Moberly, a professor at the University of Nebraska, conducted a separate study of DOL SOX whistleblower determinations from July 2002 through May 2005. His study concluded that OSHA rejected a majority of the cases based on "procedural elements," meaning that the case was not filed within the law's procedures or within the prescribed 90-day timeframe. Other reasons for dismissal include the following:[6]

His study concluded that OSHA rejected a majority of the cases based on "procedural elements," meaning that the case was not filed within the law's procedures or within the prescribed 90-day timeframe.

- Boundary Issues—the employee, employer, activity, and adverse employment action did not appear to be covered within the boundaries of SOX.
- Causation—the employee failed to prove that he or she was fired for the "protected activity."
- Clear and Convincing Evidence—the employer provided evidence to satisfy its requirements.

Unfortunately, the specifics of settlements or withdrawals are not tracked by the DOL. Nevertheless, it could be argued that the overall low success rate of employees is surprising since the SOX provisions could be considered more "employee friendly," as the complainants are only required to prove that they "reasonably" believed that there was a fraud perpetrated against shareholders and that the "protected activity" was a "contributing factor" in the unfavorable personnel action. Conversely, the burden of proof by the employer could be considered to be more onerous, as the plaintiff needs to demonstrate by "clear and convincing evidence" that it would have taken the same unfavorable action against the employee absent the whistleblowing activity.

Conclusion

Given the exceptionally small percentage of employees who have prevailed at the DOL level and the fact that no complainant has ever prevailed at the ARB or final level of appeal within the DOL, it is questionable whether the whistleblower protections within SOX are living up to the intentions of the law. Nevertheless, although the statistics relating to the SOX whistleblower cases filed to date do not seem very supportive of the employee, such claims continue to increase year after year, thereby inferring that employees do not necessarily believe historical resolutions preclude future rulings from protecting employees who come forward to report allegations of fraud within their workplace. ☐

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[6]Moberly, Richard E., "Unfulfilled Expectations: An Empirical Analysis of Why Sarbanes-Oxley Whistleblowers Rarely Win," *bepress Legal Series*, Working Paper 1987, February 6, 2007, available online at <law.bepress.com/expresso/eps/1987/>.

Case Study: Results of the First Case Filed Under Sarbanes-Oxley Whistleblower Rules

In May 2007, the case of David Welch, one of the first employees in the nation to seek whistleblower protection under the Sarbanes Oxley Act of 2002 (SOX), concluded. After four years, the case (*Welch v. Cardinal Bankshares Corp*) proceeded through all available levels within the SOX whistleblower litigation process. Following a review by the Department of Labor (DOL) Administrative Law Judge (ALJ), Welch was deemed to be the first whistleblower to win reinstatement and other remedies from an ALJ. Nevertheless, the case was appealed by his employer, Cardinal Bankshares, Inc. (Cardinal) to the DOL Administrative Review Board (ARB), which, in turn, reversed the ALJ's decision. The ARB's final decision precluded the first "win" of a SOX case by an employee at the ARB level.

David Welch was hired in 2000 as the chief financial officer of Floyd Bank, a subsidiary of Cardinal Bankshares, Inc., located in Floyd, Virginia. According to records of the case, Welch initially had a good relationship with the bank's board of directors, but that changed in a relatively short period of time. Over approximately six months, Welch became increasingly concerned about the company's financial statements and operating procedures, citing suspicions of insider trading of Cardinal's stock by the CEO's friends, a lack of adequate internal controls, and limited access to the company's external auditors.

Welch repeatedly raised his concerns to the CEO and other senior personnel in writing, and as a result, he refused to certify company financial reports for the third quarter of 2001 and the second quarter of 2002. Following Welch's assertions, the CEO informed the audit committee, which, in turn, appointed an accountant and lawyer to investigate the charges. During the investigation, certain claims made by Welch were verified, yet several performance-related issues were also raised. Following the investigation, the company repeatedly asked Welch to meet with the audit committee without his personal attorney present. Welch refused, and as a result, Cardinal terminated his employment. Two months later, within the 90-day SOX filing requirement, Welch complied with the administrative procedures within SOX and filed his complaint with OSHA, citing that he was fired for raising the allegations.

OSHA investigated Welch's complaint and dismissed the case, citing that it found no basis for action. As a result, Welch appealed the denial to the DOL ALJ. Accordingly, an ALJ reviewed the case and on January 28, 2004, issued a decision in Welch's favor that required Cardinal to reinstate Welch and pay his back wages, attorney's fees, costs, and expenses. The ALJ found that Welch "reasonably believed" that the company violated SOX, and that there were circumstances sufficient to infer that Welch's conduct was a "contributing factor" to his termination.[1]

Cardinal appealed the ALJ's decision to the DOL ARB and argued that Welch was not terminated for his whistleblowing activities but rather because he refused to meet with Cardinal's audit committee without his personal attorney present, citing that the company was concerned that certain confidential information might be disclosed improperly if the attorney had been present. On May 31, 2007, the ARB issued an opinion that denied Welch's complaint and overturned the ALJ's previous ruling to reinstate Welch to his position. The ARB ruled that the ALJ's ruling was erroneous since Welch's assertions related to accounting standards, rather than violations of federal law relating to "fraud against shareholders," and, as a result, Welch's complaints were not considered "protected activity" under SOX.

