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SARBANES-OXLEY AND INNOVATION BY PUBLIC COMPANIES*

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Economic innovation is a process that leads to new goods, services, methods of production, and forms of business organization. In response to several corporate governance failures such as accounting fraud by Enron and WorldCom, Congress enacted the Sarbanes-Oxley Act of 2002 (SOX) to reduce corporate managers' ability to abuse accounting rules or otherwise act opportunistically at the expense of investors. Innovation has specific characteristics, such as undertaking long-term risky activities that implicate the tradeoff between objectively monitoring corporate managers and facilitating innovation. Complying with SOX likely impacts this tradeoff to the detriment of innovation.

SOX increases monitoring over corporate executives by outsiders, requires more extensive internal control over financial reporting, and stiffens civil and criminal penalties for fraud and other violations of federal securities law. By focusing corporate governance towards a more objective monitoring of corporations by outsiders, SOX likely reduces the innovative potential of a significant portion of public companies. Because innovation has increased and continues to increase in importance,¹ SOX will likely impose a hidden and growing cost in the form of foregone benefits from innovation.

INNOVATION AND CORPORATE GOVERNANCE

INNOVATION CAN VASTLY improve the welfare of consumers, investors, firms, and the economy. Consumers are better off when innovation results in higher quality goods and services and companies perform better when they successfully innovate, contributing to the health of the economy and raising standards of living.

Corporations are governed by a wide variety of rules, regulations, governance bodies, and market processes that determine how the income a corporation earns is divided among

managers, shareholders, and others. Corporate governance comes from sources such as corporate law and securities regulation, internal corporate bylaws, and boards of directors. The ultimate goal of corporate governance is to increase the wealth of company shareholders.

CHARACTERISTICS OF THE INNOVATION PROCESS

INNOVATION SOLVES AN existing problem or proactively introduces change by combining the knowledge of individuals in a business firm with research and development (R&D) to create a new product, service, or process. A firm may be forced to innovate when economic change raises costs or lowers revenues. For example, a competitor's new product may require a firm to create a new product of its own or risk losing business. Innovation may involve corporate entrepreneurship activities such as strategic renewal, which enables companies to innovate the way they are organized. Such organizational innovation may be required to successfully utilize a new product or technology. In the late 1980s, for example, Samsung was able to become a leading innovator in computer memory chips after decentralizing its operations.² Innovation is typically undertaken through long-term commitments to risky investment projects involving multiple aspects of the firm, not just one isolated department.

rate activities to be organized so that knowledge is generated and communicated to the appropriate decision-makers. This is best accomplished through the adoption of decentralized governance structures that give corporate insiders, such as managers and their subordinates, more discretion.³ Insiders generally have knowledge about the company and its environment that outsiders do not have.⁴ Decentralized governance helps companies to be flexible in their operations and organizations in a way that facilitates innovation.⁵

A second governance structure that facilitates innovation is an emphasis on strategic internal controls. Strategic controls focus on and evaluate long-term performance, establish risk-taking norms, and reward activities resulting in innovation.⁶ By contrast, an emphasis on financial controls undermines innovation because, within the context of quarterly and annual disclosure requirements mandated by federal securities law, periodically reported financial data are tied to short-term outcomes. Many innovative processes do not produce short-term financial rewards, and a focus on financial controls can therefore deemphasize the importance of pursuing research and other activities not subject to straightforward measurement and quantification in financial reports.

INNOVATION AND THE CORPORATE GOVERNANCE TRADEOFF

THE ULTIMATE PURPOSE of innovation-facilitating governance structures is to induce managers to overcome an orientation toward achieving short-term, easily quantifiable results and instead undertake the types of long-term, risky, dynamic, and research-intensive activities that result in innovation. However, innovation-facilitating structures may also increase the ability of managers to benefit themselves at the expense of the company and investors.⁷ This is because innovation activities are often difficult to measure or evaluate in the short-run, and therefore create information asymmetries between corporate monitors and managers. For example, undertaking R&D spending may allow managers to entrench themselves against newcomers, forego dividend payments to shareholders, and invest in projects that benefit themselves at the expense of the company.⁸

To reduce opportunism costs, a corporation may increase objective monitoring of managers. Objective monitoring structures include increasing the portion of independent directors on a board and placing a greater emphasis on internal control over financial reporting.⁹ Subjecting agents to civil and criminal liability may also reduce agency costs incurred through fraud and misappropriation of assets. There is thus a tradeoff between adopting structures that increase innovation and those that reduce opportunism: increasing objective monitoring likely comes at the expense of reducing innovation activities.

