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PANEL TWO: SARBANES-OXLEY ACCOUNTING ISSUES

CATAclysmic LIABILITY RISK AMONG BIG FOUR AUDITORS

*Eric L. Talley**

Since Arthur Andersen's implosion in 2002, policymakers have been encouraged with ever increasing urgency to insulate the auditing industry from legal liability. Advocates of such insulation cite many arguments, but the gravamen of their case is that the profession faces such significant risk of cataclysmic liability that its long term viability is imperiled. In this Essay, I explore the nature of these claims as a legal, theoretical, and empirical matter. Legally, it is clear that authority exists (within both state and federal law) to impose liability on auditing firms for financial fraud, and courts have been doing so sporadically for years. Theoretically, it is certainly conceivable that, under certain conditions, cataclysmic liability risk could lead to widespread industry breakdown, excessive centralization, and the absence of third-party insurance. Whether such conditions exist empirically, however, is a somewhat more opaque question. On one hand, the pattern of liability exposure during the last decade does not appear to be the type that would, at least on first blush, imperil the entire profession. On the other hand, if one predicts historical liability exposure patterns into the future, the risk of another firm exiting due to liability concerns appears to be more than trivial. Whether this risk is large enough to justify liability limitations or other significant legal reforms, however, turns on a number of factors that have thus far gone unexamined by either advocates or opponents, including the presence of market mechanisms of deterrence, the effectiveness of current regulation, the likely welfare effects of further contraction of the industry, and the likelihood of new entry after a contraction.

INTRODUCTION

More than four years after the spectacular disintegration of Enron, ripple effects continue to spiral worldwide. Regulatory and judicial re-

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formers, prosecutors, legislative actors, and shareholder activists have moved in numerous ways to place enhanced scrutiny on the financial reporting and controls practices within publicly traded firms. Amid this flurry of activity, perhaps no constituency has been affected more profoundly than the auditing profession, which since 2002 has undergone a significant transformation of its market structure, expansion in auditors' duties vis-à-vis public companies, and the creation of a new regulatory oversight apparatus. Auditors now face enhanced vulnerability to liability risks that—at least according to some—threaten the very viability of the industry as we know it.

Exaggerated or not, the purported liability threat faced by auditors has already begun to redirect the winds of regulatory and contractual practices surrounding auditors on a global scale. Outside of the United States, significant reform efforts have begun to alter the exposure of auditors to civil liability for fraudulent financial reports. The British Parliament, for example, is currently considering legislation that would permit issuers to cap their auditors' liability, subject to shareholder approval.¹ The European Union is similarly considering capping auditor liability across Europe.² Within the United States, analogous tort reforms have not yet come about (at least not since the mid-1990s).³ However, auditing firms have increasingly begun to insist upon arbitration clauses, indemnity and hold-harmless provisions, and damages exclusions in their engagement letters with American issuers.⁴ While the ultimate legal enforceability of such provisions is open to some debate (particularly in the area of securities fraud),⁵ the intent of such provisions is clear: Auditors are actively attempting to limit their exposure to liability from financial

1. David Reilly, *Audit-Engagement Provisions Raise Queries: More Companies Disclose Facts That Prevent Suits, Limit Awards if Accounting Problems Arise*, Wall St. J., Mar. 6, 2006, at C1.

2. *Id.*

3. See *infra* notes 17–18 and accompanying text.

4. Reilly, *supra* note 1; see also Interagency Advisory on the Unsafe and Unsound Use of Limitation of Liability Provisions in External Audit Engagement Letters, 71 Fed. Reg. 6847, 6847 (Feb. 9, 2006) (noting that numerous agencies have “observed an increase in the types and frequency of provisions in financial institutions’ external audit engagement letters that limit the auditors’ liability”).

5. The SEC, for example, has consistently maintained that indemnity provisions are suspect because they may impair the independence of the auditor, even if such provisions are tied to “knowing misrepresentations by management.” See Office of the Chief Accountant, U.S. Sec. & Exch. Comm’n, *Application of the Commission’s Rules on Auditor Independence Frequently Asked Questions, Other Matters*, Question 4, Dec. 13, 2004, at <http://www.sec.gov/info/accountants/ocafaquaidind121304.htm> (on file with the *Columbia Law Review*) (stating that “[w]hen an accountant and his or her client, directly or through an affiliate, enter into an agreement of indemnity which seeks to provide the accountant immunity from liability for his or her own negligent acts . . . the accountant is not independent,” and that including “in engagement letters a clause that a registrant would release, indemnify or hold harmless from any liability . . . resulting from knowing misrepresentations by management would also impair the firm’s independence”). Whether the SEC’s enforcement stance on this issue is viable in court remains to be seen.

fraud that they fail to detect, responding to an expectations gap by filling a contractual one.

Animating this public debate about liability limitations is the stylized fact that, at least since the savings and loan crises of the late 1980s, auditing firms have been effectively self-insured, often through “captive” (i.e., wholly-owned) insurance companies. Such self-insurance is thought by some to be a telltale sign of an industry at risk. In a recent publication discussing the liability threats auditors face from civil fraud actions, for example, the U.S. Chamber of Commerce took the position that “these legal risks are so uncertain—and their implications are so dire—that the profession is effectively uninsurable. Without this standard tool for business planning and protection, the profession sits on a knife’s edge.”⁶

In light of current trends, it is perhaps somewhat surprising there are relatively few recent attempts in the legal academic literature to understand and quantify the nature of liability exposure that auditors face. Many studies attempting to quantify this risk try to characterize exposure to risk by estimating *average* or *median* liability exposure faced by individual auditors.⁷ While such studies are certainly informative, they are limited by at least three factors. First, they tend to be somewhat dated,⁸ and thus cannot capture recent trends in liability (particularly since the changes in the nature of fraud liability in the mid-1990s and the market implosion of 2001); second, they often focus on individual cases rather than the viability of auditors at the firm level or the profession more generally; and third, most significantly, they tend to gloss over important measures of variability and uncertainty that purportedly have created the predicament of Big Four auditors.⁹ Indeed, even if auditing firms have the capacity to service the *average* or *median* level of liability exposure in a given year (which, given their ability to set fees, they likely have), the aberrational case—the purported “fat-tail” of the liability distribution—is what ultimately can imperil their economic vitality and viability. An appropriately nuanced approach to studying liability risk, then, would adopt an approach that goes beyond capturing simple measures of central tendency, instead exploring whether and how variability in both the inci-

6. U.S. Chamber of Commerce, *Auditing: A Profession at Risk* 8 (2006), available at <http://www.uschamber.com/publications/reports/0601auditing.htm> (on file with the *Columbia Law Review*).

7. See, e.g., Elaine Buckberg, Todd Foster & Stephanie Plancich, NERA Econ. Consulting, *Recent Trends in Securities Class Action Litigation: 2003 Early Update 1* (2004), available at http://www.nera.com/publication.asp?p_ID=122 (on file with the *Columbia Law Review*).

8. E.g., Zoe-Vonna Palmrose, *An Analysis of Auditor Litigation and Audit Service Quality*, 63 *Acct. Rev.* 55, 55–56 (1988) (studying connection between auditor litigation activity and auditing quality based on cases occurring between 1960 and 1985).

9. The consensus “Big Four” auditing firms are KPMG LLP, Ernst & Young LLP, PriceWaterhouseCoopers LLP, and Deloitte & Touche, LLP. Before 2002, Arthur Andersen LLP was a member of this group, making it the “Big Five.”

dence and settlement of litigation might imperil (at least probabilistically) the health of the auditing industry.

In this Essay, I revisit the question of auditor liability—and the concomitant justifications for reform—from legal, theoretical, and empirical perspectives. My ultimate conclusions are somewhat mixed in nature. Legally, it is clear that even after prodefendant judicial and legislative reforms to securities law in the mid-1990s, auditors continue to face potential risks of liability for a host of potential causes of action at both the state and federal level. Moreover, the aggregation of such risks can—at least under the right theoretical conditions—create a risk portfolio that is “cataclysmic” in nature, in the sense that it imposes extreme risks that even a well-developed insurance or capital market would be willing to absorb.

Whether such conditions are actually present empirically, however, is a significantly harder question to answer. And, although I do not attempt to provide such an answer, I sketch out a potential approach for doing so, using federal securities fraud class action filings between 1994 and 2005. Combining this historical data with other market data and calibrated estimates about Big Four firms’ financial capacity, I estimate parameters of a theoretical model formulated to produce a set of “exposure” predictions predicated around the following question: Assuming that historical patterns and current time trends persist going forward, what are the chances that another Big Four auditing firm will face cataclysmic liability from securities class action litigation over the next X years? This approach, moreover, is general enough to allow for multiple assumptions about, for example, the capacity of Big Four firms to survive, the relationship between market volatility and filing rates, and the fact that cataclysmic liability can consist of one or two significant cases, a multitude of moderately sized cases, or some combination of the two.

The results of this analysis—while tentative—offer some important observations that are likely helpful for the larger policy debate. First, the distribution of securities class action liability exposure across firms does indeed have a relatively “fat” tail, signifying that rare, big ticket liability events can and do place a significant actuarial burden on auditing firms. At the same time, however, the characteristics of this fat tail do not appear to place it among a family of distributions that—at least as a theoretical matter—have such a fat tail as to cause insurance markets to fail. Thus, while the lack of third-party insurance might be *partially* due to the unpredictability of liability exposure, other more conventional forms of market failure, such as moral hazard and adverse selection, may also be playing a simultaneous role in inducing auditors to self-insure.

Second, the vulnerability of the Big Four auditors to class action litigation hinges in large part on one’s defined time horizon. For relatively short time horizons (such as one year), the projected risk of an additional exit by a dominant firm appears from my analysis to be generally less than 50%, and for most plausible parameter values substantially so. However,

as one extends the relevant time horizon (to say, five years), the estimated risk of exit by another Big Four firm also grows, and may in some circumstances exceed 50% for plausible parameter values. Such extended projections, however, should be taken with a grain of salt in that they hold constant a number of factors subject to change, such as market volatility, exogenous legal changes, and the continued adaptation of the auditing profession to Arthur Andersen's demise.¹⁰

A. *Related Literature*

A handful of different literatures intersect meaningfully with the enterprise of this Essay. Theoretically, my analysis is perhaps most closely aligned with a growing body of work on probability distributions and catastrophic risk. A number of recent endeavors in economics and finance, for example, have noted that when an agent's payoff follows a probability distribution that has excessive probability mass in its tails, insurance markets can break down substantially or completely.¹¹ Indeed, for such "fat-tail" distributions, the cardinal rule of portfolio theory—that one should diversify away unsystematic risk—may actually be a mistake, since each marginal investment has the potential to visit significant (or effectively infinite) downside liability on its owner. Insurance carriers, which by definition exist to pool and diversify risks, would find entry into such markets extremely unattractive (even though entry might be socially beneficial). Of course, fat-tail risks are not the only reason that insurance markets might break down. The fear of garden variety agency costs (such as moral hazard or adverse selection) might also induce third-party carriers to charge extremely high premia, assuming that their policies will largely underwrite the "lemons" of the industry.¹² Such a strategy, of course, rations out potential insureds that have greater ability and desire

10. There is recent evidence of such adaptation. In October 2006, twenty-two mid-sized accounting firms banded together to form a single company, Baker Tilly USA, with the explicit aim of competing for some of the clientele of the Big Four. See Kim Hart, *Accounting Firms Ally to Take on the Big 4*, Wash. Post, Oct. 16, 2006, at D1.

11. See, e.g., J. David Cummins, Neil Doherty & Anita Lo, *Can Insurers Pay for the "Big One"?* Measuring the Capacity of the Insurance Market to Respond to Catastrophic Losses, 26 *J. Banking & Fin.* 557, 558–59 (2002) (stating that "mega-catastrophe" may bring about "widespread insurer failures," "unpaid claims," and "severe availability problems"); Kenneth A. Froot, *The Market for Catastrophe Risk: A Clinical Examination*, 60 *J. Fin. Econ.* 529, 567–68 (2001) (discussing scenario that would force insurance firm into default); Rustam Ibragimov et al., *Non-Diversification Traps in Markets for Catastrophic Risk* 21 (May 8, 2006) (unpublished manuscript, on file with the *Columbia Law Review*) (arguing that the "heavy left tail" property of catastrophic risk can lead to nondiversification traps, preventing formation of insurance market for such risk).

12. See George A. Akerlof, *The Market for "Lemons": Quality Uncertainty and the Market Mechanism*, 84 *Q.J. Econ.* 488, 488–90 (1970) (describing how, in absence of verifiable quality, low quality goods will tend to drive out high quality goods from marketplace); Michael C. Jensen & William H. Meckling, *Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure*, 3 *J. Fin. Econ.* 305, 308–10 (1976) (defining and describing agency costs).

to take steps to ultimately reduce their exposure. The absence of third parties among the Big Four would, under this alternative view, constitute evidence not of cataclysmic risk, but rather of the fact that the large auditing firms are the “lowest cost risk avoider,” and can more efficiently internalize agency costs by self-insuring.¹³

Empirically, while there is some academic literature addressing the auditing profession’s exposure to litigation risk, this literature tends to be dated, nonsystematic, and inattentive to the question of tail risk. For example, the authors of an oft-cited book estimate the profession’s aggregate liability to be in the tens of billions of dollars.¹⁴ However, their estimate does not attempt to unpack the probabilistic distribution of liability costs, both within and across firms, nor the ability of firms to take steps to avoid such liability. Both factors are important for determining whether liability risk alone imposes a significant exit risk on another Big Four auditor. As to the distributional question, little work has been done explicitly. Some studies have attempted to estimate the extent to which adverse liability events can also affect future income streams (largely by inducing shocks to a firm’s reputational capital). The disclosure of litigation, for instance, appears to have an adverse impact on fees for new engagements.¹⁵

As to the ability of firms to avoid litigation, the results in the literature appear to be mixed. Some well-known papers have used settlement data to argue that the underlying “merits” appear to matter less than one might expect, suggesting that some fraction of filed cases are brought solely to extract a nuisance settlement payment.¹⁶ A series of studies examining the effects of the passage of the Private Securities Litigation Reform Act of 1995 (PSLRA)¹⁷ concluded that the reform led to an increase in the number of meritorious suits brought, as measured by the predictive effect of accounting irregularities and insider transactions.¹⁸ Other recent papers have taken issue with this conclusion, however, arguing that the PSLRA reforms deterred a significant amount of meritorious

13. See, e.g., Guido Calabresi, *The Cost of Accidents: A Legal and Economic Analysis* 135–73 (1970) (discussing best cost avoider concepts).

14. Alvin A. Arens & James K. Loebbecke, *Auditing: An Integrated Approach* 106 (7th ed. 1997) (estimating auditing firms’ aggregate liability exposure exceeds \$30 billion).

15. See, e.g., Larry R. Davis & Daniel T. Simon, *The Impact of SEC Disciplinary Actions on Audit Fees*, 11 *Auditing* 58, 58, 66 (1992) (concluding that recently sanctioned auditors charged lower fees but that effect did not last long).

16. See, e.g., Janet Cooper Alexander, *Do the Merits Matter? A Study of Settlements in Securities Class Actions*, 43 *Stan. L. Rev.* 497, 500–01 (concluding that settlement outcomes in class action securities claims were not significantly affected by merits).

17. Pub. L. No. 104-67, 109 Stat. 737 (codified as amended in scattered sections of 15 and 18 U.S.C.).

18. See, e.g., Marilyn F. Johnson et al., *Do the Merits Matter More? Class Actions Under the Private Securities Litigation Reform Act 23–24* (Mich. Law & Econ. Research, Paper No. 02-011, 2002), available at <http://ssrn.com/abstract=349500> (on file with the *Columbia Law Review*).

litigation using “softer” forms of information.¹⁹ Few of these papers, however, have considered auditor liability separately.

All told, the existing empirical literature raises at least the possibility that auditors may face liability risks that are, at least on some margins, *endogenous* to the auditor’s own actions. Such a feature is important in a liability system if it is to have good deterrent effects. In contrast, if the liability system simply generated frivolous litigation against issuers and auditors, then (1) one would not expect issuers and auditors to respond to the risk by changing their day-to-day business practices; and (2) auditors could do little to minimize the risk beyond simply exiting from the industry. The strategy adopted in the empirical portion of this Essay is to conceptualize liability risk solely as exogenous, investigating whether observed exposure events characterize the types of risks that theory would predict to be uninsurable. Doing so, of course, can lead one to overestimate the true risk faced by auditors after factoring in actions that they can reasonably undertake to avoid liability risks, a point I revisit later in this Essay.

B. *Caveats and Limitations*

Before proceeding, it is important to recognize both the strengths and limitations of the current enterprise, and its ultimate bearing on policy questions. Most prominently, I do not aspire to (nor shall I offer) a “Goldilocksian” conclusion about whether, from a normative perspective, the probability estimates I generate on Big Four viability are “unacceptably high,” “unacceptably low,” or “just right.” Rather, my enterprise here is merely to present a conceptual methodology for understanding and estimating cataclysmic liability risk and then formulating a tentative estimate within the domain of securities class actions. At the end of the day, however, the projections produced here are just that—projections, which can undoubtedly be refined further. Moreover, even with additional refinements, such estimates do not touch on a number of other dimensions animating the policy debate, most notably the significance of the cost of additional contraction in the industry. The next logical step of a cost-benefit analysis of auditor liability, then, would have to take on the question of *magnitudes* of loss from exit in addition to that of probabilities. While I shall have something to say about this question,²⁰ it is not the focus of this Essay.

19. See, e.g., Stephen J. Choi, Do the Merits Matter Less After the Private Securities Litigation Reform Act? 3–5 (N.Y. Univ. Law & Econ., Paper No. 03-04, 2005), available at <http://ssrn.com/abstract=558285> (on file with the *Columbia Law Review*) (arguing that PSLRA deters meritorious suits that lack hard evidence before filing); Eric L. Talley & Gudrun Johnsen, Corporate Governance, Executive Compensation and Securities Litigation 4, 25–26 (Univ. of S. Cal. Law Sch., Olin Research, Paper No. 04-7, 2004), available at <http://ssrn.com/abstract=536963> (on file with the *Columbia Law Review*) (arguing that PSLRA may discourage both meritorious and frivolous suits).

20. See discussion *infra* Part II.D.

Moreover, it is important to note that there are myriad ways that an auditing firm's viability might become threatened by liability exposure. For example, as was the case for Arthur Andersen, firms can fail because a criminal conviction causes them to lose their ability to practice—a regulatory death penalty for accounting firms. Criminal indictments and other scandals may cause a firm's reputation to suffer even before a conviction, inducing clients to abandon the firm in a wholesale manner. Similarly, employees may abandon the firm in such circumstances, further depleting the reputational and human capital stock of the company and inducing more client withdrawals. Firms might also fail because they are forced to bear a significant financial hit in the form of criminal and civil penalties, fines, and damages in all sorts of litigation. Such financial exposure can catalyze many of the other sources of risk mentioned above, and thus may create viability problems far short of the point at which a firm declares bankruptcy. Each source of failure is difficult to assess independently, making their confluence even more difficult to predict.