Furthermore, the ARB opined that Welch could not have "reasonably believed" that the alleged fraud would result in misleading the company's shareholders about the company's financial condition. Additionally, while Welch's case was under review by the ARB, the U.S. District Court for the Western District of Virginia refused to enforce the ALJ's order to reinstate Welch's position. At this point in time, Welch plans to take his case to the Fourth Circuit U.S. Court of Appeals. ☐

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[1] Wissert, David M.; Levinson Werner, Julie; and Anoniello, Vincent A., "Sarbanes-Oxley Strikes…The First Whistle Has Been Blown," *The Metropolitan Corporate Counsel*, Vol. 12, No. 5, May 2004, available online at < www.metrocorpcounsel.com/index.php>.

From The

Examiner's Desk

Going Green: What's All the Hype About?

by Becky Goodwin, Examiner, and Clarence Campbell, Supervising Examiner

Climatic change and alternate energy methods designed to reduce the environmental impact are mentioned on virtually every news programming station. The idea of changing one's lifestyle to help save the environment has gained global support and generated many initiatives to "Go Green." Moreover, regulatory requirements and guidelines designed to reduce carbon emissions and curb waste are expected to be enacted and become increasingly more stringent as federal, state, and local governments pursue environmental cleanliness. This article defines the concept of going green for bankers, highlights the possibilities for business growth, examines the green consumer, explores potential regulatory requirements, and provides ideas and resources for implementation and further research into going green.

Going Green Defined

Going green refers to individual action that a person can consciously take to curb harmful effects on the environment through consumer habits, behavior, and lifestyle.[1] Going green is predicated upon increasing sustainability while limiting environmental impact. The Environmental Protection Agency (EPA) defines sustainability as meeting the needs of the present without compromising the ability of future generations to meet their own needs.[2] Many industries have embraced the concept, including the financial community.

Opportunity for Green Growth

Various industries have begun to address the impact that their products and services will ultimately have on the environment. Likewise, the number of environmentally conscious consumers is growing, creating greater demand for products and services that allow them to support environmentally sound efforts.

Businesses and investors have recognized that climate change is an increasingly important factor in every business decision, from corporate strategy to investment planning. Within the financial community, environmental concerns have largely served as a catalyst for innovation and opportunity.[3] In fact, a recent article published in the *American Banker* suggests that almost all banks now highlight their efforts at sustainability in their annual reports.[4]

While going green or increasing sustainability may seem to be a daunting task, many in the financial industry believe that the promise of revenue growth and customer-base expansion could ultimately improve a bank's bottom line, thereby increasing shareholder activism. According to Jim Reichbach, the vice chairman of the banking and securities sector of Deloitte and Touche USA LLP, and Charles Lockwood, an environmentalist and real estate consultant, it's time for executives to see green for what it is—a major opportunity for growth. Their assessment is further supported by statistics like Innovest's 2006 global list of

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[1]See <www.lohas.com/glossary.html>.
[2]See < www.epa.gov/Sustainability/>.

[3]Ambachtsheer, Jane, and Metrick, Craig, "Going Green Not Just For Hollywood Anymore," *Pensions and Investments*, April 14, 2008, available online at <www.pionline.com/apps/pbcs.dll/article?AID=/20080414/PRINTSUB/779058623/1031/TOC>.
[4]Reichbach, Jim, and Lockwood, Charles, "Viewpoint: Viewing Sustainability as a Business Opportunity," *American Banker*, December 28, 2007, available online at <www.americanbanker.com/article.html?id=20071227K1HEM7MW>.

the 100 most sustainable corporations, as these 100 corporations outperformed those listed in the World Index by a cumulative 80.0 percent.

In addition, a study conducted by the United Nations Environment Programme (UNEP) Finance Initiative in August 2007 details various innovative green financial products and services for retail banking, corporate and investment banking, asset management, and insurance.[5] While the overall success of many of the innovative green products has not been fully validated, it is clear that there is a market for green products, driven mainly by the environmentally conscious consumer.

While the overall success of many of the innovative green products has not been fully validated, it is clear that there is a market for green products, driven mainly by the environmentally conscious consumer.

