

Public Ownership, Firm Governance, and Litigation Risk

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Many going-private transactions are motivated—at least ostensibly—by the desire to escape the burdens and costs of public ownership. Although these burdens have many purported manifestations, one commonly cited is the risk of litigation, which may be borne both directly by the firm and/or its fiduciaries, or reflected in director and officer insurance premia funded at company expense. An important issue for the “litigation risk” justification of privatization is whether alternative (and less expensive) steps falling short of going private—such as governance reforms—may augur sufficiently against litigation exposure. In this Article, I consider whether, controlling for other variables related to firm-specific attributes, various measurable attributes of governance help to predict subsequent litigation exposure. Although there are some governance features (such as multiple board service, the presence of a staggered/classified board, institutional investing, and the proactive adoption of a governance policy) that predict subsequent liability exposure, most governance indicia appear to be of negligible predictive value, both statistically and economically. In light of these findings, this Article discusses implications for both the private-equity market and for corporate/securities law more generally.

INTRODUCTION

Prior to its quasi-hibernation in late 2007, the private-equity (PE) market rose to historically unprecedented levels. From 2002 through the third quarter of 2007, the total annual number of PE deals nearly doubled, and the associated annual dollar value of PE deals approximately quadrupled.¹ Many privatizations—particularly during and after the promulgation of the Sarbanes-Oxley Act of 2002² (SOX) and its regulatory progeny—were concentrated among micro-cap and small-

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¹ See Per Strömberg, *The New Demography of Private Equity*, in Anuradha Gurung and Josh Lerner, eds, *The Global Economic Impact of Private Equity Report 2008* 3, 13 figures 1A and 1B (World Economic Forum 2008), online at http://www.weforum.org/pdf/cgi/pe/Full_Report.pdf (visited Jan 11, 2009).

² Sarbanes-Oxley Act of 2002, Pub L No 107-204, 116 Stat 745, codified in relevant part at 15 USC § 7201 et seq.

cap issuers, an observation that has now been documented numerous times elsewhere.³

The going-private wave of the last half-decade undoubtedly had many causal drivers (not the least of which was relatively cheap access to debt available during the period). According to many commentators, researchers, and the privatizing companies themselves, however, the private-equity wave of the last half-decade was at least partially inspired by an organizational desire to escape the (espoused) burdens of public ownership, including litigation risk.⁴ While difficult to test directly, this claim is at least a plausible one. Indeed, SOX (and its regulatory progeny) substantially enhanced the power of both government and self-regulating organizations (SROs) to commence enforcement actions against public issuers and their fiduciaries.⁵ Moreover, the post-SOX regulatory landscape also gave private plaintiffs greater leverage in bringing suit against public companies. To be sure, most of the provisions of SOX specifically disclaim the creation of a private right of action, but at the same time the legislation included key features that almost certainly enhanced the attractiveness of securities litigation.⁶ Most directly, it increased (prospectively) the limitations period for filing a securities fraud action (both from occurrence and discovery),⁷ thereby enhancing the value of the real option for shareholders to seek redress of their complaints through litigation. Somewhat less directly, SOX liberalized the utilization of “fair-fund” escrows in which to park moneys collected by the SEC from statutory

³ See, for example, Ehud Kamar, Pinar Karaca-Mandic, and Eric Talley, *Going-private Decisions and the Sarbanes-Oxley Act of 2002: A Cross-country Analysis*, 25 J L, Econ, & Org *3 (forthcoming 2009), online at <http://ssrn.com/abstract=901769> (visited Jan 11, 2009); Robert P. Bartlett III, *Going Private but Staying Public: Reexamining the Effect of Sarbanes-Oxley on Firms' Going-private Decisions*, 76 U Chi L Rev 7, 33–38 (2009) (examining data on companies' going-private decisions and concluding that only small-cap and medium-cap companies have done so to avoid SOX requirements).

⁴ See, for example, Ehud Kamar, Pinar Karaca-Mandic, and Eric L. Talley, *Sarbanes-Oxley's Effect on Small Firms: What Is the Evidence?*, in Susan M. Gates and Kristin J. Leuschner, eds., *In the Name of Entrepreneurship? The Logic and Effects of Special Regulatory Treatment for Small Business* 143, 165 table 5.3 (RAND 2007), online at http://www.rand.org/pubs/monographs/2007/RAND_MG663.pdf (visited Jan 11, 2009) (offering a concise summary of the literature on the effects of SOX on small firms and large firms); Maurice R. Greenberg, *Regulation, Yes; Strangulation, No*, Wall St J A10 (Aug 21, 2006) (highlighting the negative reaction to SOX compliance among public corporation executives); Alan Murray, *For Sarbanes-Oxley Bashers, Some Perspective*, Wall St J A2 (Nov 16, 2005) (acknowledging the costs of SOX for smaller firms and the complaints from businesses of all sizes, but questioning whether the costs of regulation can really explain larger firms going private).

⁵ See Kamar, Karaca-Mandic, and Talley, *Sarbanes-Oxley's Effects on Small Firms* at 145–50 (cited in note 4).

⁶ See Robert Serio and Matthew Kahn, *Private Rights of Action and the Sarbanes-Oxley Act of 2002*, 38 Sec Reg & L Rep 668, 669–71 (Apr 2006) (highlighting possible implied causes of action arising out of SOX).

⁷ See 28 USC § 1658.

finances and disgorgements, holding them for claims by private plaintiffs.⁸ Moreover, the Act set into motion (either directly or through SRO listing requirements) affirmative disclosure requirements on management⁹ or the company,¹⁰ which themselves can constitute (in some people's eyes) the elements of a securities fraud action by prospective plaintiffs.

At the same time, much of the aspirational thrust of SOX was to make public corporations better governed¹¹—a move that should (or at least plausibly could) reduce agency costs between managers and investors. If the Act was successful in accomplishing this goal, then its success might plausibly be reflected through issuers' susceptibility to investor litigation. In short, greater concentration on "good governance" by companies could result in less litigation, and the relative benefit of going private would decline accordingly. Viewed in this light, the litigation-risk justifications of going private would be a substantially less plausible explanation of the PE trend, and other (possibly less heroic) motivations may have been at its core.

This Article considers the empirical relationship between corporate governance and litigation risk. Using a broad panel dataset of public companies from 2001 to 2006, I explore the questions about whether and how—controlling for a number of firm-specific and market variables—a firm's structural governance choices predict its later susceptibility to securities class action litigation.

Although the predictive effects of governance on the incidence of litigation and exposure risk are important for a number of reasons, as noted above, they may be particularly informative in understanding and evaluating the private-equity trend that has—until recently—flourished in the post-SOX environment. Legal-exposure risks are borne by a

⁸ See SOX § 308, 116 Stat at 784–85, codified at 15 USC § 7246.

⁹ See, for example, SOX § 302(a), 116 Stat at 777, codified at 15 USC § 7241(a) ("The [SEC] shall, by rule, require . . . that the principal executive officer . . . and the principal financial officer . . . certify [] each annual or quarterly report."); SOX § 404(a), 116 Stat at 789, codified at 15 USC § 7262(a) (requiring each annual report to contain an internal control report, which states an internal control structure for financial reporting and contains an assessment of the effectiveness of that control structure).

¹⁰ See, for example, NYSE, *Listed Company Manual* §§ 201–04, online at http://www.nyse.com/lcm/lcm_section.html (visited Jan 11, 2009) (requiring NYSE-listed companies to disclose, among other things, material news developments, annual financial statements, and interim earnings reports).

¹¹ See, for example, John C. Coates IV, *The Goals and Promise of the Sarbanes-Oxley Act*, 21 J Econ Perspectives 91, 92 (Winter 2007) (noting the "variety of long-term benefits" promised by SOX, including the fact that "[i]nvestors will face a lower risk of losses from fraud and theft, and benefit from more reliable financial reporting, greater transparency, and accountability"); Lawrence A. Cunningham, *The Sarbanes-Oxley Yawn: Heavy Rhetoric, Light Reform (and It Just Might Work)*, 35 Conn L Rev 915, 955–56 (2003) (alluding, somewhat skeptically, to the requirement that the CEO and CFO design internal controls, and then certify their integrity, as an example of a provision that lawmakers hoped would inspire better corporate governance by taking the defense of ignorance off the table).

combination of current and prospective fiduciaries of the issuers (who may demand more compensation in exchange for the added risk), and the issuers themselves (who also face liability exposure and in any event generally pay director and officer (D&O) insurance premiums associated with litigation risk). Anecdotally, it is notable that during the last few years numerous D&O insurers have begun to “grade” issuers’ governance based on perceived litigation risk, and in addition numerous private vendors have moved into the market of predicting such litigation susceptibility.¹² Moreover, beyond the availability of low-cost debt capital, many ascribe the private-equity wave of the last seven years to a combination of (1) a desire to remove the regulatory and litigious overhang that drags down returns of public companies; and (2) a desire to put a public issuer in a type of “quarantine” away from the oversight of corporate law, activist shareholders, and securities regulation/litigation, where the public focus on “good governance” may run wide of the mark of what is appropriate for that firm.¹³ To the extent that the various governance reforms implemented under SOX were efficacious in reducing agency costs and fraud (and associated litigation), then the above two arguments would not be very convincing. On the other hand, if the governance reforms championed in the post-SOX environment did not have much of an effect in reducing litigation costs associated with securities litigation, then it would lend some support to these possible defenses of the going private.