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INNOVATION-FACILITATING GOVERNANCE STRUCTURES

CORPORATE GOVERNANCE IS related to innovation in that certain types of governance structures facilitate innovation. The first is decentralization, which allows for the generation and communication of knowledge and affords companies the flexibility required to adapt to change. Innovation requires corpo-

THE IMPACT OF SOX ON INNOVATION

BY INCREASING MONITORING by company outsiders and emphasizing short-term financial control, SOX aims to reduce agency costs from opportunism relating to management's involvement with financial reporting. However, a substantial body of evidence suggests that the cumulative impact of SOX is to tip the scales in innovative firms toward excessive—and hence value-reducing—objective monitoring by outsiders.

First, management's new duties under SOX to assess and report on internal control over financial reporting likely decrease their propensity to engage in innovation or related activities. Section 404 of SOX requires management to maintain, evaluate, and report on internal controls over financial reporting. Internal controls are meant to provide reasonable assurance to investors that financial reporting and preparation of financial statements are reliable and in accordance with generally accepted accounting principles.¹⁰ Management's duty to evaluate and report on the effectiveness of internal control under Section 404, along with the presence of more financial experts on boards, is likely to increase companies' emphasis on financial versus strategic control which, as empirical studies suggest, decreases long-term innovation activities by increasing a company's focus on activities with results more easily evaluated in the short-run.¹¹

In addition, the characteristics of innovation and related activities are the same characteristics identified by the SEC and auditors as contributing to the risk of financial misstatements. This means that management is less likely to engage in innovation post-SOX because doing so increases the risk of a company having to disclose that there is some problem with how they prepare and report their financial statements. Studies have found, for instance, that R&D spending has decreased post-SOX and that managers have become more cautious in their activities in a way that does not improve the value of a company.¹²

Second, the impact of SOX on public company boards likely undermines innovative activities in public companies. To comply with SOX, companies have increased the number of independent directors on their boards,¹³ adding an average of 1 to 3 new and independent directors to their boards, which generally consist of 6 to 10 directors.¹⁴ SOX had the effect of requiring about 18 percent of all public companies to make the fundamental switch from having a board with a majority of insiders to one with a majority of outsiders.¹⁵

All things being equal, a larger and more independent board is likely to undermine innovation activities. Because independent directors are part-timers and not involved in a company's day-to-day operations, their capabilities and incentives to promote corporate entrepreneurship are limited. Inside directors, by virtue of possessing greater knowledge of corporate

operations and industry conditions, are in a better position to undertake innovation activities. Companies undertaking innovation activities such as R&D have a greater proportion of inside directors on boards.¹⁶ The same is true for smaller boards, which are able to better communicate and coordinate innovation activities. This means that SOX, in increasing the relative independence and size of public company boards, upset the governance structure most conducive to undertaking innovation in certain public companies.

A substantial body of evidence suggests that the cumulative impact of SOX is to tip the scales in innovative firms toward excessive—and hence value-reducing—objective monitoring by outsiders.

REFORMS TO FACILITATE INNOVATION IN PUBLIC COMPANIES

TO ALLEVIATE THE foregone benefits from innovation that SOX likely imposes upon the economy, policymakers should make voluntary the provisions of SOX that increase outside monitoring and the emphasis on short-term financial reporting, as these may introduce tensions with innovation activity. Provisions that should be made voluntary include the SEC's particular "top-down, risk-based" approach to internal control assessment required to be conducted by management, and the requirement that the entire audit committee of all public company boards be composed of outsiders with little knowledge of a company's day-to-day operations.

It may be the case that making voluntary those provisions of SOX that increase objective monitoring and financial control would increase the potential for managerial opportunism. The analysis and evidence presented here, however, suggests that the benefits from innovation would likely more than offset such costs to the net benefit of investors, consumers, and the economy.

ENDNOTES

* This publication is based upon Shadab's *Innovation and Corporate Governance: The Impact of Sarbanes-Oxley*, University of Pennsylvania Journal of Business and Employment Law, forthcoming 2008.

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