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Did auditors need reforming? The need for SOX

ABSTRACT

This paper considers whether increased government regulation that was the basis for the American Sarbanes-Oxley Act of 2002 ("SOX") can be supported by economic analysis. Although there are no reported data on the costs and benefits of the regulation, economic theory can be applied to evaluate whether the objective of improved financial reporting was cost-effective.

We also study the effects of SOX in Finland. This gives us a richer source of information because, unlike America, in Finland only a few firms are required to comply, by virtue of their American listing, with SOX. Other firms, large and small, freely choose whether to adopt aspects of SOX or not. In the same vein, the Finnish stock exchange regulators were free to adopt provisions they felt were beneficial, and ignore others.

SOX affects many aspects of audit practice. We conclude that most, but not all, aspects would have been achieved more efficiently through market forces rather than legislative intervention.

Key words: *audit, auditor, regulation, Sarbanes-Oxley Act*

"Most observers would agree that the Sarbanes-Oxley Act is the single most important piece of legislation affecting corporate governance, financial disclosure and the practice of public accounting since the US securities laws of the early 1930s."

– Pricewaterhouse Coopers (2003)

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Introduction

The Sarbanes-Oxley Act is American legislation that became law in 2002. The act affects both corporations and audit partnerships. While its provisions affect American corporations and auditors, it has widespread direct and indirect spillover effects on companies outside the US, including those in Finland. For that reason, this legislation is of interest to a broad audience.

We ask whether the changes in audit practice would have occurred without government intervention. Were there economic forces in the private sector that would have resulted in changes in audit practice more effectively than by government intervention? It is at least possible that government intervention was driven by political opportunism as well as by sound economic regulatory principles.[1] We attempt to separate the economics from the politics by applying economic analysis. To judge whether the "theory" is supported by the evidence, we take Finland as a "natural experiment." Finland was exposed to SOX through the avenues of Finnish firms listed in the U.S. that implemented all of SOX, and auditors who became familiar with SOX through audit engagements and professional development. We collected this experience by interviews.

We give some background, both the major provisions of the Act and a brief history of the regulation it replaced.

We conclude that market forces would largely have achieved the auditor-directed aims of SOX, and would have done so more efficiently.

In the next section we give some general background. Then we move to the economic analysis, focusing on the auditor and the audit firm. We move from the theory to the empirical evidence, drawing on our study of Finnish audit practice.

The Act

Briefly, the Sarbanes-Oxley Act ("SOX") was legislation that was passed as a need perceived by the Congress to improve corporate governance. The perceived need was based on a number of financial scandals that were attributed to inadequate corporate governance and ineffective audits of companies' financial reports. There are five major areas in the act.

- Public Company Accounting Oversight Board (PCAOB). This is a quasi-governmental organization that is overseen by the Securities and Exchange Commission.[2] It was created as the principal agency to oversee auditing standards and the quality of operations of auditing firms. It was motivated by the opinion that self-regulation of the audit industry had failed.
- Auditor independence. This section severely limits the allowable consulting services that an audit firm can offer to its audit clients. It reflects the belief that offering both consulting and auditing services creates a conflict of

1 "The political environment explains why Congress would enact legislation with such mismatched means and ends. SOX was enacted as emergency legislation amidst a free-falling stock market and media frenzy over corporate scandals shortly before the midterm congressional elections" (Romano 2004).

2 "The Sarbanes-Oxley Act gives the SEC oversight authority over the Board. In addition to its responsibility for appointing or removing members, the SEC, among other things, must approve the Board's budget and rules, including auditing standards, and may review appeals of disciplinary actions against registered accounting firms and appeals of certain matters relating to Board inspections of registered accounting firms." (PCAOB annual report, 2004, page 5)

interest and jeopardizes the independence of auditors. It also requires that the lead audit partner for a company's audit must be changed not less often than every 7 years. This reflects the belief that after a long tenure, the audit partner may lose some of his or her independence and objectivity.
- Corporate responsibility for financial reports. The CEO and CFO were required explicitly to acknowledge their responsibility for financial statements. This addresses claims by some CEOs and CFOs involved in the scandals that they did not understand the financial statements and relied on their accountants.
- Management assessment of internal controls. Management must explicitly acknowledge that it takes responsibility for the adequacy of controls designed to avoid financial fraud and misstatement. The auditor then attests to the adequacy based on an independent review of the controls.[3]
- Audit committees. The Act requires that companies form audit committees that are part of the board of directors. Those audit committees must be composed of independent members (not compensated by the company except for director fees) and must include a "financial expert." This committee hires and reviews the work of the auditors. These provisions are based on the belief that company officials exercised too much power (to hire and fire auditors, to pay the audit fees) over their independent auditors (Klein 2002).

In this paper we address the effects on the audit industry. The effect on listed companies is not directly our focus. Only to the degree that the auditor's role is affected by the listed company do we consider effects on companies.

There is a large body of literature that examines the effect of SOX on corporate governance. It uses data sets and "proxy" measures to evaluate the benefit and costs of SOX; for example regressing "discretionary accruals" on number of independent directors, and any number of other specifications. We do not assess corporate governance, and the interested reader should consult a comprehensive study by Romano (2004).

History of regulation

Auditing Standards Board

Auditing as a well-organized and regulated activity in the U.S. began after the securities acts of 1933 and 1934, though there had been voluntary audits as early as the mid-19th century and licensing of auditors from 1896 (Carey 1969, chapter 2). Formal auditing standards were set in the private sector beginning in 1939 when the first Statement of Auditing Procedure was issued by the Committee on Auditing Procedure of the AICPA (American Institute of Certified Public Accountants, the private, professional society of auditors) (Heler et al. 2005). In 1973 the Auditing Standards Executive Committee took over, and has issued 112 Statements of Auditing Standards.[4]

SEC Practice Section

As a result of a number of audit failures in the 1970s, and under threat of increased govern-

3 A thorough summary of the auditor's responsibility for the state of internal controls, before and after SOX, is Heler et al. (2005).