The Green Consumer

According to findings from the 2007 ImagePower Green Brands Survey conducted by WPP's Landor Associates; Penn, Schoen & Berland Associates; and Cohn & Wolfe, environmentally conscious consumers expect to double spending on green products and services within this year, raising such spending to $43 billion per month, or roughly $500 billion annually.[6] Consumers who support sustainable businesses so their dollars can impact social and environmental concerns represent Lifestyles of Health and Sustainability, or LOHAS. They seek out companies that share their health, social, and environmental interests and priorities. In the United States, LOHAS consumers make up a $200+ billion marketplace for goods and services, and the LOHAS marketplace is expected to grow to $425 billion in three years and to $845 billion by 2015, according to research conducted by the Natural Marketing Institute.[7]

Tapping into the green marketplace does present unique challenges and risks. Steve Bishop, a global leader of Design for Sustainability at IDEO, an innovative design company, indicates that marketing directly to the green consumer can be challenging because the majority of consumers seek to satisfy their personal needs before considering those of the planet. Furthermore, he argues that companies should avoid focusing on a green niche and instead focus on green behaviors to which everyone can aspire.[8] Many financial institutions have heeded such advice and have encouraged customers to adopt services like electronic bill pay and e-statements to eliminate waste.

While the green consumer represents opportunities for expansion and possible revenue growth, corporations are warned against greenwashing when introducing environmentally conscious products. Greenwashing is the act of misleading consumers on the environmental benefits of a product or service or on the company's environmental practices.

The Green Regulatory Environment

With growing environmental concerns and increased regulations for green building standards, which have been passed by major U.S. cities, additional man-

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[5] See <www.unepfi.org/fileadmin/events/2007/roundtable/1.3.1_sullivan.pdf>.

[6] "Consumer Spending on Green Will Double, Reach $500 Billion in 2008," *Environmental Leader*, September 28, 2007, available online at <www.environmentalleader.com/2007/09/28/consumer-spending-on-green-will-double-reach-500-billion-in-2008/>.

[7] Chandler, Colette, "Understanding the Consumer Who is Driving the Green Trends," *Green Lodging News*, June 18, 2008, available online at <www.greenlodgingnews.com/Content.aspx?id=2270>.

[8] Bishop, Steve, "Don't Bother with the Green Consumer," *Harvard Business Review*, January 23, 2008, available online at <www.hbr-green.org/2008/01/dont_bother_with_the_green_con.html>.

[9] See footnote 4.

dates for increased energy efficiency and reduced greenhouse emissions for corporate facilities may not be far behind.[9] Corporations are exploring ways to implement efficiency measures to save additional energy through their operations by reducing the need for carbon-emitting energy and increasing the use of greener technologies. Various financial services leaders have vowed to reduce their carbon emission footprint (i.e., reduce their emission of greenhouse gases into the atmosphere) within a specified period.

Over the past few years, the American political scene has undergone a major shift with respect to environmental issues, in which the mid-term U.S. elections created a circumstance where the question is not *will* carbon regulatory constraints be enacted, but *how soon* will these be implemented? Currently, there are a number of climate change bills being proposed in both the U.S. Senate and the House. Furthermore, the UNEP Finance initiative study suggests that the first North American banks to pursue corporatewide or productwide carbon neutrality will likely achieve reputational benefits and positive, widespread media exposure.[10]

Beyond the Hype: Implementing Positive Change

Beyond the recent "going green" marketing hype, there is the opportunity to recognize the impact of global climate change through research, education, and the reduction of greenhouse gas emissions. Banks can participate in these efforts in several ways, including developing a comprehensive program to reduce greenhouse emissions, purchasing electricity from renewable sources, adopting an energy-effi-

[10]See footnote 5.

"GO GREEN" IDEAS FOR BANKERS

- Pledge to make every effort to go green or increase sustainability.
- Appoint an environmental sustainability coordinator, who would be responsible for creating a sustainability strategy, including energy conservation, waste management, green building, transportation, and planning.
- If the bank is located in a rural setting, consider using wind energy management by purchasing or sharing in the operation cost of turbine wind towers.
- Improve the insulation of bank facilities.
- Invest in products that reduce carbon emissions.
- Consider bio-diesel fuel for company-owned vehicles.
- Support public transportation with discounts and pre-tax benefits to employees.
- Implement flexible work schedules and reduced summer hours for eligible employees.
- Use recycling bins throughout the banking facilities, shred excess paper, and use new bio-plastic containers for trash.
- Use external trash compacters that could reduce the frequency of trash removal.
- Replace traditional light bulbs with energy-efficient compact fluorescent bulbs, and install light timers that turn off the lights when a room or cubicle is empty.
- Save paper by not printing e-mail messages and by printing or copying on both sides of the paper.
- Adopt an electronic document management system to eliminate paper waste and the need for storage space.

cient appliance purchasing program, and committing to a policy that new construction conform to the U.S. Green Building Council Leadership in Energy and Environmental Design (LEED) Silver standards.[11]

The commitment to go green must be supported by effective policies and procedures throughout the bank. Furthermore, the directorate and senior management must carefully consider the various risks associated with introducing new green banking products and services, particularly the reputational risk associated with greenwashing, if the consumer perceives that there is no environmental benefit derived from the product or service being offered.

