

Sarbanes-Oxley: A Review of the Empirical Evidence and a Proposal for Reform

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1. Introduction

At the signing ceremony for the Sarbanes-Oxley Act of 2002, President Bush referred to the legislation as “the most far-reaching reforms of American business practices since the time of Franklin Delano Roosevelt.” In addition to increasing disclosure requirements for publicly traded companies, Sarbanes-Oxley (i) increased the role of independent directors in corporate governance, (ii) expanded the liability of officers and directors, (iii) required companies to assess and disclose the adequacy of their internal controls, (iv) created the Public Company Accounting Oversight Board (“PCAOB”) to regulate auditors and increased regulation of audit practices, and (v) prompted the Securities and Exchange Commission (“SEC”) and major U.S. securities exchanges to adopt new rules and listing standards related to corporate governance.

Few would disagree with the president’s assessment that Sarbanes-Oxley, which passed by votes of 99-0 in the Senate and 423-3 in the House, is far-reaching. However, after more than five years since its enactment, there is much disagreement about the effects of SOX on U.S. firms and financial markets.

Many policymakers argue that SOX has increased the costs of being a publicly traded company and, in turn, harmed the international competitiveness of U.S. companies and U.S. financial markets. In his recently published memoir, former Federal Reserve chairman Alan Greenspan writes “it has become clear, especially in retrospect, that by increasing the regulatory burden, Sarbanes-Oxley has decreased U.S. competitive flexibility ... Sarbanes-Oxley is proving

unnecessarily burdensome.”¹ Previously, in an interview with *SDA-Asia*, Mr. Greenspan jokes that “Sarbanes-Oxley passed both houses with almost unanimous votes. Any bill that goes through congress with that sort of vote cannot be good.”

Treasury Secretary Henry Paulson has raised similar concerns. In a speech to the Economic Club of New York, he called for a reassessment of the regulatory reforms adopted after Enron, Worldcom, and other high profile corporate scandals, arguing that SOX and other regulations are chasing capital from U.S. to foreign financial markets. Secretary Paulson referred to evidence showing that 24 of the 25 largest worldwide initial public offerings (“IPOs”) in 2005 listed in non-U.S. markets, indicating that U.S. financial markets are no longer the preferred venue for large IPOs. Secretary Paulson went on to say that “balance is key ... Excessive regulation slows innovation, imposes needless costs on investors, and stifles competitiveness and job creation.”²

Prominent scholars and policymakers also have raised concerns about the effect of SOX on corporate risk-taking. In an interview shortly before his death in 2006, Milton Friedman said that “Sarbanes-Oxley says to every entrepreneur, ‘for God’s sake don’t innovate.’”³ William Donaldson, chairman of the SEC when SOX was enacted, has since stated that “I worry about the loss of risk-taking zeal. ... Sarbanes-Oxley unleashed batteries of lawyers across the country ... [the result is] a huge preoccupation with the dangers and risks of making the slightest mistake, as opposed to a reasonable approach to legitimate business risk.”⁴ In Congressional testimony in July 2003, Mr. Greenspan states that “corporate executives and boards of directors are seemingly unclear, in the wake of the recent intense focus on corporate behavior, about how an increase in

¹ Alan Greenspan, *The age of turbulence*, The Penguin Press, 2007, at 430, 431.

² *Remarks by Treasury Secretary Henry M. Paulson on the Competitiveness of U.S. Capital Markets*, Economic Club of New York, New York, N.Y., November 20, 2006.

³ Josh Gerstein, “Friedman, 93, set to unleash power of choice,” *New York Sun*, March 22, 2006.

⁴ Adrian Michaels, “After a year of US corporate clean-up, William Donaldson calls for a return to risk-taking,” *FinancialTimes.com*, July 24, 2003.

risk-taking on their part would be viewed by shareholders and regulators. As a result, business leaders have been quite circumspect about embarking on major new investment projects.”⁵

New York Mayor Michael Bloomberg and Senator Charles Schumer state, in a *Wall Street Journal* editorial, that “Since [Sarbanes-Oxley’s] passage, auditing expenses for companies doing business in the U.S. have grown far beyond anything Congress had anticipated ... There appears to be a worrisome trend of corporate leaders focusing inordinate time on compliance minutiae rather than innovative strategies for growth, for fear of facing personal financial penalties from overzealous regulators.”⁶

In short, there appears to be a consensus that SOX is in need of repair. As policymakers consider reforms of SOX, they can draw on a growing academic literature that examines the economic effects of SOX. The literature addresses a number of questions, including the following:

- a. Did the adoption of SOX affect the stock prices of companies bound by its regulations?
- b. Has SOX affected corporate risk-taking?
- c. Has SOX encouraged publicly traded companies to go private?

This paper surveys the academic literature on these topics. Although the evidence is mixed, taken as a whole, it is consistent with the view that, at least for some firms, SOX has resulted in more costs than benefits.

The paper also proposes a reform of SOX. Specifically, it proposes that firms going public in the U.S. be allowed to decide whether they will comply with SOX. Because the value of a firm’s governance structure is reflected in its IPO price, companies conducting IPOs have a strong incentive to adopt value-maximizing governance structures. If, as a general matter, the benefits of SOX exceed its costs, then most firms conducting IPOs will choose to comply with

⁵ *Testimony of Chairman Allan Greenspan before the Committee on Financial Services, U.S. House of Representatives*, July 15, 2003.

⁶ Michael Bloomberg and Charles Schumer, “To save New York, learn from London,” *Wall Street Journal*, November 1, 2006.