My empirical findings, while qualitatively mixed, appear to be more consistent with the latter argument above. That is, the predictive relationship I am able to uncover between governance choices and prospective litigation risk is relatively (and in some ways surprisingly) modest. While there are particular governance features (for example, multiple board service, the proactive adoption of a corporate governance policy, and to some extent the existence of a classified/staggered board) that bear relatively strongly and robustly on prospective litigation risks, most factors—and indeed most of those promulgated by SOX that the data studied here can measure—appear to have little predictive effect on the incidence of litigation and a firm’s exposure once sued.

It is important to note from the outset that this Article does not attempt to analyze executive compensation either as a component of go-

¹² See, for example, The Corporate Library, *Securities Litigation Risk Analyst*, online at <http://www.thecorporatelibrary.com/info.php?id=49> (visited Jan 11, 2009) (advertising software that predicts the likelihood of a securities class action against a company using factors like the company’s “governance risk”).

¹³ Consider Stanley B. Block, *The Latest Movement to Going Private: An Empirical Study*, 14 *J Applied Fin* 36, 37 (Spring/Summer 2004) (reporting that firms that had recently gone private most often cited as their primary reason the cost of being public, in both dollars and time).

vernance structure or as a predictor of litigation risk. This omission is deliberate and has multiple justifications. Primarily, the relationship between compensation and litigation risk is already one that has been explored extensively in the literature. Previous research has found that the structure of an executive's compensation package (and in particular, the fraction of one's compensation that comes through incentive payments, bonuses, and/or stock and options compensation) is relatively predictive of later accounting restatements, SEC investigations, and private securities litigation.¹⁴ A contemporaneous paper to this one considers whether a company's voluntary disclosure of a Rule 10b5-1 compensation plan is a marker of litigation risk.¹⁵ There the authors find, somewhat surprisingly, and using controls similar to those used here, that disclosure of a 10b5-1 plan is strongly associated with future litigation risk.¹⁶ Moreover, the exclusion of compensation from my analysis has some rationale in the data. It turns out that most of the available data on executive compensation comes from Compustat's ExecuComp Database, which focuses solely on relatively large issuers in the S&P 1500. Given that many sued firms come from a much smaller capitalization stratum—and it is these firms that appear to have been the most likely to utilize going-private strategies—using compensation data (even as a control) would tend to eliminate from view the set of firms that are among the most interesting for this study. Finally, including executive compensation as a “right-hand side” variable can create problems from an econometric perspective, since compensation and litigation susceptibility are endogenously part of an overall system. Thus, if one were to include executive compensation as

¹⁴ See, for example, Shane A. Johnson, Harley E. Ryan, Jr, and Yisong S. Tian, *Managerial Incentives and Corporate Fraud: The Sources of Incentives Matter* *5 (European Finance Association 2006 Zurich Meetings, Feb 2008), online at <http://ssrn.com/abstract=395960> (visited Jan 11, 2009); Eric L. Talley and Gudrun Johnsen, *Corporate Governance, Executive Compensation and Securities Litigation* *4 (University of Southern California Law School Olin Law & Economics Working Paper No 04-7, May 2004), online at <http://ssrn.com/abstract=536963> (visited Jan 11, 2009) (“[W]e estimate that each 1% increase in the fraction of a CEO's contract devoted to medium- to long-term incentives (rather than short-term compensation) predicts a 0.3% increase in *expected* litigation and a \$3.4 million dollar increase in *expected* settlement costs.”); Bin Ke, *Do Equity-based Incentives Induce CEOs to Manage Earnings to Report Strings of Consecutive Earnings Increases?* *2 (14th Annual Conference on Financial Economics and Accounting, Feb 2004), online at <http://ssrn.com/abstract=446540> (visited Jan 11, 2009) (concluding that executives with high equity-based compensation are more likely to manage earnings reports to ensure there is a string of consecutive earnings increases for their own personal gain).

¹⁵ See M. Todd Henderson, Alan D. Jagolinzer, and Karl A. Muller, *Scienter Disclosure* (University of Chicago Law School Olin Law & Economics Working Paper No 411, July 2008), online at <http://ssrn.com/abstract=1137928> (visited Jan 11, 2009).

¹⁶ Id at *2–3 (finding that insiders may voluntarily disclose information prior to strategic trades in order to mitigate future litigation risks).

a control variable, one would need to have a good set of instruments for compensation structure, independent from governance and litigation.¹⁷

This Article is in many ways related (and in some way a product of) the growing body of finance scholarship in empirical corporate governance. Among finance scholars, the practical importance of governance considerations became most salient with the seminal paper by Paul Gompers, Joy Ishii, and Andrew Metrick (GIM) published in 2003 (but circulated at least a year before).¹⁸ There the authors developed a governance index consisting of the sum of twenty-four distinct indicator variables reflecting structural governance choices,¹⁹ and asked how well the “democratic” firms fared in terms of shareholder value relative to their “nondemocratic” counterparts. The results were remarkable: if, for example, an investor put together a portfolio that went long in the democratic firms and short in the nondemocratic ones, that investor would have outperformed a randomly chosen portfolio with identical risk characteristics by 8.5 percent over the 1990s.²⁰ Moreover, democratic firms were found to have higher firm value,²¹ higher profits and stronger sales growth,²² lower capital expenditures,²³ and made fewer corporate acquisitions.²⁴

There have been a number of refinements of the GIM approach over the years. Some of them have attempted to isolate the “principal components” of their index;²⁵ others have attempted to assign weights to

¹⁷ See Joshua D. Angrist and Alan B. Krueger, *Instrumental Variables and the Search for Identification: From Supply and Demand to Natural Experiments*, 15 *J Econ Perspectives* 69, 69–70 (Autumn 2001). For similar reasons I have also deliberately excluded the incidence of earnings restatements and of federal civil/criminal litigation as a predictor of subsequent litigation. To be sure, both controls are highly predictive of later or contemporaneous shareholder suits, but they too are likely to be plagued by endogeneity problems and could therefore bias the estimates of the governance variable coefficients.

¹⁸ Paul Gompers, Joy Ishii, and Andrew Metrick, *Corporate Governance and Equity Prices*, 118 *Q J Econ* 107 (2003).

¹⁹ See *id.* at 114–19 (explaining the statistical methodology behind the construction of their dataset). See also *id.* at 112 table 1 (listing the governance variables used in the study); *id.* at 145–50 (providing detailed information on each of the variables). For example, if a company maintained a poison pill, that factor would count as a point in the GIM index and would be added to other points that the company might have accrued in other measures (such as blank-check preferred stock, golden parachutes, and so forth). *Id.* at 115 (“Thus the Governance Index [] is just the sum of one point for the existence (or absence) of each provision.”). High scorers were deemed to be “non-democratic,” giving little power to shareholders, and vice versa for low scorers. *Id.* at 116 (grouping firms with a GIM index greater than or equal to fourteen in the “Dictatorship Portfolio” and firms with a GIM index less than or equal to five in the “Democracy Portfolio”).

²⁰ *Id.* at 144.

²¹ *Id.* at 128.

²² Gompers, Ishii, and Metrick, 118 *Q J Econ* at 129 (cited in note 18).

²³ *Id.* at 133–34.

²⁴ *Id.* at 134–37 (examining data on corporate acquisitions and finding that nondemocratic firms have done so at a higher rate potentially to stave off “empire collapse”).

²⁵ See, for example, Lucian Arye Bebchuk, Alma Cohen, and Allen Ferrell, *What Matters in Corporate Governance?* *1–5 (Harvard Law School Olin Law, Economics & Business Discussion

the components of the index to improve its predictive power;²⁶ still others have attempted to combine their index with other data to improve upon it.²⁷ Other ways that governance may matter have been more elusive but are still the topic of significant collective research. For example, recent research on governance and executive compensation appears to confirm the argument (albeit weakly) that “well governed” firms also tend to structure executive compensation in a manner that more closely ties pay to performance.²⁸

Nevertheless, the enterprise of empirical corporate governance has not been free from controversy. A recent study, for example, finds that even though popular corporate governance scores do well in explaining past performance, they fare much more poorly in predicting future performance or litigation risk.²⁹ It would, of course, seem unlikely on a priori grounds that such scores *should* perform well in predicting litigation risk given that they were not crafted with that in mind; rather, their strength (or at least purported strength) is in predicting other elements of shareholder value.³⁰ My enterprise in this Article, in contrast, is much more fundamental—to determine whether the primitive building blocks of a corporate governance ranking themselves have predictive power—even if the prevailing indices that aggregate those scores are less reliable. The fact that even these primitives have a predictive ability that is at best modest provides yet another insight into why their aggregation into an off-the-rack governance “score” might similarly fare poorly.

Another important literature that is related to this Article is the large body of work on the determinants of securities litigation, and in particular how the relative incidence of frivolous and meritorious suits

Paper No 491, Sept 2004), online at <http://ssrn.com/abstract=593423> (visited Jan 11, 2009) (analyzing a subset of the GIM index consisting of six factors—four that concern shareholder voting power and two measures taken in preparation to hostile takeovers—and concluding that these six factors are largely responsible for the relation between performance and corporate governance).