The directorate is ultimately responsible for determining the strategic direction of the organization and ensuring that capable senior management operates in accordance with the strategic objectives. Any commitment to going green or increasing sustainability must be well communicated by the directorate and should encompass all areas, including risk management, lending, investing, sustainable product use, facilities, and employee initiatives. ☐

[11]For more information on LEED standards, visit the U.S. Green Building Council website at <www.usgbc.org/DisplayPage.aspx?CategoryID=19>.

More information on environmental programs, strategies, studies, and initiatives is available through the following resources:
U.S. Environmental Protection Agency: <www.epa.gov/epahome/industry.htm>
Studies on significant energy savings in LEED Energy Star Buildings: <www.usgbc.org/DisplayPage.aspx?CMSPageID=77#usgbc_publications>
The CoStar study on green buildings: <www.costar.com/News/Article.aspx?id=D968F1E0DCF73712B03A099E0E99C679>
The United Nations Environment Programme Finance Initiative (UNEP FI): <www.unep.org/>
Learn more about your carbon footprint at: <www.carboncounter.org/>

Is the Discount Window Part of Your Institution’s Contingency Funding Plan?

In July 2003, the FFIEC issued guidance recommending that institutions consider incorporating the discount window into their liquidity risk management and contingency plans. Establishing access to the discount window is a two-step process. The first step is to execute the required agreements contained in the Federal Reserve’s Operating Circular Number 10. The second step is to pledge collateral to the Federal Reserve.

The Federal Reserve accepts a wide range of bank assets as collateral for discount window advances. Securities generally need to be rated investment grade and can be pledged through either the Federal Reserve’s National Book-Entry System or Depository Trust Company. Pools of whole loans may also be pledged as collateral. Loans may be commercial or consumer and must be performing. Reserve Banks offer a pledging program to qualified institutions that allows all loan documentation to remain on the pledging institution’s premises.

For more information on required agreements, eligible asset types, how assets are valued for collateral purposes, and the mechanics of pledging collateral, visit the Federal Reserve Discount Window website at <www.frbdiscountwindow.org> or contact Gail Todd, manager of Credit and Risk Management, (gail.todd@phil.frb.org) at (215) 574-3886.

Refresher on Capital Stock Subscriptions

by William Lenney, Senior Analyst, and Lauren Jones, Intern

A little known provision in the Federal Reserve Act requires national banks and state-chartered banks that belong to the Federal Reserve System (member banks) to hold stock in their local Federal Reserve Bank. The subscription process associated with this requirement is technical and sometimes overlooked by member banks. The purpose of this article is to provide an overview of the stock requirements and provide information that will assist member banks in complying with the statute.

Overview of Federal Reserve Capital Stock Requirements

Regulation I, *Issue and Cancellation of Federal Reserve Bank Capital Stock*, addresses Section 5 of the Federal Reserve Act, which requires member banks to hold Federal Reserve Bank capital stock (Federal Reserve stock) in an amount equal to six percent of the subscribing bank's capital and surplus. The par value for one share of Federal Reserve stock is $100, half of which must be paid upon issuance; the remainder is due on call by the Board of Governors of the Federal Reserve System. Currently, a six percent dividend is paid on the paid-in portion of Federal Reserve stock (a 3% semiannual payment).

Why is it important for member banks to hold an accurate amount of Federal Reserve stock in the correct Federal Reserve Bank? First, it is required by the statute. Second, it is necessary to ensure that each member bank receives the dividends to which it is entitled. Finally, the 12 Federal Reserve Banks use capital stock balances at year-end to determine internal cost allocations between Districts.

A variety of events can impact Federal Reserve stock subscriptions. These triggering events typically include statutory mergers and other events that impact the capital accounts of member banks, as well as legal events, such as charter conversions. These events usually require formal applications to acquire or redeem stock. It is the responsibility of each institution to be aware of all triggering events so that they can complete the Regulation I requirements in a timely manner. Your local Reserve Bank is available to support you in this regard if questions arise.

Purchase of Capital Stock

A Federal Reserve stock application must be submitted in the following circumstances:

- Formation of a de novo member bank
- Acquisition of another bank by a member bank
- Conversion of a state nonmember bank to a member bank

The following table outlines the applications that banks must file for events related to purchasing Federal Reserve stock.