SOX. If not, then most firms will choose not to comply with SOX. This experiment has the potential to significantly inform the debate about the efficacy of SOX. If the evidence from the IPO market indicates that most firms conducting IPOs choose not to comply with SOX, then regulators should consider allowing seasoned publicly traded companies to “opt out” of SOX, subject to approval by some minimum percentage of the company’s stockholders.

The paper is organized as follows. Section 2 reviews the major provisions of SOX. Section 3 surveys the academic literature on the economic effects of SOX. Section 4 describes a proposal for reforming SOX. Section 5 contains concluding comments.

2. Description of SOX

The Sarbanes-Oxley Act of 2002, consisting of 11 titles, 67 sections, and 66 pages, is, as President Bush stated, far-reaching. In this section, I provide an overview of the major provisions of SOX, including its regulation of (i) the structure of corporate boards, (ii) the liability of officers and directors, (iii) companies’ internal controls, and (iv) auditors of publicly traded companies. Each area is discussed in turn.

2.1. Corporate boards of directors

SOX increases the role played by independent directors in U.S. corporate governance.

Section 301 of SOX directs the SEC to adopt rules that prohibit national securities exchanges and associations from listing securities of companies that do not have audit committees in compliance with the requirements of SOX. Under SOX and the corresponding SEC rules, audit committees of publicly traded companies must be comprised entirely of independent directors.⁷ If companies do not have enough independent directors to comprise their audit committees, then under SOX, they must add more independent directors to their boards.

In addition, Section 407 of SOX requires publicly traded companies to disclose that at least one member of the audit committee is a “financial expert” as defined by the SEC.⁸ If they do

⁷ SEC Release Nos. 33-8220 and 34-47654, April 9, 2003.

⁸ SEC Release Nos. 33-8177 and 34-47235, January 23, 2003.

not have a financial expert on the committee, then they are required to disclose why not. If firms do not have a financial expert on their board, and if they do not want to disclose why not, then SOX requires them to add an independent director who qualifies as a financial expert

Shortly after SOX was signed into law, the New York Stock Exchange (“NYSE”) and the National Association of Securities Dealers (“NASD”) proposed changes to their listing standards that increase the role played by independent directors in the governance of companies listed on the NYSE and the Nasdaq Stock Market. The proposed changes were approved, in amended form, by the SEC, in the fall of 2003.⁹ The changes include a requirement that independent directors, newly defined by the SEC, comprise a majority of the board for companies listed on the NYSE and Nasdaq Stock Market. Furthermore, the NYSE’s listing standard requires audit, nominating or corporate governance, and compensation committees of companies listed on the NYSE to consist entirely of independent directors. The Nasdaq Stock Market’s listing standards also require that audit committees consist entirely of independent directors.¹⁰

2.2. Officer and director liability

Sarbanes-Oxley increases the liability of corporate officers and directors by expanding the scope of their legal obligations, creating new crimes for certain acts, and increasing the penalties associated with violations of securities laws.

First, SOX expands the scope of officers’ and directors’ legal obligations. Perhaps most importantly, Section 302 requires that the principal executive officer (presumably the chief executive officer) or officers and the principal financial officer (presumably, the chief financial officer) or officers to certify various information, including the financial statements, in their companies’ SEC filings. Among other things, the section requires them to certify that, based on their knowledge, there are no untrue statements of material facts, the financial statements fairly present the company’s financial condition, they have evaluated the effectiveness of their

⁹ SEC Release No. 34-48745, November 4, 2003.

¹⁰ Nasdaq’s listing standards do not require companies listed on Nasdaq to have nominating or compensation committees.

company's internal controls, and they have disclosed their conclusions about the effectiveness of these controls.

In addition to the certification requirement, SOX expands the legal obligations of officers and directors in various other ways. Section 301 requires audit committees to develop procedures for handling complaints about accounting matters, including confidential concerns expressed by employees. Section 401 increases the companies' disclosure requirements regarding off balance sheet items, pro forma data, and special purpose entities. Section 402 restricts the extension of personal loans to executives and Section 403 amends the disclosure of transactions in company securities by officers and directors. Section 406 requires companies to disclose if they have adopted a code of ethics for senior financial officers and, if not, why not.

Second, SOX creates new crimes for certain acts by officers and directors, including securities fraud, obstruction of justice, and false certification of financials.

Section 807 creates criminal liability for knowing violations of U.S. securities laws, with up to 25 years in prison for a single violation.¹¹ Specifically, the section states that "whoever knowingly executes, or attempts to execute, a scheme or artifice ... to defraud any person in connection with any security of an issuer with a class of securities registered under section 12 of the Securities Act of 1934" faces criminal liability and possible imprisonment. Sections 802 and 1102 create new obstruction of justice crimes related to destruction and tampering of audit and other records, with up to 20 years in prison for such violations. Under Section 906, it is a criminal act to knowingly and/or willfully violate the requirement that executive and financial officers certify information in SEC filings, with up to 10 and 20 years in prison for knowing and willful violations, respectively.

Third, SOX increases the penalties associated with existing criminal and civil violations of securities laws. Section 902 Section 903 increases the maximum prison sentence from five to 20 years for each mail and/or wire fraud violation related to a securities fraud. Section 904

¹¹ The Sarbanes-Oxley Act of 2002, Section 807.

increases the fines associated with certain violations of the Employee Retirement Income Security Act of 1974 by as much as twenty-fold to \$100,000 and it increases possible imprisonment for such violations from one year to 10 years. In addition, Section 304 requires chief executive officers and chief financial officers to reimburse their companies for bonuses and incentive-based compensation, equity-based compensation, and any profits they earned on the sale of the companies' securities during the 12-month period after the filing of financial documents with the SEC if the companies are required to prepare accounting restatements because of misconduct.