²⁶ See, for example, Robert M. Bowen, Shivaram Rajgopal, and Mohan Venkatachalam, *Accounting Discretion, Corporate Governance and Firm Performance* *20 n 11 (14th Annual Conference on Financial Economics and Accounting, Jan 2003), online at <http://ssrn.com/abstract=367940> (visited Jan 11, 2009) (considering several board characteristics and the GIM index as separate measures of governance).

²⁷ See, for example, Lawrence D. Brown and Marcus L. Caylor, *Corporate Governance and Firm Performance* *3–4 (Working Paper, Dec 2004), online at <http://ssrn.com/abstract=586423> (visited Jan 11, 2009) (considering the GIM in conjunction with proxies for board monitoring, institutional ownership, managerial ownership, incentive compensation by bonus or stock options, and auditor expertise).

²⁸ See Jay C. Hartzell and Laura T. Starks, *Institutional Investors and Executive Compensation*, 58 J Fin 2351, 2352 (2003).

²⁹ See Robert Daines, Ian Gow, and David Larcker, *Rating the Ratings: How Good Are Commercial Corporate Governance Ratings?* *29 (Stanford Law School Olin Law & Economics Working Paper No 360, June 2008), online at <http://ssrn.com/abstract=1152093> (visited Jan 11, 2009).

³⁰ Significantly, Daines, Gow and Larcker report that most commercial ratings do not perform well as predictors even of standard shareholder value measures. Id at *21–26.

has changed over the years.³¹ Although I have little to say about the issue of whether meritorious lawsuits have increased over the last decade, my findings may have at least some tangential relevance. Intuitively, one might conjecture that as the incidence of frivolous litigation decreases, the connection between governance and litigation risk should grow stronger. The moderate to underwhelming results I find here, then, might also be consistent with a claim that regardless of their trajectory over the last decade, securities class actions remain a relatively noisy and unpredictable function of governance choices.

One significant caveat that deserves explicit mention before proceeding concerns the nature of most (if not all) attempts to understand the empirical relationship between governance and observable outcomes: it is difficult to overemphasize the caution one should exercise about interpreting the results of the sort of empirical exercise conducted here as a test of *causal theories* relating governance and other outcomes. In a manner similar to (though less extreme than) the executive compensation discussion above, governance attributes within a firm are frequently endogenous, making it difficult to find reliable, independent statistical instruments for predicting those choices. While there are many things one can try to do to confront this problem (such as lagging the independent variables of interest, adding additional controls, and using other measures), the problem of endogeneity bias is unlikely to crumble away. This criticism is, of course, true both for those who purport to find a relationship between governance and a variable of interest and those who purport to find little or no relationship. Consequently, should there be refinements that would better address these issues than those utilized here (and there undoubtedly are), then my results must be interpreted in light of those possible refinements.

My analysis proceeds as follows. Part I describes the overall architecture and structure of the dataset, providing summary statistics of the variables that are available within it. Part II then presents an analysis of the incremental effects of numerous governance characteristics—controlling for a number of other market characteristics—on the prospective incidence of securities class actions. Part III conducts a

³¹ See generally, for example, Stephen J. Choi, *Do the Merits Matter Less after the Private Securities Litigation Reform Act?*, 23 J L, Econ, & Org 598 (2007) (looking at the impact of the Private Securities Litigation Reform Act of 1995 (PSLRA) on meritorious securities litigation and concluding that although the PSLRA has reduced the incidence of “nuisance suit litigation,” it has also worked to reduce more meritorious litigation aimed at smaller companies and companies engaged in fraud whose existence is not evinced in pre-filing “hard evidence”); Marilyn F. Johnson, Karen K. Nelson, and A.C. Pritchard, *Do the Merits Matter? The Impact of the Private Securities Litigation Reform Act*, 23 J L, Econ, & Org 627 (2007) (looking at the same question and finding evidence that, post-PSLRA, plaintiffs’ attorneys are more precisely targeting firms likely to have committed fraud).

similar analysis in predicting the outcomes of litigation for those companies that are sued. Finally, Part IV discusses the implications of my results more generally and offers some concluding remarks.

I. DATA DESCRIPTION AND SUMMARY STATISTICS

The raw data for my empirical enterprise is drawn from three principal sources. The first is the Securities Class Action Alert (SCAA), which has tracked securities litigation since the late 1980s.³² For the purposes of this study, I harvested the SCAA data from January 2001 through March 2006. The dataset identifies sued firms by both name and eight-digit CUSIP number(s), and it also includes information about named natural persons, filing dates, class periods, indicator variables for the type of allegations (for example, § 10(b), § 11, generally acceptable accounting principles (GAAP) violations, and so forth), the type of plaintiff (institutional or individual), the jurisdiction/court hearing the case, the case disposition (dropped, dismissed, summary judgment, final adjudication, or settlement), the ultimate terms of the settlement/judgment, the attorneys representing the plaintiffs/defendants, the compensation terms for the attorneys, and textual descriptions of the precise allegations.³³

The second principal database is the corporate governance data tracked by the Corporate Library (CL). Most of this dataset tracks noncompensation governance metrics of boards—the building blocks of CL's rankings. Data reflected in the CL dataset include the state/jurisdiction of incorporation, the issuer's listing exchange, insider and institutional investor control, the number of annual meetings (both of outsiders and as a whole), whether the company had adopted a business ethics and/or governance code in the reporting year, and a significant amount of information about the demographic characteristics of board members (age, gender, experience as an executive, and so forth). The data used for this study covers the 2001 to 2005 reporting years.

Although the SCAA and CL data constitute the core targets of inquiry for this Article, I also utilized data from the Center for Research in Security Prices (CRSP) for purposes of establishing some market controls.³⁴ CRSP tracks securities prices, capitalization, volume, returns, and volatility among publicly traded American firms. Although I am not

³² The SCAA is now published by RiskMetrics Group and is referred to as Securities Class Action Services. See RiskMetrics Group, <http://scas.issproxy.com/Login.php> (visited Jan 11, 2009).

³³ For a description of the SCAA, see RiskMetrics, *Securities Class Action Services* 1–2, online at https://www.riskmetrics.com/sites/default/files/SCAS_Research_Filing.pdf (visited Jan 11, 2009).

³⁴ For a description of the CRSP database, see *Database Guides*, Center for Research in Security Prices (Chicago Booth School of Business), online at <http://www.crsp.chicagobooth.edu/documentation/> (visited Jan 11, 2009).

interested in examining how such securities market measures predict litigation risk, it is relatively well established that such measures can play a substantial predictive role in securities litigation risk, and I therefore included key variables as controls. I therefore utilize a number of CRSP variables to serve as controls for my analysis.

In merging the principal datasets, it was important to remain mindful of the fact that only a small minority (ranging from 2 to 5 percent) of publicly traded firms are sued in any given year. Thus, one cannot expect to have a one-to-one match between the governance and litigation databases. Consequently, the only firm-year observations that were dropped were those involving firms that appeared in the litigation database but for which I was unable to find a match within the CL and CRSP database. These dropped observations almost certainly bias the sample in favor of larger issuers that the Corporate Library tends to track. (As with most ratings and proxy advisory firms, the CL tracks slightly more than half of all publicly traded firms, skewed toward the larger capitalization issuers.) The merge was performed according to the six-digit (historical) CUSIP code of the issuer or—if that was not available—the issuer's exchange ticker code.

The merged dataset consists of an unbalanced panel spanning the five-year period of the panel, comprised of 9,455 firm-years and 377 securities class actions. The summary statistics for the merged dataset are reflected in Tables 1a–c below. Note that in many cases, the Corporate Library governance data was missing values for its key variables for a number of sued firms. Thus, most of the later regressions that follow will utilize only a portion of CL data (around 50 percent of the raw data, sometimes less). As can be seen from Table 1a, this creates some bias in the direction of larger US issuers (for example, 93 percent of the sample is comprised of US corporations, the mean number of employees is over 85,000, and fully 39 percent of the firms in the merged dataset appear in the Russell 1000 index for that year).

TABLE 1A
SUMMARY STATISTICS—MARKET CONTROL VARIABLES

Variable	Observations	Mean	Standard Deviation	Minimum	Maximum
Company Age (years)	5370	42.35102	47.38025	0	230
US Corporation (1 if yes)	9455	0.9353781	0.2458705	0	1
Delaware Corporation (1 if yes)	9455	0.5359069	0.4987354	0	1
Employees (Log)	8918	8.487771	1.685237	0	19.25
In Russell 1000 Index	9455	0.3922792	0.4882842	0	1
In S&P Midcap Index	9455	0.2070862	0.4052393	0	1
In S&P Smallcap Index	9455	0.2956108	0.456341	0	1
Mean Monthly Price (Log)	9142	3.126659	0.808775	-2.996	7.201
Mean Monthly Volume (Log)	9159	11.39143	1.594765	3.004	16.828
Mean Gross Abnormal Return (Log)	9121	0.0059051	0.1352223	-1.243	1.355
Mean Return Volatility	9114	0.3816908	0.2580139	0.028	4.067

Table 1b reports on the attributes of the 377 firms subject to suit. Note that the incidence of litigation against the issuers in the dataset is higher than it is among all publicly traded firms.³⁵ Between 4 and 5 percent of the sample (slightly less for all firm-years) is named in a securities class action in the reporting years. This is more than twice the size of the historical litigation incidence rate, a fact that is not surprising given the larger capitalization of the sample relative to the entire population of public companies. The distribution of settlement values reported for the sued firms is right-skewed, with a mean value of \$50 million, but a median of approximately \$10 million and a 75th percentile of just under \$30 million.

