1st Anniversary Issue

COMMUNITY BANKING COMMUNITY BANKING COMMUNITY BANKING

A SUPERVISION AND REGULATION PUBLICATION

Third Quarter 2013

View from the District

A Fifth District Perspective — Richmond



Capital Planning: Not Just for Troubled Times

by Jennifer Burns, Senior Vice President, Supervision, Regulation and Credit, Federal Reserve Bank of Richmond

Since the inception of Community Banking Connections last year, we have published a series of articles on effective corporate governance and sound risk management. In late 2012, Kevin Moore wrote about how material loss reviews of failed banks from the recent crisis revealed that, in many cases, the boards of directors and senior management had not ensured that "risk management processes, internal controls, and capital were sufficient to mitigate the increased risk exposure." Then, in early 2013, Teresa Curran wrote about how "successful management teams and boards of directors typically identify and mitigate risks before considering and introducing new products and services." Finally, in the most recent issue, Ron Feldman challenged the "this time it will be different" thinking and cautioned that "effective bank management recognizes that risks from the past can occur again in the future."3 A common thread woven throughout these articles is the importance of holding capital commensurate with risk.

In this article, I will focus on that thread of ensuring capital adequacy through effective capital planning. I will share with you my perspectives on this subject by focusing first on lessons learned from the recent crisis and the importance of capital planning, and then looking at capital adequacy and assessing risks, capital



Jennifer Burns

maintenance activities, and governance over capital planning processes.

continued on page 8

¹ Kevin Moore, "View from the District: The Importance of Effective Corporate Governance," Community Banking Connections, Fourth Quarter 2012, at www.cbcfrs.org/articles/2012/Q4/Importance-of-Effective-Corporate-Governance.cfm.

INSIDE		
Essentials of Effective Interest Rate Risk Measurement	2	
Community Banks and the Revised Regulatory Capital Framework	4	
Assessing Inherent BSA/AML Risk at Community Banks	6	
D.C. Updates	11	
FedLinks	18	
Banking Alert: Patent Lawsuits Against Community Banks Are Increasing	22	
Regulatory Recap	23	

² Teresa Curran, "View from the District: Considerations When Introducing a New Product or Service at a Community Bank," Community Banking Connections, First Quarter 2013, at www.cbcfrs.org/articles/2013/Q1/ Considerations-When-Introducing-A-New-Product.cfm.

³ Ron Feldman, "View from the District: Confronting 'This Time Will Be Different' in 2013," *Community Banking Connections*, Second Quarter 2013, at www.cbcfrs.org/articles/2013/Q2/Confronting-This-Time-It-Will-Be-Different-in-2013.cfm.

Essentials of Effective Interest Rate Risk Measurement

by Emily Greenwald, Assistant Vice President, Federal Reserve Bank of Chicago and Doug Gray, Managing Examiner, Federal Reserve Bank of Kansas City

Interest rate risk (IRR) is defined as the potential for changing market interest rates to adversely affect a bank's earnings or capital protection. Two previous issues of Community Banking Connections included articles on IRR management for community banks. The first article provided an overview of key elements of an IRR management program and common pitfalls faced at community banks. The second article focused more attention on directors' and senior managers' specific responsibilities, including development of sound policies and IRR exposure limits. In this article, the discussion proceeds to IRR measurement issues, including the appropriateness of certain measures and some of the challenges faced in modeling risk exposures.

Perhaps the most discussed IRR management topic for community banks is risk measurement. Community bankers often ask which techniques, tools, and models are needed and how those tools can be fine-tuned. At the most basic level, regulators expect a bank's IRR measurement tools and techniques to be sufficient to quantify the bank's risk exposure.2

Measurement techniques typically fall into two broad categories: short-term and long-term risk measures (Figure 1). Generally speaking, short-term measurement techniques attempt to quantify the size of a bank's risk relative to the earnings stream generated by bank operations. Alternatively, long-term measurement techniques attempt to quantify the size of a bank's risk relative to its capital protection.

Community Banking Connections is published quarterly and is distributed to institutions supervised by the Federal Reserve System. Current and past issues of Community Banking Connections are available at www.communitybankingconnections.org or www.cbcfrs.org. Suggestions, comments, and requests for back issues are welcome in writing (editor@communitybankingconnections.org) or by telephone (215) 574-3417.

Editor: Hilda Guay
Project Manager: Donna Gulle
Designer: Advisory Board: Jackie Brunmeier, Assistant Vice President and Chief Risk Officer, Supervision, Regulation, and Credit, FRB Minneapolis, Cynthia Course, Principal, Banking Supervision and Regulation, FRB San Francisco, Minh Farnsworth, Specialist, Supervision, Regulation, and Credit, FRB Philadelphia, Joan Fischmann, Assistant Vice President and Regional Director, Supervision and Regulation, FRB Chicago, Jinai Holmes, Senior Supervisory Financial Analyst, Policy Implementation and Effectiveness, Division of Banking Supervision and Regulation, Board of Governors, Tara Humston, Assistant Vice President, Supervision and Regulation, Board of Governors, T. Kirk Odegard, Assistant Director, Policy Implementation and Effectiveness, Division of Banking Supervision and Regulation, Board of Governors, Erik Soell, Director, Rapid Communications, FRB St. Louis, Constance Wallgren, Vice President and Chief Examinations Officer, Supervision, Regulation, and Credit, FRB Philadelphia, Lauren Ware, Assistant Vice President, Supervision and Regulation, Board of Governors

The analyses and conclusions set forth in this publication are those of the authors and do not necessarily indicate concurrence by the Board of Governors, the Federal Reserve Banks, or the members of their staffs. Although we strive to make the information in this publication as accurate as possible, it is made available for educational and informational purposes only. Accordingly, for purposes of determining compliance with any legal requirement, the statements and views expressed in this publication do not constitute an interpretation of any law, rule, or regulation by the Board or by the officials or employees of the Federal Reserve System.

Copyright 2013 Federal Reserve System. This material is the intellectual property of the Federal Reserve System and cannot be copied without permission.

¹ Doug Gray, "Interest Rate Risk Management at Community Banks," Community Banking Connections, Third Quarter 2012, at www.cbcfrs.org/ articles/2012/Q3/Interest-Rate-Risk-Management.cfm; and Doug Gray, "Effective Asset/Liability Management: A View from the Top," Community Banking Connections, First Quarter 2013, at www.cbcfrs.org/articles/2013/Q1/ Effective-Asset-Liability-Management.cfm.

² Refer to interagency guidance on IRR communicated by Federal Reserve Supervision & Regulation (SR) Letter 12-2, "Questions and Answers on Interagency Advisory on Interest Rate Risk Management," at www.federal reserve.gov/bankinforeg/srletters/sr1202.htm; SR Letter 10-1, "Interagency Advisory on Interest Rate Risk," at www.federalreserve.gov/boarddocs/ srletters/2010/sr1001.htm; and SR Letter 96-13, "Joint Policy Statement on Interest Rate Risk," at www.federalreserve.gov/boarddocs/srletters/1996/ sr9613.htm. Also see section 4090, "Interest-Rate Risk Management," of the Federal Reserve's Commercial Bank Examination Manual, at www. federalreserve.gov/boarddocs/supmanual/cbem/4000.pdf.

Measuring IRR is nothing new, as bankers have measured aspects of IRR for decades beginning with basic static gap analyses. Technological advancements have allowed IRR measurements to evolve from simple spreadsheet calculations to software and third-party vendors capable of measuring complex cash flows. Today, even noncomplex community banks can obtain cost-effective asset/liability management (ALM) models to quantify both short-term and long-term IRR exposures (although the Federal Reserve does not require community banks to purchase such models). While some of these models use complex mathematical computations to calculate a bank's IRR exposure, the short- and long-term measures captured by these ALM models are conceptually straightforward. Before discussing essential considerations in selecting and operating an ALM model, it is important to clearly understand each measure conceptually.

IRR exposure. For example, a bank with rate-sensitive assets that significantly exceed the volume of rate-sensitive liabilities would expect the net interest margin to decline when market interest rates also decline. While the static gap report might provide some indication of the direction of IRR, it is an imprecise risk measurement tool. Specifically, the static gap report does not effectively capture cash flow timing from unscheduled loan and bond payments (prepayments), and slotting the repricing horizon of nonmaturity deposits becomes extremely difficult at best. Thus, it may only be suitable for banks that have very low IRR profiles to rely solely on this measure to quantify short-term IRR exposures.

Earnings at Risk (EaR)

Because of the shortcomings of static gap reports, most community banks have implemented IRR models that

> compute EaR over a 12-month or 24-month time horizon to quantify short-term earnings exposures. To compute these earnings exposures, most models begin by calculating either net interest income or net income in a scenario in which interest rates do not change (base case). Income and expenses are then recalculated in scenarios with higher and lower interest rates.

The results of each variation are compared against the base case scenario to determine the potential change in earnings from each.

Figure 1: Common Interest Rate Risk Measurement Techniques **Short-Term Measures** Long-Term Measures Long-Term Economic Value Static Gap at Risk Earnings at Risk of Equity

Short-Term Measures

Short-term measurement techniques quantify the potential reduction in earnings that might result from changing interest rates over a 12- to 24-month time horizon. The two most common short-term measures for community banks are static gap reports and earnings-at-risk (EaR) analysis.