2.3. Internal controls

Perhaps the most controversial part of SOX is Section 404, which directs the SEC to adopt rules requiring companies to evaluate and disclose the effectiveness of their internal controls in their annual reports. The SEC adopted rules in 2003, which were to take effect in 2004 for "accelerated filers," defined as companies that have public equity with a market value of \$75 million or more.¹² Since 2004, accelerated filers have been required to disclose information about their internal controls in their annual reports, including (a) a report by management assessing whether or not the system of internal controls is "effective," and (b) a report by the company's external auditor attesting to management's assessment of the firm's internal controls.

Non-accelerated filers, i.e., companies that have public equity with a market value of less than \$75 million, initially were not required to disclose a management report assessing the effectiveness of internal controls until fiscal years ending on or after July 15, 2007. This date was later changed to December 15, 2007. Presently, these companies are not required to disclose a report by the company's auditor on the company's internal controls until fiscal years ending on or after December 15, 2008. In congressional testimony in December 2007, SEC Chairman Christopher Cox stated that SEC economists would conduct a cost-benefit study of Section 404 to

¹² SEC Release No. 33-8238, June 11, 2003.

be completed no earlier than June 2008.¹³ In order to have the benefit of the study before small companies are required to comply with Section 404(b), Chairman Cox indicated he plans to propose an additional one-year delay for implementation of this rule for small companies.

In 2007, the SEC provided guidance on how accelerated filers should comply with the rules.¹⁴ Its guidance purports to entail two principles. First, “management should evaluate whether it has implemented controls that adequately address the risk that a material misstatement of the financial statements would not be prevented or detected in a timely manner,”¹⁵ Second, “management’s evaluation of evidence about the operation of its controls should be based on its assessment of risk.”¹⁶ In short, the SEC’s guidance emphasizes that management should have the flexibility to design evaluation processes in accordance with the risks of financial misstatements – where the risks are greater, more extensive testing and evaluation is expected.

The SEC’s interpretive guidance describes the characteristics of companies that purportedly give rise to a higher likelihood of financial reporting misstatements. It states that “these characteristics include, among others, the size, complexity, and organizational structure of the company and its processes and financial reporting environment.”¹⁷ The SEC provides additional guidance on factors it believes affects the likelihood of financial misstatements, including, among other factors, “the susceptibility of the related asset or liability to loss or fraud” and “the subjectivity, complexity, or extent of judgment required to determine the amount involved.”¹⁸

In short, the SEC’s guidance and identification of firm characteristics associated with a higher probability of financial misstatements indicate that greater evaluation and testing of internal controls will be required for firms with activities involving specialized knowledge,

¹³ *Testimony of Christopher Cox on Sarbanes-Oxley Section 404: new evidence on the cost for small companies before the Committee on Small Business, U.S. House of Representatives*, December 12, 2007.

¹⁴ SEC Release Nos. 33-8810; 34-55929; June 20, 2007.

¹⁵ *Ibid*, pp. 4-5.

¹⁶ *Ibid*, p. 5.

¹⁷ *Ibid*, pp. 13-14.

¹⁸ *Ibid*, p. 36.

decentralized organizational structures, and complex transactions accounted for in ways involving large amounts of subjectivity and judgment.

2.4. Auditors

Sarbanes-Oxley also provides for major changes in the ways that auditors and audit practices are regulated. These changes include the creation of the PCAOB and regulations governing a variety of audit practices.

Section 101 establishes the creation of the PCAOB to “oversee the audit of public companies that are subject to the securities laws.” The PCAOB is not to be an agency of the federal government, but rather a nonprofit corporation organized in accordance with the District of Columbia Nonprofit Corporation Act. Under Section 109, the PCAOB’s budget is funded by fees paid by issuers. The board consists of five members, with the initial board members, including the chairman, appointed by the SEC, after consultation with the Federal Reserve chairman. The term of board members is five years, with no person allowed to serve more than two terms. Each member of the board serves on a full-time basis with prohibitions on other employment and restrictions on sources of outside income.

Public accounting firms that audit publicly traded companies are required to register with the PCAOB. The PCAOB also is charged with the duty of establishing rules relating to the preparation of audit reports, inspecting registered accounting firms, conducting investigations and disciplinary proceedings of registered accounting firms, and imposing sanctions where appropriate. The PCAOB is required to submit an annual report to the SEC, which has oversight and enforcement authority over the board.

In addition to establishing the PCAOB to oversee auditors of public companies, SOX creates new regulations governing audit practices and the operation of audit firms. Perhaps most importantly, Section 201 prohibits auditors of public companies from providing non-audit

services to the issuers they audit, including bookkeeping, information systems, valuation, actuarial, and other services. Section 203 prohibits the lead audit partner involved the audit of an issuer to be someone who performed audit services for that issuer in each of the five previous fiscal years, resulting in mandated rotation of lead audit partners. As mentioned earlier, Section 404 requires auditors to attest to the assessment that managers of the issuers make with regard to the effectiveness of their internal controls.

Section 802 provides for criminal liability of auditors, including imprisonment of up to 10 years, if they “knowingly and willfully” violate various recordkeeping requirements in SOX, including a requirement that auditors maintain audit records for a minimum of five years. SOX also directs the SEC to adopt rules regarding preservation of work papers, including e-mails, by auditors for a stipulated period, with possible criminal sanctions for violations of these rules as well.

