Federal Reserve Bank of Richmond

2002 Annual Report

Accounting for Corporate Behavior

Message from the President and First Vice President

History may well designate both 2001 and 2002 as watershed years for the United States—years in which the country was strenuously challenged in several important areas of national life. It has become almost a cliché to say that the terrorist attacks in September 2001 have changed America forever, yet the statement is probably true. In 2002, the nation continued its recovery from the attacks, but revelations of serious deficiencies in corporate governance and accounting practices presented a significant new challenge, economic growth remained lackluster, and the stock market declined further. The threat of war in the Middle East toward the end of the year created a level of geopolitical risk that appeared to place a considerable additional drag on the economy. In this environment, the Bank, as an important component of the Federal Reserve System, gave its highest priority to reducing risk and increasing confidence and trust in the economy and financial markets.

Despite these challenges, there were some bright spots in both the national and Fifth District economies. Consumer outlays for goods and services, in particular, continued to advance, and purchases of both new and existing homes remained robust. Business investment in equipment, software, and structures, however, continued to lag, and few net new jobs were created. In the District, conditions in some high-tech industries improved, but several of the region's traditional manufacturing industries remained weak.

The recovery from the 2001 recession has featured two extraordinary developments that have strongly affected both the Fed's conduct of monetary policy and its own internal operations. For the first time in over half a century, Fed policymakers have had to take account of the risk of *de*flation as well as *in*flation in their efforts to maintain price stability. This Bank has long been in the forefront of the fight against inflation, and we are pleased, to put it mildly, that price stability has finally been achieved. If sustained, price stability will provide a firm foundation for growth in production and jobs. But when core inflation is below 2 percent, as it has been recently, policymakers obviously need to give more attention to guarding against deflation than when inflation is 4 or 5 percent or higher. Through our research and our participation in the formulation of monetary policy, the Bank worked diligently in 2002 to prevent the economy from drifting toward either deflation or a reemergence of inflation. We were strongly supported in this effort by information on business and financial conditions supplied by our boards of directors in Richmond, Baltimore, and Charlotte.

The second extraordinary development was continued robust growth in labor productivity. Productivity grew about 4 percent over the four quarters of 2002, well above even its relatively high 2½ percent average growth from 1996 to 2001. Productivity growth is a principal way the nation increases the incomes and living standards of its citizens over time. But productivity growth can also temporarily displace workers and products. The Federal Reserve is not immune to these forces of creative destruction. Our financial services businesses—check processing in particular—came under severe pressure in 2002 as a result of technological progress in the payments system.

A recent study commissioned by the Fed showed that consumers and businesses increasingly are choosing electronic forms of payment rather than checks—roughly 40 billion checks were written in the United States in 2002, down from about 50 billion in 1995. While this is a welcome—and long sought—development from the standpoint of the efficiency in the payments system, the Federal Reserve Banks face the challenge of adapting their check processing infrastructures to this fundamental change in the market environment. Late last year the Banks embarked on a major national initiative to reduce operating costs in their check services businesses while still maintaining and strengthening the Fed's presence as a nationwide provider of check services. As the year ended, the Banks decided collectively to reduce the number of check processing sites nationwide. As part of this effort, this Bank decided to discontinue its processing operations in Richmond and in Charleston, West Virginia, and Columbia, South Carolina. At the same time, we continued our preparations to standardize and modernize our check services operations in Baltimore and Charlotte as part of the Fed's nationwide check modernization program.

The Bank's banking supervision and regulation resources are also adapting to changes in market conditions. We are focused on retaining and attracting staff with a broad range of experience and skills to help supervise the complex and sophisticated activities of two of the nation's four largest banking organizations. Our District is also home to numerous community banks, several large regional banks, and several banks with particular complexities or areas of specialization. In 2002, the Bank established a new bank supervision unit that will focus specifically on these large regional and specialized institutions.

These accomplishments reflect the combined efforts of many Bank employees and our board of directors. We are fortunate indeed to have strong, knowledgeable, and independent directors whose perspective on District economic conditions as well as corporate governance issues served us exceedingly well this past year. We especially thank our retiring directors, Fred Green and Jeremiah Sheehan.

Fred shared his extensive banking experience with us, and we are pleased that he is now serving as the District's representative to the Federal Advisory Council. Jerry served as chairman of our board and provided an enormous reserve of practical business experience that helped us strengthen both our operations and policies.

The strength of corporate governance arrangements in American corporations became a subject of intense scrutiny and debate in 2002. The year opened with the unfolding accounting scandals at several large firms. These revelations ultimately led to the enactment of the Sarbanes-Oxley Act to reform corporate accounting and oversight practices. Our Annual Report essay this year addresses corporate accounting. The essay written by John Weinberg, vice president and economist, discusses this topic in terms of the fundamental challenge in corporate governance: how can a large public corporation align the incentives of professional managers with those of widely dispersed shareowners? The economic literature on corporate governance builds on an inescapable asymmetric condition—managers are much better informed than shareholders and other outside stakeholders about both a firm's actions and its performance. As last year's events demonstrated, this asymmetry can lead to abuses and even criminal activity by corporate managers that erodes the investor trust so essential to the health of the American economy. The essay recognizes that some new government regulation may be inevitable in these circumstances. It argues, however, that the most effective way to confront this problem is to reinforce and strengthen the market forces already working to align the incentives of managers and investors. Ultimately, the need to sustain investor confidence and trust is the most effective discipline on the behavior of corporate managers.

We thank all of the Bank's stakeholders for their support in 2002, and we look forward to serving them in 2003.

As this Annual Report was going to press, we were saddened to learn of the death of Irwin Zazulia, deputy chairman of our board of directors and chairman of the board's committee on financial and strategic planning for 2003. As the retired president and CEO of the Hecht's department store chain, Irwin generously shared his broad knowledge of retailing and management with the Bank. Most importantly, though, his personal warmth and strong commitment to public service lifted our spirits and made us a better Bank. We will miss him.

J. Alfred Broaddus, Jr.
President

Walter A. Varvel
First Vice President

Accounting for Corporate Behavior

John A. Weinberg
Vice President and Economist

The year 2002 was one of great tumult for the American corporation. As the year began, news of accounting irregularities at energy giant Enron was unfolding at a rapid pace. These revelations would ultimately lead to the demise of that firm and its auditor Arthur Andersen. But Enron was not an isolated case, as other accounting scandals soon followed at WorldCom and Global Crossing in the telecommunications industry and at other prominent companies in different sectors. In July of 2002, Forbes.com published a "corporate scandal sheet" listing some twenty companies that were under investigation by the Securities and Exchange Commission (SEC) or other government authority.[1] Of these cases, the vast majority involved misreporting of corporate earnings.

These allegations certainly created the appearance of a general phenomenon in corporate finance, and the resulting loss of confidence in financial reporting practices arguably contributed to the weakness of markets for corporate securities. The fact that many of the problems were surfacing in industries that had been at the center of the new economy euphoria of the late 1990s contributed to the sense of malaise by shaking investor confidence in the economy's fundamental prospects. In most of the recent cases, the discovery of accounting improprieties was accompanied by a spectacular decline of high-flying stocks and, in a number of cases, criminal charges against corporate executives. Consequently, the state of corporate governance and accounting became the dominant business news story of the year.

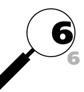
To some observers, the recent events confirm a sense that the stock market boom of the 1990s was artificial — a "bubble" backed solely by unrealistic expectations with no grounding in economic fundamentals. According to this view, investors' bloated expectations were nourished by the fictitious performance results reported by some firms. In the aftermath of these events, Congress enacted a new law known as the Sarbanes-Oxley Act to reform corporate accounting practices and the corporate governance tools that are intended to ensure sound financial reporting.

The attention received by the various scandals and the legislative response might easily create the impression that a fundamental flaw developed in the American system of corporate governance and finance during the late 1990s. It *does* appear that the sheer number of cases in which companies have been forced to make significant restatements of their accounts, largely as the result of SEC action, has risen in recent years. Beginning in 1998 with large earnings restatements by such companies as Sunbeam and Waste Management and with a heightened commitment by the SEC, under then chairman Arthur Levitt, to police misleading statements of earnings, the number of cases rose significantly above the dozen or so per year that was common in the 1980s.[2] While the frequency and magnitude of recent cases seem to be greater than in the past, accounting scandals are not new. Episodes of fraudulent accounting have occurred repeatedly in the history of U.S. financial markets.

The views expressed are the author's and not necessarily those of the Federal Reserve System.

In the aftermath of the stock market crash of 1929, public attention and congressional investigation led to allegations of unsavory practices by some financial market participants during the preceding boom. This activity led directly to the creation of the Securities and Exchange Commission in 1934. One of the founding principles of this agency was that "companies publicly offering securities … must tell the public the truth about their businesses."[3] The creation of the SEC, however, did not eliminate the problem, and scandals associated with dubious accounting remained a feature of the financial landscape. In 1987 a number of associations for accounting and finance professionals organized a National Commission on Fraudulent Financial Reporting. The commission studied cases from the 1980s and characterized the typical case as involving a relatively small company with weak internal controls. Although incidents of fraud were often triggered by a financial strain or sudden downturn in a company's real performance, the companies involved were usually from industries that had been experiencing relatively rapid growth. So while the size of companies involved in recent cases may be atypical, the occurrence of scandals in high-growth firms fits the established pattern.

Does fraudulent financial reporting represent the Achilles' heel of U.S. corporate finance? This essay addresses such questions by examining the problem of financial reporting in the context of the fundamental problem of corporate governance. Broadly stated, that fundamental problem is the need for a large group of corporate outsiders (shareholders) to be able to control the incentives of a small group of corporate insiders (management). At the heart of this problem lies a basic and inescapable asymmetry: insiders are much better informed about the opportunities and performance of a business than are any outsiders. This asymmetry presents a challenge that the modern corporation seeks to address in the mechanisms it uses to measure performance and reward managers.



While the tools of corporate governance can limit the effects of the incentive problem inherent in the corporate form, they cannot eliminate it. Ultimately, there are times when shareholders just have to trust that management is acting in their best interest and realize that their trust will sometimes be violated. Still, management has a powerful interest in earning and preserving the trust of investors. With trust comes an enhanced willingness of investors to provide funds, resulting in reduced funding costs for the business. That is, the behavior of corporate insiders is disciplined by their desire or need to raise funds in financial markets. This discipline favors efficient corporate governance arrangements.

As discussed in the next section, there are a variety of tools that a corporation might use to control managerial discretion, ranging from the makeup and role of the board of directors to the firm's relationship with its external auditor. To say that such tools are applied efficiently is to say that managers will adopt a tool as long as its benefit outweighs its cost. In the absence of government intervention, the forces of competition among self-interested market participants (both insiders and outsiders) will tend to lead to an efficient set of governance tools. It bears repeating, though, that these tools do not eliminate the fundamental problem of corporate governance. The observation of apparent failures, such as the accounting scandals of 2002, is not inconsistent, however, with a generally well-functioning market for corporate finance. Still, such episodes often provoke a political response, as occurred during the Great Depression and again in 2002 with the Sarbanes-Oxley Act. Through these interventions, the government has assumed a role in managing the relationship between shareholders and management.

The final sections of the essay consider the role of a government authority in setting and enforcing rules. After reviewing the functions of the SEC,

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discussion turns to the Sarbanes-Oxley Act, the provisions of which can be classified into two broad categories. Parts of the act attempt to improve corporate behavior by mandating certain aspects of the design of the audit committee or the relationship between the firm and its external auditor. The discussion in this essay suggests that there is reason to doubt that such provisions, by themselves, can do much to reduce fraud. Other parts of the act deal more with enforcement and the penalties for infractions. These provisions are more likely to have a direct effect on incentives. An open question is whether this effect is desirable. Since reducing fraud is costly, it is unlikely that reducing it to zero would be cost effective from society's point of view. Further, it is unrealistic to expect the new law to bring about a substantial reduction in instances of fraud without an increase in the resources allocated to enforcement. Given that it is in the interest of corporate stakeholders to devise mechanisms that respond efficiently to the fundamental problem of corporate governance, one might doubt that the gains from government intervention will be worth the costs necessary to bring about significant changes in behavior.