³⁵ By most estimates, there are around 12,000 to 15,000 publicly traded companies in the United States, and historically there have been around 200 to 220 class actions filed per year, which would yield a prediction of around a 1.3 to 1.8 percent litigation rate. See *Walkers Research*, online at <http://www.walkersresearch.com> (visited Jan 11, 2009) (subscription required).

TABLE 1B
SUMMARY STATISTICS—LITIGATION DATA

Variable	Observations	Mean	Standard Deviation	Minimum	Maximum
Institutional Lead Plaintiff	377	23.92%	18.20%	0	1
GAAP Violations Alleged	377	32.19%	21.83%	0	1
IPO Violations Alleged	377	3.04%	2.95%	0	1
Related to Restatement	377	18.05%	14.79%	0	1
Section 10b	377	69.59%	21.16%	0	1
Section 11	377	6.96%	6.47%	0	1
Settlement Value (\$2005) (if greater than 0)	134	\$51,500,000	\$141,000,000	\$81,814	\$1,130,000,000
Cash Settlement Portion (\$2005)	134	\$32,800,000	\$107,000,000	\$0	\$1,130,000,000
Dismissed	377	1.66%	12.78%	0	1

Finally, Table 1c reports on twenty governance variables of the firms included in the database. A few items here warrant particular attention. First, very few firms (just over 5 percent) are controlled either directly or indirectly by corporate insiders. Institutional investors, on the other hand, play a large ownership role—collectively owning a majority stake in approximately 70 percent of the sample. Most institutional investor stakes, however, are not coordinated with one another, as reflected in the appreciably lower rate of dominant shareholder ownership (24 percent). In about one-third of the sample, the CEO was also the chairperson. The database also includes measures on whether the issuer maintained a governance policy and/or a business ethics code. Although both of these became putatively mandatory in SROs' listing requirements by 2004,³⁶ companies were somewhat slow to adopt them, and thus my data observes variation on these measures in both the pre- and post-SOX years.

³⁶ See, for example, NYSE, *Listed Company Manual* at § 303A.10 (cited in note 10) (“Listed companies must adopt and disclose a code of business conduct and ethics for directors, officers and employees, and promptly disclose any waivers of the code for directors or executive officers.”); id at § 303A.09 (requiring that NYSE-listed companies adopt corporate governance guidelines that at a minimum address director qualification standards, director responsibilities, director access to management and independent advisors, director compensation, director orientation and education, management succession, and annual performance reviews of the board).

TABLE 1C
SUMMARY STATISTICS—CORPORATE GOVERNANCE VARIABLES

Variable	Observations	Mean	Standard Deviation	Min	Max
Insiders Control	6124	0.0566623	0.2312151	0	1
Institutional Investor Majority	6125	0.7142857	0.4517908	0	1
Institutional Investor Ownership Stake	8525	0.6450231	0.2221165	0	0.999
Classified/Staggered Board	9430	0.5632025	0.4960157	0	1
Majority Outsider Board	9421	0.9369494	0.2430669	0	1
Outside Board Members Meet	6108	0.8865422	0.3171775	0	1
Business Ethics Code	5852	0.9634313	0.1877164	0	1
Governance Policy	9418	0.3587811	0.4796683	0	1
Directors' Base Pay (\$000, 2005 dollars)	8877	25.23128	18.67201	0	400
Outside Board Members (percent)	9421	67.27375	18.30169	0	100
Other CEO Board Members (percent)	9421	36.52972	29.23046	0	100
Board Members with > 15 Years Experience (percent)	9421	14.63755	17.3344	0	100
Board Members Serving on \geq 4 Boards (percent)	9421	9.26789	12.20255	0	90
Board Members > 70 Years Old (percent)	9421	8.678846	12.25187	0	80
Women Board Members (percent)	9421	9.409655	9.117241	0	67
Dominant Shareholder	5764	0.2416724	0.4281339	0	1
Audit Committee Independent	3785	0.988111	0.1084011	0	1
Compensation Committee Independent	4028	0.9615194	0.1923774	0	1
Nominating/Governance Committee Independent	4029	0.8880616	0.3153298	0	1
CEO Is Chair	3329	0.3331331	0.4714045	0	1

One should also note from the three tables above the fact that some of the governance variables have greater breadth across the dataset than do others. (For example, the “CEO Is Chair” indicator variable has significantly more missing data than, say, whether the board is classified/staggered.) This will cause the effective sample size of the estimations below to vary (depending on data coverage) across different forms of governance variables.

II. INCREMENTAL GOVERNANCE EFFECTS ON LITIGATION INCIDENCE

Perhaps the most transparent (and least confusing) way to think about how governance metrics might predict litigation risk is to study a number of them sequentially in isolation. I turn to this task below, analyzing the incremental likelihood of securities litigation, controlling for in-

dustry and capital market effects, and for various measures of governance performance. In the interests of conserving time and space, I limit my attention to the governance factors that are of greatest interest.

A. Litigation Exposure: Component-wise Effects

Consider first the likelihood that an issuer is subject to a private suit as a function of its governance characteristics and a set of market controls. Specifically, consider the following functional relationship, in which the dependent variable is the probability that an issuer is subject to suit:

$$\Pr(y_{i,t+1} = 1) = f(\alpha + \beta x_{i,t} + \gamma z_{i,t} + \varepsilon_{i,t})$$

In the above expression, the dependent variable $y_{i,t+1}$ is the event that a class action is filed against the company in the year *following* the reporting year; $f(\cdot)$ denotes an increasing function bounded between 0 and 1; α , β and γ are estimated parameters; $z_{i,t}$ is a vector of industry and securities market controls for each issuer i at each reporting year t . In all the specifications that follow, the controls include logged price, logged monthly volume, the logged gross abnormal returns, return volatility, logged number of employees, Delaware incorporation, exchange dummies, industry dummies, capitalization dummies, and foreign issuer status; $\varepsilon_{i,t}$ is an error term for firm i in year t . Finally, $x_{i,t}$ denotes a *single* governance characteristic of the issuer, considered sequentially. (In Part II.B, I will report on combinations of and interactions between governance characteristics in fuller specifications.) In all specifications below, I use a random-effects logit likelihood function (though I obtained similar results with random- and fixed-effect linear probability estimates).³⁷

Although I will not delve deeply in what follows into the coefficient estimates of the baseline model—treating them strictly as controls—it is perhaps worth reporting on the estimates of these control variable coefficients as an initial matter. Table 1d presents these results; keep in mind that the estimation procedure takes advantage of the panel structure of the data to estimate a random-effects logit specification, in which the dependent variable is the probability of the filing of a securities class action within the succeeding reporting year. Because of the presence of numerous binary variables, the coefficient for each variable in Table 1d (and many of those that follow in this Part) is expressed in terms of an odds ratio: thus, values falling below one reflect a *smaller predicted like-*

³⁷ It would, in principle, also be possible to use a conditional logit (fixed-effects) approach here. However, because there is not a considerable amount of variation among the governance variables over time, I report on a random-effects estimator throughout.

likelihood of suit (all else equal), and vice versa for reported coefficient values exceeding unity.³⁸

TABLE 1D
RANDOM-EFFECTS LOGIT ESTIMATION;
DEPENDENT VARIABLE: ISSUER NAMED IN SECURITIES CLASS
ACTION DURING SUCCEEDING REPORTING YEAR

	OR	P > z	95 Percent Low	95 Percent High
Age of Company	1.001757	0.7350	0.9916097	1.012008
US Corporation	18.64989**	0.0300**	1.326881	262.1324
Delaware Corporation	0.8630468	0.7550	0.342404	2.175354
Employees (Log)	1.020128	0.8810	0.7849975	1.325688
In Russell 1000	9.327671**	0.0000**	3.407155	25.5361
In S&P Mid Cap	1.922995	0.2140	0.6848797	5.399356
In S&P Small Cap	4.153802**	0.0260**	1.188713	14.51492
Mean Price (Log)	3.481992**	0.0000**	1.994971	6.077417
Mean Volume (Log)	0.542924**	0.0010**	0.374905	0.7862415
Average Abnormal Return (Gross; Log)	5.752032*	0.0850*	0.7838325	42.21038
Average Volatility of Return	760.4113**	0.0000**	116.0337	4983.252
N Observations	1453			
N Firms	586			
Log Likelihood	-655.66954			
Wald Chi Squared Statistic (p-value)	0.0000			

Note: All coefficients are reported as order statistics. Baseline market control variables include company age, jurisdiction, capitalization measures, price, volume, abnormal returns, and volatility. ** (*) figures are statistically significant at the 5 percent (10 percent) level.