Static Gap

Static gap reports attempt to highlight potential "gaps" in the near future (typically over the next 12 months), where changes to interest rates on assets such as loans and bonds, or liabilities such as deposits, do not occur contemporaneously. Thus, when the prevailing market interest rates change, a bank could experience net interest margin compression, reduced net income, or both. Assets and liabilities with interest rates that change in the measurement window (say 12 months) are referred to as "rate-sensitive." The difference between cumulative rate-sensitive assets and liabilities for the period being measured is referred to as the "static gap." A large gap indicates a potentially significant

Long-Term Measures

Long-term measurement techniques quantify the potential exposure to capital — either through reduced long-term earnings or a reduced economic value of capital — that might result from changing interest rates. While long-term (up to five years) net income simulations (i.e., EaR analysis) are occasionally used at community banks, the most common long-term measurement technique is some variation of economic value of equity (EVE) analysis. EVE analysis, unlike the EaR measure, involves projecting cash flows from assets and liabilities over the economic life of each product, assuming interest rates will not change. Cash flows are then discounted to determine their present value, and the present value of liabilities is subtracted from the present value of assets to determine the bank's EVE in a base case. Cash flows are also projected for various rising and falling interest

continued on page 12

Community Banks and the Revised Regulatory Capital Framework

by Policy Staff at the Board of Governors of the Federal Reserve System

On July 2, 2013, the Federal Reserve Board approved a final regulatory capital rule to help ensure that banking organizations of all sizes and risk profiles maintain strong levels of high-quality capital. On July 9, 2013, the Federal Deposit Insurance Corporation's board of directors approved an interim final rule and the Office of the Comptroller of the Currency approved a final rule identical in substance to the Federal Reserve's final rule. The rules adopted by the federal banking agencies (revised capital framework) are designed to improve the overall resilience of the U.S. banking system and of individual banking organizations by increasing the quantity and quality of regulatory capital and by addressing shortcomings in regulatory capital requirements that became apparent during the recent financial crisis.

The revised capital framework applies to all banking organizations currently subject to minimum capital requirements, including national banks, state member banks, state nonmember banks, state and federal savings associations, and top-tier bank holding companies (BHCs),² as well as to certain savings and loan holding companies (SLHCs)³ that were not previously subject to minimum capital requirements (collectively, banking organizations). As with the current regulatory capital framework, the requirements for large, internationally active banking organizations are more complex than those for smaller, less complex banking organizations.⁴

All banking organizations subject to the revised capital framework, including community banks, will have a significant transition period to meet the new regulatory capital requirements. In particular, community banks will not be subject to the revised capital framework until January 2015.

Similar to what the federal banking agencies highlighted in the "New Capital Rule: Community Bank Guide" issued in July 2013,⁵ this article notes several changes that were proposed by the agencies in June 2012 (the June 2012 proposal) but that were not adopted in the revised capital framework, in large part to minimize burden on community banks, as well as some of the key changes from the current framework that are most relevant for community banks. Community banks should refer to the revised capital framework itself for a more comprehensive discussion and understanding of applicable requirements, as this article does not provide full coverage.

Key Changes from the June 2012 Proposal

In June 2012, the federal banking agencies issued for comment three notices of proposed rulemaking (NPRs) that would revise and replace the agencies' capital rules.⁶ The agencies received more than 2,500 comments on the proposed changes, with the majority of the comments submit-

¹ See "Federal Reserve Board approves final rule to help ensure banks maintain strong capital positions," Board of Governors of the Federal Reserve System press release, July 2, 2013, available at www.federalreserve.gov/newsevents/press/bcreg/20130702a.htm.

² The revised capital framework applies to BHCs that are not subject to the Federal Reserve Board's Small BHC Policy Statement (typically those with total consolidated assets of less than \$500 million). See 12 CFR 225, Appendix C (Small Bank Holding Company Policy Statement).

³ At this time, the revised capital framework does not apply to SLHCs with significant commercial or insurance underwriting activities (as specified in the revised capital framework). The Federal Reserve Board will take additional time to evaluate the appropriate regulatory capital framework for these entities.

⁴ For example, banking organizations with more than \$250 billion in total consolidated assets or \$10 billion in on-balance-sheet foreign exposures (advanced approaches banking organizations) are subject to the advanced approaches risk-based capital rule and, under the revised capital framework, an additional minimum supplementary leverage ratio and a countercyclical capital buffer.

⁵ See www.federalreserve.gov/bankinforeg/basel/files/capital_rule_community bank guide 20130709.pdf.

⁶ The press release announcing the June 2012 proposal and the attachments (Basel III NPR, Advanced Approaches and Market Risk NPR, and Standardized Approach NPR) are available at www.federalreserve.gov/newsevents/press/bcreg/20120612a.htm. See "Agencies Seek Comment on Regulatory Capital Rules and Finalize Market Risk Rule," Board of Governors of the Federal Reserve System, the Federal Deposit Insurance Corporation, and the Office of the Comptroller of the Currency press release, June 12, 2012.

ted by community banks expressing concern about certain aspects of the NPRs that they believed would have imposed undue burden. Community banks were particularly concerned about three elements of the proposals: the elimination of the filter for most components of accumulated other comprehensive income (AOCI), the phase-out of trust preferred securities (TruPS) from tier 1 capital, and the proposed treatment for residential mortgage exposures. The agencies carefully considered all the comments received and, as a result, made a number of changes prior to adopting the revised capital framework to reduce the number of and simplify the modifications of the current general risk-based capital rules that apply to community banks.

66 The agencies made a number of changes prior to adopting the revised capital framework to reduce the number of and simplify the modifications of the current general risk-based capital rules that apply to community banks.

AOCI Filter

In contrast to the current treatment, the June 2012 proposal would have required all banking organizations to reflect most AOCI components, including unrealized gains and losses on available-for-sale securities, in regulatory capital. A number of commenters said that this proposed change would result in significant regulatory capital volatility due to, for example, fluctuations in benchmark interest rates, which could be especially difficult for community banks to manage. Under the revised capital framework, nonadvanced approaches banking organizations (including community banks) may elect to continue with the current AOCI treatment and exclude most of the AOCI components from regulatory capital (the AOCI opt-out election). The AOCI opt-out election must be made on a banking organization's first Call Report, FR Y-9C, or FR Y-9SP, as applicable, filed after January 1, 2015. The agencies have proposed changes to the reporting forms, as noted below in the "Implementation" section, that would facilitate this election.

Nonqualifying Capital Instruments and Tier 1 Capital

The June 2012 proposal would have required all banking organizations to phase out TruPS and cumulative perpetual preferred stock from tier 1 capital. A number of commenters asserted that TruPS had been an effective source of capital for small banking organizations that may have a more limited access to capital markets than larger organizations. In addition, commenters referred to section 171 of the Dodd-Frank Act, which would permit smaller banking organizations (including banking organizations with total consolidated assets of less than \$15 billion as of December 31, 2009) to include in tier 1 capital TruPS and certain other capital instruments that were issued prior to May 19, 2010.7

In light of the concerns raised, the revised capital framework permits depository institution holding companies with less than \$15 billion in total consolidated assets as of December 31, 2009, (and banking organizations that were mutual holding companies as of May 19, 2010) to continue including capital instruments that were issued by these institutions prior to May 19, 2010, and that are currently included in tier 1 capital (such as TruPS and cumulative perpetual preferred stock), subject to limits. Specifically, similar to the current general risk-based capital requirements, these instruments are limited to 25 percent of tier 1 capital elements, excluding any nonqualifying capital instruments and after all regulatory capital deductions and adjustments are applied to tier 1 capital.

Residential Mortgages

Under the June 2012 proposal, a bank would divide its residential mortgage exposures into one of two categories based on various risk characteristics and then assign a risk weight based on the exposure's loan-to-value ratio. Commenters raised concerns that the proposed changes would be burdensome for banks and, in light of other mortgage-related rules, could reduce credit availability by discouraging community banks from engaging in mortgage lending. In light of these comments, and the importance of community banks' lending in local economies, the agencies retained the current treatment for residential mortgage exposures.

continued on page 16

⁷ "Dodd-Frank Act" refers to the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (Pub. L. 111-203, 124 Stat. 1376).

Assessing Inherent BSA/AML Risk at Community Banks

by Bronwen Macro, BSA/AML Risk Coordinator, Federal Reserve Bank of San Francisco

Every community bank faces some degree of inherent Bank Secrecy Act/Anti-Money Laundering (BSA/AML) risk. This inherent risk comes from a bank's products and services, customers and entities, and the geographical locations in which the institution and its customers operate. Effective BSA/AML compliance programs incorporate appropriate controls to mitigate these risks. However, with the rapid speed of innovation in the banking industry and a continued regulatory focus on BSA/AML compliance, accurately assessing inherent BSA/AML risk is an important first step in the BSA/AML compliance process.

This article is intended to help community bankers understand potential indicators that can be indicative of elevated levels of inherent BSA/AML risk and heightened legal and compliance risk that may bring greater regulatory focus.¹ The article begins by reviewing some of the factors regulators may assess to identify institutions' inherent BSA/AML risk and discussing the evolving nature of that risk. It then offers observations on key characteristics of effective risk identification programs and examiner expectations for analysis and mitigation of community bank BSA/AML compliance risks. It concludes with a specific discussion of two important areas: (1) setting the right compliance tone at the top of the organization and (2) including the BSA compliance officer in new product development discussions.