The Nature of the Modern Corporation

In the modern American corporation, ownership is typically spread widely over many individuals and institutions. As a result, owners as a group cannot effectively manage a business, a task that would require significant coordination and consensus-building. Instead, owners delegate management responsibilities to a hired professional. To be sure, professional managers usually hold some equity in the firms they run. Still, it is common for a manager's ownership stake to be small relative both to the company's total outstanding equity and to the manager's own total wealth.[4]

This description of the modern corporation featuring a separation between widely dispersed ownership and professional management is typically associated with the work of Adolf Berle and Gardiner Means. In their landmark study, *The Modern Corporation and Private Property*, Berle and Means identified the emerging corporate form as a cause for concern. For them, the separation of ownership and control heralded the rise of a managerial class, wielding great economic power but answerable only to itself. Large numbers of widely dispersed shareholders could not possibly exert effective control over management. Berle and Means' main concern was the growing concentration of economic power in a few hands and the coincident decline in the competitiveness of markets. At the heart of this problem was what they saw as the impossibility of absentee owners disciplining management.

Without adequate control by shareholders in the Berle and Means view, managers would be free to pursue endeavors that serve their own interests at shareholders' expense. Such actions might include making investments and acquisitions whose main effect would be to expand management's "empire." Managers might also use company resources to provide themselves with desirable perks, such as large and luxurious corporate facilities. These actions could result in the destruction of shareholder wealth and an overall decline in efficiency in the allocation of productive resources.

The experience of the last seventy years and the work of a number of writers on the law and economics of corporate governance have suggested that the modern corporation is perhaps not as ominous a development as imagined by Berle and Means. A field of financial economics has developed that studies the mechanisms available to shareholders for exerting some influence over management's decisions.[5] These tools represent the response of governance arrangements to the forces of supply and demand. That is, managers implement a governance mechanism when they perceive that its benefits exceed its costs. The use of these tools,

however, cannot eliminate the fundamental asymmetry between managers and owners. Even under the best possible arrangement, corporate insiders will be better informed than outsiders.

The most obvious mechanism for affecting an executive's behavior is the compensation arrangement between the firm and the executive. This tool, however, is also the most subject to problems arising from the separation of ownership and control. Just as it would be difficult for owners to coordinate in directly running the firm, so it is difficult for them to coordinate employment contract negotiations with managers. In practice, this task falls to the board of directors who, while intended to represent owners, are often essentially controlled by management. In terms of this relationship, management can benefit by creating a strong and independent board. This move signals to owners that management is seeking to constrain its own discretion. Ultimately, however, shareholders face the same challenge in assessing the board's independence as they do in evaluating management's behavior. The close contact the board has with management makes its independence hard to guarantee.

Another source of control available to owners comes from the legal protections provided by corporate law. Shareholders can bring lawsuits against management for certain types of misbehavior, including fraud and self-dealing, by which a manager unjustly enriches himself through transactions with the firm. Loans from the corporation to an executive at preferential interest rates can be an example of self-dealing. Of course use of the courts to discipline management also requires coordination among the widespread group of shareholders. In such cases, coordination can be facilitated by class-action lawsuits, where a number of shareholders come together as the plaintiff. Beyond suing management for specific actions of fraud or theft, however, shareholders' legal rights are limited by a general presumption in the law that management is best positioned to take actions in the firm's best business interests.[6] For instance, if management chooses between two possible investment projects, dissatisfied shareholders would find it very difficult to make a case that management's choice was driven by self-interest as opposed to shareholder value. So, while legal recourse can be an important tool for policing certain types of managerial malfeasance, such recourse cannot serve to constrain the broad discretion that management enjoys in running the business.

Notice that this discussion of tools for controlling managers' behavior has referred repeatedly to the coordination problem facing widely dispersed shareholders. Clearly, the severity of this problem depends on the degree of dispersion. The more concentrated the ownership, the more likely it is that large shareholders will take an active role in negotiating contracts and monitoring the behavior of management. Concentrated ownership comes at a cost though. For an investor to hold a large share of a large firm requires a substantial commitment of wealth without the benefits of risk diversification. Alternatively, many investors can pool their funds into institutions that own large blocks of stock in corporations. This arrangement does not solve the corporate governance problem of controlling incentives; however, it simply shifts the problem to that of governing the shareholding institutions.

In spite of the burden it places on shareholders, concentrated ownership has won favor as an approach to corporate governance in some settings. In some developed economies, banks hold large shares of equity in firms and also participate more actively in their governance than do financial institutions in the United States. In this country, leveraged buyouts emerged in the 1980s as a technique for taking over companies. In a leveraged buyout, ownership becomes concentrated as an individual or group acquires the firm's equity, financed through the issuance of debt. Some see the leveraged buyout wave as a means of forcing businesses to dispose of excess capacity or reverse unsuccessful acquisitions.[7] In most cases, these transactions resulted in a temporary concentration of ownership, since subsequent sales of equity eventually led back to more dispersed ownership. It seems that, at least in the legal and

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financial environment of the United States, the benefits of diversification associated with less concentrated ownership are great enough to make firms and their shareholders willing to face the related governance challenges.[8] Still, there is considerable variation in the concentration of ownership among large U.S. corporations, leading some observers to conclude that this feature of modern corporations responds to the relative costs and benefits.[9]

A leveraged buyout is a special type of takeover, an additional tool for controlling managers' incentives. If a firm is badly managed, another firm can acquire it, installing new management and improving its use of resources so as to increase profits. The market for corporate control, the market in which mergers and acquisitions take place, serves two purposes in corporate governance.[10] First, as just noted, it is sometimes the easiest means by which ineffective managers can be replaced. Second, the threat of replacement can help give managers an incentive to behave well. Takeovers, however, can be costly transactions and may not be worth the effort unless the potential improvement in a firm's performance is substantial.

The threat of a takeover introduces the idea that a manager's current behavior could bring about personal costs in the future. Similarly, a manager may have an interest in building and maintaining a reputation for effectively serving shareholders' interests. Such a reputation could enhance the manager's set of future professional opportunities. While reputation can be a powerful incentive device, like other tools it is not perfect. There will always be *some* circumstances in which a manager will find it in his best interest to take advantage of his good reputation for a short-run gain even though he realizes that his reputation will suffer in the long run. For example, a manager might "milk" his reputation by issuing misleading reports on the company's performance in order to meet targets needed for additional compensation.

The imperfections of reputation as a disciplining tool are due to the nature of the corporate governance problem and the relationship between ownership and management. Any tools shareholders have to control management's incentives are limited by a basic informational advantage that management enjoys. Because management has superior information about the firm's opportunities, prospects, and performance, shareholders can never be perfectly certain in their evaluation of management's actions and behavior.

Corporate Governance as an Agency Problem

At the heart of issues related to corporate governance lies what economists call an agency (or principal-agent) problem. Such a problem often arises when two parties enter into a contractual relationship, like that of employer-employee or borrower-lender. The defining characteristic of an agency problem is that one party, the principal, cannot directly control or prescribe the actions of the other party, the agent. Usually, this lack of control results from the agent having superior information about the endeavor that is of mutual interest to both parties. In the employer-employee relationship, this information gap is often related to the completion of daily tasks. Unable to monitor all of their employees' habits, bosses base workers' salaries on performance to induce those workers to put appropriate effort into their work.[11] Another common example of an agency problem includes insurance relationships. In auto insurance, for instance, the insurer cannot directly monitor the car owner's driving habits, which directly affect the probability of a claim being filed. Typical features of insurance contracts such as deductibles serve to enhance the owner's incentive to exercise care.

In interpreting corporate governance as an agency problem, it is common to identify top corporate management as the agent and owners as the principal. While both management and ownership are typically composed of a number of individuals, the basic tensions that arise in an agency relationship can be seen quite clearly if one thinks of each of the opposing parties as a single individual. In this

hypothetical relationship, an owner (the principal) hires a manager (the agent) to run a business. The owner is not actively involved in the affairs of the firm and, therefore, is not as well-informed as the manager about the opportunities available to the firm. Also, it may not be practical for the owner to monitor the manager's every action. Accordingly, the control that the owner exerts over the manager is primarily indirect. Since the owner can expect the manager to take actions that maximize his own return, the owner can try to structure the compensation policy so that the manager does well when the business does well. This policy could be supplemented by a mutual understanding of conditions under which the manager's employment might be terminated.

The agency perspective is certainly consistent with a significant part of compensation for corporate executives being contingent on firm performance. Equity grants to executives and equity options are common examples of performance-based compensation. Besides direct compensation, principals have a number of other tools available to affect agents' incentives. As discussed earlier, the tools available to shareholders include termination of top executives' employment, the possibility of a hostile takeover, and the right to sue executive management for certain types of misbehavior. Like direct compensation policy, all of these tools involve consequences for management that depend on corporate performance. Hence, the effective use of such tools requires that principals be able to assess agents' performance.

In the usual formulation of an agency problem, the agent takes an action that affects the business's profits, and the principal pays the agent an amount that depends on the level of those profits. This procedure presumes that the principal is able to assess the firm's profits. But the very same features of a modern corporation that make it difficult for principals (shareholders) to monitor actions taken by agents (corporate management) also create an asymmetry in the ability of shareholders and managers to track the firm's performance. Since owners cannot directly observe all of the firm's expenses and sales revenues, they must rely to some extent on the manager's reports about such measures of performance. As discussed in the next section, the problem of corporate governance is a compound agency problem: shareholders suffer

both from an inability to directly control management's actions and an inability to easily obtain information necessary to assess management's performance.

The characterization of corporate governance as an agency problem might lead one to doubt the ability of market forces to achieve efficient outcomes in this setting. But an agency problem is not a source of market failure. Rather, agents' and principals' unequal access to relevant information is simply a condition of the economic environment. In this environment, participants will evaluate contractual arrangements taking into account the effects on the incentives for all parties involved. An individual or a firm that can devise a contract with improved incentive effects will have an advantage in attracting other participants. In this way, market forces will tend to lead to efficient contracts. Accordingly, the economic view of corporate governance is that firms will seek executive compensation policies and other governance mechanisms that provide the best possible incentive for management to work in shareholders' best interest. The ultimate governance structure chosen does not eliminate the agency problem but is a rational, best response to that problem, balancing the costs and benefits of managerial discretion.

Accounting for Corporate Performance

All of the tools intended to influence the incentives and behavior of managers require that outsiders be able to assess when the firm is performing well and when it is performing poorly. If the manager's compensation is tied to the corporation's stock price, then investors, whose behavior determines the stock price, must be able to make inferences about the firm's true performance and prospects from the information available. If management's discipline comes from the threat of a takeover,

then potential acquirers must also be able to make such assessments.

The challenge for effective market discipline (whether in the capital market or in the market for corporate control) is in getting information held by corporate insiders out into the open. As a general matter, insiders have an interest in providing the market with reliable information. If by doing so they can reduce the uncertainty associated with investing in their firm, then, they can reduce the firm's cost of capital. But it's not enough for a manager to simply say, "I'm going to release reliable financial information about my business on an annual (or quarterly or other interval) basis." The believability of such a statement is limited because there will always be some circumstances in which a manager can benefit in the short term by not being fully transparent.

The difficulty in securing reliable information may be most apparent when a manager's compensation is directly tied to accounting-based performance measures. Since these measures are generated inside the firm, essentially by the same group of people whose decisions are driving the business's performance, the opportunity for manipulation is present. Certainly, accounting standards set by professional organizations can limit the discretion available to corporate insiders. A great deal of discretion remains, however. The academic accounting literature refers to such manipulation of current performance measures as "earnings management."

An alternative to executive compensation that depends on current performance as reported by the firm is compensation that depends on the market's perception of current performance. That is, compensation can be tied to the behavior of the firm's stock price. In this way, rather than depending on self-reported numbers, executives' rewards depend on investors' collective evaluation of the firm's performance. Compensation schemes based on this type of investor evaluation include plans that award bonuses based on stock price performance as well as those that offer direct grants of equity or equity options to managers.