EVENT OR PURPOSE	APPLICATION
Liquidating Member Banks	FR 2086
Member Bank Converting into or Merging with a Member or Nonmember Bank	FR 2086A
Insolvent Member Bank	FR 2087
Adjustment in Holdings*	FR 2056

Cancellation of Capital Stock

Member bank ownership of Federal Reserve stock is subject to cancellation for the following reasons:

- Insolvency or voluntary liquidation
- Conversion to nonmember status through merger, acquisition, or change in charter
- Voluntary or involuntary termination of membership

The cancellation of Federal Reserve stock should occur at or before consummation of the event. The following table outlines the applications that member banks must file for events related to canceling Federal Reserve stock.

EVENT OR PURPOSE	APPLICATION
Issuance of Federal Reserve Stock — Organizing National Bank	FR 2030
Issuance of Federal Reserve Stock — Nonmember State Bank Converting to National Bank	FR 2030a
Nonmember State Bank Converting to State Member Bank	FR 2083A
Mutual Savings Bank Converting to State Member Bank	FR 2083B
Adjustment in Holdings*	FR 2056

Quarterly and Year-End Requirements

Section 5 of the Federal Reserve Act states that Federal Reserve stock shall be adjusted when member banks increase or decrease capital stock or surplus. As declared by the Board of Governors, member banks shall only make quarterly adjustments if the cumulative change exceeds the lesser of 15 percent or 100 shares of Federal Reserve stock. Required changes must be made promptly after filing the Call Report, whenever such changes in capital stock and surplus exceed the amount permitted to be deferred.

Year-end adjustments are most critical to ensure that the year-end books are accurate. Each member bank must file to eliminate any differences between the actual number of shares owned and the required number of shares specified in Section 5 of the Federal Reserve Act. At year-end, immediate changes must be made to reflect the exact number of shares.

Conclusion

Teamwork and coordination between the Federal Reserve Banks and their member banks are necessary to ensure that these institutions hold an accurate amount of Federal Reserve stock at the appropriate District. For questions regarding capital stock, please contact Eric Nichols (eric.nichols@phil.frb.org) at (215) 574-3716 or William Lenney (william.lenney@phil.frb.org) at (215) 574-6074. Forms and instructions may be obtained online at the Board of Governors' website at <www.federalreserve.gov/reportforms/CategoryIndex.cfm?WhichCategory=2>. ☐

Do You Have Questions or Comments?

With each issue of *SRC Insights*, we aim to highlight the supervisory and regulatory issues that affect you and your banking institution the most. We strive to ensure that your voice is heard, and we realize that you may have comments or questions concerning a topic covered in one of our publications or questions concerning a particular supervisory or regulatory issue. We are also interested in hearing your suggestions for future *SRC Insights* topics.

We encourage you to contact us with any questions, concerns, or topic ideas. Please e-mail any comments and suggestions to the following: PHIL.SRCInsights@phil.frb.org

Stress Testing: A Risk Management Tool for Commercial Real Estate Loan Concentrations, Part II ...continued from page 1

conditions, it may be prudent to also test other loan sectors that may be affected in the future. Increasing energy costs and unemployment rates, lower consumer spending rates, or inflationary considerations, for instance, may affect other sectors which have received minor attention until this point in time.

For our purposes, the most critical factors that can be tested are those that increase the probability of loss by directly impacting property cash flows and underlying asset values. Figure 1 provides examples of shock factors that should be considered for CRE portfolio sectors.

The decision to stress test a particular sector will be highly dependent upon the size of a portfolio relative to other sectors and the specific geographic and market trends affecting that sector. Decisions should not be based on the strength of underwriting and loan structuring practices for that sector, the reason being that conservative underwriting criteria, such as high outgoing DCRs, low LTVs, aggressive hold-backs,

Fig. 1 - Stress Testing Factors

STRESS FACTORS	Land Acquisition & Development	Residential Construction	Commercial Construction (1)	Multi-Family Residential	Residential & Commercial Condominium Development & Construction	Leased Commercial Office Space	Leased Industrial & Warehouse Distribution	Retail Boxes & Strip Malls
DECREASES IN:								
Rents				X	X	X	X	X
Sales Prices	X	X						
Absorption/Sell-Out Rates	X	X	X		X			
Collateral Values	X	X	X	X	X	X	X	X
INCREASES IN:								
Vacancy Rates				X		X	X	X
Marketing Costs	X	X		X	X	X	X	X
Utility and/or Energy Costs	X	X	X	X	X	X	X	X
Maintenance Costs	X			X	X	X	X	X
Material Costs	X	X	X					
Labor Costs	X	X	X		X			
Tenant Concessions				X		X	X	X
Interest Rates	X	X	X	X	X	X	X	X
Capitalization Rates	X	X	X	X	X	X	X	X
CHANGES IN:								
Property Use					X			

(1) Includes multi-family residential, leased commercial office space, leased industrial and warehouse distribution, and retail boxes and strip malls.

cash collateral supplements, and other upfront risk mitigation strategies, should inherently cushion the impact of the results.