4 The name was changed in 1977 to the Auditing Standards Board (ASB). The ASB survives. It continues to issue the standards applied to audits of non-listed firms. On an interim basis its standards have been adopted by the PCOAB until superseded.

mental intervention, the AICPA established an SEC Practice Section. This was the first time that its members gave the AICPA the right to impose sanctions on its member firms, *in contrast to* individual auditors. It required firms who were members of the section to adopt a system of peer review. Every three years a team of auditors drawn from other practicing firms reviewed an audit firm to determine the adequacy of the subject firm's program for quality control (AICPA 2004).[5]

Government

SOX was by no means the *introduction* of regulation to the audit industry. For decades the federal government, primarily in the body of the Securities and Exchange Commission, has exercised strong control over the industry. It determines which firms are allowed to conduct audits of traded firms. It may restrict (and has done so) the right of auditors to add new listed clients (Olson 1978). State governments are the licensing authorities for the certification needed to render audit opinions. These state boards of accountancy regulate the right of individual auditors to become certified public accountants and to continue to practice in that role.

Theory

The history of regulation has been brief, because our question is whether SOX was necessary to reform the audit industry in the circumstances when it was enacted, and not how those circumstances evolved. We see that oversight of the industry was both by self-regulation and governmental controls. Now we turn to the analysis, and consider the economics of the audit firm and the audit industry. Before evaluating the need for government regulation of the audit industry, it is necessary to understand the forces that audit firms and the audit industry face, and how those forces determine the business conduct that SOX is meant to regulate.

Economics of the audit firm

Product

The auditor has one dominant product, the "auditor's opinion." In this short communication, the auditor expresses to the firm's stakeholders its opinion on the financial stocks and flows for a specified period. Although consulting services are also offered, they account for a minority of a Big Four firm's revenue (30% in 2000; GAO 2003).

Assets

The audit firm is a bundle of assets, over which control is exercised by a governance mechanism. The assets of an audit firm are its human capital and its brand name (Van Lent 1999).

Human capital consists of general and specific human capital, where general capital enhances the holder's value in the market, and the specific capital raises the value of the holder to his or her employer (Becker 1975). In this industry, *general* human capital is the skill of auditors to perform high quality audits. This skill comes from university training, professional development programs within the firms, and apprenticeship (on-the-job training). The *specific* human capital is knowledge of the clients to which the auditor is assigned. Auditors become familiar with the clients' businesses, establish relationships with company financial people, and learn the company's financial processes.

5 The peer review program survived the transfer of quality control to the PCAOB. All auditors have non-listed clients, and the authority of the PCAOB does not extend to those audits. The profession continues its peer review program for that part of the practice.

The second asset is its brand name. It is affected by the human capital: the ability of the audit staff to perform professionally, competently and ethically. The other main ingredient to brand name is a reputation for independence. Outsiders have imperfect knowledge of the audit opinion production function. The production is guided by standards of auditing. Most countries specify national standards to be followed, and increasingly countries are adopting a uniform set, the International Standards of Auditing (ISA).[6] The US has its own standards, the establishment of which has been changed by the SOX act (of which more will be said below). Beyond the fact that most stakeholders in a firm are not familiar with the standards (which are part of the auditor's general human capital), they cannot know whether they were followed. As La Porta et al. (1998) have emphasized, good laws are only part of good legal systems; sound enforcement of those laws is also necessary. Outside stakeholders do recognize the necessity for arriving at the opinion independent of the company's desires for a "clean," unqualified opinion that the financial statements "fairly present" the company's position.[7] Furthermore they understand that audits are costly, that audit fees are paid by the companies whose statements they audit, and that contractual arrangement creates pressure on the auditor to act as client desires.

Strategy

The analysis of "brand name" can be developed further. Prahalad and Doz (1987) and others in the field of international strategy make use of the concept of integration vs. responsiveness. Some multinationals are operated by responding to local conditions, and operate quite autonomously under a "country manager." They are the "multidomestic" firms in the figure. Some firms closely integrate operations globally and allow little decentralization. They are the "simple global form" firms in the figure. "Complex global firms" strive for global integration of their businesses, but must respond to local variations. Drug companies sell global medicines, but they face local differences in pricing, quality standards and testing requirements. The relationship is conveniently depicted in this "integration-responsiveness grid."

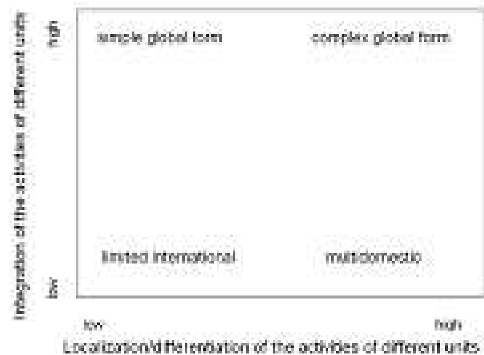

FIGURE: Prahalad and Doz framework (as represented by Martinez & Jarillo, 1991)

Where do auditing firms fit? How does it affect their decisions?

The Big Four firms strive to be global. There are economies of scale achievable by maintaining a single auditing process, standardized audit checklists, centralized professional training, easy rotation of personnel, etc. *Complete* globalization is limited by some local requirements. For example, in Finland the auditor's opinion contains a paragraph about the company having followed certain provisions of the Finnish law. The Big Four firms are toward the top center of the grid.