Evolving Nature of BSA/AML Risk

Over the past 40 years, both the BSA/AML regulatory environment and the financial services environment have evolved. When the Bank Secrecy Act was enacted in 1970, the primary intent was to combat drug trafficking, with regulations focused on the domestic banking system and on cash transactions, which were most often conducted face-to-face. In 2001, with the passage of the USA PATRIOT Act, the AML framework in the United States and the BSA itself were significantly amended in recognition of the changed landscape of financial crimes and systems. BSA/

AML regulatory requirements were expanded to confront a broader set of criminal activities, including terrorist financing. Regulations address the complex financial services environment that has continued to evolve since the BSA was first enacted; this environment now relies to a large extent on fast-paced, anonymous transactions within a globally intertwined financial system.

Increasingly complex product offerings complicate risk assessment activities, as these offerings, by their very nature, are more difficult to assess than traditional banking products and services. For example, electronic banking systems, the purpose of which are to expedite the delivery of banking products and services, have replaced traditional face-to-face contact with remote, electronic account opening and transaction initiation. Likewise, electronic cash, including mobile payments and pre-paid cards, provide similar conveniences but also greater risks associated with reduced transparency of transactions.

While these innovations deliver numerous benefits to customers and bankers, the change in delivery systems often increases the risks of what previously were lower-risk services. For example, online account openings present challenges in verifying the account holder's true identity and geographic origin or business footprint; these challenges are further exacerbated by the almost instantaneous processing and settlement of transactions. All these issues affect an institution's ability to predict the type and frequency of transactions the customer is likely to make; without a firm understanding of the customer's risk profile, monitoring for suspicious activity and, by extension, the reporting of suspicious activity can be more challenging.

In addition to the fast pace of innovation, banks are facing a sustained low interest rate environment, and many institutions find themselves facing added pressure to offer new and competitive services, sometimes without adequately reviewing and assessing the risk of these services. Implementation of these products without appropriate vetting can mean that the inherent risk profile of the institution increases without

 $^{^{\}rm I}$ While this article focuses on community banks, these principles are relevant to banks of all sizes.

a commensurate enhancement to risk mitigants. At the same time, the low interest rate environment also introduces pressure to cut costs, and operational areas such as compliance are often prime targets for trimming. Institutions with increasing BSA/AML risk profiles and dwindling resources may be vulnerable to having weakened BSA/AML programs.

As BSA/AML risk increased, the financial crisis may have diverted some management teams' focus away from BSA/ AML as they addressed their institutions' financial viability. Consequently, some BSA/AML programs became stagnant and did not keep pace with the institutions' subsequent growth, expansion, and changing risk profile.

Throughout this time, the core BSA/AML program elements have remained the same; however, as banking products and services became more complex and electronic in nature, accurately assessing these risks became even more challenging and critical. At the same time, the consequences of noncompliance have become more severe.

Importance of Proper Risk Assessment

Identifying the inherent BSA/AML risk of an institution's products and services, customers and entities, and the geographic locations in which the institution and its customers operate is the first step in developing an effective BSA/AML compliance program. It is only after these risks are identified and analyzed that an institution can begin to develop a compliance program tailored to and commensurate with the risk profile of the institution. Understanding the inherent risk faced by the institution will determine how it approaches the four pillars² of BSA compliance. For example, the level of inherent risk should determine (1) the nature and extent of internal controls, (2) the scope of independent testing, (3) the skills and expertise required of the BSA compliance officer, and (4) the focus of and approach to training. The board of directors and senior management at community banks should develop compliance programs tailored to the specific inherent risks of their institutions. Likewise, the nature and extent of mitigating controls, including investments in infrastructure and human resources, should be commensurate with a bank's risk profile.

The stakes for failing to comply with BSA/AML regulations have never been higher. Not only has noncompliance in some recent cases resulted in significant fines and penalties, but weak programs can also stall expansionary plans. In 2012, various regulatory agencies assessed fines and penalties against a number of institutions that in aggregate exceeded \$3.2 billion;3 this represented the largest amount in BSA/AML and Office of Foreign Assets Control penalties ever imposed over a one-year period. In addition to the monetary penalties and fines, these banks incurred significant expenses associated with remediating their compliance programs, such as increases in staffing and investments in technology, as well as related legal expenses. But even if compliance program shortcomings are not significant enough to warrant monetary penalties, material deficiencies that are deemed to make a program less than satisfactory can curtail an institution's expansionary activities. Section 327 of the USA PATRIOT Act requires federal banking agencies to consider an institution's BSA/ AML compliance program when reviewing a bank's application. The Board of Governors of the Federal Reserve System (Board) has published a supervisory letter on Section 327 for institutions submitting applications to the Board that states:

"On a case-by-case basis, depending on information contained in examination reports and obtained from other regulators, further information about the effectiveness of an applicant's anti-money laundering activities may be required from the applicant to complete the Federal Reserve's analysis of an application. The applications record maintained by the Board and the Reserve Banks should continue to include documentation relating to the review of an applicant's efforts to combat money laundering activities, including information about contacts with other regulators."4

Thus, inadequate BSA/AML compliance could adversely affect a banking application.

continued on page 19

² BSA/AML programs must include the following minimum requirements (also known as the four pillars): (1) a system of internal controls, (2) independent testing of BSA/AML compliance, (3) designation of an individual or individuals responsible for managing BSA compliance (BSA compliance officer), and (4) training for appropriate personnel.

³ See details of fines and penalties assessed in 2012 by OFAC at www. treasury.gov/resource-center/sanctions/CivPen/Pages/2012.aspx; FinCEN at www.fincen.gov/news room/nr/; and the Federal Reserve at www.federal reserve.gov/newsevents/press/enforcement/20121210a.htm.

⁴ See SR Letter 02-8, "Implementation of Section 327 of the USA Patriot Act in the Applications Process," March 20, 2002, at www.federalreserve. gov/boarddocs/srletters/2002/sr0208.htm.

Capital Planning: Not Just for Troubled Times

continued from page 1

Capital planning is not just for troubled times; it is a key component of a sound risk management framework. Similarly, capital adequacy is broader than just meeting the minimum regulatory capital requirements. It speaks to the level of capital held by individual institutions in relation to their risk profiles and risk management strategies. When bank examiners evaluate and assign a capital rating, they consider both planning and adequacy, among other factors.

Lessons from the Crisis and the Importance of Capital Planning

Supervisors have long emphasized that banks of all sizes should have risk-sensitive and forward-looking capital planning processes. Unfortunately, leading up to the recent financial crisis, some bankers were not forward looking enough. During the crisis, many banks did not have risk management programs that linked capital needs to the bank's risk profile, nor did they have early warning systems to provide advance notice of looming capital shortages so that mitigating actions could be taken sooner. The acute problems encountered by many of the largest banking organizations are well documented. Moreover, as financial conditions deteriorated and higher capital levels were needed to absorb losses, the ability of community banks⁴ to raise capital was challenging for some and impossible for many others. By the time these organizations recognized that they needed more capital, in many cases it was too late to obtain it, particularly without significant dilution of existing shareholders. A key lesson learned is that effective capital planning programs would have alerted bank leadership of the need to improve capital positions while options were still available.

Alan Lakein, a well-known author on personal time management, said, "Planning is bringing the future into the present so that you can do something about it now." That applies to capital planning as well: Think about the future so that you can take action today.

During the crisis, the Federal Reserve reaffirmed the importance of capital planning for institutions of all sizes.⁵

Capital planning should be a forward-looking process to help the board of directors and senior management ensure that the bank has adequate capital based on its current and prospective risk profile. Capital planning, coordinated with the bank's strategic planning and new product adoption processes, provides the board and management with a more holistic view, which should better prepare the bank for less likely outcomes by considering both short- and long-term capital needs. Having a capital planning process consistent with the bank's risk levels and growth plans helps the board and management plan more effectively for both capital and business line decisions.

Having a capital planning process consistent with the bank's risk levels and growth plans helps the board and management plan more effectively for both capital and business line decisions.

Capital Adequacy and the Assessment of Risks

Effective capital planning begins with identifying and assessing material risks. The board and senior management should establish a process to identify material risks, both actual and anticipated, on an ongoing basis. The process should consider not only the primary banking risks — credit, market (including interest rate), liquidity, operational, reputational, and legal⁶ — but also risks from off-balance-sheet exposures

⁴ Although this article refers to "community banks" for the sake of simplicity, that term is intended here to include not only depository institutions but also community bank holding companies.

⁵ See Supervision and Regulation (SR) Letter 09-4, "Applying Supervisory Guidance and Regulations on the Payment of Dividends, Stock Redemptions, and Stock Repurchases at Bank Holding Companies," at www. federalreserve.gov/boarddocs/srletters/2009/SR0904.htm.

⁶ Federal Reserve assessments of the adequacy of a bank's risk management are focused primarily — but not exclusively — on these six risks, as described in SR Letter 95-51, "Rating the Adequacy of Risk Management Processes and Internal Controls at State Member Banks and Bank Holding Companies," available at www.federalreserve.gov/boarddocs/srletters/1995/sr9551.htm.

and contingent liabilities, regional and macroeconomic factors, vendor or third-party relationships, and any other risks to which the bank is exposed.

Risks that can be quantified should be measured. Those that cannot be measured should be evaluated qualitatively using bank management's judgment and expertise about the nature and potential exposure from these risks. When evaluating risks, management should consider the strength of its risk management practices to mitigate those risks.

