Corporate Governance and Shareholder Litigation

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ABSTRACT

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Firms with agency problems are more vulnerable to litigation, i.e. they are more likely to be sued. The U.S. securities laws allow shareholders to file a lawsuit against a firm when they feel that their investment in firm was misappropriated or misproperly managed by the firm's executives. This paper examines the link between shareholder litigation and various corporate governance practices. Focusing on seasoned firms, we employ a sample of 1613 sued firms and a matching sample of 1613 non-sued firms. We find that poor corporate governance mechanism, shorter CEO tenure, lower CEO salary, and lower incentive pay in the form of restricted shares increases the probability of litigation, holding constant a wide range of control variables. We further document that sued firms improve their governance practices after a lawsuit by increasing the proportion of outside members on the board and dissolving the CEO-chairmanship link. These findings support the view that corporate governance has an impact on litigation risk, and that litigation leads to governance changes, at least at the board level.

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1. Introduction

A growing body of empirical research examines the relation between shareholder litigation activities and the manager-shareholder agency problem. In addition, several studies suggest that shareholder class actions serve as an external ex-post monitoring mechanism and that the underlying reason for such lawsuits are governance problems that lead to management fraud or other suable misconduct.

Strahan (1998) concludes that firms prone to agency problems are more likely to face securities class action lawsuits. Core (2000) finds that directors' and officers' insurance premiums are higher for firms with weaker governance and that premiums are positively associated with the probability of litigation risk. Denis et al. (2006) note that the likelihood of fraud allegations is negatively related to bonus payments. They also report a positive association between measures of option intensity and class action lawsuits for securities fraud. Gillian (2006) concludes that law, regulation and lawsuits serve as an important mechanism of external governance. In addition, Ferris et al. (2007) study derivative lawsuits and find that the incidence of lawsuits is higher for firms with greater agency problems. They further show that the proportion of outside representation increases, board size decreases, and fewer CEOs continue to hold a dual position of chairman following lawsuits. Peng and Röell (2008) find a significant relationship between option-based executive compensation and litigation: ex ante incentive pay in the form of options significantly increases the probability of a shareholder class action lawsuit.

However, little work examines the relation between shareholder litigation activity and the entire corporate governance system within the firm. Our study adds to the literature with a wider set of corporate governance and compensation variables and an extension of the sample period.

We study two main hypotheses to understand the interaction between litigation risk and corporate governance. The first main hypothesis is that firms with poor corporate governance mechanisms are more likely to be sued. In terms of corporate governance mechanisms, we examine both an integrated corporate governance index, as well as board structure, ownership structure, CEO characteristics and compensation. The second main hypothesis is that firms that face litigation are more likely to improve their corporate governance.

Our sued sample is based on information provided by Stanford's Securities Class Action Clearinghouse and consists of 1,613 non-IPO suits between January 1996 and December 2012. Using a propensity matching approach, we create a full sample by matching each sued firm with a non-sued firm in the same industry. Our data are obtained from various sources: we collect

governance, board, and director variables from Risk Metrics, compensation variables from Execucomp, institutional holdings from Thomson Financial's 13f filings, analyst forecasts from I/B/E/S, and firm and stock characteristics from the Center for Research in Security Prices and Compustat.

We conduct several tests to explore our hypotheses. We first report univariate comparisons of corporate governance mechanisms between our sued and non-sued sample, and estimate logit models that include other possible determinants of litigation risk and other corporate governance factors. We then investigate if firms with flaws in their governance structure improve their governance one year and two years after the occurrence of a lawsuit, respectively. Lastly, we perform a multivariate analysis to test if it is the lawsuit that drives the governance changes.

Our results confirm that firms with poor corporate governance are more likely to be sued, as indicated by a positive association between the G-Index and the incidence of lawsuits at the 5% level of significance. Furthermore, we provide evidence that salary, LTIPs and restricted shares are important predictors of litigation. Firms are more likely to be sued when salaries represent a lower percentage of total compensation or when long term incentive plans or restricted shares represent a higher proportion of a CEO's compensation package. Furthermore, the impact of CEO tenure on the probability of litigation is significantly negative at the 5% level, indicating that CEOs who have shorter tenure may be more innovative and risky in their business practices, which could increase their litigation risk. Our results also weakly suggest that firms with older CEO are more likely to be sued before the financial crisis in 2007. With respect to our second hypothesis, sued firms increase the proportion of outside board members one year after the lawsuit, and keep increasing the proportion two years afterwards. In addition, sued firms dissolve the CEO-chairmanship link two years after the lawsuit. However, we find little support for the notion that litigation risk on governance changes. Our findings imply that changes in corporate governance do result from higher litigation risks.

Relative to the literature on the determinants of securities litigation, what is new and different about our work is that we provide an overview about this issue with a broader set of variables and with an up-to-date sample. Existing studies have focused on the impact of a specific aspect of corporate governance and company characteristics. We include these variables as controls but add more governance related variables. In addition, existing work mostly uses litigation data before 2008. We contribute by updating the sample to the end of 2012.

Our paper is organized as follows. Section 2 reviews the relevant empirical research and outlines the hypotheses tested in the paper. Section 3 describes the data and the sample selection process. Section 4 presents the variable measures and research design. Section 5 exhibits the empirical analysis and results: Section 5.1 examines logit regressions to test hypothesis 1, Section 5.2 investigates the effect of litigation on the corporate governance changes. Section 6 discusses the limitations of our study and presents a robustness test. Section 7 concludes the paper.

2. Hypotheses and Literature Review

Our study is based on the premise that firms with agency problems are more vulnerable to litigation, i.e. that these firms are more likely to be sued. The U.S. securities laws allow shareholders to file a lawsuit against a firm when they feel that their investment in a firm was misappropriated or misproperly managed by the firm's management. In this section, we review the growing body of literature that examines the incentives for and effects of a lawsuit.

