

A Third Pillar of Bank Supervision

Examinations and Capital Requirements
Already Seek to Control Risk.
Can Markets Support This Effort?

by William R. Emmons, R. Alton Gilbert and Mark D. Vaughan

The terms “bank supervision” and “market discipline” are linked increasingly these days. Because most people think of government supervision and free markets as polar opposites, this coupling may seem curious. Yet, bank supervisors across the globe have come to see financial markets as a tool for preserving bank safety and soundness. For example, over the past three years, delegates from 13 nations have worked to hammer out a supervisory framework that is consistent across national frontiers. This international framework—the New Basel Capital Accord—features market discipline as one of three pillars of bank supervision, along with supervisory review and capital requirements.¹ Exactly what does market discipline mean in a banking context, and how could such discipline improve bank supervision?

Basics of market discipline

In a free-enterprise economy, markets discipline most businesses in one way or another. For instance, businesses must obtain financing—that is, submit to financial market discipline. Firms must also recruit workers—submit to labor market discipline. Finally, firms must sell goods or services—submit to product market discipline. Only by successfully responding to these forms of discipline can a business survive and thrive. In capitalist ideology, governments should not protect businesses from market discipline. Rather, such discipline ensures that scarce resources flow only to the most efficient firms.

Why supervise banks?

Banking is a special industry in most developed countries because the government interferes with market discipline. In the United States, federal and state agencies supervise the operation of commercial banks. This supervision limits the discretion of bank management and reduces the discipline from product and financial markets. For example, before opening their doors, bank managers must obtain a charter from either the state or federal government. Chartering requirements reduce product market discipline by limiting competition. At the same time, the Federal Deposit Insurance Corp. protects small depositors from losses due to bank failures. This protection reduces the incentive for insured depositors to monitor bank risk—that is, it lessens financial market discipline.

One reason that banks receive special treatment is that bank failures have stronger adverse effects on the economy than do other business failures. Bank failures can



disrupt the flow of credit to local communities, interfere with the operation of the payments system and reduce the money supply. These effects can be long-lasting. Indeed, many economists blame the length of the Great Depression on the disruption of credit relationships caused by the wave of bank failures in the early 1930s.

Shortcomings in the structure of the deposit insurance program provide another reason for government supervision of the banking industry. The current range of deposit insurance premiums is too small to deter bank risk-taking effectively. For example, the safest banks pay no premiums for their deposit insurance coverage, while the riskiest banks pay 27 cents per \$100 of deposits or, put another way, 27 basis points for their coverage. In contrast, the spread between the yields on the riskiest and the safest

1 or 2 to be safe and sound. Supervisors use a variety of formal and informal sanctions—called enforcement actions—to prod 3-, 4- and 5-rated banks to restore safety and soundness.

Supervisory review also includes off-site surveillance. This involves using financial data and anecdotal evidence to schedule and plan on-site exams. Although on-site examination is the most effective tool for spotting safety- and-soundness problems, it is costly and burdensome. On-site examination is costly to supervisors because of the examiner resources required and is burdensome to bankers because of the intrusion into daily operations. Off-site surveillance reduces the need for unscheduled exams. Off-site surveillance also helps supervisors plan exams by highlighting risk exposures at specific institutions. For example, if pre-exam

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bank subordinated debt—an instrument that is particularly sensitive to risk—often exceeds 100 basis points. Because the narrow range of premiums does little to deter risk-taking, supervisors must monitor bank conditions and discourage unsafe and unsound practices to reduce the likelihood of failures.

How are banks supervised?

Traditionally, bank supervisors have contained risk with supervisory review and capital requirements. Supervisory review includes on-site examination and off-site surveillance. Capital requirements direct each bank to keep the owner's stake in the enterprise above a minimum level.

The cornerstone of supervisory review is thorough, regularly scheduled, on-site examinations. Each U.S. bank must submit to a wide-ranging federal or state examination every 12 to 18 months. These examinations focus on six components of bank safety and soundness, known together as CAMELS: C for capital protection, A for asset quality, M for management competence, E for earnings strength, L for liquidity risk exposure and S for sensitivity to market risk. The banks are awarded a grade of 1 (best) through 5 (worst) on each component. Examiners use these six scores to award a composite CAMELS rating, also expressed on a 1 through 5 scale. The scores are kept confidential to facilitate the flow of information between examiners and bankers. In general, bank supervisors consider institutions with composite ratings of

surveillance reports indicate that a bank has significant exposure to interest-rate fluctuations, then supervisors could add interest-rate risk specialists to the exam team.