Approaches for Assessing Risks

One common misconception is that capital planning is synonymous with stress testing. Capital planning is a process that can include some form of stress testing, but it is not limited to stress testing, since it involves assessing capital positions, making capital decisions, and evaluating capital contingencies. For example, a bank with historically high capital levels relative to its risks, a conservative no- or low-growth business model, and a demonstrated capacity to determine capital needs based on its risk profile could effectively conduct capital planning without stress testing. That said, it is prudent for banks to consider adverse events and the potential impact on the bank (for example, if a major employer were to close operations).

As reinforced last year by the federal banking agencies, community banks are not subject to Dodd-Frank Wall Street Reform and Consumer Protection Act stress testing requirements.7 However, it is always appropriate for banks of all sizes to ask themselves the "what could happen to us?" questions. Some accomplish this through stress testing. Essentially, stress testing is a risk management tool that uses hypothetical extreme, but conceivable, events and measures how these events would affect the bank's condition. When used as part of capital planning, stress testing enables management to think through the impact on earnings, and ultimately capital, and make decisions about whether changes to business strategy or the balance sheet are needed.

⁷ See Board of Governors of the Federal Reserve System, Federal Deposit Insurance Corporation, and Office of the Comptroller of the Currency, "Agencies Clarify Supervisory Expectations for Stress Testing by Community Banks," press release, May 14, 2012, available at www.federalreserve.gov/ newsevents/press/bcreg/20120514b.htm. Community banks are subject to other guidance that describes the possible use of stress testing as part of sound risk management, especially for higher-risk exposures such as subprime lending, concentrations in commercial real estate lending, interest rate risk, and funding and liquidity risk.

Two stress testing approaches often used are 1) sensitivity analysis and 2) scenario analysis. Sensitivity analysis examines how sensitive a portfolio is to variations (or shocks) in certain inputs (for example, recovery or loss rates). It can help answer the question, "Given a change in loan past due and loss rates by loan type, what is the impact on asset quality, earnings, and capital?" Scenario analysis involves looking at historical or hypothetical scenarios as part of a specific narrative — such as a major recession, an inflation crisis, or a regional natural disaster — to determine the effect on profit and loss in various "what if" situations.

The approach used does not need to be a complicated, expensive, or burdensome process for community banking organizations with traditional business models but should be more developed at banks with higher risk profiles. Riskier business strategies require more comprehensive planning because of the greater degree of uncertainty.

Moreover, it is not necessary to buy a vendor stress testing tool for capital planning purposes. Simple spreadsheets, for example, can serve as effective tools for noncomplex community banks. We have seen some instances in which a community bank developed in-house spreadsheet-based stress tests on its portfolios to supplement its capital planning.

If a bank chooses to use a vendor tool, it should be properly customized. For the tool to be effective, bank management should take the time to input bank-specific data into the tool and fully understand the tool's computations and limitations when applied to that organization. For example, using a bank's own historical loss rates rather than the industry loss rates would be considered a sound approach, particularly if the bank's underwriting standards had remained relatively constant over this period and its own historical loss rates were appropriate for the current lending environment. Moreover, in order to make the tool most effective for capital planning, it is important to consider that during the financial crisis and subsequent recession, the timing, degree, and length of the crisis played out very differently depending upon geography, market, and product. So, using a one-sizefits-all tool may not always be appropriate.

If a bank uses a stress testing tool for capital planning, whether developed in-house or obtained from a vendor, all documentation, including assumptions, should be maintained. Above all, discussions of key assumptions and results should be captured in board meeting minutes to show that the board of directors is aware of the actual and potential

risks the bank has accepted or plans to accept. Any quantitative models used for capital planning, whether developed internally or by third parties, are subject to existing supervisory expectations for model risk management.⁸

Finally, capital planning and strategic planning should be linked. In addition to determining the amount of capital needed to support existing risks, a bank should consider strategic initiatives, such as new businesses or services, growth plans, and/or entering into new markets when assessing future capital needs. Sensitivity and scenario analyses can be helpful not only in understanding the capital needed to support current risks but also in evaluating new strategies.

Capital Maintenance Activities

Once risks and strategies have been assessed, appropriate capital levels should be established based on the unique risk profile of the firm and should incorporate both short- and long-term capital needs. Capital levels should be expressed as ratios that relate to regulatory definitions and requirements (that is, leverage and risk-based capital ratios), as well as any other ratios that are used by key stakeholders.

For capital planning, banks should have explicit capital targets, which in some cases may include a "cushion" for unexpected circumstances. One of the most frequent deficiencies we see when examining community banks' capital planning processes is the use of regulatory capital minimums, or a prompt corrective action (PCA) level of "well capitalized," for capital targets. Banking organizations should operate well above the regulatory minimums, and the targets should be based upon the quantitative and qualitative assessments of risk.

The more effective bank capital policies typically also establish early warning thresholds for key measures. These triggers should be proactive and provide sufficient early warning to allow bank leadership to take action in advance of adverse scenarios (that is, capital levels are a concern or might catch the attention of regulators). The triggers should inspire discussion early enough so that bank leadership has many options to choose from to improve capital. Specific triggers for capital maintenance could be linked (for example, concentration levels, levels of nonperforming assets to capital, liquidity and interest rate risk levels, or absolute levels of capital).

I would like to note two common pitfalls to avoid in order to develop a capital policy and planning process that is both realistic and effective. First, capital plans should be realistic and incorporate appropriate triggers for taking action. Establishing thresholds, for example, that would not be breached despite significant financial stress or growth may not sufficiently alert the board or senior management that capital was too low relative to risk. In addition, setting capital thresholds so low that, by the time they were breached, regulatory concerns would have already been raised would not be an appropriate practice. Second, capital plans should sufficiently address new exposures, concentrations in lending exposures or revenue sources, or reliance on wholesale funding, for example, to be considered "commensurate with the bank's risk profile."

Capital planning should include potential sources of capital, both internal and external, and should note the timeframes within which these various sources of capital could be acquired. It should also include the types of events and actions that could affect capital (for example, shareholder dividends and repaying holding company debt). Specific strategies to build capital, both in the short and long term, should also be outlined as part of this process. These strategies could include, for example:

- Earnings retention (reduction of capital distributions/ elimination of dividends)
- Restrictions on asset growth (ceasing expansion plans/ deleveraging)
- Infusion from principal shareholder or parent company
- Public offering

Capital Planning Governance

As with all risk management processes, board oversight is critical in the capital planning process. The board should be actively engaged in setting approved capital limits and triggers and should ensure that senior management has processes in place for monitoring risk limits and other capital measures. The board should review the capital planning process annually.

⁸ See SR Letter 11-7, "Guidance on Model Risk Management," at www.federalreserve.gov/bankinforeg/srletters/sr1107.htm.

⁹ Community bank capital plans refer to the outcome of the planning process described in this article. The Federal Reserve Board's capital plan rule for bank holding companies with total consolidated assets of \$50 billion or more and long-established expectations that banks that fail to meet the minimum risk-based capital requirements or prompt corrective action thresholds will develop and implement capital restoration plans are beyond the scope of this article.

It is essential that the board receives periodic reporting and documents discussions about capital levels and trends in the minutes. Oftentimes, board packages include information that is more transactional in nature rather than information focused on aggregate risk taken in the portfolio. One of the senior bank supervisors from my Reserve Bank recently advised a group of bank directors to take their board package and divide the reports into two piles — the reports in the first pile provided transaction-based information and those in the second were aggregated on a portfolio level. If the latter pile was fairly small, she told them they may want to question whether they are receiving the right information on overall

risk levels and trends. I believe this is good advice and particularly important when monitoring capital adequacy.

Conclusion

Banks are expected to maintain sufficient capital relative to risks and have processes to ensure that capital remains adequate. Examiners evaluate both the adequacy of capital levels and the effectiveness of the capital planning process. Effective capital planning is a key component of an ongoing sound risk management framework and is not just for use in an economic downturn or during troubled times.

Capital planning should include identifying and assessing all material risks, establishing capital levels that are tailored to the bank's risk profile - not just the regulatory minimums — and documenting strategies to raise capital when necessary. Stress testing is not a required element of capital planning, but it can be a useful tool for understanding the impact of adverse conditions on the bank's earnings and capital if it is properly tailored to the bank's risk profile. Management should establish an ongoing process to ensure adequate capital levels and effective capital planning, and the board of directors should provide effective oversight of management's processes.

Current Guidance Resources

- The Federal Reserve Commercial Bank Examination Manual (Section 3020, "Assessment of Capital Adequacy")
- SR Letter 09-4, "Applying Supervisory Guidance and Regulations on the Payment of Dividends, Stock Redemptions, and Stock Repurchases at Bank Holding Companies" Note: While this letter applies specifically to bank holding companies, the capital planning principles can be applied to community banks as well.
- SR Letter 11-7, "Guidance on Model Risk Management"

D.C. UPDATES

Governor Elizabeth "Betsy" A. Duke resigned from the Federal Reserve Board effective August 31, 2013. A former community banker, Governor Duke served on the Board beginning in August 2008. She provided strong leadership in ensuring that the Federal Reserve's supervisory program for community banks was effective and that supervisory policies and guidance were applied appropriately and in a proportionate manner to community banking organizations. Governor Duke was the first chair of the Board's subcommittee that makes recommendations about matters related to community and regional bank supervision and regulation. That subcommittee remains actively engaged in matters affecting community banks following her departure.