Strahan (1998) observes that firms prone to agency problems are more likely to face securities class action lawsuits. Bhagat et al. (1998) discover that no matter whether it is a government entity, another firm, or a private citizen who bring a lawsuit against a firm, defendant shareholders experience economically meaningful and statistically significant wealth losses upon the filing of the suit. Moreover, Core (2000) finds that directors' and officers' insurance premiums are higher for firms with weaker governance, and that premiums are positively associated with the probability of litigation. In addition, Lu (2003) states that over the period 1988–2000, firms with higher litigation risk tend to engage more in income-increasing earnings manipulation, whereas income-increasing earnings manipulation does not necessarily increase firms' litigation risk. DuCharme et al. (2004) study 150 IPO firms and 72 SEO firms from 1988 to 1997 and conclude that abnormal accounting accruals have a significant positive relation with subsequent litigation against SEO firms. Altogether, it has been widely recognized that the legal protection of shareholders' rights is an essential element of corporate governance.

This paper draws upon and links a number of threads in the corporate governance and litigation literature in order to analyze the impact of various corporate governance mechanisms on corporate litigation risk.

We consider two main hypotheses and a series of sub-hypotheses. Our first main hypothesis is given below.

Hypothesis 1: Firms with poor corporate governance mechanisms are more likely to be sued.

To test this hypothesis, we will first consider a broad corporate governance index and then explore how specific board characteristics, ownership structure, CEO characteristics and compensation affect a firm's litigation risk.

Gompers et al. (2003) build an integrated governance index as a proxy for the balance of power between managers and shareholders in a given firm. The G-Index captures shareholder rights at different levels and represents strong shareholder rights and weak management power when the index is small. Fich and Shivdasanwe (2007) show that the G-Index is significantly higher for sued firms, suggesting a weaker governance structure for these firms. A high governance index significantly increases the probability of a fraud lawsuit[1]. Although there is no direct evidence on the relation between shareholder litigation and the G-Index, we propose that:

Hypothesis 1.1: Firms with a high corporate governance index are more likely to be sued.

Larger boards have been shown to be ineffective compared to smaller boards (Jensen, 1993, and Beasley, 1996). Fich and Shivdasanwe (2007) point out that boards of sued firms tend to be larger than those of non-sued firms by almost one director and sued firms tend to have fewer independent outside directors. According to Weisbach (1988), Dechow et al. (1996) and Karpoff et al. (1996), more independent boards, larger audit committees, and greater institutional ownership infer stronger corporate governance. In this context, Beasley (1996) finds that if firms have a higher proportion of outside directors, financial statement fraud is less likely.

Although there is no previous study that examines the relation between shareholder litigation and the size and composition of a firm's audit committee as well as CEO/chairman duality, researchers have studied how these aspects of corporate governance affect corporate fraud. Uzun et al. (2004) conclude that corporate fraud is much less likely for firms that have a high percentage of independent outside directors on the board and audit committee. They argue that outside directors have fewer incentives to commit fraud. Therefore, the more outsiders serve on the board, the more likely they can prevent or reduce the fraudulent behaviour of the executive directors. Similarly, we expect litigation risk to be higher for firms with larger audit committee and more outside directors on the committee. CEO/chairman duality is another indicator of board independence. Dechow et al. (1996) argue that fraud is more likely in firms in which the chairman is also the CEO and that

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[1] Their variable of interest, sued, is a dummy variable that is equal to one if a firm is sued for allegedly violating rule 10(b)-5 of the 1934 Securities and Exchange Act. Our subjects here are all lawsuits on Stanford Securities Class Action Clearinghouse (http://securities.stanford.edu/), rather than a specific type of lawsuits.

have fewer outsiders on the board, although Beasley (1996) and Uzun et al. (2004) find that the duality of the CEO and chairman positions does not affect fraud. Therefore, we expect litigation risk to be higher for firms in which the CEO is also the board chairman.

Hypothesis 1.2: Firms with larger and less independent boards and audit committees are more likely to be sued.

Mohan (2004) argues that closer monitoring by shareholders can effectively prevent litigation. Because it is difficult for small private shareholder to monitor, institutional investors play an important role in monitoring. One of his main findings is that firms with large institutional blockholders are less likely to be sued.

Barker and Mueller (2002) observe that the value of CEO stock holdings is positively related to R&D spending. This finding is consistent with agency theory and suggests that CEOs make longer-term investments that maximize firm value when their interests are closely aligned with those of the firm's shareholders (Jensen and Murphy, 1990 and Cho, 1998). Wang (2004) reports a negative association between the probability of fraud litigation and investment expenditures, particularly R&D expenditures. Given these findings, we expect litigation risk to be higher for firms with lower CEO ownership, because the CEO's interests are not properly aligned with shareholder interests.

Hypothesis 1.3: Firms with lower institutional ownership and CEO ownership are more likely to be sued.

Empirical studies have found that older top managers tend to pursue lower-growth strategies (Child, 1974), and tend to be more risk averse (MacCrimmon and Wehrung, 1990). Hambrick and Mason (1984) note that older executives tend to be more conservative. Although Nelson (2005) finds no relationship between CEO age, tenure, or compensation and governance changes, we expect the likelihood of lawsuits to be lower for firms in which CEOs are older, because they usually follow a more conservative business strategy and would not risk their pensions and/or stock option plans with decisions that would harm the firm and its shareholders.