Within this array of sources of liability risk, this study carves off but one scenario (albeit an important one): the possibility that a firm's viability will become threatened as a result of litigation from *federal securities class action lawsuits*. My focus on this specific source of risk by no means implies that it is the only threat to viability that auditors face. Rather it is a product of several concerns. First and foremost of these is a simple data limitation: Securities class actions are perhaps the best source of publicly available information touching on the liability exposure of large auditors. In addition, such actions are generally thought to comprise a significant (though not exclusive) portion of an auditing firm's litigation risk portfolio, and have been the focus of most recent reform efforts. Moreover, because federal securities laws are national in scope, it is more likely and practical that reformers would attempt to implement their proposals at that level. And finally, the conceptual approach employed here may be of general service to those interested in studying exit risk in the auditing profession. In theory, this form of analysis could lend itself to other sources of liability risk (such as Securities and Exchange Commission (SEC) actions, individual civil actions, and regulatory proceedings). Consequently, readers should not view the results presented here as exhaustive, but rather as using a specific dimension of liability exposure to pursue what I believe is a promising direction for future work that might offer a more unified account. Indeed, much more would have to be done if one were interested in making a convincing case for policy reform in one direction or another.

My analysis proceeds as follows. Part I considers the institutional landscape within which securities class actions live. It canvasses (somewhat briefly) the multidimensional sources of litigation that the dominant auditing firms currently face, ranging from state to federal jurisdiction, from public to private rights of action, and from criminal to civil sanctions. The bottom line of this analysis is that securities class actions

represent only a part—but an important part—of the overall liability portfolio that an auditing firm carries. Part II then presents an empirical analysis of auditor-related securities litigation, a model that ultimately culminates in a tentative set of point estimate projections of the likelihood of another firm failure over the next few years. The Essay concludes by discussing the important dynamics that exist between litigation risk and auditor behavior, which in turn affect audit quality.

I. A BRIEF(ISH) PRIMER ON THE SOURCES OF LITIGATION RISK

Before proceeding to the quantitative analysis, it is helpful to frame (and appropriately cabin) my enterprise by analyzing the different sources of liability risk for auditors. As will become apparent below, there is a multifaceted set of legal habits in which auditor liability risk lives, both substantively and procedurally. Table 1, below, provides a brief overview of many of these sources. The Table subdivides liability sources first by jurisdiction, distinguishing between state and federal law, and then by subject matter. In many—if not most—cases, firms and defendants can face liability exposure in multiple dimensions (although in some contexts, such as securities class actions, federal law has substantially pre-empted state law).

The columns of the Table describe some of the principal components of the liability theories represented in each category. Among other things, the tabular columns describe the species of liability; the “state of mind” requirement for asserting a cause of action; whether there is a private right of action under the applicable area of law; whether there is regulatory enforcement; whether there are civil damages; whether there are criminal sanctions; and, finally, whether the underlying doctrine is “immutable” in nature—that is, whether parties are legally prohibited from waiving and/or contracting around the background provisions of law.

Simple examination of the table below reveals a significant amount of overlap between state and federal sources of law. For example, both ordinary securities fraud at the federal level and tort law at the state level prescribe liability for inaccurate disclosures made to the investing public. In addition, the enforcement modalities for the above sources of law can be quite varied. For a given alleged action of fraud, for example, there may simultaneously be a private right of action, a regulatory cause of action, and a criminal action brought by a state or federal prosecutor. This overlapping and often concurrent form of enforcement is relatively unique to securities law, and significantly challenges the task of estimating liability risk.

Although time and space constraints prevent a comprehensive analysis of each area of law, it is perhaps worthwhile to consider some of the details of the statutory and common law sources of litigation from Table 1 in greater detail. The discussion that follows offers such an analysis, dividing along federal and state law, *ad seriatim*.

TABLE 1: SOURCES OF AUDITOR LIABILITY

	Authority	Type of Liability	Scienter	Private Right of Action?	Regulatory Enforcement?	Civil Damages?	Criminal Sanctions?	Immutable?
Federal Law Provisions	Rule 10b-5	Reckless Disclosure	Recklessness	Implied	Yes	Yes	Yes	Yes
	Section 11	Strict Liability Disclosure	Strict Liability	Express	Yes	Yes	Yes	Yes
	Section 13(b)	Accounting Standards / Internal Controls	Strict Liability	No	Yes	Yes	Yes	Yes
	Mail/Wire Fraud	General (bootstrap)	Tag-along	No	No	No	Yes	Yes
	RICO	General (bootstrap)	Tag-along	Express	No	Yes	Yes	Yes
	ERISA	Fiduciary Duty Violations	Gross Negligence	Express	Yes	No	Limited	Yes
State Law Provisions	Blue Sky Laws	Merit	Varies	Yes	Yes	Varies	Yes	Varies
	Contract	3rd Party Beneficiaries / Negligence	Strict Liability	Yes	No	Yes	No	No
	Tort	Negligence	Negligence	Yes	No	Yes	No	Possibly
	State Boards	Regulatory Refusal to Certify	N/A	No	Yes	No	No	Yes
	Corporate Law	Fiduciary Duty Violations	Variable (depending on type of duty)	Implied	No	Yes	No	Variable

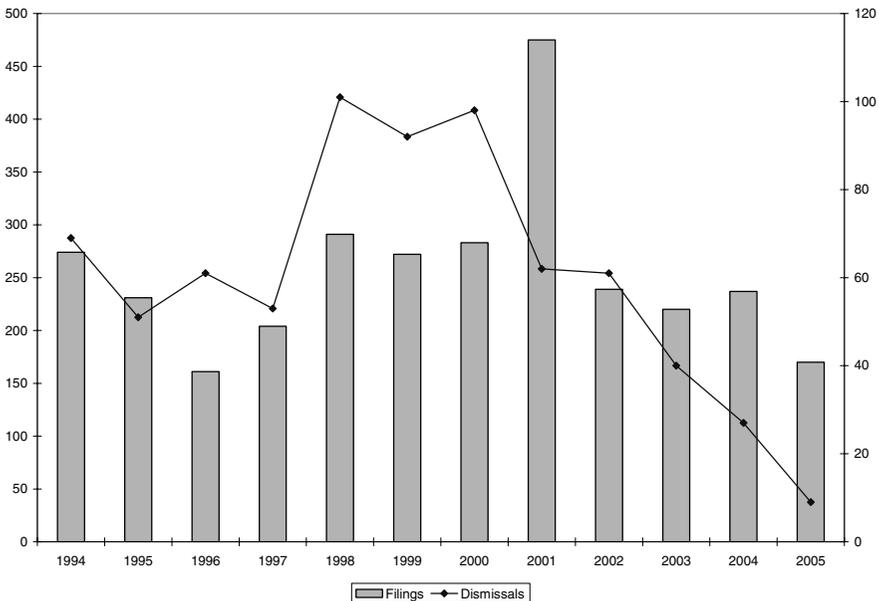
A. Federal Law

Of all the sources of liability that auditors face, perhaps the most familiar is embodied in the antifraud provisions of the federal securities laws. Not only does this source of liability capture a significant fraction of the national headlines, but it is perhaps the most significant monetary source of exposure for dominant firms today. A recent study, for example, suggests that since 1977, American firms have paid just under \$14 billion in fines, disgorgements, or civil remedies to either the SEC or private plaintiffs under federal securities fraud actions.²¹ While the SEC has wide authority to pursue civil litigation and conduct administrative adjudications for violations of its rules, private plaintiffs can bring civil litigation only when they are expressly provided a private right of action by statute, or one has been implied by courts. Private plaintiffs, moreover, may sometimes pursue litigation through a class action (usually in federal court), but can and frequently do bring suit individually (in either state or federal court). Auditing firms potentially face liability from many of

21. See Jonathan M. Karpoff et al., *The Cost to Firms of Cooking the Books* 15, 35 tbl.7 (Mar. 8, 2006) (unpublished manuscript, on file with the *Columbia Law Review*), available at <http://ssrn.com/abstract=652121> (providing data on legal sanctions for financial reporting violations).

the same sources of exposure that confront public companies. Figure 1 below illustrates a key dimension of securities fraud liability risk—federal class actions—from 1994 through 2005. The Figure considers all filings and dismissals (not just those against auditing firms—a topic this Essay addresses in the next section). The left vertical axis measures the number of filings in a given year (pictured by the bars), and the right vertical axis illustrates number of dismissals.²² It is interesting to note that filings and dismissals are procyclical with one another, but out of phase. Indeed, in the mid-1990s, filings decreased while dismissals increased. Since around 2000, however, dismissals have decreased monotonically while filings have largely leveled off since 2002 (with some modest reductions).²³

FIGURE 1: FEDERAL SECURITIES CLASS ACTION FILING EVENTS AND DISMISSALS: 1994–2005 (BY FILING DATE)



The three most salient sources of auditor liability emanate from section 10(b) of the Securities Exchange Act of 1934 (Exchange Act), section 11 of the Securities Act of 1933 (Securities Act), and section 13(b) of

22. For source of Figure, see Sec. Class Action Servs., Securities Class Action Alert, at <http://scas.issproxy.com/Login.php> (last visited Mar. 1, 2006) (data on file with author) [hereinafter SCAA]. The numbers given in the Figure fall below those commonly referred to in the literature. This is for good reason: Often, multiple simultaneous filings are made against a single defendant. Figure 1 reports on data in which such multiple same-year filings have been collapsed into a single event.

23. It is important to note that the particularly low level of dismissals in 2004 and 2005 is, at least in part, a statistical aberration. Many of those filed cases are still in the litigation “pipeline,” and some are certain to be dismissed, which will eventually elevate the dismissal rates depicted in the Figure.

the Exchange Act. Many (though not all) federal securities laws and regulations are enforced through a patchwork of jurisdictional devices, including private suits (class action and individual), civil actions brought by the SEC, administrative proceedings, and criminal prosecutions. Although the analysis below carves out criminal prosecutions as a separate category due to their distinct consequences and evidentiary burdens,²⁴ it groups together private rights of action, SEC civil enforcement actions, and regulatory proceedings.²⁵ The substantive law undergirding them is similar, but there are some differences between public and private enforcement (which the analysis below considers at relevant junctures).

1. *Section 10(b)*. — Rule 10b-5 is the SEC's implementing regulation of section 10(b) of the Exchange Act.²⁶ The rule prohibits any person from "employ[ing] any device, scheme, or artifice to defraud"; from making "any untrue statement of a material fact" or omitting facts "necessary in order to make the statements made, in the light of the circumstances under which they were made, not misleading"; and from engaging in "any act, practice, or course of business which operates or would operate as a fraud or deceit upon any person in connection with the purchase or sale of any security."²⁷

Rule 10b-5 liability is the most general prohibition in existence against fraudulent behavior related to securities. As such, it is in many respects the crescent wrench of the securities fraud toolbox. It is far and away the most popular approach in civil securities fraud litigation,²⁸ and it is available to both private plaintiffs and the SEC (in civil litigation and administrative proceedings). A successful 10b-5 claimant must plead and prove: (a) the existence of a false statement or omission in connection with a purchase or sale of security; (b) made with the requisite state of mind (usually some version of recklessness); (c) that is material; (d) upon which plaintiffs relied; (e) that caused them to enter into a transaction ("transaction causation"); (f) which in turn caused a resulting loss ("loss causation"); (g) that is provable in money damages.²⁹

24. See discussion *infra* Part I.A.5.

25. The federal government enjoys its own ability to obtain injunctions and recover civil penalties and disgorgements from violators. Federal law provides for civil penalties up to \$110,000 for individuals and \$550,000 for firms or, if greater, the gross gain to the defendant. Penalties are subject to other limitations depending on the nature of the violation. Administrative penalties can also be large: up to \$110,000 for individuals and \$550,000 for firms, plus accounting and disgorgement of illegal profits. See Karpoff et al., *supra* note 21, at 7–9 (outlining enforcement process of securities actions by federal government).

26. Securities Exchange Act of 1934 § 10(b), 15 U.S.C. § 78j(b) (2000).

27. 17 C.F.R. § 240.10b-5(a)–(c) (2006).

28. Rule 10b-5 allegations are present in over 60% of all private class actions filings. See SCAA, *supra* note 22.

29. Some of these factors (such as reliance and transaction causation) tend to overlap considerably with one another.

This is a significant set of hurdles, and many of them have been reshaped by statute or case law over the years. An important moment for auditors' (and others') liability occurred over twenty years ago, when the Supreme Court significantly relaxed the reliance requirement in private securities class actions. Before the early 1980s, private plaintiffs were frequently required to plead and prove that class members actually relied on the audited financial statements in order to bring a 10b-5 action. This requirement limited liability in many cases where passive or unsophisticated investors simply did not study (or even receive) the audited statements. In *Basic, Inc. v. Levinson*, however, the Supreme Court relaxed the reliance requirement by introducing the (so-called) "fraud on the market" (FOM) theory.³⁰ An outgrowth of the semistrong form of the efficient capital markets hypothesis (ECMH),³¹ the FOM doctrine presumes the market price of a security reflects the content of all publicly available information, including a company's audited financial statements. Consequently, when an investor relies on the price of a security, the FOM approach dictates that she necessarily relies on all of the constituent information that informs that price. The effect of the FOM theory in financial statement fraud is that all shareholders who bought shares while a stock was artificially high due to fraudulent financial statements, and who sold them after the fraud was revealed, have potential class standing to file a 10b-5 claim.

Another salient reform occurred in 1995, when Congress, overriding a presidential veto, passed the PSLRA.³² This set of reforms was institutionally noteworthy, in that it specifically targeted private plaintiffs, leaving the SEC substantially in the same position as it had been before. The legislation, moreover, had a number of important effects on the auditing and accounting professions. The first was the replacement of joint and several liability with proportional liability for some defendants, at least when their liability did not arise out of *knowing* behavior. This meant that accountants, bankers, and lawyers—defendants with deep pockets—would only be held responsible for a judicially determined percentage of damages representing the fractional portion of their responsibility. A second reform required private plaintiffs to satisfy a much stricter pleading standard, requiring them to plead "with particularity" facts giving rise to a "strong inference of fraud." In a suit against auditors, this standard can

30. 485 U.S. 224, 241–42 (1988).

31. The semistrong ECMH states that all publicly available information is embedded into the stock price of a public company. It is distinguishable from the weak-form hypothesis (which asserts that only historical information is reflected) and the strong-form hypothesis (which asserts that even privately held information is reflected in stock prices). See Stephen A. Ross, Randolph W. Westerfield & Jeffery F. Jaffe, *Corporate Finance* 352–57 (7th ed. 2005).

32. Pub. L. No. 104-67, 109 Stat. 737 (1995) (codified as amended in scattered sections of 15 and 18 U.S.C.).

be difficult to meet prior to discovery.³³ Significantly, another reform imposed a mandatory stay on discovery pending a defendant's motion to dismiss. Thus, the difficulty in meeting the elevated pleading standard, combined with the discovery stay, made it incumbent on private plaintiffs to come forward only if they could cobble together a prima facie case of securities fraud using the "facts at hand"—only the facts available in the public domain. Because these procedural impediments do not confront the SEC or its investigation process, many private plaintiffs now appear to prefer to wait for the SEC to act before pressing their own claims.

In the years since the passage of the PSLRA, courts have continued to play an important role in developing the doctrine around 10b-5 liability for auditors. A potentially significant development occurred recently in *Dura Pharmaceuticals, Inc. v. Broudo*, where the Supreme Court clarified the element of loss causation, under which a plaintiff must show that any transaction induced by reliance on the alleged fraud caused the plaintiff to incur a financial loss.³⁴ In *Dura*, the Court overturned a Ninth Circuit opinion which had held that all a plaintiff need prove to demonstrate loss causation in a 10b-5 action is that the issuer's stock price was artificially inflated at the time that the plaintiff purchased it³⁵ (and, presumably, quantifying by how much). Under the Court's holding, however, a plaintiff must be able to plead and demonstrate that the plaintiff later suffered an economic loss, presumably caused by a fall in market price once the news of the alleged fraud was disseminated.³⁶ The *Dura* holding homogenized circuit court disagreement about loss causation, forcing the Ninth Circuit back into line with a number of other federal circuits, including the Second, Third, and Eleventh circuits.³⁷ In conjunction with the pro-

33. For example, if a company restates its earnings, shareholder-plaintiffs may attempt to sue the auditor as a primary violator. However, merely alleging—even with particularity—that a company's financials are not in compliance with Generally Accepted Accounting Practices has consistently been held inadequate to state a cause of action. See, e.g., *Lovlace v. Software Spectrum, Inc.*, 78 F.3d 1015, 1018, 1020 (5th Cir. 1996) (“[A] failure to follow GAAP, without more, does not establish scienter. The party must know that it is publishing materially false information, or the party must be severely reckless in publishing such information.” (internal quotation marks omitted) (quoting *Fine v. Am. Solar King Corp.*, 919 F.2d 290, 297 (5th Cir. 1990))). Even before the PSLRA, in fact, one can find evidence of increasing judicial skepticism toward auditor liability pleadings. See, e.g., *Melder v. Morris*, 27 F.3d 1097, 1103 (5th Cir. 1994) (“The plaintiffs’ boilerplate averments that the accountants violated particular accounting standards are not, without more, sufficient to support inferences of fraud.”).

34. 544 U.S. 336, 342–46 (2005).

35. See *Broudo v. Dura Pharms., Inc.*, 339 F.3d 933, 938 (9th Cir. 2003), rev'd, 544 U.S. 336.

36. *Dura*, 544 U.S. at 346.

37. See, e.g., *Emergent Capital Inv. Mgmt. v. Stonepath Group, Inc.*, 343 F.3d 189, 197 (2d Cir. 2003) (“Loss causation . . . is the causal link between the alleged misconduct and the economic harm ultimately suffered by the plaintiff.”); *Semerenco v. Candant Corp.*, 223 F.3d 165, 183–85 (3d Cir. 2000) (“[A] plaintiff . . . must establish that the alleged misrepresentations proximately caused the decline in the security’s value to satisfy the element of loss causation.”); *Robbins v. Koger Props., Inc.*, 116 F.3d 1441, 1447–49

portionality requirement of the PSLRA, *Dura* may well increase the difficulty in pleading and proving the likely effects of, for example, an unqualified auditor's opinion on a company's stock price inflation, as it requires a private plaintiff to "trace back" causally any subsequent price movements to the auditor's prior opinion at the exclusion of other factors.