Unfortunately, tying compensation to stock price performance hardly eliminates a manager's incentive to manipulate accounting numbers. If accounting numbers are generally believed by investors to provide reliable information about a company's performance, then those investors' trading behavior will cause stock prices to respond to accounting reports. This responsiveness could create an incentive for managers to manipulate accounting numbers in order to boost stock prices. Note, however, that if investors viewed earnings management and other forms of accounting manipulation as pervasive, they would tend to ignore reported numbers. In this case, stock prices would be unresponsive to accounting numbers, and managers would have little reason to manipulate reports (although they would also have little incentive to exert any effort or resources to creating accurate reports). The fact that we do observe cases of manipulation suggests that investors do not ignore accounting numbers, as they would if they expected all reports to be misleading. That is, the prevailing environment appears to be one in which serious instances of fraud are occasional rather than pervasive.

In summary, the design of a system of rewards for a corporation's top executives has two conflicting goals. To give executives an incentive to take actions that maximize shareholder value, compensation needs to be sensitive to the firm's performance. But the measurement of performance is subject to manipulation by the firm's management, and the incentive for such manipulation grows with the sensitivity of rewards to measured performance. This tension limits the ability of compensation plans to effectively manage executives' incentives.[12]

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Are there tools that a corporation can use to lessen the possibility of manipulated reporting and thereby improve the incentive structure for corporate executives? One possible tool is an external check on a firm's reported performance. A primary source for this check in public corporations is an external auditor. By becoming familiar with a client and its performance, an auditor can get a sense for the appropriateness of the choices made by the firm in preparing its reports. Of course, every case of fraudulent financial reporting by corporations, including those in the last year, involves the failure of an external auditor to detect or disclose problems. Clearly, an external audit is not a fail-safe protection against misreporting. A significant part of the Sarbanes-Oxley legislation was therefore devoted to improving the incentives of accounting firms in their role as external auditors.

An external audit is limited in its ability to prevent fraudulent reporting. First, many observers argue that an auditor's role is limited to certifying that a client's financial statements were prepared in accordance with professional accounting standards. Making this determination does not automatically enable an auditor to identify fraud. Others counter that an auditor's knowledge of a client's operations makes the auditor better positioned than other outsiders to assess the veracity of the client's reports. In this view, audit effectiveness in deterring fraud is as much a matter of willingness as ability.

One aspect of auditors' incentives that has received a great deal of attention is the degree to which the auditor's interests are independent of the interests of the client's management.[13] Some observers argue that the objectivity of large accounting firms when serving as external auditors is compromised by a desire to gain and retain lucrative consulting relationships with those clients. Even before the events of 2002, momentum was growing for the idea of separating the audit and consulting businesses into separate firms. Although the Sarbanes-Oxley Act did not require such a separation, some audit firms have taken the step of spinning off their consulting businesses. This step, however, does not guarantee auditor independence. Ultimately, an auditor works for its client, and there are always strong market forces driving a service provider to give the client what the client wants. If the client is willing to pay more for an audit that overlooks some questionable numbers than the (expected) costs to the auditor for providing such an audit, then that demand will likely be met. In general, a client's desire to maintain credibility with investors gives it a strong interest in the reliability of the auditor's work. Even so, there will always be some cases in which a client and an auditor find themselves willing to breach the public's trust for a short-term gain.

Some observers suggest that making the hiring of the auditor the responsibility of a company's board of directors, in particular the board's audit committee, can prevent complicity between management and external auditors. This arrangement is indeed a standard procedure in large corporations. Still, the ability of such an arrangement to enhance auditor independence hinges on the independence of the board and its audit committee. Unfortunately, there appears to be no simple mechanism for ensuring the independence of directors charged with overseeing a firm's audit relationships. In 1987 the National Commission on Fraudulent Financial Reporting found that among the most common characteristics of cases that resulted in enforcement actions by the Securities and Exchange Commission was weak or inactive audit committees or committees that had members with business ties to the firm or its executives. While such characteristics can often be seen clearly after the fact, it can be more difficult and costly for investors or other outsiders to discriminate among firms based on the general quality of their governance arrangements before problems have surfaced. While an outside investor can learn about the members of the audit committee and how often it meets, investors are less able to assess how much care the committee puts into its work.

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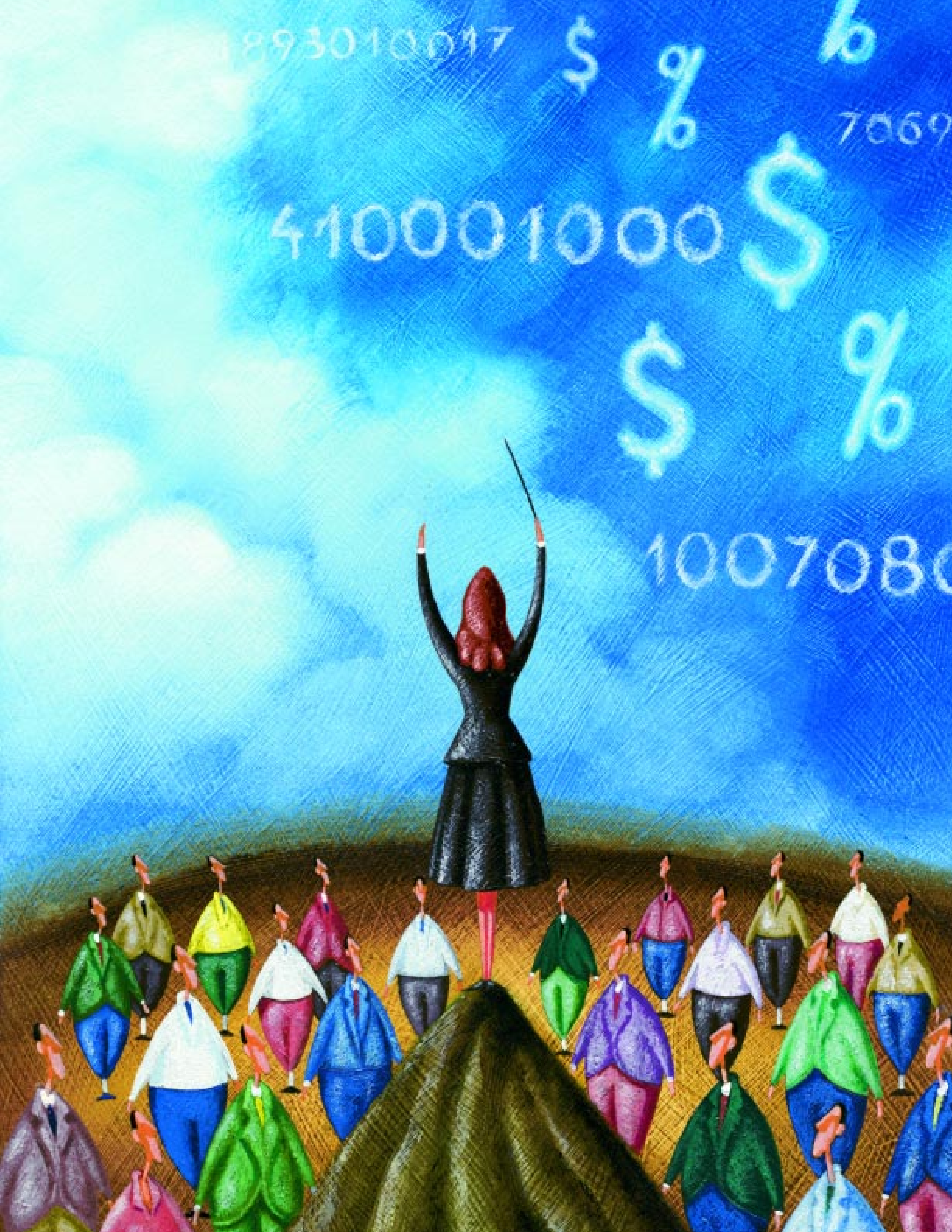
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The difficulty in guaranteeing the release of reliable information arises directly from the fundamental problem of corporate governance. In a business enterprise characterized by a separation of ownership and control, those in control have exclusive access to information that would be useful to the outside owners of the firm. Any outsider that the firm hires to verify that the information it releases is correct becomes, in effect, an insider. Once an auditor, for instance, acquires sufficient knowledge about a client to assess its management's reports, that auditor faces incentive problems analogous to those faced by management. So, while an external audit might be part of the appropriate response to the agency problem between management and investors, an audit also creates a new and analogous agency problem between investors and an auditor.

An alternative approach to monitoring the information released by a firm is for this monitoring to be done by parties that have no contractual relationship with the firm's management. Investors, as a group, would benefit from the increased credibility of accounting numbers this situation would provide. Suppose that a small number of individual investors spent the resources necessary to assess the truthfulness of a firm's report. Those investors could then make trades based on the results of their investigation. In an efficient capital market, the results would then be revealed in the firm's stock price. In this way, the firm's management would suffer the consequences (in the form of a lower stock price) of making misleading reports. The problem with this scenario is that while only a few investors incur the cost of the investigation and producing the information, all investors receive the benefit. Individual investors will have a limited incentive to incur such costs when other investors can free ride on their efforts. Because it is difficult for dispersed shareholders to coordinate information-gathering efforts, such free riding might occur and is just a further reflection of the fundamental problem of corporate governance.

The free-riding problem that comes when investors produce information about a firm can be reduced if an individual investor owns a large fraction of a firm's shares. As discussed in the second section, however, concentrated ownership has costs and does not necessarily resolve the information and incentive problems inherent in corporate governance. An alternative approach to the free-riding problem, and one that extends beyond the governance arrangements of an individual firm, is the creation of a membership organization that evaluates firms and their reporting behavior. Firms would be willing to pay a fee to join such an organization if membership served as a seal of approval for reporting practices. Members would then enjoy the benefits of reduced funding costs that come with credibility.

One type of membership organization that could contribute to improved financial reporting is a stock exchange. As the next section discusses, the New York Stock Exchange (NYSE) was a leader in establishing disclosure rules prior to the stock market crash of 1929. The political response to the crash was the creation of the Securities and Exchange Commission, which took over some of the responsibilities that might otherwise fall to a private membership organization. Hence, a government body like the SEC might substitute for private arrangements in monitoring corporate accounting behavior. The main source of incentives for a government body is its sensitivity to political sentiments. While political pressure can be an effective source of incentives, its effectiveness can also vary depending on political and economic conditions. If government monitoring replaces some information production by private market participants, it is still possible for such a hybrid system of corporate monitoring to be efficient as long as market participants base their actions on accurate beliefs about the effectiveness of government monitoring.

Given the existence of a governmental entity charged with policing the accounting behavior of public corporations, how much policing should that entity do? Should it carefully investigate every firm's reported numbers? This would be an expensive undertaking. The purpose of this policing activity is to enhance the incentives for corporate managements and their auditors to file accurate reports. At the same time, this goal should be pursued in a cost-effective manner. To do this, there is a second tool, beyond investigation, that the agency can use to affect incentives. The agency can also vary the punishment imposed on firms that are found to have violated the standards of honest reporting. At a minimum, this punishment simply involves the reduction in stock

price that occurs when a firm is forced to make a restatement of earnings or other important accounting numbers. This minimum punishment, imposed entirely by market forces, can be substantial.[14] To toughen punishment, the government authority can impose fines or even criminal penalties.

To increase corporate managers' incentive for truthful accounting, a government authority can either increase resources spent on monitoring firms' reports or increase penalties imposed for discovered infractions. Relying on large penalties allows the authority to economize on monitoring costs but, as long as monitoring is imperfect, raises the likelihood of wrongly penalizing firms. The Sarbanes-Oxley Act has provisions that affect both of these margins of enforcement. The following sections describe enforcement in the United States before and after Sarbanes-Oxley.

Government Enforcement of Corporate Honesty

Before the creation of the Securities and Exchange Commission in 1934, regulation of disclosures by firms issuing public securities was a state matter. Various states had "blue sky laws," so named because they were intended to "check stock swindlers so barefaced they would sell building lots in the blue sky."[15] These laws, which specified disclosures required of firms seeking to register and issue securities, had limited impact because they did not apply to the issuance of securities across state lines. An issuer could register securities in one state but offer them for sale in other states through the mail. The issuer would then be subject only to the laws of the state in which the securities were registered. The New York Stock Exchange offered an alternative, private form of regulation with listing requirements that were generally more stringent than those in the state laws. The NYSE also encouraged listing firms to make regular, audited reports on their income and financial position. This practice was nearly universal on the New York Stock Exchange by the late 1920s. The many competing exchanges at the time had weaker rules.