Powell and Ansic (1997) show that females are more risk-adverse when making financial decisions than males. Women have been shown to be more conservative investors because they invest a smaller proportion of their wealth in risky assets compared to men (Jianakoplos and Bernasek, 1998, and Bernasek and Shwiff, 2001). Martin et al. (2009) find that female CEOs are more likely selected to reduce the idiosyncratic risk of the firm. Faccio et al. (2012) demonstrate that female CEOs have a lower risk preference in investment and financing opportunities.

Altogether, there is a clear pattern that the level of risk aversion is higher among female than among male CEOs and that litigation risk may be lower for firms in which the CEO is female.

Miller (1991) asserts that CEOs with longer tenure may not keep themselves updated with changes in organizational environments and therefore may be less likely to make changes that keep the firm evolving over time. Grimm and Smith (1991) find that CEOs make fewer strategic changes as their tenure increases. This lack of change occurs because as tenure increases, CEOs became more dedicated to implementing their own model for operating the business (Hambrick and Fukutomi, 1991). Beasley (1996) states that the tenure of the company chairman or CEO may have an impact on corporate fraud. Barker and Mueller (2002) find evidence that suggests that relative R&D spending increases with longer CEO tenure. Overall, with longer tenure, CEOs are more conservative in their business strategy, reducing the probability of lawsuits. Hence, we expect litigation risk to decrease as CEO tenure increases.

Hypothesis 1.4: Firms with a younger male CEO who has shorter tenure are more likely to be sued.

Since Murphy's (1999) seminal paper, it has been widely accepted that there are three major components to CEO compensation, namely basic salaries, annual bonus plans, and stock options. A CEO's basic salary, just as its name implies, acts as a base compensation and is usually a fixed amount in the executive's remuneration contract. The annual bonus plan is a performance-based reward for the CEO, with benchmarks that are typically based on pre-established financial and/or non-financial performance objectives. A stock option is in essence a vesting right for the CEO to purchase a certain amount of shares at a pre-determined exercise price.

Because the basic salary represents a fixed compensation component that is pre-determined and known to the CEO, a risk-averse CEO will prefer an increase in his/her basic salary which comes with a higher level of certainty to an increase in bonus plans or stock options which come with a higher level of uncertainty. Therefore, it is natural to infer that if basic salary is a dominant part of a CEO's compensation package, the CEO tends to pursue conservative projects out of his/her preference for certainty and aversion to risk.

Denis et al. (2006) note that the likelihood of fraud allegations is negatively related to bonus payments. They also report a positive association between measures of option intensity and fraud-related class action lawsuits. The size of annual bonus plans is mainly determined on the basis of company's financial or non-financial performance during the current year. Therefore, it is reasonable to conjecture that if the CEO's compensation is comprised of a considerable amount

of bonus payments, the CEO would be inclined to carry out a less risky business strategy, which will not undermine the shareholder's wealth.

More recently, Peng and Röell (2008) find that there is a significant relationship between option-based executive compensation and litigation: ex ante incentive pay in the form of options significantly increases the probability of a shareholder class action lawsuit. Similarly, Jones and Wu (2009) show that the extent of option-based executive compensation is positively related to lawsuit incidence. Therefore, it is likely that if the stock options constitute the major or even the greatest part of a CEO's total compensation, the CEO has higher incentives to engage in riskier business practices, which in turn might increase the probability of being sued.

There are few papers that examine long term incentive plans and restricted shares. Both of them can only be rewarded when the CEO fulfills various conditions and requirements, such as an increase in earnings per share or the achievement of other financial targets. If long term incentive plans or restricted shares dominate the compensation package, the CEO may pursue an aggressive operating, investment and financial strategy to achieve those goals and thereby reap the benefits of LTIPs and restricted shares. Therefore, it is reasonable to infer that if LTIPs or restricted shares account for a major portion of the CEO's compensation package, the litigation risk for the firm will be higher. To sum up, we formulate the following hypothesis about CEO compensation:

Hypothesis 1.5: Firms are more likely to be sued when salary and bonus make up a small proportion of a CEO's compensation package, and when options, long term incentive plans and/or restricted shares account for a large part of the CEO's compensation package.

A number of studies have identified factors that are associated with litigation. According to prior academic research, it is necessary to control for the influence of several factors on litigation risk. For instance, Peng and Röell (2008) show that stock turnover, stock price volatility, firm size, return on assets, financial leverage, intangible assets, the book to market ratio, and dividends have an influence on the incidence of shareholder lawsuits. In addition to the factors above, Krishnan and Lee (2009) include buy and hold returns in their litigation risk model. Wang (2004) reports that the probability of fraud litigation is negatively related to investment expenditures, especially R&D expenditures. Mohan (2004) argues that companies which are followed by more analysts should benefit from closer monitoring, as these analysts collect and disseminate information to shareholders.

There has been evidence of corporate governance changes around certain lawsuits. Jones and Weingram (1996), Strahan (1998), Agrawal et al. (1999), and Niehaus and Roth (1999) study CEO turnover around fraud-related lawsuit filings. Farber (2005) indicates that firms charged with fraud by the SEC tend to have poor governance compared to a control group, and that the average governance of the fraud firms improves during the following three years. Ferris et al. (2007) study derivative lawsuits and find that the incidence of lawsuits is higher for firms with greater agency problems. They further show that the proportion of outside representation increases, board size decreases, and fewer CEOs continue to serve in a dual CEO/chairman position. Fich and Shivdasanwe (2007) argue that boards of sued firms are more likely to have outside directors with reputations for monitoring and fraud detection. If the firm detects a signal that a firm is more prone to litigation than expected, the number of board seats held by outside directors will be adjusted endogenously. Together, these studies suggest that corporate governance improves following a lawsuit. Therefore, our second main hypothesis is as follows:

Hypothesis 2: Firms that have higher litigation risk are more likely to improve their corporate governance.

To the best our knowledge, this is a first paper to comprehensively examine the interrelation between corporate governance and litigation risk.