As can be seen from the Table, the fit of the baseline model appears to be strong ($\chi^2(11) = 63.57$; $p = 0.000$), suggesting that the controls collectively do a relatively good job of explaining variance in litigation risk. Moreover, seven of the eleven controls in this baseline model are statistically significant at the 10 percent level, and six of them are significant at the 5 percent level. Note that US corporations are much more likely than foreign incorporated firms to be sued and that some measures of capitalization appear to play a significant role, with both

³⁸ There are some “right-hand side” variables that are measured not in binary fashion but rather in a continuous fashion. In order to remain consistent in how I report later results, I will report all results in odds ratios. Although this leads to some cumbersome interpretations for non-binary variable coefficients, it elucidates the lion’s share of them.

large-cap firms and small-cap firms attracting the greatest attention.³⁹ In particular, variables that are related to the likely stakes associated with a securities settlement (such as price, volume, abnormal returns, and volatility) have tremendous explanatory value. Consistent with other studies on securities litigation, the most predictive single element appears to be the volatility in the return of the issuer's common stock.⁴⁰ In addition, however, the higher the price and volume of the stock (holding constant the volatility), the greater the likely loss claim, and thus the more lucrative the case.

With the underlying structural model described above operating as a baseline, Table 2a now proceeds to consider the added predictive effect of governance variables. Each line from the Table reports on the marginal coefficient estimates of the above specification with the highlighted governance attribute added as the x_{it} variable. (That is, each row from the Table represents a coefficient estimate from a different regression.) As with the baseline estimation above, the coefficient for each variable is reported as an odds ratio, so as to facilitate the interpretation of the coefficient for dummy variables.

Before discussing the factors in the Table that *are* significant, it is perhaps worth noting *just how many of them are not*. Specifically, there does not appear to be much predictive power to any of the factors relating to corporate control by insiders, classified/staggered boards, outside majorities on either the board itself or on significant committees (audit, compensation, or nominating/governance), and the shared role of CEO and chairperson;⁴¹ in many respects, both the reforms implemented by SOX and the recent publicity around shareholder rights have concentrated on addressing and altering each of these perceived

³⁹ The omitted category in the capitalization rankings contains firms that appear neither in the Russell 1000 nor the S&P small- and medium-cap indices. Because this omitted category constitutes a mixture of middling to small-cap firms that are not in an index, the mid-cap order statistic coefficients have an interpretation that is more challenging. Alternatively controlling for (logged) capitalization does not significantly improve the predictiveness of the baseline model beyond these indicator measures of capitalization.

⁴⁰ Throughout the analysis, I measure volatility in any year as the standard deviation of the logged monthly gross returns during the year. This is consistent with standard asset-pricing approaches in option-pricing theory. See Mark Grinblatt and Sheridan Titman, *Financial Markets and Corporate Strategy* 280–83 (McGraw-Hill 2d ed 2002). Although there is nothing sacrosanct about using stock volatility (for example, public debt holders, preferred shareholders, and even option holders can also be securities fraud plaintiffs), this measure is directly tied to derivatives prices, and the presence of common shareholders in such suits is nearly ubiquitous.

⁴¹ One word of caution: for the “CEO Is Chairman” regression, the CL data is more limited, and I was forced to drop some of the capitalization variables from the baseline regression. However, even if one drops all control variables, the “CEO Is Chairman” factor never appears to play any appreciable predictive role.

“problems.”⁴² It may well be that they are problems, but the data do not appear to suggest that shareholders were reacting to these problems by ratcheting up their own securities litigation efforts. Adding to the intrigue is the effect of a large sample size: in large datasets, statistical significance is not terribly hard to come by in its own right. Moreover, the approach used here—adding in each governance variable individually in sequence rather than including them all simultaneously—is even more likely to render results that are statistically significant. The fact, therefore, that only seven of the twenty governance variables explored yield statistically significant predictions of litigation exposure is telling—not definitive, of course, but telling.

⁴² See, for example, Gretchen Morgenson, *Soviet-style Proxies, Made in the U.S.A.*, NY Times C1 (June 25, 2006).

TABLE 2A
RANDOM-EFFECTS LOGIT ESTIMATION;
DEPENDENT VARIABLE: ISSUER NAMED IN SECURITIES
CLASS ACTION DURING SUCCEEDING REPORTING YEAR

Governance Variable	OR	<i>p</i> -value	N	LogLik
Insiders Control	1.756922	0.429	1421	-640.63
Institutional Majority	0.9689254	0.944	1422	-641.17
Institutional Percentage	0.03761**	0.002**	1367	-620.97
Classified/Staggered Board	1.832805	0.237	1452	-654.77
Outside Majority Board	0.8567479	0.902	1452	-655.01
Outside Board Meetings	0.7128763	0.470	1420	-638.70
Business Ethics Code	19.54424**	0.009**	1394	-628.62
Governance Policy	0.131793**	0.000**	1448	-634.06
Directors' Base Pay	0.972824**	0.006**	1415	-642.72
Directors Active CEOs	1.137912	0.160	1452	-654.04
Outside Board Members (percent)	0.946619**	0.000**	1452	-642.98
Board Members with > 15 Years Experience (percent)	1.007446	0.579	1452	-654.87
Board Members on ≥ 4 Boards (percent)	0.910409**	0.000**	1452	-634.86
Board Members > 70 Years Old (percent)	1.007457	0.628	1452	-654.90
Women Board Members (percent)	0.952907**	0.022**	1452	-652.74
Existence of Dominant Shareholder	0.451333*	0.084*	1374	-622.50
Independent Audit Committee	2.926751	0.580	941	-481.14
Compensation Committee Independent	1.438963	0.752	963	-487.91
Nominating/Governance Committee Independent	0.3852763	0.148	963	-486.87
CEO Is Chairman	1.165624	0.416	945	-621.68

Note: This Table reports, in terms of order statistics, the marginal effect of each governance attribute estimated separately; the Table excludes the coefficients for the baseline parameters, such as capitalization, price, volume, abnormal returns, volatility, and jurisdiction. With the exception of CEOs who are also chairmen, the baseline model coefficients are qualitatively similar. Coefficients significant at the 5 percent (10 percent) level are denoted by ** (*).

That said, there are, to be sure, at least some variables in Table 2a that are statistically significant. Before proceeding with that discussion, however, a word of caution is in order. As noted above, larger samples are more likely—by virtue of the sample size—to yield statistically significant results. Thus, it is necessary to concentrate not only on those variables that appear to be statistically significant but to refine our tastes further to require that there be some economic significance associated with the variable. Luckily, in this case, all statistically significant variables appear to carry economic significance as well.

Consider first the effect of ownership composition. As the total ownership stake held by institutional investors increases (row three), the

odds of a shareholder suit declines. This finding is intuitive, and is consistent with greater willingness by institutional shareholders to use direct monitoring and governance pressure (rather than threatened litigation) as a core managerial discipline device. Similarly, the existence of a dominant shareholder also predicts a lower susceptibility to later class action litigation and is mildly statistically significant. One potential interpretation of this effect is that both institutional-ownership-dominant shareholders may be both good monitors and well positioned to exercise more control over the company, thereby forestalling shareholder litigation. Significantly, this effect does not appear to carry over to companies controlled by *insiders*, which face significant agency-cost problems notwithstanding the insiders' enhanced stake in company value.

Next, consider the effects of board structure. As noted above, many of the reforms brought about by SOX, including outside majorities on the board and on significant board committees, appear not to matter much at all in predicting susceptibility to litigation exposure. However, there are some factors that do appear to play a role. Most notably, the firm's possession of a business ethics code significantly increases the predicted susceptibility to suit, with an order statistic of almost twenty. Conversations with practitioners suggest that this may make some sense for a number of reasons. First, the existence of a business ethics code is voluntary and may be endogenously determined by a "bad apples" effect—that is, bad managers are forced to adopt business ethics codes in addition to being sued more.⁴³ In addition, the existence of a business ethics code provides a benchmark against which to measure subsequent behavior. Divergence from a stated ethics code can provide particularized evidence of intent to defraud, making things somewhat easier on prospective plaintiffs.⁴⁴ Conversely, the possession of a formal corporate governance policy predicts a substantially lower litigation-risk threshold. One possible interpretive story here is that a governance code clarifies the processes that shareholders may expect to be accorded should they attempt to challenge management through nonlitigious means, thereby either providing valuable procedural information to shareholders or sending a signal that the corporation will be receptive to such endeavors.⁴⁵

⁴³ Recall that SOX did not require companies to adopt business ethics codes; rather, § 406 requires them to disclose whether they have adopted one consistent with the criteria laid out in the section. See SOX § 406(a), 116 Stat at 789, codified at 15 USC § 7264(a). Listing requirements at the SRO level subsequently required all issuers to adopt one. See, for example, NYSE, *Listed Company Manual* at § 303A.10 (cited in note 10).

⁴⁴ See Harvey L. Pitt and Karl A. Groskaufmanis, *Minimizing Corporate Civil and Criminal Liability: A Second Look at Corporate Codes of Conduct*, 78 Georgetown L J 1559, 1560 (1990).