6 Auditing standards in Finland are translations of ISA.
7 Equivalently, present a "true and fair" view.

One manifestation of their attempt to be global is the organization of the firm. The Big Four firms are not a single large multinational firm; instead the firms in each country are affiliated with firms in other countries in a global network. Because they are not a single firm, any legal liability in one country does not threaten the financial assets in another.[8]

Another, more important aspect of this strategy is the use of a common name. In Finland the Big Four firms practice as KPMG, Deloitte, Pricewaterhouse Coopers, and Ernst & Young, identical brand names as in the US. Even where the local identity of a firm is retained, the brand name association with the Big Four is highlighted. In Japan the firms practice under the names KPMG Azsa & Co, Deloitte Touche Tohmatsu Japan, ChuoAoyama PwC, and Ernst & Young ShinNihon. The point of this is that the firms seek a high level of global brand equity

In summary, the assets of an audit firm hold their value only if the firm can uphold its "global brand" equity, and that brand equity derives from a reputation for independence from the audit client as well as a high quality of human capital.

Economics of the industry

The structure of an industry affects the need for regulation. For instance, monopolistic industries tend to be more highly regulated to protect consumers from the ability of producers to capture "monopoly rents."

Structure

The audit industry comprises the "Big Four" and a large number of smaller firms. The oligopolistist structure has raised questions about whether there is true competition among the firms, but a study by the US General Accounting Office concluded that there was no problem in the competition for audit services (Bloom and Schirm 2005).[9] The four large firms are global; for the most part smaller firms operate within a region; sometimes just within a city.

Product

It is an unusual industry since it is charged with a public responsibility to protect investors, yet earns its revenue by selling its product, audit services, to its private customers. The GAO report noted that the large size of the Big Four firms may make them more able to withstand pressures from its clients – the client has few alternative suppliers and the loss of even a big client has a manageable effect on the firm (Bloom and Schirm 2005). This public responsibility has led in many other countries to put more of the operations of the audit process inside the government. In Finland the auditing profession establishes what auditing standards will be used.

In summary, the industry is competitive, even though concentrated.

Assurance mechanisms

The adequacy of processes to ensure auditor integrity has been a controversial subject. One finds statements such as "Prior to Sarbanes-Oxley … auditors had been failing to detect and report improper accounting…" (Coates 2007, 96). This viewpoint is rooted in a "race to the bottom" mentality, where in an effort to retain

8 This is beginning to change. The practices of KPMG in Germany and the UK are merging, and this is said to be a step in creating an integrated European practice in the firm (KPMG 2006).

9 "[W]e found no empirical evidence that competition in the audit services market has been impaired to date" (GAO 2003, 4)

clients and collect large audit fees, auditors bend to the will of their clients. It ignores the fact that once their product – the audit opinion – becomes valueless, the audit firms cannot survive.

The fallacy of this "race to the bottom" presumption has been pointed out by Rajan and Zingales (2003, 158). The New York Stock Exchange imposes stringent listing requirements, and by doing so attracts high quality corporations which in turn benefit from the "brand equity" value of a NYSE listing. In just the same way, Deloitte, for example, benefits when its audit opinion conveys integrity.

What can audit firms do to reassure stakeholders that they have not "sold" their independence to their audit clients? How is the "incentive compatibility" problem solved? This is the key question underlying this paper: must this reassurance come from government regulation, or are there more effective means for the industry to establish its own quality assurance mechanisms?

Realizing that the outside stakeholders need assurance about audit quality, a characteristic that they cannot observe, the audit firms have both created for themselves, or faced outside pressures for, a means of insuring independence.

One of these means is the threat of litigation. Lawsuits against audit firms are frequent, and often for large amounts. Often in a bankruptcy an investor will charge that financial statements caused him or her to be misled, which in turn caused financial damage. The now-bankrupt company cannot supply restitution, but the auditors with their "deep pockets" are an inviting target. The threat of economic damage posed by claims of negligence is strong motivation to uphold quality (Lang et al. 2005). The yet more serious economic threat is that of criminal liability, and that is what forced the liquidation of the Arthur Andersen firm in 2002.[10]

The threat of economic damage is known to firm stakeholders. This is one source of pressure to uphold high quality standards, and the knowledge of this threat is a source of assurance to stakeholders.

A second form of pressure is the shared realization among the firms that the industry itself can be restructured. Though audits of publicly traded companies in most countries are done by private-sector auditors, it need not be that way, and the government itself could take control of the auditors. But even short of this, control could be tightened in a number of ways unattractive to the auditor. More of the rule-making that determines audit standards could be taken from the audit profession and put into the hands of potentially less competent government bureaucrats. Judgments about auditor performance and appropriate sanctions likewise could be assigned to government regulators. The high salaries of audit firm partners could be curtailed. These are considerations that face not the single firm, but the industry as a whole, and this shared risk is sufficient to create self-policing mechanisms.

What are these self-policing mechanisms? Peer reviews under the oversight of the AICPA were mentioned above. The AICPA has the power to set professional qualifications for entry to the industry. While the individual states regulate

10 Curiously, despite the many criticisms of Andersen's accounting complicity with Enron management, they were charged not with any accounting malfeasance, but with destroying documents. The U.S. Supreme Court ultimately overturned the conviction, but this did no good for Andersen, which had been liquidated (Benston et al. 2006).

certification, all states use the Uniform CPA Examination as the test of knowledge, and this exam is prepared and administered by the AICPA. The AICPA can expel auditors who violate the ethical rules it sets. Although it cannot withdraw the license to practice, being expelled from the profession is a severe sanction.

