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Staff Study
173

Improving Public Disclosure in Banking

Study Group on Disclosure
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The following paper is summarized in the *Bulletin* for April 2000. The analyses and conclusions set forth are those of the authors and do not necessarily indicate concurrence by the Board of Governors, the Federal Reserve Banks, or members of their staffs.

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Improving Public Disclosure in Banking

Introduction

The use of market discipline as a complement to bank supervision and regulation has gained greater acceptance in the United States and abroad. It is also widely recognized that effective market discipline depends on market participants' having information about the risks and financial condition of banking organizations. Therefore, attention is being focused increasingly on ways to improve transparency in banking.

The accent on market discipline and transparency has been prompted in large part by changes reshaping banking. With consolidation, convergence, globalization, and the rapid pace of financial innovation, more-effective market discipline is a preferred alternative to large-scale expansion of supervision and regulation as a means of limiting risk-taking by large, complex financial institutions with substantial banking activities. These developments are also affecting the types of information needed for evaluating organizations, and thus, changes in disclosure practices are required for maintaining transparency in banking.

It is appropriate for the Federal Reserve as a banking agency, in strengthening the links among market discipline, transparency, and bank supervision, to consider initiatives that promote better disclosure in banking. The purpose of this report is to present a set of such initiatives that would reinforce the current process shaping disclosure while avoiding additional regulatory requirements.

Section 1 of this report lays the foundation for the initiatives by considering how market discipline could supplement supervision. The analysis suggests that greater reliance on private-sector oversight in banking can be consistent with the supervisory goals of limiting moral hazard and systemic risk and, thus, with the public interest. Supervisors face tradeoffs, however, if market discipline brings with it increased financial fragility. While market discipline that flows from improved disclosure should limit ex ante risk-taking by individual banks, the net effect on systemic risk depends also on the extent to which improved market discipline affects the management of financial crises. Thus, greater reliance on market discipline, supported by efforts to improve disclosure, needs to be viewed as part of a comprehensive approach to supervising and regulating large banking organizations.

Section 2 reviews the empirical evidence on market oversight and discipline in banking. The evidence indicates that large bank holding companies have the most equity, subordinated debt, and commercial paper outstanding. Holders of short-term bank debt, such as large certificates of deposit (CDs), foreign obligors, and even participants in the domestic interbank market, provide a basis for market discipline at the bank level. Available studies suggest that, in equity markets at least, the market can evaluate banking organizations about as well as it can other types of firms. Moreover, the relative riskiness of banking organizations tends to be reflected in the interest rates on their debt, though the sensitivity to risk may have been damped in more recent years.

Section 3 examines the disclosure process itself.[1] Standards promulgated by the Securities and Exchange Commission (SEC) and the Financial Accounting Standards Board (FASB) are instrumental in shaping disclosures. Banking regulatory reports also are important in the disclosure process, in part because their fixed format allows comparison across firms. Banking firms have a large measure of flexibility in how they meet various SEC disclosure requirements, and they often make voluntary disclosures, which allow for discretion in structuring disclosures and in responding to demands of market constituents for additional types of disclosure. However, as a result of the process, some types of disclosures by some banking organizations are more complete than those of others, while other types of disclosures tend to be limited across the board.

Section 4 discusses specific problem areas in disclosure at U.S. banking organizations, including four related to credit risk: risk retained in securitization, risk-rating categories, contributions to loan-loss

NOTE. The members of the study group and their affiliations are listed in appendix A.

1. For this report, interviews were conducted with bank holding companies, securities firms, institutional investors, rating agencies, and clearinghouses to discuss current disclosure practices and the ways that new disclosures could improve transparency and market discipline. See appendix B for a summary of the interviews.

reserves, and credit concentrations. The section also examines issues related to disclosures of market risk and disclosures by lines of business.

Section 5 discusses several initiatives intended to promote better disclosure in banking. Steps have already been taken to increase the value of regulatory reports by accelerating the release to the public of information collected for the reports. In addition, the Federal Reserve is reviewing the confidential treatment of certain information in reports, with an eye to making some of the data public. The section discusses the creation of a private-sector task force that would develop guidelines for disclosure by large banking organizations for the purpose of increasing the scope of public disclosure while trying to avoid new regulations. Such a set of guidelines could be an important complement to the efforts of the Basel Committee on Banking Supervision to promote international guidelines for disclosure. A report by the new private-sector task force also could provide comments on how bank supervisory initiatives could promote better disclosure. An example of how the supervisory process might be used for this purpose is outlined in the discussion of the initiative that would have Federal Reserve examiners review the public disclosures of large banking organizations as part of the evaluation of their management. Finally, to make better use of market-related information, the Federal Reserve is establishing a system for tracking market data on individual banking organizations and is assessing how to use those data as part of supervisory surveillance.

1. Market Discipline, Transparency, and Banking Supervision and Regulation

Market discipline means that a firm has private-sector stakeholders who are at risk of financial loss from the firm's decisions and who can take actions to "discipline" the firm, that is, to influence its behavior. Transparency in banking is a measure of the degree to which the stakeholders—equity holders, debt holders, and other counterparties—as well as securities analysts and rating agencies are able to assess an institution's current financial condition, prospects for future earnings, and risk. That assessment depends, in turn, on the extent and quality of disclosure, which refers to the public release of information on individual institutions about their financial condition and performance, the current value and collectibility of assets, and the value and cash flow requirements associated with liabilities, as well as information on risk exposures, risk-management processes, control procedures, and business strategies.

Understandably, market discipline is often equated with oversight by debt holders because their motives and actions tend to mitigate risk-taking. The ex ante (before debt issuance) actions that debt holders can take, such as demanding higher rates on riskier debt and withholding funding, provide a check on risk-taking. In addition, ex post, the value of debt holders' claims declines as their default risk increases. Therefore, if the risk of a firm increases, the secondary market rate on its outstanding debt would be expected to rise, providing a signal to other potential debt holders.

For publicly held firms, shareholders, too, are a source of market oversight of management. The effectiveness of monitoring by shareholders also depends on the extent and quality of disclosures. Greater shareholder monitoring can result in better risk-management procedures and controls. More generally, however, shareholders want a firm to attain an appropriate risk-return tradeoff, not to limit risk per se. Indeed, for a leveraged firm, an increase in risk has the effect of transferring wealth from debt holders to shareholders. This problem of private-market moral hazard makes the discipline from debt holders imperative for an unregulated firm.

Special Issues for Banking

As regulated firms, banking organizations raise special issues regarding market discipline and disclosure. Supervision and regulation of banks are motivated in part by the concern that two key features of banking—opaque assets, such as loans, and the reliance on short-term liabilities—produce inherently unstable institutions.[2] This situation raises policy concerns because it is seen as presenting a systemic threat.[3] In response, the Congress has given

2. See Flannery (1998).

3. One view is that banks are special because of regulation—that is, the safety net and oversight by the government allow banks to rely on short-term deposit funding, invest in opaque assets, and be highly leveraged. Diamond and Rajan (1998) offer an alternative theory of banking that assesses the implications of key institutional features of banks: Banks make loans to borrowers that are difficult to evaluate and offer guarantees of liquidity—that is, banks can be meaningfully differentiated from other intermediaries by what they do, not just because they are regulated. Rajan (1998) puts this discussion in perspective by employing an incomplete contract framework. He asks what would happen if the special privileges of depository institutions were eliminated. He answers that some liquidity providers would not offer deposits, but others would continue to do so. He goes on to argue that institutions will have to provide assurances that they have the ability to offer liquidity to holders of deposits and, for example,

the banking agencies roles both in corporate governance through direct supervision and regulation and in providing guarantees on liabilities through the federal safety net. The supervisory oversight and safety net, however, reduce the private-sector incentives to monitor and discipline banks and create regulatory moral hazard.

The growing emphasis on market discipline in banking is an attempt to limit the extent of the regulatory moral hazard. This is not to say that supervisory oversight and the safety net are unimportant. Rather, the emerging view in policy is that the scope of the oversight and safety net historically may have made banks more special than necessary. The desire to be more discriminating in applying the federal safety net is a rationale for provisions in the Federal Deposit Insurance Corporation Improvement Act, such as least-cost resolutions of failures and strict limits on the application of the "too-big-to-fail" policy. Proposals for stronger capital positions and mandatory subordinated debt also imply that banks may have been a little more special than necessary. Although banks are a source of liquidity, such initiatives essentially send the message that banks can function effectively while holding somewhat more long-term funding.

An emphasis on market discipline and a more discriminatory safety net are also consistent with the ongoing evolution of financial services. The underlying assumption is that, as individual financial institutions come to encompass virtually the entire spectrum of financial services, policymakers have to decide where to draw lines. Doing so, of course, is made increasingly difficult because financial integration and innovation blur the lines between services provided by banks (and thrifts) and those provided by holding company nonbank affiliates and other nonbanks. Lines drawn today may not be workable in the future. But they must be drawn somewhere to limit the potential for extending bank-like oversight and explicit federal financial guarantees to more financial services. For now the public may be best served by differentiating between institutions with commercial bank (as well as thrift) charters and other entities providing financial services.

on loan commitments. He then asserts that capital per se can go only so far in offering assurance to such parties. Rajan concludes that what is crucial are the institution's risk-control systems, whose primary function is to avoid institutional default on commitments to deliver liquidity.

Market Discipline as a Complement to Bank Supervision

Given its scope, can market discipline be compatible with bank supervisory goals? Considering the ex ante risk-taking of individual banks, the answer is "yes." To the extent that some bank liability holders are at risk, their actions, through the pricing and availability of funds, in response to bank risk would guide a bank's choices on investments and leverage. This discipline of individual bank risk-taking could contribute to stability in the banking system.[4]

Market discipline cannot substitute fully for supervisory oversight as long as there are mispriced insured funds and systemic risk. For example, if some bank funds are insured, the supervisor may still need to take action to limit risk-taking ex ante. The reason is that regulatory moral hazard still exists, with banks able to compensate uninsured debt holders for higher risk without necessarily raising the cost of the insured funds.[5]

The more critical issue for market discipline in banking is what it implies for crisis management in the face of a systemic threat. When a bank's solvency is in question, even the interests of uninsured creditors can diverge from those of the bank supervisor, especially subordinated debt holders who bear the losses before other creditors. The uninsured creditors may seek quick closure of the bank (or, if possible, withdraw funds) to limit their losses, whereas a bank supervisor may be concerned about the more general effects of an abrupt closure (or liquidity squeeze) of a bank on the financial system.[6] In taking action against banks, individual bank debt holders would not have the incentive to take into account all the costs to society from disruptions to financial markets.

Regarding increased transparency itself, the public policy concern is that disclosures about individual banks would trigger actions by private stakeholders

4. Cordella and Yeyeti (1997) suggest that increased market discipline through improved transparency would lead to a more stable private banking system. The intuition is that in the absence of disclosure, depositors and other creditors assume that banks will choose riskier positions and that the debt (deposits) will be priced accordingly. The solution then is for a bank to take riskier options. In contrast, with full disclosure—that is, with its risk known—the bank can take less-risky options. By enhancing market discipline, more effective disclosure could produce a more stable banking system.

5. Ex post (after issuing debt), however, the uninsured debt holder has the incentive to limit risk-taking by the bank. See Furlong and Keeley (1987).

6. The interests of the subordinated debt holders can become aligned with those of shareholders as the financial condition of a firm deteriorates. That is, at some point, a debtor with a junior claim will prefer to have the firm increase risk.

that would preempt the efforts of central banks and supervisory agencies to contain a systemic threat. For long-term debt, such a trigger could be a put provision in a bond covenant. Therefore, regulations that increase risk for long-term debt might need to take into account the implications of debt contracts for closure policy. For short-term bank debt and obligations to other counterparties, the more likely preemptive action would be the withdrawal of funding. Regulating against that threat would be difficult.

Increased disclosure and more-active market discipline could make life difficult for policymakers dealing with systemic threats, but an on-and-off policy on disclosure that depended on market conditions could be counterproductive. Perhaps most important, cutting off information would limit the value of disclosure in reducing irrational contagion in the face of a systemic threat.[7]

The discussion above suggests that the market discipline that flows from enhanced disclosure should limit ex ante risk-taking of individual banks but that the net effect on systemic risk also depends on the effects of improved market discipline on behavior during financial crises. The potential for market discipline to have adverse effects during periods of financial stress points up the importance of effective policies to resolve problems, particularly at large banking organizations. That is, greater reliance on market discipline supported by efforts to improve disclosure should be viewed as part of a comprehensive approach to supervising and regulating large banking organizations.

Using Market Information in the Supervisory Process

Another potential benefit from more-effective market discipline through improved transparency is greater accuracy of market assessments of risk and value. More-precise market assessments of risk and value should provide better signals as to where supervisory efforts should be focused. In this context, information on both debt and equity can, in principle, be useful. A simple, uninsured, long-term debt instrument would provide the most straightforward information. The interest rate spread between such an instrument and an otherwise comparable risk-free security would reflect the market's assessment of a bank's risk. The signal from shorter-term uninsured debt, such as three-month CDs, also would be useful, though perhaps less so to the extent that the relevant period for assessing risk for CD holders would not span the entire period relevant for the bank supervisor.