⁴⁵ Although it is often plaintiffs' attorneys (and not shareholders) who make an initial decision to bring class actions, an availing governance code might still augur against litigation risk by

Next, consider the attributes of the directors themselves. Although the existence of an outside majority on the board does not itself appear to have much predictive power (see Table 2a), the overall fractional representation of outside directors on the board (that is, outside board membership measured on a continuous scale) does appear to have a nontrivial dampening effect.⁴⁶ Delving deeper into the data, it turns out that most of this effect is identified from inframarginal boards possessing a minority of outside directors: increasing outside composition (even if not to a majority) appears to substantially reduce litigation risk.⁴⁷ This may be because minority outside directors, while formally powerless to effect change on the board, may act as effective whistleblowers.⁴⁸

Finally, the data pick up two other predictive component-specific effects. First, the percentage representation on a board of members who serve on multiple (four or more) boards appears to predict significantly dampened litigation risk. This effect remains robust (and even a bit stronger) with other baseline models or permutations of controls. In some respects, multiple board service would not automatically seem to predict a lower susceptibility to litigation. However, there is one sense in which board overlap can serve as an important information dissemination device. Many practitioners with whom I have spoken about this effect agree that maintaining a degree of multiple board experience provides useful avenues for shared knowledge among members of the board. This interboard learning effect may prove significant in coming years given the decline in multiple board service witnessed in the post-SOX era (a point that I shall return to in Part IV).⁴⁹

Finally, the data suggest that the percentage composition of women on the board tends to predict lower litigation exposure. Intriguing as it

inducing greater information revelation to the market sooner, which in turn can undermine the viability of a later securities fraud action.

⁴⁶ Even though the value of the odds ratio seems modest, remember that this variable is measured continuously from 0 percent to 100 percent, and thus the coefficient measures the odds ratio difference of a move of 1 percent in outside board representation.

⁴⁷ Estimating this same model for companies that do not have an outside majority yields a nearly identical coefficient estimate and standard error.

⁴⁸ See, for example, Julie Creswell, *A Board in Need of an Emily Post*, NY Times C1 (Sept 7, 2006) (discussing the controversy over Hewlett-Packard obtaining phone records to determine the source of board leaks and the role that Tom Perkins, an outside director, played in publicizing it).

⁴⁹ My results on multiple board service are a bit distinct from those found in a recent paper that concentrates more directly on board attributes per se. See Stephen P. Ferris, Murali Jagannathan, and A.C. Pritchard, *Too Busy to Mind the Business? Monitoring by Directors with Multiple Board Appointments*, 58 J Fin 1087, 1107–08 table VIII (2003) (using a matched sample approach to consider the effect of multiple board service for firms sued between 1996 and 1998). Ferris, Jagannathan, and Pritchard find essentially no significant difference. See *id.* at 1109. The longer panel and later time period studied here, along with somewhat more controls, may be playing part of the role in explaining the difference in results. In addition, my results consider multiple board service in terms of a dummy variable (that is, service on four or more boards), which may pick up the especially experienced board members.

may seem on first blush, the “women director” effect in particular turns out not to be terribly robust after additional robustness checks (as discussed in greater detail below).

B. Litigation Exposure: Multivariable Effects

While a helpful first pass, the analysis in the previous Part II.A was likely biased in the direction of uncovering statistically and economically significant effects. Notably, each of the regressions reported upon above did not attempt to estimate litigation exposure as a function of multiple governance attributes simultaneously (though the baseline market controls were always employed). Although such a simplification can be helpful in isolating the marginal effect of each variable, if two or more variables are highly collinear, they may each appear significant even when they tend to borrow one another’s predictive power.

Table 2b considers this possibility with the seven factors identified above as being statistically (and economically) significant in isolation, estimating liability exposure with respect to these factors jointly (in addition to the baseline model). This “kitchen sink” regression is illustrated in specification 1. Note that when all seven governance variables are simultaneously included, some lose explanatory power, and one—particularly fractional composition of women directors—even switches sign. This is not terribly surprising, since there are likely to be some linear relationships among the governance variables. Accordingly, alternative specifications are reported in Columns (2)–(4). As one can see from the Table, the possession of a business ethics code, a governance code, and the fraction of board members serving on over four boards have effects that remain robustly significant throughout. The fractional outside composition of board members also retains significance, though dropping to the 10 percent level in specification 4.

TABLE 2B
RANDOM-EFFECTS LOGIT ESTIMATION;
DEPENDENT VARIABLE: ISSUER NAMED IN SECURITIES
CLASS ACTION DURING SUCCEEDING REPORTING YEAR

	(1)	(2)	(3)	(4)
Institutional Percentage	0.1273* (0.0970)*	0.0959* (0.0840)*	0.1404 (0.1150)	
Business Ethics Code	90.6921** (0.0010)**	65.8014** (0.0010)**	47.1639** (0.0030)**	32.1158** (0.0040)**
Governance Policy	0.1988** (0.0000)**	0.2028** (0.0010)**	0.1884** (0.0000)**	0.2326** (0.0010)**
Directors' Base Pay (000s)	0.9801* (0.0880)*	0.9847 (0.1810)		
Outside Board Members (percent)	0.9453** (0.0000)**	0.9487** (0.0010)**	0.9517** (0.0010)**	0.9561* (0.0780)*
Board Members on ≥ 4 Boards (percent)	0.9294** (0.0000)**	0.9359** (0.0010)**	0.9402** (0.0159)**	0.9305** (0.0000)**
Women Board Members (percent)	1.0537 (0.1120)			
Baseline Controls Included?	Yes	Yes	Yes	Yes
N Observations	1291	1291	1303	1389
N Firms	535	535	538	546
Log Likelihood	-550.722	-551.652	-557.838	-588.566
Wald χ^2 Statistic (<i>p</i> -value)	69.33**	64.47**	66.38**	81.11**

Note: This Table reports, in terms of order statistics, the effect governance attributes estimated in combination; the Table estimates but does not report coefficients for the baseline parameters, such as capitalization, price, volume, abnormal returns, volatility, and jurisdiction. The *p*-values are in parentheses. Coefficients significant at the 5 percent (10 percent) level are denoted by ** (*).

The possible narrowing of the set of explanatory governance variables to four (as in specification 4) draws some additional support from a principal components analysis of the governance variables identified in the marginal analysis of Part II.A.⁵⁰

⁵⁰ Principal component analysis is a method within statistics to understand the structure of a dataset by asking how much of a contribution each variable makes to the overall variation of the data. For example, in the above dataset, if the percentage of women on a board were always 50 percent of the percentage number of outside board members, then those two variables would be completely replicative of one another. It would, in principle, be possible to throw one of them out and lose no informational content in the data. Similarly, principal component analysis analyzes the covariance relationships among the variables to determine how well the dataset can be simplified in terms of a smaller number of synthesized variables (sometimes known as "factors"). It was developed first by Karl Pearson over a century ago. See generally Karl Pearson, *On Lines and Planes of Closest Fit to Systems of Points in Space*, 2 *The London, Edinburgh, and Dublin Philosophical Mag and J Sci* 559 (July–Dec 1901), online at <http://stat.smmu.edu.cn/history/pearson1901.pdf> (visited Jan 11, 2009).

Although reasonable minds can (and do) differ on the precise criteria for determining the minimal acceptable number of factors, the structure of these seven governance variables appears consistent with something between a two- and six-factor model. A principal component decomposition of these variables yields Table 2c.

TABLE 2C
PRINCIPAL COMPONENT ANALYSIS OF SEVEN SIGNIFICANT
GOVERNANCE VARIABLES FROM TABLE 2B

Factor	Eigenvalue	Proportion	Cumulative
1	1.87323	26.76%	26.76%
2	1.002	14.31%	41.07%
3	0.94647	13.52%	54.60%
4	0.91805	13.12%	67.71%
5	0.82832	11.83%	79.54%
6	0.74964	10.71%	90.25%
7	0.68229	9.75%	100.00%

Conventional a priori desiderata for principal component analysis commonly favor selecting a set of factors that (1) have eigenvalues that exceed one, (2) are each able to explain at least 10 percent of the variance in the data, and (3) collectively explain at least 75 percent of the variance in the data.⁵¹ Table 2c illustrates whether each of these criteria is satisfied (white fill) versus not satisfied (gray fill) for various posited numbers of factors ranging from one to seven. As is clear from the Table, no set of factors satisfies all three conventional criteria, but one could justifiably maintain that somewhere between two and six factors are reasonable for explaining variation among the remaining governance variables.

Ultimately, the analysis of whether governance structure can predict the incidence of suit suggests that there may be *some* relationship between governance policy and litigation risk. However, the effects are haphazard, relatively uneven (given the size of the dataset), and generally inconsistent with some of the principal reforms brought about in the post-SOX era.

III. PREDICTING SETTLEMENT VALUE

Another potentially informative approach to measuring effects of governance goes beyond the question of litigation risk and more directly to the question of liability exposure for companies that are sub-

⁵¹ See I.T. Jolliffe, *Principal Component Analysis* 111–49 (Springer-Verlag 2d ed 2002).

ject to suit. On an intuitive level, this question is well worth pursuing, for litigation often accompanies other disputes within the organization. A well-governed firm may not only help avoid crises but may also give itinerant shareholders an alternative (nonlegal) venue to air their grievances once such grievances arise. An issuer's openness to governance-led redress may also be reflected in settlements where the issuer agrees to governance reforms (with no or more modest monetary sanctions accompanying them). Indeed, in some respects the effect of governance on exposure *conditional on* a lawsuit may even be a more telling barometer of litigation risk.