3. Sample Selection and Data Description

Our litigation sample is based on information provided by Stanford University's Securities Class Action Clearinghouse (http://securities.stanford.edu/) and consists of 3,562 lawsuits between January 1996 and December 2012. For each case, we collect the lawsuit filing date, company identifiers, and the case summary. To measure the litigation environment, we calculate yearly litigation frequencies. We exclude 788 financial firms with SIC codes from 6000 to 6999. In addition, we limit our sample to lawsuits against seasoned firms. To detect IPO-related cases, we search for the words "Prospectus", "1933", "initial", "offering", "underwriter", "and "IPO" in the case summary.

If the case is indeed related to misstatements in the firm's IPO prospectus, we exclude it from our sample. After excluding all IPO-related cases, our sample consists of 2,024 firms.

Finally, because we need information on stock prices from the Center for Research in Security Prices (CRSP), we also delete lawsuits against privately held firms. The resulting data set thus includes 2,019 sued cases.

We match each sample firm with a control firm that is not subject to a class action lawsuit using a propensity score matching approach. Specifically, we first merge Risk Metrics and Compustat, and then identify all firms in this merged database having the same four-digit SIC code as the sued firm. Then, each sued firm is matched to a non-sued firm by minimizing the Euclidean distance between the two firms as follows:

$$d = \sqrt{\frac{(Size_s - Size_n)^2}{\sigma_{size,s}^2} + \frac{(BM_s - BM_n)^2}{\sigma_{BM,s}^2}}$$

where d is the Euclidean distance between the sued firm s and the non-sued firm n, $Size_s$ and $Size_n$ are the logarithms of the firm's total assets, BM_s and BM_n are the book to market ratios, and $\sigma_{size,s}^2$ and $\sigma_{BM,s}^2$ are the variances of the size and book to market ratio, respectively, of the sued firms and non-sued firms. All variables in this matching procedure are calculated using data one year prior to the filing date. After matching each sued firm to a non-sued firm by industry, size, and book-to market ratio, we obtain a sample of 1,613 matching firm pairs (i.e., 3,226 firms in total).

Table 1 provides an overview of our litigation sample. In the second column, we list the total number of lawsuits based on information provided by Stanford's Securities Class Action Clearinghouse. Column 3 provides information on the final composition of our sample after the aforementioned exclusions and matching criteria.

*****************************Insert Table 1 here*****************************

The variables used in this study are broadly categorized as the governance index, as well as board, ownership, CEO, compensation and control variables. We collect these data from various databases on Wharton Research Data Services (WRDS). Data on the majority of the independent variables, including the G-Index (Gompers et al., 2003), the size of the board and the audit committee, the percentage of outsiders on the board and the audit committee, a CEO/chairman duality dummy, CEO gender, CEO age, and CEO tenure, are obtained from Risk Metrics, which reports corporate governance provisions adopted by large public firms. The database covers most

high market value firms in the U.S. market. Risk Metrics data are gathered from SEC filings by firms such as 10-K and 10-Q filings, annual reports, and other public sources. The Risk Metrics database consists of two parts each related to a specific time period: before 2007, IRRC was initially the data provider and collected all the variables needed to build the governance index; beginning in 2007, the acquisition of IRRC and ISS changed the methodology used to collect the data. Also, the new method does not collect all the variables needed to create the governance index. In Risk Metrics, the sub-database before 2007 is called Legacy, and the sub-database after 2007 is called Governance/Directors. The size of the board and audit committee, the outsider percentage on the board and audit committee, and CEO/chairman duality can be calculated with information on Risk Metrics. Institutional investor holdings are obtained from 13F filings through Thomson Financial, which provides consolidated stock holdings for all institutional managers filing 13F reports with the SEC. CEO stock ownership and the CEO compensation variables including salary, bonuses, options, long term incentive plans and restricted shares, are constructed using the Compustat Executive Compensation (ExecuComp) database.

To control for other economic factors that are not captured by governance variables but that may be related to the probability of litigation, we compute a set of firm-level variables using data obtained from Compustat. We further supplement the data with daily share volume, common shares outstanding and daily stock returns from the Center for Research in Security Prices (CRSP) and compute stock turnover, stock price volatility, and buy-and-hold returns, which have been demonstrated to have an impact on probability of shareholder litigation. Data on analyst coverage, measured as the number of analyst recommendations, is retrieved from I/B/E/S on Thomson Financial's database. Unless otherwise stated, all variables are measured using year-end data from one year prior to the filing date of a given lawsuit.

****************************Insert Table 2 here****************************

Table 2 reports information on the G-index, board structure, ownership structure, CEO characteristics, compensation characteristics and control variables for the sued and non-sued firms. We report means and medians and conduct T-tests and Wilcoxon tests to determine if there are significant differences in the means and medians between the two sets of firms. All variables are measured one year prior to the filing of the lawsuit.

We observe that there are significant differences in these variables between sued firms and non-sued firms. The G-Index is significantly higher for sued firms, suggesting a weaker governance structure for these firms. Whereas Gompers et al. (2003) use 24 provisions to calculate the G-

Index, the Risk Metrics-Governance database only provides data for 12 provisions. To ensure consistency, we only use the 12 provisions that are consistently available in both the Legacy database (data from 1995 to 2006) and the Governance database (from 2007 to 2013) to compute the index.

In addition, boards of sued firms tend to be larger than those of non-sued firms by almost two directors. We observe a larger audit committee in sued firms, even if the difference between the two samples is small. The percentages of outsiders on the board and audit committee, however, are significantly higher for sued firms than for non-sued firms, inconsistent with Hypothesis 1.2. Sued firms are more likely to have a combined CEO-chairman leadership structure than non-sued firms.