A second self-policing method is ethical standards, which augment the procedural standards for an audit. Auditors are proscribed, for example, from holding stock in companies that they audit; this is to eliminate a source of conflict of interest.

A third incentive to maintain high, independent standards of work is the strategic necessity to have high brand equity. Deloitte's global brand is damaged when the *Financial Times* (Michaels, 2005) writes:

> Italian regulators have banned from audit work two partners who worked for Deloitte on the accounts of Parmalat, the dairy company that collapsed amid fraud two years ago.

Similarly, when audit failures occur in the US, not only is the American practice damaged, the global brand equity is reduced. There is pressure to maintain high standards of conduct, not just from the American partners but also from all the other firms around the world. The externalities provide a powerful force to maintain high standards of independence and self-regulation.

Having identified the structure of the industry, the market forces, and mechanisms that have developed to ensure quality, we turn to the question, "Is increased government regulation of the industry the best way to improve audit practices?"

Optimality of regulation

As described above, before SOX there was extensive governmental regulation. One question that might be asked is "Was the level of governmental regulation before SOX *optimal*, considering the internal forces for self-policing?" This is not, however, a question that we address, for the following reasons.

The level of pre-SOX regulation was in a fairly stable equilibrium, although rules were constantly being tweaked either by the government or the profession. In equilibrium certain processes emerged in the path to that equilibrium. Governmental regulation and self-regulation are substitutes. For example, the SEC reviews all filings, and sometimes they are rejected. The registered company, with the assistance of its auditor, is required to restate the financial report.

This is sometimes cited as evidence of auditor malfeasance. Lev (2003) discusses reported earnings "in the web of misstatements and fraudulent information…" He does note that "*not all* earnings restatements reflect manipulations" (italics added), but his implication is that there is often a sinister background to a restatement.

However, we offer an alternative explanation. The audit firm knows that their clients' financial reports will receive this thorough SEC scrutiny, and that restatements are not very damaging to firms' reputations.[11] (Wu (2002) found 1,068 cases of restatements in 1977–2000, so they are hardly headline news.) Thus, knowing that the government will supply a final inspection, it relaxes its final quality control checks. This is optimal for the firm, but also so-

11 The SEC reviews all filings (Kershaw 2005, 600).

cially optimal since it eliminates duplication of resources.[12]

We argue that an equilibrium solution was reached before SOX, and evaluating the optimality of that would require envisioning what other equilibria might have existed with which to compare the existing one, and that is a task we do not undertake. We only ask whether, *given* the equilibrium that existed before SOX, the changes that result from SOX were likely to create a more socially efficient or effective equilibrium?

Analysis of the regulatory process

A necessary condition for an audit firm to survive is its reputation for integrity, even when faced with incentives of its customers to demand a "sweeter flavor" of the product than the vendor offers.

In making short and long-range decisions, the audit firms internalize the costs and benefits of their decisions. Too high a standard of quality (for example, reviewing *every* transaction) entails marginal costs in excess of marginal benefits. Too low a standard jeopardizes survival. Since the costs of production are passed along to the audit clients in the form of audit fees, the clients themselves create forces for optimal audit standards, neither so stringent that they raise audit fees too high, nor so loose that their financial statements lose credibility, and increase the client's cost of capital through increased uncertainty and risk perceived by the capital markets.

Now we turn to the establishment of audit standards in the government sector. What are the costs of setting the standards too high, so high that they provide readers of the financial statements absolute, rather than just reasonable, assurance that the statements present a "true and fair" view?

First, we look closer at the PCAOB. Their costs are covered by a levy on all publicly traded firms under their jurisdiction. If the standards they set are so high that marginal benefits fall below marginal costs, the Board does not internalize these costs. The excess costs are borne by the traded firms (and ultimately by their investors).

What, on the other hand, if the standards are set too low? Then the effects *are* internalized. Presuming that low standards lead to audit failures, and that at least some of these audit failures become publicly known, then it does not challenge the imagination to picture the results. The collapses of Enron, WorldCom, etc., set off Congressional investigations, outraged investors and employees, created sensational press coverage, and ultimately stimulated new laws. Future failures (just as past ones) would be attributed to laxity, incompetence or lack of independence by the regulators. Unlike the private sector, the regulators constantly confront legislative pressures (Posner 1975). If the government regulator looks ineffective to the legislature, its funding might be lowered, with the associated loss of jobs.

Faced with this asymmetrical loss function, it follows that standards will be set in the government sector at a level that is not optimal – that is, too high and too costly.

One might object that audit firms do not internalize *all* the costs either. The pertinent question is not whether *all* costs are internal-

12 The trend in restatements is another matter. Levitt (2002) and Wu (2002) point to a rapidly increasing number of restatements. Even if our proposed explanation is correct, there must be more going on, possibly along the lines of earnings manipulations. Possibly regulators may have become more aggressive, to avoid another Enron.

ized, any more than whether all benefits are internalized (e.g., investors' well-informed investment decisions). The question is whether the size of the costs is enough to overcome the risks to auditor independence.

First, auditors internalize the costs of the audit production process. Second, they bear the expected cost of an audit failure which might include failure of the firm should the audit failure be disastrous enough. Third, individual auditors until recently faced costs of personal wealth, as audit firms were organized as partnerships in which the partners were individually liable for the losses of the partnership.

Even now, when the form of organization has changed to relieve the partners of personal liability, their human capital would be severely damaged. Although there is an overlap in the accounting knowledge required to perform an audit and the knowledge required to work in the corporate sector, it is not complete. Auditors have much *general* human capital in audit production, but this has a lower value in the corporate sector. Recall that auditors invest in *specific* human capital, which has a zero market price should they find themselves changing jobs as a result of an audit failure.