Information on risk from bank equity would be more difficult to extract. However, option models have been applied to time series on stock prices to derive estimates of asset risk and probabilities of default. More directly, models have been used to derive the forward-looking estimates of asset risk from stock option prices.

2. State of Market Oversight and Discipline in Banking

Moving beyond the theoretical feasibility of using market discipline to help curtail risk-taking, in practice market participants must actually be at risk to have incentives to monitor banking organizations. Important in this context are the scope for market oversight and discipline and the evidence of their effectiveness.

Potential Scope for Market Oversight and Discipline

The potential sources of market oversight in banking include the equity holders and uninsured creditors. Uninsured creditors include holders of subordinated debt, of short-term uninsured domestic debt, and of liabilities in foreign offices. Most publicly traded

7. Calomiris and Mason (1997) address the case of depositors who may initiate runs on all banks when they cannot observe whether individual banks are solvent but can observe a shock that affects bank portfolios. Their paper addresses the empirical question of whether private actions can prevent the failure of solvent banks during a panic. They compare the attributes of banks that failed during the Chicago panic of June 1932 with those of banks that failed at other times in early 1932 and those of banks that survived. They find that special attributes of failing banks are distinguishable months before the panic, as reflected in stock prices, examination reviews, debt composition, and interest rates. The authors conclude that failures during the panic reflected the relative weakness of failing banks in the face of a common asset value shock rather than contagion: The banks that failed during the panic were among the weakest in Chicago.

Some recent empirical studies provide evidence regarding the contagion effects of disclosure among banks. They try to detect contagion by measuring the effect of disclosures by a banking organization on the stock prices of other banking organizations. One particularly relevant study by Docking et al. (1997) looks at the effects of disclosures about loan-loss reserves from 1985 to 1990. This study finds that disclosures by large money center banks did not systematically affect stock prices of other large money center banks. This finding means that there was not a consistent contagion effect among the money center banks. The study does find evidence of contagion from regional banks to money center banks. The contagion, however, appears to stem only from regional banks in New England and the mid-Atlantic. Because many of the money center banks had major operations in those regions in the 1980s, these results are consistent with the market differentiating among banks based on their actual risk exposure.

equity of banking organizations is issued at the holding company level. At the end of 1998, the market value of common equity for banking organizations with data available on the Compustat database totaled $907 billion (see appendix C). Equity market monitoring extends to medium-sized organizations, but large organizations account for the lion's share of the value of market equity. In comparison, the volume of subordinated debt (on a consolidated basis) at all the holding companies was around $103 billion, or 2 percent of assets. Holding company commercial paper outstanding was around $73 billion. In both cases, the preponderance of the debt was issued by the largest holding companies.

At the bank level, only 226 institutions had subordinated debt outstanding, which totaled about $72 billion at the end of 1998. A few medium-sized institutions had some subordinated debt outstanding; however, the top fifty banks had issued most of the debt. In addition, evidence suggests that most of the bank-issued notes are held by affiliated holding companies. Among the holders of short-term bank debt, a large portion of creditors would have an interest in the financial condition of the banks themselves. The sizable volume of large-denomination domestic CDs, foreign liabilities, and federal funds balances provides a basis for discipline at the bank level, with the greatest potential at the largest banks.

Evidence Concerning Market Oversight and Discipline

The observations that many assets held by banks tend to be opaque and that banks are heavily regulated prompt two empirical questions. First, is the makeup of banks' portfolios a significant hurdle to market evaluation of banks' financial condition, performance, and risk? Second, given the federal safety net, do bank liability holders have the incentive and ability to respond to differences in the default risk of banking organizations?

In answer to the first question, a recent study focuses on the adverse selection component of the bid–ask spreads on stocks, which is the portion of the spread that compensates marketmakers for the risk of trading with informed parties.[8] A wider spread can be interpreted as indicating more uncertainty or opacity. The study's results are consistent with the hypothesis that investors are able to value large (traded on the New York Stock Exchange) banking firms about as well as they can value large nonbanking firms with matched characteristics. Moreover, the findings show that market investors have good information about smaller (listed on Nasdaq) banking firms compared with size-matched nonfinancial firms.

Another study, which may be more relevant to the evaluation of bank-related debt, uses differences in ratings by Moody's and Standard & Poor's as a proxy for the difficulty in assessing risk.[9] It finds that the ratings of the two agencies tended to differ more for bank holding companies and insurance companies than for other firms of comparable size and risk. The study also finds that the likelihood of a split rating increases as the proportion of a bank's assets in loans (as opposed to securities) increases, and it decreases with higher capital leverage ratios. These findings suggest that bank debt, particularly among risky banks, may be more difficult for the market to assess.

Nevertheless, in answer to the second question posed earlier, several studies find that liability holders have the incentive and ability to respond to differences in the default risk of banking organizations. One recent study considering the risk of long-term bank debt concludes that interest rates on subordinated debt tend to vary with the riskiness of the banking organization issuing the debt. Moreover, the sensitivity of interest rates to the long-term debt of banks appears to have increased in the first part of the 1990s compared with earlier years, likely reflecting the change in the public policy stance on protecting uninsured liability holders in the event of bank failures.[10]

The link between risk premiums on bank-related subordinated debt and bank default risk is also supported by a recent Federal Reserve System study.[11] That study, however, also finds some indication of less sensitivity to risk in the latter part of the 1990s, compared with earlier in the decade. This shift may merely reflect the substantial strengthening of the capital positions of most large banking organiza-

8. See Flannery et al. (1999).

9. See Morgan (1998).

10. See Flannery and Sorescu (1996). It is important, however, to note that evidence of risk premiums does not mean that market discipline is fully effective. Billett et al. (1998) examine the significance of such risk premiums for effectively disciplining banks within the current U.S. regulatory environment, which permits banks to vary their reliance on market-priced sources of funds without adjustment to their overall use of financial leverage. Their findings led them to argue that previous work had important shortcomings, in that it had not examined how the costs of regulatory and market discipline combine to influence a bank's overall risk appetite.

11. See Study Group on Subordinated Notes and Debentures (1999).

tions over the decade rather than changes in debt holders' views about bank supervisory policy.

Evidence relating to interest rates on short-term bank-related debt also points to some degree of market discipline. Most of the published research on the effect of bank risk on rates on large-denomination CDs covers periods through the early 1990s.[12] These studies generally find that measured bank risk affects large CD rates in a plausible fashion. However, results from research conducted for this study covering sample periods through 1997 indicate that in more recent years, CD rates have shown less sensitivity to bank-specific risk.[13] Again, this sensitivity may have been affected by the substantial increase in bank capital since the early 1990s. In addition, the depositor preference rule, instituted in 1993, may have had an effect. The intent of the rule was to provide more protection for the Federal Deposit Insurance Corporation (FDIC) by placing it ahead of other general creditors. However, it also gives holders of large-denomination domestic CDs priority over other general creditors.

Summary

The potential sources of market oversight in banking include equity holders and uninsured creditors. For these stakeholders, large bank holding companies have the most equity, subordinated debt, and commercial paper outstanding. At the bank level, holders of short-term debt such as large CDs, foreign obligors, and even participants in the federal funds market provide a basis for market discipline.

Supporting the potential for effective market oversight is the market's ability to evaluate bank equity, which seems roughly on a par with its ability to evaluate the equity of other types of firms. Thus, disclosure by banking organizations helps to overcome to some extent the intrinsically more opaque nature of banks. Moreover, the evidence on long-term debt indicates that there are risk premiums related to bank-specific risk. The analysis of rates on short-term uninsured CDs indicates that historically these instruments responded to risk in banking. However, that sensitivity may have been damped in more recent years. This result has to be viewed as preliminary, especially in light of the fact that the market still expends resources on evaluating the risk of large-denomination CDs.

3. Factors Shaping Public Disclosures in Banking

Disclosure practices in banking are shaped by regulation as well as by private-sector initiatives. Regulatory standards apply to published financial statements and other financial information as well as to bank regulatory reports. The process for change in disclosure is influenced importantly by the initiatives of standard setters, such as the SEC and the FASB, along with the bank regulatory agencies.

Initiatives by banking organizations, however, also play an important role in determining the form and content of disclosures, in part because banks have considerable discretion in interpreting certain SEC regulations regarding disclosures. In addition, banks go beyond regulatory requirements to disclose information voluntarily. Also important to banking transparency are the myriad of private-sector efforts to make disclosed data more accessible, to assemble additional information on banking activities, and to assess the performance of individual banks.

Regulatory Agencies' Role in Disclosure

SEC Regulatory Standards

The SEC requires banking organizations (and other firms) with publicly traded securities outstanding to prepare periodic financial reports. Because most bank-related equity and traded debt securities are issued at the holding company level, SEC disclosure reports are mainly from bank holding companies. The reports include the annual Form 10-K (which includes audited annual financial statements and other unaudited disclosures) and quarterly 10-Q financial statements (which are unaudited).

Disclosures of financial information are also made in press releases and in securities registrations, proxy statements, Form 8-K reports, and other reports filed with the SEC and the securities exchanges. Unlike routine financial statements, these releases and reports usually occur in connection with special circumstances that can affect the reporting firm.

12. A recent study also tests for evidence that bank credit risk affects interest rates on federal funds. Furfine (1999) assembled a database of transactions on overnight federal funds for the period from January 2 to March 31, 1998. In the empirical analysis, the borrowing bank's leverage ratio was used to control for credit risk. The study finds that lower leverage did result in lower borrowing rates on federal funds. This study also reports results indicating that leverage has a statistically significant effect on the borrowing cost of smaller banks. The study, however, does not provide separate results for large banks.

13. The analysis for this study used the methodology of Ellis and Flannery (1992) for a sample of large banks covering the period from 1982 to 1997.

Generally accepted accounting principles (GAAP) address both accounting and disclosure requirements and must be followed for financial reporting purposes, that is, for annual and quarterly published financial statements. The disclosure standards in GAAP are based on pronouncements issued by the FASB, the American Institute of Certified Public Accountants (AICPA), and, for publicly traded companies, the SEC. In addition, certain requirements may result from the work of the Emerging Issues Task Force (EITF), which is appointed by the FASB and is made up of accountants from industry (including banking) and the accounting profession.

For publicly traded companies, disclosures appear in three main sections of annual and quarterly reports: (1) management's discussion and analysis (MD&A), (2) the financial statements, and (3) the explanatory notes to the financial statements. Financial statements—financial position (balance sheet), income, cash flow, and changes in equity and comprehensive income—are the primary conduit for disclosing quantitative information. In contrast, both MD&A and the notes to the financial statements provide qualitative information about risk management and accounting policies, as well as quantitative information about risk exposures, fair values of financial instruments, and details relating to financial statement balances.

Banking Regulatory Reports

Banking organizations are required to submit regulatory reports to the federal banking agencies. Certain banking regulatory financial reports are available to the public and are important components of public disclosure. These publicly available reports fall into two broad categories: (1) bank Call Reports subject to the reporting requirements of the Federal Financial Institutions Examination Council and (2) bank holding company Y Reports subject to the reporting requirements of the Federal Reserve Board.[14] Both categories are composed of fixed-format financial reports prepared using accounting principles for recognition and measurement that are consistent with GAAP.

These reports typically include a balance sheet, income statement, and statements of changes in equity capital and supporting schedules that present more details on assets, liabilities, and equity, as well as off-balance-sheet items, risk-based capital components, and limited explanatory notes. The Y Reports also provide information on a bank holding company's parent company and nonbank activities.[15]

Banking Supervisory Reports

The supervisory process is another source of public information on banking organizations. Formal enforcement actions, for example, are public documents, which include cease-and-desist orders and written agreements between a bank regulatory agency and a banking organization. These agreements identify specific steps to be taken by a banking organization to address one or more problem areas and are enforceable by the banking agencies. Recent research, discussed in appendix D, indicates that the announcements of formal actions can add to the effectiveness of market discipline. The research also suggests that the speed with which detrimental information is made public by banking organizations varies considerably. Specifically, for announcements of formal actions, the market appeared in some cases to have had prior information on problems at the affected institutions, while in other cases problems appeared to be a surprise to the market.

Informal supervisory actions can also be a source of information to the market. Informal actions include memoranda of understanding and informal agreements signed by companies' boards of directors. These agreements identify actions to be taken by a banking organization, but they are not legally enforceable. Informal actions are not made public by the banking agencies; however, there is no legal impediment to such disclosure by the agencies or by the affected banking organizations. Indeed, banking organizations have disclosed informal actions that they have deemed to be material to their financial condition or performance. For example, an informal agreement that limited dividend payments might be deemed material and therefore disclosed. To date, the effect of informal actions on transparency has not been assessed systematically.

The supervisory process also generates examination reports.[16] These reports include specific examina-

14. Some items in these regulatory reports are considered confidential and are not made available to the public. For example, in the Call Report, data on loans with interest past due for less than 90 days are considered confidential.

15. These reports use GAAP, but they may require information that goes beyond GAAP disclosure requirements for supervisory purposes or for advancing public policy.