In terms of ownership structure, institutional ownership and CEO ownership are significantly lower in sued firms, indicating that institutional shareholders do not have enough monitoring power and that interests of CEO may not be aligned with those of the firm's shareholders. The average change in the institutional holding from one year before the lawsuit to the filing date is similar for sued and non-sued firms, whereas the median change is significantly larger (at the 1% level) for sued firms.

In line with our prediction in Hypothesis 1.4, sued firms are also more likely to have a younger CEO with shorter tenure. One exception is the female dummy, which is calculated as the number of female CEOs over the total number of CEOs if multiple CEOs exists in the firm. The median fraction of female CEOs is significantly greater at the 1% level for sued firms than for non-sued firms, although the mean difference is only significant at the 5% level.

Our results also show that the components of executive compensation between sued and non-sued firms are all significantly different at the 1% level or lower. However, although we expected the proportion of bonuses to be lower for sued firms, the results turn out to be opposite.

Most control variables differ significantly between sued and non-sued firms. The mean for dividends is slightly higher for sued firms than for non-sued firms, but the difference is not significant.

To summarize, these comparisons highlight differences that may exist between sued firms and non-sued firms, even though many of these differences are economically small.

4. Methodology

In this paper, we examine whether firms with poor corporate governance mechanisms are more likely to be sued. Our basic estimation model is specified as follows:

$$Sued_i = f(Corporate\ Governance\ Proxies_i, Control\ Variables_i)$$

where:

$Sued_i$ = Dummy variable that identifies whether or not a firm is sued in a securities class action lawsuit (1=yes, 0=no)

$Corporate\ Governance\ Proxies_i$ = A set of variables that measure a firm's corporate governance, including a governance index, the proportion of outside members on the board, institutional holdings, CEO tenure, CEO/chairman duality, etc.

$Control\ Variables_i$ = A set of variables that are associated with litigation, including firm size, turnover, stock price volatility, buy-and-hold return, ROA, book-to-market ratio, leverage ratio, dividend ratio, litigation frequency, industry effects, and analyst coverage.

Gompers et al. (2003) construct one of the first governance indices. The aim of creating the index is to have a sense of how much a firm restricts its shareholder rights via rules and provisions in the bylaws of the firm. The G-Index takes on values between 1 and 24 based on provisions that Risk Metrics-Legacy provides in its governance database. In our sample, G varies between 1 and 11 with a mean of 5.529. Since Risk Metrics-Governance only provides data for 12 provisions after 2007, we only consider the 12 provisions that are available in both the Legacy database (data from 1995 to 2006) and the Governance database (data from 2007 to 2013) to compute the index. This ensures a consistent approach throughout our sample period. Specifically, we evaluate the presence of twelve provisions including Blank Check, Bylaw, Charter, Classified Board (also called Staggered Board), Cumulative Voting, Fair Price, Golden Parachute, Poison Pill, Secret Ballots (also called Confidential Voting), Special Meeting, Supermajority and Written Consent (see Gompers et al. (2003) for more details. For each provision that restricts shareholder rights, we add one point to the firm's G-Index. Cumulative Voting and Secret Ballot are the only two provisions whose presence is explained as an increase in shareholder rights. Therefore, whenever either of these two provisions are present, we subtract one point from the firm's G-Index.

As noted above, the new data gathering procedures employed by Risk Metrics require that we perform our own calculations. Some dummy variables, such as Supermajority, were changed to

actual percentages. In this paper, we count one point for Supermajority if this percentage is above 66.7%. Another issue we faced during our data gathering process was a lack of data for some years (data are reported for years 1995, 1998, 2000, 2002, 2004, and 2006). To address this problem, we replace missing values with the previous year's values. This procedure is used by Gompers et al. (2003).

We measure board size as the number of directors on the board and board independence as the percentage of outside independent directors on the board. Audit committee size and audit committee independence are defined similarly. In order to capture firms in which the CEO holds a dual appointment as chairman, we also collect information on the employee title of the director. The duality dummy is coded as 1 when the chairman of the board of directors simultaneously holds the title of CEO or president.

We calculate the proportion of shares outstanding held by all institutional owners as:

$$Institutional\ Ownership = \sum_{i=1}^{N} s_i/S$$

where N is the number of institutional managers reporting their positions on form 13F, s_i is the number of shares owned by institutional manager i, and S is the total number of shares outstanding.

Following Barber et al. (1996) and Barabanov et al. (2013), we consider changes in institutional ownership in both a univariate and multivariate analysis and measure changes in ownership from period T-i we to T-j as the natural logarithm of (ownership at T-j)/(ownership at T-i). Similarly, CEO ownership is computed as the ratio of the total shares held by the CEO to the total number of common shares outstanding.

Our analysis of CEO compensation is based on five different components of compensation: salary, bonus, options, long term incentive programs (LTIPs), and restricted shares. In this paper, we measure the relative weights of these components by dividing the dollar amount of each compensation component by the CEO's total compensation, i.e. the basic salary, bonus, options, LTIPs, and restricted shares.

Size is measured as the natural logarithm of the market capitalization of the firm one year prior to the lawsuit. Turnover is defined as the average daily trading volume as a percentage of the number of shares outstanding for the fiscal year. Volatility, as a proxy for risk, is measured as the standard deviation of daily stock returns annualized assuming 252 trading days per year. Because lawsuits

are typically filed after a sharp price decline, we also control for the buy and hold return, which is measured as the holding period return during a period of 252 trading days before the lawsuit filing.