The damage to their reputations from being party to a spectacular audit failure would greatly limit their value to any company. It could be worse, as they could be charged with crimes.[13]

Finally, in such a concentrated industry, the "free rider" aspects of misbehavior disappear (Olson 1965, Lindahl 1987). A spectacular audit failure by one firm *does* have consequences for the industry as a whole. Thus the auditor thinks not only of the financial liability to his firm from an audit failure, but must also consider that the failure could result in restructuring of the whole industry, a structure in which someone in his position might be paid government bureaucrat salaries.

The competitive pressures facing audit firms are strong. Because they bear both the costs and benefits of their decisions, which government regulators do not, the optimum level of audit quality is more likely to result from self-regulation and professionalism than from shifting more decision-making to government regulators.

Evidence

We have argued that market mechanisms are sufficient to ensure ethical behavior by auditors. Furthermore the mechanisms are more likely to achieve equivalence between the marginal costs and the marginal benefits of regulation, since the parties to the regulation internalize these costs more completely than the governmental alternative.

What is the evidence that theory works in practice?

The historical record supplies some evidence of what has happened in crises where the reputation of the industry have been threatened by events that cast doubt on the ability of the industry to regulate itself.

The first of these was a dramatic audit failure in the 1930s. The McKesson and Robbins Company was found to have committed a massive accounting fraud by recording on its balance sheet amounts receivable from its customers, and inventory in its warehouses (Miller 1966). At that time auditing standards did not require that auditors seek independent confir-

13 David Duncan was the Andersen partner on the Enron engagement. He pleaded guilty to obstruction of justice, although he later withdrew his plea (http://en.wikipedia.org/wiki/David_Duncan last viewed 17 November 2008).

mation of amounts due from the client's customers, or that they physically observe inventory stocks. Subsequently the auditing procedures were changed by the AICPA (*not* by the government). This is not compelling evidence, but the fact remains that without government legislation or increased regulation, the problem was solved.

A second crisis was in the 1970s when there was a cluster of audit failures (National Student Marketing, Penn Central RR, among others) (Zeff 2003). At that time both houses of the Congress conducted investigations and serious proposals were made to remove accounting and auditing standard-setting from the profession (McEnroe and Martens 1998). Reforms were instituted in the wake of these scandals, most notably the Committee of Sponsoring Organizations (COSO). The government did not increase regulation. However, admiration for this voluntary self-reform in the profession cannot be taken too far. There was enormous pressure from the Congress, in the form of legislation proposing to take away auditors' standard-setting. Although the legislation never became law, the force of this pressure to reform cannot be underestimated. What actions might have been taken absent this pressure is a counterfactual that we cannot address.

Arguably the industry has generally been effective in these recent years. Holmstrom and Kaplan (2003) present a number of arguments that American corporate governance is indeed healthy. Furthermore, while Enron, etc., have attracted prolonged and high level press coverage and political outrage, there are over 10,000 publicly traded firms in the US, and the number of scandals proportionately is almost vanishingly small. Francis (2004, p.34), in a review of "audit quality," concludes: "The bottom line is that the number of proven audit failures is so small as to approach a rate of zero." It is hard to find the evidence that there were systematic defects in the audit process in the US. This is not to deny that the faults that led to the destruction of value at WorldCom, Adelphia, etc., should be corrected.

Consulting

For some years there was debate about the effect of audit firms selling consulting services to its audit clients, the concern arising from the threat of conflicts of interest. A simple example is the auditor firm whose consulting arm installs a financial reporting system, which then creates the data from which financial reports are produced. Shortcomings in the system should be subject to criticism by the auditor, but in this case there might be some reluctance to do so.

SOX severely restricts the nature of consulting services that an audit firm can offer. How likely is it that the firms would voluntarily have abandoned this part of their business? Objections to this have been raised before. A proposal to spin off the consulting practice was made in the 1970s by a leader of the auditing profession, the managing partner of Arthur Andersen (Zeff 2003, 203). Though the proposal was not adopted, it is evidence of the awareness of the business consequences of maintaining potentially conflicting business objectives. The split-up, in 2000, of Arthur Andersen into separate audit and consultancy (Accenture) firms occurred before SOX or the major scandals that precipitated it. This constitutes at least weak evidence that the industry might have reorganized itself without legislation. This split-up was influenced by feuding between auditor and consultants about the division of profits (Wikipedia 2006). We see a decision not driven by high

principle, but perhaps relying on economic consequences more than untainted ethics is safer.

Romano (2004) reviews empirical evidence from accounting studies and concludes on that basis that the prohibition was not warranted.

Evidence on costs

What about our claim that the costs of governmental regulation will be higher than necessary to achieve the desired regulatory equilibrium of reasonable, but not absolute, audit effectiveness?

It can hardly be taken as evidence of excessive costs that those companies who bear the costs want them to be lower (Parker 2005). Zhang (2007) also estimates that at the firm level the marginal costs exceeded the marginal benefits. When the regulator itself acknowledges the excessive level of cost, this can be taken as more persuasive.

> While a portion of the costs likely reflect start-up expenses from this new requirement, it also appears that some non-trivial costs may have been unnecessary, due to excessive, duplicative or misfocused efforts. As a result, we heard the implementation process needs to be improved going forward, so that it is more effective and efficient (SEC 2005).[14]

This kind of objection is always in response to the internal control requirements, a topic that we have explicitly avoided by focusing on audit practice. Frankly, there is not yet any economic data on the cost of this massive shift in a $10 billion industry.

Evidence on benefits

If the matter of costs is to be addressed, then so should be the benefits. Are there benefits from the SOX legislation that would not have been realized if self-regulation had been left to the market?