2.5. Miscellaneous

In addition to the aforementioned provisions, SOX contains various miscellaneous provisions. Section 307 directs the SEC to issue rules establishing minimum standards of professional conduct for lawyers appearing and practicing before the SEC on behalf of issuers. Section 501 directs the SEC and/or national securities associations and securities exchanges to adopt rules related to alleged conflicts of interest faced by securities analysts.

Sections 601-604 mandate a sizeable increase in the SEC’s budget and an expansion of its authority. Sections 701-705 mandate studies by the General Accounting Office (“GAO”) or the SEC on various topics, including consolidation in the accounting industry, credit rating agencies, the number of securities professionals who violated federal securities and the nature of the violations during January 1, 1998 to December 31, 2001, SEC enforcement actions, and whether investment banks and financial advisers played a role in facilitating the manipulation of earnings by public companies. Section 806 defines whistleblower protection for employees of publicly traded companies who provides information and/or assistance to the federal government

related to its investigations of securities fraud. Section 1001 provides a “sense of the Senate” that federal income tax returns of corporations should be signed by the corporations’ chief executive officers.

3. Review of the academic literature on SOX

A large body of academic literature has emerged that examines the effects, if any, that SOX has had on the value of firms and various corporate decisions. This section reviews the most salient part of this literature, focusing on the effects of SOX on stock prices, corporate risk-taking, and the decisions of companies to go private.

3.1. SOX and stock prices

Several papers have attempted to estimate the effect of SOX on the stock prices of companies affected by the legislation, including both U.S. and foreign companies. The results from these papers fall into several categories.

Effect of SOX-related events on U.S. stock prices

One set of papers examines the relation between events related to the adoption of SOX and changes in the stock prices of U.S. companies affected by SOX. The papers, which use different samples and methodologies, present conflicting results.

Zhang (2007) finds the cumulative raw returns on a U.S. market index around 17 SOX-related events are highly negative (-15.35% using value-weighted returns and -12.53% using equal-weighted returns) and statistically significant. After controlling for the corresponding stock returns in foreign markets, she finds statistically significant cumulative stock returns ranging from -3.76% to -8.21% around key SOX-related events. She also finds that foreign companies required to comply with SOX suffered statistically significant declines in their stock prices around the key events. Zhang’s (2007) evidence is consistent with the view that SOX was expected to have a negative net effect on the value of affected firms.

Contrary to Zhang (2007), Li, Pincus, and Rego (2006) and Jain and Rezaee (2006) find that key SOX-related events are associated with positive and statistically significant returns on various U.S. market indexes.

Li, Pincus and Rego (2006) find that across eight SOX-related events, cumulative “abnormal” returns are 11%, but not statistically significant. However, when they exclude one event, the admission by Worldcom that it had committed accounting fraud, the cumulative return is 14.7% and statistically significant at the 0.05 level. They interpret the evidence as consistent with the view that investors expected SOX to have a positive net effect on the value of affected firms.

Similarly, Jain and Rezaee (2006) classify 12 SOX-related events into three categories – (i) events that increased the probability that SOX would be adopted, (ii) events decreasing the probability that SOX would be adopted, and (iii) events that had ambiguous effects on the probability that SOX would be adopted. They find that events which, according to their classification, increased the probability of SOX being adopted were associated with positive and statistically significant average daily “abnormal” returns and events that decreased the probability that SOX would be adopted were associated with negative and statistically significant average daily abnormal returns. Events with an ambiguous effect on the probability of SOX being adopted are not associated with statistically significant abnormal returns. Jain and Rezaee (2006) conclude that their results are consistent with the view that SOX was expected to result in more benefits than costs for the affected companies.

The stark differences in the results found by Zhang (2007) versus Li, et al. (2006) and Jain and Rezaee (2006) arise from significant differences in their selection of SOX-related events. Zhang (2007) identifies 17 events during January 17, 2002 through July 25, 2002. In contrast, Li, Pincus and Rego (2006) identify 8 SOX-related events during June 25, 2002 through August 15, 2002 and Jain and Rezaee (2006) identify 12 events during February 14, 2002 through July 30,

2002. Hence, Zhang's (2007) sample of events is considerably larger than the ones used in the other papers.

In addition, the timeline of events differs substantially across the three papers. Of Zhang's (2007) 17 events, 12 occur before June 25, 2002, which is the date of the first event used by Li, Pincus, and Rego (2006). Although the first event used by Jain and Rezaee (2006) is February 14, 2002, the second event they use is on June 18, 2002. Eleven of Zhang's (2007) 17 events occur before June 18, 2002, including the introduction of an accounting reform bill by Congressman Oxley in the House Financial Services Committee (February 13, 2002), President Bush's first response to the accounting scandals (March 7, 2002), the passage of Congressman Oxley's bill in Committee (April 16, 2002), the Senate Judiciary Committee's approval of legislation strengthening corporate fraud laws (April 25, 2002), and circulation of Senator Sarbanes' reform bill (May 8, 2002).

Zhang's (2007) selection of events seems appropriate. Information that Congress was likely to pass and the president was likely to sign some legislation in response to the corporate scandals was in the public domain before the first event date used by Li, Pincus and Rego (2006) and all but one of the event dates used by Jain and Rezaee (2006). In order to assess the full valuation effect of SOX, it is necessary to capture the effect of the earlier information releases identified by Zheng (2007). Because they do not include these earlier releases, the stock price reactions documented by Li, Pincus and Rego (2006) and Jain and Rezaee (2006) could indicate that the final version of SOX was not as costly as the market had initially anticipated and not that the market believed SOX would confer net benefits on firms.