Furthermore, we consider a series of variables related to agency problems within the firm, including the book-to-market ratio (BM), ROA, intangible assets, leverage, and dividends. BM is the ratio of book value of equity to the firm's market capitalization. ROA is computed using earnings before interest and taxes divided by the firm's total assets at the end of the previous year. Intangible assets are measured as the natural logarithm of the firm's intangible assets. To examine the impact of leverage and dividends on a firm's litigation risk, we compute leverage as the ratio of total debt to total assets and dividends as the ratio of total dividends over earnings before interests and taxes.. Analyst coverage is measured as the total number of analyst forecasts for the firm during the one year period before the lawsuit. To proxy for the litigation environment in a given year, we measure litigation frequency as the total number of lawsuits that took place one year before the filing date. To examine industry effects, we classify firms as technology (tech) firms and non-tech firms. Following Barabanov et al. (2013), we consider a firm as a tech firm if its SIC code falls into one of the following categories: 2833-2836, 3571, 3572, 3575, 3577, 3578, 3661, 3663, 3669, 3674, 3812, 3823, 3825-3827, 3829, 3841, 3845, 4812, 4813, 4899, 7370-7375, or 7377-7379.

To ensure that our regression results are unaffected by any potential multicollinearity, we examine the correlations between all variables used in this study. Table 3 lists the independent and control variables used in the study along with the pairwise correlations[2]. As expected, audit committee size is highly correlated with board size with a coefficient of 0.81. Similarly, the percentage of outsiders on the board and on the audit committee are strongly correlated with a coefficient of 0.64. Furthermore, CEO ownership is strongly correlated with CEO tenure with a coefficient of 0.59; likely because as the CEO tenure increases, the CEO may be given more shares as compensation or as an incentive. Finally, it is worth noting that salary, bonuses, and options are significantly correlated at the 99% confidence level: salary is correlated with bonus with a coefficient of 0.60, and with option with a coefficient of 0.74; bonuses and options are correlated with a coefficient of 0.54. As reported, some of the control variables are also significantly correlated to compensation variables. Salary is strongly correlated with size with a coefficient of 0.85, with intangible assets with a coefficient of 0.79, and with analyst coverage with a coefficient of 0.7. Bonuses and intangible assets are correlated with a coefficient of 0.58. Options are strongly correlated with intangible assets with a coefficient of 0.70, and with analyst coverage with a

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coefficient of 0.80. To avoid multicollinearity problems, we estimate different constellations of our variables and avoid including highly correlated variables in the same model

****************************Insert Table 3 here****************************

The second problem we study is whether litigation leads to corporate governance changes. Specifically, do firms with flaws in their governance structure improve their governance after the occurrence of a lawsuit?

To test the hypothesis, we conduct a univariate test to examine if there are any changes in a firm's governance structure from one year before a lawsuit (T-1) to one year (T+1) and two years (T+2) after the lawsuit. Furthermore, we employ a series of multivariate tests to examine whether changes in corporate governance are due to lawsuits or other factors. Specifically, we employ a broad corporate governance index and test whether the index value changes after a lawsuit. In addition, we explore whether sued firms change specific aspects of their governance structure. For instance, after a lawsuit, does a firm decrease its board size, increase the proportion of outside board members, or implement a new board structure in which the CEO position is separated from the position of chairman of the board? We answer these questions with the following models:

$$\Delta \; Coporate \; Governance \; Proxies_i = f\left(Sued_i, \Delta Control \; Variables_i\right)$$

where

$Coporate \; Governance \; Proxies_i$ = Governance index, board size, percentage of outsiders on the board, and CEO/chairman duality

$Sued_i$ = Dummy variable that identifies whether or not a firm was sued in a securities class action lawsuit (1=yes, 0=no)

Following Bhagat et al. (2006), Boon et al. (2007), and Linck et al. (2008), we consider a set of control variables that are known to affect a firm's board structure and corporate governance in our model.

5. Empirical Results

In this section, we first estimate a series of logit models to examine whether a firm's litigation risk is affected by its corporate governance. We then examine whether firms improve their governance after the occurrence of a lawsuit.

5.1 Logit Analyses

Table 4 presents estimates from a logit model in which the dependent variable takes on a value of one if the firm is sued and zero if the firm is a matching non-sued firm. Models 1 through 8 differ with respect to the included independent variables and control variables. We start our analysis with a simple model that only includes the G-Index as an explanatory variable and all control variables in Model 1. Because we documented significant correlations between a firm's board size and audit committee size as well as between the proportion of outside directors on the board and on the audit committee, we separate these variables in Models 2 and 3. Model 4 display the results for CEO stock ownership, institutional holdings, and changes in institutional holdings. Model 5 considers CEO gender, age, and tenure. Model 6 and 7 include different components of executive compensation. Due to the fact that salary is significantly correlated with bonuses and options, we run the regression with each independent variable separately. In addition, Models 1-5 include a full set of control variables, while Model 6 and Model 7 exclude certain variables according to the correlation matrix.

****************************Insert Table 4 about here ****************************

In Model 1, a high governance index (indicating weak governance) increases the probability of a lawsuit. In addition, the percentage of independent outside directors on the board and the audit committee is negatively related to the incidence of a lawsuit, suggesting that an independent board and/or audit committee decreases a firm's litigation risk. In contrast, the signs of board size and audit committee size are negative, inconsistent with our expectation. Interestingly, the relation between CEO/chairman duality and the likelihood of litigation is positive in Model 2 and negative in Model 3, thus disallowing clear inferences. In Model 4, the institutional ownership variable is in line with our hypothesis, suggesting that the higher the proportion of institutional ownership, the less likely the firm is to be sued. The results in Model 5 imply that a lawsuit is more likely for firms with a female, old, and short-tenured CEO, partially contradicting our hypotheses. Nevertheless,

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none of the coefficients mentioned are significant; we thereby cannot draw any conclusions at this point.