Although most of its significant changes were ostensibly confined to enhanced governance and disclosure obligations (rather than changes to the character of fraud litigation), the Sarbanes-Oxley Act of 2002 (Sarbox) has nonetheless effected a number of important changes to securities litigation. For private plaintiffs, the most salient was the extension of the statute of limitations for filing private securities action. Traditionally, private plaintiffs had a minimum of one year from discovering the act of fraud, or three years from its actual occurrence, to file a claim.³⁸ Under Sarbox, these time limits were increased to two and five years, respectively.³⁹ Although the other central provisions of Sarbox were specifically excluded from private rights of action, they may well have an effect on the ways in which private plaintiffs choose to plead and prove securities fraud in the future.⁴⁰ Moreover, noncompliance with Sarbox mandates may well become a factor in SEC civil or regulatory actions under Rule 10b-5 in the future.

Historically, accountants and auditors were not viewed (even by the plaintiffs' bar) as primarily responsible for the fraudulent behavior of their clients. Rather, auditing firms were typically brought into securities litigation for having provided material assistance to those "primary" viola-

(11th Cir. 1997) ("[L]oss causation describes the link between the defendant's misconduct and the plaintiff's economic loss." (citation omitted)). Other circuits, like the Seventh, had occupied a middle ground. See *Bastian v. Petren Res. Corp.*, 892 F.2d 680, 685 (7th Cir. 1990) (arguing more general proposition that loss causation "is an exotic name . . . for the standard rule of tort law that the plaintiff must allege and prove that, but for the defendant's wrongdoing, the plaintiff would not have incurred the harm of which he complains").

38. E.g., *Lampf, Pleva, Lipkind, Prupis & Pettigrew v. Gilbertson*, 501 U.S. 350, 361 (1991) ("We therefore conclude that we must reject the Commission's contention that the 5-year period . . . is more appropriate for § 10(b) actions than is the 1-and-3 year structure in the Act's original remedial provisions.").

39. Specifically, section 804 of Sarbox added the following provision:

(b) Notwithstanding subsection (a), a private right of action that involves a claim of fraud, deceit, manipulation, or contrivance in contravention of a regulatory requirement concerning the securities laws, as defined in section 3(a)(47) of the Securities Exchange Act of 1934 (15 U.S.C. 78c(a)(47)), may be brought not later than the earlier of—

- (1) 2 years after the discovery of the facts constituting the violation; or
- (2) 5 years after such violation.

Sarbanes-Oxley Act of 2002 § 804(a)(2), Pub. L. No. 107-204, 116 Stat. 745, 801 (codified at 28 U.S.C. § 1658 (Supp. III 2003)).

40. See, e.g., Robert Serio & Matthew Kahn, Private Rights of Action and the Sarbanes-Oxley Act of 2002, 38 Sec. Reg. & L. Rep. (BNA) 668, 669-71 (Apr. 17, 2006) (highlighting possible implied causes of action from sections of Sarbox).

tors who planned and carried out the violation, usually knowing (or recklessly remaining ignorant) about the underlying scheme. Frequently, such secondary liability is referred to as an “aiding and abetting” violation. Neither the Securities Act nor the Exchange Act explicitly imposes liability on secondary violators for securities fraud violations. Nevertheless, a number of federal district and circuit courts had, until roughly a decade ago, routinely invoked aiding and abetting analogies from other doctrines (where the concept was well established) to impose liability on secondary actors in private actions who allegedly assisted in the perpetration of financial fraud. Such approaches are often appealing to plaintiffs, particularly when the issuer is in financial distress, in bankruptcy, or otherwise effectively judgment-proof. Indeed, typical aiding and abetting defendants (such as accountants, auditors, underwriters, and attorneys) often provide a significantly more attractive target than their frequently impecunious clients.

In a landmark securities fraud case from 1994, however, the Supreme Court all but eliminated the aiding and abetting route for private securities fraud plaintiffs. In *Central Bank of Denver v. First Interstate Bank of Denver*, the Court ruled that the absence of any explicit mention of “aiding and abetting” in both the Securities and Exchange Acts reflected a congressional intent to withhold that private right of action from plaintiffs alleging such theories.⁴¹ This holding came as somewhat of a surprise to outside observers, given that the absence of an explicit authorizing provision did not, apparently, deter the Court from finding an implied private right of action against primary defendants in other contexts, such as primary 10b-5 liability.⁴²

Nevertheless, even after the *Central Bank* decision, auditors did not emerge free from securities fraud liability risk. To the contrary, accounting firms still face liability for activities that historically would have fallen under the aiding and abetting category, though the source or theory of such liability has metamorphosized somewhat. First, the *Central Bank* opinion did not limit the SEC’s use of aiding and abetting doctrines to pursue its civil cases against auditors, and the SEC continues to exploit this ability today.⁴³ Second, nothing in the Court’s opinion prevents a private plaintiff from alleging that an auditor played such a central role in the fraud that it constituted a joint, *primary* violator of antifraud provisions in federal securities laws. The plaintiffs’ bar was quick to realize this

41. 511 U.S. 164, 191 (1994).

42. The Court was, perhaps, mindful of academic criticisms about the implied private right of action and its viability. See *id.* at 169 (citing Daniel Fischel, *Secondary Liability Under Section 10(b) of the Securities Act of 1934*, 69 Cal. L. Rev. 80, 82 (1981) (arguing that theory of secondary liability was no longer viable given recent Supreme Court strict interpretation of federal securities laws)).

43. The Department of Justice also continues to prosecute criminal cases using these doctrines.

fact, and accordingly most of the fraud actions filed against auditors now implicate them as primary defendants.

2. *Section 11.* — In contrast to the crescent wrench of Rule 10b-5, claims based on section 11 of the Securities Act are more akin to the needle-nose pliers of the securities fraud toolkit: infrequently used, but highly effective in the right circumstances. Section 11(a) provides that a person acquiring a security covered by a registration statement may recover damages on a joint and several basis from the issuer, its directors, its officers who signed the registration statement, the accountants and other experts named in the registration statement, and every underwriter of the security if “any part of the registration statement, when such part became effective, contained an untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary to make the statements therein not misleading.”⁴⁴ Unlike section 10b, section 11 specifically allows a private right of action, including actions against all certifying accountants (subject to a due diligence defense).⁴⁵

In some respects, section 11 and Rule 10b-5 are similar. For example, both require that a plaintiff demonstrate the materiality of the misstatements or omissions, reliance, and transaction or loss causation.⁴⁶ Nevertheless, section 11 diverges from Rule 10b-5 (in the plaintiff’s favor) in a few significant respects. First, it does not require a plaintiff (or the SEC, for that matter) to prove damages explicitly, but rather simply presumes them to be the initial offering price of the securities, less the price at the time of suit.⁴⁷ Second, section 11 explicitly grants private

44. Securities Act of 1933 § 11(a), 15 U.S.C. § 77(k)(a) (2000). Moreover, Rule 408 of the Securities Act requires issuers to disclose “such further material information, if any, as may be necessary to make the required statements, in the light of the circumstances under which they are made, not misleading.” 17 C.F.R. § 230.408(a) (2006).

45. See James C. Spindler, IPO Liability and Entrepreneurial Response 7–16 (Univ. of Chi. John M. Olin Law & Econ., Working Paper No. 243, 2005), available at http://www.law.uchicago.edu/Lawecon/WkngPprs_226-50/243-jcs-ipo.pdf (on file with the *Columbia Law Review*) (giving overview of section 11 liability).

46. For example, Rule 405 of the Securities Act defines materiality for the purposes of section 11, and states that “[t]he term *material* . . . [refers] to those matters to which there is a substantial likelihood that a reasonable investor would attach importance in determining whether to purchase the security registered.” 17 C.F.R. § 230.405. This standard is virtually identical to that in other private rights of action in securities fraud. See *TSC Indus., Inc. v. Northway, Inc.*, 426 U.S. 438, 449 (1976) (defining material fact in the context of Rule 14a-9 liability as one to which there is “a substantial likelihood that the disclosure of the omitted fact would have been viewed by the reasonable investor as having significantly altered the ‘total mix’ of information made available”). The Supreme Court subsequently adopted this same standard for 10b-5 liability. See *Basic Inc. v. Levinson*, 485 U.S. 224, 232 (1988).

47. At the same time, the defendant is afforded an affirmative defense to the extent that it can demonstrate that any or all of the decline in price was caused by a set of factors independent of the firm’s alleged fraud. See Securities Act of 1933 § 11(e), 15 U.S.C. § 77k(e).

plaintiffs a cause of action⁴⁸ that can only be limited by a future act of Congress (rather than by courts or by the SEC through a rule change). And finally, and most significantly, section 11 eliminates the scienter requirement for liability, effectively rendering it a *strict liability* source of legal exposure for both issuers and accounting firms.⁴⁹ Notably, private actions alleging section 11 liability claims were left largely unaffected by the PSLRA. Consequently, section 11 imposes a narrow but significant source of liability risk for auditing firms engaged to certify the financial statements of firms who are going public.

3. *Section 13(b)*. — Unlike section 11 or Rule 10b-5 actions, the pursuit of claims under section 13(b) of the Exchange Act is delegated solely to public authorities.⁵⁰ Nevertheless, section 13(b) is an important liability constraint on accounting practices at public companies and their auditors. The section reflects two significant statutory amendments during the last thirty years. The first, the Foreign Corrupt Practices Act of 1977 (FCPA),⁵¹ was an act largely intended to deter bribery of foreign officials and restore public confidence in the integrity of the American business system. While its most central features are therefore directed at acts of foreign bribery, the FCPA also inserted new accounting provisions into the Exchange Act. In particular, it added section 13(b)(2)(A),⁵² referred to as the books and records provision, which requires all firms subject to Exchange Act reporting requirements to keep detailed books and records that accurately reflect corporate payments and transactions. It also added section 13(b)(2)(B),⁵³ known as the internal controls provision, which requires companies to devise and maintain a system of internal accounting controls to assure management's control over the company's assets.⁵⁴

In the years since, section 13(b) has proven to be an important weapon in the federal government's antifraud arsenal.⁵⁵ Before the FCPA, financial misrepresentation cases relied almost exclusively on the other antifraud provisions of the Securities and Exchange Acts. Most of these statutes and regulations required proof of intent (scienter). Section 13(b), in contrast, granted powers to the government to prosecute financial misrepresentation without demonstrating intent. Consequently, as Jonathan Karpoff's study shows, all financial misrepresentation actions

48. *Id.* § 11(a) (authorizing "any person" acquiring security to sue on account of untrue or misleading registration statement).

49. *Id.* § 11(a)(1)–(5) (listing liable parties without reference to mens rea).

50. Securities Exchange Act of 1934 § 13(b), 15 U.S.C. § 78m(b).

51. Pub. L. No. 95-213, 91 Stat. 1494 (1977) (codified as amended at 15 U.S.C. §§ 78m, 78dd-1, 78dd-2, 78dd-3, 78ff).

52. Securities Exchange Act of 1934 § 13(b)(2)(A), 15 U.S.C. § 78m(b)(2)(A).

53. *Id.* § 13(b)(2)(B).

54. Two rules, 13b2-1 and 13b2-2, were also added to the Code of Federal Regulations to aid in enforcement of the Exchange Act's provisions. See 17 C.F.R. §§ 240.13b2-1, 240.13b2-2 (2006). These rules do not establish a private right of action.

55. The section does not provide for any private rights of action.

brought by the government since 1977 included charges under the FCPA's accounting provisions.⁵⁶

The second revision of section 13 is better known and current: Sarbox itself amended the internal controls component of section 13 in a number of respects. Specifically, section 404 of Sarbox and related rules adopted by the SEC impose a number of additional internal controls requirements.⁵⁷ First, subsection (a) requires that each reporting company (other than a registered investment company) state in its annual report "the responsibility of management for establishing and maintaining an adequate internal control structure and procedures for financial reporting."⁵⁸ Moreover, such annual reports must include a managerial assessment, as of the end of the company's most recent fiscal year, of the effectiveness of the company's internal control over financial reporting and procedures for financial reporting.⁵⁹ Finally, subsection 404(b) requires that each reporting company's independent auditor must attest to management's assessment of the company's internal controls, and that the company file the auditor's attestation report as part of the company's annual report.⁶⁰ While the section 404 amendments track many of the pre-existing requirements under section 13(b)(2)(A), they introduce both managerial responsibilities for internal controls, as well as an assessment requirement by an outside auditor. At the time of Sarbox's passage, the exact content of the auditor's attestation report was delegated to regulators for subsequent administrative clarification.

This clarification arrived in early 2004, when the Public Company Accounting Oversight Board promulgated Auditing Standard No. 2.⁶¹ The standard states that the auditor report in an internal controls audit must include an opinion as to whether "management's assessment of the effectiveness of the company's internal control over financial reporting . . . is fairly stated, in all material respects" as of the date specified in management's assessment.⁶² The auditor also must itself audit the company's financial statements as of the date specified in management's assessment because the information the auditor obtains during a financial statement audit is relevant to the auditor's conclusion about the effectiveness of the company's internal control over financial reporting.⁶³ Maintaining effective control over financial reporting means that no "material weaknesses" exist;⁶⁴ therefore, the objective of the audit of internal con-

56. See Karpoff et al., *supra* note 21, at 5.

57. Sarbanes-Oxley Act of 2002 § 404, 15 U.S.C. § 7262 (Supp. III 2003).

58. Id. § 404(a)(1).

59. Id. § 404(a)(2).

60. Id. § 404(b).

61. See Auditing and Related Prof'l Practice Standards, Auditing Standard No. 2 (Pub. Co. Accounting Oversight Bd. 2004), available at http://www.pcaobus.org/Rules/Rules_of_the_Board/Auditing_Standard_2.pdf (on file with the *Columbia Law Review*).

62. Id. para. 167(1), at 208.

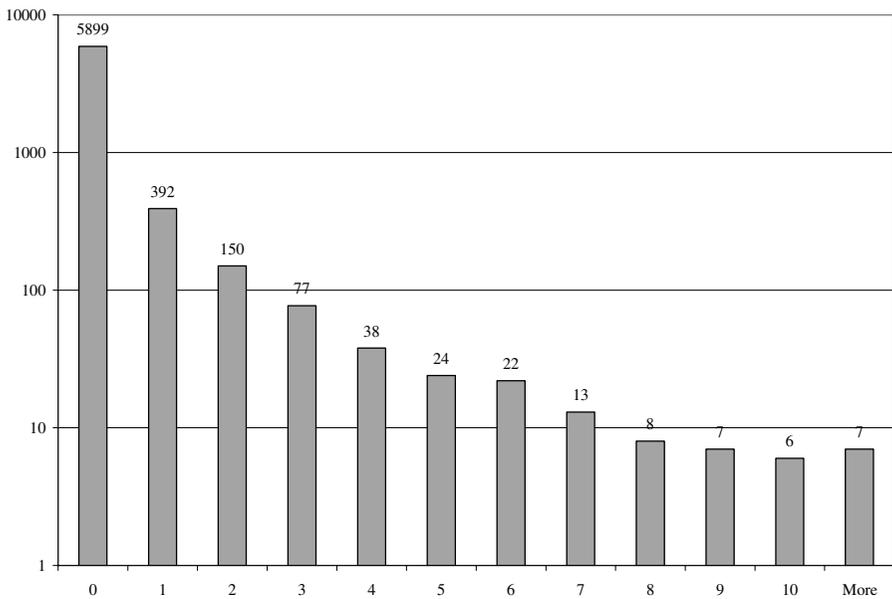
63. Id. para. 98, at 183.

64. Id. para. 164, at 205.

trol over financial reporting is to obtain “reasonable assurance” that no material weaknesses exist as of the date specified in management’s assessment.⁶⁵

Internal controls reports began to become mandatory for many public companies in the latter half of 2004 (based on individual firms’ reporting/fiscal years). Since that time, well over 3,000 public companies and auditors have filed such reports. (Nonaccelerated filers will not be required to do so until 2007.) Figure 2 below illustrates the frequency with which auditors’ attestation reports thus far have found material weaknesses to exist in the company’s internal controls assessment. As demonstrated by the table, the vast majority of companies (89%) have, thus far, been given a clean bill of health in their section 404 reports (albeit undoubtedly at some cost). Auditors found at least one material weakness in the remaining companies’ (11%) assessments.

FIGURE 2: NUMBER OF INTERNAL CONTROLS WEAKNESSES IDENTIFIED BY AUDITOR’S ATTESTATION REPORTS (N=6643) AS OF MARCH 2006 (VERTICAL SCALE IN LOGARITHMS)⁶⁶



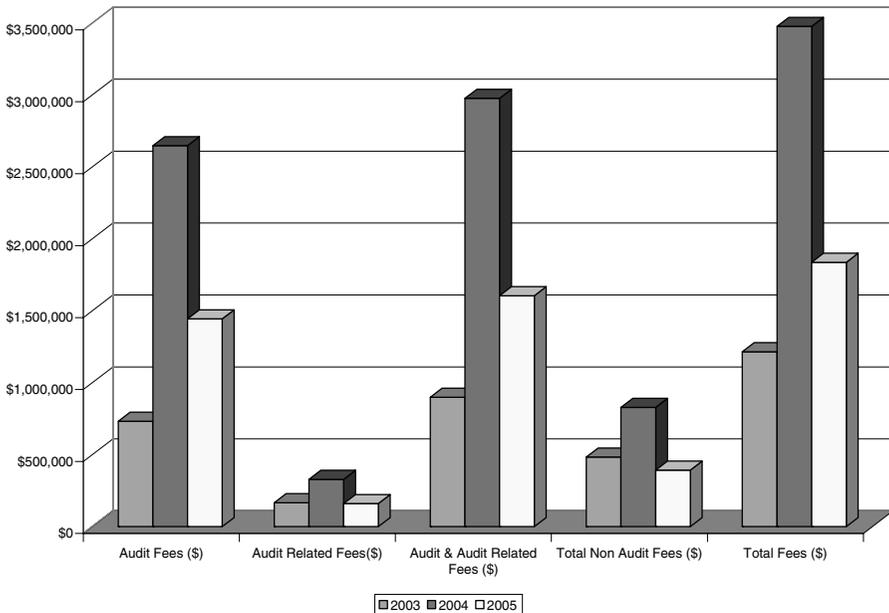
Because the section 404 process is still early in its implementation, there is little or no track record of SEC enforcement patterns concerning auditor compliance with the newer mandates of the internal controls regulations. Tailored predictions about future liability risks related to this new requirement are thus likely to be many years off.

65. *Id.* para. 175, at 210.

66. Audit Analytics Database, at <http://www.auditanalytics.com> (last visited Mar. 31, 2006) (data on file with author).