16. The Federal Reserve, in its supervisory capacity, may also review to some extent the quality of an institution's significant financial disclosures. In this regard, the Federal Reserve's examiners do not seek to validate the accuracy of every item in the financial reports. They will, however, compel financial institutions to correct significant errors or omissions that come to an examin-

tion findings and ratings, which the agencies treat as confidential information that is not made public. Examination reports can also include information that is confidential or proprietary to the affected banking organization. The agencies' authority either to disclose or to require a banking organization to disclose trade secrets or confidential business information to the public is limited by law, in particular by the Trade Secrets Act. Although examination data are confidential, the research discussed in appendix D suggests that related information makes its way to the market, with favorable information being disclosed faster than unfavorable information.

Financial Reporting Initiatives

In recent years, FASB has issued a number of new rules affecting the accounting standards and disclosures associated with financial instruments that compose the main part of banking activities. Much of the emphasis has been on the fair value of financial instruments, asset transfers, and off-balance-sheet risks.[17]

In addition, FASB has issued reports on surveys and other projects that address disclosure practices. For example, in December 1996 FASB issued a report that surveyed annual report disclosures about derivative instruments across a number of industries. Also, in December 1998 FASB issued a report on suggestions for improved disclosures of asset securitization transactions.

Along with initiatives affecting the regulatory reports, the federal banking agencies seek to influence disclosure in banking through their relationships with FASB, the AICPA, the SEC, and the EITF. One way that this is done is through the agencies' participation in FASB task forces that address accounting and disclosure issues. The federal banking agencies also have quarterly meetings with FASB on an interagency basis and have other meetings to discuss accounting and disclosure issues affecting banking institutions. Typically, the agencies will also comment on major accounting and disclosure proposals of FASB, the AICPA, and the SEC that would affect banking organizations.

International Agency Initiatives

Disclosure in banking has also been influenced by several initiatives and reports by international agencies (see appendix E). Some very recent reports related to disclosure are from the Basel Committee on Banking Supervision. One issued in September 1998, entitled *Enhancing Bank Transparency*, provides general guidance on regulatory frameworks for public disclosure and supervisory reporting and on core disclosures that should be provided to the public. The report discusses the qualitative characteristics of information contributing to transparency, six broad categories for disclosure, and a large number of recommendations regarding specific disclosures.

Other recent Basel Committee reports present specific guidelines on credit-risk disclosures. One report released in October 1998 proposed practices for international loan accounting and related credit-risk disclosures. A revised version of that report, *Sound Practices for Loan Accounting and Disclosure*, was released in July 1999. This report presents twenty-six principles for improved accounting and disclosure practices, of which thirteen are recommendations for disclosures relating to credit risk in lending.

The recommendations in the *Loan Accounting* report on disclosure are subsumed in a more comprehensive set of guidelines for credit-risk disclosures included in the Basel Committee's July 1999 report *Best Practices for Credit Risk Disclosure*. This report presents twenty-four specific guidelines for disclosure in five broad areas: accounting practices, credit-risk management, credit exposure, credit quality, and earnings. The guidelines apply to credit risk related to lending as well as other activities, such as trading, investing in securities, asset management, and management of liquidity and funding. Several of the guidelines in the Basel Committee report address the problem areas in disclosures by U.S. banking organizations that are discussed in section 4 of this report.

Private-Sector Role in Bank Disclosure

Published Disclosures

In contrast to the fixed-format banking regulatory reports, public documents required by the SEC allow banking organizations (and other firms) flexibility in meeting some of the reporting and disclosure requirements. Banking organizations also have a

er's attention in the organization's regulatory filings and work with the SEC to encourage correction of public financial statements.

17. During the past decade, FASB has issued the following standards affecting banks: FAS 107, Disclosures about Fair Values of Financial Instruments; FAS 114, Accounting by Creditors for Impairment of a Loan; FAS 115, Accounting for Certain Investments in Debt and Equity Securities; FAS 119, Disclosures about Derivatives; FAS 125, Accounting for Transfers and Servicing of Financial Assets and Extinguishments of Liabilities; and FAS 133, Accounting for Derivative Instruments and Hedging Activities.

great deal of latitude in reporting supplementary ad hoc information deemed to be material to their performance. Recent examples are the disclosures made in connection with the currency crisis in East Asia in 1997 and the financial market disruptions after the Russian debt default in 1998.

Banks also make voluntary public disclosures. These disclosures are often used to inform the market of developments that would have a favorable effect on a bank's performance. Banks also might make disclosures to indicate that they are not vulnerable to a particular economic or financial development.

Banks have several groups of constituents for their disclosures. Based on the interviews conducted for this report, banks view shareholders, of which institutional investors are an important segment, as their foremost constituents. Other constituents include research analysts (both equity and debt), rating agencies, debt holders, and counterparties. Both the analysts and the rating agencies serve as conduits of information to shareholders and debt holders.

There is considerable overlap in the information used by these groups. However, as a result of their different perspectives, these groups also seek different types of information. Shareholders are interested in evaluating a bank's growth prospects, while debt holders concentrate on an institution's ability to meet its obligations.

At any time, the content of public reports reflects regulatory requirements and ad hoc disclosures originally made in response to past events. As a result, extant disclosures are not always well suited for conveying information on new developments. Therefore, caution must be exercised when using regulations to ''hardwire'' disclosures to address the ''issues of the day.''

Outside auditors play an important role in ensuring accurate disclosures. Specifically, their responsibility is to test firms' financial statements for conformance with GAAP.

Other Information Exchanges

Although published financial reports are a natural focus of discussions on disclosure, regular briefings and individual exchanges between banking organizations and securities analysts, rating agencies, and institutional investors are also important in enhancing transparency. Banks use these exchanges in part to clarify quantitative data published in regulatory reports and in some cases to provide more detailed quantitative data. These exchanges, however, seem to be primarily sources of both qualitative data, such as management projections and information on internal controls and procedures, and unaudited quantitative data, such as management projections. Analysts and rating agencies also use these exchanges to provide banks with feedback on the types of additional information that might be useful in formal disclosure statements. Among market analysts, it appears that equity analysts interact more with banks than some fixed-income analysts do. It should be mentioned, though, that the fixed-income analysts for larger securities firms and large institutional investors maintain regular contact with the large banking organizations.

Rating Agencies

The rating agencies serve as intermediaries in the disclosure process by collecting, analyzing, and distributing bank information. Aside from public information, the agencies often receive bank proprietary information in this process. Such information becomes embedded in ratings, which, in turn, are key inputs to credit decisions by other market participants. In this indirect way, some proprietary information becomes part of the process through which market discipline is exerted. Holders of short-term bank-related debt apparently rely to a large extent on rating agencies in assessing risk.

Factors Limiting Disclosure

Because market discipline cannot work without some degree of transparency, the private sector has incentives to promote disclosure. Outside investors and debt holders clearly have a demand for information, while management has incentives to supply information that reduces the cost of funds, raises equity values, or does both.

As a practical matter, however, it is difficult for a bank to assess ex ante the value the market places on a given voluntary disclosure. The decision to disclose is complicated further by uncertainty about costs. Although the cost of assembling, processing, and publishing information is a consideration, it is often not the main deterrent to disclosures. Rather, a major factor limiting disclosures appears to be banks' desire to protect proprietary information. Another factor is legal liability, including exposure to litigation over privacy issues and the release of information that is later judged to be inaccurate or misleading. Banking organizations also tend to be cautious in making voluntary disclosures because once they report a particular piece of information,

they will likely feel pressure to continue reporting it. The difficulties in evaluating the benefits and costs of disclosures as well as in reversing decisions to make disclosures are seen as reasons for banks' reluctance to be "first-movers" in breaking new ground on public disclosures.[18]

Other Private-Sector Initiatives to Enhance Transparency

A significant number of other private-sector initiatives have improved the transparency of bank performance and related risks. (See appendix F for information on a number of such initiatives.) Besides these endeavors, the Group of Thirty, a private nonprofit international organization, has had a significant effect on transparency in banking through its reports on measuring and managing risk and disclosure of information on derivatives.

Information on Banks' Financial Condition

Besides the bank financial statements that are available from federal agencies, private-sector sources also provide information about the financial performance of banks. Many banks provide quarterly earnings releases on their web sites. In addition, several vendors provide bank financial data, research reports, analyst reports, and earnings estimates for their clients.

A number of firms also assign ratings to banks based on their financial strength. Moody's and Standard & Poor's provide ratings on bank obligations. Other firms specialize in rating securities for banking organizations and other financial institutions. Bank Rate Monitor assigns CAEL (assessments of capitalization, asset quality, earnings, and liquidity) ratings to FDIC-insured banks. Moreover, news services and industry journals are valuable sources of information on key industry and bank-specific developments that may affect a bank's financial strength.

Information on Bank Activities and Market Sectors

Other private-sector initiatives enhance the transparency of certain banking activities and related risks. For example, the Loan Pricing Corporation (LPC) provides data on the syndicated loan market, including information on pricing, fees, tenure, covenants, and ratings. Rating agencies such as Moody's, Fitch IBCA, and Standard & Poor's rate bank loans. Trade associations with bank members, such as the Loan Syndications and Trading Association, seek to promote the standardization of trading practices in the syndicated loan market, including promoting the use of loan identification numbers and making secondary market prices available through LPC. From these and other sources, which provide data on specific agent banks and obligors, analysts and market participants can improve their understanding of large banks' syndicated lending activities and related risks. Other services available to market participants that enhance the transparency of certain banking activities involve providing data on corporate and municipal finance, syndicated bank loans, mergers and acquisitions, and leveraged finance.

Information on Risk-Management Practices

Banks' financial statements include certain information about their risk exposures and risk-management practices. In addition, consulting companies and research firms publish papers that improve the market awareness of risk-management practices. Often these firms have access to proprietary information on which to base their observations. For example, the "Big Five" public accounting firms occasionally publish papers based on their consulting and audit work. Other firms publish articles and surveys related to risk-management issues, and trade associations disseminate information regarding risk-management practices.

4. Current Issues in Banking Disclosures

The public disclosure process operating in the United States, with its combination of regulatory requirements and private-sector initiatives, generates a considerable volume of information for assessing the financial condition and risk of banking organizations. The process has demonstrated responsiveness in

18. Other considerations may also affect the disclosure process. The need for market discipline in general arises because of conflicts of interest. One example is the conflict that can arise between the interest of equity holders and debt holders of a firm because of the possibility that an increase in risk will shift value from debt holders to equity holders.

These conflicts of interest can affect the disclosure process. First, management will likely have a greater incentive to disclose good information than bad information, leading to some asymmetry in disclosure. Second, because information in financial disclosures is difficult to verify, the management of a firm in poor financial condition may try to make it look like a healthy firm, an action that corrupts the disclosure process in two ways. First, the unhealthy firms will not reveal bad information, and second, the accurate information from healthy firms will be discounted by the market. Thus, the market tends to react less to reports of good news than it does to reports of bad news.

the face of changes in the financial-services sector. Indeed, in interviews conducted for this report with securities analysts, institutional investors, and rating agencies, respondents tended to compare bank disclosures in the United States favorably with those of nonbanks as well as with banks abroad.

Nevertheless, additions and changes in disclosures can take time. Also, for some categories of disclosures, those of certain institutions are clearly more complete than those of other institutions. Those categories that may require improved public disclosures among banking organizations operating in the United States include risks retained in securitization and loan sales; the distribution of assets by internal risk rating; explanations of loan-loss reserve calculations and adequacy; credit concentrations by counterparty, industrial sector, or geography; market risk; and risk by legal entity and business line.

Improving Disclosures of Credit Risk

Risk Retained in Securitization

The market often has difficulty in assessing adequately the credit risk retained by most large banking organizations in connection with securitizations and loan sales.[19] The largest bank holding companies generally indicate whether securitizations and loan sales are done with recourse, though they usually do not report information on the value of the exposure. Gains and losses with respect to securitizations and loan sales generally are reported as part of non-interest income.

In interviews, securities analysts strongly recommended having banks disclose how much risk they retain in connection with securitizations and loan sales, including information relating to bankruptcy-remote vehicles sponsored by banks. Analysts also recommended that banks report more information about hedges using credit derivatives.

Part of the current problem with disclosures of retained risk lies with the GAAP requirements. However, some of the deficiencies in GAAP have been recognized, and FASB has issued proposed new disclosure requirements governing the accounting for, and reporting of, transfers and servicing of financial assets. The proposed rules, for example, would require a firm to provide a description of its accounting policies for retained interests and the characteristics of securitizations, disclosure of key assumptions for measuring fair value, and disclosure of cash flows between the firm and special-purpose vehicles used in the securitizations.

Reporting Assets by Risk-Rating Categories

Most of the largest banking organizations have internal systems for rating the credit risk of assets. Disclosure of the distribution of a bank's assets in ''risk buckets'' would provide the market with much more detail on a bank's assessment of its risk exposure than is currently available.

Alternatively, banks could provide more detailed information on the classifications of problem assets, a disclosure similar to reporting the amount of assets in a bank's higher risk buckets.[20] Analysts argue that being able to track changes in the distribution of assets among the risk categories would be useful in gauging changes in an institution's financial condition.