Turning to the compensation components, we find that salary has strong explanatory power in predicting the probability of a lawsuit. In economic terms, a one-point increase in the proportion of salary increases the probability of a lawsuit by 3.85% at the 1% level of significance. This suggests that, consistent with our hypothesis, the lower the proportion of salary in the CEO's total compensation, the more incentives the executives have to pursue risky business practices that may hurt shareholder wealth, thus triggering litigation. The bonus component, the option component, LTIPs, and restricted shares have no significant impact on lawsuit incidence, even if their signs are mostly consistent with our expectation.

In Model 8, a positive statistically significant coefficient for the G-Index supports our hypothesis that firms with poor corporate governance are more likely to be sued. The coefficient is significant at the 5% level. Firms with a higher G-Index and fewer shareholder rights, are exposed to more litigation risk compared to those with a low index. The impact of CEO tenure on the probability of litigation is significantly negative at the 5% level. The relation suggests that CEOs with shorter tenure may be more innovative and riskier in their business practices, which could be harmful for shareholders. Moreover, shareholders may perceive that CEOs with shorter tenure nay be more tempted to maximize their own profits at the expense of shareholders, leading to a higher likelihood of shareholder litigation. LTIPs have a significant positive impact on litigation risk at the 10% level, consistent with the hypothesis that when LTIPs account for a large proportion of a CEO's compensation package, CEO may pursue in aggressive business strategies to achieve higher share prices and reap the benefits from LTIPs.

In Model 9, we run a regression with all five compensation variables. We find that the proportion of bonuses is positively related to the incidence of litigation at the 10% level. The result contradicts our hypothesis, while it is in line with our univariate results that the proportion of bonuses is higher for sued firms than non-sued firms.

The results concerning our control variables are in line with previous research findings. Turnover, the firm's buy-and-hold return, leverage, size and the technology dummy are all significant at the 1% level. Turnover, which is measured as the ratio of the firm's average daily trading volume to the total number of shares outstanding for the fiscal year, is positively related to litigation probability in Model 1 to 9. This result is consistent with the previous literature on litigation risk: when a stock is heavily traded, there are more potential plaintiffs who transact at distorted prices.

The buy-and-hold return is shown to have a negative relation with the incidence of litigation, suggesting that large price drops trigger litigation. We find a positive association between firm size and lawsuit incidence. Larger firms are more likely to be the target of litigation, not necessarily because they are more likely to engage in fraudulent behavior, but because they have deeper pockets and may thus settle for more. We also find evidence that firms in the high technology industry are more likely to be sued, likely because the industry is more risky than others. The sign for leverage, however, is contrary to our expectation. Previous studies typically show that high debt may indicate a recent history of poor performance, asset write-downs or forced heavy borrowing, fueling shareholder dissatisfaction. Our result suggests that higher leverage tends to decrease the probability of being sued. According to Jensen (1986), free cash flow available to the managers may give rise to agency problems, while high debt can mitigate these problems by forcing managers to pay out free cash flows. As such, debt holders play an important role in monitoring the management, benefiting the shareholders.

Volatility, intangible assets, the book-to-market ratio, the dividend ratio, litigation frequency, and analyst coverage are also significant at least at the10% level. Volatility, as a proxy for the risk of the firm's stock, is significant with a positive coefficient of 30.5 in Model 7. This result indicates that high stock price volatility in stock price may result in shareholder litigation. Litigation risk increases when a firm has more intangible assets, suggesting that firms with more intangible assets are harder for outsiders to value and monitor, thus these firms are more likely to have greater agency problems. The book-to-market ratio is negatively significant in Model 1, 7 and 9, while positively significant in Model 8. Prior research provides explanations for both cases. Strahan (1998) argues that the book-to-market ratio may capture managerial success, therefore firms with a low book-to-market ratio may be better managed and less likely to be sued, while Jensen (2004) proposes that a low book-to-market ratio can be a sign of overvaluation, which may motivate management to manipulate share prices, thus causing litigation. Regarding the impact of dividends, we find a significant positive relation Model 6. Its sign implies that higher dividends increase the likelihood of litigation, conflicting with past studies. The positive sign may be indirectly driven by firm size, since larger firm tend to pay out more dividends. Indeed, dividends are insignificant where size is significant. Litigation frequency has a negative relation with litigation incidence at the 5% level of significance in Model 7 and at the 10% of significance in Model 9. Analyst coverage is positively related to litigation risk at the 5% significance level. This results may due to the fact that large firms are more likely to be sued. Mohan (2004) argues that analysts may not be able to pre-empt earnings manipulation by managers or play a role in reducing information

asymmetry between managers and shareholders. R&D expenditures and ROA are insignificant in all models.

Our results imply that firms operating in the high technology industry are more likely to be sued. To further examine the impact of industry effects, we follow Barabanov et al. (2013) and categorize firms into two subsamples depending on whether or not they are technology (tech) focused. The results are reported in Table 5. The fraction of salary is negatively related to the probability of litigation at the 5% level, similar to the results in our main models. Other independent variables are not significant. Volatility, intangible assets, leverage, the book-to-market ratio and the dividend ratio also lose their significance in this sample. The coefficients for turnover, buy-and-hold return, size, and litigation frequency are largely in line with what we found in our main models, although their significance tends to be lower.

In the non-tech sample, salary is negatively related to litigation at the 1% level of significance, and restricted share is positively related to litigation at the 10% of significance. Both variables are economically significant: the probability of a lawsuit increases by 3.3568 percent when the proportion of salary decreases by one percent, and increases by 2.654 when the proportion of restricted shares decreases by one percent. The signs and significance levels of turnover, buy and hold return, intangible assets, leverage, and size remain largely the same as in the main models. The book-to-market ratio and litigation frequency are strongly significant in Model 1, while they lose their significance afterwards.