This Part briefly explores that relationship using an identical set of market, industry, and size controls as in the litigation-risk regressions above.⁵² The central question here is whether—conditional on suit—a particular governance attribute predicts a greater or lesser susceptibility to damages exposure than similarly situated defendants without such an attribute. Thus, in what follows, I limit my inquiry to issuers who appear in my litigation database and for which I have governance metrics matches in the CL data.⁵³

A. Monetary Exposure: Marginal Effects

Recall, not all suits that are filed are resolved (through adjudicated outcomes or settlement) for positive monetary amounts; some are dismissed, and others are settled for nonmonetary amounts. For these cases, I infer that damages are functionally truncated at zero. Therefore, a Tobit specification is plausible and appropriate.⁵⁴ In particular, I estimate the following piecewise linear specification:

⁵² See Table 1d. As noted in Part II in the litigation-risk analysis, I deliberately exclude the existence of restatements, compensation, and federal civil/criminal litigation as right-hand side variables, for fear that their endogeneity and the lack of reliable instruments will bias governance coefficients. These factors, however, have been shown to be predictive of litigation. See, for example, Michael A. Perino, *The Milberg Weiss Prosecution: No Harm, No Foul?* *30 (St John's Legal Studies Research Paper No 08-0135, May 2008), online at <http://ssrn.com/abstract=1133995> (visited Jan 11, 2009).

⁵³ As noted below, the total number of governance matches varies depending on the governance characteristic of interest. See Part III.A.

⁵⁴ It is also possible that the truncation point is not at zero, given the relative paucity of monetary settlement around zero. As a robustness check, I also experimented with a two-stage Tobit (sometimes known as Heckman approach) specification, which yields qualitatively similar results (not reported here).

$$y_{i,t+1} = \begin{cases} \alpha + \beta x_{i,t} + \gamma z_{i,t} + \varepsilon_{i,t} & \text{if } y_{i,t+1} > 0 \\ 0 & \text{else} \end{cases}$$

where—as in Part II.A— α , β , and γ represent estimated parameters; $z_{i,t}$ is a vector of industry and securities market controls (identical to those in Table 1d); $\varepsilon_{i,t}$ is an error term; and $y_{i,t+1}$ denotes the logged real monetary value (in 2005 dollars) of the case filed in the one-year forward reporting year (if resolved by March 2006) in the form of either cash or liquid securities. For all dismissed cases or cases that were resolved solely with governance reforms or nonliquid assets, I impose a value of $y_{i,t+1} = 0$. As with the earlier analysis, for each specification in this Part $x_{i,t}$ denotes a *single* governance characteristic of the issuer, considered in sequence.

TABLE 3A
RANDOM-EFFECTS TOBIT ESTIMATION;
DEPENDENT VARIABLE: LOGGED REAL VALUE IN 2005 DOLLARS
OF SETTLEMENT, CONDITIONAL ON BEING SUED

Governance Variable	Coefficient	<i>p</i> -value	N	LogLik	P(χ^2)
Insiders Control	-3.813	0.786	169	-105.70	0.3974
Institutional Majority	6.460	0.332	170	-105.57	0.3704
Institutional Percentage	-7.699	0.390	228	-231.89	0.3070
Classified/Staggered Board	-6.114**	0.045**	243	-247.33	0.2032
Outside Majority Board	-9.396	0.153	242	-247.39	0.2613
Outside Board Meetings	14.661*	0.062*	169	-104.78	0.2613
Business Ethics Code	-12.586	0.433	119	-105.67	0.0347
Governance Policy	-13.263**	0.001**	242	-244.52	0.0317
Directors' Base Pay	-0.093	0.331	191	-247.54	0.3762
Directors Active CEOs	0.882*	0.093*	242	-247.19	0.2172
Outside Board Members (percent)	0.120	0.226	242	-247.52	0.2934
Board Members with > 15 Years Experience (percent)	0.147	0.117	242	-247.28	0.2478
Board Members Serving on \geq 4 Boards (percent)	-0.369**	0.014**	242	-246.23	0.1186
Board Members > 70 Years Old (percent)	0.026	0.842	242	-247.88	0.3791
Women Board Members (percent)	-0.192	0.298	242	-247.62	0.3211
Existence of Dominant Shareholder	-3.108	0.686	118	-97.99	0.4981
Independent Audit Committee	91.498	0.991	88	-92.73	0.6437
Independent Compensation Committee	102.351	0.992	136	-92.60	0.5920
Nominating/Governance Committee Independent	5.370	0.557	136	-92.82	0.5949
CEO Is Chairman	2.496	0.582	74	-133.71	0.6480

Note: This Table reports the marginal effect of each governance attribute estimated separately on an underlying settlement amount, where nonmonetary settlements, drops, defendant victories, and dismissals represent truncations at zero. All estimations include (but do not report on) coefficients for the baseline model. Coefficients significant at the 5 percent (10 percent) level are denoted by ** (*).

A few features of these regression specifications are worth noting. First, there is some arbitrariness to how I have defined the zero-truncation point—in particular, the fact that it excludes settlements having solely governance reforms or involving solely nonliquid securities, and that it includes even small monetary settlements. As to the former, some settlements, while not easily monetized in dollar figures, have both a cost to the issuer and a benefit to the plaintiffs. Thus, my specification tends to discount the significance of such reforms entirely. There is a potential danger that this categorization scheme will tend to bias my results downward, since “poorly” governed firms may well be sued as a means for improving their governance. As to the latter (small monetary

settlements), some tend to view settlements under, say, \$2 million as tantamount to a nuisance suit, and such suits should be treated accordingly. Even if this characterization is valid, it is still relevant for the question of whether governance augurs against litigation risk, since nuisance suits represent real costs to issuers.

In addition, note that due to irregularities in the CL data and the smaller number of litigated cases, the total number of cases considered in each specification varies. While this was also true for the litigation-risk regressions reported in Table 2a, it can have a more significant impact given the smaller sample size here, which ranges between 74 and 243 cases. Consequently, there is significantly more noise in these estimations, and the reliability of the coefficient estimates is therefore somewhat more suspect.

Perhaps not surprisingly, then, the marginal effects of each governance variable as a predictor of exposure had significantly less explanatory power. Indeed, under conventional significance criteria, only classified/staggered boards, the presence of a governance policy, and service on multiple boards appear to exhibit statistically significant explanatory power. Others appear to have very little or no statistical power.

The most plausible interpretation of the statistically significant coefficients is similar to that offered above. The presence of a governance policy, for example, may credibly signal the availability of alternative dispute resolution devices, and moreover, may be associated with earlier interventions in potential problems than at other firms. In addition, multiple board service may provide for a stock of experiential capital that is helpful for firms contending with securities litigation for perhaps the first time. Finally, unlike the litigation-risk estimations, the presence of a classified/staggered board tends to reduce predicted monetary exposure conditional on suit. This effect seems intuitively plausible: classified/staggered boards tend to dampen the deterrent effects of the takeover market in stemming managerial agency costs, which may place a greater emphasis on other mechanisms of deterrence (such as litigation). This may give shareholders of such companies an incentive to bring suit even for relatively small-stakes matters, which would be consistent with a lower predicted monetary exposure of suits against those companies.⁵⁵

The presence of directors who are also CEOs of other companies predicted a larger settlement fund, which was mildly statistically significant. The CEO effect is interesting and may be suggestive of greater litigation risk among firms that have large structural biases within them

⁵⁵ It should be noted from Table 2a that classified/staggered boards did face a greater estimated exposure to filings, though the estimated coefficient was not statistically significant.

(for example, a fraternity of CEOs who, when serving on a board, tend not to meddle in other CEOs' decisions). On the other hand, it could also be an artifact of inadequate market and size controls (beyond those used here) in which larger firms are more likely to have CEOs on the board and are also more likely to be exposed to litigation risk.

B. Monetary Exposure: Joint Effects

The three governance variables identified in Part II.B as having the strongest predictive power also appear to retain much of their power when estimated jointly, as illustrated in Table 3b. The Table reports on all multiple permutations of a classified/staggered board, multiple board service, and the presence of a governance policy. Both classified/staggered boards and governance policy variables retain significance at the 5 percent level in each permutation. While multiple board service loses some explanatory power, it is still significant at the 10 percent level in the presence of the other two variables. Consequently, it appears that all three of these governance variables have some explanatory power in predicting exposure once sued.⁵⁶

TABLE 3B
RANDOM-EFFECTS TOBIT ESTIMATION; DEPENDENT VARIABLE:
LOGGED REAL VALUE IN 2005 DOLLARS OF SETTLEMENT,
CONDITIONAL ON BEING SUED

	(1)	(2)	(3)	(4)
Classified/Staggered Board	-2.8221** (0.0300)**	-2.6029** (0.0450)**	-2.8152** (0.0320)**	
Board Members on ≥ 4 Boards	-0.1163* (0.0750)*		-0.1676** (0.0100)**	-0.1030 (0.1130)
Governance Policy	-5.0326** (0.0030)**	-5.7934** (0.0010)**		-5.0438** (0.0030)**
Baseline Controls Included?	Yes	Yes	Yes	Yes
N Observations	242	242	242	242
Log Likelihood	-206.949	-207.788	-209.436	-208.145
Wald χ^2 Statistic (<i>p</i> -value)	0.016	0.0192	0.0663	0.0257

Note: This Table reports the marginal predictive effect of each governance attribute to the monetary settlement amount, where nonmonetary settlements, drops, defendant victories, and dismissals represent truncations at zero. All reported coefficients reflect (but do not report on) estimations of a baseline model set of controls. Coefficients significant at the 5 percent (10 percent) level are denoted by ** (*).