On August 12, 2013, the Federal Reserve Board announced the members of its Community Depository Institutions Advisory Council (CDIAC) and the president and vice president of the council for 2014. The CDIAC advises the Board on the economy, lending conditions, and other issues. Drake Mills, president and chief executive officer of Community Trust Bank, Ruston, LA, will serve as president in 2014. John B. Dicus, chairman, president, and chief executive officer of Capital Federal Savings Bank, Topeka, KS, will serve as vice president. The complete announcement, including the names of the additional CDIAC members, is available at www.federalreserve.gov/newsevents/press/other/20130812a.htm.

Essentials of Effective Interest Rate Risk Measurement

continued from page 3

rate scenarios and discounted at higher and lower discount rates to recalculate the EVE. The percent change in EVE from the various scenarios provides a meaningful measure of the bank's long-term IRR exposure relative to capital. The real value in EVE analysis is identifying risk exposures that extend beyond the next 12 to 24 months. For example, if a bank's analysis reflects a significant reduction in EVE in a period of rising rates, research has indicated that the bank's financial performance would be expected to deteriorate in the years following a period of increasing interest rates.³

It is a longstanding expectation by U.S. banking supervisors that all banks will assess the potential impact of IRR on earnings and capital. While EVE analysis is a beneficial measure of long-term IRR exposure for community banks, regulatory guidance does not require every community bank to conduct such analysis. EVE analysis is particularly useful, and often required by examiners, for banks with long-term bond portfolios and assets with embedded options. The risks from these assets are typically not captured by short-term measures. Community banks with short-term balance-sheet structures and ample capital and earnings, however, would not always be expected to use EVE analysis to compute long-term IRR exposures.

Key Considerations

When a bank considers purchasing ALM model software or contracting with a third party to measure its IRR, a number of considerations should factor into the decision. Some of these considerations include, but are not limited to, the intended use of the model, cost, measurement capabilities, features, reporting, and customer support. When selecting any ALM model, management should also weigh the strengths of the model against its limitations. Choosing an ALM model is a bank-specific decision, where one size truly does not fit all. From a regulatory perspective, we will focus on two key considerations: a bank's intended use and the measurement capabilities of the model.

Intended Use

Evaluating management's intended use is a key first step in selecting an ALM model. An important primary use of any bank's ALM model is measuring the bank's IRR exposure. While this seems intuitive, not all community bankers have given the appropriate consideration to measuring all of the bank's material IRR exposures. Once established, the ALM model may also be used for other purposes, such as profit planning, asset pricing, liquidity planning, and other functions, all of which are distinct and secondary to basic IRR measurement.

As discussed earlier, ALM model results are derived by projecting cash flows, which contemplate likely behavior of the bank's management team and customers to changing market interest rates. The simplest ALM models create cash flows and accrual calculations from Call Report data fields, while more sophisticated models derive such information from detailed product attributes of the bank's assets and liabilities. By projecting these cash flows, ALM models are used to construct commonly utilized EaR and EVE measures. Since the primary intended use is measuring EaR and EVE, understanding the capabilities and key assumptions that go into these calculations is crucial to evaluating an ALM model.

Measurement Capabilities

Another key consideration in choosing the appropriate ALM model is the measurement capabilities of the software or third-party vendor. Some models provide the user with a standard set of basic interest rate change scenarios, such as instantaneous, uniform changes in all prevailing market rates (for example, all rates increase 300 basis points) that are evaluated against the existing balance sheet. Other models provide the ability to evaluate the effects of nonparallel interest rate changes (for example, short-term rates increase, while long-term rates remain stable), delayed reactions to rate changes (for example, certificate of deposit (CD) rate changes 90 days after prevailing market rate changes), and balancesheet changes that may result from market rate changes (referred to as "dynamic" balance-sheet modeling). Guidance from federal and state banking regulators in 2010 (with subsequent frequently asked questions in 2012 to clarify the 2010

³ Gregory E. Sierra and Timothy J. Yeager, "What Does the Federal Reserve's Economic Value Model Tell Us About Interest Rate Risk at U.S. Community Banks?" Federal Reserve Bank of St. Louis *Review*, 86 (November/December 2004), pp. 45-60, available at research.stlouisfed.org/publications/review/04/11/SierraYeager.pdf.

guidance) emphasized the importance of evaluating the ALM model's measurement capabilities against material products and services on the bank's balance sheet.4

A couple of examples might be helpful in clarifying the guidance in this area. First, consider a bank that is exposed to basis risk because the rates that drive asset pricing differ from the rates that drive liability pricing. This bank has a large volume of loans priced off of national prime rates, which are funded by three-month CDs priced off of U.S. Treasury bill rates. To quantify this IRR exposure, management would need to ensure that the ALM model is capable of evaluating changes to more than one key market rate.

Another example that has become more prominent in recent years is a bank that originates and sells mortgage loans but retains the servicing rights. Some ALM models only measure changes to net interest income (NII) rather than potential changes to all income and expense categories. Since fee income from mortgage originations and ongoing servicing fees are sensitive to interest rates, calculating the change in NII would fail to capture the fee income at risk in various rate environments. Banks with significant noninterest income that is sensitive to changing rates should focus special attention on quantifying potential changes to net income. A bank should ensure that its ALM model is capable of quantifying the effect that market rate variations could indirectly have on its earnings.

More broadly, a bank should also understand the benefits and limitations in the level of detail for which assets and liabilities are analyzed in the model. A model that is based upon Call Report schedules may be appropriate for lower-risk banks with homogeneous loan and security characteristics. While these ALM models are often less expensive and more easily implemented and operated, grouping assets and liabilities in the model based upon Call Report categorization also has a downside. For example, Call Report instructions define any loan operating at or below an interest rate floor as a fixed-rate loan. ALM models using this categorization of assets would also treat these otherwise variable-rate loans as fixed-rate loans and miscalculate the contribution of these assets to earnings in various interest rate change scenarios. Call Report–based models have similar limitations for other loan and deposit features as well, lessening their accuracy as a risk

measurement tool. Thus, an ALM model's material limitations should be clearly understood by the ALM committee or board of directors when reviewing ALM model reports.

Questions to consider when reviewing the measurement capabilities of an ALM model include:

- How much flexibility does the bank have to set and/or modify the interest rate scenarios employed in the ALM model?
- How frequently can the ALM model be run and the results be made available to the bank?
- Can the level of asset and liability detail be customized, or is the model limited to Call Report fields?
- Can the ALM model measure nonparallel interest rate scenarios? If so, how much input does the bank have in determining the scenario(s) to run?
- Does the model measure key risks, such as basis, mismatch, prepayment, and yield curve risks? If not, are any of these risks material to the balance sheet?

ALM Model Assumptions

An effective IRR measurement tool is expected to have an appropriate degree of precision, which depends upon properly established assumptions. While regulators do not expect an ALM model to predict the future, the data used in the tool should have a high degree of accuracy. If data inputs or model assumptions are invalid or inaccurate, the model output reports will not be very useful and could result in poor decisions being made. Likewise, if the reports do not provide

Common Deposit Assumptions

Deposit beta measures how responsive management's deposit repricing is to the change in market rates. Assume, for example, that prevailing interest rates increase from 1 percent to 2 percent, and management increases the rate paid on savings accounts from 0.5 percent to 0.9 percent in response. The beta is then 0.4/1.0, or 40 percent of the market rate change.

Deposit average life measures customers' nonmaturity deposit (NMD) withdrawal behavior. ALM models use the average life of an NMD balance as their effective maturity when projecting cash flows.

⁴ See SR Letters 10-1 and 12-2, respectively.

meaningful information, they could be ignored by management. As community bank examiners have reviewed ALM models over the past 15 years, they have found that two common assumptions significantly impact the accuracy of model results — deposit behaviors and prepayments. In fact, slight errors in these assumptions can result in significant errors in ALM model results.

Deposit Assumptions

Deposit products continue to represent the most significant funding source for community banks, making deposit assumptions critical to ALM model accuracy. While a bank holds the option to set deposit rates for NMDs and other deposit products like CDs, consumers hold the option to withdraw funds at will. Consequently, assumptions like deposit betas and deposit average lives play a vital role in a bank's measurement system. (See the sidebar on page 13 for descriptions of deposit beta and deposit average life.)

Most ALM models provide a bank with the flexibility to customize deposit betas. However, not all ALM models provide the ability to input different deposit betas for rising and falling rate scenarios. Deposit betas indirectly affect projected interest expenses under various interest rate change scenarios. In most situations, banks delay raising or lowering deposit rates at the beginning of a rate cycle. When a bank finally elects to change deposit rates, it often will do so to a lesser extent than the prevailing change in market interest rates and often to different degrees depending on whether the rate change is upward or downward. Thus, setting deposit beta assumptions is challenging, as bankers must balance controlling interest expense with customers' ability to transfer accounts.

An ALM model's deposit assumptions also include setting deposit average lives. Assumptions made about the average life of NMDs often have a critical effect on model calculations of EVE. Risk managers should explore how an ALM model enables deposit average life information (sometimes entered as a rate of decay to the balance) to be input. Many community banks turn to vendor-supplied deposit assumptions as a starting point or source for setting the average life for NMD products. Bank management should evaluate how any vendor-supplied assumptions in the model, such as deposit decay rate tables, are updated and maintained by the vendor and compare them with their customers' behavior.

In today's environment, deposit volumes at community banks are at high levels relative to total liabilities. Many community banks have also experienced migration of customer balances from CDs into NMDs since 2008. This influx of NMDs makes sensitivity testing of ALM model assumptions valuable to a community bank. Sensitivity testing takes one key assumption, such as deposit betas, and changes the value to be larger or smaller than its current value. The model scenarios are then run again to see what impact changing one assumption has on the overall ALM model results. Another approach to sensitivity testing is to reallocate a portion of NMD balances into CDs. By measuring traditional deposit mix balances, a bank can be informed of possible outcomes should funds revert back to a more traditional NMD/CD deposit mix that prevailed before 2008.