Cross-sectional variation in stock price reactions to SOX-related events

Two studies examine the cross-sectional variation in stock returns of U.S. companies, as opposed to the returns on broad-based U.S. stock market indexes, around the time that SOX was adopted and the NYSE and Nasdaq proposed changes to their listing standards to require that boards of directors consist of a majority of independent directors.

Chhaochharia and Grinstein (2007) estimate buy-and-hold stock returns for different portfolios of U.S. companies during the period of November 1, 2001 (shortly after the revelation of the Enron scandal) through October 2, 2002 (the date Nasdaq proposed changes to its listing standards). The portfolios are based on the authors' estimates of the degree to which companies were already in compliance with SOX and the changes in listing standards. They estimate this by examining several variables, including whether the firms made accounting restatements, whether insiders sold shares of their companies' stock shortly before large drops in their stock prices, whether the firms are involved in related party transactions, the structure of the firms' boards and board committees, and whether the firms had replaced their external auditors.

The authors also find that firms classified as not being in compliance with SOX and the new listing standards experienced statistically significant positive stock returns relative to other firms during the period. Among the "non-compliant" firms they find significant differences in the stock returns of large versus small firms. Whereas large, noncompliant firms earned positive returns during the period, small noncompliant firms earned negative returns. The results are consistent with the view that SOX had some beneficial effects on the value of firms, but not all companies shared in the benefits. In particular, their evidence suggests small firms that were not in compliance suffered declines in value.

In a complementary study, Wintoki (2007) examines the relation between stock returns for a sample of more than 1,500 U.S. companies during the period of January 15, 2002 through August 15, 2002 and firm characteristics that proxy for the costs and benefits of monitoring by independent directors. Drawing on recent literature regarding the determinants of board structure¹⁹ (Coles, Daniel, and Naveen (2007), Linck, Netter, and Yang (2007), Lehn, Patro, and Zhao (2007)), Wintoki (2007) posits that if firms had endogenously chosen optimal governance structures before SOX and the changes in listing standards, then the new regulations mandating a

¹⁹ See, for example, Coles, Daniel, and Naveen (2007), Linck, Netter, and Yang (2007), and Lehn, Patro, and Zhao (2007)).

larger role for independent directors should adversely affect the values of firms in which the cost of outside monitoring is high.

Wintoki (2007) finds results consistent with this hypothesis. Specifically, he finds that stock returns over the period are (i) inversely related to growth opportunities and the uncertainty of the business environment (i.e., characteristics associated with high outside monitoring costs) and (ii) directly related to firm size and age (i.e., characteristics associated with low outside monitoring costs). Among the results, Wintoki (2007) finds that an investment strategy of investing long in firms expected to be least adversely affected by the new regulations and investing short in firms expected to be most adversely affected would have earned a statistically significant abnormal return of 17% over the period. Wintoki (2007)'s results are consistent with the view that SOX and the changes in listing standards were harmful to young, small, high growth firms.

Effect of SOX-related events on the stock prices of cross-listed foreign firms

Litvak (2007) examines the stock returns of foreign firms that are cross-listed in the U.S. and their home countries around 14 events related to the adoption of SOX in 2002. The events identified by Litvak (2007) are similar to those used in the papers reviewed above. The first event identified by Litvak (2007) is the announcement by the SEC chairman on January 17, 2002 that he favors an overhaul of accounting regulation, including the creation of a public oversight board. The last event occurs on October 22, 2002, when, in response to SOX, the SEC releases a proposal concerning new disclosures, including disclosures related to companies' internal controls. Based on her reading of the information released around the 14 events, Litvak (2007) surmises that only eight of the 14 events are expected to affect the returns of cross-listed firms. Furthermore, Litvak identifies one event, consisting of two announcements by the SEC chairman on October 8, 2002 and October 10, 2002 that foreign issuers might receive exemptions from the SEC rules adopted under SOX, as information that indicates SOX-related rules are less likely to apply to cross-listed foreign companies.

Litvak (2007) identifies a sample of 1,016 non-U.S. firms that are cross-listed in the U.S. and their home countries. The sample consists of 385 firms subject to SOX and 631 cross-listed firms not subject to SOX. For each firm, she identifies a matched firm that (i) operates in the same industry, (ii) is from the same country, and (iii) is of similar size, resulting in a sample consisting of 1,016 matched pairs. She uses this sample to conduct two main tests.

First, Litvak (2007) tests whether there is a statistically significant difference in the returns of cross-listed foreign firms subject to SOX vis-a-vis the corresponding returns of the matched firms around the key SOX-related events. She finds the difference in returns between cross-listed companies and their non cross-listed matches is significantly different across all eight events she deems to be relevant. The difference in returns is negative and statistically significant for all but one event – the announcements by the SEC chairman that foreign issuers might receive exemptions. Around this event, the difference in returns is positive and statistically significant. The results are consistent with the view that SOX and related SEC rules had a negative effect on the value of foreign issuers cross-listed in the U.S.

Litvak (2007) also tests whether the difference in the returns of cross-listed foreign companies and their corresponding matched firms is different for cross-listed foreign firms subject to SOX versus those that are not. She finds that the difference in the returns of cross-listed foreign companies not subject to SOX and their matches is significant around some, but not all of the events, and these differences are smaller than the corresponding differences for cross-listed foreign companies subject to SOX. Hence, these results also are consistent with the view that SOX imposed net costs on foreign issuers subject to the legislation and its associated rules.