There have been many reports of some aspects of SOX being voluntarily adopted by governments and companies in other countries.

- "Even countries like Macedonia and Pakistan, hardly hubs of multinational business, are talking about keeping an eye on accountants, empowering shareholders and increasing the transparency of financial reporting." *International Herald Tribune, 27 Sep. 03*
- "Beneath the politics, however, corporate governance experts say many European companies are quietly adhering to the Sarbanes-Oxley provisions – even firms without shares traded on Wall Street, which would not have to do so." *Financial Times, 26 Sep 03*
- "…British clients had told him that internal controls and reporting have improved. They said, for example, that information was getting more quickly and accurately to the chief executive, who, under Sarbanes-Oxley, must personally certify the accuracy of a company's results." *International Herald Tribune, 27 Sep. 03*

It is unlikely that changes such as these would have occurred had the US auditing profession quietly *reformed itself* – or at least they would not have occurred so quickly. Unfortunately the benefits cannot be measured, but should not on that account be ignored.

14 Auditing Standard No. 2 was replaced by Auditing Standard No. 5 in 2007. It standard reduces the review and documentation requirements for internal financial controls.

Evidence on cost and benefits – Finland

To explore further the "costs vs. benefits" question, we made Finland our "case study." This choice was made primarily on the basis of availability of information, but it also serves as a particularly good "test case." The thrust of Sarbanes-Oxley is improved corporate governance. The stronger the quality of corporate governance in the period preceding SOX, *a fortiori* the less need for the kinds of improvements that SOX purportedly achieves. Finland is acknowledged to maintain high levels of corporate ethics.[15] If we find effects of SOX in Finland, it makes it likely that other countries would be even more affected.

We interviewed several people in the accounting field.[16] The people included three partners and two managers in Big Four firms, the General Secretary of the Auditing Board of the Central Chamber of Commerce and one manager of SOX compliance (a former Big Four auditor) at a US-listed Finnish company.

We tested our theoretical conjectures against actual experience. Since our main topic is the effect on audit practice (as opposed to the effect on corporate activities) we felt that we would get reliable information from auditors who serve a wide range of clients, in some cases clients subject to SOX. By consulting several people we learned about audit activities as well as activities of a larger number of corporations that are their audit clients.

Since we raise the question of the necessity of SOX legislation, the first question we ask is whether SOX imposed deadweight losses on society. The testable implication is that if it did, then firms subject to the law would comply with its provisions, but all other firms would avoid them. But it does not follow that SOX would be counted a success only if it is absolved of deadweight losses. We also look at the question of marginal costs and marginal benefits. Voluntary compliance implies net benefits. The question of any excess of marginal benefits over marginal costs raises the question of cost.

The audit firms have developed, in response to SOX, a new product: assistance in designing and testing internal financial controls. It might have been that this product would be entirely tailored to the individual client due to the uniqueness of that company's business and operating policies. Alternatively, it is possible that there are economies of scale in production of this product. Economies of scale are what we found, and this implies a generally lower level of marginal cost than if the product were very firm-specific. We found that the implementation at the Finnish company involved "technology transfer" in the form of an American audit partner and a senior manager who had experience with previous implementations at American companies. Having now sold a number of these fully-SOX-compliant implementation products in Finland, the audit firms are now using that experience to offer variations of the product to its clients not subject to SOX.

It appears that part of the benefits from the product results from the economies of scale that make a stripped-down version appealing to non-SOX companies. We absolve SOX of deadweight losses, and acknowledge that there are some net benefits.

15 There are a number of country rankings about business conduct. One well-recognized ranking is the Corruption Perceptions Index, produced by Transparency International and Passau University (Transparency International 2006). In the 2006 ranking of 163 countries, Finland is ranked as #1.

16 The semi-structured interviews were from one to two hours.

The second topic, in the spirit of asking whether market forces would have achieved a better result, is whether, absent the legislative mandate, the audit firms would have developed this product. It is not enough to observe that they did not develop such a product before SOX, because there has been an evolution of corporate governance processes that predated SOX. For example, the reductions of cost of capital that result from better transparency were commented on before SOX (e.g., Pricewaterhouse Coopers 2001).

It is nevertheless doubtful that the audit firms would have been able to anticipate such a large market. Therefore they would rationally not have invested in the development of this product. There are some companies, looking for better governance, that would have purchased, but others would have abstained. Without the economies of scale that came about through mandated SOX, supply costs would have been higher and demand would have been less, likely to the point that the product would likely have failed.

At the level of the economy, a second important aspect of SOX for Finnish practice is a change in recommended processes for corporate governance for listed companies. The recommendations are made on a "comply or explain" basis, which comes close to being mandatory. It cannot be coincidental that a report recommending governance policies for listed Finnish companies was published shortly following SOX (Central Chamber of Commerce of Finland 2003). A close look at the recommendations leaves no doubt that they are modeled after SOX.

As an example, the report recommends the appointment of an audit committee of the board.[17] The members of the committee shall be independent (where "independence" is defined in terms similar to SOX). The duties of the audit committee include "supervision of financial reporting," "evaluation of the adequacy and appropriateness of internal control and risk management," and "examination of the auditor's reports" (Central Chamber of Commerce 2003, 10)

The point of this, for purposes of this analysis, is that important aspects of SOX were adopted by the OMX Nordic Exchange Helsinki, entirely without any external pressure. It is noteworthy, however, that the onerous provisions in SOX to analyze, document, and audit the internal controls were not included. This can be taken as evidence that SOX was a good thing, noting voluntary adoption of some of its provisions.

We discussed above the supply cost of SOX-like products, but there is another cost implication.