One of the key provisions of the Securities Exchange Act of 1934 was a requirement that all firms issuing stock file annual and quarterly reports with the SEC. In general, however, the act did not give finely detailed instructions to the commission. Rather, the SEC was granted the authority to issue rules "where appropriate in the public interest or for the protection of investors."[16] As with many of its powers, the SEC's authority with regard to the treatment of information disclosed by firms was left to an evolutionary process.

> "A government body like the SEC might substitute for private arrangements in monitoring corporate accounting behavior."

In the form into which it has evolved, the SEC reviews financial reports, taking one of a number of possible actions when problems are found. There are two broad classes of filings that the Corporate Finance Division of the SEC reviews—transactional and periodic filings. Transactional filings contain information relevant to particular transactions, such as the issuance of new securities or mergers and acquisitions. Periodic filings are the annual and quarterly filings, as well as the annual report to shareholders. Among the options available to the Corporate Finance Division if problems are found in a firm's disclosures is to refer the case to the Division of Enforcement.

Given its limited resources, it is impossible for the SEC to review all of the filings that come under its authority. In general, more attention is paid to transactional filings. In particular, all transactional filings go through an initial review, or screening process, to identify those warranting a closer examination. Many periodic filings do not even receive the initial screening. While the agency's goal has been to review every firm's annual 10-K report at least once every three years, it has not had the resources to realize that goal. In 2002 around half of all public companies had not had such a review in the last three years.[17] It is possible that the extraordinary nature of recent scandals has been due in part to the failure of the SEC's enforcement capabilities to keep up with the growth of securities market activity.

The Sarbanes-Oxley Act of 2002

In the aftermath of the accounting scandals of 2002, Congress enacted the Sarbanes-Oxley Act aimed at enhancing corporate responsibility and reforming the practice of corporate accounting. The law contains

provisions pertaining to both companies issuing securities and those in the auditing profession. Some parts of the act articulate rules for companies and their auditors, while other parts focus more on enforcement of these rules.[18]

The most prominent provisions dealing with companies that issue securities include obligations for the top executives and rules regarding the audit committee. The act requires the chief executive and financial officers to sign a firm's annual and quarterly filings with the SEC. The signatures will be taken to certify that, to the best of the executives' knowledge, the filings give a fair and honest representation of the firm's financial condition and operating performance. By not fulfilling this signature requirement, executives could face the possibility of significant criminal penalties.

The sections of the act that deal with the audit committee seek to promote the independence of directors serving on that committee. To this end, the act requires that members of the audit committee have no other business relationship with the company. That is, those directors should receive no compensation from the firm other than their director's fee. The act also instructs audit committees to establish formal procedures for handling complaints about accounting matters, whether the complaints come from inside or outside of the firm. Finally, the committee must include a member who is a "financial expert," as defined by the SEC, or explain publicly why it has no such expert.

Like its attempt to promote audit committee independence, the act contains provisions regarding a similar relationship between a firm and its auditor. A number of these provisions are intended to keep the auditor from getting "too close" to the firm. Hence, the act specifies a number of nonaudit services that an accounting firm may not provide to its audit clients. The act also requires audit firms to rotate the lead partner responsible for a client at least once every five years. Further, the act calls on the SEC to study the feasibility of requiring companies to periodically change their audit firm.

With regard to enforcement, the act includes both some new requirements for the SEC in its review of company filings and the creation of a new body, the Public Company Accounting Oversight Board. The PCAOB is intended to be an independent supervisory body for the auditing industry with which all firms performing audits of public companies must register. This board is charged with the task of establishing standards and rules governing the operation of public accounting firms. As put forth in Sarbanes-Oxley, these standards must include a minimum period of time over which audit workpapers must be maintained for possible examination by the PCAOB. Other rules would involve internal controls that audit firms must put in place to protect the quality and integrity of their work.

Sarbanes-Oxley gives the PCAOB the task of inspecting audit firms on a regular basis, with annual inspection required for the largest firms.[19] In addition to examining a firm's compliance with rules regarding organization and internal controls, inspections may include reviews of specific audit engagements. The PCAOB may impose penalties that include fines as well as the termination of an audit firm's registration. Such termination would imply a firm's exit from the audit business.

In addition to creating the new board to supervise the audit industry, the act gives the SEC greater responsibilities in reviewing disclosures by public companies. The act spells out factors that the SEC should use in prioritizing its reviews. For instance, firms that have issued material restatements of financial results or those whose stock prices have experienced significant volatility should receive priority treatment. Further, Sarbanes-Oxley requires that no company be reviewed less than once every three years. Other sections of the act that deal with enforcement prescribe penalties for specific abuses and extend the statute of limitations for private securities fraud litigation.

"In the aftermath of the accounting scandals of 2002, Congress enacted the Sarbanes-Oxley Act aimed at enhancing corporate responsibility and reforming the practice of corporate accounting."

> "Is there any reason to believe that a private market for corporate finance, without any government intervention, would not result in an efficient level of corporate honesty? Economic theory suggests that the answer is no."

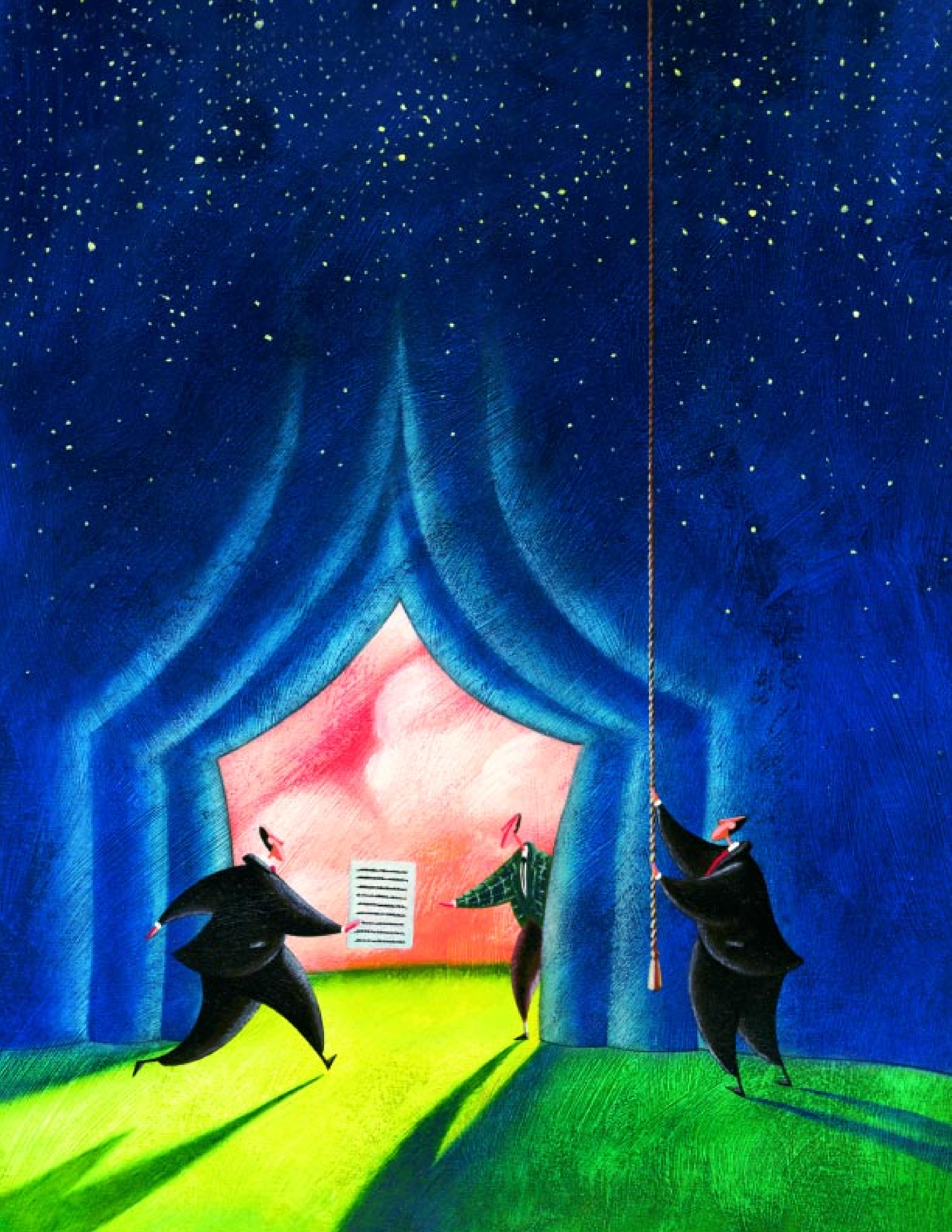
The goal of the Sarbanes-Oxley Act is to alter the incentives of corporate managements and their auditors so as to reduce the frequency of fraudulent financial reporting. In evaluating the act, one can take this goal as given and try to assess the act's likely impact on actual behavior of market participants. Alternatively, one could focus on the goal itself. The act is presumably based on the belief that we currently have too much fraud in corporate disclosures. But what is the right amount of fraud? Total elimination of fraud, if even feasible, is unlikely to be economically desirable. As argued earlier, reducing fraud is costly. It requires the expenditure of resources by some party to evaluate the public statements of companies and a further resource cost to impose consequences on those firms determined to have made false reports. Reduction in fraud is only economically efficient or desirable as long as the incremental costs of enforcement are less than the social gain from improved financial reporting.

What are the social benefits from improved credibility of corporate information? A reduction in the perceived likelihood of fraud brings with it similar benefits to other risk reductions perceived by investors. For example, investors become more willing to provide funds to corporations that issue public securities, resulting in a reduction in the cost of capital for those firms. Other things being equal, improved credibility should also lead to more investment by public companies and an overall expansion of the corporate sector. Again, however, any such gain must be weighed against the corresponding costs.

Is there any reason to believe that a private market for corporate finance, without any government intervention, would not result in an efficient level of corporate honesty? Economic theory suggests that the answer is no. It is true that the production of information necessary to discover fraud has some characteristics of a public good. For example, many people stand to benefit from an individual's efforts in investigating a company. While public goods can impede the efficiency of private market outcomes, the benefits of information production accrue to a well-defined group of market participants in this case. Companies subject to heightened investigative scrutiny enjoy lower costs of capital.

In principle, one can imagine this type of investigative activity being undertaken by a private membership organization. Companies that join would voluntarily subject their accounting reports to close review. Failure to comply with the organization's standards could be punished with expulsion. This organization could fund its activities through membership fees paid by the participating companies. It would only attract members if the benefits of membership, in the form of reduced costs of capital, exceeded the cost of membership. That is, such an organization would be successful if it could improve at low cost the credibility of its members' reported information. Still, even if successful, the organization would most likely not eliminate the potential for fraud among its members. There would always be some circumstances in which the short-run gain from reporting false numbers would outweigh the risk of discovery and expulsion.

Before the stock market crash of 1929, the New York Stock Exchange was operating in some ways much like the hypothetical organization just described. Investigations after the crash, which uncovered instances of misleading or fraudulent reporting by issuers of securities, found relatively fewer abuses among companies issuing stock on the NYSE.[20] One might reasonably conjecture that through such institutions the U.S. financial markets would have evolved into an efficient set of arrangements for promoting corporate honesty. While consideration of this possibility would make an interesting intellectual exercise, it is not what happened. Instead, as often occurs in American politics, Congress responded to a crisis with the creation of a government entity. In this case, a government



> **"Corporate discipline, whether from market forces or government intervention, arises when people outside of the firm incur the costs necessary to learn some of what insiders know."**

entity charged with policing the behavior of companies that issue public securities. The presence of such an agency might well dilute private market participants' incentives to engage in such policing activities. If so, then reliance on the government substitutes for reliance on private arrangements.

Have the SEC's enforcement activities resulted in an efficient level of corporate honesty? This is a difficult determination to make. It is true that known cases of misreporting rose steadily in the 1980s and 1990s and that the events of 2002 represented unprecedented levels of both the number and the size of companies involved. It is also true that over the last two decades, as activity in securities markets grew at a very rapid pace, growth in the SEC's budget lagged, limiting the resources available for the review of corporate reports. In this sense, one might argue that the level of enforcement fell during this period. Whether the current level of enforcement is efficient or not, the Sarbanes-Oxley Act expresses Congress' interest in seeing heightened enforcement so as to reduce the frequency of fraudulent reports.