Effect of SOX on cross-listed premia

Previous research has found that cross-listing in U.S. stock markets is associated with significant increases in market-to-book ratios, suggesting that foreign firms realize a premium when they cross-list their stock in U.S. markets. One explanation for the premium is that foreign firms cross-listing in U.S. markets bond themselves to U.S. governance and disclosure standards,

which conveys a positive signal to investors. Zingales (2007), Doidge, Karolyi, and Stulz (2007), and Litvak (2007) examine whether the cross-listing premium changed significantly after SOX.

In a paper focused on the competitiveness of U.S. equity markets, Zingales (2007) uses data from Doidge, Karolyi, Lins, Miller, and Stulz (2006) to examine whether the cross-listed premium, defined as the difference in market-to-book ratios of cross-listed firms and non cross-listed firms, changed significantly after SOX. He finds the premium declines by almost 50% from 1997-2001, a period before SOX, to 2003-2005, a period after SOX. Zingales (2007) reports the change is significant at the 0.10 level. He also finds the decline in premia is smaller for firms from countries with “poor” corporate governance standards, which he interprets as evidence consistent with the view that SOX reduced the benefit of cross-listing in the U.S.

Using a longer series of data, Doidge, Karolyi, and Stulz (2007) find no evidence that the cross-listing premium changed significantly after SOX. Specifically, they examine the premia associated with several thousand cross-listings in the U.S. and the U.K. over the period of 1990-2005. Their analysis shows that the premium associated with cross-listing in the U.S. is positive in every year, with no significant decline after SOX. Their results suggest that Zingales’s (2007) findings are idiosyncratic to his use of 1997-2001 as the pre-SOX period. They conclude that the benefits of cross-listing in the U.S. “have not been seriously eroded by SOX.”

Using data for the period of 1995-2005, Litvak (2007) finds the cross-listing premium declined significantly in 2002, the year SOX was adopted, and remained at a significantly lower level thereafter. Litvak (2007) matches each cross-listed firm with a firm from the same country that is matched based on her estimate of the propensity of a company to cross-list, which is a function of firm characteristics (e.g., size, growth, profitability). She finds that the average difference in Tobin’s q for the cross-listed versus matched firms declined significantly after SOX. Furthermore, she finds that the decline is significantly larger for cross-listed firms required to comply with SOX compared with cross-listed firms not required to comply with SOX. She

concludes that the “overall evidence is consistent with the view that SOX negatively affected cross-listed premia.”

3.2. SOX and corporate risk-taking

As discussed in the introduction, it is often argued that SOX has discouraged corporate risk-taking. According to this argument, the increased potential liability faced by officers and directors, combined with an expansion in their reporting requirements, including the requirements that they certify their companies’ financial statements and attest as to the effectiveness of their firms’ internal controls, has reduced their incentive to initiate and approve risky projects.

In a survey of CFOs, Graham, Harvey, and Rajgopal (2003) find that CFOs believe SOX has impaired risk-taking by “providing an environment in which second-guessing of actions taken by management is more prevalent ... and ... altering compensation incentives, which might affect risk-taking motivations.”²⁰ Additional anecdotal evidence of this is found in a letter, commenting on the Section 404 rules, from the Biotechnology Industry Organization to the SEC, stating “Many emerging biotech companies are directing precious resources from core research and development of new therapies for patients due to overly complex controls or unnecessary evaluation of controls.”²¹

Two papers empirically examine the merits of the argument that SOX has impaired corporate risk-taking.

Cohen, Dey, and Lys (2007) examine the effect of SOX on the both the structure of CEOs’ compensation contracts and various measures of corporate risk-taking, including capital expenditures, research and development expenditures (“R&D”), and stock price volatility. They predict that the increased liabilities faced by CEOs after SOX would lead firms to alter the CEOs’ compensation contracts so as to reduce their incentives to take on risky projects. They find that the structure, but not the level, of CEO compensation changed significantly after SOX.

²⁰ Graham, Harvey, and Rajgopal (2003), p. 36.

²¹ Eisenberg (2007).

Specifically, the proportion of CEO compensation consisting of salary and bonus increased after SOX, while the proportion consisting of stock option grants declined significantly. Relatedly, they also find that the sensitivity of CEO pay to performance declined significantly after SOX.

Cohen, Dey, and Lys (2007) find support for the argument that SOX, perhaps through its effect on the structure of CEO compensation, affected the incentives of firms to invest in risky projects. Specifically, they find that total investments, calculated as the sum of R&D, net capital expenditures, and acquisitions, declined significantly after SOX, after controlling for various factors associated with firms' investment behavior. Among the independent variables included in their regression analysis is an interaction term consisting of the product of a variable measuring the importance of equity-based incentives and a dummy variable for post-SOX years. The coefficient on the interaction term is negative and statistically significant, indicating that the greater the equity-based incentives the larger the curtailment in total investments. The authors state that this result is consistent with the view that "CEOs with incentive compensation could be more wary after SOX due to the policy that requires them to return any incentive-based compensation following an earnings restatement."²²

In addition, Cohen, Dey and Lys (2007) find a significant decline in stock price volatility after SOX and associate this decline with the decline in total investments made by firms after SOX. Overall, their results support the view that SOX has had a chilling effect on corporate risk-taking.

In a related study, Barger, Lehn, and Zutter (2008) examine various measures of corporate risk-taking for U.S. firms as compared with their U.K. counterparts after the adoption of SOX. Because SOX does not apply to U.K. firms, the authors use the U.K. sample to control for global factors that might affect the investment behavior of U.S. firms after SOX. They find U.S. firms significantly reduced capital expenditures and R&D vis-à-vis their U.K. counterparts after SOX. In addition, they find that U.S. firms significantly increased their cash holdings (i.e.,

²² Cohen, Dey, and Lys (2007), p. 24.

low-risk investments) as compared with U.K. firms after SOX and that the stock price volatility of U.S. firms declined significantly vis-à-vis U.K. companies following SOX. These results also are consistent with the view that SOX reduced corporate risk-taking.