One interesting development since the initial roll out of section 404, however, has been the fee and cost structure that Big Four auditors present to their clients. During the first year of internal controls attestations, auditing costs rose to staggering proportions: An average Big Four client, for example, faced nearly \$3 million in audit and audit-related fees, compared to just under \$900,000 in fiscal year 2003. As Figure 3 below suggests, the apparent pricing effects of section 404 on Big Four firms are still perhaps evident, but costs have decreased substantially in the second year of internal controls attestations. Indeed, among Big Four auditors, pricing patterns in 2005 appear more similar to 2003 than 2004. Almost surely, this decrease comes from the fact that internal controls compliance required large sunk costs. However, it is possible that this fee structure also represents an assessment of smaller liability exposure among auditors than they had initially feared.⁶⁷

FIGURE 3: AVERAGE AUDIT FEES, AUDIT-RELATED FEES, AND NON-AUDIT FEES AMONG THE BIG FOUR: 2003–2005⁶⁸



4. *Other Civil Litigation Under Federal Law.* — In addition to the central components of federal securities fraud, there are many other “add on” statutory violations that are frequently alleged along with (and sometimes as an alternative to) securities fraud. Although an exhaustive description is not appropriate for this Essay, the following represent two significant examples.

67. This Essay is unable to test this claim directly.

68. Audit Analytics Database, *supra* note 66.

One such source is the Racketeer Influenced and Corrupt Organizations Act of 1970 (RICO).⁶⁹ Although predominantly a statute aimed at eliminating organized crime, RICO explicitly includes securities fraud within its ambit.⁷⁰ One aspect of the statute allows for “civil” RICO claims, which—at least traditionally—gave rise to the prospect of treble damages (plus attorneys’ fees) for successful plaintiffs.⁷¹ Such claims often had substantial settlement value when filed against companies where reputations are of significant importance. For example, Drexel Burnham Lambert paid \$650 million rather than face trial on federal RICO charges.⁷² Similarly, because the accounting profession also relies on reputational capital as a source of value, RICO was frequently perceived as a serious litigation risk.

The 1995 PSLRA, however, substantially reduced the current vitality of RICO claims as an independent source of liability. In particular, the PSLRA severely restricted the private remedy, requiring that a defendant must have already been held criminally liable.⁷³ Thus, RICO now is of more limited importance, except in cases where prosecutors have already obtained a conviction (cases that, until recently, included Arthur Andersen).

5. *Criminal Prosecutions.* — Although the SEC has significant powers to enforce federal securities laws through civil litigation and administrative proceedings, for some serious matters it frequently refers them to the Attorney General’s office, which has the authority to bring criminal complaints upon the detection of a violation of federal law. Although SEC actions and DOJ actions can take place simultaneously, the usual practice is for one entity to take the lead in prosecuting a case while the other takes a distant second position. Some examples of the use of criminal penalties follow.

a. *Securities and Exchange Acts and Regulations.* — Although most of the public enforcement of federal securities laws is done through the civil and administrative powers of the SEC, federal law allows for broad criminal enforcement of the Securities and Exchange Acts. Indeed, the criminal provisions of both acts make it a felony for any person to violate willfully any of the securities laws or regulations, to make willful misstatements or omissions in any document filed in accordance with the securities laws and regulations or, if in connection with an application for membership or association, the rules of a self-regulatory organization.⁷⁴

69. Pub. L. No. 91-452, 84 Stat. 922 (1970) (codified as amended at 18 U.S.C. §§ 1961–1968 (2000)).

70. 18 U.S.C. § 1961(1)(D).

71. *Id.* § 1964(c) (allowing “[a]ny person injured” to recover treble damages and “reasonable attorney’s fee”).

72. Elizabeth A. Skorcz, Comment, RICO Forfeiture: Secured Lenders Beware, 37 UCLA L. Rev. 1199, 1217 n.79 (1990).

73. Pub. L. No. 104-67, § 107, 109 Stat. 737, 758 (1995) (codified at 18 U.S.C. § 1964).

74. See Securities Act of 1933 § 24, 15 U.S.C. § 77x (2000); Securities Exchange Act of 1934 § 32(a), 15 U.S.C. § 78ff.

Maximum penalties for violations are a \$5,000,000 fine and twenty years imprisonment for individuals and a \$25,000,000 fine for firms.⁷⁵ In addition, many of the “add on” statutes (including RICO and ERISA) also have criminal liability components that are sometimes at issue in fraud cases.⁷⁶

b. *Obstruction of Justice.* — Another important source of organizational criminal liability is through obstruction of justice statutes, which prohibit individuals and companies from knowingly engaging in acts that subvert or impair an official governmental proceeding, including tampering with witnesses or documentary evidence. This source is particularly salient as it was the principal charge leveled against Arthur Andersen in 2002, as well as many other prominent individual defendants in recent white collar criminal cases, such as Frank Quattrone and Martha Stewart.⁷⁷

In March of 2002, Arthur Andersen was indicted in federal court in the Southern District of Texas on a single count of witness tampering.⁷⁸ The principal allegation was that in the fall of 2001, Andersen “did knowingly, intentionally and corruptly persuade . . . other persons, to wit: [Andersen] employees, with intent to cause them to withhold documents from, and alter documents for use in, official proceedings, namely: regulatory and criminal proceedings and investigations.”⁷⁹ After a protracted two-week period of deliberation, the jury returned a guilty verdict. Andersen subsequently appealed to the Fifth Circuit, arguing that the trial court had charged the jury with instructions that were overly broad, biasing the outcome in favor of conviction. Nevertheless, the Fifth Circuit upheld the district court verdict.⁸⁰

75. Securities Exchange Act of 1934 § 32(a).

76. See Employee Benefits Sec. Admin., U.S. Dep’t of Labor, ERISA Enforcement, Aug. 20, 2006, at http://www.dol.gov/ebsa/erisa_enforcement.html (on file with the *Columbia Law Review*) (detailing ERISA’s criminal provisions).

77. See *United States v. Quattrone*, 441 F.3d 153, 161 (2d Cir. 2006); *United States v. Stewart*, 433 F.3d 273, 289 (2d Cir. 2006).

78. See *Arthur Andersen, LLP v. United States*, 544 U.S. 696, 702 (2005) (describing timing of indictment). The witness tampering statute underlying the indictment provided in relevant part:

Whoever knowingly uses intimidation or physical force, threatens, or corruptly persuades another person, or attempts to do so, or engages in misleading conduct toward another person, with intent to . . . cause or induce any person to . . . withhold testimony, or withhold a record, document, or other object, from an official proceeding [or] alter, destroy, mutilate, or conceal an object with intent to impair the object’s integrity or availability for use in an official proceeding . . . shall be fined under this title or imprisoned not more than ten years, or both.

18 U.S.C. § 1512(b) (current version at 18 U.S.C. § 1512(b) (Supp. III 2003)).

79. *Andersen*, 544 U.S. at 702 (internal quotation marks omitted).

80. *Arthur Andersen, LLP v. United States*, 374 F.3d 281, 284 (5th Cir. 2004), rev’d, 544 U.S. 696.

In late May of 2005, the Supreme Court reversed, holding that the jury instructions were erroneous and overinclusive on at least two levels.⁸¹ First, the Court held that the trial court had incorrectly instructed the jury that it could find guilt *without* concluding that Andersen acted with a knowing, conscious state of mind, even though the statute, model jury instructions, and substantial case law departed significantly from the instructions actually given. The Court reasoned that “[o]nly persons conscious of wrongdoing can be said to ‘knowingly . . . corruptly persuad[e].’ [L]imiting criminality to persuaders conscious of their wrongdoing sensibly allows § 1512(b) to reach only those with the level of ‘culpability . . . we usually require in order to impose criminal liability.’”⁸² Under this reading, Chief Justice Rehnquist, writing for a unanimous Court, ruled that the original jury instructions were misleading, biasing upward the likelihood of conviction from that envisioned by the statute.

Moreover, Chief Justice Rehnquist wrote, the jury instructions erroneously allowed jurors to find guilt when an official proceeding was neither imminent nor foreseeable.⁸³ This instruction was also inconsistent with the statute, which has been interpreted as requiring some “nexus” between the act of persuading others to destroy documents and some particular official proceeding in which those documents might be material.⁸⁴ Consequently, the Court concluded, Andersen’s conviction at trial was based on flawed jury instructions, which constituted reversible error.⁸⁵ The Department of Justice is currently contemplating whether to retry Andersen under modified jury instructions. At this stage, a retrial seems unlikely, given that the company has already largely ceased to exist.⁸⁶

Legally, the *Andersen* decision is a rather narrow one. It did not declare the company “innocent,” nor did it prevent federal prosecutors from attempting again to procure a conviction. Rather, the opinion merely requires the district court to try the case (if brought again) using jury instructions that are more representative of statutory mandates.⁸⁷ In addition, the opinion deals only with the witness tampering and document destruction components of obstruction under federal law, and not at all with civil enforcement actions (public or private), other criminal violations of securities fraud laws, or state violations. Moreover, the very statute that was being adjudicated in *Andersen* has since been amended by Sarbox, and now is both more inclusive in scope and more severe in consequence than was its statutory forebear.⁸⁸

81. *Andersen*, 544 U.S. at 706–08.

82. *Id.* at 706 (quoting *United States v. Aguilar*, 515 U.S. 593, 602 (1995)).

83. *Id.* at 707–08.

84. *Id.*

85. *Id.* at 708.

86. See, e.g., John R. Emshwiller, *Moving the Market: Andersen Figure Files to Withdraw His Guilty Plea*, *Wall St. J.*, Nov. 23, 2005, at C3.

87. See *Andersen*, 544 U.S. at 708.

88. The pertinent addition to the statute now reads:

Nevertheless, there may be some basis for the conclusion that the *Andersen* case constitutes a symbolic shift in the jurisprudential winds surrounding auditor litigation by instructing courts to be more exacting in the nature of the proof they require before imposing criminal penalties on the alleged collaborators in financial fraud. Moreover, the opinion appears to give broad support to the creation of and fidelity toward reasonable document retention practices within auditing firms, even if one of the possible repercussions of such practices is to impair future criminal proceedings.⁸⁹ It seems likely, then, that even under the newer incarnation of the federal obstruction statute, judges will be more apt to pay attention to the *Andersen* holding, requiring heightened (even if not identical) showings of willful conduct in future cases down the road.

c. *Federal Wire and Mail Fraud*. — Finally, a favorite tool of federal prosecutors is the federal mail and wire fraud statutes.⁹⁰ These offenses are essentially derivative in nature, “bootstrapping” themselves to an underlying act of fraud (perhaps as specified under another statute or regulatory rule). Mail and wire fraud allegations are a favorite of federal prosecutors, both because of their breadth and their simplicity.⁹¹ The elements of a criminal offense are quite simple. First, prosecutors must demonstrate a “scheme to defraud,” and second, the use of the mail or electronic wires must be used in furtherance of that scheme.⁹² It is not necessary to prove reliance, causation, or damages; indeed, none need exist for criminal liability to lie under the mail and wire fraud acts. Moreover, the statutes apply not only to schemes calibrated to defraud victims out of money or property, but also schemes to defraud employers out of the “honest services” of their employees or independent contractors.⁹³ Although prosecutions under these statutes traditionally have been brought in connection with insider trading activities, they have occasionally encompassed the fraud of financial fiduciaries and those in a rela-

(c) Whoever corruptly—

(1) alters, destroys, mutilates, or conceals a record, document, or other object, or attempts to do so, with the intent to impair the object’s integrity or availability for use in an official proceeding; or (2) otherwise obstructs, influences, or impedes any official proceeding, or attempts to do so, shall be fined under this title or imprisoned not more than 20 years, or both.

18 U.S.C. § 1512(c) (Supp. III 2003).

89. See *Andersen*, 544 U.S. at 704.

90. 18 U.S.C. §§ 1341, 1343 (2000).

91. See John S. Baker, Jr., *Jurisdictional and Separation of Powers Strategies to Limit the Expansion of Federal Crimes*, 54 Am. U. L. Rev. 545, 552 (2005) (suggesting that prosecutors pursue charges for mail and wire fraud “when other statutes may be more appropriate”).

92. 18 U.S.C. §§ 1341, 1343.

93. See *id.* § 1346 (“[T]he term ‘scheme or artifice to defraud’ includes a scheme or artifice to deprive another of the intangible right of honest services.”).

tionship of trust and confidence, such as auditors.⁹⁴ Although the utility of mail and wire fraud statutes for federal prosecutors remains ample, it has recently been at least partially undercut by a Fifth Circuit opinion that overturned the convictions of a number of Enron defendants who worked for Merrill Lynch.⁹⁵

B. *State Law*

1. *State Securities Fraud Statutes.* — Although federal law is often the focus of most securities fraud liability discussions, it is worth noting that most of the corpus of federal law on the topic is an outgrowth of state law. In fact, a number of states—led, apparently, by Kansas in 1911—began to enact systematic regulations protecting investors in securities more than two decades before the federal government became involved. In an oft-debated account, early legislators were motivated by a salient fear of fast-talking chicaners from the East, attempting to sell simple public investors everything, including the “blue sky.”⁹⁶ Whatever the origin, the name stuck, and now state securities laws are referred to collectively as “blue sky” laws and have remained on the books in all states, notwithstanding the greater federalization of securities practice and law. Because state law necessarily involves some heterogeneity, it is impractical for current purposes to exhaustively review the differences across states’ blue sky provisions. Nevertheless, I can offer a cursory overview.

There is a significant amount of overlap between federal and state antifraud prohibitions. It is not uncommon, for example, to observe general statutes that are strikingly similar in their text to federal law.⁹⁷ All

94. See, e.g., *United States v. Simon*, 425 F.2d 796, 808 (2d Cir. 1969) (affirming conviction of auditors for securities fraud and mail fraud arising out of certification of misleading financial statements).

95. See *United States v. Brown*, No. 05-20319, 2006 WL 2130525, at *9 (5th Cir. Aug. 1, 2006) (holding that “honest services” theory of fraud is not viable when employer specifically incentivized and encouraged employees to help perpetrate fraud on outside investors). One plausible reading of this opinion is that mail and wire fraud are less likely to be found under the “honest services” theory, ironically, in cases where the scheme to defraud has spread throughout the organization and its financial experts (such as auditors).

96. See, e.g., Thomas Lee Hazen, *The Law of Securities Regulation* § 8.1, at 320 (5th ed. 2005). The most quoted reference comes from *Hall v. Geiger-Jones Co.*, 242 U.S. 539, 550–51 (1917), where Justice McKenna wrote:

The name that is given to the law indicates the evil at which it is aimed, that is, to use the language of a cited case, “speculative schemes which have no more basis than so many feet of ‘blue sky’”; or, as stated by counsel in another case, “to stop the sale of stock in fly-by-night concerns, visionary oil wells, distant gold mines and other like fraudulent exploitations.” Even if the descriptions be regarded as rhetorical, the existence of evil is indicated, and a belief of its detriment; and we shall not pause to do more than state that the prevention of deception is within the competency of government and that the appreciation of the consequences of it is not open for our review.

97. California’s general antifraud prohibition is emblematic of its similarity to Rule 10b-5, 17 C.F.R. § 240.10b-5(a)–(c) (2006). The California statute reads:

states maintain a regulatory administrator (much like the SEC) to oversee registration, disclosure, and fraud enforcement activities. Moreover, like federal law, many states have adopted statutory schemes that permit private rights of action in addition to public (civil and criminal) enforcement.⁹⁸ In fact, private claims emanating from the provisions of the Securities Act, such as section 11, are permitted in both state courts and federal courts, at the plaintiff's choice.⁹⁹

Nevertheless, federal laws generally preempt state law in the administration of the Exchange Act, which deals more centrally with fraud prohibitions. It is here where conflicts between state and federal law become the most difficult to navigate, since state statutes themselves include broad antifraud provisions, and state legislatures frequently have experimented with the contours of liability, including broader antifraud prohibitions than are present in federal law.¹⁰⁰ Of particular note here is the fact that some states have retained an aiding and abetting violation as part of their blue sky laws.¹⁰¹ In addition, more than half the states have long used more generous statutes of limitation than has federal law.¹⁰²

Perhaps because of the substantial overlap between state and federal antifraud laws, the last decade has witnessed a significant amount of statutory activity related to federal preemption. Two such reforms warrant explicit note. First, the National Securities Markets Improvement Act of 1996 (NSMIA) substantially removed a number of securities registration and reporting requirements from the province of state law, subordinating them to their federal counterparts.¹⁰³ For example, section 18(b) of the Securities Act (enacted by NSMIA) precludes state registration regula-

It is unlawful for any person to offer or sell a security in this state or buy or offer to buy a security in this state by means of any written or oral communication which includes an untrue statement of a material fact or omits to state a material fact necessary in order to make the statements made, in the light of the circumstances under which they were made, not misleading.

Cal. Corp. Code § 25401 (West 2006).

98. See, e.g., Cal. Corp. Code §§ 25500–25510.

99. Securities Act of 1933 § 22(a), 15 U.S.C. § 77v(a) (2000).

100. See, e.g., Unif. Sec. Act §§ 501–510, 7C U.L.A. 99 (Supp. 2006). Many states have adopted either the Uniform Securities Act or the Revised Uniform Securities Act. Hazen, *supra* note 96, at 321.

101. See, e.g., Cal. Corp. Code § 25403(b) (extending equal liability to “[a]ny person that knowingly provides substantial assistance to another person in violation of any provision of this division or any rule or order thereunder”).

102. Securities Litigation Uniform Standards Act of 1997: Hearing on S. 1260 to Amend the Securities Act of 1933 and the Securities Exchange Act of 1934 to Limit the Conduct of Securities Class Actions Under State Law and for Other Purposes Before the Subcomm. on Securities of the S. Comm. on Banking, Housing & Urban Affairs, 105th Cong. 47 (1997) (statement of Arthur Levitt, Jr., Chairman, and Isaac C. Hunt, Comm’r, U.S. Securities and Exchange Commission) (noting that thirty-three states have more generous limitations periods). Under Sarbox, which extends the limitation period by one to two years, this number has likely fallen. See *supra* note 39 and accompanying text.

