

Accounting for Corporate Behavior

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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

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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.

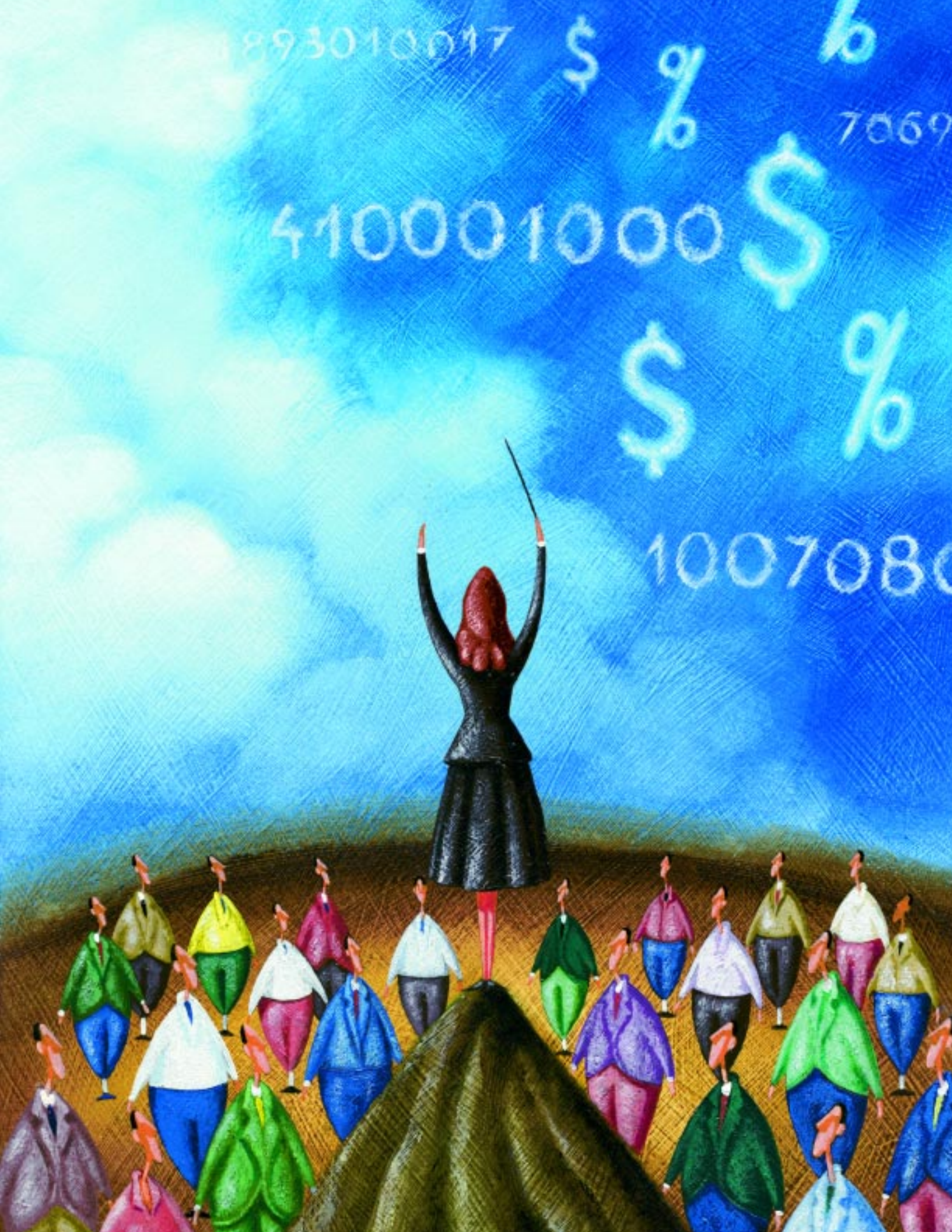
An external audit is limited in its ability to prevent fraudulent reporting. First, many observers argue that an auditor's role is limited to certifying that a client's financial statements were prepared in accordance with professional accounting standards. Making this determination does not automatically 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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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

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

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.

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.



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

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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 Felmliee.



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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