Rules mandating that the owners' stake in a bank exceed a minimum level—capital requirements—are the other major component of traditional supervision. Because the owners are first in line to absorb losses, high capital ratios reduce the temptation to take inappropriate risks with insured deposits. High capital ratios also reduce the likelihood that economic shocks, such as unanticipated fluctuations in interest rates or economic activity, will lead to failure. In the late 1980s and early 1990s, U.S. bank supervisors, working in conjunction with supervisors in other leading industrial countries, phased in a system of risk-based capital requirements. These requirements—the “old” Basel Capital Accord—tied capital adequacy explicitly to credit risk; banks with riskier loans and securities were required to hold more capital.

What is meant by market discipline in banking?

Assessing the contribution of market discipline to bank supervision first requires defining terms precisely. All banking organizations receive funds from depositors, other creditors and owners. Each claimant expects a return for his or her contribution—depositors expect transactions services and interest, other creditors expect interest and owners

expect dividends. Each group monitors the bank's financial health to ensure that expected returns are forthcoming. When a bank assumes more risk, its claimants may demand extra compensation to guard against the possibility that expected returns will not materialize. Another possibility is that claimants will respond to the increase in risk by withdrawing their funds. These responses—demanding extra compensation or withdrawing funds—are what most economists and supervisors typically mean by market discipline in banking. The recent discussion concerns proposals to beef up financial market discipline on large banks by requiring them to issue standardized, publicly traded debt.

In theory, financial market discipline preserves bank safety and soundness by directly penalizing undue risks or by helping supervisors penalize undue risks. Suppose, for example, that a bank decides to pursue a new high-risk activity. If the holders of the bank's required debt securities respond by demanding extra compensation or refusing to buy new issues of the mandated debt, then bank management might opt to reverse the increase in risk. Alternatively, the bank might choose not to increase risk in the first place because management foresaw the likely response by debt holders. Bank supervisors could use the evidence of an increase in funding costs or a funding runoff to accelerate a scheduled exam and to question bank management once on-site. Finally, supervisors could monitor progress in correcting safety-and-soundness problems by watching market signals about bank risk.

What can market discipline do for supervisors?

Dissatisfaction with the old risk-based capital requirements explains much of the recent enthusiasm for financial market discipline. Although the theory underlying these requirements was sound, the application created problems. The capital requirements created four different risk categories for assets, with a different requirement for each category. Banks placed each asset in one of the categories. For example, Treasury securities fell into category one—the category with the lowest capital charge. All commercial loans fell into category four—the category with the highest capital charge. Problems arose because assets inside each category were not equally risky; banks with relatively safe commercial loans had to hold the same amount of capital as banks with relatively risky commercial loans. Also, some large banks tried to “game” the requirements by investing in the riskiest assets in each

category, thereby increasing risk without having to increase capital. Finally, the swift pace of industry change convinced some bank supervisors that any capital standard, no matter how frequently updated, would always lag behind current practices.

Financial market discipline enhances traditional supervision in four specific ways. First, financial markets supplement supervisory assessments of bank risk.



Investors and analysts face powerful incentives to price risk correctly—careers and fortunes are at stake with every transaction. They may uncover evidence of risky behavior that eludes supervisors. Second, financial markets penalize risk more incrementally than bank supervisors do. Enforcement actions are blunt instruments; supervisors reserve these tools for institutions with serious safety-and-soundness problems. Financial markets, in contrast, add a basis point here or subtract a basis point there when risk premiums need tweaking. Third, financial markets update their risk assessments more frequently than bank supervisors do. The prices of bank securities can change every minute, whereas, in most cases, examinations take place at 12- to 18-month intervals, and fresh surveillance reports come out at quarterly intervals. Fourth, financial markets help insulate supervision from politics. During the 1980s, politicians pressured savings-and-loan supervisors to keep insolvent institutions open, which, in turn, mag-



nified their losses. It is more difficult for politicians to pressure supervisors to overlook risky practices when financial markets are sending up warning flares.