103. Pub. L. No. 104-290, 110 Stat. 3416 (1996) (codified as amended at 15 U.S.C. § 77r).

tions for securities listed on the NYSE, AMEX, or NASDAQ,¹⁰⁴ while a subsequent subsection preserves limited states' rights to require filing of documents to serve strictly the purpose of providing public notice.¹⁰⁵

Although the NSMIA said little about state antifraud prohibitions, two years later the Securities Litigation Uniform Standards Act of 1998 (SLUSA) imposed a form of federal preemption of state securities fraud class actions, including both 10b-5 actions and section 11 suits.¹⁰⁶ Under SLUSA, most fraud class actions involving publicly traded securities must be brought in federal court.¹⁰⁷ Some important potential exceptions apply here, however, and are worth noting. First, and perhaps foremost, SLUSA does not apply to *individual* actions but only class actions. If a single private plaintiff has a sufficiently large stake in a matter involving alleged fraud that would justify individual litigation, that plaintiff may proceed under state law. Second, SLUSA does not apply to derivative litigation under state corporate law, a form of litigation that bears significant resemblance to class action litigation (and is discussed in greater detail below).¹⁰⁸ Finally, until recently, a number of federal circuit courts maintained that because SLUSA only applies to fraudulent conduct "in connection with the purchase or sale of securities," it therefore did not apply to class actions in states that allow so-called "holders" claims, in which the plaintiff class alleges that the alleged fraud led them to hold rather than sell their shares. In March 2006, however, the Supreme Court held that SLUSA does preempt all covered state securities class actions, whether holders claims or not.¹⁰⁹

After SLUSA, most private state law claims must proceed on an individual basis. Accordingly, claimants often invoke state common law principles of warranty, fraud, and deceit to prove their substantive cases. It is to these doctrines I now turn.

2. *Common Law Tort and Contract Principles.* — Against the backdrop of (or perhaps more accurately, in conjunction with) state blue sky laws, state courts have innovatively crafted a common law approach that combines tort and contract principles. Thought largely to be the wellspring of such cases, Benjamin Cardozo's opinion in *Ultramares Corp. v. Touche, Niven & Co.* allowed third parties (such as capital creditors) who relied on incorrect financial statements that were negligently certified by the accountant to claim auditor liability.¹¹⁰ Allowing liability for claimants who were not in contractual privity with the accountant was a discernable expansionary step (consistent with similar developments in American

104. 15 U.S.C. § 77r(b).

105. *Id.* § 77r(c)(2).

106. Pub. L. No. 105-353, 112 Stat. 3227 (1998) (codified as amended at 15 U.S.C. § 78bb).

107. 15 U.S.C. § 78bb(f).

108. *Id.* § 78bb(f)(5)(C).

109. *Merrill Lynch v. Dabit*, 126 S. Ct. 1503, 1515 (2006).

110. 174 N.E. 441 (N.Y. 1931).

contract and tort law at that time). However, *Ultramares* was limited in its application in a number of important respects. First, a cause of action was afforded only to *intended* beneficiaries of the auditor's services, whose identity was known at the time of contracting.¹¹¹ Perhaps more importantly, the cause of action afforded to a plaintiff under *Ultramares* was in *contract* rather than in *tort*, which is a distinction that is significant in many respects.¹¹² Under contract law, claimants are typically awarded only expectancy damages (i.e., the actual value lost due to the fraud). In addition, a defendant's contractual liability is not necessarily presumed to be joint and several in nature. Finally, contract law is largely a set of default rules, allowing the parties to contract out of the very doctrine creating liability. Under any interpretation of *Ultramares*, the auditor and client could specify (with express contractual terms) the universe of investors who are intended beneficiaries.

Approximately thirty years after *Ultramares*, the Restatement (Second) of Torts expanded the circumstances under which an investor would constitute an intended beneficiary, extending standing to the "limited group of persons for whose benefit and guidance [the auditor] . . . knows that the recipient intends to supply [the audit information]."¹¹³ The Restatement provision was adopted by a majority of state courts (and even by some courts in the United Kingdom).¹¹⁴

Soon thereafter, the landscape began to change considerably, as a series of cases from a number of state high courts (beginning with New Jersey, but soon in many other states) essentially "tortified" the *Ultramares* doctrine.¹¹⁵ Although the transition in state law was cross-sectionally uneven, it is unmistakable that state courts become increasingly receptive to extending liability beyond the limits that then existed, allowing claims by all *reasonably foreseeable* individuals who relied on an audit report.¹¹⁶ In

111. *Id.* at 444–48. In *Ultramares*, in fact, Touch, Niven & Co. did not know the identities of the third-party capital investors, and were therefore found not to be liable. *Id.* While this likely means that the affirmative cause of action in *Ultramares* was nothing more than obiter dictum, it matters little given that courts ubiquitously followed it thereafter. See Thomas L. Gossman, *The Fallacy of Expanding Accountants' Liability*, 1988 *Colum. Bus. L. Rev.* 213, 219 (noting that states generally follow rule established by *Ultramares*).

112. *Ultramares*, 174 N.E. at 448.

113. Restatement (Second) of Torts § 552 (1975).

114. See Gossman, *supra* note 111, at 219.

115. See, e.g., *Int'l Mortgage Co. v. John P. Butler Accountancy Corp.*, 223 Cal. Rptr. 218, 226–27 (Ct. App. 1986) (holding auditors accountable to reasonably foreseeable individuals), overruled by *Bily v. Arthur Young & Co.*, 834 P.2d 745, 774 (Cal. 1992) (adopting Restatement approach); *Rosenblum v. Adler*, 461 A.2d 138, 153 (N.J. 1983) (holding auditors accountable to reasonably foreseeable individuals), superseded by statute, N.J. Stat. Ann. § 2A:53A-25 (West 2006); *Citizens State Bank v. Timm, Schmidt & Co.*, 335 N.W.2d 361, 366 (Wis. 1983) (holding auditors liable to reasonably foreseeable individuals unless public policy requires otherwise).

116. In some cases—even if they had never seen it—the decisions echoed the roughly contemporaneous federal securities fraud case of *Basic Inc. v. Levinson*, 485 U.S. 224 (1988).

fact, the Supreme Court's decision in *United States v. Arthur Young & Co.* took an analogous position (at least insofar as it concerns public companies):

By certifying the public reports that collectively depict a corporation's financial status, the independent auditor assumes a public responsibility transcending any employment relationship with the client. The independent public accountant performing this special function owes ultimate allegiance to the corporation's creditors and stockholders, as well as to the investing public.¹¹⁷

This holding is limited, however, to audit reports of publicly held corporations that are required by law to be filed with the SEC. Nevertheless, there were a number of important effects of the expanding state negligence law on auditor exposure. First, the auditor would now be subject to tort-based damages, which can include punitive damages not provided for in contract law. Second, the auditor could no longer depend on a lack of contractual privity as a shield against legal liability. And lastly, because tort law is more difficult to displace with contractual waivers, auditors under state tort principles are less likely to be able to "contract out" of liability as they were under the *Ultramares* doctrine.

Finally, notwithstanding the expansion of the *Ultramares* doctrine, the auditor could always face individual liability toward its own client (with whom it is in contractual privity) or those "specifically identified as users of the auditor's work."¹¹⁸ This class of plaintiffs can include creditors or investors in privately held companies. For example, investors in the closely held aviation risk reinsurance company, Fortress Re, which went bankrupt after the attacks of September 11, 2001, sued Deloitte & Touche in North Carolina state court for \$2 billion. Fortress Re's investors, two Japanese insurance companies, claimed that improper accounting practices led them to believe that Fortress Re was properly reinsured when it was not. Since Deloitte helped in the preparation of the financial statements in addition to performing the audit, the plaintiffs alleged they were liable under negligence standards. In September 2005, the case was settled for a reported \$250 million.¹¹⁹

Because federal statutory reforms have predominantly channeled class actions out of states, leaving only individual actions, state litigation remains, frustratingly, somewhat of an empirical black box. Determining the risk that auditors face from private suits in state courts is sometimes impossible, given that settlement information in these suits is frequently sealed and confidential. Therefore, there is little publicly available historical information upon which to base an estimate of future risk.

117. 465 U.S. 805, 817 (1984).

118. Derek K. Chan & Kit Pong Wong, Scope of Auditors' Liability, Audit Quality, and Capital Investment, 7 Rev. Acct. Stud. 97, 97 (2002).

119. Margaret Moffett Banks, Auditor Settles Reinsurance Company Suit, News & Rec. (Greensboro, N.C.), Sept. 23, 2005, at B1.

3. *Corporate Law and Derivative Actions.* — With the removal of most fraud class actions to federal courts, some plaintiffs have attempted to use the derivative action procedure from state corporate law to pursue their claims in state court. The derivative action is a device created by state courts to allow, and even require, a corporation to sue one of its fiduciaries (such as a director or officer) or other person against which the corporation has a right (such as an auditor). Because the managers of the company may also be the defendants, the derivative process empowers shareholders to force litigation, essentially rolling two lawsuits into one. The first is in equity, in which the plaintiff attempts to procure an injunction forcing the corporation to sue its fiduciaries or otherwise enforce its rights. The second is in law, in which the actual suit in name of the corporation proceeds.

In many respects, derivative actions bear a stark resemblance to class actions. In particular, successful derivative plaintiffs can obtain one-way fee shifting, in which the company pays the reasonable attorneys' fees of the derivative plaintiff (often adjusted for underlying risk).¹²⁰ This feature is similar to the established practice of compensating class action plaintiff attorneys with legal fees as part of a settlement.¹²¹

Moreover, many fraud claims can also be recast as fiduciary duty violations, over which state courts (such as the Delaware Chancery Court) have predominant jurisdiction. In a recent study by Randall Thomas and Robert Thompson of derivative actions filed in Delaware between 1999–2000, for example, approximately 25% of sampled cases involved allegations of improper financial records, and just under 10% involved allegations of misleading statements, both of which could equally undergird a federal securities fraud claim.¹²² These sorts of allegations can, in theory, ensnare an auditing firm as well.

That said, the risk of derivative litigation involving auditors appears still to be relatively modest. Indeed, in the Thomas and Thompson study, there was not a single derivative action filed that named an auditor as a defendant. Moreover, of the fifteen cases between 1999–2000 that alleged some type of financial impropriety, only one appears to have resulted in a monetary award. Assuming this snapshot of litigation remains valid, then the use of derivative actions to enforce rights against nonfiduciaries is still an uncommon approach—though one that may become more popular in years to come.

120. See, e.g., *In re Caremark Int'l Inc. Derivative Litig.*, 698 A.2d 959, 972 (Del. Ch. 1996) (awarding reasonable hourly fees “plus a premium of 15% of that amount to reflect the limited degree of real contingency in the undertaking”).

121. See Judith Resnik et al., *Individuals Within the Aggregate: Relationships, Representation, and Fees*, 71 N.Y.U. L. Rev. 296, 339–45 (1996) (describing “percentage of the fund” and “lodestar” approaches for compensating class action claimants).

122. Robert B. Thompson & Randall S. Thomas, *The Public and Private Faces of Derivative Lawsuits*, 57 Vand. L. Rev. 1747, 1772 (2004).

4. *Criminal Proceedings.* — As with federal law, state antifraud and embezzlement statutes also carry the possibility of criminal sanctions,¹²³ which are enforced by state attorneys general. Elliot Spitzer of New York has probably been the most prominent user of such authority, provided to him by New York's antifraud laws,¹²⁴ but similar authority is vested in the attorneys general of many other states. The use of criminal prosecutions at the state level against auditing firms, however, is neither frequent nor well established.

5. *Miscellaneous.* — There are other sources of liability under state law that this section has not explored in great detail. For example, private plaintiffs can sometimes seek compensation for alleged acts of fraud or bad faith behavior under state commercial law. Although not routinely applied to accounting firms, such actions can often involve allegations of financial manipulation and deceit.¹²⁵

Moreover, the regulatory process imposed by state licensing boards on auditing firms can often be extremely burdensome. Although state accounting boards generally do not assess damages against accounting firms, they have significant controls over the issuance and renewal of licenses to practice within the state. By some accounts, this great power has proven to be somewhat ineffectual. For example, Timothy Fogarty documents the history of state accounting boards' responses to auditing crises, and finds that such boards appear to be more responsive to political exigencies than they are to exposing quality differences among their members or rooting out fraud.¹²⁶

In addition, state regulators have the capacity to impose independent liability judgments on auditors, often bootstrapping their claims on evidence brought out by other investigations. For example, in 2004 Ernst & Young was sued by the California Board of Accountancy, based on a finding by the SEC that the auditing firm had sufficiently close business ties to PeopleSoft while serving as that company's auditor to impair its independence. The litigation ultimately culminated in a settlement that placed Ernst & Young on three years' probation and required the retention of an independent consultant to review internal firm practices.¹²⁷

123. See Unif. Sec. Act. § 508, 7C U.L.A. 104 (Supp. 2006) (specifying criminal sanctions).

124. N.Y. Gen. Bus. Law § 353 (McKinney 2006).

125. See, e.g., *Proctor & Gamble v. Bankers Trust*, 925 F. Supp. 1270, 1288–90 (S.D. Ohio 1996).

126. Timothy J. Fogarty et al., *Political Aspects of Financial Accounting Standard Setting in the USA*, 7 *Acct., Auditing & Accountability J.* 24, 25–30 (2004).

127. *Ernst & Young Sanctioned by State Regulators*, *Sacramento Bus. J.*, Sept. 22, 2004, available at <http://www.bizjournals.com/sacramento/stories/2004/09/20/daily17.html> (on file with the *Columbia Law Review*).

C. *Summing Up*

Although the synopsis offered above has been necessarily brief, there are several conclusions to draw from it. Most centrally, the liability risk faced by auditing firms is really the aggregation of numerous overlapping, but distinct, sources of law traversing numerous jurisdictional divides, including state/federal, civil/criminal, and private/administrative. Although various of these dimensions have waxed and waned over the last half century, most (if not all) of them remain viable theories of auditor liability from a legal perspective. Thus, if one were interested in doing a comprehensive analysis of cataclysmic liability risk borne by auditors, it would have to account for virtually all of these factors, their correlation with one another, the extent to which some preempt others, and the extent to which some catalyze others. As I discuss below, however, the data are simply not available (at least publicly) for conducting such a comprehensive review. For example, there is (to my knowledge) no comprehensive database of shareholder derivative actions (except for narrow time samples)¹²⁸ and virtually no public information about private action settlements.

The analysis that follows, then, will concentrate on securities class actions. While only a piece of the puzzle, such lawsuits are thought by most outside observers to be a big piece, and have themselves generated the lion's share of reform proposals in the United States and abroad. I shall return to this issue in the discussion portion of Part II.

II. AN APPROACH FOR ESTIMATING RIGHT-TAIL RISK

Having described the broader universe of liability risks auditors might plausibly face, I now proceed to focus in on a specific but important subuniverse: securities class actions. Within this domain, at least, how would one go about characterizing and measuring the extent of cataclysmic liability risk that such suits represent among the Big Four auditing firms? As noted in the Introduction, it would be insufficient simply to look at the median or average exposure of Big Four firms in cases where they are named defendants, because there is no guarantee that any year will be an average year with respect to liability exposure. Indeed, although such measures would be appropriate for potential defendants who have access to competitive insurance markets, they are not appropriate in the context of the dominant auditing firms, which are virtually self-insured. Rather, quantifying cataclysmic liability requires one to be able to say something about the *probabilistic distribution* of liability exposure, something I shall refer to below as "right-tail risk."

128. See, e.g., Thompson & Thomas, *supra* note 122, at 1760–61 (describing collected data on shareholder derivative suits).

FIGURE 4: A CONCEPTUAL DIAGRAM OF RIGHT-TAIL RISK

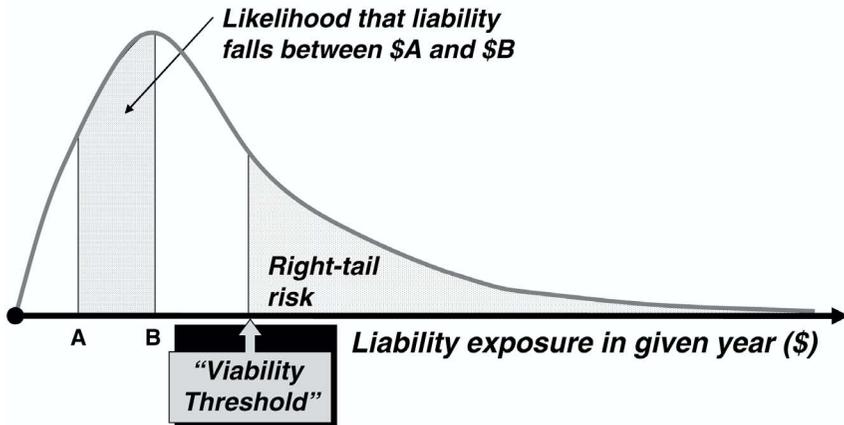


Figure 4 illustrates the core concepts of the empirical approach adopted herein. The horizontal axis in the Figure depicts the various levels of liability exposure a typical Big Four firm might face in a single relevant period (in this case, one year), summarizing across all cases that occur in that year. This aggregate value might increase because of an unexpectedly large number of suits filed against an auditor, unexpectedly large damages and/or defense costs in cases that are filed, or both. The curve rising above the horizontal axis represents a “probability density” associated with each aggregated level of exposure that a firm faces. The area under this curve and between two specified points on the horizontal axis represents the probability that a firm’s aggregated liability falls somewhere between those two points. In the Figure, for example, the area of the shaded region on the left portion of the curve represents (conceptually) the probability that total liability will be between two dollar amounts, A and B.

If a firm’s aggregate liability outcome in a given year is sufficiently large—beyond a posited “viability threshold” embodied by the arrow below the horizontal axis—then the firm’s future viability becomes imperiled for any number of reasons (e.g., it chooses to cease operations through bankruptcy or closure, suffers a mass exodus of clients and partners, encounters prohibitive difficulties in procuring financing, etc.). The probabilistic risk to viability presented by litigation exposure, then, constitutes the area under the curve and to the right of this viability threshold. In what follows, I will often refer to this area as the firm’s “right-tail risk” of liability.

Under this conceptual approach, formulating an estimate of cataclysmic liability risk requires three things: One must (1) posit a plausible range of the monetary values that might constitute the relevant threshold; (2) characterize the probability distribution of liability that auditors likely face; and (3) estimate and/or predict the right-tail risk that is associated with the combination of (1) and (2). The balance of this Part describes an overall approach that attempts to execute each of these

steps. In doing so, I will employ a simple theoretical model to formulate the plausible range of levels of liability risk that could induce either exit or a viability crisis—the point labeled in the Figure above as the “viability threshold” of a given firm. This theoretical model ultimately yields estimates that seem roughly consistent with both casual interviews and common sense. Second, I turn to describing and estimating the historical liability exposure patterns that auditing firms face by drawing from different data sources, including the Securities Class Action Alert (SCAA) database,¹²⁹ as well as data on stock market volatility, which appears to be the best predictor of future securities litigation. Using this data, I proceed to analyze the relationship between the frequency with which securities class actions are filed and trends in the market, along with liability risks for individual suits to formulate an empirical model of exposure. Finally, this section synthesizes the results of these steps in the analysis, projecting a right-tail risk assessment for the remaining Big Four accounting firms, under different combinations of market volatility and exit thresholds. In each case, the question addressed is the same: “What is the likelihood that at least one Big Four firm will fail because of liability overhang problems?”