Residential land acquisition and development. The most prevalent risk associated with this portion of the CRE portfolio is a decline in demand, which results in longer project sell-out periods or declines in sales prices. For this portfolio sector, the most relevant stress test is to lengthen the absorption rate. Current-, best-, and worst-case scenarios for this factor should be considered, with the current absorption rate supported by documented market data from reliable sources. Using these lengthened absorption rates, determine how long it will take for the project to sell out. Under these stressed conditions, how much inventory will remain for sale at loan maturity? How long will it take for loans within the portfolio to be paid in full under these circumstances?

Many lenders may have a false sense of comfort when there are formal contracted lot sales agreements between the developer and third party builders, and they may be tempted to bypass lengthening the absorption rate. Using a best-case scenario could potentially accommodate these considerations. However, it is still prudent to also develop an absorption downside scenario that anticipates that current market conditions will continue to negatively impact the ability of certain developers to honor their contractual obligations.

No matter how low market prices may be, some areas may continue to experience slow absorption rates. Others may not, depending on how readily the individual market is willing to move to purchase on a decrease in prices. Consequently, a separate scenario or a combination of both a decline in price and a slower absorption rate might make sense. It is important to remember that decreased sales prices will have an impact on the amount of funds available to meet minimum lot release prices contracted under the loan agreement. Depending on the level of price decline, lower than anticipated principal pay downs could result in a longer term to payout and/or residual loan exposure at the end of the project sell-out. Institutions may want to consider a worst-case liquidation price scenario for loans that fund projects in highly depressed markets or loans that are risk rated watch and/or classified. Institutions may also need to consider diluting net sales proceeds for increased marketing costs in order to move lots or for liquidation services.

In addition to affecting the rate and level of project cash flow and collateral values, lengthened sell-out rates or lower than anticipated unit prices can also translate into inadequate interest reserves. Institutions that permit bank-funded interest reserves (or finite borrower-funded interest reserve escrows) should test the adequacy of the reserves in the face of a protracted market downturn to determine how much in scheduled interest payments is at risk for the portfolio. What alternative sources of funding are available to carry the project without extending additional funds to replenish the reserve when the sell-out is delayed for a substantial period of time? For loans that are priced at variable or adjustable rates, institutions should also factor in the impact of increased interest rates on the adequacy of interest reserves.

An institution with a loan portfolio that contains a large number of loans funding projects in mid-process (i.e., preliminary development or infrastructure completion) might also want to consider stress testing this portion of the portfolio to determine the impact of increased costs on the portfolio. Consider the following scenarios:

- What additional funds would be needed to complete the projects if costs increase?
- If additional funds need to be advanced to accommodate increased costs resulting from inflationary considerations, how would this impact the capacity of net sales proceeds to repay increased levels of outstanding debt?
- What would happen if a declining sales price scenario was added?
- To what extent would the loan-to-value (LTV) ratios increase in both steady price or declining market price environments?
- Do the underlying borrowers within this sector have the ability to carry these costs themselves?

The same considerations can be applied to residential construction (vertical construction) loan portfolios. Application of stress tests measuring the impact of lengthened absorption rates, a decline in sales prices, a loss of pre-sales, and increased construction costs and interest rates are applicable. All tests should be based on documented market assumptions and should be designed to measure the impact on the primary and secondary sources of repayment.

Testing raw land inventory portions of the loan portfolio should also be considered. If a significant concentration exists, management may want to consider testing the impact of a longer-term debt service carry burden and analyzing a decline in property value on LTVs.

Residential and commercial condominium development and construction. During the last several years, the real estate market has seen a proliferation of ground-up condominium development and condominium conversion projects. Demand for this type of property at scheduled prices has waned in some markets. The same assumptions made for residential land development and construction also apply for this type of project (i.e., absorption rate declines, lower sales prices, increased carry project and interest costs).

Delays in condominium sales often translate into reliance on the rental market to supplement cash flow until market conditions improve. Consequently, stress testing should factor in the potential for a shift in repayment sources from unit sales to rental income. This may prompt institutions to consider including a separate analysis of the impact of these conversions on property cash flows and property values. As more properties are converted to rentals, it may also be prudent to consider the impact of competing supply on the apartment sector.

Multi-family residential. The most common type of stress testing for this portfolio segment is to test for an increase in vacancies or rent concessions. Regional economic considerations, such as the loss of a large regional employer or government or military shrinkage, as well as increased competition from condominium conversions and other factors, are likely to affect the occupancy rates in the apartment sector. These factors should be considered in establishing the downside simulations.

