



Do the Benefits of Sarbanes-Oxley Justify the Costs?

Empirical Evidence in the Case of Small Firms

RAND RESEARCH AREAS

- THE ARTS
- CHILD POLICY
- CIVIL JUSTICE
- EDUCATION
- ENERGY AND ENVIRONMENT
- HEALTH AND HEALTH CARE
- INTERNATIONAL AFFAIRS
- NATIONAL SECURITY
- POPULATION AND AGING
- PUBLIC SAFETY
- SCIENCE AND TECHNOLOGY
- SUBSTANCE ABUSE
- TERRORISM AND HOMELAND SECURITY
- TRANSPORTATION AND INFRASTRUCTURE
- WORKFORCE AND WORKPLACE

In 2002, Congress passed the Sarbanes-Oxley Act (SOX) to strengthen corporate governance and restore investor confidence. The act's most important provision, §404, requires management and independent auditors to evaluate annually a firm's internal financial-reporting controls. In addition, SOX tightens disclosure rules, requires management to certify the firm's periodic reports, strengthens boards' independence and financial-literacy requirements, and raises auditor-independence standards.

While the intent of the legislation is clear, its ultimate effects continue to be debated. SOX proponents maintain that the act alleviates investor concerns by improving the transparency and accuracy of financial reports. Opponents contend that compliance imposes too great a burden on publicly traded firms, particularly on small firms, which will face higher average costs and derive lower average benefits as a result of new regulations.

In a new book, *In the Name of Entrepreneurship? The Logic and Effects of Special Regulatory Treatment for Small Businesses* (2007), RAND researchers address the impact of SOX and other regulations on small firms. One of the book's chapters, "Sarbanes-Oxley's Effect on Small Firms: What Is the Evidence?" focuses specifically on three areas in which the effects of SOX are susceptible to empirical measurement: relative compliance for small firms compared to those for large firms, stock-price reactions, and changes in firms' (particularly small firms') propensity to leave the public capital market.

The chapter's authors concluded that SOX has had a mixture of negative and positive effects on small firms, but which effects will prove more significant in the future is, as yet, unknown.

Measurable SOX Effects

Studies of **compliance costs** provide ample evidence that SOX increased public firms' accounting and auditing expenditures, regardless

Abstract

To evaluate the impact of the Sarbanes-Oxley Act (SOX) on small firms, RAND researchers reviewed studies in three areas in which SOX's effects are empirically measurable: (1) relative compliance costs for small firms compared to those for large firms, (2) stock-price reactions, and (3) changes in exit patterns from the public capital market. The evidence offers qualified support for the view that SOX, at least initially, had a number of negative effects on small firms.

of company size; that audit costs were disproportionately higher for small firms even before SOX passed; and that this disparity increased after SOX enactment, especially for small firms subject to SOX §404. The table illustrates pre- and post-SOX median audit costs for all firms; firms with less than \$75 million in market capitalization, already spending the highest portion of revenues on audit fees in 2003, saw these costs increase significantly after SOX, rising to 1.14 percent of 2004 revenues for firms filing internal-control reports (0.79 percent for nonreporting firms).

The studies of abnormal **stock returns** around events leading to the enactment and implementation of SOX provide mixed evidence. For example, two studies of pre- and post-SOX effects that did not distinguish among firms by size came to opposite conclusions: One suggested that firms *least* affected by SOX experienced higher stock returns; the other indicated that firms *most* affected had higher returns.

On the other hand, almost all studies that did distinguish between large and small firms found that SOX sometimes reduced the latter's value. One such study showed that small firms (as defined here, averaging \$21 million in market capitalization) with less independent boards and

This product is part of the RAND Corporation research brief series. RAND research briefs present policy-oriented summaries of published, peer-reviewed documents.

Corporate Headquarters
1776 Main Street
P.O. Box 2138
Santa Monica, California
90407-2138
TEL 310.393.0411
FAX 310.393.4818

© RAND 2007

Median Audit Fees as a Percentage of Revenues

Market Capitalization (\$ million)	Median Audit Fees as a Percentage of 2003 Revenues	Median Audit Fees as a Percentage of 2004 Revenues	
		Firms Not Filing Internal-Control Reports	Firms Filing Internal-Control Reports
0–75	0.64	0.79	1.14
75–250	0.29	0.35	0.56
250–500	0.18	0.26	0.40
500–700	0.15	0.20	0.30
700–1,000	0.13	0.12	0.25
>1,000	0.07	0.07	0.13

SOURCE: U.S. Government Accountability Office and U.S. Senate Committee on Small Business and Entrepreneurship, *Sarbanes-Oxley Act: Consideration of Key Principles Needed in Addressing Implementation for Smaller Public Companies* (GAO-06-361, 2006).

weaker internal controls performed more poorly than did similar firms with more independent boards and stronger internal controls. Another study examining the relation between firm size and returns found that SOX had a particularly negative effect on smaller and less actively traded firms.

Because **exiting the public market** relieves companies of SOX obligations, researchers attempted to measure SOX's net effects on firms by examining the rate at which they deregistered their stock with the SEC. Companies can deregister by having private acquirers buy their entire stock ("going private") or by cashing out small shareholders to reduce the total number of shareholders to below 300 ("going dark").