How effective is Sarbanes-Oxley likely to be in changing the incentives of corporations and their auditors? Many of the act's provisions set rules and standards for ways in which firms should behave or how they should organize themselves and their relationships with auditors. There is reason to be skeptical about the likely effectiveness of these provisions by themselves. These portions of the act mandate that certain things be done inside an issuing firm, for instance in the organization of the audit committee. But because these actions and organizational changes take place inside the firm, they are subject to the same information problems as all corporate behavior. It is inherently difficult for outsiders, whether market participants or government agencies, to know what goes on inside the firm. The monitoring required to gain this information is costly, and it is unlikely that mandates for changed behavior will have much effect without an increase in the allocation of resources for such monitoring of corporate actions, relationships, and reports.

Other parts of the act appear to call for this increase in the allocation of resources for monitoring activities, both by the SEC and by the newly created PCAOB. Together with the act's provisions concerning penalties, these portions should have a real effect on incentives and behavior. Further, to the extent that these agencies monitor firms' adherence to the general rules and standards specified in the act, monitoring will give force to those provisions. If the goal of the act is to reduce the likelihood of events like Enron and WorldCom, however, monitoring might best be applied to the actual review of corporate reports and accounting firm's audit engagements. Ultimately, such direct review of firms' reports and audit workpapers is the activity that identifies misbehavior. Uncovering and punishing misbehavior is, in turn, the most certain means of altering incentives.

Incentives for deceptive accounting will never be eliminated, and even a firm that follows all of the formal rules in the Sarbanes-Oxley Act will find a way to be deceptive if the expected payoff is big enough. Among the things done by the SEC and PCAOB, the payoff to deception is most effectively limited by the allocation of resources to direct review of reported performance and by bringing penalties to bear where appropriate. Any hope that a real change in corporate behavior can be attained without incurring the costs of paying closer attention to the actual reporting behavior of firms will likely lead to disappointment. Corporate discipline, whether from market forces or government intervention, arises when people outside of the firm incur the costs necessary to learn some of what insiders know.

This article benefited from conversations with a number of my colleagues in the Research Department and from careful and critical readings by Tom Humphrey, Jeff Lacker, Ned Prescott, John Walter, and Alice Felmlee.

Endnotes

1. Patsuris (2002).
2. Alternative means of tallying the number of cases are found in Richardson et al. (2002) and Financial Executives Research Foundation Inc. (2001). By both measures, there was a marked increase in the number of cases in the late 1990s.
3. From the SEC Web page.
4. Holderness, et al. (1999) present evidence of rising managerial ownership over time. They find that executives and directors, *as a group*, owned an average of 21 percent of the outstanding stock in corporations they ran in 1995, compared to 13 percent in 1935.
5. Shleifer and Vishny (1997) provide a survey of this literature.
6. This point is emphasized by Roe (2002).
7. Holmstrom and Kaplan (2001) discuss the role of the leveraged buyouts of the 1980s in aligning managerial and shareholder interests.
8. Roe (1994) argues that ownership concentration in the United States has been constrained by a variety of legal restrictions. While this argument might temper one's conclusion that the benefits of dispersed ownership outweigh the costs, the leveraged buyout episode provides an example of concentration that was consistent with the legal environment and yet did not last.
9. Demsetz and Lehn (1985) make this argument.
10. Henry Manne (1965) was an early advocate of the beneficial incentive effect on the market for corporate control.
11. Classic treatments of agency problems are given by Holmstrom (1979) for the general analysis of moral hazard and Jensen and Meckling (1976) for the characterization of corporate governance as an agency problem.
12. Lacker and Weinberg (1989) analyze an agency problem in which the agent can manipulate the performance measure.
13. Levitt (2000) discusses this point.
14. Richardson, et al. (2002).
15. Seligman (1982), p. 44.
16. Ibid., p. 100.
17. United States Senate, Committee on Governmental Affairs (2002).
18. A summary of the act is found in Davis and Murray (2002).
19. Firms preparing audit reports for more than one hundred companies per year will be inspected annually.
20. Seligman (1982), p. 46.

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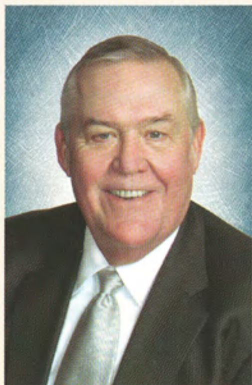

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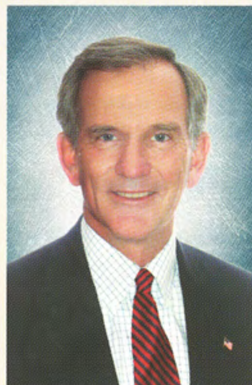

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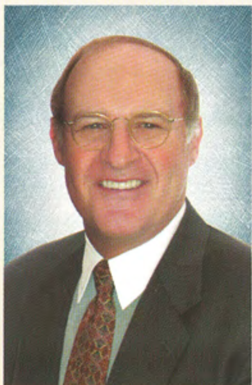

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Jeffrey M. Lacker
Senior Vice President and Director of Research

James McAfee
Senior Vice President and General Counsel

Joseph C. Ramage
Senior Vice President

James D. Reese
Senior Vice President and Chief Financial Officer

Virginius H. Rosson, Jr.
Senior Vice President

Marsha S. Shuler
Senior Vice President

Robert E. Wetzel, Jr.
Senior Vice President and General Auditor

Malcolm C. Alfriend
Vice President

Kemper W. Baker, Jr.
Vice President

William H. Benner, Jr.
Vice President

Jackson L. Blanton
Vice President

William A. Bridenstine, Jr.
Associate General Counsel

Bradford N. Carden
Vice President

Janice E. Clatterbuck
Vice President

Roland Costa
Vice President

B. Wayne Deal
Vice President and Assistant General Auditor

Betty M. Fahed
Vice President

A. Linwood Gill, III
Vice President

Sharon M. Haley
Vice President and Secretary

Robert L. Hetzel
Vice President

Richard L. Hopkins
Vice President

Thomas M. Humphrey
Vice President

Eugene W. Johnson, Jr.
Vice President

Claudia N. MacSwain
Vice President

Yash P. Mehra
Vice President

Raymond E. Owens, III
Vice President

G. Ronald Scharr
Vice President

Gary W. Schemmel
Vice President

John W. Scott
Vice President

Roy H. Webb
Vice President

John A. Weinberg
Vice President

Howard S. Whitehead
Vice President

Hattie R. C. Barley
Assistant Vice President

Gwen W. Byer
Assistant Vice President

Whitley K. Crane
Assistant Vice President

Alan H. Crooker
Assistant Vice President

Burrie E. Eaves, III
Assistant Vice President

Howard S. Goldfine
Assistant Vice President

Mattison W. Harris
Assistant Vice President

Andreas L. Hornstein
Research Officer

Charles L. Huffstetler
Assistant Vice President

Thomas P. Kellam
Assistant Vice President

Jodie S. Kitchens
Assistant Vice President

Malissa M. Ladd
Assistant Vice President

Page W. Marchetti
Assistant Vice President

William R. McCorvey, Jr.
Assistant General Counsel

Robert J. Minteer
Assistant Vice President

Richard S. Mohn, Jr.
Assistant Vice President

Susan Q. Moore
Assistant Vice President

Barbara J. Moss
Assistant Vice President

Edward B. Norfleet
Assistant Vice President

P. A. L. Nunley
Assistant General Counsel

Susan A. Saavedra
Assistant Vice President

Arlene S. Saunders
Assistant Vice President

Rebecca J. Snider
Assistant Vice President

Donna A. Stroup
Assistant Vice President

Catherine S. Tyler
Assistant Vice President

John R. Walter
Research Officer

John N. Weiss
Assistant Vice President

William F. White
Assistant Vice President

Karen J. Williams
Assistant Vice President

Floyd M. Dickinson, Jr.
Examining Officer

Constance B. Frudden
Information Technology Officer

Andrew S. McAllister
Currency Technology Officer

Edward S. Prescott
Associate Research Officer

Pierre-Daniel G. Sarte
Associate Research Officer

Alexander L. Wolman
Associate Research Officer

Baltimore

William J. Tignanelli
Senior Vice President

R. William Ahern
Vice President

David E. Beck
Vice President

Patricia S. Tunstall
Assistant Vice President

John I. Turnbull, II
Assistant Vice President

Charlotte

Dan M. Bechter
Senior Vice President

Jennifer J. Burns
Vice President

Lyle C. DeVane
Vice President

Marsha H. Malarz
Vice President

Ronald D. Steele
Vice President

T. Stuart Desch
Assistant Vice President

Richard J. Kuhn
Assistant Vice President

Jeffrey K. Thomas
Assistant Vice President

Helen S. Williams
Assistant Vice President

Ronald B. Holton
Business Development Officer

A. Thomas Ray
Operations Officer

David A. Swett
Examining Officer

Charleston

Carlisle C. Jones, Jr.
Assistant Vice President

Columbia

John R. Tyburski
Operations Officer

Listing as of December 31, 2002

Senior Vice Presidents
Front row, left to right: J. Lacker, M. Shuler, J. Reese
Second row, left to right: R. Wetzel, W. Tignanelli, V. Rosson, D. Bechter
Back row, left to right: J. McAfee, J. Ramage, J. Kane, M. Goodfriend

Financial Statements

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The firm engaged by the Board of Governors for the audits of the individual and combined financial statements of the Reserve Banks for 2002 was PricewaterhouseCoopers LLP (PwC). Fees for these services totaled $1.0 million. In order to ensure auditor independence, the Board of Governors requires that PwC be independent in all matters relating to the audit. Specifically, PwC may not perform services for the Reserve Banks or others that would place it in a position of auditing its own work, making management decisions on behalf of the Reserve Banks, or in any other way impairing its audit independence. In 2002, the Bank did not engage PwC for advisory services.

Management Assertion

December 31, 2002

To the Board of Directors:

The management of the Federal Reserve Bank of Richmond ("FRB Richmond") is responsible for the preparation and fair presentation of the Statement of Financial Condition, Statement of Income, and Statement of Changes in Capital as of December 31, 2002 (the "Financial Statements"). The Financial Statements have been prepared in conformity with the accounting principles, policies, and practices established by the Board of Governors of the Federal Reserve System and as set forth in the Financial Accounting Manual for the Federal Reserve Banks ("Manual"), and as such, include amounts, some of which are based on judgements and estimates of management. To our knowledge, the Financial Statements are, in all material respects, fairly presented in conformity with the accounting principles, policies, and practices documented in the Manual and include all disclosures necessary for such fair presentation.

The management of the FRB Richmond is responsible for maintaining an effective process of internal controls over financial reporting including the safeguarding of assets as they relate to the Financial Statements. Such internal controls are designed to provide reasonable assurance to management and to the Board of Directors regarding the preparation of reliable Financial Statements. This process of internal controls contains self-monitoring mechanisms, including, but not limited to, divisions of responsibility and a code of conduct. Once identified, any material deficiencies in the process of internal controls are reported to management, and appropriate corrective measures are implemented.

Even an effective process of internal controls, no matter how well designed, has inherent limitations, including the possibility of human error, and therefore can provide only reasonable assurance with respect to the preparation of reliable financial statements.

The management of the FRB Richmond assessed its process of internal controls over financial reporting including the safeguarding of assets reflected in the Financial Statements, based upon the criteria established in the "Internal Control – Integrated Framework" issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on this assessment, we believe that the FRB Richmond maintained an effective process of internal controls over financial reporting including the safeguarding of assets as they relate to the Financial Statements.

Federal Reserve Bank of Richmond

J. Alfred Broaddus, Jr.
President

Walter A. Varvel
First Vice President

James D. Reese
Senior Vice President and
Chief Financial Officer

Report of Independent Accountants

To the Board of Directors of the Federal Reserve Bank of Richmond:

We have examined management's assertion that the Federal Reserve Bank of Richmond ("FRB Richmond") maintained effective internal control over financial reporting and the safeguarding of assets as they relate to the Financial Statements as of December 31, 2002, based on criteria described in "Internal Control – Integrated Framework" issued by the Committee of Sponsoring Organizations of the Treadway Commission included in the accompanying Management's Assertion. The assertion is the responsibility of the FRB Richmond's management. Our responsibility is to express an opinion on the assertions based on our examination.