Testing for the impact of increased expense levels for multi-family housing projects may also be important in today's environment due to increased energy costs or other inflationary pressures that affect property costs, especially projects where landlords bear the burden of utility costs.

Loans of this type are often subject to interest rate reset risk. Lenders can stress test for interest rate reset risk by evaluating the portion of the portfolio with reset dates occurring within the next 6 to 18 months to determine whether current and stressed occupancy rates are strong enough to support an upward adjustment.

Leased commercial office. A slowing job growth rate and the impact of economic slowdowns on certain service sectors each have the ability to impact the performance of leased commercial office properties. In applying stress tests for this sector, lenders should consider the dynamics of regional economies when determining the degree to which stress tests should be applied to this portion of the portfolio. Properties with tenants in business lines that are currently vulnerable to economic trends should be evaluated for the impact of increased vacancy rates and/or declining rents at levels supported by regional economic data. Properties supported by short-term lease arrangements should also be tested for increased vacancy levels.

For properties where expense pass-throughs do not apply, expenses should be tested for inflationary increases in costs, particularly for utilities and maintenance. Properties with short-term leases should also include increased marketing costs and tenant improvement costs to support re-leasing activities.

As with all other sectors identified in this article, interest rate sensitivity should also be considered on this portion of the portfolio, particularly for fixed-rate loans subject to interim rate resets or loans tied to floating rate pricing arrangements.

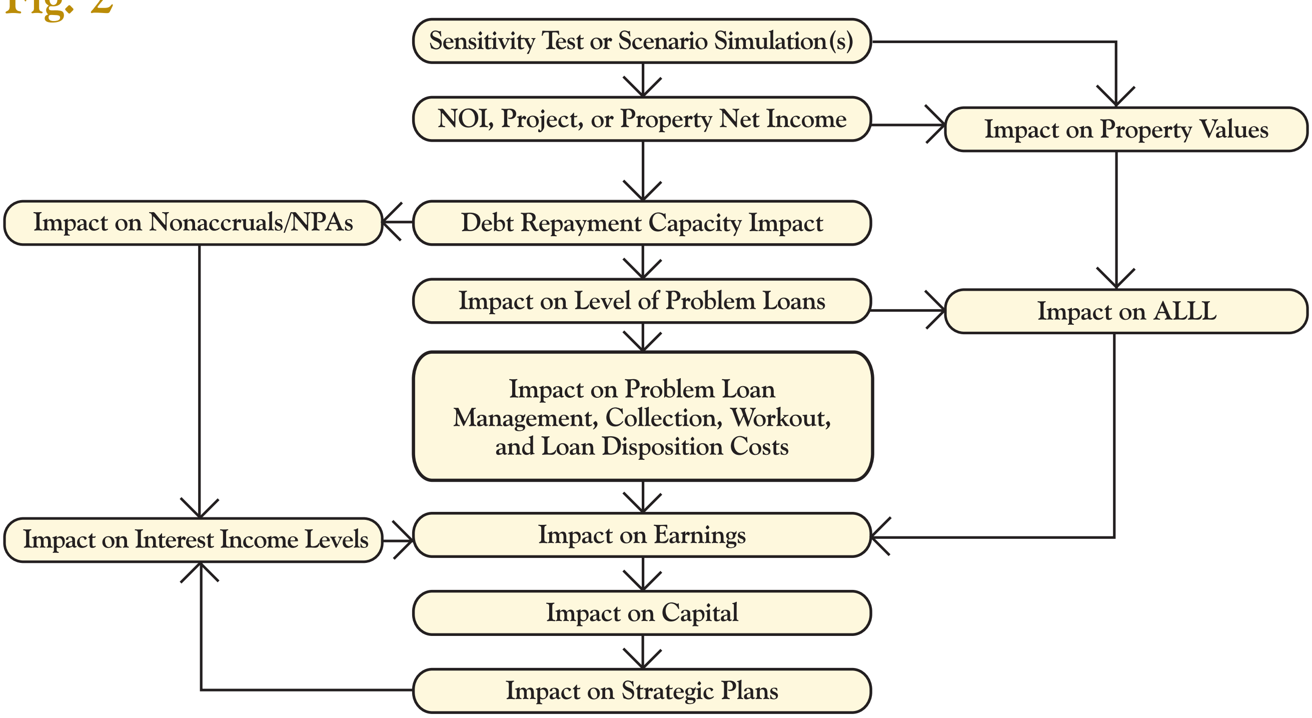
Industrial, warehouse, and distribution. Tenant credit risk is the most pervasive concern for this sector. Therefore, stress testing this portion of the portfolio should include a review and an evaluation of industry concentrations in the portfolio that are most vulnerable to declining economic trends. Increased vacancy rates, lower rental rates, and increased expenses (depending on the lease terms) should be factored into the stress testing scenarios for this sector at levels reflecting conditions of the industrial markets served by the tenant base. Particular attention should be paid to those with tenants whose industries have supported the housing market or other vulnerable segments of the economy. Properties are likely to be single-tenant facilities; therefore, worst-case scenarios should simulate prolonged vacancy periods and/or reduced rental rates and increased marketing costs on property cash flows. LTVs should be recast based on reduced levels of projected net operating income (NOI) as a result of these adjustments.