Some of the largest banking organizations provide information on the credit quality of their over-the-counter derivatives counterparties. Disclosing comprehensive information on risk categories for loans, however, is unusual. The interviews conducted for this report revealed that banks tend to resist revealing loan ratings because of the degree of subjectivity used in assigning risk ratings and because disclosing the risk distributions could reveal information about the banks' business strategies. Some banks provide this type of information to the private rating agencies but apparently do not pass on specific information to the market more generally.

Even if the distribution of assets by risk rating were available, assessing the implications for risk overall would not be straightforward. Recent research finds that rating structures and operations vary substantially across banks.[21] For example, the number of credit categories and their definitions can be quite different from one banking organization to the next. For a rating to be informative, a banking organization would have to supply considerable supporting information concerning its method for allocating assets among the risk categories.

The basic issue in the disclosure of the internal risk rating of assets, which also pertains to the disclosure of internal information more generally, is that dis-

19. The areas for improving disclosure relating to credit risk discussed in this section are also identified in the Basel Committee on Banking Supervision report *Best Practices for Credit Risk Disclosure* (see appendix E).

20. Jones and King (1995) find that from 1984 to 1989, problem loans classified by examiners as ''loss,'' ''doubtful,'' ''substandard,'' and ''special mention'' are highly significant in explaining future charge-offs at banks.

21. See Treacy and Carey (1998).

closure of summary data or statistics tends to be of limited use to the market without explanations of how the data are derived. Banks, however, are generally reluctant to disclose those details.

Explanations for Contributions to Loan-Loss Reserves

Banking organizations must disclose increases or decreases in contributions to loan-loss reserves. However, changes in the contributions to loss reserves are often not fully explained in disclosure statements. The Federal Reserve and other banking agencies are already engaged with the SEC on the issue of how to account for loan-loss provisions. Part of this process includes considering the feasibility of providing additional guidance on disclosing reasons for making loan-loss provisions.

Credit Concentrations

Securities analysts argue that more information on concentrations of exposures by counterparty, by industrial sector, and by geographic area would be useful in assessing an institution's appetite for risk. Information on the exposure of a bank or bank holding company to, for instance, its *top ten counterparties*, would not involve revealing the identities of the counterparties, but rather just the aggregate exposure. Under current disclosure practices, banking organizations may include comments such as, ''no one customer or group of related customers represents a material exposure.'' However, they do not reveal quantitative information on the exposure to groupings of their largest customers.

Information on concentrations of exposures by *industrial sector* would disclose all material concentrations, even if there were no current problems with, for instance, loan performance in a sector. Bank holding companies often indicate that they review and manage concentrations in industrial sectors, but it is less common for their financial statements to include breakdowns by industrial classification.[22] Among those holding companies that do include such breakdowns, the number of industrial classifications reported varies considerably. Some banks use the same industrial-sector categories to describe the distribution of nonaccrual commercial and industrial loans. In addition, some bank holding companies use as many as twelve categories based on the use of a property to describe the composition of their commercial real estate loan portfolio.

Information on *geographic concentration* of domestic assets would be relevant mainly for large multistate organizations. A review of the financial statements of the largest bank holding companies revealed some examples of fairly detailed disclosure of the geographic distribution of consumer credit or commercial real estate loans and some additional examples that were rather general. Some of the companies stated that the distributions of their consumer, business, and real estate loans correspond to the footprint of their branch office network. Internationally active banking organizations already disclose quantitative data on exposures to foreign countries and regions.

Improving the Usefulness of Market-Risk Disclosures

Over the past decade, support has grown for better public disclosure of derivatives and trading activities as banks have expanded their business in these areas. Industry groups and the banking agencies, including the Federal Reserve, have recommended voluntary disclosure of more information. In 1997, the SEC adopted requirements for the disclosure of market risk. All financial firms, as well as public corporations with market capitalization of more than $2.5 billion, are required to report quantitative and qualitative market-risk measures of activities in derivatives and other financial instruments. The rule was later amended to encompass all public registrants.

As background for this report, a case study was conducted to assess financial disclosures of trading activities at nine large bank holding companies and investment banks (see appendix G). The case study examines the usefulness of the information disclosed on trading accounts in connection with financial market turmoil in the third quarter of 1998. The review raises some questions about the current state of public disclosure. First, it is clear that disclosures regarding market risk vary considerably among institutions. Second, there appears to be little connection between the degree of risk as suggested by value-at-risk (VaR) disclosures by firms and their actual trading account performance in the wake of the financial shock in the third quarter of 1998.

Although the case study is only suggestive, the findings seem in line with the responses in the interviews conducted for this report in which, for

22. Disclosure of information on credit concentrations by type of customer (for example, consumer, commercial, and real estate) is common.

example, VaR disclosures were viewed as mainly useful for showing that a bank has management information systems that can produce the numbers. Otherwise, the usefulness of VaR in signaling relative risk among banking organizations was seen as limited without supporting information. Interviewees suggested several steps to improve information relating to market risk. These included more widespread provision of histograms for daily trading results, separating out fee income from daily trading results, and providing more information on the assumptions used in estimating the VaR models and on model validation results.

Disclosures of Data at the Bank Level and by Lines of Business

The market demands information both at the bank level and by lines of business. The demand for bank-level data in part reflects the need for assessments of banks as separate legal entities by holders of their debt.

Activities of large banking organizations, however, are organized on a line-of-business basis that often cuts across legal entities within the holding company. Securities analysts, investors, and the rating agencies interviewed for this report expressed a desire for more information related to business lines. They emphasized that as large banking organizations expand the scope of services they offer, disclosure by business lines is becoming even more crucial for assessing bank holding companies.[23]

The largest bank holding companies provide information along business lines (operating segments). The information commonly reported is on outstandings and revenues. Some holding companies also provide information on profitability, measured by return on equity, by business line. In this regard, an important step in improving disclosure could be to have more institutions report information about their internal allocations of equity by activity. This disclosure would provide the market with information relevant to a banking organization's assessment of the relative riskiness of activities.

Greater disclosure along business lines will improve the market's ability to assess complex banking organizations. This is clearly the case in making separate disclosures regarding very different activities, such as insurance and commercial lending. (However, as activities of bank affiliates overlap more with the activities of nonbank affiliates, disclosures along lines of business are less informative about bank affiliates.)

These observations raise three points relevant to the role of the Federal Reserve and the other banking agencies in connection with public disclosure. First, the market will be more dependent on bank regulatory reports for bank-specific information. As a result, the banking agencies may want to give more weight to the value of public disclosure and bank transparency when evaluating the need to include items on the Call Report. Second, information on banks' exposures to nonbank affiliates within a holding company may be useful to the market in assessing the riskiness of banks. Thus, consideration should be given to promoting such disclosures. Third, through the Y Reports, the Federal Reserve collects data on nonbank holding company affiliates that may be useful to the market, and consideration should also be given to releasing some of this information to the public.

5. Initiatives for Improving Disclosure in Banking

This section discusses several initiatives intended to improve public disclosure by banking organizations, as well as one to make better use of market information in the supervisory process.[24] Some initiatives

23. FAS 131 covers disclosure by lines of business (operating segments).

24. Considering only the twin supervisory goals of limiting moral hazard and systemic risk, supervisors in their efforts to promote public disclosure might logically target the very largest banks, rather than large holding companies more generally. These banks benefit directly from the federal safety net and can pose systemic threats. Focusing supervisory initiatives on the large banks would reinforce the perception in the market that the bank is the main concern of bank supervisors.

However, two considerations warrant also focusing on the holding companies. One is that a good deal of the information about banks is released in holding company reports. The second consideration is that much of the bank-related subordinated debt is issued by holding companies, the disciplining effects of which can be expected to extend to bank risk-taking. Thus, for the large number of banking organizations in which bank subsidiaries account for the bulk of holding company assets, the market's assessment of a holding company primarily reflects the risk and value of the affiliated bank(s). In addition, for the bank-dominated holding companies, rates on their debt should provide signals to uninsured creditors of the affiliated bank(s).

For a bank holding company with a more diverse set of affiliates, the implications for market discipline at the bank level are more complicated. In terms of direct discipline, the effects of risk-taking at the bank level on the cost of funds at the holding company level may be muted, depending on the effects of diversification within the holding company. In terms of indirect discipline of the bank, extracting information about bank risk from data relating to holding company debt is more difficult. A bank debt holder would need information on both bank and nonbank affiliates to assess the implications for an affiliated bank of the signals from market data relating to its parent's debt. Thus, some disclosure proposals relating to nonbank affiliates of holding companies may be of interest to bank supervisors.

would contribute directly to fuller disclosures by enhancing information available through regulatory reports. Others would promote better disclosure indirectly—one by increasing public awareness of disclosure issues and fostering communication and private-sector initiatives and another through the supervisory process.

The supervisory process can also benefit by using market-related data as part of banking oversight. For example, market assessments of the risk and value of banking organizations could be useful signals to banking supervisors on how to allocate resources, and better public disclosure would make these market assessments more accurate.

Facilitating Disclosure

Improving the Timeliness and Accessibility of the Banking Regulatory Reports

Banking regulatory reports are important components of public disclosure in banking. Historically, however, the technology available for processing the data affected the timeliness of the public release of the reports. For example, the quarterly bank Call Reports and bank holding company Y Reports have been available, but with a lag of up to three months. Also, access to the data in the past was cumbersome.

In addition, not all the information collected through regulatory reports is made available to the public. Three examples of information currently classified as confidential are (1) information on securities subsidiaries (from Y-20 Reports), (2) the volume of loans with interest past due less than ninety days (from Call Reports), and (3) some of the information concerning banking organizations' foreign exposure. These types of information could be useful to the market in assessing banking organizations.

To increase the value of banking regulatory reports, steps have already been taken to improve the timeliness of banking data. For example, the public release of Y Reports for large bank holding companies has been accelerated. The consolidated balance sheets of the fifty largest holding companies for the third quarter of 1999 were made available to the public fifty-five days after the end of the quarter, which is ten days after the reports are due to the Federal Reserve System. Starting with the fourth quarter of 1999, all the Y-9 Reports of the fifty largest bank holding companies will be released to the public fifty-five days after the end of the quarter. This new schedule should make the regulatory reports available close to the time that the holding companies release other information, such as their earnings reports and 10-Qs.

The data from banking regulatory reports are very accessible. These data are available through the Internet from the National Information Center web pages, which provide access to information on bank holding companies as well as banks. The FDIC provides data on depository institutions on its Internet site.

Regarding classified information, the Federal Reserve is reviewing all the reports that it receives that contain confidential data. The reasons for classifying data as confidential are being reexamined, and an evaluation will be made to determine if some data could be made public.

Facilitating Private-Sector Initiatives

The rapid pace of innovation in banking and financial services has changed, and will continue to change, the information needed to evaluate a banking organization. Although supervisors should try to avoid new regulations, they need to take steps to increase the quality and scope of public disclosure in banking, particularly by the largest holding companies. The Federal Reserve could increase the quality and scope of such disclosure in banking by intensifying its efforts to promote such disclosure. These currently include multilateral efforts, such as meetings with private-sector groups, banks, the SEC, and FASB, as well as unilateral activities, such as public presentations, articles, and other vehicles, including SR letters on supervisory and regulatory issues.

Another vehicle that could help keep disclosure by banking organizations on track is a private-sector committee or task force dealing specifically with disclosure issues for large banking organizations subject to U.S. disclosure regulations. Such a task force might include those most intimately involved in shaping public disclosure in the private sector, including bankers. By focusing on issues relevant to large banking organizations in the United States, the new task force could provide useful input to the current process shaping disclosure in this country and complement international efforts to promote better disclosure, such as those by the Basel Committee on Banking Supervision. More specifically, the task force could establish guidelines for improving disclosure and might comment on, or propose, bank regulatory agency initiatives to promote better disclosure in banking.

Using the Supervisory Process

The supervisory process could also be used to promote better disclosure. Using the supervisory process for this purpose would highlight the importance of disclosure and would be in keeping with the view that market discipline is a viable complement to supervisory oversight in banking. Such a supervisory initiative could be implemented by considering public disclosure as part of the evaluation of management that factors into bank supervisory ratings. Part of good management should be both a sound policy of public disclosure and a vigorous application of that policy. The exam process could include a review of an institution's disclosure policies and practices. The objective of this review should not be to duplicate the efforts of external auditors by verifying compliance with GAAP or the oversight efforts of the SEC, nor to certify the completeness of disclosures, nor to make examination findings public. Rather, the goal would be to encourage best practices and convey significant findings to bank senior management and boards of directors.

The target institutions for these supervisory efforts arguably should be the largest holding companies because, aside from regulatory reports, the main public disclosures by the largest banking organizations are in holding company reports. An appropriate set of institutions might be the so-called large, complex banking organizations (LCBOs). For the LCBOs, supervisory evaluations might focus on consolidated disclosures, as well as the disclosure of information on bank affiliates. In addition, attention could also be given to lines of business and key nonbank subsidiaries because information on such entities can be useful in assessing the financial condition and risk of banks within a holding company structure.