Bargeron, Lehn, and Zutter (2007) also find cross-sectional differences in the decline in risk-taking consistent with the view that SOX has had a negative effect on corporate risk-taking. They find that the decline is significantly greater in large versus small firms, consistent with the view that the expected costs of complying with Section 404 are greater for firms characterized by more complexity. They also find evidence that the decline is significantly greater for firms with high versus low R&D expenditures and firms that did not have a majority of outside directors before SOX (i.e., firms that would be most affected by the increased role of independent directors after SOX).

The authors also examine the propensity of high risk firms to conduct IPOs in the U.S. and U.K. before and after SOX. Using a large sample of IPOs in the U.S. and U.K. during the period of 1990-2006, they find the likelihood of an IPO being conducted in the U.K. versus the U.S. increased significantly after SOX. In addition, the increase in this likelihood is directly related to R&D expenditures, meaning firms with large amounts of R&D activity were significantly less likely to conduct IPOs in the U.S. after SOX. The evidence is consistent with the view that SOX has deterred firms with risky operations from entering U.S. public equity markets.

3.3 SOX and going private transactions

Following the adoption of SOX in 2002, there was a substantial increase in the number and value of publicly traded U.S. companies that were taken private. Some have inferred that SOX caused the increase in going private activity. For example, Bartlett (2008) quotes Stephen Schwarzman, chairman of The Blackstone Group, a large private equity firm, as stating that SOX has “probably been the best thing that’s happened to our business and one of the worst things

that's happened to America ... when we talk to [corporate managers] about going private, they're really quite excited about it.”²³

Several papers empirically examine the extent to which SOX can explain the increase in going private activity in the post-SOX period.

Engel, Hayes, and Wang (2007) examine a large sample of firms that went private during the period of 1998 through May 2005. They document an increase in the frequency of going private activity on a quarterly basis after SOX, which is broadly consistent with the view that SOX increased the incentive to go private. They argue that the incidence of SOX-related costs are likely to fall disproportionately on small firms, on the presumption that a large percentage of these costs are fixed. Consistent with this prediction, they find that stock returns associated with announcements of going private transactions increased for smaller firms with higher insider ownership after SOX as compared with before SOX, evidence that is consistent with the view that the costs of SOX encourages small companies to go private.

In a discussion of the paper by Engel, Hayes, and Wang, Leuz (2007) points out that their sample of going private transactions consists of Rule 13e-3 going private transactions, which includes firms that perform reverse stock splits and firms that deregister but continue to trade in the pink sheets. According to Leuz (2007), as a result, Engel, Hayes and Wang's (2007) sample includes firms that “go dark” (i.e., continue to trade) as well as firms that go private. After accounting for firms that go dark, Leuz (2007) finds no significant increase in going private activity after SOX.

Leuz, Triantis and Wang (2007) document that the increase in SEC deregistrations after SOX is largely due to an increase in “going dark” as opposed to “going private” transactions. In both cases, firms are not required to comply with SOX, provided they do not have publicly traded debt securities. However, the characteristics of firms going dark are significantly different than those going private. Leuz, Triantis, and Wang (2007) show that firms going dark are smaller,

²³ Bartlett (2008), p. 3.

poorer performers, and more financially distressed than firms that go private. Also, whereas the stock returns associated with going private transactions usually are positive, announcements of going dark transactions are, on average, associated with statistically significant stock price declines. The authors find that the decision to go dark is explained, at least in part, by the costs of complying with SOX.

Kamar, Pinar Karaca-Mandic, and Talley (2005) examine the decisions of public U.S. companies to be acquired by private versus public acquirers, before and after SOX, as compared with their foreign counterparts. They find evidence consistent with the view that SOX encouraged small U.S. companies to exit the public market. Whereas they find no significant increase in the relative rate with which U.S. companies were acquired by private versus public acquirers after SOX, they find that small U.S. firms, as compared with small foreign firms, were significantly more likely to be acquired by private as opposed to public companies after SOX. They also show that the relative increase in going private activity among small U.S. companies largely occurs in the first year after the adoption of SOX.

Bartlett (2008) notes that previous studies fail to recognize that companies do not necessarily escape the provisions of SOX by going private. Specifically, he notes that companies that go private may still be required to comply with SOX if they use high yield notes to finance the going private transactions, which many of them do. He finds that the rate of going private activity has increased since SOX, but that the proportion of companies that choose to remain SEC-reporting companies, because of their use of publicly traded bonds, has remained relatively constant after SOX. Bartlett (2008) does find some variation in the use of publicly traded debt by large versus small companies since SOX, with large companies increasing their use of publicly traded debt and smaller companies reducing their use of this debt. Hence, Bartlett's (2008) analysis suggests that the costs of SOX have little to do with going private decisions in the post-SOX period, except, perhaps for smaller firms.

3.4. Summary

The academic literature on SOX contains mixed results. Whereas some evidence supports the view that SOX had an adverse effect on the stock prices of companies subject to the legislation, other evidence, based on different methodologies, finds evidence to the contrary. Similarly, conflicting evidence exists on the effect of SOX on the premium associated with foreign companies cross-listing their stock in the U.S. Some evidence suggests the premium has declined, whereas other evidence suggests it has not. Conflicting evidence also exists on the relation between SOX and going private activity.