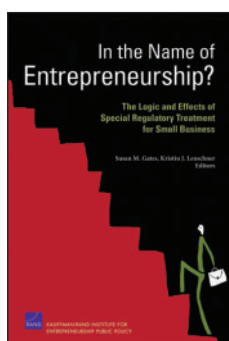
The research found that more firms, particularly smaller ones, left the public market after SOX enactment. Some of these firms went private, but this result could be influenced by factors that have little to do with SOX. Financial-market liquidity might have increased private investors' willingness to pursue acquisitions based on perceptions unrelated to SOX. Similarly, the weakness of the public capital market at that time could have independently encouraged firms to go private. A 2006 study by the Kauffman-RAND Institute for Entrepreneurship Public Policy (KRI) that controlled for such factors by comparing post-SOX behavior of U.S. firms with that of non-U.S. firms found that the tendency of small, public U.S. firms (having a market value of less than \$15 million) to go private increased by 53 percent in the first year after SOX. However, this tendency did not last long: Acquisitions of small public firms by private ownership diminished to roughly pre-SOX levels by the second year.

Interpretations

Overall, while the evidence offers qualified support for the view that SOX has had a negative effect on small firms, this evidence should be interpreted with caution for at least three reasons. First, the effects found in these studies could be explained in a number of ways. For example, studies of stock-market reactions to SOX looked at investor beliefs (as capitalized in stock price) at key moments of SOX enactment. But given the novelty of the SOX requirements and the delegation its provisions made to regulatory bodies and stock exchanges, investors could easily have been mistaken about how the reforms would affect the future of various firms.

Second, the studies have suggested that increased compliance costs may have had certain beneficial effects. While it is clear that SOX requirements led some small firms to leave the public capital market, the exiting firms may have been opaque, risky, or prone to financial misstatements, and their departure may have positively affected the market's function. It is also possible that small firms remaining in the public market benefited more from SOX than the exiting firms lost because increased transparency raised investor confidence in them.

Finally, the reviewed studies examine only the early post-SOX period, and it is important to learn whether the initial effects represented one-time or recurring effects. Compliance costs declined after the first post-SOX year and may further decrease in response to new interpretive guidelines and audit standards. Consequently, the puzzle surrounding SOX's overall effect is far from being resolved. Additional empirical studies will almost certainly continue to inform the policy debate over the coming years. ■



This research brief describes work done for the Kauffman-RAND Institute for Entrepreneurship Public Policy within the RAND Institute for Civil Justice documented in "Sarbanes-Oxley's Effect on Small Firms: What Is the Evidence?" by Ehud Kamar, Pinar Karaca-Mandic, and Eric Talley, in Susan M. Gates and Kristin J. Leuschner, eds., *In the Name of Entrepreneurship? The Logic and Effects of Special Regulatory Treatment for Small Businesses*, MG-663-EMKF (available at <http://www.rand.org/pubs/monographs/MG663/>), 2007, 368 pp., \$38.50, ISBN: 978-0-8330-4204-0. The RAND Corporation is a nonprofit research organization providing objective analysis and effective solutions that address the challenges facing the public and private sectors around the world. RAND's publications do not necessarily reflect the opinions of its research clients and sponsors. **RAND**® is a registered trademark.

RAND Offices

Santa Monica, CA • Washington, DC • Pittsburgh, PA • Jackson, MS / New Orleans, LA • Cambridge, UK • Doha, QA



KAUFFMAN-RAND INSTITUTE FOR ENTREPRENEURSHIP PUBLIC POLICY

THE ARTS
CHILD POLICY
CIVIL JUSTICE
EDUCATION
ENERGY AND ENVIRONMENT
HEALTH AND HEALTH CARE
INTERNATIONAL AFFAIRS
NATIONAL SECURITY
POPULATION AND AGING
PUBLIC SAFETY
SCIENCE AND TECHNOLOGY
SUBSTANCE ABUSE
TERRORISM AND
HOMELAND SECURITY
TRANSPORTATION AND
INFRASTRUCTURE
WORKFORCE AND WORKPLACE

This PDF document was made available from www.rand.org as a public service of the RAND Corporation.

This product is part of the RAND Corporation research brief series. RAND research briefs present policy-oriented summaries of individual published, peer-reviewed documents or of a body of published work.

The RAND Corporation is a nonprofit research organization providing objective analysis and effective solutions that address the challenges facing the public and private sectors around the world.

Support RAND

[Browse Books & Publications](#)

[Make a charitable contribution](#)

For More Information

Visit RAND at www.rand.org

Explore [Kauffman-RAND Institute for
Entrepreneurship Public Policy](#)

View [document details](#)

Limited Electronic Distribution Rights

This document and trademark(s) contained herein are protected by law as indicated in a notice appearing later in this work. This electronic representation of RAND intellectual property is provided for non-commercial use only. Unauthorized posting of RAND PDFs to a non-RAND Web site is prohibited. RAND PDFs are protected under copyright law. Permission is required from RAND to reproduce, or reuse in another form, any of our research documents for commercial use. For information on reprint and linking permissions, please see [RAND Permissions](#).