Leased retail. A weakening economy is likely to continue to impact consumer spending, so portfolios with a high concentration of loans supporting this sector may face challenges, as certain retailers face financial pressures due to lower consumer demand. Stress testing for this portion of the portfolio should include an analysis of the same fundamental factors highlighted in other sectors: increased vacancy rates, lower rental rates, and increased property costs (if leases are not triple net). Adjustments to LTVs should also be recast based on reduced levels of projected NOI.

Analyzing the Results & Developing Conclusions

The next step of the process is to determine what the overall impact to earnings and capital will be if simulated situations become a reality by overlaying the results of the stress tests (see Figure 2). It is important to evaluate how declining DCRs and increasing LTVs resulting from stressed scenarios will impact problem loan levels and nonperforming assets. As problem loan levels rise, management needs to consider how interest income may be negatively impacted. The allowance for loan and lease losses (ALLL) under stressed scenarios should also be reassessed.

Fig. 2



Ultimately, management should review this potential impact on capital based on best- and worst-case scenarios.

Conclusion

There are a variety of approaches to stress testing a CRE loan portfolio. As we have demonstrated, sophisticated models are not always necessary to define potential areas of risk and to determine the impact on earnings and capital. Focusing on simple factors that may affect debt service capacity and collateral adequacy will provide a satisfactory foundation for assessing an institution's staying power during negative market conditions.

We will conclude our series on stress testing by highlighting the role of the board and management in developing mitigation strategies and contingency plans based on the final outcomes of earnings and capital analysis in Part III of this series. In addition, Part III will provide suggestions for developing policies and procedures to promote the ongoing success of stress testing programs.

If you have questions pertaining to stress testing or other CRE risk management strategies, contact Jim Adams (james.adams@phil.frb.org) at (215) 574-4325 or Sharon Wells (sharon.wells@phil.frb.org) at (215) 574-2548. □

Supervision Spotlight: Bank Performance During Economic Downturns

... continued from page 3

Regulators, policymakers, and market participants are working together in an effort to restore the markets to normal functioning and to strengthen the financial infrastructure to limit the frequency and intensity of future shocks. The Federal Reserve is attempting to relieve funding pressures and increase overall market liquidity by easing the primary credit rate (by reducing the spread between the primary credit rate and the fed funds target) and introducing several new lending facilities designed to make credit more readily available to depository institutions and primary securities dealers.

On the consumer protection side, the Federal Reserve issued new rules under the Home Ownership and Equity Protection Act (HOEPA) that apply to all mortgage lenders and that address many of the questionable lending practices that played a role in the housing meltdown. Most recently, Congress enacted a comprehensive housing rescue package that will provide aid to homeowners facing foreclosure, create new licensing standards for the mortgage industry, modernize the federal housing authority, and institute other measures aimed at improving the overall functioning of the mortgage industry.

Experts agree that significant strain in the financial markets may persist for quite some time, and banks will continue to feel the impact. As we work through this market correction, bankers, regulators, and bank supervisors have important roles to play. Regulators must improve the financial infrastructure without inhibiting the financial innovation needed to spur future growth, while bank supervisors need to improve their knowledge of the range of financial market activities and their implications for bank balance sheets. For their part, bankers should reevaluate their business models and focus on strengthening their capital, liquidity, and risk management practices. As bankers navigate the market turmoil, they should also remain aware of long-term strategic opportunities and position their firms accordingly. Long-term success depends on how well they steer their way through the current downturn and how well they position their organizations to participate in the recovery. □

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Note: In September, the Philadelphia Fed will unveil its redesigned website. The redesigned site will feature a new look with updated graphics; better organization of content, resources, and tools; new topic-based ways to find content; and more. Please be aware that some URLs may change as a result of the redesign.

Section 19 Letters

This year, the Federal Reserve began posting "Section 19 Letters" on the Board of Governors' public website. Section 19 Letters (referring to Section 19 of the Federal Deposit Insurance Act, 12 U.S.C. § 1829) are sent by the Federal Reserve Banks to institution-affiliated parties whom the Reserve Banks learn have been convicted of, or have entered into a pretrial diversion or similar program for, certain criminal offenses and are therefore prohibited from participating in the affairs of insured depository institutions, their holding companies, or credit unions without prior regulatory or judicial approval.

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