Questions to consider regarding an ALM model's deposit assumption capabilities include:

- Does the ALM model break out NMDs and CDs beyond the Call Report categories? If the ALM model is Call Report-based, how does customer behavior compare with characteristics of deposits grouped together?
- Does the model allow for different deposit betas in rising and falling rate scenarios?
- How does the model handle deposit average lives? If default assumptions are provided, how are they generated? Can the bank alter default assumptions to reflect customer behavior?
- Does the model allow sensitivity testing of deposit betas and decay rates?
- Does the model enable the deposit product mix to be altered for sensitivity testing purposes?

Prepayment Assumptions

Typically, one of the most difficult IRR measurement challenges is modeling cash flows for mortgages and mortgage-related products. For example, the uncertainty of expected cash flow timing and amounts for products such as residential mortgages, mortgage-backed securities (MBS), and collateralized mortgage obligations (CMOs) depends on the embedded option held by each underlying borrower to refinance or prepay. During periods of low and/or decreasing interest rates, similar to the current environment, the incentive for borrowers to refinance their mortgage is greater and, as such, their propensity to prepay increases. Conversely, during periods of increasing rates, this incentive diminishes and prepayments are likely to be lower. Volatile mortgage refinancing cycles over the past decade, however, have not followed traditional theory, which further emphasizes the difficulty in developing prepayment assumptions. Figure 2 illustrates the Mortgage Banking Association's Refinance Index level and the 10-year constant maturity

Figure 2: MBA Refinance Index (left) vs. 10-Year U.S. Treasury Rates (right)



Source: Mortgage Banking Association via Bloomberg

Treasury (CMT) rate between January 2000 and January 2013. As illustrated, homeowners' refinancing activities have not always behaved as expected during periods of interest rate changes, which causes difficulties in estimating future cash flows and potentially leads to erroneous IRR model results. For example, in 2009, 10-year Treasury rates increased after a brief period of low rates. Normal expectations would be that refinancing activity would decline. However, the opposite actually occurred. Other factors, such as government programs, were influencing prepayments during that period.

For banks with material volumes of mortgage-related products, understanding the ALM model's incorporation of prepayment assumptions is essential. ALM model vendors offer an array of prepayment measurement capabilities, from a single prepayment speed for all products to different prepayment speeds for assorted products based on various factors. With respect to modeling mortgages and mortgage-related products, factors such as loan size, seasonality, age of the loan, home sale rates, and loan-to-value percentages may be used to derive prepayment measures and model assumptions.

As with deposit assumptions, value may be found in sensitivity testing prepayment assumptions to determine the risk that earnings may be reduced by elevated prepayments or that EVE may be reduced by slower prepayments. In considering an ALM model, banks should explore the ability and ease of changing prepayment assumptions. With some models, the ability to implement and customize prepayment assumptions requires add-on features, which often adds expense. Regula-

tors would expect that banks having a material amount of mortgage-related or other amortizing assets would incorporate these add-on ALM model features. For these banks, an ALM model that does not effectively incorporate prepayments or resolve the difficulties in estimating future cash flows is likely to produce results that do not adequately quantify the bank's actual IRR exposure.

Bankers often rely on vendors or modeling software providers to provide prepayment assumptions. Regardless of the method used to derive these assumptions, the ultimate goal

should be to capture the risk to earnings and capital created by unexpected changes to projected cash flows. Questions to consider when evaluating an ALM model's prepayment assumption capabilities include:

- How does the ALM model incorporate prepayment assumptions?
- Does the ALM model allow prepayment speeds to be assigned for each product?
- Does the model provide default prepayment options?
 If default assumptions are provided, does the vendor explain how they are generated?
- How reasonable are the prepayment assumptions provided?
- Does management have the ability to alter default assumptions to reflect customer behavior?

In closing, not all ALM models provide the same functionality or produce the same results. The forward-looking nature of IRR measurement techniques presents challenges even for sophisticated ALM models. A bank should select an ALM solution that reliably and cost-effectively delivers the necessary functions for the bank's activities and risk profile. This discussion has provided several considerations and questions that should be useful in evaluating a bank's IRR measurement practices. As additional ALM questions arise, banks should not hesitate to contact supervisory staff at their local Reserve Bank.

Community Banks and the Revised Regulatory Capital Framework continued from page 5

Specifically, the revised capital framework assigns a 50 percent risk weight to first-lien residential mortgage exposures that are prudently underwritten and that are not past due, reported as nonaccrual, or restructured. All other one- to four-family residential mortgage loans are assigned a 100 percent risk weight. In addition, the revised capital framework does not change the current exclusions from the definition of credit-enhancing representations and warranties.

Major Changes from the Current General Risk-Based Capital Rules

As noted above, the revised capital framework includes several regulatory capital changes aimed at improving the resilience of the overall U.S. banking system. The revised framework also includes a more risk-sensitive treatment for certain exposures; however, for many exposures typically held by community banks, the revised capital framework maintains the current treatment.

Higher Quantity and Quality of Capital

The revised capital framework is designed to ensure that all banking organizations hold higher amounts of high-quality regulatory capital that is available to absorb losses on a going-concern basis. The revised framework emphasizes the importance of common equity tier 1 capital, which is the highest-quality, most loss-absorbing form of capital. It will primarily be composed of common stock and retained earnings, and the

vast majority of regulatory deductions will come from common equity tier 1 capital (as opposed to tier 1 capital, as is the case under the current general risk-based capital rules).

Under the revised capital framework, banking organizations are subject to a new minimum risk-based capital ratio of common equity tier 1 capital to risk-weighted assets of 4.5 percent. The revised capital framework also raises the minimum risk-based capital ratio of tier 1 capital to risk-weighted assets from 4 percent to 6 percent, and it applies the same minimum leverage ratio of 4 percent for all banking organizations (see Table 1).

The revised capital framework incorporates other changes to the general risk-based capital rules that are designed to improve the quantity and quality of regulatory capital. For example, the revised framework implements stricter eligibility criteria for regulatory capital instruments, strictly limits the amount and type of minority interest that can be included in regulatory capital, and imposes individual and collective threshold deductions for mortgage-servicing assets, deferred tax assets arising from temporary differences that cannot be realized from net operating loss carrybacks, and significant investments in the capital of unconsolidated financial institutions in the form of common stock.

In addition, the revised capital framework introduces a capital conservation buffer that is designed to provide incentives for all banking organizations to conserve capital during benign economic periods so that they are prepared to withstand severe stress events while still remaining above the minimum capital levels and continuing to lend to creditworthy households and businesses. More specifically, banking organizations need to hold an additional amount of common equity tier 1 capital (on top of the minimum risk-based capital requirements) in an amount greater than 2.5 percent of risk-weighted assets to avoid limitations on capital distributions and discretionary bonus payments to executive officers. The capital conservation buffer applies beginning on January 1, 2016.

Table 1. Comparison of Minimum Regulatory Capital Ratios Under the Current General Risk-Based Capital Rules with the Revised Capital Framework

	Current General	Revised Capital
	Risk-Based	Framework
	Capital Rules	
Common Equity Tier 1 Capital/Risk-	N/A	4.5%
Weighted Assets (RWA)		
Tier 1 Capital/RWA	4%	6%
Total Capital/RWA	8%	8%
Leverage Ratio	4% (or 3%)	4%

Prompt Corrective Action

The revised capital framework includes revisions to the prompt corrective action (PCA) framework for insured depository institutions. These revisions incorporate the new minimum regulatory capital requirements into the PCA framework, while maintaining its general structure. Specifically, the revised PCA framework incorporates the new common equity tier 1 capital ratio; increases the current PCA thresholds for the tier 1 capital ratio; revises the definition of tangible common equity; and, for advanced approaches banks only, incorporates the supplementary leverage ratio (see Table 2).

Revised Risk-Weighting Methodologies for Certain Exposures

The revised capital framework improves the risk-sensitivity of the general risk-based capital rules by addressing the short-comings of certain risk weights that became apparent during the recent financial crisis. Specifically, loans that are past due or on nonaccrual, as well as high-volatility commercial real estate (HVCRE) exposures, are risk weighted at 150 percent. HVCRE exposures include certain acquisition, development, or construction loans and represent a subset of commercial real estate exposures. Commercial real estate loans that do not meet the definition of an HVCRE exposure retain their current risk weight.

The revised capital framework also raises from 0 percent to 20 percent the credit conversion factor for off-balance-sheet

short-term commitments that are not unconditionally cancelable by a banking organization. This change is designed to better reflect risk and differentiate these commitments from those that are unconditionally cancelable. Risk weights for foreign sovereign, bank, and public-sector exposures, as well as for securities firms and equity exposures, are also revised.

In addition, the revised capital framework changes the treatment of securitization exposures consistent with section 939A of the Dodd-Frank Act, which prohibits using references to, and reliance on, external credit ratings in the regulations of federal agencies and directs agencies to use alternative standards of creditworthiness. The revised framework replaces the ratings-based approach, which uses credit ratings to assign risk weights, with the simplified supervisory formula approach to determine the appropriate risk weights for securitization exposures. Alternatively, banking organizations may use the existing gross-up approach, which assigns risk-weighted asset amounts based on the full amount of the credit-enhanced assets for which the banking organization directly or indirectly assumes credit risk, or assign securitization exposures a 1,250 percent risk weight.