⁵⁶ Of these individually significant variables, a principal components analysis (similar to that of the previous Part) also lends support to a three-factor specification.

IV. DISCUSSION

So, what are we to make of all of this, and what does it hold for the private-equity wave? At the very least, there are three central implications that come out of the econometric analysis above. I discuss each of them briefly below.

First and foremost, it is somewhat surprising to find *how few* governance variables are really predictors of litigation risk. Indeed, most of the governance structures that my data contain do not appear, at least directly, to have a significant predictive effect on either litigation risk or exposure to damages, once one controls for structural and market incentives for litigation. Of the twenty governance variables considered, only seven appear to have any appreciable statistical power in predicting suit, and in fact there appear to be fewer still (between two and six) whose predictive effect is robust across many specifications. Of sued firms, only three of the twenty governance variables appear to have significant predictive effects. This collective *non*-result may be just as important as the statistically significant ones. As noted above, it bears on the extent to which classically defined “good governance” augurs against (or, in more economic terms, serves as a “substitute” for) lawsuits. Although it would be a lot to expect the data to test these sorts of causal claims definitively (no less to reject them), for many of the reasons explored above, this is at least potentially a troubling finding. Indeed, many received practices of “good governance” have been imposed or made quasi-mandatory by SOX and its regulatory progeny with the articulated goal of making securities investments safer, and thus impliedly suggesting that investors would resort to suit less. However, many of the very governance structures mandated by SOX, such as committee and board independence, have scant predictive power within my data.⁵⁷ Although such mandates may indeed have had beneficial effects, those effects do not appear manifest in private securities litigation trends.

Nevertheless, some governance metrics do appear to have some predictive effect on litigation, and that effect is robust across differing statistical approaches. The adoption of a governance policy appears to have a resilient predictive effect on litigation risk. Although the SOX statute did not require the adoption of a governance policy, the listing exchanges have done so themselves. The New York Stock Exchange listing requirements, for example, require issuers to adopt and disclose corporate governance guidelines; and while the listing requirements do not

⁵⁷ Of course, it is far from clear that the mandates of SOX were intended as much to reduce litigation exposure as to make firms better governed generally. But to the extent that securities litigation is an imperfect substitute for good governance, one might expect (or at least hope) that securities litigation rates would also be sensitive to tools that implement good governance.

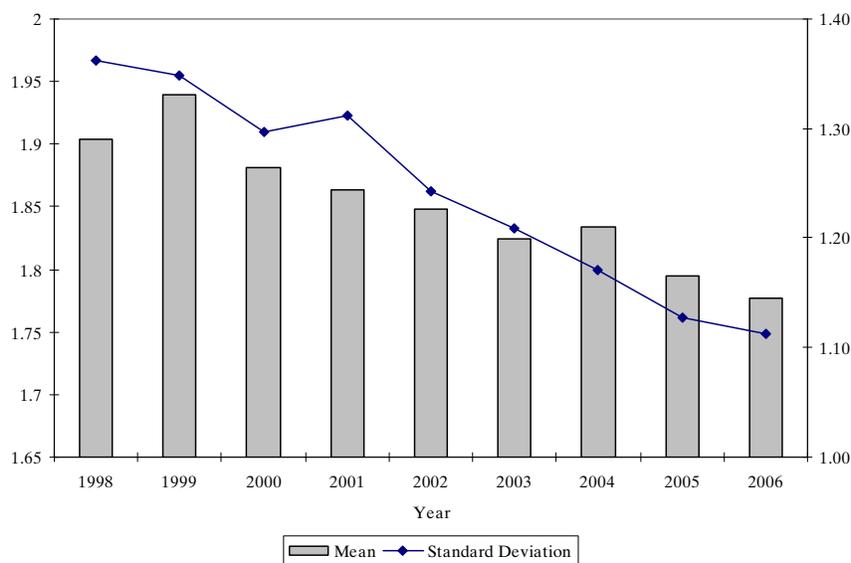
mandate the precise content of those guidelines, they do require inclusion and discussion of at least certain attributes, such as director qualifications, director compensation, director education, conflicts of interest policies, and management succession.⁵⁸ It remains to be seen, of course, whether the mandated adoption and disclosure of such policies will have the same effect as the largely voluntary disclosures made by most firms within the data analyzed here. Nevertheless, what is extractable from the data seems positive: indeed, if one confines attention solely to the post-SOX years (regression estimations not reported here), the estimated litigation-risk coefficient on governance policies declines significantly relative to its pre-SOX counterpart.⁵⁹

In addition, boards whose members are also members of numerous other boards appear—holding all else constant—to be the least susceptible to securities litigation. As noted above, this predictive effect may make some sense in light of the potential for multiple board service to disseminate knowledge across different issuers' boards. If this correlation has a causal component, there may be some reason to be concerned, as the incidence of multiple board service in US corporations has been steadily declining. As Figure 1 below illustrates, since the late 1990s, both the incidence and the standard deviation of multiple board service have steadily declined in the last decade, a fact that may be partially due to the legal and cultural aversion that many have to placing the “usual suspects” on a public board. While such changes may have some merit, they do create one pitfall in that they tend to reduce the amount of shared wisdom about valuable lessons (usually in the form of “war stories”) that board members may bring from one boardroom into another.

⁵⁸ See NYSE, *Listed Company Manual* at § 303A.09 (cited in note 10).

⁵⁹ Likely due to data restrictions, the noise in estimating this coefficient ebbs in and out of significance.

FIGURE 1
MEAN AND STANDARD DEVIATION OF THE NUMBER OF PUBLIC
COMPANY BOARDS ON WHICH BOARD MEMBERS SAT, 1998–2006



Source: IRRD Directors Database

Finally, the analysis above at least suggests that the presence of a classified/staggered board may also affect litigation risk, though the direction of this effect is complicated: firms with classified/staggered boards face a larger estimated risk of litigation (though this estimated effect, while large economically, was not statistically significant) but a lower exposure once sued. This combination of effects is consistent with the common view that classified/staggered boards are a telltale sign of entrenched management and that shareholders may be utilizing securities litigation as a substitute for more direct governance. Significantly, however, the ability of a company to stagger its board was *not* in play during the promulgation of SOX or its regulatory implementation.⁶⁰

⁶⁰ It might also be the case that the settlements in cases involving staggered boards are more likely to be skewed toward governance reforms rather than pure cash payments. Although my data did not allow for testing this claim, it does appear to be a growing trend in securities litigation. See, for example, *Bristol-Myers Squibb Agrees to Record Securities Litigation Settlement with Sweeping Data Disclosure Requirements Announces Labaton Sucharow*, Bus Wire (Jan 23, 2006).

CONCLUSION

Ultimately, the empirical analysis presented in this Article paints a suggestive account of the relationship between governance and litigation as the dog that either did not bark, or did so only intermittently. On the one hand, there do appear to be a handful of governance attributes that predict lower litigation incidence to securities class actions and/or monetary exposure thereto. Some, such as institutional investor activity, staggered/classified boards, and well-developed governance policies, *may* reflect plausible causal stories that justify use by insurers, investors, and others as reliable predictors of fraud.⁶¹ In this respect at least, companies that remain publicly owned might fruitfully consider responsive reforms as a means to reduce both litigation risk and associated insurance premia.

On the other hand, along most governance traits studied here, the link between governance and litigation risk seems a tenuous and indeterminate one. Various popular measures of “good” governance—such as board/committee independence, independent board member activity, and separation of CEO and board chair positions—have extremely noisy predictive effects on a firm’s prospective susceptibility to shareholder litigation. And it is here that the relationship to both SOX and the private-equity trend of the early 2000s may be most significant: as noted above, one of the widely articulated reasons for the private-equity wave of the last half-decade centered on the relative costs of remaining as a public company in the post-SOX world. A fair criticism of this rationale is that it does not take account of various benefits associated with greater legal scrutiny. One such benefit—at least in theory—is that the transparency and governance reforms encouraged by SOX (and its progeny) would make public securities less vulnerable to corporate fraud, and thus public issuers would be less susceptible to litigation. As demonstrated, however, the governance templates introduced by SOX seem largely askew with the few governance attributes that predict litigation risk.

To be sure, the panoply of SOX reforms may well have created public and private benefits outside of the realm of litigation. They may, for example, have reduced firms’ costs of debt and equity capital generally; or instilled public investors with greater confidence generally, increasing market depth and reducing volatility; or efficiently pushed the most opaque and fraud-prone companies toward private ownership structures. Any of these effects could (in theory) justify the regulatory reforms as a matter of public policy. As a device for reducing private securities litigation through better governance, however, the principal governance reforms set in motion by SOX do not appear to be appreciable empirically.

⁶¹ As noted in the Introduction, however, my analysis is not capable of testing these causal claims directly.