Our examination was made in accordance with standards established by the American Institute of Certified Public Accountants, and accordingly, included obtaining an understanding of the internal control over financial reporting, testing, and evaluating the design and operating effectiveness of the internal control, and performing such other procedures as we considered necessary in the circumstances. We believe that our examination provides a reasonable basis for our opinion.

Because of inherent limitations in any internal control, misstatements due to error or fraud may occur and not be detected. Also, projections of any evaluation of the internal control over financial reporting to future periods are subject to the risk that the internal control may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, management's assertion that the FRB Richmond maintained effective internal control over financial reporting and over the safeguarding of assets as they relate to the Financial Statements as of December 31, 2002, is fairly stated, in all material respects, based upon criteria described in "Internal Control – Integrated Framework" issued by the Committee of Sponsoring Organizations of the Treadway Commission.

PricewaterhouseCoopers LLP

Washington, D.C.
March 3, 2003

Report of Independent Accountants

To the Board of Governors of the Federal Reserve System and the Board of Directors of the Federal Reserve Bank of Richmond:

We have audited the accompanying statements of condition of the Federal Reserve Bank of Richmond (the "Bank") as of December 31, 2002 and 2001, and the related statements of income and changes in capital for the years then ended, which have been prepared in conformity with the accounting principles, policies, and practices established by the Board of Governors of the Federal Reserve System. These financial statements are the responsibility of the Bank's management. Our responsibility is to express an opinion on the financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

As discussed in Note 3, the financial statements were prepared in conformity with the accounting principles, policies, and practices established by the Board of Governors of the Federal Reserve System. These principles, policies, and practices, which were designed to meet the specialized accounting and reporting needs of the Federal Reserve System, are set forth in the "Financial Accounting Manual for Federal Reserve Banks" and constitute a comprehensive basis of accounting other than generally accepted accounting principles.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Bank as of December 31, 2002 and 2001, and results of its operations for the years then ended, in conformity with the basis of accounting described in Note 3.

PricewaterhouseCoopers LLP

Washington, D.C.
March 3, 2003

Statements of Condition *in millions*

Federal Reserve Bank of Richmond

As of December 31,	**2002**	2001
ASSETS		
Gold certificates	**$ 819**	$ 741
Special drawing rights certificates	**147**	147
Coin	**144**	165
Items in process of collection	**917**	174
Loans to depository institutions	**—**	1
U.S. government and federal agency securities, net	**49,847**	33,556
Investments denominated in foreign currencies	**4,048**	3,544
Accrued interest receivable	**425**	341
Prepaid expense – interest on Federal Reserve notes to the U.S. Treasury	**—**	13
Interdistrict settlement account	**—**	13,211
Bank premises and equipment, net	**246**	232
Other assets	**129**	101
Total assets	**$ 56,722**	$ 52,226
LIABILITIES AND CAPITAL		
Liabilities:		
Federal Reserve notes outstanding, net	**45,349**	45,208
Securities sold under agreements to repurchase	**1,645**	—
Deposits:		
Depository institutions	**1,381**	3,191
Other deposits	**57**	76
Deferred credit items	**808**	109
Interest on Federal Reserve notes due U.S. Treasury	**137**	—
Interdistrict settlement account	**3,052**	—
Accrued benefit costs	**89**	83
Other liabilities	**58**	45
Total liabilities	**52,576**	48,712
Capital:		
Capital paid-in	**2,073**	1,757
Surplus	**2,073**	1,757
Total capital	**4,146**	3,514
Total liabilities and capital	**$ 56,722**	$ 52,226

The accompanying notes are an integral part of these financial statements.

Statements of Income *in millions*

Federal Reserve Bank of Richmond

For the years ended December 31,	**2002**	2001
INTEREST INCOME		
Interest on U.S. government and federal agency securities	**$ 1,834**	$ 1,756
Interest on investments denominated in foreign currencies	**65**	80
Interest on loans to depository institutions	**—**	1
Total interest income	**1,899**	1,837
INTEREST EXPENSE		
Interest expense on securities sold under agreements to repurchase	**1**	—
Net interest income	**1,898**	1,837
OTHER OPERATING INCOME (LOSS)		
Income from services	**80**	78
Reimbursable services to government agencies	**36**	34
Foreign currency gains (losses), net	**498**	(354)
U.S. government securities gains, net	**5**	19
Other income	**4**	6
Total other operating income (loss)	**623**	(217)
OPERATING EXPENSES		
Salaries and other benefits	**214**	203
Occupancy expense	**30**	26
Equipment expense	**79**	76
Assessments by Board of Governors	**81**	92
Other credits	**(91)**	(59)
Total operating expenses	**313**	338
Net income prior to distribution	**$ 2,208**	$ 1,282
DISTRIBUTION OF NET INCOME		
Dividends paid to member banks	**$ 120**	$ 103
Transferred to surplus	**316**	78
Payments to U.S. Treasury as interest on Federal Reserve notes	**1,772**	1,101
Total distribution	**$ 2,208**	$ 1,282

The accompanying notes are an integral part of these financial statements.

Statements of Changes in Capital *in millions*

Federal Reserve Bank of Richmond

For the years ended December 31, 2002 and December 31, 2001	Capital Paid-in	Surplus	Total Capital
Balance at January 1, 2001 (33.6 million shares)	$ 1,679	$ 1,679	$ 3,358
Net income transferred to surplus	—	78	78
Net change in capital stock issued (1.5 million shares)	78	—	78
Balance at December 31, 2001 (35.1 million shares)	1,757	1,757	3,514
Net income transferred to surplus	—	316	316
Net change in capital stock issued (6.3 million shares)	316	—	316
Balance at December 31, 2002 (41.4 million shares)	**$ 2,073**	**$ 2,073**	**$ 4,146**

The accompanying notes are an integral part of these financial statements.

1. Structure

The Federal Reserve Bank of Richmond ("Bank") is part of the Federal Reserve System ("System") created by Congress under the Federal Reserve Act of 1913 ("Federal Reserve Act") which established the central bank of the United States. The System consists of the Board of Governors of the Federal Reserve System ("Board of Governors") and twelve Federal Reserve Banks ("Reserve Banks"). The Reserve Banks are chartered by the federal government and possess a unique set of governmental, corporate, and central bank characteristics. The Bank in Richmond, Virginia, and its branches in Baltimore, Maryland, and Charlotte, North Carolina, serve the Fifth Federal Reserve District, which includes Maryland, North Carolina, South Carolina, Virginia, the District of Columbia, and a portion of West Virginia. Other major elements of the System are the Federal Open Market Committee ("FOMC") and the Federal Advisory Council. The FOMC is composed of members of the Board of Governors, the president of the Federal Reserve Bank of New York ("FRBNY") and, on a rotating basis, four other Reserve Bank presidents. Banks that are members of the System include all national banks and any state chartered bank that applies and is approved for membership in the System.

Board of Directors

In accordance with the Federal Reserve Act, supervision and control of the Bank are exercised by a Board of Directors. The Federal Reserve Act specifies the composition of the Board of Directors for each of the Reserve Banks. Each board is composed of nine members serving three-year terms: three directors, including those designated as Chairman and Deputy Chairman, are appointed by the Board of Governors, and six directors are elected by member banks. Of the six elected by member banks, three represent the public and three represent member banks. Member banks are divided into three classes according to size. Member banks in each class elect one director representing member banks and one representing the public. In any election of directors, each member bank receives one vote, regardless of the number of shares of Reserve Bank stock it holds.

2. Operations and Services

The System performs a variety of services and operations. Functions include: formulating and conducting monetary policy; participating actively in the payments mechanism, including large-dollar transfers of funds, automated clearinghouse ("ACH") operations and check processing; distributing coin and currency; performing fiscal agency functions for the U.S. Treasury and certain federal agencies; serving as the federal government's bank; providing short-term loans to depository institutions; serving the consumer and the community by providing educational materials and information regarding consumer laws; supervising bank holding companies and state member banks; and administering other regulations of the Board of Governors. The Board of Governors' operating costs are funded through assessments on the Reserve Banks.

The FOMC establishes policy regarding open market operations, oversees these operations, and issues authorizations and directives to the FRBNY for its execution of transactions. Authorized transaction types include direct purchase and sale of securities, matched sale-purchase transactions, the purchase of securities under agreements to resell, the sale of securities under agreements to repurchase, and the lending of U.S. government securities. The FRBNY is also authorized by the FOMC to hold balances of and to execute spot and forward foreign exchange ("F/X") and securities contracts in, nine foreign currencies, maintain reciprocal currency arrangements ("F/X swaps") with various central banks, and "warehouse" foreign currencies for the U.S. Treasury and Exchange Stabilization Fund ("ESF") through the Reserve Banks.

3. Significant Accounting Policies

Accounting principles for entities with the unique powers and responsibilities of the nation's central bank have not been formulated by the Financial Accounting Standards Board. The Board of Governors has developed specialized accounting principles and practices that it believes are appropriate for the significantly different nature and function of a central bank as compared to the private sector. These accounting principles and practices are documented in the *Financial Accounting Manual for Federal Reserve Banks* ("Financial Accounting

Manual"), which is issued by the Board of Governors. All Reserve Banks are required to adopt and apply accounting policies and practices that are consistent with the Financial Accounting Manual.

The financial statements have been prepared in accordance with the Financial Accounting Manual. Differences exist between the accounting principles and practices of the System and accounting principles generally accepted in the United States of America ("GAAP"). The primary differences are the presentation of all security holdings at amortized cost, rather than at the fair value presentation requirements of GAAP, and the accounting for matched sale-purchase transactions as separate sales and purchases, rather than secured borrowings with pledged collateral, as is generally required by GAAP. In addition, the Bank has elected not to present a Statement of Cash Flows. The Statement of Cash Flows has not been included as the liquidity and cash position of the Bank are not of primary concern to the users of these financial statements. Other information regarding the Bank's activities is provided in, or may be derived from, the Statements of Condition, Income, and Changes in Capital. Therefore, a Statement of Cash Flows would not provide any additional useful information. There are no other significant differences between the policies outlined in the Financial Accounting Manual and GAAP.

Effective January 2001, the System implemented procedures to eliminate the sharing of costs by Reserve Banks for certain services a Reserve Bank may provide on behalf of the System. Major services provided for the System by the Bank, for which the costs will not be redistributed to the other Reserve Banks, include Standard Cash Automation and the Currency Technology Office.

The preparation of the financial statements in conformity with the Financial Accounting Manual requires management to make certain estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of income and expenses during the reporting period. Actual results could differ from those estimates. Unique accounts and significant accounting policies are explained below.

a. Gold Certificates

The Secretary of the Treasury is authorized to issue gold certificates to the Reserve Banks to monetize gold held by the U.S. Treasury. Payment for the gold certificates by the Reserve Banks is made by crediting equivalent amounts in dollars into the account established for the U.S. Treasury. These gold certificates held by the Reserve Banks are required to be backed by the gold of the U.S. Treasury. The U.S. Treasury may reacquire the gold certificates at any time and the Reserve Banks must deliver them to the U.S. Treasury. At such time, the U.S. Treasury's account is charged and the Reserve Banks' gold certificate accounts are lowered. The value of gold for purposes of backing the gold certificates is set by law at $42 2/9 a fine troy ounce. The Board of Governors allocates the gold certificates among Reserve Banks once a year based upon average Federal Reserve notes outstanding in each District.

b. Special Drawing Rights Certificates

Special drawing rights ("SDRs") are issued by the International Monetary Fund ("Fund") to its members in proportion to each member's quota in the Fund at the time of issuance. SDRs serve as a supplement to international monetary reserves and may be transferred from one national monetary authority to another. Under the law providing for United States participation in the SDR system, the Secretary of the U.S. Treasury is authorized to issue SDR certificates, somewhat like gold certificates, to the Reserve Banks. At such time, equivalent amounts in dollars are credited to the account established for the U.S. Treasury, and the Reserve Banks' SDR certificate accounts are increased. The Reserve Banks are required to purchase SDRs, at the direction of the U.S. Treasury, for the purpose of financing SDR certificate acquisitions or for financing exchange stabilization operations. At the time SDR transactions occur, the Board of Governors allocates SDR certificate transactions among Reserve Banks based upon Federal Reserve notes outstanding in each District at the end of the preceding year. There were no SDR transactions in 2002.

c. Loans to Depository Institutions

The Depository Institutions Deregulation and Monetary Control Act of 1980 provides that all depository institutions that maintain reservable transaction accounts or nonpersonal time deposits, as defined in Regulation D issued by the Board of Governors, have borrowing privileges at the discretion of the Reserve Banks. Borrowers execute certain lending agreements and deposit sufficient collateral before credit is extended. Loans are evaluated for collectibility, and currently all are considered collectible and fully collateralized. If loans were ever deemed to be uncollectible, an appropriate reserve would be established. Interest is accrued using the applicable discount rate established at least every fourteen days by the Boards of Directors of the Reserve Banks, subject to review by the Board of Governors. Reserve Banks retain the option to impose a surcharge above the basic rate in certain circumstances.

d. U.S. Government and Federal Agency Securities and Investments Denominated in Foreign Currencies

The FOMC has designated the FRBNY to execute open market transactions on its behalf and to hold the resulting securities in the portfolio known as the System Open Market Account ("SOMA"). In addition to authorizing and directing operations in the domestic securities market, the FOMC authorizes and directs the FRBNY to execute operations in foreign markets for major currencies in order to counter disorderly conditions in exchange markets or to meet other needs specified by the FOMC in carrying out the System's central bank responsibilities. Such authorizations are reviewed and approved annually by the FOMC.