Implementation

The revised capital framework provides a phase-in period for smaller, less complex banking organizations that will not begin until January 2015. After considering comments on the

Table 2. Revised PCA Levels for Insured Depository Institutions (amounts in percent)									
				Leverage Measure					
PCA Category	Total Risk-Based Capital (RBC) Measure	Tier 1 RBC Measure	Common Equity Tier 1 RBC Measure	Leverage Ratio	Supplementary Leverage Ratio (for advanced ap- proaches banks only)				
Well Capitalized	≥ 10	≥ 8	≥ 6.5	≥ 5	N/A				
Adequately Capitalized	≥ 8	≥ 6	≥ 4.5	≥ 4	≥ 3				
Undercapitalized	< 8	< 6	< 4.5	< 4	< 3				
Significantly Undercapitalized	< 6	< 4	< 3	< 3	N/A				
Critically Undercapitalized	Tangib F	N/A							

⁸ The revised capital framework does not change the existing constraints on banks' activities within the PCA categories.

⁹ A related topic was discussed in the *Community Banking Connections* article "Investing in Securities Without Relying on External Credit Ratings." The article is available at www.cbcfrs.org/articles/2013/Q2/Investing-in-Securities-Without-Relying-on-External-Credit-Ratings.cfm.

June 2012 proposal, the federal banking agencies reconsidered certain elements of the proposed rule and, in the end, adopted a framework that strengthens the resilience of the financial system while minimizing the burden on community banks.

In August 2013, the agencies proposed modifications to the current regulatory capital reporting forms to implement the revised capital framework. The reporting changes would come into effect for community banks starting with the first applicable regulatory reporting form(s) in 2015. ¹⁰ In the near future, the agencies expect to propose additional revisions

to the reporting forms pertaining to risk-weighted assets that would also take effect in 2015. Community banks are encouraged to comment on the proposed reporting changes and should contact their Reserve Bank or primary federal supervisor, as appropriate, with any questions on the revised capital framework.

¹⁰ See the proposed regulatory capital reporting forms (Call Report (FFIEC 031/041), RC-R; FR Y-9C, HC-R, and FR Y-9SP, SC-R), available at www. federalreserve.gov/apps/reportforms/review.aspx.

FEDLINKS Connecting Policy with Practice

FedLinks: Connecting Policy with Practice is a single-topic bulletin prepared specifically for community banks and bank holding companies with total assets of \$10 billion or less. Each bulletin provides an overview of a key supervisory topic; explains how supervisory staff members typically address that topic; highlights related policies and guidance, if applicable; and discusses examination expectations as appropriate at community banks. FedLinks is not intended to establish new supervisory expectations beyond what is already set forth in existing policies or guidance, but rather to connect policy with practice.

The most recently released FedLinks bulletins include:

"Supervisory Expectations for Appraisal and Evaluation Programs" (October 2013) provides an overview of how Federal Reserve examiners typically review and evaluate a community bank's appraisal and evaluation program. It includes information about appraisal regulations and interagency guidelines, common examination findings noted in community banks, and more.

"Supervisory Expectations for Internal Control Functions" (July 2013) discusses the common elements of an effective internal control framework, the process used by examiners to assess a bank's internal controls, and common areas identified by examiners where banks could strengthen their control functions.

These bulletins, and others like them, can be found online at www.cbcfrs.org/fedlinks.cfm.

By subscribing to FedLinks bulletins at www.cbcfrs.org/subscribe.cfm, you will receive an e-mail notification when new bulletins become available.

Assessing Inherent BSA/AML Risk at Community Banks

continued from page 7

Most of the recent high-profile enforcement actions have focused on internal control deficiencies at large, globally active financial institutions. Although not often in the public realm, deficiencies at community banks have also been noted, and similar to findings at the large institutions, weaknesses at smaller institutions often involve a deficient customer risk-rating process. For both large and small institutions, the ability to identify high-risk customers directly impacts the efficacy of monitoring regimes; if risk identification and follow-through are weak, institutions may fail to file Suspicious Activity Reports when necessary.

The problem often lies in inadequate customer due diligence because banks may not fully understand their customers' business. For example, a money services business (MSB) engaged solely in payroll check cashing likely poses less risk than an MSB providing multiple lines of products, including high volumes of cross-border money transfers. Understanding the specifics of the business and making distinctions between high- and low-risk customers are crucial first steps in being able to calibrate risk monitoring and identify and report any suspicious activity.

Key Categories of BSA/AML Risk for Community Banks

Inherent BSA/AML risk falls into three main categories: (1) products and services, (2) customers and entities, and (3) geographic location. The first step in understanding

the inherent risk is to identify the extent to which these categories present risk for the institution; the second step is to analyze these risks more thoroughly so that the true nature of the risk is known and appropriate controls can be developed.

Within the three categories, certain characteristics present higher levels of inherent BSA/AML risk. Specifically, customers, products, and services that obscure financial transparency, allow for anonymity, or include multiple parties along the payment chain are especially vulnerable to money laundering. For example, financial intermediaries, such as third-party payment processors, MSBs, or foreign

correspondents, pose higher risks because banks lack direct access to, or knowledge of, their customers' customers; due diligence and suspicious actitivity monitoring efforts are thus more challenging and more critical for mitigating risks. Similarly, prepaid cards and virtual currencies both offer anonymity and can involve many parties, again making it difficult for banks to identify specific customer activity and determine whether that activity is suspicious. As such, community bank management should ask itself several questions to help identify some of these areas of heightened BSA/AML risk.

Higher-Risk Products and Services

- Do we have significant volumes of electronic payments, such as wire transfers, ACH, prepaid cards, and remittances?
- Do our customers actively engage in, or have we recently implemented, electronic banking services, such as remote deposit capture, online account opening, and/or Internet transactions?
- Do we provide services to third-party payment processors or senders?

Higher-Risk Customers and Entities

- Do we have a significant portfolio of cash-intensive business customers, such as privately owned ATMs or convenience, liquor, or retail stores?
- Does our customer base include foreign entities, such as financial institutions (banks and foreign money service providers, including exchange houses, money transmitters, etc.), corporations, and/or individuals?
- Do we have significant business related to nonbank financial institutions, including MSBs and casinos?
- Do we have a significant number of professional service provider customers, including attorneys, accountants, real estate brokers, etc.?
- Do we maintain accounts for domestic and/or foreign nongovernmental organizations?
- Does our customer base include a significant number of politically exposed persons?

Higher-Risk Geographic Locations

- Do our customers engage in or process transactions involving international locations identified by the U.S.
 State and/or Treasury Departments, the Financial Action Task Force, or other international bodies as having strategic deficiencies in their countries' AML frameworks or being susceptible to corruption, and/or geographic locations outside of our normal business area?
- Are any of our customers located in, or do they conduct transactions with, offshore financial centers?
- Do we maintain branches in or have significant customer populations located within domestic locales designated as High Intensity Drug Trafficking Areas and/or High Intensity Financial Crimes Areas?

Once the areas of inherent risk are identified, further analysis is needed to fully understand the risks of each category. For example, a first level of analysis may include the review of data pertaining to the volume of transactions and the number of higher-risk customers. Pairing these data with customer due diligence information, such as the purpose of the account, the products and services used, transaction and dollar volumes, and jurisdictions involved, allows management to make necessary distinctions between seemingly similar customers. For example, a local doctor who has been a longstanding customer and uses remote deposit capture to collect low-dollar payments for office visits from her customers likely presents a lower level of risk than an MSB that deals with customers and parties located in a foreign jurisdiction. After conducting such analyses, management is better equipped to build monitoring systems calibrated to the specific risks of the bank's customers.

Getting It Right

How can management ensure that the bank is adequately assessing inherent risk? Institutions with strong BSA/AML risk assessment programs take a dynamic approach to risk assessment, as opposed to viewing it as a static exercise only performed once every few years. These institutions also ensure that the BSA compliance officer is a fixture in any new product discussion. Finally, the board of directors and senior management at these institutions set the right compliance tone from the top by demonstrating the importance of understanding, monitoring, and controlling BSA risk.

A dynamic BSA/AML program is one that revisits its risk assessment regularly, or even on an ongoing basis, depending on its risk profile, by comparing the assessment with the bank's current products, service offerings, and customer mix. A good

assessment appropriately considers the products, services, customers, transactions, and jurisdictions that currently pose risks to the institution. If the institution has recently implemented new products and services, these risks should be reflected in the risk assessment and control environment. Integral to this process is a strong "know your customer" program in which customer information is collected on an ongoing basis to maintain up-to-date information on activity and product utilization and the associated risks. Not only is this practice good for BSA/AML compliance purposes, it is also good for business. Building customer relationships, especially with small businesses, includes demonstrating a current understanding of the customer's specific business and industry and showing that the bank can anticipate and fulfill the customer's banking needs as they arise.

Along with periodic updates to the risk assessment, examiners expect banks to perform a review of the control framework and make updates and enhancements to address any gaps presented by new or heightened risks. This includes reevaluating and recalibrating automated monitoring systems to ensure that they continue to make sense for the types of transactions the bank is trying to identify or control, especially given the bank's updated risk profile.