The emphasis that SOX creates on the company's internal financial controls is a significant change in the traditional financial audit (the production of the auditor's opinion on financial condition). Beyond those companies that are *required* to implement "section 404" provisions, the increased attention in other companies to internal financial controls (which we have noted above) has cost implications for those companies. Reviews of internal controls by auditors and reviews of internal controls by companies are substitutes. As companies voluntarily increase *own review*, one expects a reduction of the reviews undertaken by auditors. Since company financial managers have a high-

17 The board is "responsible for supervising the management and proper organization of the operations of the company." There may also be a "supervisory board," separate from the "board."

er level of specific human capital in their own controls than do auditors, shifting this activity from auditor to client may reduce total audit cost. This is a benefit that would result *even if* there were no improvement in control.

There is another avenue through which SOX changes Finnish audit practice. Since Finland is a member of the European Union, it is subject to EU directives. As the EU is influenced by SOX, then Finland is affected indirectly by SOX.

Two examples of these indirect effects are auditor rotation and auditing oversight. There has not been mandatory rotation of audit partners in Finnish audit engagements, but now that will change, and the lead audit partner must change at least every five years (European Union 2006, para. 26; Auditing Act 459/2007, para. 27). The trail back to SOX seems clear, since it is one of the provisions of the act, and was not theretofore required.

The EU has directed that each member state establish a public oversight body (European Union 2006, Chap. VIII). Historically, inspections of public accounting firms have been performed through the Central Chamber of Commerce of Finland. That structure does not fit the requirement that the inspections be conducted by the state.

In summary we conclude that SOX has created social benefits that have gone beyond the companies covered by the law. These benefits were certainly not foreseen by the law's designers, but this positive externality has nevertheless occurred.

The result is a mixed one. Had SOX been nothing more than unjustified government interference with corporate governance, the manifestation would be grudging compliance with its requirements. On the other hand, if the social benefits were overwhelming, the Finnish government would have been expected to legislate the same provisions. If the benefits to individual firms significantly increased their reputations, enhanced the quality of their corporate governance and lowered their cost of capital, then we would expect to see widespread voluntary adoption.

What we have found is something in the middle. We do not find widespread voluntary adoption of SOX by Finnish firms, but we do find a variety of evidence that firms have strengthened their internal controls, added audit committees, and increased their focus on governance. The corporate governance list of recommendations (Central Chamber of Commerce of Finland 2003) is one reflection of this. But some companies have not only adopted the list of recommendations, they want to publicize their good governance. One audit partner reported that companies seek auditor attestation to their adherence to the 57 recommendations in the new governance code, using their good governance for competitive advantage. At the country level, we find governance recommendations modeled on SOX, and we also note that the three of the Finnish Big Four firms have divested their consulting practices (as SOX induced US firms to do).[18]

Conclusions

This paper argues that a market solution to the relation between investors and corporations in the matter of financial reporting is more efficient than governmental alternatives.

An interesting further development of this topic would be a formal cost vs. benefit analy-

18 SOX only prohibits the firms from performing certain services for audit clients. Deloitte has retained its consulting practice.

sis. The US government recognizes the desirability of assessing its programs on this criterion, and has applied cost-benefit analysis to some regulations (Hahn 1998). In general, studies of privatization and deregulation have found efficiency gains (Brown, Earle and Telegdy 2006), so this abrupt increase in government regulation of a $10,000,000,000 industry deserves further analysis.[19]

This topic has implications broader than the American audit industry. Though it is not directly attributable to SOX, in the EU a similar process is under way. Charlie McCreevy, the EU European Commissioner for the Internal Market and Services, recently remarked:

> The cornerstone of the change to the EU legislation is to require each Member State to set up a *public oversight system to regulate auditors*. They must be governed by non-practitioners. They must also be transparent and independently funded. Statutory *auditors will no longer be self regulated*. In the EU, the public oversight bodies of each Member State will be responsible for registering, inspecting, and sanctioning statutory auditors and audit firms (2006, italics added).

An argument that the increasing concentration in the auditor industry during the period around SOX requires increased government regulation is not supported. As noted, the US General Accounting Office studied market conditions in the 1980s and 1990s and concluded that competition was not degraded (GAO 2003).

Corporate governance is a topic of great concern. Developed countries have experienced scandals and bankruptcies that stemmed from inadequate corporate governance. Developing countries strive to improve governance as a means of attracting foreign direct investment and lowering the cost of capital. (Saudagaran and Diga 1997). Close analysis of the "natural experiment" of Sarbanes-Oxley legislation can yield tentative conclusions of what works and what does not in this critical area of the global economy. ■

19 Amount derived from GAO (2003, p.17): year 2002 US audit revenue only.

References

AMERICAN INSTITUTE OF CERTIFIED PUBLIC ACCOUNTANTS (AICPA). (2004) *White Paper: AICPA Standards for Performing and Reporting on Peer Reviews*.

BECKER, GARY S. (1975) *Human Capital*, New York: Columbia University Press.

BENSTON, GEORGE J., MICHAEL BROMWICH, and ALFRED WAGENHOFER (2006) "Principles-Versus Rules-Based Accounting Standards: The FASB's Standard Setting Strategy," *Abacus* 42, 165–188.

BLOOM, ROBERT and DAVID C. SCHIRM (2005) "Consolidation and Competition in Public Accounting," *The CPA Journal* LXXV, June.

CAREY, JOHN L. (1969) *The Rise of the Accounting Profession*, New York: American Institute of Certified Public Accountants.

CENTRAL CHAMBER OF COMMERCE OF FINLAND (2003) *Corporate Governance Recommendation for Listed Companies*, Helsinki.