In December 2002, the FRBNY replaced matched sale-purchase ("MSP") transactions with securities sold under agreements to repurchase. MSP transactions, accounted for as separate sale and purchase transactions, are transactions in which the FRBNY sells a security and buys it back at the rate specified at the commencement of the transaction. Securities sold under agreements to repurchase are treated as secured borrowing transactions with the associated interest expense recognized over the life of the transaction.

The FRBNY has sole authorization by the FOMC to lend U.S. government securities held in the SOMA to U.S. government securities dealers and to banks participating in U.S. government securities clearing arrangements on behalf of the System, in order to facilitate the effective functioning of the domestic securities market. These securities-lending transactions are fully collateralized by other U.S. government securities. FOMC policy requires FRBNY to take possession of collateral in excess of the market values of the securities loaned. The market values of the collateral and the securities loaned are monitored by FRBNY on a daily basis, with additional collateral obtained as necessary. The securities loaned continue to be accounted for in the SOMA.

F/X contracts are contractual agreements between two parties to exchange specified currencies, at a specified price, on a specified date. Spot foreign contracts normally settle two days after the trade date, whereas the settlement date on forward contracts is negotiated between the contracting parties, but will extend beyond two days from the trade date. The FRBNY generally enters into spot contracts, with any forward contracts generally limited to the second leg of a swap/warehousing transaction.

The FRBNY, on behalf of the Reserve Banks, maintains renewable, short-term F/X swap arrangements with two authorized foreign central banks. The parties agree to exchange their currencies up to a prearranged maximum amount and for an agreed upon period of time (up to twelve months), at an agreed upon interest rate. These arrangements give the FOMC temporary access to foreign currencies that it may need for intervention operations to support the dollar and give the partner foreign central bank temporary access to dollars it may need to support its own currency. Drawings under the F/X swap arrangements can be initiated by either the FRBNY or the partner foreign central bank, and must be agreed to by the drawee. The F/X swaps are structured so that the party initiating the transaction (the drawer) bears the exchange rate risk upon maturity. The FRBNY will generally invest the foreign currency received under an F/X swap in interest-bearing instruments.

Warehousing is an arrangement under which the FOMC agrees to exchange, at the request of the Treasury, U.S. dollars for foreign currencies held by the Treasury or ESF over a limited period of time. The purpose of the warehousing facility is to supplement the U.S. dollar resources of the Treasury and ESF for financing purchases of foreign currencies and related international operations.

In connection with its foreign currency activities, the FRBNY, on behalf of the Reserve Banks, may enter into contracts which contain varying degrees of off-balance sheet market risk, because they represent contractual commitments involving future settlement and counter-party credit risk. The FRBNY controls credit risk by obtaining credit approvals, establishing transaction limits, and performing daily monitoring procedures.

While the application of current market prices to the securities currently held in the SOMA portfolio and investments denominated in foreign currencies may result in values substantially above or below their carrying values, these unrealized changes in value would have no direct effect on the quantity of reserves available to the banking system or on the prospects for future Reserve Bank earnings or capital. Both the domestic and foreign components of the SOMA portfolio from time to time involve transactions that can result in gains or losses when holdings are sold prior to maturity. Decisions regarding the securities and foreign currencies transactions, including their purchase and sale, are motivated by monetary policy objectives rather than profit. Accordingly, market values, earnings, and any gains or losses resulting from the sale of such currencies and securities are incidental to the open market operations and do not motivate its activities or policy decisions.

U.S. government and federal agency securities and investments denominated in foreign currencies comprising the SOMA are recorded at cost, on a settlement-date basis, and adjusted for amortization of premiums or accretion of discounts on a straight-line basis. Interest income is accrued on a straight-line basis and is reported as "Interest on U.S. government and federal agency securities" or "Interest on investments denominated in foreign currencies," as appropriate. Income earned on securities lending transactions is reported as a component of "Other income." Gains and losses resulting from sales of securities are determined by specific issues based on average cost. Gains and losses on the sales of U.S. government and federal agency securities are reported as "U.S. government securities gains, net." Foreign-currency-denominated assets are revalued daily at current foreign currency market exchange rates in order to report these assets in U.S. dollars. Realized and unrealized gains and losses on investments denominated in foreign currencies are reported as "Foreign currency gains (losses), net." Foreign currencies held through F/X swaps, when initiated by the counter-party, and warehousing arrangements are revalued daily, with the unrealized gain or loss reported by the FRBNY as a component of "Other assets" or "Other liabilities," as appropriate.

Balances of U.S. government and federal agency securities bought outright, securities sold under agreements to repurchase, securities loaned, investments denominated in foreign currency, interest income and expense, securities lending fee income, amortization of premiums and discounts on securities bought outright, gains and losses on sales of securities, and realized and unrealized gains and losses on investments denominated in foreign currencies, excluding those held under an F/X swap arrangement, are allocated to each Reserve Bank. Income from securities lending transactions undertaken by the FRBNY are also allocated to each Reserve Bank. Securities purchased under agreements to resell and unrealized gains and losses on the revaluation of foreign currency holdings under F/X swaps and warehousing arrangements are allocated to the FRBNY and not to other Reserve Banks.

e. Bank Premises, Equipment, and Software

Bank premises and equipment are stated at cost less accumulated depreciation. Depreciation is calculated on a straight-line basis over estimated useful lives of assets ranging from 2 to 50 years. New assets, major alterations, renovations and improvements are capitalized at cost as additions to the asset accounts. Maintenance, repairs and minor replacements are charged to operations in the year incurred. Costs incurred for software, either developed internally or acquired for internal use, during the application development stage are capitalized based on the cost of direct services and materials associated with designing, coding, installing, or testing software.

f. Interdistrict Settlement Account

At the close of business each day, all Reserve Banks and branches assemble the payments due to or from other Reserve Banks and branches as a result of transactions involving accounts residing in other Districts that occurred during the day's operations. Such transactions may include funds settlement, check clearing and ACH operations, and allocations of shared expenses. The cumulative net amount due to or from other Reserve Banks is reported as the "Interdistrict settlement account."

g. Federal Reserve Notes

Federal Reserve notes are the circulating currency of the United States. These notes are issued through the various Federal Reserve agents (the Chairman of the Board of Directors of each Reserve Bank) to the Reserve Banks upon deposit with such agents of certain classes of collateral security, typically U.S. government securities. These notes are identified as issued to a specific Reserve Bank. The Federal Reserve Act provides that the collateral security tendered by the Reserve Bank to the Federal Reserve agent must be equal to the sum of the notes applied for by such Reserve Bank. In accordance with the Federal Reserve Act, gold certificates, special drawing rights certificates, U.S. government and federal agency securities, securities purchased under agreements to resell, loans to depository institutions, and investments denominated in foreign currencies are pledged as collateral for net Federal Reserve notes outstanding. The collateral value is equal to the book value of the collateral tendered, with the exception of securities, whose collateral value is equal to the par value of the securities tendered, and securities purchased under agreements to resell, which are valued at the contract amount. The par value of securities pledged for securities sold under agreements to repurchase is similarly deducted. The Board of Governors may, at any time, call upon a Reserve Bank for additional security to adequately collateralize the Federal Reserve notes. The Reserve Banks have entered into an agreement which provides for certain assets of the Reserve Banks to be jointly pledged as collateral for the Federal Reserve notes of all Reserve Banks in order to satisfy their obligation of providing sufficient collat-

eral for outstanding Federal Reserve notes. In the event that this collateral is insufficient, the Federal Reserve Act provides that Federal Reserve notes become a first and paramount lien on all the assets of the Reserve Banks. Finally, as obligations of the United States, Federal Reserve notes are backed by the full faith and credit of the United States government.

The "Federal Reserve notes outstanding, net" account represents the Bank's Federal Reserve notes outstanding reduced by its currency holdings of $9,023 million, and $10,230 million at December 31, 2002 and December 31, 2001, respectively.

h. Capital Paid-in

The Federal Reserve Act requires that each member bank subscribe to the capital stock of the Reserve Bank in an amount equal to 6 percent of the capital and surplus of the member bank. As a member bank's capital and surplus changes, its holdings of the Reserve Bank's stock must be adjusted. Member banks are those state-chartered banks that apply and are approved for membership in the System and all national banks. Currently, only one-half of the subscription is paid-in and the remainder is subject to call. These shares are nonvoting with a par value of $100. They may not be transferred or hypothecated. By law, each member bank is entitled to receive an annual dividend of 6 percent on the paid-in capital stock. This cumulative dividend is paid semi-annually. A member bank is liable for Reserve Bank liabilities up to twice the par value of stock subscribed by it.

i. Surplus

The Board of Governors requires Reserve Banks to maintain a surplus equal to the amount of capital paid-in as of December 31. This amount is intended to provide additional capital and reduce the possibility that the Reserve Banks would be required to call on member banks for additional capital. Pursuant to Section 16 of the Federal Reserve Act, Reserve Banks are required by the Board of Governors to transfer to the U.S. Treasury excess earnings, after providing for the costs of operations, payment of dividends, and reservation of an amount necessary to equate surplus with capital paid-in.

In the event of losses or a substantial increase in capital, payments to the U.S. Treasury are suspended until such losses are recovered through subsequent earnings. A portion of the payments made to the U.S. Treasury in 2001 are classified as "Prepaid expense – interest on Federal Reserve notes to the U.S. Treasury." Weekly payments to the U.S. Treasury may vary significantly.

j. Income and Costs related to Treasury Services

The Bank is required by the Federal Reserve Act to serve as fiscal agent and depository of the United States. By statute, the Department of the Treasury is permitted, but not required, to pay for these services.

k. Taxes

The Reserve Banks are exempt from federal, state, and local taxes, except for taxes on real property, which are reported as a component of "Occupancy expense."

4. U.S. Government and Federal Agency Securities

Securities bought outright are held in the SOMA at the FRBNY. An undivided interest in SOMA activity and the related premiums, discounts and income, with the exception of securities purchased under agreements to resell, is allocated to each Reserve Bank on a percentage basis derived from an annual settlement of interdistrict clearings. The settlement, performed in April of each year, equalizes Reserve Bank gold certificate holdings to Federal Reserve notes outstanding. The Bank's allocated share of SOMA balances was approximately 7.799 percent and 5.974 percent at December 31, 2002 and 2001, respectively.

The Bank's allocated share of securities held in the SOMA at December 31, that were bought outright, was as follows (in millions):

	2002	2001
Par value:		
Federal agency	**$ 1**	$ 1
U.S. government:		
Bills	**17,680**	10,877
Notes	**23,233**	15,887
Bonds	**8,176**	6,193
Total par value	**49,090**	32,958
Unamortized premiums	**839**	675
Unaccreted discounts	**(82)**	(77)
Total allocated to Bank	**$ 49,847**	$ 33,556

Total SOMA securities bought outright were $639,125 million and $561,701 million at December 31, 2002 and 2001, respectively.