Another important step in the inherent risk assessment process is to include the BSA compliance officer in any new product or service development activities.⁵ It is crucial that the BSA compliance officer be involved from the very beginning so that potential risks are identified and understood early, prior to implementation. As new technologies are developed, the associated risks are often unknown. These risks have the potential to affect not only inherent risk but also the control framework. In this regard, management should consider the following questions:

- How does the new product or service affect our risk profile?
- What steps need to be taken to appropriately mitigate the risks?
- Do we have the expertise, capacity, and compliance resources to take on the new product or service and/or the various associated service providers?

⁵ For a more expansive discussion of best practices around new product development, reference "Considerations When Introducing a New Product or Service at a Community Bank," Community Banking Connections, First Quarter 2013, available at www.cbcfrs.org/articles/2013/Q1/Considerations-When-Introducing-A-New-Product.cfm.

These types of questions should be discussed with all appropriate stakeholders, and adequate planning should be in place before any new product or service is implemented.

Finally, effective BSA/AML compliance programs reflect a strong commitment to compliance from the board of directors and senior management. This extends to all aspects of the program, including risk identification and analysis. Discussions about BSA/AML risk should be conducted at all levels of the organization, including the board of directors, executive management, line management, and staff. Assigning proper priority to the BSA compliance program also includes investing in compliance talent and resources, empowering compliance officers with the necessary authority to resolve

identified issues, and creating a formal mechanism for reporting on BSA/AML risks and issues to the highest levels of the organization.

Conclusion

Understanding an institution's inherent risk is the first step in developing a strong BSA/AML compliance program, and getting it right has never been more challenging. At the same time, the stakes for noncompliance have increased. Banks with strong BSA/AML compliance programs have made ongoing risk assessment a priority for their institutions, included their BSA compliance officer in new product development discussions, and set the right tone at the top of the organization.

Community Banking Connections: One-Year Anniversary

The Community Banking Connections publication and website were launched just one year ago. In addition to almost 6,000 Federal Reserve-supervised institutions that receive the publication each quarter, there are more than 4,000 subscribers! Community Banking Connections is published quarterly to provide additional insight on recent supervisory and regulatory developments related to community banking. The website, which can be accessed at www.communitybankingconnections.org or cbcfrs.org, houses much more than the online version of the publication. It provides bankers with news on regulations and supervisory guidance, policy updates, information about outreach programs at the various Federal Reserve Banks and the Board of Governors, and additional resources. survey, please go to www.cbcfrs.org/readersurvey.

To better serve our readers, we have prepared a brief survey that asks bankers what topics are most important to them so that we can include information on these topics in future issues of Community Banking Connections. To participate in this

Thank you for taking the time to respond. Your feedback is important to us.

Community Banking in the 21st Century

On October 2–3, 2013, the Federal Reserve Bank of St. Louis and the Conference of State Banking Supervisors hosted an inaugural conference on Community Banking in the 21st Century. The attendees included community bankers, academics and researchers, and state and Federal Reserve Bank supervisors. The sessions were webcast live to a wide audience and will be available in the near future.

The primary focus of the conference was on the presentation of research papers related to community banking and the results of a series of community bank town hall meetings. The three academic/research panels addressed topics related to the role of community banks, community banks' performance, and the supervision and regulation of community banks. The capstone panel comprised four community bankers who discussed the challenges and opportunities in their markets.

Both Chairman Bernanke and Governor Powell attended in person, gave prepared remarks, and answered questions from the audience. Governor Powell's comments focused on the importance of community banks to the economy and society and also included a high-level recap of many of the papers presented at the conference.

In the upcoming issue of *Community Banking Connections* (Fourth Quarter 2013), Julie L. Stackhouse, senior vice president, Banking Supervision, Credit, Community Development and Learning Innovation, Federal Reserve Bank of St. Louis, will provide an overview of the findings from both the research presented and the panel discussion with community bankers during this year's conference. She will also discuss the implications of these findings and opportunities and challenges facing community banks as they look for ways to not only survive but also to thrive in the 21st century.

Please visit the conference webpage at www.stlouisfed. org/banking/community-banking-conference/ to view remarks, videos, a summary of the town hall comments, abstracts of the research papers, and much more.

Banking Alert: Patent Lawsuits Against Community Banks Are Increasing

To foster innovation, a successful patent applicant obtains the exclusive right to produce, use, and sell the patented innovation for 20 years from the date of filing a patent application with the U.S. Patent and Trademark Office. See 35 U.S.C. §154, Contents and terms of patent: provisional rights. But in recent years, companies have emerged with a business model of purchasing or licensing patents from inventors (often in the areas of software and technology) and then sending demand letters to businesses alleging patent infringement and threatening litigation unless the infringers pay a fee. This alert provides an overview of this issue for community banks.

The companies purchasing patents are known as patent assertion entities (PAEs) — although they are often disparagingly referred to as "patent trolls." Because of the complexity of patent law, the loose descriptions used in some patents, and the high cost of patent litigation, many businesses settle these claims even though the claims may be without merit. Financial institutions have increasingly been targeted. For example, Automated Transactions LLC (ATL), a PAE, has sued more than 60 banks (many of them community banks) for violating a patent covering automated teller machines that ATL licenses from the inventor.

Statistics reveal the rise in PAE patent litigation. In 2006, nearly 2,500 patent infringement lawsuits were filed, 19 percent of which were filed by PAEs. But by 2012, more than 4,500 patent infringement lawsuits were filed, 62 percent of which were filed by PAEs. In response to the rise in PAE litigation, several actions have been taken:

- Congress passed the America Invents Act in 2011, which addresses some concerns with PAE patent litigation, and is now considering several other bills, including the SHIELD Act of 2013 and the Patent Quality Improvement Act, to address burdensome patent litigation.
- The White House Task Force on High-Tech Patent issued legislative recommendations in June 2013 for Congress to consider and identified executive actions the White House was taking, including a requirement that the Patent and Trademark Office identify the scope of patents and scrutinize patent applications claiming overly broad claims.²
- The state attorney generals of Nebraska, Vermont, and Minnesota have filed lawsuits against some PAEs, alleging that their conduct violates state deceptive trade practices

- laws, and Vermont amended its laws to make it easier for the attorney general to sue PAEs that act in bad faith against a Vermont business.
- The Federal Trade Commission announced it is initiating a formal study of PAEs.
- The chief judge of the federal appeals court with exclusive jurisdiction to hear federal patent appeals coauthored an op-ed in the New York Times urging judges hearing patent cases to use existing authority to police abuses of the patent system.3

Financial institutions should be aware of this issue. If they receive a demand letter alleging patent infringement, they should consult with their counsel for the best way to proceed.

REGULATORY RECAP

Supervision & Regulation (SR) Letters

The following SR and CA letters that have been published since the last issue (and are listed by release date) apply to community banking organizations. Letters that contain confidential supervisory information are not included. All SR letters are available by year at www.federalreserve.gov/bankinforeg/srletters/srletters.htm and by topic at www.federalreserve.gov/bankinforeg/topics/ topics.htm. A complete list of CA Letters can be found at www.federalreserve.gov/bankinforeg/caletters/caletters.htm.

SR Letter 13-16, "End of Microsoft Support for Windows XP Operating System"

CA Letter 13-14, "Interagency Guidance on Privacy Laws and Reporting Financial Abuse of Older Adults"

CA Letter 13-13, "Revised RESPA Interagency Examination Procedures"

CA Letter 13-12, "Revised Interagency Examination Procedures for Regulation Z"

SR Letter 13-15/CA 13-11, "Federal Reserve Resources for Minority Depository Institutions"

SR Letter 13-14, "Timing Standards for the Completion of Safety-and-Soundness Examination and Inspection Reports for Community Banking Organizations"

¹ See http://ow.ly/q8GTT.

² See www.whitehouse.gov/the-press-office/2013/06/04/fact-sheet-whitehouse-task-force-high-tech-patent-issues. The White House also issued a report in June 2013 titled Patent Assertion and U.S. Innovation, which is available at www.whitehouse.gov/sites/default/files/docs/patent report.pdf.

³ See www.nytimes.com/2013/06/05/opinion/make-patent-trolls-pay-in-court. html.

Outreach Connections

The Board of Governors and the Federal Reserve Banks reach out to community banks through various programs and resources. In addition to live hosted events, many of these programs and resources are available online. Following is an overview of just a few of these outreach programs, with links to access more information or to subscribe

Bank Director's Desktop — This online course is a primer on the duties, responsibilities, and key roles of bank directors. It is an excellent tool for new directors who want to learn more about what is expected of them in their new role, and it is also useful for seasoned directors who want to refresh themselves on different elements of their role. This resource is designed to provide insight into current supervisory expectations, promote proper risk management practices and internal controls, and build core skills needed to fulfill the obligations of a bank director in a rapidly changing industry. It is available at www.bankdirectorsdesktop.org/.



Consumer Compliance Outlook and Outlook Live — Consumer Compliance Outlook is a quarterly Federal Reserve System publication dedicated to consumer compliance issues. The online version of the publication is available at www.



consumercomplianceoutlook.org. In addition to the publication, the System hosts *Outlook Live*, a popular webinar series that delves deeper into consumer compliance topics of interest. Each webinar is archived for future reference. *Outlook* and *Outlook Live* are available at www.consumercomplianceoutlook.org.

Partnership for Progress — P4P is the Federal Reserve's outreach and technical assistance program for minority-owned banking institutions. This program helps these institutions confront their unique challenges, cultivate safe and sound practices, and compete more effectively in today's marketplace. It combines one-on-one guidance, workshops, and an extensive interactive webbased resource and information center at www.fedpartnership.gov/.