Recent legislation in the United States reflects the interest in giving financial markets a larger role in bank supervision. The Gramm-Leach-Bliley Act of 1999 tied a large bank's right to control financial subsidiaries to rating agency assessments of default risk on the institution's long-term unsecured debt. The Act also directed the Treasury Department and the Federal Reserve to study the feasibility of requiring banks to issue subordinated debt—a security thought to be particularly effective for disciplining risky institutions.² Perhaps Federal Reserve Governor Laurence H. Meyer best

1980s, under which uninsured claimants were shielded from losses to prevent disruption to the financial system.⁵ To date, research has unearthed little evidence that bank managers respond to financial market pressure, though to be fair, this line of inquiry is new.⁶ Still, even if bank managers ignore financial market pressure, bank supervisors could use market signals to inform on-site examination or off-site surveillance.

Is subordinated debt the ticket?

The recent market discipline discussion centers on proposals to require some banks to issue a standardized form of subordinated debt. Like any corporate bond, bank subordinated debt offers

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summed up the enthusiasm when he said: “When all is said and done, it seems clear that market discipline remains our first line of defense. It is perhaps the most flexible option for maintaining bank safety and soundness in a rapidly evolving environment and has the potential to strengthen and complement bank supervision and regulation, particularly on the outside chance that the market knows best.”³

Can it work?

Three conditions must hold before financial market discipline can complement supervisory review effectively. First, holders of bank debt, such as private investors or mutual funds, must price bank risk. Second, bank debt holders must believe that the federal government will not bail them out should failure occur. Third, either bank management or bank supervisors must respond to risk signals sent by bank debt holders.

The first two of these conditions appear to hold, suggesting that the time is right for greater reliance on financial market discipline. A number of recent scholarly papers have documented risk pricing by holders of bank debt.⁴ In addition, debt holders of large banks seem convinced the federal government has retreated from the “too big to fail” doctrine of the

interest payments over time and principal at maturity. Unlike many other bonds, this debt is “subordinated”—the holders stand in line after insured depositors, uninsured depositors and general creditors should the bank fail. Subordinated debt is not backed by collateral and is not insured by the FDIC. “Standardized” debt conforms to pre-specified terms to maturity and frequencies of issuance. For example, banks might be required to sell a specific quantity of five-year instruments every year. Most proposals require that total subordinated debt outstanding account for a minimum fraction of bank's overall funding. To mandate subordinated debt, bank supervisors would first need to write a rule outlining the standardized terms and put the rule out for public comment. After responding to these comments, supervisors then could publish the rule as a legally enforceable bank regulation.

Many economists believe that mandatory, standardized subordinated debt would introduce significant financial market discipline into banking. Facing the full brunt of losses should the bank fail gives the holders of subordinated debt strong incentives to police risk. Moreover, unlike holders of bank stock, who can profit from increases in bank risk, holders of the subordinated debt confront a risk/reward tradeoff similar

to that faced by bank supervisors—little is gained from increases in risk but much can be lost. Standardizing issues makes it easier for supervisors or investors to compare debt yields across banking organizations and draw inferences about relative risk exposures. Specifying a minimum percentage in the funding mix keeps risky banks from evading financial market discipline by turning to insured deposits or other funding that is not risk-priced.⁷ A structure of regularly maturing issues forces banks to “roll over” subordinated debt, thereby allowing periodic evaluation by new investors.

The proposals for mandatory subordinated debt have focused on large banks because the supervisory benefits from enhanced market discipline would be greatest for these institutions. Large banking organizations are difficult to supervise because they often engage in non-bank activities and heavily use derivative instruments. For example, 93 percent of large banking organizations (total assets exceeding \$1 billion) own non-bank subsidiaries; only 33 percent of small organizations (assets under \$1 billion) control non-bank subsidiaries. At the same time, the notional value of derivatives securities at large organizations averages about 700 percent of assets; the comparable figure for small organizations is less than 1 percent.⁸ Large banks also account for the lion's share of U.S. banking assets, making the stability of the financial system dependent on their safety and soundness. For example, the 361 banks with more than \$1 billion in assets hold 83.3 percent of U.S. banking assets. Financial markets provide an independent source of information about the risk of large, complex banking organizations, information that could help supervisors respond quickly and decisively to emerging threats to the financial system.