Such an initiative would require additional resources and the development of workable operational guidelines for consistent application among institutions. Therefore, careful assessment of the costs to the banking agencies and the targeted institutions and the feasibility of implementing this initiative are needed.

Using Market Information in the Supervisory Process

Market data on bank-related debt can be used in supervisory surveillance. Data on transaction interest rates as well as bid–ask spreads convey information on the market's assessment of risk. To assess the data's usefulness, however, much better access to such data is needed. Accordingly, the Federal Reserve is establishing a system for tracking secondary market rates on subordinated notes and debentures and on large-denomination CDs issued by large banking organizations and for studying the usefulness of these data in providing information on the market's assessment of risk.

The Federal Reserve is also studying the usefulness of information on equity prices. Banking equity markets are, by far, deeper and more efficient than debt markets. While shareholders cannot be expected to limit moral hazard, they have a strong incentive to assess the risk and value of banking organizations. Techniques are available that, in principle, filter data on equity prices to assess the risk of banks. In addition, other information related to equity prices, such as bid–ask spreads, may provide useful information.

6. Conclusion

This report presents several initiatives for improving disclosure in banking. Improved disclosure would mean more transparency and more effective market discipline. Federal bank regulatory agencies have an interest in disclosure because of the potential for market discipline to complement supervisory oversight. Improving disclosure is especially relevant for the Federal Reserve because most public filings of bank-related financial statements are from bank holding companies that it supervises.

Banking agencies can improve disclosure and transparency directly through the bank regulatory reports. In particular, emphasis should be placed on the benefits of public disclosure when deciding on the content of the regulatory reports and the policies affecting the release of the data. Accordingly, steps have already been taken to accelerate the public release of bank holding company reports and to make greater use of the Internet. The Federal Reserve is also reviewing the possibility of making other information from regulatory reports available to the public.

A second avenue for improving disclosure is facilitating and encouraging related private-sector initiatives. Indeed, from the interviews conducted for this report with securities analysts, institutional investors, rating agencies, clearinghouses, and banks, it is clear that innovations in disclosure initiated by the private sector have helped to make the process responsive in the face of changes in financial services. Nevertheless, clearly there is also scope for improvement in areas such as risks retained in securitization and loan sales, the distribution of assets by internal risk ratings, explanations of loan-loss reserve calculations and adequacy, and credit concentrations.

A promising initiative, then, would be to form a private-sector task force to make an in-depth assessment of these and other potential weaknesses in disclosure practices, with a focus on the largest U.S. financial organizations. The findings of such a task force could reinforce the current process shaping disclosure while avoiding additional regulatory requirements.

Another step to consider is using the bank supervisory process to encourage better public disclosure. Recognizing that sound disclosure practices should be part of sound management, bank supervisors can play a role in reviewing disclosure practices. This review would not duplicate efforts to ensure compliance with GAAP, but would encourage adoption of ''best practices'' when appropriate. The goal of this initiative would be to keep the flexibility inherent in the current disclosure process while adding to the process by facilitating more rapid adoption of innovations in disclosure. Such an initiative would require additional resources, so careful assessment of the costs to the banking agencies and the targeted institutions and the feasibility of implementing the initiative are needed.

Finally, to amplify the contribution of market discipline as a complement to bank supervisory oversight, more systematic use could be made of market data on bank-related debt and equity in supervisory surveillance. To this end, the Federal Reserve is establishing a system for tracking market data on individual banking organizations and is assessing how to use those data as part of supervisory surveillance.

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Appendix A: Members of the Federal Reserve System Study Group on Disclosure

Frederick T. Furlong (Chair)
Economic Research Department
Federal Reserve Bank of San Francisco

Scott G. Alvarez
Legal Division
Board of Governors

Gerald A. Edwards, Jr.
Division of Banking Supervision and Regulation
Board of Governors

Gregory E. Eller
Division of Banking Supervision and Regulation
Board of Governors

Allen B. Frankel
Division of International Finance
Board of Governors

John S. Jordan
Research Department
Federal Reserve Bank of Boston

Kenneth M. Kinoshita
Law Department
Federal Reserve Bank of San Francisco

Simon H. Kwan
Economic Research Department
Federal Reserve Bank of San Francisco

Jose A. Lopez
Economic Research Department
Federal Reserve Bank of San Francisco

James T. Moser
Economic Research
Federal Reserve Bank of Chicago

Lawrence J. Radecki
Research and Market Analysis Group
Federal Reserve Bank of New York

Anne M. Rierson
Law Department
Federal Reserve Bank of San Francisco

Eric S. Rosengren
Research Department
Federal Reserve Bank of Boston

Alice Patricia White
Division of Research and Statistics
Board of Governors

Jennifer R. Zara
Bank Supervision Group
Federal Reserve Bank of New York

Appendix B: Summary of Interviews on Disclosure

Members of the study group met with bank holding companies, securities firms, institutional investors, rating agencies, and clearinghouses to discuss current disclosure practices and the ways that new disclosures could enhance transparency and market discipline. Banks were questioned both as providers of disclosure materials and as users of disclosures made by borrowers and counterparties. The respondents offered a wide range of information about the disclosure process as well as suggestions for improvements.

The interviews are summarized below. As background, we identify the various constituents or users of disclosure and describe the disclosure process. Major themes that emerged in the interviews are then reviewed. The study group members sought views on two policy questions: the disclosure of supervisory ratings and the creation of a new private-sector committee that would be convened by bank regulators to focus on disclosure issues. Reactions to these ideas are discussed. Finally, we note some of the specific suggestions that interviewees offered.

Constituents

Banks have several groups of constituents for their disclosures, and these groups' information needs can differ. First and foremost in the view of banks are shareholders, of which institutional investors are an important segment. Other constituents include research analysts (both equity and debt), rating agencies, debt holders, and counterparties. Both the analysts and the rating agencies serve as conduits of information to shareholders and debt holders.

There is considerable overlap in the information used by these groups. However, as a reflection of their different perspectives, these groups also seek some different types of information. Shareholders are interested in information that helps them evaluate a bank's growth prospects, while debt holders concentrate on an institution's ability to meet its obligations.

Different types of constituents also tend to interact with the bank and its investor relations personnel in different ways. Equity holders and analysts interact more with banks than fixed-income investors and analysts do. However, fixed-income analysts for the large securities firms maintain regular contact with the large banking organizations. Holders of short-term bank debt, such as large-denomination CDs, are described as reliant on the rating agencies.

Process of Disclosure

Periodic Financial Reports

In determining the contents of periodic financial reports (annual reports, 10-Ks, 10-Qs, and prospectuses prepared before the issuance of debt or equity), banks consider the needs and interests of their constituencies against the background of the requirements laid out by FASB and the SEC. Banks have a degree of flexibility in how they meet disclosure requirements. In addition, banks have the option to go beyond the basic requirements, either in periodic reports or in special press releases. Strategic concerns enter the banks' thinking when considering voluntary disclosures. Voluntary disclosure of any particular information runs the risk of being misinterpreted. Furthermore, voluntary disclosure of particular items often commits the firm to continue the disclosure because ceasing to disclose it could elicit a negative reaction. For these reasons, banks cautiously alter their regular reports.

One bank noted that shareholders are the focus of disclosures and that their needs largely drive decisions regarding content. Nevertheless, banks are quite concerned about the liability from presenting inaccurate or misleading information or inaccurate forecasts, and they are extremely sensitive about protecting what they perceive to be proprietary business information. At the same time, they realize that their disclosures must be comparable with those of their competitors. Therefore, banks routinely benchmark their own disclosures against those of their competitors.

The content of disclosures in periodic financial statements is also driven by a need to describe the effect of major events in the financial system on the bank or to discuss areas in the bank with weaknesses or perceived problems. A problem with this approach is that annual reports become bloated because disclosures that are added to address specific events or weaknesses may not be discontinued until long after their relevance fades. For example, disclosures introduced during the era of commercial real estate problems are only now being dropped by some institutions.

Additional Forms of Public Disclosure

Although public disclosure typically means the periodic financial statements required by the SEC, the actual process is broader and more complicated.

Disclosure encompasses all means of conveying information about the status of a firm to stakeholders. Besides the mandatory financial statements mentioned earlier, regulatory reports, contacts with management, special press releases, and rating agency analyses are integral parts of the process.

Regulatory Reports. Securities analysts, rating agencies, and institutional investors specifically mentioned the importance of banking regulatory reports in preparing their evaluations. Call Reports and Y Reports allow direct comparisons among banks and bank holding companies when comparability is lacking in annual reports. The fixed format of regulatory reports has a weakness, however, in that it does not easily accommodate new issues as they develop.

Discussions with Bank Management. Another important part of the disclosure process is the discussions that take place between firms and analysts, rating agencies, and institutional investors. These discussions include quarterly presentations to analysts and investors as well as one-on-one meetings. These conversations provide an opportunity for the market to learn more forward-looking, qualitative information (for example, the sustainability of favorable trends in revenue, cost, or credit quality). Almost uniformly, the interviewees said that these discussions were a critical part of disclosure, particularly with equity investments. Indeed, one institutional investor noted that he would not invest in any firm without meeting regularly with its management.[1]

Unscheduled Announcements. Banks use press releases to broadcast information about their financial condition outside the channels mandated by the SEC or bank regulatory reports. A firm may release statements in response to major market events to describe their effects on its financial condition. Firms tend to make an unscheduled announcement when it is in their interest to do so. However, investors take this incentive into account in evaluating a special announcement.

Rating Agencies. The rating agencies serve as intermediaries in the disclosure process by collecting, analyzing, and redistributing information, some of which banks consider confidential. The information the agencies receive becomes embedded in ratings, which are a key input to credit decisions made by equity owners, other debt holders, and counterparties. In this indirect way, proprietary information becomes part of the process through which market discipline is exerted. For short-term liabilities and short-term counterparty relationships, interviewees described investors as relying largely on ratings in making decisions.

Major Themes

Overall, respondents believed that bank disclosures are good with respect to quality and timeliness. U.S. banks' disclosures were compared favorably with those made by domestic companies generally and by banks in other countries. The high quality of disclosure was perceived to be a competitive advantage to U.S. banks, particularly in stressful market conditions. This is not to say that market participants did not see areas for improvement. It was widely acknowledged that banks engage in complex activities and that their risks can easily be obscured.

Three major themes emerged from the interviews. First, changes in disclosure practices that were intended to improve understanding of market risk are less than fully successful. Second, most market participants want more information on credit risk. Third, there is a distinct tension between banks' notions of proprietary information and users' beliefs that certain information should be disclosed.

Market Risk

In recent years, numerous changes have been incorporated in disclosures of market risk. These changes have been a mixed success, however, in the opinion of many respondents. Several cited the ambiguity of value-at-risk (VaR) numbers and noted the difficulties of conveying the riskiness of bank activities. Many VaR disclosures were judged unhelpful because the banks were unable (or unwilling) to reveal the methodology behind the numbers. Several interviewees suggested that banks should reveal the outcomes of the risk-management process instead of their internal measures of risk. For example, it was recommended that banks produce histograms of daily profits and losses from trading activities. One person discounted the value of VaR figures and all risk-management data by noting that the primary value of a VaR number is to demonstrate that the firm has a functional risk-management system in place.

1. The discussions that analysts have with management present the opportunity for banks to make "selective disclosures." The SEC, in fact, is aware that firms may be making selective disclosures and has been speaking out against the practice.

Credit Quality

The respondents consistently suggested additional disclosures of the credit quality of portfolios. Several noted that although more information on market risk was revealed, it was not the primary risk in bank portfolios. The emphasis on credit risk may simply reflect what the respondents anticipate will be the next big problem area for banks. Nonetheless, a focus on credit risk was evident in the suggestions for improved disclosures. Several respondents thought that additional information about portfolio concentrations (both geographic and product line) would be particularly helpful, and they were interested in aggregate information about the top ten exposures and top ten counterparties or borrowers. (Banks said that they were already giving this type of information to the rating agencies.) To help evaluate credit-underwriting standards, interviewees suggested that banks provide data on their exposures broken out by internal rating category and that they also reveal information about shifts between rating categories.

Proprietary Information

Finally, banks' reactions to suggestions for additional disclosures indicate a sharp difference of opinion on what constitutes proprietary information. For example, a wide spectrum of market participants would like to see information on credit exposures broken down by a bank's internal credit-rating system. Some banks argued that the credit-evaluation process that yields internal loan ratings is highly proprietary. (Another bank took a different tack, arguing that internal risk ratings were so subjective that they would not be meaningful if disclosed.) The disclosure of internal credit ratings was not the only issue on which views clashed on what information is proprietary. It was, however, the starkest example of an obstacle to altering disclosure policies because there is no uniformly acknowledged boundary between proprietary and nonproprietary information.

Policy Issues

Disclosure of Supervisory Information

During the interviews, opinions about the disclosure of supervisory ratings were directly solicited. Reactions were mixed. Those supporting publication of the ratings noted that banking supervisors appeared to have useful information that the market did not have (alternatively, the supervisors receive information earlier than the market). It was also suggested that supervisors could effectively play a certification role because they are in the best position to evaluate many of the qualitative dimensions of a bank's operation (for example, Y2K compliance).