It bears emphasizing that what follows is rough and tentative, and should be read as much for its methodology as for its results (if not more so). There is significant room to refine the analysis suggested below with greater specificity and accuracy—a topic that I revisit in the latter part of this Part.

A. *Assessing a Viability Threshold*

The first order of business in estimating right-tail risk is to formulate a plausible estimate of the capacity of Big Four firms to withstand significant liability risk: what Figure 4 refers to as the “viability threshold” of a representative Big Four accounting firm. To gain some purchase on this question, I developed and calibrated a theoretical model that captures auditing partners’ collective decision about whether to remain in their firm or dissolve it and seek employment elsewhere. The model makes a number of factual assumptions: For example, it assumes that departing partners would be able to find employment in another firm relatively quickly; that their remuneration at such a firm would be substantially the same as in the firm from which they departed; and that dissolving the firm would imperil at least some fraction of individuals’ assets (those tied up in, say, vested pension rights). The model also assumes that individuals may disagree about whether to continue operating the firm after a liability event, and that decisions about exit are determined by a vote among the partners.¹³⁰

129. See SCAA, *supra* note 22.

130. I use the term “exit” rather than “financial distress,” “failure,” or “bankruptcy” because it is likely that a firm would choose to exit the industry far before it would file for

Perhaps the first important line of inquiry concerns the question of *who ultimately decides* to cause the firm to exit the auditing industry. In order to address this question, I take a cue from public choice theories of median voters. Because all of the Big Four accounting firms are LLPs, operating under a partnership model, I assume that bankruptcy determinations are made by a vote of the partners, the ultimate resolution of which turns on how the “median” voting partnership share is voted. Note, of course, that because partnership governance participation need not be (and often is not) distributed equitably, I shall be considering the median vote as it pertains to the *pivotal* voting partner (i.e., the partner that likely possesses the swing vote on such issues). Even in a large firm, if participation is sufficiently skewed toward senior partners, then the median vote may be held by the partner who owns, say, the highest (or second highest, or third highest, etc.) number of participation shares. It is this partner’s assessment, I suggest, that is critical, as partners with relative seniority at the firm are likely to be the most reluctant to allow it to dissolve, since they stand to lose more pension benefits, larger sunk investments in firm-specific capital, and probably suffer greater personal reputational losses.

Consider, then, a typical Big Four auditing firm assessing whether to exit the profession in the face of aggregate damages claims in the amount Δ during a given fiscal year. The central question is how large Δ must grow before the firm exercises an option to exit. To facilitate the analysis, I define a number of variables in Table 2 as follows:

bankruptcy. Nevertheless, it is almost certain that financial considerations are a key determinant in the decision to exit.

TABLE 2: EXIT THRESHOLD NOTATION

Variable	Definition
B_t	Number of partners in firm at time. Assumed, without loss of generality, to be constant over time so that $B_t=B>0$.
θ	Pivotal partner's fractional ownership share / participation rights (assumed, without loss of generality, to be constant over time).
Z_t	Expected Net Revenues received by pivotal partner. Assumed constant over time so that $Z_t=Z>0$ (total net revenues of the firm are therefore Z/θ).
Y_t	Expected Monetary Cost of Closing Firm borne by pivotal partner (total expected cost of closing firm = Y/θ).
X_t	Pivotal partner's accrued benefits that perish upon exit/bankruptcy (reflecting an additional, implicit cost of closing the firm).
T	Years remaining until the pivotal partner's retirement.
W_t	Expected Cash Flow Rights under partner's best outside option. Assumed constant over time and equal to revenue perpetuity stream inside firm, so that $W_t=W=Z>0$
m	Number of periods that pivotal partner must spend searching for outside option above.
D_t	Pivotal partner's <i>expected</i> pro rata share of Damages/Fines plus Litigation Costs for a representative firm in each year. Assumed independent and identically distributed on a per-partner basis across all firms so that $D_t=D>0$ for all t (note that the <i>expected</i> value of total damages faced by the firm, $E(\Delta) = D/\theta$).
δ	Time discount factor.

The analysis assumes that all t-subscripted variables are identically distributed across time, and have means denoted by the variable without the subscript (e.g., Y, Z, X , etc.). It also assumes that expected damages per partner are lower than average compensation per partner (otherwise, there would not be an auditing industry to begin with).

The pivotal partner will favor exit when the net present value of leaving and obtaining outside employment (with, by assumption, another auditing firm) exceeds the present daily value of staying in the firm (and satisfying judgment creditors).¹³¹ I assume that once the firm's aggregate liability is realized, the partner makes an exit decision immediately.

Using this approach, it is possible to derive the aggregate level of damages before the firm exits using the following expression:

EQUATION 1

$$\Delta \geq \Delta^* \equiv \left(\frac{(1-\delta^{T+1})}{(1-\delta)} \cdot \frac{Z}{\theta} - \frac{(\delta-\delta^m)}{(1-\delta)} \cdot \frac{D}{\theta} - \frac{(\delta^m-\delta^{T+1})}{(1-\delta)} \cdot \frac{W}{\theta} + \frac{\delta^T X_0}{\theta} + \frac{Y}{\theta} \right)$$

131. I assume that the pivotal partner makes this decision on a risk-neutral basis. This seems to be a reasonable approximation given that (a) the partner owns only a fraction of the firm's cash flows and that (b) she would likely continue to bear whatever litigation risk premium there is if she were to leave for another firm.

As one's intuition might suggest, the critical exit threshold, defined above, Δ^* , is strictly increasing in X , Y , Z , and δ , and strictly decreasing in W , m , and T . The probability of exit, therefore, moves in the opposite direction.

Therefore, estimating a plausible range of exit thresholds reduces to an attempt to calibrate the expression above. That said, calibration in this context is easier said than done. Because the Big Four audit firms are not publicly held, information about their financial conditions is typically not available, at least on any level of detail. Nevertheless, it is possible to piece together either reliable estimates or educated guesses about most of the parameters of the above model.

Consider first the total partner net revenues (net of nonpartner operating costs). Using the North American revenue figures from all four auditing firms for recent years (reported in each of the Big Four's annual reports), and also using some confidential sources, I estimate that net partner revenues at Big Four firms tend to average around 25% of total North American revenues. Of this, auditing is almost certainly a minority contributor (in recent years), contributing between one-fourth and one-half of all net revenues, while nonaudit fees services contribute the remainder. This suggests that total firm revenues (denoted by Z/θ) for Big Four firms range between \$312 million and \$2 billion.

If an auditor leaves a Big Four firm to work elsewhere, I shall assume that his revenue stream does not change appreciably, so that (W/θ) also ranges between \$312 million and \$2 billion. In actuality, of course, the closure of a Big Four firm implies greater concentration, which would likely bias my estimate of outside revenues downward. On the other hand, greater concentration may also mean greater costs (due to conflicts, for example). Thus, assuming equality of pre- and postexit revenues provides a good benchmark.

The period of unemployment for an auditor after the failure of a Big Four firm (denoted by m) is hard to assess, and may vary considerably among partners. However, given the relatively smooth transition of Andersen in 2002, it seems likely that most departing partners could be placed back into the profession within a year. Accordingly, I therefore assume that $m=1$. A confidential source suggests the internal rate of return in the auditing industry is somewhere around 9%. Using this figure as a discount rate,¹³² I calibrate the appropriate discount factor (δ) to be approximately 0.917.

As noted above, because of the heterogeneous way that partnership participations (and votes) are distributed, it is likely the case that a "pivotal" partner (i.e., the one who possesses the median partnership *vote*) is

132. This figure may be conservative on an individual basis if the median auditor discounts at higher rates as other experimental subjects do. See David Laibson, Golden Eggs and Hyperbolic Discounting, 112 Q.J. Econ. 443, 443-45 (1997) (suggesting that individuals' discount rates vary and are roughly hyperbolic in shape, which means that individuals discount deeply in short term but gradually flatten in longer term).

somewhat senior in nature. A recent study reports that the median age of a new junior nontax partner in a Big Four firm is just over thirty-six years.¹³³ Assuming that it takes ten to fifteen years to move to a senior decisionmaking position, a rough estimate suggests that the pivotal partner is somewhere in the neighborhood of fifty years of age, and has approximately fifteen years left until retirement.

The remaining figures necessary to calibrate the above model are (1) an estimate of the value of the vested component of the pivotal partner's pension, retirement, and other nonportable benefits; (2) an estimate of the percentage participation of the pivotal partner; and (3) an estimate of the out-of-pocket costs of shutting the doors to a Big Four firm. It has proven difficult to uncover reliable information about these figures from public disclosures of accounting firms; in their absence, the analysis below formulates rough (but hopefully reasonable) guesses about their value of (1) \$10 million, (2) 2%, and (3) \$5–\$10 million, respectively.

Using these estimates, one can formulate a plausible range of exit values. On the conservative side, using the upper range of reported North American revenues, my calibration yields an upper value of approximately \$2.15 billion. On the aggressive side, using the lower range of nonauditing revenues, my calibration yields a lower bound value of approximately \$454 million. These figures are consistent, moreover, with a number of interviews (not reported here) with a convenience sample of experts in the field, which appear to have suggested in the upper hundred-million dollar range to low one-billion dollar range.¹³⁴

To be sure, these figures are very speculative and open to considerable debate. Most significantly, it is important to be aware of the fact that auditors do not merely face federal class action liability, as illustrated in Part I above. Thus, even if the capacity of an auditing firm to satisfy judgment creditors were, say, in the neighborhood of \$1 million per year, it would be necessary to subtract off any expected costs of non-class action liability exposure to impute a "net" capacity of an auditing firm.

Unfortunately, the very data restriction that prevents one from studying non-class action activity also presents a barrier to formulating an estimate of liability in such arenas. However, the recent Fortress Re settlement of \$250 million may be a reasonable benchmark for thinking about the magnitude of non-class action liability that auditors may face.¹³⁵ The analysis that follows, then, will risk erring on the side of shading capacity downward from the above estimates, exploring eight plausible threshold levels: \$250 million, \$500 million, \$750 million, \$1 billion, \$1.25 billion, \$1.5 billion, \$1.75 billion, and \$2 billion.¹³⁶

133. Robert E. Guinn, Sak Bhamornsiri & Cindy Blanthorne, *Promotion to Partner in Big Firms: Truths and Trends*, CPA J., Apr. 2004, at 54, 55.

134. Report on Interviews on file with author.

135. See *supra* note 119 and accompanying text.

136. It will become apparent below why I do not explore threshold values larger than \$2 billion. See *infra* notes 148–150 and accompanying text.

B. *Estimating Distribution of Exposure*

Having formulated a plausible range of viability thresholds, I now move on to calibrating the distribution of liability exposure that each firm faces. Perhaps not surprisingly, this is also a difficult enterprise. The Essay's approach is to use historical data on filings and settlements (inflated to current dollars and time trends) to assemble a probability distribution of outcomes, and then carry that model forward in time to make prospective projections. Implicitly, while this approach allows awards to grow or shrink on average over time due to secular trends, it nonetheless assumes some degree of smoothness over time, which makes the analysis less sensitive to the effects of significant legal reforms that have taken place over the last decade. This simplification, however, offers considerably more statistical power in estimating outcomes, as it allows one to utilize significantly more data.¹³⁷

1. *Data.* — In order to formulate estimates, I collected data from a number of different sources concerning litigation activity, securities market activity, and accounting firm financial capacity. The most extensive data source concerns securities class actions from 1994 to 2005, as recorded in the SCAA.¹³⁸ This data set includes synopses of the population of securities class actions filed in federal court (as well as a few SEC and state court civil actions). All told, the data set contains over 3,600 cases, of which approximately 90% are securities class actions. For each case, the SCAA provides the primary issuer's name, the list of all defendants (including auditors), a set of Community on Uniform Securities Identification Procedures identifiers for the issuer's securities, filing dates, class open and closed dates, basic allegations, settlement or decision date (virtually all were settled), and the financial and nonfinancial terms of the settlement. In some cases where a Big Four auditor was named, the description of the settlement was sufficiently detailed to allow me to divine the portion of the total financial settlement that was contributed by the auditor. I augmented this data with published data on auditor litigation from 1960–1985 from Palmrose.¹³⁹ Although this data covers a somewhat earlier time span than does the SCAA, it includes a helpful overlap for the early years of the SCAA where my data were incomplete.

In addition to litigation data, I also collected data on stock market volatility from the Center for Research on Securities Prices (CRSP) database available through Wharton Research Data Services.¹⁴⁰ These data are important to include since volatility is perhaps the best predictor

137. In future work, I hope to expand the analysis to include fixed effects across industry years. The figures reported in this Essay, however, do not reflect those changes, but instead consider linear and quadratic time trends as well as some fixed industry compositional trends.

138. See SCAA, *supra* note 22.

139. Palmrose, *supra* note 8, at 56.

140. Ctr. for Research on Sec. Prices, Wharton Research Data Services, at <http://wrds.wharton.upenn.edu> (last visited Mar. 1, 2006) (data on file with author).

of subsequent securities litigation (and it proved to be highly predictive in my estimations as well). Consequently, one's estimate of the likely number of suits faced by auditors is likely to be closely related to an underlying prediction about the likelihood of future market volatility, similar to that experienced in the U.S. equity markets in the late 1990s and early 2000s.

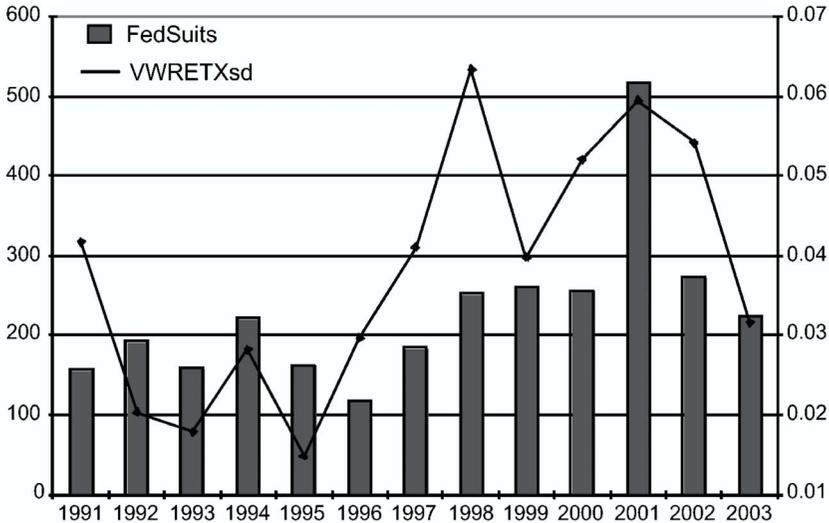
2. *Number of Filings.* — Although little is known about how individuals file suits, one can study empirically the frequency with which securities class actions are filed as the market changes. It is a generally established empirical reality that securities filings move with market volatility.¹⁴¹ The bars in Figure 5 depict the number of federal class actions filed in each year from 1994–2005. The line in the figure shows the stock market volatility measured by the standard deviation of the average monthly return during that year of the value weighted CRSP portfolio. As Figure 5 illustrates, volatility is a relatively good predictor of changes in the number of lawsuits. The only significant outlier in this data set is 1998, for which volatility was in the upward direction. Note that the most significant volatility year (and the second most litigious year) occurred in 2001, when average volatility was approximately 0.62 (historically, 2001 was well into the upper 5% of the distributions of market volatility since 1950).

In order to make predictions about filings as a function of market conditions, I formulated a statistical model that accounts for the number of public firms, volatility, and other controls (such as market capitalization, industry composition, and linear and quadratic time trends) on the number of filings. Using the results of this model, it is possible to produce a set of estimates about the likely number of suits filed as a function of the number of firms traded in the market and market volatility. These estimations are derived from aggregate data illustrated in Figure 5, and appear to be relatively good at explaining observed variance in historical filing activity (adjusted $R^2=0.86$).¹⁴² Using the coefficient estimates of this model, it is possible to make out-of-sample predictions about the number of suits filed for a number of hypothesized future volatility levels in the market.

141. See generally Christopher L. Jones & Seth E. Weingram, *The Determinants of 10b-5 Litigation Risk* (Stanford Law Sch., John M. Olin Program in Law & Econ., Working Paper No. 118, June 1996) (on file with the *Columbia Law Review*). Another approach that some in the auditing profession have employed is to use abnormal accruals to predict litigation. See, e.g., William G. Heninger, *The Association Between Auditor Litigation and Abnormal Accruals*, 76 *Acct. Rev.* 111, 113 (2001). Because of some difficulties in estimating abnormal accruals, I have taken an alternative approach. See Paul Hribar & Daniel W. Collins, *Errors in Estimating Accruals: Implications for Empirical Research*, 40 *J. Acct. Res.* 105, 106–07 (2002).

142. This measure includes linear and quadratic time trends as controls in the model. An example of the underlying regressions for generating all the point estimates below appears in the Appendix to this Essay. Other specifications are available from the author. A significant refinement of this approach would be to make predictions of suit probabilities on a firm-by-firm basis using firm-specific volatility measures. I leave this (considerable) extension for future work.

FIGURE 5: PREDICTED FILING INCIDENCES FUNCTION OF MARKET VOLATILITY



In every year but 2001, the actual number of suits filed was within a standard deviation of the model's predictions, and even in 2001, the actual number of filings deviated only 1.2 standard deviations from the prediction.

3. *Distribution of Outcomes for Filed Cases.* — Of all private securities class action suits filed, only a fraction of them name auditors as violators (particularly since *Central Bank of Denver* eliminated aiding and abetting liability from private litigation in 1994).¹⁴³ In my data set, a “Big Five” (or now, Big Four) auditor was named in 132 of the 2,016 reported cases,¹⁴⁴ representing a rate of 6.55% of cases. This measure likely embeds an undercount because the SCAA does not always mention that an auditor was named, even though one was. I therefore conducted a hand count of a sample of cases and found an undercount of just under 1.86% for the filed cases in the sample. In the absence of a more exhaustive audit, I will report on an adjusted estimate of 8.41% for nondismissed cases involving an auditor.

There are several ways to project what proportion of future litigation will fall to a given firm. One is to interpolate from historical data, assuming that Andersen's litigation would be borne evenly by the remaining Big Four.¹⁴⁵ Another approach would be to use market share as mea-

143. *Cent. Bank of Denver v. First Interstate Bank of Denver*, 511 U.S. 164, 191 (1994).

144. The SCAA actually reports many more cases, but I treated multiple suits filed against the same issuer at approximately the same time as a single case. See SCAA, *supra* note 22.