Another reason for limiting the mandate to large banks is that the compliance costs are lowest for these institutions. Forcing a bank to issue a security it would not otherwise issue is akin to imposing a tax on that bank. This tax would probably not prove burdensome to large banks because most of these institutions already issue subordinated debt. For example, at the end of 2000, 44 of the largest 50 commercial banks and 46 of the 50 largest bank holding companies had subordinated debt outstanding, albeit not standardized. In contrast, only 68 of the 7,674 banks with assets under \$500 million had any subordinated debt outstanding. Small banks tend to avoid subordinated debt because issuing costs are high and because they can meet their funding needs with core deposits, jumbo certificates of deposits and Federal Home

Loan Bank advances. In short, a subordinated debt tax on small banks might prove excessively burdensome.⁹

Although most economists find mandatory subordinated debt theoretically appealing, they differ on the implementation details. For example, even among those favoring mandatory subordinated debt, disagreements arise over the quantity of subordinated debt that large banks should be required to issue. Arguments also arise over whether the bank or the bank holding company should be subject to the mandate. Finally, differences arise over whether the debt should be long-term or short-term. Research is ongoing at the Federal Reserve and at the Office of the Comptroller of the Currency to produce a consensus on these issues.

If a consensus is reached on these details, a number of training hurdles will remain. Traditionally, examiners and surveillance analysts have been taught to analyze bank financial statements and reach their own conclusions about safety and soundness. If financial market discipline becomes a true third pillar, supervisory personnel will have to keep one eye trained on capital markets. They will have to learn to read market signals, distinguishing between movements that are unrelated to bank condition and movements that portend safety-and-soundness problems. In short, supervisors will have to learn to think like market analysts, yet still be mindful of the difference between protecting the economy from bank failures and maximizing expected returns for security holders.

The way of the future?

Financial market discipline will undoubtedly play an important part in bank supervision in the future. The dizzying pace of industry change has led U.S. bank supervisors, along with their colleagues around the developed world, to conclude that financial markets can complement supervisory review and capital requirements. Harnessing market forces as a third pillar of supervision demands that safety-and-soundness examiners and surveillance analysts learn a new way of thinking. Perhaps the public will also have to learn a few new tricks—such as getting used to hearing the words “market” and “government supervision” in the same breath.

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ENDNOTES

- 1 The framework is described at www.bis.org/publ/bcbsca.htm.
- 2 The Treasury-Federal Reserve report can be downloaded from www.federalreserve.gov/boarddocs/RptCongress/debt/subord_debt_2000.pdf
- 3 Quoted in Meyer (1999).
- 4 See Flannery (1998) for an overview of recent evidence.
- 5 See Flannery and Sorescu (1996) for an example of this evidence.
- 6 See Bliss and Flannery (2000) for evidence of the weak response by bank managers to changes in financial market prices.
- 7 See Lang and Robertson (2000) for an analysis of the various subordinated debt proposals.
- 8 A derivative is an asset whose value “derives” from the price of another asset. The value of a contract to deliver corn in one month—one form of derivative—depends on the expected price of corn. The cash flows on derivatives contracts are often based on a fictional sum called the notional value. Although notional values do not equal derivative exposures, the greater the notional value of a bank's derivatives, all else equal, the greater its derivatives activity.
- 9 See Stojanovic, Vaughan and Yeager (2000) for discussion of the role the Federal Home Loan Bank plays in funding community banks.

REFERENCES

- Bliss, Robert R. and Flannery, Mark J. “Market Discipline in the Governance of U.S. Bank Holding Companies: Monitoring vs. Influencing.” Working Paper No. 2000-3, Federal Reserve Bank of Chicago, Research Department, March 2000.
- Flannery, Mark J. “Using Market Information in Prudential Bank Supervision: A Review of U.S. Empirical Evidence.” *Journal of Money, Credit and Banking*, 1998, 30, pp. 273-305.
- _____ and Sorescu, Sorin. “Evidence of Bank Market Discipline in Subordinated Debt Yields: 1983-1991.” *Journal of Finance*, 1996, 50, pp. 1347-77.
- Lang, William W. and Robertson, Douglas. “Analysis of Proposals for a Minimum Subordinated Debt Requirement.” Working Paper No. 2000-4, Comptroller of the Currency, Economic and Policy Analysis, March 2000.
- Meyer, Laurence H. “Market Discipline as a Complement to Bank Supervision and Regulation.” Remarks before the Conference on Reforming Bank Capital Standards, New York, N.Y., 14 June 1999.
- Stojanovic, Dusan; Yeager, Timothy J. and Vaughan, Mark D. “Is Federal Home Loan Bank Funding a Risky Business for the FDIC?” Federal Reserve Bank of St. Louis, *The Regional Economist*, October 2000, pp. 5-9.