Some respondents suggested that supervisory ratings leak out into the market, and it was thus preferable to release them. Others contradicted this assertion. In the event ratings were to be released, one interviewee noted that the banking agencies would have to clearly explain the process used to arrive at a rating to avoid adversely affecting the confidence or liquidity of institutions.

Those opposed to the release of supervisory ratings generally believed that the ratings were subject to misinterpretation, and they highlighted the effect that publication would have on the supervisory process. One fear was that ratings would become orchestrated, to the detriment of the supervisory process. Release of ratings would put pressure on examiners to ensure that the ratings could be defended on the basis of quantitative information, which could severely restrain examiners from exercising their judgment. In addition, the Federal Reserve would have to release the methodology used to establish the ratings. Other interviewees noted that ratings are not directly comparable across banks because they cover different time periods.

Banks tended to be opposed or neutral to this proposal. One bank thought that the ratings were too subjective to be disclosed. Another bank that did not express active opposition emphasized the need for a consistent methodology that could be explained to the public if the ratings were to be published. Some banks saw the disclosure of supervisory ratings as creating more problems than benefits. One bank raised the issue of the lag between the time of an exam and the release of the rating—noting that a bank's financial condition could change in the interim.

Formation of A New Disclosure Committee

Market participants were asked for their response to the creation of a joint industry–supervisor advisory committee to consider disclosure policy for banks. Almost uniformly, market participants believed that there were serious problems in the current process for determining disclosure policies. However, support for the formation of another committee was mixed. Some respondents thought that such a committee could make a contribution, but others were less sanguine. Several respondents noted that banks are usually in the best position to decide the format for disclosing new information. One bank characterized the proposed committee as another group the

banks would have to please. Recognizing bank supervisors' limited role, some felt that the supervisors should instead try to work more closely with FASB and the SEC on these issues. Others suggested using existing industry groups rather than creating a new one. A user of banks' disclosure documents offered the view that banks had not been particularly cooperative in some of the existing industry groups and that working more effectively in those groups would be a way of moving forward. In any event, respondents argued that the staffing of such a group would be critical to its success and would require the commitment of senior personnel from both the analyst and bank side.

Specific Suggestions

In the course of the interviews, several specific suggestions for improving disclosure were offered, and these are noted briefly.

Concentrations. Because concentrations are indicative of an institution's risk appetite, credit risk should be broken down by geographic region, industrial sector, largest classified assets, and top ten exposures (or perhaps a histogram of exposures as a percentage of capital).

Internal Risk Ratings. Asset quality should be described by internal risk ratings, and shifts between rating categories should be reported. To make this information useful, banks would also need to disclose the expected loss rates or probabilities of default associated with each category. More information on the quality of assets in the trading account should be provided than results from the current practice of dividing all securities into two categories, investment grade and non-investment grade. As was noted earlier, some banks feel strongly that this type of information is proprietary or, alternatively, too subjective to be released.

Problem Loans. More detail should be provided on problem loans. If the internal risk ratings of assets were disclosed, however, this additional detail would not be necessary.

Lines of Business. Significant voluntary improvements in disclosures related to lines of business have been made, in part driven by analysts' interests. Segment reporting has become particularly important as banks have ventured into new businesses. For example, one respondent noted that the balance sheets of banks and insurance companies are so different that consolidated information from these two business lines would not be meaningful. Respondents who focused more on fixed-income securities also value disclosures by legal entity because defaults relate to the obligations of a particular entity.

Securitizations. This area was highlighted as particularly problematic because banks do not reveal how much risk is retained or if positions are being hedged. One respondent described current disclosures as almost useless.

Value at Risk and Stress Tests. Current disclosures are not useful because banks do not provide enough information on the model and on assumptions used to derive the numbers. Alternatives would include histograms for daily trading results, in which fee income is separated out from trading revenue. Some respondents, however, would like more detailed information on confidence intervals and correlations assumed in VaR calculations as well as the results of uniform stress tests.

Tenure of Positions in the Trading Account. Banks should disclose how long positions have been held on the balance sheet, and for positions that are old, an explanation of why the bank is holding them. Long tenure could be indicative of potential liquidity problems.

Capital. More extensive disclosures about market risk capital and internal capital allocations would be informative. Disclosures should relate capital to its uses, so that a bank reveals the riskiness of lines of business, concentrations of risk, and volatility of earnings.

Interest Rate Risk. Banks should provide some measure other than standard gap.

Funding Risk. Bank disclosures generally lack information on contingency funding plans. The broker–dealer disclosures are a good model in this area.

Comparability. Several respondents expressed a desire for more comparability to facilitate peer-group analysis. However, one analyst noted that meaningful and relevant data are preferable to comparable data. Further, it is important not to compel misleading disclosure by emphasizing comparability problems. Comparability problems are most notable in the international area; for example, different standards for a nonperforming asset were cited.

Fair Value. According to analysts, disclosures that FASB requires on the fair value of financial instruments are useless and could be dropped to make room for new and more useful data.

Appendix C: Potential Sources of Market Oversight, December 31, 1998

C.1. Publicly traded banking organizations

Bank asset size (millions of dollars)	Number of banks[1]	Market value of equity (millions of dollars)	Bank assets (millions of dollars)	Share of all U.S. bank assets (percent)[2]
Less than 150	455	663	33,208	.48
150 to less than 500 ..	326	16,740	93,216	1.34
500 to less than 10,000	402	117,266	891,451	12.77
10,000 or more	63	772,443	3,591,588	51.45
Total	**1,246**	**907,112**	**4,609,463**	**66.04**
Memo: Top 50 banks .	50	739,165	3,426,686	49.09

1. Banks owned by 349 publicly traded bank holding companies or banks as of 1998:Q4, from Compustat.
2. Average weighted by assets.

C.2. Subordinated debt issuance by top-tier U.S. bank holding companies (BHCs)

BHC asset size (millions of dollars)[1]	Number of BHC issuers	Subordinated debt (millions of dollars)	Ratio of subordinated debt to assets[2] (percent)
150 to less than 500	63	137	.78
500 to less than 10,000	49	1,876	1.24
10,000 or more	55	100,780	2.23
Total	**167**	**102,793**	**2.19**
Memo: Top 50 banks	48	100,040	2.26

1. Banks included have total assets greater than or equal to $150 million.
2. Average weighted by assets.

C.3. Commercial paper issuance by U.S. bank holding companies (BHCs)

BHC asset size (millions of dollars)[1]	Number of BHC issuers	Commercial paper (millions of dollars)	Ratio of commercial paper to assets[2] (percent)
150 to less than 500	5	31	1.82
500 to less than 10,000	17	1,346	2.18
10,000 or more	45	71,288	2.15
Total	**67**	**72,665**	**2.14**
Memo: Top 50 banks	33	65,012	1.24

1. Banks included have total assets greater than or equal to $150 million.
2. Average weighted by assets.

C.4. Subordinated debt issuance by U.S. commercial banks

Bank asset size (millions of dollars)	Number of bank issuers	Subordinated debt (millions of dollars	Ratio of subordinated debt to assets[1] (percent)
Less than 150	35	34	1.35
150 to less than 500	26	84	1.11
500 to less than 10,000	109	6,432	1.86
10,000 or more	56	65,595	2.01
Total	**226**	**72,145**	**2.00**
Memo: Top 50 banks	45	62,889	2.02

1. Average weighted by assets.

C.5. Large certificates of deposit (CDs) at U.S. commercial banks

Bank asset size (millions of dollars)	Number of banks	Large CDs (millions of dollars)	Ratio of large CDs to assets[1] (percent)
Less than 150	6,434	43,681	11.28
150 to less than 500	1,555	44,454	11.25
500 to less than 10,000	580	98,750	9.34
10,000 or more.....	70	226,502	6.43
Total	**8,639**	**413,387**	**7.71**
Memo: Top 50 banks	50	199,863	6.15

1. Average weighted by assets.

C.6. Federal funds purchased by U.S. commercial banks

Bank asset size (millions of dollars)	Number of banks	Federal funds purchased (millions of dollars)	Ratio of federal funds to assets[1] (percent)
Less than 150	1,486	3,993	3.49
150 to less than 500	889	10,208	4.31
500 to less than 10,000	498	78,704	8.20
10,000 or more	68	337,254	9.65
Total	**2,941**	**430,159**	**8.95**
Memo: Top 50 banks	50	306,208	9.42

1. Average weighted by assets.

C.7. Foreign deposits of U.S. commercial banks

Bank asset size (millions of dollars)	Number of banks	Foreign deposits (millions of dollars)	Ratio of foreign deposits to assets[1] (percent)
Less than 150	4	152	30.40
150 to less than 500	17	580	11.10
500 to less than 10,000	50	14,697	8.10
10,000 or more	61	556,416	16.50
Total	**132**	**571,845**	**16.06**
Memo: Top 50 banks	47	543,366	17.06

1. Average weighted by assets.

Appendix D: Supervisory Information and Bank Transparency

A growing line of research provides empirical support for the proposition that bank examiners, at times, have an information advantage over other outside monitors. Flannery and Houston (1999) show that financial markets evaluate accounting data differently when an exam has occurred recently. For a sample of banks examined in the fourth quarter of 1988, they find that accounting statements of examined banks are more informative than those of non-examined banks; they also find that examined banks' market values are slightly higher. These effects are stronger for smaller banks, banks with higher stock return variance, banks with harder-to-value assets, and banks not rated by bond-rating agencies. They argue that these findings provide evidence that bank examiners play a valuable role in the certification of banks' accounting data and that bank shareholders benefit from this activity.

Berger, Davies, and Flannery (1998) compare market and supervisory assessments of bank performance. They employ Granger causality tests to compare the relative timeliness of government supervisors' and market participants' assessments of banks to see if either group uses some relevant information before the other. They find that both bond-rating agencies and supervisors regularly discover relevant information that is only subsequently incorporated into the other group's assessments. The relationship between the discovery of information by stock market participants and supervisors is not as strong. However, in terms of predicting future performance, the authors find that supervisory assessments following recently completed bank exams contribute substantially to forecasting future bank performance and often exceed the contribution of the market's assessment.

A study by DeYoung, Flannery, Lang, and Sorescu (1998) examines whether private information uncovered in bank exams is incorporated in the pricing of bank subordinated debt. They find that examiner assessments contain relevant information about bank conditions that is not fully incorporated in the pricing of subordinated debt at the time of the exam but that is incorporated in subsequent quarters. They also find that when examiners uncover "bad" information in an exam, the information generally does not become public until subsequent quarters, but that "good" information generally finds its way to the market quickly. This finding suggests that managers tend to disclose good news more readily than bad news.

A study by Berger and Davies (1994) draws a similar conclusion from evidence on the relationship between stock returns and the examination process. In examining abnormal stock returns of bank holding companies in the period after their lead bank had been examined, they find that exams that uncovered unfavorable information about bank condition resulted in abnormal negative returns. The authors conclude that bank managers may reveal favorable information in advance, while supervisors in effect force the release of unfavorable information.

In a recent study, Jordan, Peek, and Rosengren (1999) examine the effect of disclosing formal enforcement actions that previously were confidential. In 1989 and 1990, the U.S. Congress adopted legislation requiring bank regulatory agencies to make public all formal enforcement actions imposed on banks. Moreover, this enhanced disclosure was adopted during a period of great banking distress in the United States. By making the formal actions public, bank supervisors were in effect disclosing that certain institutions were believed to have a high probability of failure in the absence of substantial remedial action.

Further, they find that announcements of formal actions provide useful information to the market but are not destabilizing. On average, an announcement of a formal action caused the announcing bank's stock price to decline only 5 percent. The declines tended to be small for banks for which the problems had already been anticipated by the market, and larger for those banks for which little news of impending problems had been revealed. Thus, the market's ability to uncover problems is, at least in part, a function of bank disclosure. Banks whose earnings, capital positions, and loan-loss provisioning had yet to reveal fully the extent of their problems had a much more substantial share price reaction. There were some spillover effects, including rival banks' experiencing moderate stock price declines. However, these spillover effects were limited to banks in the same region with portfolio positions similar to that of the announcing bank. Finally, total deposits declined modestly, an average of 2 percent, with the largest declines occurring in deposit categories that were not fully insured. Disclosure of formal actions was not destabilizing; investors and depositors reacted to news in a manner that was consistent with enhanced market discipline, and the reaction was far from catastrophic.

Appendix E: International Initiatives and Studies Relating to Disclosure

The Federal Reserve has been involved in recent years in international initiatives to improve transparency, including related studies. This effort was launched in 1994 with the issuance of the Fisher Report by the Euro-Currency Standing Committee of the Group of Ten Central Banks (ECSC). In this report, the ECSC recommended that firms disclose quantitative information about their market and credit-risk exposures and their success at managing those risks to provide a framework for their qualitative discussions. According to the report, at a minimum, these disclosures should include quantitative information about the market risk of the trading portfolio; similar disclosures about the consolidated portfolio (that is, about derivatives and financial instruments relating to traditional banking activities as well as to trading) are desirable. The information should reveal the portfolio's riskiness by indicating the volatility of its market value. The ECSC also recommended that firms increase the transparency of their disclosures about credit risk, including the reporting of current and potential credit exposure and the quantification of the variability of credit exposure over time. Reporting of actual credit losses, arrangements for collateral, and other credit enhancements were also suggested to give an indication of the quality of the firm's risk-management practices.