145. This assumption, of course, neglects the possibility that some engagements (and litigation) likely migrated to non-Big Four auditing firms after Andersen's collapse.

sured by the number of registrants engaged in the most recent reporting period. A third approach would be to use market share as measured by the total asset value of engaged registrants. Table 3 illustrates the estimates of litigation shares under each of these assumptions. Because I have no reason to favor one approach over another, I shall generally assume in what follows that the litigation burden is borne symmetrically by the remaining Big Four auditors (corresponding to the third row of the table).¹⁴⁶

TABLE 3: PREDICTED LITIGATION SHARES UNDER THREE ALTERNATIVE METHODOLOGIES

	PWC	EY	KPMG	DT
Asset Value	0.29	0.18	0.27	0.26
Historical Interpolation	0.21	0.26	0.26	0.26
Equal Distribution	0.25	0.25	0.25	0.25

Of the 132 cases in which a Big Five auditor is named, it was possible to determine the outcomes for both the auditor and the issuer in seventy-nine of them. (For the remaining cases, the breakdown was not reported in the SCAA; nor was it discoverable through other means.) In six of the seventy-nine cases, the issuer was dismissed. For these cases, litigation did not proceed further against anyone. In an additional seven cases, the auditor was dismissed from the case, but other defendants remained and eventually settled. All told, auditor defendants procured dismissal in approximately 16% of the cases filed for which I have definitive data.

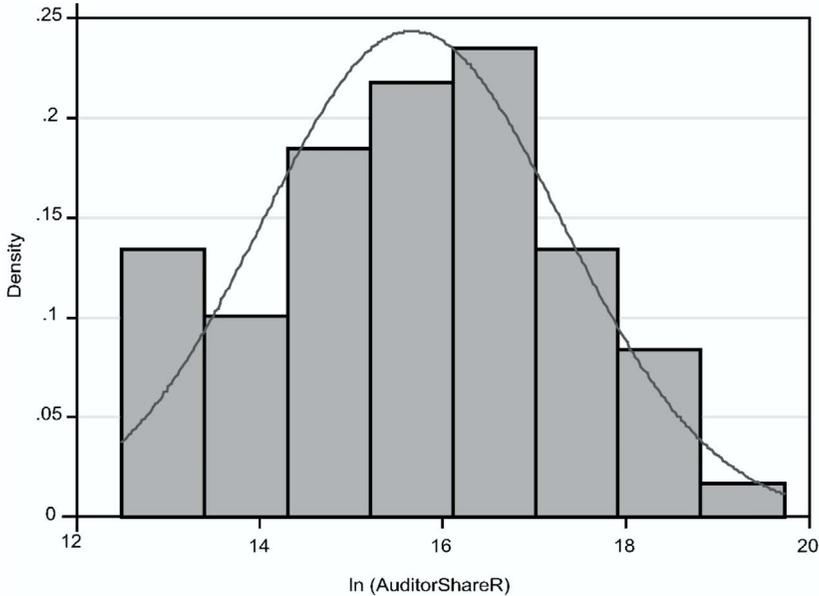
4. *Exposure of an Auditor in Nondismissed Cases.* — For cases in which the auditor did not procure a dismissal, I used the size of the settlement fund to formulate an empirical distribution of outcomes, again controlling for time trends and inflating settlements to real 2005 dollars. Consistent with my predictions, the empirical distribution had a significant right-tail skew, suggesting that the distribution I used should account for the possibility that a “lightning strike” case with significant damages (in the hundreds of millions) both has occurred in the past, and could occur again. After considering a number of possible distributions to fit the analysis, including fat-tailed “Lévy distributions,”¹⁴⁷ it appears as though a

146. Filings against auditors were historically distributed among the Big Five in a relatively uniform fashion. My data suggest that PWC faced a slightly lower litigation rate than any other of the non-Andersen dominant firms. (Interestingly, Andersen appears to have been subject to a lower filing rate than the other Big Five auditors, even excluding filings made since Andersen’s collapse.) Note that nondominant firms are not accounted for in Table 3, though historically such firms do bear some degree of liability exposure.

147. The Lévy distribution is one of the few stable distributions for which (1) diversification is inferior to nondiversification under certain parametric circumstances and (2) a closed form expression exists. It is therefore a convenient comparison distribution to the log-normal. See Ibragimov et al., *supra* note 11, at 5–7.

log-normal distribution best represents the data.¹⁴⁸ The empirical distribution of case outcomes, after controlling inflation and time trends in nondismissed auditor cases, is pictured in Figure 6 below. Superimposed on the Figure is the estimated distribution function.

FIGURE 6: LOG-NORMAL DISTRIBUTIONAL FIT OF THE DATA (N=73)



Note that the data appears to fit a log-normal distribution reasonably well, with a mean (in 2006 time and inflation terms) of approximately 16.4 (corresponding to approximately \$13 million dollars) and a standard deviation of 1.81.

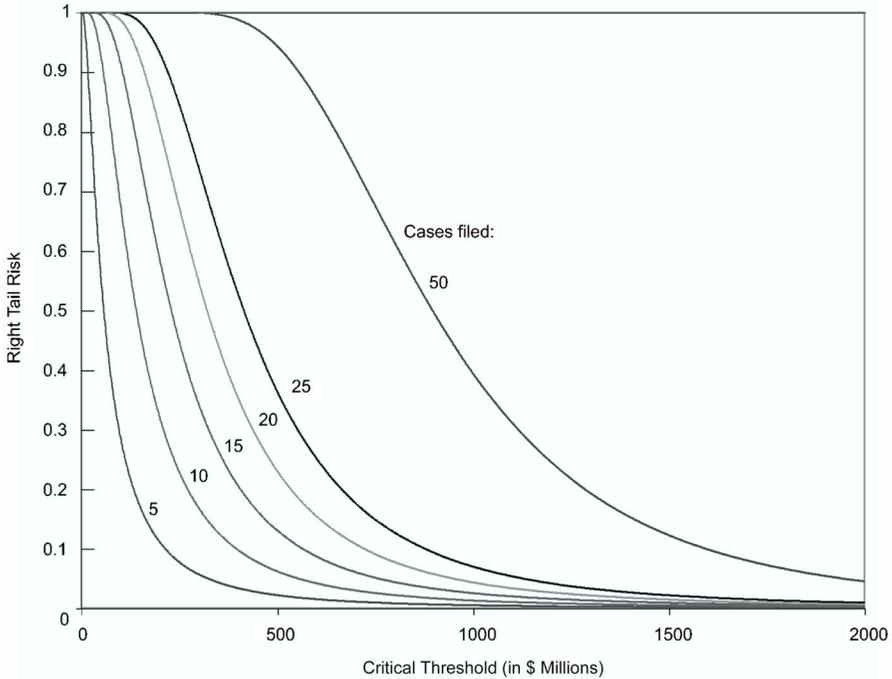
5. *Synthesis and Findings.* — We are now in a position to put the various pieces of the analysis together. For the moment, suppose that one could predict, with exact precision, the number of class actions that an auditor would be subject to in the next year. Given the historical distribution of outcomes, can I say anything about right-tail risk?

Figure 7 illustrates my projections of the right-tail risk for an individual Big Four firm when facing a known number of suits filed. The horizontal axis reflects the firm's viability threshold (previously identified as plausibly ranging between \$250 million and \$2 billion). The vertical axis reflects the right-tail risk probabilities projected as of 2006 (accounting for both dismissal probabilities and outcomes conditional on nondismissal). Each of the curves in the figure, in turn, corresponds to a different number of cases filed against the auditor, ranging from five to fifty (note that on average, even dominant firms historically face a class action filing rate that is decidedly on the low side of this scale, and even slightly below

148. Under a log-normal distribution, the natural log of the settlement amount is normally distributed.

it). For example, consider a firm with a viability threshold of \$500 million facing five suits in a given year. Using the figure above, that firm would face a projected right-tail risk of approximately 2.2%. If that firm were to face twenty suits, in contrast, its right-tail risk would jump to 23.2%.

FIGURE 7: PROJECTIONS OF RIGHT-TAIL RISK FOR AN INDIVIDUAL BIG FOUR FIRM (IN 2005 DOLLARS)



One potential limitation of the above chart is that one does not know, *ex ante* at least, the number of suits that a firm is likely to face in a given year. One might have some knowledgeable predictions about drivers of future class actions (such as market volatility, as discussed above), but not necessarily about how those predictions will be transformed into suits, and if so, how such suits are transformed into damages. Tables 4 and 5, therefore, extend the projections of the probability of at least one Big Four firm failure, incorporating various projections about future market volatility, and assuming that measured time trends continue into the future. In both tables, individual suits are assumed to be independent of one another, assigned randomly to each of the Big Four auditors, and entail identical distributions of damages. Table 4 assumes a period of one year, and Table 5 offers a five-year time horizon. (It would be possible to construct longer time horizons, but the accuracy of such projections grows more questionable as the time horizon expands). Recall that I estimated eight viability threshold values: \$250 million, \$500 million, \$750 million, \$1 billion, \$1.25 billion, \$1.5 billion, \$1.75 billion, and \$2

billion. Those values comprise the columns of both tables. The rows provide different measures of volatility (as measured by the standard deviation of monthly market portfolio returns.) Historically, this measure of volatility has been centered at around 0.037, and it has rarely gone above 0.07.

TABLE 4: ESTIMATED PROBABILITY OF FAILURE OF BIG FOUR AUDITING FIRM: ONE-YEAR HORIZON

Hypothesized Viability Threshold								
Market Volatility	\$250 Million	\$500 Million	\$750 Million	\$1 Billion	\$1.25 Billion	\$1.5 Billion	\$1.75 Billion	\$2 Billion
0.01	0.045	0.013	0.006	0.003	0.002	0.001	0.001	0.001
0.02	0.094	0.028	0.013	0.007	0.005	0.003	0.002	0.002
0.03	0.153	0.045	0.021	0.011	0.007	0.004	0.003	0.002
0.04	0.216	0.065	0.029	0.016	0.010	0.007	0.005	0.003
0.05	0.285	0.087	0.039	0.021	0.012	0.008	0.006	0.004
0.06	0.356	0.110	0.048	0.026	0.015	0.010	0.007	0.005
0.07	0.429	0.136	0.059	0.031	0.019	0.012	0.009	0.006
0.08	0.501	0.165	0.071	0.037	0.022	0.014	0.010	0.007

TABLE 5: ESTIMATED PROBABILITY OF FAILURE OF BIG FOUR AUDITING FIRM: FIVE-YEAR HORIZON

Hypothesized Viability Threshold								
Market Volatility	\$250 Million	\$500 Million	\$750 Million	\$1 Billion	\$1.25 Billion	\$1.5 Billion	\$1.75 Billion	\$2 Billion
0.01	0.204	0.065	0.031	0.017	0.011	0.007	0.005	0.004
0.02	0.391	0.134	0.062	0.035	0.022	0.015	0.010	0.008
0.03	0.563	0.207	0.099	0.055	0.033	0.022	0.015	0.011
0.04	0.704	0.286	0.135	0.076	0.048	0.033	0.023	0.017
0.05	0.814	0.365	0.179	0.099	0.061	0.040	0.028	0.021
0.06	0.889	0.441	0.218	0.121	0.075	0.050	0.034	0.024
0.07	0.939	0.518	0.261	0.148	0.090	0.060	0.043	0.031
0.08	0.969	0.593	0.307	0.172	0.105	0.069	0.048	0.035

As can be seen by the tables, projected right-tail risk turns critically on the combination of underlying viability threshold, hypothesized market volatility, and time horizon. Consider first the one-year time horizon in Table 4. Here, all but five of the volatility threshold combinations appear to fall below 0.2. None of the combinations yield right-tail risks that exceed 0.5, at least by a large margin. For the five-year horizons in Table 5, unsurprisingly, the right-tail risk is somewhat larger, and in cases of extreme wealth constraints and high market volatility, right-tail risk can grow very close to 1.0 (though it tails off fairly rapidly as the viability threshold grows).

C. *Robustness and Sources of Bias*

Although my analysis has offered some numerical projections to describe the exposure of the auditing profession and individual firms to litigation risk, it has done so only through making a number of factual assumptions (some of which may be little more than educated guesses).

It is important to be mindful of these assumptions, and of the likely effects on my results were these assumptions to be revised. Consequently, many of my estimates are likely to come with a considerable amount of noise, even if they are not systematically biased upward or downward. In addition, however, some of the simplifying assumptions could also introduce bias into my projections. Below I discuss (1) factors that might bias my results downward, and (2) factors that might bias my results upward.

1. *Sources of Downward Bias.* — A number of factors may potentially bias my estimates toward zero, causing them to underestimate the likelihood of another Big Four failure. Four such factors may be particularly pertinent:

a. *Litigation Costs.* — My analysis has not taken litigation costs into account. This could be a significant source of downward bias, given that many class actions can drag on for some time before settlement (upwards of eighteen months in my sample of auditor litigation). Estimating this effect is possible in principle, but it would require historical data on billable hours in class action litigation involving auditors. Unfortunately, I was unable to get access to such data from the auditing firms to conduct my estimates.¹⁴⁹

b. *Litigation Risks Outside of Securities Class Actions.* — As I have noted numerous times above, my analysis excludes risk from other sorts of securities litigation, including private actions (both state and federal), SEC civil actions, SEC administrative actions, and criminal actions. Examples include prominent SEC actions (like Deloitte's SEC settlement of \$50 million in the Adelpia case)¹⁵⁰ and individual actions (Deloitte's reported \$250 million settlement in the Fortress Re litigation).¹⁵¹ Once again, because resolutions on private settlements are rarely made public, it is difficult to gain reliable information on their overall incidence in the population of outcomes over the last decade. For this reason, the analysis above expanded the plausible threshold levels downward from what the calibrated model suggested, but it is difficult to know how much to shift those amounts.

c. *Reputational Costs.* — As a number of auditing scholars have noted, the costs of litigation go far beyond the monetary outlays that an auditing firm must bear.¹⁵² Because the auditing profession is, in many ways, an elaborate clearinghouse of reputational bonding, a notable episode of litigation can have a serious effect on future prospects by eroding the reputation of the auditor. Controlling for such effects, then, might cause my right-tail risk estimates to increase.

149. In principle, it is possible to estimate defendants' per-day defense costs, or alternatively, to use plaintiff attorney fee awards as a proxy for defense costs. Neither measure is entirely satisfactory, however.

150. Jonathan D. Glater, *Adelpia Auditor Agrees to Pay \$50 Million into Investors' Fund*, N.Y. Times, Apr. 27, 2005, at C5.

151. See *supra* note 119 and accompanying text.

152. E.g., Davis & Simon, *supra* note 15, at 66–67; Palmrose, *supra* note 8, at 57.

d. *Lowball Settlements.* — My empirical analysis does not account for the fact that many recent settlements may appear artificially low because they involve recovery from the remaining assets of Arthur Andersen, which is no longer a going concern. Although they are not reported on above, the estimated cataclysmic risk probabilities decrease slightly when the Andersen settlements are excluded from the sample.¹⁵³

2. *Sources of Upward Bias.* — On the other hand, a number of omitted factors may potentially bias my estimates upward and away from zero, causing us to overestimate the likelihood of another Big Four failure. Four such factors seem pertinent here.

a. *Auditing Fees and Litigation Risk.* — The analysis above has not considered the role that fees have in stemming and otherwise affecting cataclysmic liability risk. The significance of these increased fees for viability is twofold. First, the ability to raise fees in the face of litigation risk permits auditing firms to engage in a form of effective self-insurance, extracting actuarial payments that reflect downstream liability risk. Moreover, empirical evidence suggests they do just that. For example, at least one study has found that U.K. auditors charge higher fees for their services when their clients access U.S. capital markets, an increase that is not fully explained by the more extensive U.S. disclosure requirements.¹⁵⁴

b. *Indemnity Provisions.* — As noted in the Introduction, it has become increasingly frequent (and by some accounts ubiquitous) for Big Four auditors to place indemnity provisions in their engagement letters with clients. The current legal enforceability of such provisions is, as of yet, unclear, but to the extent that they are enforceable, the estimates above would overstate the right-tail risk faced by auditors.

c. *Plaintiff Restraint.* — It is possible (though perhaps not probable) that plaintiffs' attorneys will exercise some restraint before causing another firm to fail. This argument asserts that the plaintiffs' bar has come to depend on litigation against the auditing industry, and would effectively be killing the goose that lays the golden egg by threatening the viability of the industry. If plaintiffs (and perhaps regulators) were to exercise such self-restraint, then my projections would be too high.

d. *Deterrent Effects.* — In addition to fees, the analysis above has held constant the underlying rate at which auditors engage in or assist financial statement fraud. Such an approach is perhaps sufficient alone if the liability system were wholly unresponsive to underlying base rates of fraudulent behavior.¹⁵⁵ However, to the extent that legal liability creates

153. It should be noted, however, that the fear of financial distress may *naturally* provide a dampening force on securities litigation settlements against any defendant, and thus it may not be appropriate to exclude the Andersen settlements as a special case.

154. Ananth Seetharaman, Ferdinand A. Gul & Stephen G. Lynn, *Litigation Risk and Audit Fees: Evidence from UK Firms Cross-Listed on US Markets*, 33 *J. Acct. & Econ.* 91, 93 (2002).

155. See Antonio E. Bernardo, Eric Talley & Ivo Welch, *A Theory of Legal Presumptions*, 16 *J.L. Econ. & Org.* 1, 2–3 (2000).

a reasonable deterrent, auditors can respond. For example, auditors can decide to sever relationships with their riskiest clients, altering their “portfolio” of clients to a safer subpopulation. Alternatively, they can consider issuing qualified or modified attestations, which constitute not only a red flag for investors, but can also lead to a reduced likelihood of liability to investors down the road.¹⁵⁶ Once again, should deterrence effects cause auditors to reduce their liability exposure endogenously, my projections would err on the high side.

D. Discussion

Assuming, then, for argument’s sake that the estimates produced above are not unduly infected by significant bias in either direction, are they big numbers, small numbers, or medium-sized ones? Cutting to the chase, even if the above projections were infinitely precise, the issue is probably still too complicated for my analysis to answer it one way or another, and for a simple reason: Half of the pertinent policy question remains unaddressed and unanswered. From a policy perspective, one would want to know not only the *likelihood* that a cataclysmic event occurs, but also the *magnitude of the consequences* should one occur.¹⁵⁷ The analysis above has concentrated exclusively on the former question, and has paid little attention to the latter. Without an additional analysis of the consequences of an additional exit by a Big Four firm, then, it is difficult to place a definitive valence on the probability estimates above.¹⁵⁸

Nevertheless, the analysis above is at least helpful in that it provides one piece of the policy puzzle which is relevant in thinking about how the auditing profession should be regulated (or, alternatively, not regulated). In this spirit, it is perhaps also worth noting a few central attributes exposed by the above analysis that are worth keeping in mind. First, com-

156. Steven Mong & Peter Roebuck, Effect of Audit Report Disclosure on Auditor Litigation Risk, 45 *Acct. & Fin.* 145, 165 (2005).