COATES, JOHN C. IV (2007) "The Goals and Promise of the Sarbanes-Oxley Act," *Journal of Economic Perspectives* 21, 91–116.

DENNIS, ANITA (2000) "Taking Account: Key Dates for the Profession," *Journal of Accountancy*, Oct., 97–104.

EUROPEAN UNION (2006) "Directive 2006/43/EC of the European Parliament and of the Council of 17 May 2006 on statutory audits of annual accounts and consolidated accounts, amending Council Directives 78/660/EEC and 83/349/EEC and repealing Council Directive 84/253/EEC"

FRANCIS, JERE (2004) "What Do We Know About Audit Quality," *The British Accounting Review* 36, 345–366.

GAO (GENERAL ACCOUNTING OFFICE) (2003) *Public Accounting Firms: Mandated Study on Consolidation and Competition*.

HELER, JAN R., MICHAEL T. DUGAN, and DAVID L. SAYERS (2005) "A Century of Debate for Internal Controls and Their Assessment: A Study of Reactive Evolution," *Accounting History* 10, 39–70.

HOLMSTROM, BENGT and STEVEN N. KAPLAN (2003) "The State of U.S. Corporate Governance: What's Right and What's Wrong?" *Bank of America Journal of Applied Corporate Finance,* 15.

KERSHAW, DAVID (2005) "Evading Enron: Taking Principles Too Seriously in Accounting Regulation," *Modern Law Review*, 594–625.

KLEIN, APRIL (2002) "Economic Determinants of Audit Committee Independence," *The Accounting Review* 77, 435–452.

KPMG (2006) "KPMG Europe LLP: Proposal to Create Europe's Largest Accountancy Firm, KPMG's U.K. and Germany Member Firms to Merge in First Stage" http://www.kpmg.co.uk/news/detail.cfm?pr=2646

LANG, MARK, JANA SMITH RAEDY and WENDY WILSON (2005) "Earnings Management and Cross Listing: Are Reconciled Earnings Comparable to US Earnings?" working paper, University of North Carolina.

LA PORTA, RAPHAEL, FLORENCIO LOPEZ-DE-SILANES, ANDREI SHLEIFER, and ROBERT W. VISHNY, (1998) "Law and finance," *Journal of Political Economy,* 106 (6), 1113–1156.

LEV, BARUCH (2003) "Corporate Earnings: Fact and Fiction," *Journal of Economic Perspectives*, 27–50.

LEVITT, ARTHUR (2002) "Arthur Levitt's Crusade," *Business Week*, issue 3801, 30 September, 74–78.

LINDAHL, FREDERICK (1987) "Accounting Standards and Olson's Theory of Collective Action," *Journal of Accounting and Public Policy* 6, 59–72.

MARTINEZ, JON I., and J. CARLOS JARILLO, (1989) "The Evolution of Research on Coordination Mechanisms in Multinational Corporations," *Journal of International Business Studies*, 20 (3, fall), 489–514.

MCCREEVY, CHARLIE. (2006) "EU-China Cooperation on Accounting and Auditing," Delegation of the European Commission to China, May 16.

MCENROE, JOHN E. and STANLEY C. MARTENS (1998) "An Examination of the Auditing Standards Promulgation Process Involving SAS No. 69," *Journal of Accounting and Public Policy* 17, 1–26.

MICHAELS, ADRIAN (2005) "Auditors Banned over Parmalat," Financial Times, 14 December.

MILLER, NORMAN C. (1966) *The Great Salad Oil Swindle*, London: Victor Gollancz.

OLSON, MANCUR (1965) *The Logic of Collective Action*, Cambridge: Harvard University Press.

OLSON, WALLACE E. (1978) "How Should a Profession Be Disciplined?" *Journal of Accountancy,* May, 59–66.

PARKER, ANTHONY (2005) "Use Your Judgment on Sarbanes 404 Governance," *Financial Times*, 17 May.

POSNER, RICHARD A. (1975) "Theories of Economic Regulation," *Bell Journal of Economics*.

PRAHALAD, C.K., & DOZ, YVES L. (1987) *The Multinational Mission: Balancing Local Demands and Global Vision*. New York: Free Press.

PRICEWATERHOUSE COOPERS (2001) *The Opacity Project*: New York.

PRICEWATERHOUSE COOPERS (2003) website.

RAJAN, RAGHURAM G. and LUIGI ZINGALES (2004) *Saving Capitalism from the Capitalists*. Princeton: Princeton University Press.

ROMANO, ROBERTA (2004) "The Sarbanes-Oxley Act and the Making of Quack Corporate Governance," finance working paper No. 52/2004, European Corporate Governance Institute.

SAUDAGARAN, SHAHROKH M. and JOSELITO G. DIGA (1997) "Financial Reporting in Emerging Capital Markets: Characteristics and Policy Issues," *Accounting Horizons* 11, 41–64.

SECURITIES and EXCHANGE COMMISSION (2005) "Commission Statement on Implementation of Internal Control Reporting Requirements," SEC News Digest, Issue 2005–93.

WALDMEIR, PATTI (2005) "Andersen Conviction Overturned," *Financial Times*, 1 June, 15.

WIKIPEDIA ENTRY (2006) "Accenture," http://en.wikipedia.org/wiki/Accenture

WU, MIN (2002) http://pages.stern.nyu.edu/~mwu1/Media/Restatement-year.pdf

ZEFF, STEPHEN A. (2003) "How the U.S. Accounting Profession Got Where It Is Today: Part I," *Accounting Horizons* 17, 189–205.

ZHANG, IVY X. (2007) "Economic Consequences of the Sarbanes-Oxley Act of 2002," *Journal of Accounting and Economics*, 74–115.