Since publication of the Fisher Report, the Basel Committee on Banking Supervision has undertaken a number of initiatives on transparency issues. For example, the Basel Committee has been providing input to the International Accounting Standards Committee (IASC) as it seeks to develop and implement its first comprehensive accounting and disclosure standard for financial instruments. The Basel Committee has helped to shape the IASC standards-setting process by airing its views on the discussion paper and proposals affecting financial activities. Recently, an official of the Federal Reserve Board has been serving as the Basel Committee's observer on the IASC financial instruments project.

In September 1998, the Basel Committee on Banking Supervision published a policy paper entitled *Enhancing Bank Transparency*. That report provides general guidance to banking supervisors as they seek to improve regulatory frameworks for public disclosure and supervisory reporting and to the banking industry on core disclosures that should be provided to the public.

The report also discusses the qualities of information that aid transparency, such as reliability, relevance, timeliness, and comparability, and recommends that banks make meaningful disclosure in six broad areas:

- Financial performance
- Financial position (including capital, solvency, and liquidity)
- Risk-management strategies and practices
- Risk exposures (including credit risk, market risk, and liquidity risk, as well as operational, legal, and other risks)
- Accounting policies
- Basic business, management, and corporate governance information.

The report discusses the types of useful information for each category. The Basel Committee strongly recommends that banks address these categories in their financial reports and other disclosures to the public. Within each broad area, significant detail in disclosures may be required, depending in part on the nature, complexity, and risk of an institution's activities.

The Basel Committee's report on transparency recommends that supervisors take an active role in encouraging high-quality public disclosure at reasonable cost. Supervisors are encouraged to enhance comparability by promoting the use of uniform supervisory definitions and reporting categories in public disclosure. In addition, supervisors are urged to promote mechanisms that ensure compliance with disclosure standards and to strengthen standards that improve the reliability of information. However, the paper also notes that supervisors' first priority in countries with less-developed financial markets must be to establish a comprehensive supervisory reporting system. All supervisors are encouraged to pursue access to the information discussed in the report and other information of supervisory interest.

In October 1998, the Basel Committee issued a comprehensive proposal on sound practices for international loan accounting and related credit-risk disclosures. A revised report, *Sound Practices for Loan Accounting and Disclosure*, was released in July 1999. The report presents twenty-six principles for improved accounting and disclosure practices. Thirteen of these are recommendations for disclosures relating to credit risk in lending.

The recommendations in the *Loan Accounting* report on disclosure are subsumed in a more comprehensive set of guidelines for credit-risk disclosures

included in the Basel Committee's July 1999 report *Best Practices for Credit Risk Disclosure*. The report presents twenty-four specific guidelines for disclosure in five broad areas: accounting practices, credit-risk management, credit exposure, credit quality, and earnings. The guidelines apply to credit risk related to lending as well as to other activities, such as trading, investing in securities, asset management, and management of liquidity and funding.

Several of the guidelines in the *Best Practices* report deal with disclosure of qualitative information on methods used to account for credit-risk exposures, allowance for losses, and credit-management procedures and controls. Others call for quantitative disclosures on credit risk. These include disclosure of credit exposure by lines of business, geographic regions, major categories of counterparties, and other significant concentrations. Other key recommendations apply to quantitative disclosures regarding the effects of credit-risk mitigation techniques, risk retained in securitizations, and allowances for loss reserves.

Also, each year since 1995, the Basel Committee and the International Organization of Securities Commissions (IOSCO) have jointly published a survey of annual report disclosures about trading and derivatives activities of global banks and securities firms that includes joint recommendations for improved disclosures of these complex activities. The surveys show that over the period from 1993 to 1998, derivatives-related disclosures in annual reports of banks and securities firms have generally improved, while the derivatives activities of these firms have expanded considerably. In December 1999, the Basel Committee and IOSCO published their fifth annual survey report on this topic. The report revealed that almost all of the seventy-one banks and securities firms surveyed disclose information on market risk and methods of managing risk. The institutions' annual reports often included information on parameters of market-risk models and VaR values. Most of the institutions also disclosed information about the management of operational risk and liquidity risk. Information on credit-risk models generally was not disclosed, though information on credit-risk management methods and exposures were included in annual reports.

Appendix F: Private-Sector Initiatives

This appendix discusses the wide array of private-sector entities whose products and services are intended to increase the transparency of banks' financial strength and banking activities. It neither presents a comprehensive list nor evaluates the usefulness of the services or products.

Firms that Aggregate Data from Public Filings, Securities Analyst Reports, or Other Information Sources

- *Compustat*. Offers its North American database containing thousands of companies and hundreds of financial data items collected from a wide variety of sources, including news wire services, news releases, shareholder reports, direct company contacts, and quarterly and annual documents (10-Ks and 10-Qs) filed with the SEC. Its bank databases provide financial, statistical, and market information coverage on the largest U.S. banks.
- *First Call Corporation*. Provides a source for real-time earnings estimates, corporate information, and fixed-income and equity research. Its information originates from brokerage firms, investment research firms, and directly from corporations.
- *Loan Pricing Corporation* (LPC). Provides data and analysis on the commercial loan market through various products. It also promotes the use of standard loan identification numbers (LINs) to enhance transparency and liquidity in the secondary loan market. LPC's public-deals database covers the syndication market and includes information on pricing, fees, tenor, covenants, and structure. Gold Sheets is its weekly chronicle of the global syndicated loan market, including U.S. and European League tables, U.S. and European forward calendars, relative value analysis, updated bank loan ratings, and loan comparables. DealScan is its historical database on the terms and conditions of more than 50,000 loans, high-yield bonds, and private placements worldwide. Its LoanScan product provides a real-time link to the global syndications and secondary markets. The LPC databases allow the user to access institution-specific data, thereby allowing analysts to draw conclusions about an institution's exposure.
- *Multex Investor Network*. Maintains an online service that provides more than 200,000 full-text research reports from more than 200 brokerage firms, investment banks, and independent research providers worldwide.
- *Portfolio Management Data* (PMD). Provides data and analytic services for the leveraged finance community through its partnerships with about thirty of the largest market participants. The Comps database is the foundation of its service and comprises each client's proprietary loan book. This proprietary information is available only to individual clients. However, PMD uses the information gleaned from managing this database to publish monthly research pieces on the overall leveraged loan market.
- *Securities Data Company*. Maintains an online information and research service for corporate and municipal finance and mergers and acquisitions. Its corporate finance databases contain extensive information on the syndicated lending market and real estate investment trusts. The databases are updated monthly with bank- and facility-specific data, allowing the user to customize reports.
- *Sheshunoff*. Provides financial data and analysis, professional publications, risk management, and regulatory reporting tools for banks, savings and loans, credit unions, and bank holding companies. Its historical database comprises publicly released data from regulatory agencies. Sheshunoff reviews these data and then makes them available to its clients in various print and electronic formats. It also helps banks manage interest rate risk through its Risk Analytics product, which uses its clients' balance sheet information.
- *KMV Corporation*. Through its CreditMonitor software calculates one-year default probabilities for publicly listed firms, including banks and other financial institutions in North America, Asia, and Europe. Its expected default frequencies are derived from an institution's debt structure, the market value of its assets (calculated from its stock price using an option valuation model), and the volatility of its stock price. The software is flexible, allowing the user to test the effect on default risk of changes in an institution's stock price or leverage.

Bank Rating Services

- *Bank Rate Monitor*. Offers its Safe & Sound rating system, a proprietary, analytical product that assesses the financial condition of banks and thrifts. The ratings are based on tests of institutions' capitalization, asset quality, earnings, and liquidity (CAEL) using publicly available quarterly Call Report data from the FDIC and Office of

Thrift Supervision. Thousands of FDIC-insured banks and thrifts are analyzed and given composite ratings.

- *Duff & Phelps Credit Rating*. Measures the credit quality of stocks and bonds, commercial paper, certificates of deposit, structured financing, and municipal securities of private and public entities, including banks, around the world.
- *Fitch IBCA*. Assigns ratings to about 650 banks and 75 investment and merchant banks, mostly in Europe and Latin America, although the company has a growing presence in Asia and the United States.
- *Moody's Investors Service*. Through its Bank Financial Strength Ratings represents its opinion of banks' intrinsic safety and soundness, excluding certain external credit risks and credit support elements that are addressed by Moody's traditional debt and deposit ratings. The rating is a measure of the likelihood that a bank will require assistance from third parties, such as its owners, its industry group, or official institutions. Factors considered in the assignment of ratings include bank-specific elements, such as financial fundamentals, franchise value, and business and asset diversification. The ratings also take into account other risk factors in the banks' operating environments, including the strength and prospective performance of the economy, the structure and relative fragility of the financial system, and the quality of banking regulation and supervision.
- *Standard & Poor's*. Through its BankRatings Service provides access to detailed coverage of more than 800 S&P-rated financial institutions worldwide, including banks, bank holding companies, savings institutions, mortgage institutions, finance companies, asset managers, exchanges and clearinghouses, sovereign-supported banks, and building societies.
- *Thomson BankWatch*. Rates and provides research and analysis on more than 1,000 financial institutions in more than 94 countries. Its Bankstat database provides current and historical financial information on 10,000 banks in 190 countries. Its parent company, Thompson Financial Services, owns the First Call Corporation and the American Banker newspapers and newsletters.
- *Veribanc*. Provides ratings instantaneously by telephone on any bank, savings bank, savings and loan, or credit union in the United States. Written confirmation provides current ratings and three previous quarters of ratings for a small fee. Short-form or in-depth follow-up reports providing financial data behind the rating are available for additional fees.

Consultancies and Research Firms

- *Capital Market Risk Advisors*. Specializes in risk management, valuation, capital markets strategy, and independent risk assessment for all sectors of the capital markets. It has published articles on VaR and market and credit risk as well as surveys on risk-management practices and market-risk disclosure.
- *Greenwich Associates*. Offers research-based consulting for institutional or professional financial services, including commercial and investment banking, stock brokerage, bond dealing, foreign exchange, derivatives management, and investments. It surveys the buyers of professional financial services about (1) how that market is developing overall and in each market segment; (2) which banks, dealers, brokers, and managers these different service buyers are using; and (3) how they evaluate each organization's capabilities and performance. Primarily for the 40,000 financial executives who participate in the annual research, each year it produces more than twenty-five financial market reports covering key trends and developments.
- *Ernst & Young*. Publishes occasional pieces relating to issues in the banking industry based on consulting and audit work. Recent publications include an overview of the challenges facing the retail banking industry and a survey of bank cash-management practices. Other ''Big Five'' accounting firms provide similar analyses.
- *Find/SVP*. Provides business research, consulting, and management advisory services in a broad range of industries and disciplines. The firm specializes in providing customized reports to clients (such as market research and background information on companies and individuals) using print and online sources, publicly available documents (such as financial filings and court records), and its network of contacts in various industries and fields.

Online Information Services

- *Bloomberg*. Maintains a real-time financial information network operating twenty-four hours a day and providing detailed data on individual companies, financial market instruments (such as stocks, bonds, foreign exchange, and derivatives), industries, and economic statistics. Bloomberg combines news stories prepared by its network of correspondents and bureaus with current financial market data, historical data, research, and public filings.

- *Lexis-Nexis*. Provides news on companies, industries, markets, demographics, people, and public records. It pulls together public information from more than 18,000 news sources, such as newspapers, magazines, news wires, and trade journals. Altogether, its various databases (which cover legal, academic, and government affairs, as well as business) include 1.4 billion documents.

Industry Journals and Newsletters

- *American Banker*. Publishes numerous newspapers and newsletters relating to the banking industry. It also sponsors conferences on subjects of interest to the banking community, such as syndicated lending, E-commerce, and community banking.
- *Institutional Investor*. Publishes twenty-three weekly, biweekly, and monthly newsletters (such as Bank Letter, Wall Street Letter, and Financial NetNews) covering investment and financial market news.

Trade Associations

- *Loan Syndications and Trading Association* (LSTA). Seeks to promote the standardization of trading practices in the syndicated lending market through the adoption of a code of conduct, oral trade agreements, common contracts, LINs, and a mark-to-market service.
- *Robert Morris Associates* (RMA). Promotes credit quality and sound risk-management practices in the financial services industry. The association was founded on the premise that discussions among lenders on marketplace dynamics and the state of the lending environment would result in better loan decisions. The RMA recently conducted an extensive analysis of the current state of portfolio risk-management techniques to determine how advanced practices affect an institution's risk profile and its earnings.