157. This is also, as it turns out, the critical definition of materiality in many legal contexts. See, e.g., *Basic Inc. v. Levinson*, 485 U.S. 224, 238 (1988) (stating that materiality depends on probability event will occur and on likely magnitude of event); *TSC Indus. v. Northway*, 426 U.S. 438, 448–49 (1976) (“An omitted fact is material if there is a substantial likelihood that a reasonable shareholder would consider it important in deciding how to vote.”); *SEC v. Tex. Gulf Sulphur Co.*, 401 F.2d 833, 849 (2d Cir. 1968) (“[W]hether facts are material . . . will depend at any given time upon a balancing of both the indicated probability that the event will occur and the anticipated magnitude of the event in light of the totality of the company activity.”).

158. Curiously, on this point auditors have developed their own rules of thumb for deciding when probabilities are high or low, at least regarding whether to issue a going concern opinion for a client. In such a context, as one prominent textbook notes, contingencies with probabilities of less than 0.2 would be classified as “remote”; those with probabilities between 0.2 and 0.7 would be classified as “possible”; and those with probabilities in excess of 0.7 would be classified as “probable.” William R. Kinney, Jr., *Information Quality Assurance and Internal Control for Management Decision Making* 235–36 (2000). As noted in the text, however, there is reason to doubt whether these rules of thumb are very helpful even in the going concern context, not to mention the unrelated one studied here.

paring Tables 4 and 5, it is clear that one's definition of an appropriate time horizon is of crucial importance. The cataclysmic risk estimates jump considerably (particularly under low viability threshold assumptions) as one moves from a one-year horizon to a five-year horizon. They would jump again if one were to move to ten-, fifteen-, or twenty-year horizons. Indeed, in the limit of an infinite horizon, every cell in the table would converge to 100% (a statistical incarnation of the Keynesian prophecy/tautology that in the long run, we're all dead). Although a one- or five-year horizon may be a reasonable horizon for some purposes, it may be too short for others. Nevertheless, it is clearly important to define the relevant horizon clearly before one can attend to any policy questions with much confidence. Moreover, in thinking about an appropriate time horizon, it is also important to keep in mind that as one's horizon grows, any statistical model's out-of-sample projections become less and less reliable, since they hold constant much of the status quo in the years compromising the projection. As noted in the Introduction, even four years after Andersen's demise, second tier firms have adapted by changing their strategy, and in at least one instance have merged to form a relatively large company that may well begin to compete with the Big Four.¹⁵⁹

A second point warranting reiteration comes from the fact that the empirical distribution of case outcomes (i.e., settlements) appears to be something approximating a log-normal distribution. Even after adjusting for the fact that multiple cases can be filed in any given year against an auditor, and the fact that filings tend to be predicted by systematic swings in the market, the distribution that eventually emerges—while a “fat-tail” distribution—appears not to be of the variety that defies the benefits of risk diversification. In other words, the types of distributions that seem to emerge from the empirical analysis above appear to represent risks that—at least in principle—could be insured in a private market. Viewed from this perspective, the preliminary analysis above does not uncover strong evidence that the breakdown of the insurance market among Big Four auditors is solely attributable to cataclysmic liability risk exposure. While such risk exposure may well be playing a partial role, it is plausible that scale economies and agency costs also help explain the absence of an insurance market for dominant auditing firms.¹⁶⁰

As noted above, this Essay does not endeavor to characterize the magnitude of the social loss associated with an exit by another large audi-

159. See Hart, *supra* note 10.

160. There may also be some intermediate possibilities that are plausible. For example some finance scholars have demonstrated the theoretical possibility of “traps” in which near-cataclysmic (but diversifiable) risks nonetheless remain undiversified by a private market in the absence of a large, extremely liquid insurer. See, e.g., Ibragimov et al., *supra* note 11, at 5. Although the analysis in this Essay cannot reject such a hypothesis in the auditor context, the author is skeptical—given recent merger activity among second-tier auditors—that the current auditing profession is in such a liquidity trap.

tor. But this is obviously a topic that is both important and debatable. As a matter of classical finance theory, the bankruptcy and/or shutdown of a firm is little more than a reallocation of cash flow and control rights from shareholders and managers to debt holders in a company. It neither creates nor destroys value itself, but rather is “merely” a legal event. While formally correct, the classical view of bankruptcy/shutdown is at least mildly misleading in three ways. First, bankruptcy is costly and imposes significant transaction fees on all corporate constituents. United Airlines’s recent bankruptcy, for example, is likely to run well over \$330 million in professional fees alone; Adelpia’s will run approximately \$370 million; and Enron’s, upwards of \$725 million.¹⁶¹ These are real resources that the reorganizing/liquidating company loses for good, and represent the opportunity costs of the time of those professionals assisting with the bankruptcy.

Second, when a firm exits/liquidates, significant displacement can be caused for employees. Based on Arthur Andersen’s exit experience, at least when the Big Five contracted into the Big Four, the diaspora of displaced employees appeared to be absorbed by other firms in a relatively orderly way, not only by other large firms, but also by second-tier accounting firms. Grant Thornton, for example, the largest second-tier firm, used the downfall of Andersen as an opportunity to expand operations, though it still remains far smaller than the smallest Big Four firm. Table 6 illustrates how various firms took on board groups within Andersen that were hired as “whole practices.”

TABLE 6: ANDERSEN PARTNERS AND STAFF HIRED BY OTHER FIRMS

Firms	Partners	Staff
Deloitte & Touche	299	2255
KPMG	154	1598
Bearing Point/McLean, Virginia	—	1575*
Ernst & Young	125	1296
Grant Thornton	60	500
Robert Hall/Menlo Park, California	50	760
Huron Consulting/Chicago	25	250
PricewaterhouseCoopers	25	165
Navigant/Chicago	8	90

*Total staff figure only—partners not separately identified.¹⁶²

In the case of Andersen, however, the costs were not evenly distributed. While most employees were able to recover quickly, a smaller proportion, particularly of partners, suffered large losses upon the firm’s demise. In most cases when Andersen partners and staff were hired by another firm as an intact, or mostly intact, practice, the hiring firms made up for up to \$100,000 of the capital that the Andersen partners lost and

161. Nathan Koppel & Paul Davies, *Bankruptcy-Law Overhaul Has Wriggle Room*, Wall St. J., Mar. 27, 2006, at C1.

162. Public Accounting Report (CCH) (July 15, 2003) (on file with author).

agreed to take ten professionals and two administrative staff members per partner. This did not take care of everyone, however. Andersen retirees and junior Andersen partners who did not have a strong client list were the most likely to be hurt. The retired partners' pensions evaporated, and new partners were deeply in debt because the loans they had taken out to buy into the Andersen partnership were sometimes as large as \$250,000. For example, one twenty-year partner who was just reaching retirement age when the firm fell lost \$3 million in retirement savings and paid-in capital.¹⁶³

Finally, the exit of a dominant firm can have serious implications for competition policy. Since Andersen's exit in 2002, the market has become significantly more concentrated, with four rather than five firms coming to dominate existing engagements and the vast majority of high-stakes clients. The Big Four account for over 75% of all public registrants, 99% of the market capitalization of public reporters, and 99% of the reported asset value of publicly traded companies.¹⁶⁴ Based on the distribution of engagements, the auditing industry currently has a Herfindahl-Hirschman Index¹⁶⁵ of 1,287, which, under Department of Justice guidelines, would be considered "Moderate Concentration." The loss of Andersen (and subsequent reallocation of engagements) caused the auditing industry's rise to its current Herfindahl index level from one that was comfortably below 1,000, which the Department views as "unconcentrated." The loss of yet another Big Four firm would, if clients simply switched to one of the remaining dominant firms, cause the Herfindahl index for the industry to shoot well past 1,800, a point that the Department views as "highly concentrated." (This is highly probable, as this was essentially the pattern after Andersen's exit.) Indeed, it is almost certainly the case that under its Merger Guidelines,¹⁶⁶ the Justice Department would not approve of a merger between two of the Big Four firms for exactly this reason. Finally, the Sarbox prohibition on the simultaneous provision of certain nonauditing services with auditing services likely exacerbates problems with dominant firm competition. Indeed, if a large-cap client were to use one Big Four auditor for auditing services, and another one for nonauditing services, then currently it has only two other Big Four firms to choose from, should it wish to switch providers. Exit by another dominant firm would leave it with only one. It is at least

163. Barbara Ley Toffler with Jennifer Reingold, *Final Accounting: Ambition, Greed, and the Fall of Arthur Andersen* 219 (2003).

164. Audit Analytics Database, *supra* note 66 (data last visited May 2005).

165. The Herfindahl-Hirschman index is a commonly used measure of market power, and is computed by taking the squared sum of market shares of individual companies (measured in percent). A perfectly competitive industry, therefore, with an infinite number of firms, would have an index of zero ($= 0^2$), while a market monopoly would have an index of 10,000 ($= 100^2$).

166. See U.S. Dep't of Justice & Fed. Trade Comm'n, *Horizontal Merger Guidelines* (1997), available at http://www.usdoj.gov/atr/public/guidelines/horiz_book/toc.html (on file with the *Columbia Law Review*).

plausible, therefore, that the concentration induced by an additional exit would hurt both quality and price competition, particularly among large-cap firms (who appear to have strong preferences for a Big Four auditor).

Thus, while this study does not attempt to quantify the magnitude of the consequences attending exit by another Big Four firm, the discussion above illustrates that such consequences are at least plausibly significant. And, as they become more significant, the probability point estimates generated above become more informative.

CONCLUSION

This Essay has presented a framework for analyzing viability threats to Big Four auditing firms associated with securities fraud class actions. Using data drawn from the universe of class action filings, market data, and a model of firm exit, the Essay has used this framework to generate a set of point estimates for viability risk of firms over various finite time horizons. Such an approach is helpful in at least two respects: First, it provides some information (albeit with some noise) that is likely to be helpful in understanding the ongoing debate about what—if anything—regulators should do to address arguments of cataclysmic risk faced by Big Four firms. In particular, while this study does not find evidence that auditors' historical liability exposure is inherently undiversifiable, it does generate projections of viability risk that can, at moderate time horizons and low viability thresholds, be rather large. If one believes that the consequences of additional contraction in the auditing industry would be unambiguously bad (a topic this Essay views as plausible but ultimately takes no position on), then such viability risks are at least worthy of our collective attention. In addition, however, the framework provided above can likely be exported to other sources of liability risk not studied here, in particular other forms of private and public civil litigation.

In closing, I reiterate that the analysis presented here is but the tip of the iceberg in attempting to refine the enterprise of fitting empirical outcomes to right-tail risk. In particular, future work could probably take advantage of more individual firm-level variation than I have studied above, tying it more directly to precise client portfolios carried by the market dominant firms. Moreover, future analysis might also attempt to understand what interdependencies plausibly exist among ostensibly "independent" actions filed against specific auditing firms in a given time period. Obviously, if individual auditing firms are subject to periodic "litigation waves," understanding the nature of such interdependencies could substantially refine predictions about viability. In addition, future work might attempt a more highly calibrated model of the capacity of firms to address large liability events by altering their fee and client base structures. Although I leave these questions for future endeavors, the overall framework presented here hopefully presents a promising avenue for understanding litigation risk and its relationship to market structure and regulatory policy.

APPENDIX

This Appendix describes in greater detail the manner in which the litigation risk probabilities were estimated for the purposes of the calibration exercises in the main body of the paper. The estimation consisted of two stages. The first stage consisted of analyzing the relationship between the number of firms, trading volatility, and time in estimating the number of class actions naming a Big Five/Big Four auditor for each year on the overall sample. This stage of the analysis used all available data on the number of class actions involving litigation against an auditor, regardless of whether information about its ultimate resolution was observable. The second stage then considered the distribution of damages *paid by auditors* in each filed suit, again conditional on observable factors, but this time including only data for which auditor settlement amounts were observable.

Consider first the initial stage, relating auditor filings and observable market characteristics. Using data drawn from CRSP, this stage of the analysis derived a simple model of “Bernoulli” suit filing probabilities where the number of suits filed is a function of the number of publicly traded firms in the CRSP data set¹⁶⁷ (denoted by N_t), the average monthly volatility of the market during the year preceding filing (denoted by $VWRET\text{Xsd}_t$), the percentage of average volatility attributable to technology firms (as denoted by two digit SIC codes) relative to all public companies (*TechPercent*), and linear and squared time terms (expressed in years). A Bernoulli hazard rate approach implies a nonlinear function to predict the number of suits each year. This function is reported in Equation A1 below, where Y_t denotes the number of suits filed in a given year t , Z_t denotes a vector of observable variables, and $(\alpha_0, \vec{\beta})$ denotes a vector of estimated coefficients.

EQUATION A1

$$Y_t = N_t \cdot \alpha_0 \cdot \left(1 - \exp\left[-\vec{\beta} \cdot Z_t\right]\right) + \varepsilon_t$$

Table A1 reports estimated coefficients and standard errors for the “filing stage” estimation. In all specifications, the model fit is relatively good and is able to explain approximately 80% of the observed variance. Although neither the linear nor the quadratic time coefficient is statistically significant, all other variables are significant at the 1% level, and I therefore retain them in generating the calibrations below. Still, of course, the above estimates are made with some noise, and any going-forward prediction about the number of suits requires information about the likely distribution of market volatility.

167. There are currently approximately 7,000 firms in listed in CRSP. Note that this is somewhat smaller than the number of publicly traded firms (which number well over 10,000), but the undercount is relatively consistent across time.

In order to characterize such a distribution, I also tracked market volatility in each month since 1950 using CRSP data once again.¹⁶⁸ Assuming that market volatility follows a random walk process, I attempted to fit a rough distribution to the underlying random process. Bootstrapping methods helped to confirm that a normal specification constituted a reasonable fit of the historical data.¹⁶⁹ The mean volatility measure during this time was 0.0376846, with a standard deviation of 0.0145603. The calibrated projections noted in the text assumed a low volatility year to be one in which volatility is one standard deviation below its historic mean, and vice versa for a high volatility year.

TABLE A1

	[1]	[2]	[3]
Constant	2.298574 (0.75461***)	0.982292 (0.9100012)	0.546595 (0.5842733)
VWRETxs _d	0.3744992 (0.0746841***)	0.4431925 (0.1195282***)	(0.1374303***)
Time		6.69E-06 (0.0000112)	0.0056155 (0.0096144)
Time-Sqd			-0.0000901 (0.0003841)
TechPercent	0.161 (0.07***)	0.142 (0.07***)	0.159 (0.06***)
N	15	15	15
R-Sqd	0.8186	0.8406	0.884
Adj. R-Sqd	0.7907	0.8007	0.8419
F-Stat	29.33***	21.09***	20.97***

Table A1: Non-Linear Least Squares estimates

Dep. Var.: Number of Securities Class Action Filings Naming Big Five/Big Four Auditor per Year

(Standard Errors in Parentheses)

***= Significant at 1% level

The next set of estimations considers—when a given auditor is named in a class action—the likely distribution of damages shouldered by that auditor when such information is available. There are at least two methods for estimating the exposure of an auditor per suit filed. The first approach would be simply to use the distribution of auditor outcomes that can be disaggregated from total outcomes ($n=79$), using that sample to estimate a population's characteristics. (In what follows, I shall refer to this as the "direct" method). The second approach would be to use the same sample to estimate a relationship between total outcome and the auditor's share of the outcome, but then to use a broader sample ($n=132$) of cases to predict total outcome, imputing the auditor's ex-

168. I could not track the same time period for federal class actions because the data are quite poor before 1990.

169. I also experimented with various autoregressive specifications, none of which improved the explanatory power of the regressions significantly.

pected share in unobserved cases using bootstrapping techniques. Fortunately, the analysis of the data appears relatively consistent across both methods, and I therefore constrain my exposition to the simpler, direct method in the discussion that follows.

As noted in the text, it appears that the distribution of damages in these cases is most consistent with a log-normal distribution. To control for other possible sources of variation, then, I regressed the log of the ultimate auditor-borne settlement amount against constant, linear, and quadratic time variables, five dummy variables regarding whether a particular type of allegation was pled in the case, and the identity of the named auditor. A number of specifications are reported in Table A2 below.

Note from the table that neither the time variables nor the allegation variables appear to have much explanatory power in prediction settlement size. Of the variables included, the auditor identifier appears, in some instances, to have some explanatory power (PWC is the omitted category). Interestingly, when Arthur Andersen was a named defendant, it appears to have a slightly negative estimated impact on settlement value. Ultimately, for the projections given in the text, I included the time variables (although excluding them would make little difference) and an imputed average settlement value effect across the surviving four firms drawn from the estimated coefficients in the second specification of the model.

TABLE A2

	[1]	[2]	[3]	[4]
Constant	15.17935 (0.9490773***)	15.46855 (0.8933412)	15.16966 (0.8561824)	15.2253 (0.8087181)
Time	0.2222771 (0.3154602)	0.2496796 (0.3039241)	0.2262018 (0.322638)	0.2862124 (0.3163135)
Time^2	-0.0244938 (0.0279559)	-0.0253864 (0.0269947)	-0.0234262 (0.028601)	-0.0284266 (0.0276978)
GAAP Violations	0.159007 (0.4622526)		0.1915048 (0.4916979)	
IPO Violations	0.9148111 (1.027831)		1.274017 (1.037878)	
Restatement	0.5698746 (0.4830053)		0.567547 (0.4886391)	
Section 10b	0.02841 (0.592296)		0.0225506 (0.5931362)	
Section 11	-0.6778905 (0.7008975)		-1.182973 (0.6896283*)	
Arthur Andersen	-0.2474766 (0.7010004)	-0.6263416 (0.6214037)		
Deloitte & Touche	-0.8617951 (0.6000436)	-1.148875 (0.5446881**)		
KPMG	1.230362 (0.6263304*)	0.9892802 (0.5662646*)		
Ernst & Young	0.1906291 (0.6591648)	0.2030091 (0.6380065)		
N	79	79	79	79
R-Squared	0.2666	0.2303	0.0891	0.0189
Adj R-Squared	0.1172	0.152	-0.0208	-0.0122

Table A2: Ordinary Linear Least Squares estimates
 Dep. Var.: Log Settlement Value; Auditor Share; Real \$2005
 (Standard Errors in Parentheses)

***= Significant at 1% level

** = Significant at 5% level

* = Significant at 10% level