The maturity distribution of U.S. government and federal agency securities bought outright, which were allocated to the Bank at December 31, 2002, was as follows (in millions):

	Par value		
Maturities of Securities Held	U.S. Government Securities	Federal Agency Obligations	Total
Within 15 days	$ 2,140	$ —	$ 2,140
16 days to 90 days	12,028	—	12,028
91 days to 1 year	11,063	1	11,064
Over 1 year to 5 years	13,474	—	13,474
Over 5 years to 10 years	4,157	—	4,157
Over 10 years	6,227	—	6,227
Total	**$ 49,089**	**$ 1**	**$ 49,090**

As mentioned in footnote 3, in December 2002, the FRBNY replaced MSP transactions with securities sold under agreements to repurchase. At December 31, 2002, securities sold under agreements to repurchase with a contract amount of $21,091 million and a par value of $21,098 million were outstanding, of which $1,645 million and $1,645 million, respectively, were allocated to the Bank. At December 31, 2001, MSP transactions involving U.S. government securities with a par value of $23,188 million were outstanding, of which $1,385 million was allocated to the Bank. Securities sold under agreements to repurchase and MSP transactions are generally overnight arrangements.

At December 31, 2002 and 2001, U.S. government securities with par values of $1,841 million and $7,345 million, respectively, were loaned from the SOMA, of which $144 million and $439 million were allocated to the Bank.

5. Investments Denominated in Foreign Currencies

The FRBNY, on behalf of the Reserve Banks, holds foreign currency deposits with foreign central banks and the Bank for International Settlements, and invests in foreign government debt instruments. Foreign government debt instruments held include both securities bought outright and securities purchased under agreements to resell. These investments are guaranteed as to principal and interest by the foreign governments.

Each Reserve Bank is allocated a share of foreign-currency-denominated assets, the related interest income, and realized and unrealized foreign currency gains and losses, with the exception of unrealized gains and losses on F/X swaps and warehousing transactions. This allocation is based on the ratio of each Reserve Bank's capital and surplus to aggregate capital and surplus at the preceding December 31. The Bank's allocated share of investments denominated in foreign currencies was approximately 23.935 percent and 24.344 percent at December 31, 2002 and 2001, respectively.

The Bank's allocated share of investments denominated in foreign currencies, valued at current foreign currency market exchange rates at December 31, was as follows (in millions):

	2002	2001
European Union Euro:		
Foreign currency deposits	**$ 1,336**	$ 1,118
Government debt instruments including agreements to resell	**789**	656
Japanese Yen:		
Foreign currency deposits	**428**	460
Government debt instruments including agreements to resell	**1,475**	1,294
Accrued interest	**20**	16
Total	**$ 4,048**	$ 3,544

Total investments denominated in foreign currencies were $16,913 million and $14,559 million at December 31, 2002 and 2001, respectively.

The maturity distribution of investments denominated in foreign currencies which were allocated to the Bank at December 31, 2002, was as follows (in millions):

Maturities of Investments Denominated in Foreign Currencies	
Within 1 year	$ 3,737
Over 1 year to 5 years	216
Over 5 years to 10 years	95
Over 10 years	—
Total	**$ 4,048**

At December 31, 2002 and 2001, there were no open foreign exchange contracts or outstanding F/X swaps.

At December 31, 2002 and 2001, the warehousing facility was $5,000 million, with zero balance outstanding.

6. Bank Premises and Equipment

A summary of bank premises and equipment at December 31 is as follows (in millions):

	2002	2001
Bank premises and equipment:		
Land	**$ 19.7**	$ 19.7
Buildings	**122.3**	122.6
Building machinery and equipment	**45.6**	44.1
Construction in progress	**1.2**	0.3
Furniture and equipment	**298.0**	292.8
	486.8	479.5
Accumulated depreciation	**(240.8)**	(247.5)
Bank premises and equipment, net	**$ 246.0**	$ 232.0

Depreciation expense was $36 million and $31 million for the years ended December 31, 2002 and 2001, respectively.

Bank premises and equipment at December 31 include the following amounts for leases that have been capitalized (in millions):

	2002	2001
Bank premises and equipment	**$ 15**	$ 20
Accumulated depreciation	**(11)**	(13)
Capitalized leases, net	**$ 4**	$ 7

The Bank leases unused space to outside tenants. Those leases have terms ranging from one to four years. Rental income from such leases was $1.4 million and $1.3 million for the years ended December 31, 2002 and 2001, respectively. Future minimum lease payments under noncancelable agreements in existence at December 31, 2002, were (in millions):

2003	$ 1.2
2004	1.2
2005	1.3
2006	1.2
Thereafter	0.0
	$ 4.9

7. Commitments and Contingencies

At December 31, 2002, the Bank was obligated under noncancelable leases for premises and equipment with terms ranging from one to approximately four years. These leases provide for increased rentals based upon increases in real estate taxes, operating costs or selected price indices.

Rental expense under operating leases for certain operating facilities, warehouses, and data processing and office equipment (including taxes, insurance and maintenance when included in rent), net of sublease rentals, was $42 million and $40 million for the years ended December 31, 2002 and 2001, respectively. Certain of the Bank's leases have options to renew.

Future minimum rental payments under noncancelable operating leases and capital leases, net of sublease rentals, with terms of one year or more, at December 31, 2002, were (in millions):

	Operating	**Capital**
2003	$ 1.4	$ 6.3
2004	1.0	6.2
2005	1.0	0.4
2006	0.2	0.4
Thereafter	0.0	0.0
	$ 3.6	13.3
Amount representing interest		(1.1)
Present value of net minimum lease payment		**$ 12.2**

At December 31, 2002, the Bank, acting on behalf of the Reserve Banks, had a contractual commitment through the year 2007 totaling $92 million, none of which has been recognized. This contract represents costs for maintenance of currency processing machines that will be allocated annually to other Reserve Banks. It is estimated that the Bank's allocated share will be $8 million.

Under the Insurance Agreement of the Federal Reserve Banks dated as of March 2, 1999, each of the Reserve Banks has agreed to bear, on a per incident basis, a pro rata share of losses in excess of one percent of the capital paid-in of the claiming Reserve Bank, up to 50 percent of the total capital paid-in of all Reserve Banks. Losses are borne in the ratio that a Reserve Bank's capital paid-in bears to the total capital paid-in of all Reserve Banks at the beginning of the calendar year in which the loss is shared. No claims were outstanding under such agreement at December 31, 2002 or 2001.

The Bank is involved in certain legal actions and claims arising in the ordinary course of business. Although it is difficult to predict the ultimate outcome of these actions, in management's opinion, based on discussions with counsel, the aforementioned litigation and claims will be resolved without material adverse effect on the financial position or results of operations of the Bank.

8. Retirement and Thrift Plans

Retirement Plans

The Bank currently offers two defined benefit retirement plans to its employees, based on length of service and level of compensation. Substantially all of the Bank's employees participate in the Retirement Plan for Employees of the Federal Reserve System ("System Plan") and the Benefit Equalization Retirement Plan ("BEP") and certain Bank officers participate in a Supplemental Employee Retirement Plan ("SERP"). The System Plan is a multi-employer plan with contributions fully funded by participating employers. No separate accounting is maintained of assets contributed by the participating employers. The Bank's projected benefit obligation and net pension costs for the BEP at December 31, 2002 and 2001, and for the SERP at December 31, 2002, and for the years then ended, are not material.

Thrift Plan

Employees of the Bank may also participate in the defined contribution Thrift Plan for Employees of the Federal Reserve System ("Thrift Plan"). The Bank's Thrift Plan contributions totaled $8 million and $6 million for the years ended December 31, 2002 and 2001, respectively, and are reported as a component of "Salaries and other benefits."

9. Postretirement Benefits Other Than Pensions and Postemployment Benefits

Postretirement Benefits Other than Pensions

In addition to the Bank's retirement plans, employees who have met certain age and length of service requirements are eligible for both medical benefits and life insurance coverage during retirement.

The Bank funds benefits payable under the medical and life insurance plans as due and, accordingly, has no plan assets. Net postretirement benefit costs are actuarially determined using a January 1 measurement date.

Following is a reconciliation of beginning and ending balances of the benefit obligation (in millions):

	2002	2001
Accumulated postretirement benefit obligation at January 1	**$ 77.4**	$ 71.0
Service cost-benefits earned during the period	**2.2**	2.3
Interest cost of accumulated benefit obligation	**5.5**	5.6
Actuarial loss	**6.7**	12.5
Contributions by plan participants	**0.5**	0.4
Benefits paid	**(4.1)**	(3.4)
Plan amendment/settlement	**(1.1)**	(11.0)
Accumulated postretirement benefit obligation at December 31	**$ 87.1**	$ 77.4

Following is a reconciliation of the beginning and ending balance of the plan assets, the unfunded postretirement benefit obligation, and the accrued postretirement benefit costs (in millions):

	2002	2001
Fair value of plan assets at January 1	**$ —**	$ —
Actual return on plan assets	**—**	—
Contributions by the employer	**3.6**	3.0
Contributions by plan participants	**0.5**	0.4
Benefits paid	**(4.1)**	(3.4)
Fair value of plan assets at December 31	**$ —**	$ —
Unfunded postretirement benefit obligation	**$ 87.1**	$ 77.4
Unrecognized prior service cost	**11.7**	11.6
Unrecognized net actuarial loss	**(25.8)**	(20.1)
Accrued postretirement benefit costs	**$ 73.0**	$ 68.9

Accrued postretirement benefit costs are reported as a component of "Accrued benefit costs."

At December 31, 2002 and 2001, the weighted average discount rate assumptions used in developing the benefit obligation were 6.75 percent and 7.00 percent, respectively.

For measurement purposes, a 9.0 percent annual rate of increase in the cost of covered health care benefits was assumed for 2003. Ultimately, the health care cost trend rate is expected to decrease gradually to 5.0 percent by 2008, and remain at that level thereafter.

Assumed health care cost trend rates have a significant effect on the amounts reported for health care plans. A one percentage point change in assumed health care cost trend rates would have the following effects for the year ended December 31, 2002 (in millions):

	One Percentage Point Increase	One Percentage Point Decrease
Effect on aggregate of service and interest cost components of net periodic postretirement benefit costs	$ 0.5	$(0.5)
Effect on accumulated postretirement benefit obligation	7.7	(8.6)

The following is a summary of the components of net periodic postretirement benefit costs for the years ended December 31 (in millions):

	2002	2001
Service cost-benefits earned during the period	**$ 2.2**	$2.3
Interest cost of accumulated benefit obligation	**5.5**	5.6
Amortization of prior service cost	**(1.0)**	(0.1)
Recognized net actuarial loss	**0.9**	0.3
Net periodic postretirement benefit costs	**$ 7.6**	$8.1

Net periodic postretirement benefit costs are reported as a component of "Salaries and other benefits."

Postemployment Benefits

The Bank offers benefits to former or inactive employees. Postemployment benefit costs are actuarially determined and include the cost of medical and dental insurance, survivor income, disability benefits, and self-insured workers' compensation expenses. Costs were projected using the same discount rate and health care trend rates as were used for projecting postretirement costs. The accrued postemployment benefit costs recognized by the Bank at December 31, 2002 and 2001, were $15.8 million and $13.6 million, respectively. This cost is included as a component of "Accrued benefit costs." Net periodic postemployment benefit costs included in 2002 and 2001 operating expenses were $3.5 million and $2.6 million, respectively.

10. Subsequent Events

In January 2003, the System announced plans to restructure its check collection operations. The restructuring plans include streamlining the check management structure, reducing staff, decreasing the number of check-processing locations, and increasing processing capacity in other locations. The restructuring, which is expected to begin in 2003 and conclude by the end of 2004, will result in the Bank discontinuing its check operations at the Charleston, Columbia, and Richmond offices, increasing its check processing capacity at the Baltimore and Charlotte offices, and consolidating its check adjustment function at the Charlotte office. At this time, the Reserve Banks have not developed detailed estimates of the cost of the restructuring plan in the aggregate or for the individual Reserve Banks affected.

In February 2003, the Bank purchased a building as a general use facility, at a cost of $15 million.

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