Notwithstanding the tension in the academic literature on some of these topics, the evidence does appear clearer on other topics. For example, there is evidence that risk-taking behavior by U.S. companies has declined after SOX and two studies find evidence consistent with the view that SOX is at least one reason for the decline. Similarly, although there is conflicting evidence about the overall effect of SOX on going private activity, the evidence does suggest that, at least for small companies, SOX has increased the attractiveness of going dark or going private. At a minimum, the evidence suggests that, at least for some firms, SOX has resulted in more costs than benefits.

4. A proposal for reforming SOX

In light of the anecdotal and empirical evidence suggesting that, at least for some firms, SOX is not cost-effective, Congress and the SEC should consider a significant market-based reform of SOX – allowing companies conducting IPOs to choose whether or not they will opt in to the provisions of SOX. This proposal has several merits.

First, basic finance theory indicates that companies have strong incentives to adopt value-maximizing governance structures at the time of an IPO.²⁴ Typically, a firm conducting an IPO has a highly concentrated ownership structure before the IPO, with the officers and directors owning a disproportionate amount of the equity. If the shares are efficiently priced, the owners have strong incentives to adopt governance structures that maximize the value of the shares.

²⁴ The proposal in this section is based on principles developed in Jensen and Meckling (1976).

For example, suppose a private firm in which insiders own 100% of the equity is considering an IPO. Further suppose that, for this firm, SOX confers more benefits than costs, such that the firm can fetch \$20 a share if they opt in to SOX and only \$15 a share if they do not. In this case, the owners have a strong private interest to voluntarily opt in to SOX – if they do not, the owners forego \$5 a share in the IPO.

Now consider another private firm, also with 100% of the equity owned by insiders, and also considering an IPO. Suppose, that SOX involves more costs than benefits for this firm, such that it could fetch \$20 a share if it did not opt in to SOX, but only \$15 a share if it did. Here, too, the owners have a strong private decision to make the value-maximizing decision, which is to not opt in to SOX.

Hence, there are strong private incentives for firms to make the “right” decisions at the time of an IPO. Insofar that the costs and benefits of SOX vary across firms and industries, and I presume they do, this proposal allows SOX to be implemented when it is cost-effective and rejected when it is not. The proposal corrects for one of the major deficiencies of SOX, which is its “one size fits all” nature.

Second, as long as the shares are efficiently priced, investors in IPOs can expect normal rates of return, regardless of whether or not firms make the “right” decisions regarding opting in to SOX. Suppose, for example, the owners of a private company could sell shares in an IPO at \$20 if they opt in to SOX but only \$15 a share if they do not opt in to SOX. Although it would be value-maximizing to opt in to SOX, suppose for idiosyncratic reasons, the owners choose not to opt in. In this case, the owners would be selecting a governance structure that is not value-maximizing, but they would be bearing the full value loss of \$5 a share. New investors would be compensated for the ‘suboptimal’ governance structure by \$5 a share. If the shares are efficiently priced, the new investors suffer no wealth loss because of the firm’s decision to not opt in to SOX.

There is precedence for this proposal in the SEC's posture with regard to dual class recapitalizations in the 1980s. Dual class recapitalizations were a popular antitakeover device used by an increasing number of large companies in the 1980s to deter hostile takeovers. It was a controversial takeover defense in that it involved an exchange offer in which the stockholders of a company would be offered a newly created class of common stock with low voting rights in exchange for the existing shares with higher voting rights. Typically, a "dividend sweetener" would be included in the offer to encourage stockholders to participate in the exchange offer. Many argued that the transactions were structured so as to create a "prisoner's dilemma" that "coerced" stockholders to exchange their high voting shares for low voting shares, thereby resulting in a transfer of voting control to the managers (who, presumably, would not exchange their shares).

In 1989, the SEC adopted Rule 19c-4 that effectively forbade publicly traded companies from engaging in dual class recapitalizations. However, the SEC distinguished between companies coming public with dual classes of common stock with different voting rights and companies that wanted to engage in a dual class recapitalization after they had already come public. In effect, the SEC recognized that as long as the shares were efficiently priced, investors do not systematically suffer wealth losses by buying low voting stock in dual class IPOs. Because, all else equal, low voting shares are priced lower than higher voting shares in IPOs, investors in the low voting shares are compensated for their inferior voting power. The same logic holds in the case of this proposal.

A third advantage of the proposal is that it would provide regulators with potentially important information about the efficacy of SOX. Suppose, hypothetically, that 90% of the firms conducting IPOs chose to not opt in to SOX. This data would strongly suggest that SOX may not be appropriate for publicly traded companies generally, not just IPOs. At that point, regulators might consider allowing publicly traded companies to opt out of SOX, subject to a minimum vote of the stockholders. Alternatively, if 90% of the companies conducting IPOs opted in to SOX,

then it might suggest that the concerns about SOX and its effects on the competitiveness of U.S. firms and financial markets, are exaggerated and that serious reform of SOX is not warranted.

5. Concluding comments

This paper has summarized the public debate over SOX, described its major provisions, and reviewed relevant academic literature on SOX. In light of the heated debate about the effect of SOX on U.S. firms and capital markets, and empirical evidence suggesting at least for some firms, SOX is not cost effective, this paper proposes that firms conducting IPOs be given the choice as to whether or not they opt in to SOX. The proposal has the virtue of allowing SOX to apply to firms only when it is cost effective as opposed to the SOX's existing "one size fits all" nature. In addition, the proposal offers the potential of providing data that can inform the broader debate over the efficacy of SOX and whether a more wide-ranging reform of the legislation is warranted.

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