Bank Loan Rating Agencies

- *Fitch IBCA*. Rates secured bank loans based on probability of default as well as post-default recoveries. Its rating reports provide information on the agent(s) of a deal, but not the loan participants.
- *Standard & Poor's*. Rated 949 bank loans totaling $548 billion, primarily for U.S. and U.K. loan syndications, as of the end of the fourth quarter of 1998. These loan ratings, and the credit research on which they rest, increase transparency in the secondary loan market and help address the needs of both lenders and borrowers. The ratings, however, focus on the borrower and do not provide information on the agent of, or participants in, a deal. S&P bank loan ratings are available on its web site, as well as on Bloomberg, the LPC's LoanConnector service, and the IntraLinks web page.

Appendix G: Case Study: Public Disclosures of Trading Activities

Over the past decade, support has grown for better public disclosure of derivatives and trading activities as banks expanded their business in these areas. Subsequently, industry groups and the banking agencies, including the Federal Reserve System, recommended voluntary disclosure of more information. In 1997, the SEC adopted requirements for the disclosure of market risk. All financial firms, as well as public corporations with market capitalization greater than $2.5 billion, are required to report quantitative and qualitative market-risk measures of activities in derivatives and other financial instruments. This requirement was later extended to all public registrants.

In light of these initiatives, this case study considers the progress that has been made on improving disclosure of the risk profile of a bank's (or a securities firm's) trading activities. If public disclosure is to promote market discipline as envisioned by supervisors, financial institutions with large-scale trading activities must provide meaningful information on risk measurement, risk management, and trading revenue, especially in a setting of declining and poorly functioning markets.

The usefulness of current practices for public disclosures of market risks and trading results was subjected to a rigorous test by events in the financial markets during the third quarter of 1998. The first purpose of this case study is to review the information provided by the largest banks and securities firms in their quarterly and annual reports (SEC 10-Q and 10-K filings) to shareholders. The second purpose is to evaluate the potential for public disclosure, as it is currently practiced, to promote market discipline of financial firms. Shareholder reports are compared across firms to see what can be extracted from them regarding differences in risk profiles, risk management, and trading outcomes.

The review raises some questions about the current state of public disclosure. In particular, there appears to be little connection between the degree of risk suggested by a firm's value-at-risk (VaR) disclosures and its actual trading account performance in the wake of the financial shock in the third quarter of 1998. Although this lack of connection might be explained by the idiosyncrasies of the shocks to financial markets, it also might mean that current disclosures do not provide enough information for the market to make valid judgments about the efficacy of a firm's risk-measurement and management system.

Review of the Content of Disclosures

During the past few years, leading banks and securities firms certainly have expanded their public disclosures on derivative instruments, trading activities, and market risk. A task force working for the International Organization of Securities Commissions and the Basel Committee on Banking Supervision conducts an annual survey of internationally active banks and securities firms; it reports that in some cases, disclosures of trading and market risk have improved substantially from the previous year.

Although disclosures are becoming more detailed, it is clear that further improvements are necessary. To serve the purposes identified in the Basel Committee's report *Enhancing Bank Transparency*, ''a bank must provide timely, accurate, relevant, and sufficient disclosures of qualitative and quantitative information that enables users to make proper assessments of the institution's activities and risk profile.'' The set of institutions selected for evaluating current disclosure practices includes five U.S. banking organizations with large-scale trading activities, BankAmerica, Bankers Trust, Chase Manhattan, Citicorp, and J.P. Morgan, and four U.S.-based securities firms, Lehman Brothers, Merrill Lynch, Morgan Stanley Dean Witter, and Salomon Smith Barney. The analysis focuses on the following areas:

- Trading results for the quarter
- VaR
- Daily profit or loss from trading activities
- Accuracy of risk-measurement systems.

Trading Account Revenues

Three of the nine firms (BankAmerica, Bankers Trust, and Salomon Smith Barney) recorded sizable losses on trading activities for the third quarter of 1998. Among the other six firms, trading income was positive, but below the average of previous quarters. Of the three reporting trading losses, BankAmerica and Salomon Smith Barney showed a loss from all operations for the quarter. Merrill Lynch, however, also showed a loss from all operations because it chose to take a restructuring charge for downsizing its underwriting and trading business, an action that in fact was related to developments in the quarter.

G.1. Summary of Disclosures of Value-at-Risk (VaR) in the Trading Account, 1997:Q4–1998:Q4

Millions of dollars

Financial institution and type of VaR disclosure	1997	1998			
	Q4	Q1	Q2	Q3	Q4
	Disclosures over previous four quarters except as noted				
BankAmerica [1]					
Average VaR	28	n.a.	n.a.	45 [3]	46
End-of-period VaR	n.a.	n.a.	n.a.	n.a.	n.a.
Maximum VaR	36	n.a.	n.a.	n.a.	n.a.
Bankers Trust					
Average VaR	26	[2]	[2]	35 [3]	33
End-of-period VaR	37	[2]	[2]	16	26
Maximum VaR	n.a.	n.a.	n.a.	n.a.	52
Chase Manhattan					
Average VaR	n.a.	23	24	27	26
End-of-period VaR	28	20	29	25	21
Maximum VaR	n.a.	52	52	52	45
Citicorp [4]					
Average VaR	n.a.	24 [6]	19 [6]	15 [6]	18
End-of-period VaR	25 [5]	21	16	18	15
Maximum VaR	n.a.	31 [6]	22 [6]	19 [6]	22
J.P. Morgan					
Average VaR	32	38	44	51	54
End-of-period VaR	39	48	48	61	50
Maximum VaR	49	64	64	78	78
Lehman Brothers					
Average VaR	21 [7]	n.a.	n.a.	n.a.	26
End-of-period VaR	21	22	20	29	45
Maximum VaR	23 [7]	n.a.	n.a.	n.a.	46
Merrill Lynch					
Average VaR	n.a.	n.a.	n.a.	n.a.	n.a.
End-of-period VaR	32 [8]	n.a.	n.a.	n.a.	30
Maximum VaR	n.a.	n.a.	n.a.	n.a.	n.a.
Morgan Stanley Dean Witter [9]					
Average VaR	30 [10]	n.a.	n.a.	n.a.	43
End-of-period VaR	39 [11]	n.a.	n.a.	n.a.	38
Maximum VaR	41 [10]	n.a.	n.a.	n.a.	50
Salomon Smith Barney [4]					
Average VaR	n.a.	n.a.	n.a.	n.a.	70
End-of-period VaR	61 [5]	n.a.	69	73	71
Maximum VaR	n.a.	n.a.	n.a.	n.a.	73

NOTE. VaR estimates are shown for a one-day holding period and calculated at a 99 percent statistical confidence level. For those firms that disclosed on a different basis, their figures were converted assuming a normal distribution.

1. Figures for 1998:Q3 and Q4 are not comparable with 1997:Q4 because of a merger. In addition, its figures are not readily comparable with other firms' figures because they do not incorporate diversification effects, which implies that its actual VaR is less than its estimated VaR.
2. No material change.
3. Previous three quarters.
4. Although Citicorp and Salomon Smith Barney merged into Citigroup, both entities made separate market-risk disclosures in Citigroup's 1998 annual report.
5. Restated to this amount in the annual report for 1998.
6. Current quarter only.
7. Shown in 1998 annual report.
8. Estimate restated in 1998 annual report to $97 million.
9. In Morgan Stanley's 1998 annual report, a line chart of daily VaR is provided, which allows the reader to see average, end-of-period, and high for each quarter of the year.
10. Not restated.
11. Restated in 1998 annual report to $46 million.

n.a. Not available.

SOURCE. Company public reports.

VaR

By disclosing VaR estimates in 1997 annual reports, each of the nine firms gives a sense of the amount of market risk it was taking in its trading account during the previous year. (See table G.1 for a summary of VaR disclosures by the nine firms.) The depth of the disclosure, however, varies considerably across firms. The leanest disclosure is a single figure for VaR on the last day of the year; nevertheless, showing this figure at least allows a basic comparison with other firms at a point in time.

Five of the nine firms updated their VaR disclosures over the course of 1998 and through the third quarter. (The others waited until release of the annual report.) Providing VaR estimates for the quarter just ended clearly represents more timely disclosure of market risk.[1]

The most extensive market risk disclosure is a line graph depicting VaR on each day of the year. From such a graph, one can see how a firm varied its exposure to market risk over the course of the year and whether its appetite for risk tended to grow through time. For example, J.P. Morgan steadily increased its exposure to market risk over the period from the third quarter of 1997 to the third quarter of 1998. Useful, although not as informative, are disclosures of high, low, and average VaR over the past quarter or the past year.

Disclosures of Daily or Weekly Trading Results

Six of the nine banks and securities firms in our sample present histograms of daily or weekly trading revenue in their 1997 annual report. Among the banks, BankAmerica, Chase Manhattan, and J.P. Morgan have charts that make it easy to observe the frequency of large one-day gains or losses. The charts may also be used to compare daily trading results with a bank's disclosed figure for average VaR. For all three banks, the observed dispersion of daily trading results does not raise any questions about the accuracy of a bank's VaR estimates. In addition, comparing histograms from one year to the next provides a sense of whether there is a change in appetite for risk in connection with trading operations.

Three of the four securities firms present a histogram of trading revenue. Morgan Stanley presents daily results; Lehman Brothers and Merrill Lynch present theirs on a weekly basis. No securities firms and only one bank—Chase Manhattan—updated its histogram of daily trading results in the quarterly reports. Chase's histogram in its 1998:Q3 report shows ten days over the past twelve months in which a loss of $20 million or more was incurred. It mentioned that five of these ten days of large losses occurred in late August and September 1998. Among the other firms, only J.P. Morgan and Merrill Lynch updated their histograms in the 1998 annual reports. BankAmerica, Lehman Brothers, and Morgan Stanley apparently decided to stop providing the information.

Disclosures of VaR Performance

Regulatory guidelines for improved public disclosure of market and trading risks emphasized the need to present quantitative information on the performance of risk-management systems. In third-quarter reports, three of the five banks discussed the frequency of one-day losses that were exceptionally large according to their VaR models. Chase Manhattan and Bankers Trust disclosed the actual number of exceptionally large losses. J.P. Morgan was less exact in its 1998:Q3 report; it disclosed that over the most recent four quarters it experienced more exceptionally large losses than had been predicted by its model but did not specify how many. In its annual report, however, J.P. Morgan did provide the exact number of large losses (see table G.2).

None of the four securities firms discussed the accuracy of its risk-measurement system right after the third quarter. Merrill Lynch's statement, however, does give a hint of poor performance by its VaR model (see table G.2). Only one securities firm discusses model accuracy in its annual report.

Drawing Distinctions among Firms

Disclosures relating to market risk vary considerably among the set of institutions considered in this case study. In examining the disclosed material, one cannot find specific information that would predict which banks were more likely to suffer large losses during a sharp market move like that seen in the third quarter of 1998. The firms suffering the largest losses were not necessarily those that showed either

1. With respect to 1998:Q3, updated estimates show the effect of higher market volatility on VaR. In two cases, showing a significant increase prompted the firms to explain how this occurred. For example, 1998:Q3 reports show that J.P. Morgan's VaR rose 25 percent from the previous quarter and that Lehman Brother's VaR rose 60 percent. Each firm found it necessary to comment that its VaR rose because of both higher volatility and an inability to trim positions in illiquid markets, not because of larger trading-account positions.

the highest VaR or the sharpest increase in VaR during 1997 or 1998—in other words, those firms that had a large or growing appetite for risk. In addition, there were no indications of inferior risk measurement or management on the part of any firm that might foretell large losses in a period of market stress.

Based on this analysis, one would conclude that even though public disclosures have undergone substantial improvements, they may not be working as intended. Given the current state of disclosure, counterparties, shareholders, and other investors still cannot obtain enough information to draw distinctions among firms regarding their risk appetite or capacity to manage risk.

G.2. Summary of Disclosures on Accuracy of Risk Measurement during 1998

Financial institution	Material on model accuracy
BankAmerica	*No information was provided.*
Bankers Trust	"On five days during the quarter ended September 30, 1998, the Corporation experienced losses that exceeded its one-day, one percent, value-at-risk statistic for trading account positions. On no occasions did the daily losses exceed the ten-day value-at-risk estimates, which are used for calculating regulatory capital."
Chase Manhattan	"For mark-to-market activities, there were two days in the third quarter of 1998 in which a daily trading loss exceeded that day's VaR."
Citicorp	*No information was provided.*
J.P. Morgan	"During the twelve month period, there was a greater number of occurrences where actual daily revenue fell short of average revenue by amounts larger than related VaR estimates than was consistent with statistical expectations." (from the 1998:Q3 report) "In 1998 daily revenue fell short of the downside VaR band (average daily revenue less than the VaR estimate) on 20 days, or more than 5% of the time. Nine of these 20 occurrences fell within the August to October period." (from the 1998 annual report)
Lehman Brothers	*No information was provided.*
Merrill Lynch	"Unprecedented volatility reduces the effectiveness of market risk models that predict current market risk exposures based on historical volatilities and statistical analysis, such as value-at-risk."
Morgan Stanley Dean Witter	". . . during fiscal 1998, there were no days during which the Company incurred daily trading losses in its institutional trading business in excess of the 99%/one-day VaR . . ."
Salomon Smith Barney	*No information was provided.*

SOURCE. Company public reports.