We are also interested in testing whether if there is a difference in how corporate governance affects litigation risk before and after the financial crisis in 2007. Table 6 provides the results for the corresponding subsamples. Because there are not enough observations to estimate Model 6 to 9 for the post-crisis sample, we only report Models 1 to 5 here and compare the outcomes for the two subsamples. CEO age is the only significant independent variable in the pre-crisis sample. Contrary to our hypothesis, we find that firms with older CEOs are more likely to be sued. Referring to Table 4, we find that even though the difference in CEO age between the sued and non-sued sample is significant at the 10% level, the magnitude is small: the average age is 55.1191 in the sued sample, and 56.3312 in the non-sued sample at the10% level, thus it is not difficult to make

sense of this relation. The results for turnover, buy-and-hold return, leverage, size, the book-to-market ratio and analyst coverage are similar to what we found in previous models.

*************************** Insert Table 6 about here ***************************

After the crisis, none of our main variables of interest influence litigation risk, whereas turnover, leverage, and size continue to affect the probability of a lawsuit. Furthermore, the tech dummy is significant at the 1% level, suggesting that after the financial crisis tech firms are more likely to be sued, possibly because shareholders and investors are more sensitive to risk after 2008 and the industry is considered more risky.

5.2 Changes in Corporate Governance

Next, we perform a series of univariate tests to examine whether these sued firms implement any governance changes following a lawsuit. In Panel A of Table 7, we compare the G-Index and various board characteristics one year before the lawsuit and one year after the lawsuit for our full sample. We find no significant differences in the G-Index, the number of directors, and the CEO/chairman duality. We do, however, observe a significant difference in the proportion of outside directors. The mean proportion increases from 68.38% to 72.05%, and the median proportion increases from 72.73% to 75.00%, with the changes being statistically significant at the 1% level.

In Panel B of Table 7, we report changes in the G-Index and board characteristics from one year prior to the lawsuit to two years after the lawsuit. Neither the G-Index nor board size exhibit any significant changes. Both the average and median fraction of outside directors are significantly greater at the 1% level two years after the lawsuit. Furthermore, the difference in CEO/chairman duality is also significant at the 1% level. The average percentage declines from 54.82% to 47.45%, and the median change from 1 to 0, suggesting that fewer CEOs hold the position of board chairman two years after the lawsuit.

*************************** Insert Table 7 here***************************

We further conduct a multivariate analysis to examine whether or not the lawsuit that drives these improvements. To do so, we regress changes in board size and CEO/chairman duality on the sued dummy and several other explanatory factors. Table 8 reports the results for both regressions. In Panel A, the coefficient on the sued dummy is positive, but it is nether significant in Model 1 nor Model 2. The change in size is weakly significant in Model 2, implying that the

change in the number of outside directors is caused by a change in firm size. When examining CEO/chairman duality, it appears that it is the CEO's age that drives the change. The change in the CEO's age is positively related to the change in duality at the 5% level of significance, suggesting that who are more likely to serve in a dual CEO/chairman role as they get older. Thus, even though our univariate results provided some support for the notion that sued firms change their corporate governance practices following a lawsuit, our multivariate results suggest that it may be other factors that drive these changes.

*************************** Insert Table 8 about here***************************

6. Limitations and Robustness Test

Due to data availability limitations in the Risk Metrics database, we only consider S&P 1500 firms which tend to be larger. Because they have deeper pockets, larger firms may be more likely to be sued, thus skewing our sample. To address this issue, we also employed an alternative matching approach to create our non-sued sample. Specifically, we relax the industry matching criterion from 4-digit SIC codes to 3-digit SIC codes. The results are qualitatively and quantitatively similar to our findings and are omitted for brevity.

7. Conclusions

We find evidence that the litigation risk for seasoned firms can be explained by corporate governance, CEO compensation as well as CEO tenure. Board variables including board size, board independence, audit committee size, audit committee independence and CEO/Chairman duality provide little ability to predict lawsuit activity. Although CEO age may still play a role in some circumstances, our findings suggest that this effect is sample specific. We find some evidence of board changes following shareholder lawsuits. Specifically, sued firms increase the proportion of outside board members one year after the lawsuit and keep increasing the proportion two years afterwards. In addition, sued firms dissolve the CEO-chairmanship link two years after the lawsuit, likely because it usually takes some time for a company to change its chairman. However, we find little evidence that litigation leads to other governance changes.

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Table 1: Seasoned Firms Litigation—Summary Statistics

Our sued sample consists of 1,613 securities class action lawsuits that were filed against publicly traded, seasoned non-financial U.S. firms between 1996 and 2012. We only consider firms for which all required data is available in the Center for Research in Security Prices (WRDS) and Compustat databases (last column). After these restrictions, our sample covers about half of the 3,562 lawsuits contained in Stanford Univsersity's Securities Class Action Clearinghouse database (middle column).

Year	Number of Lawsuits Listed on Stanford s Securities Class Action Clearinghouse	Number of Lawsuits Against Non-Financial Seasoned Firms with Complete Data
1996	110	33
1997	174	62
1998	242	84
1999	209	94
2000	216	104
2001	498	314
2002	265	116
2003	228	108
2004	239	118
2005	182	76
2006	120	53
2007	177	60
2008	223	66
2009	165	54
2010	175	81
2011	188	106
2012	151	84
Total	3562	1613

Table 2:Comparative Statistics for Sued and Matched Non-sued Firms

This table presents descriptive statistics for our sample of 1,613 firms subject to a shareholder lawsuit between 1996 and 2012 and 1613 matching non-sued firms. Matched firms must not have been involved in any securities litigation during the sample period, must belong to the same industry as the sued firm, and must have the smallest Euclidean distance relative to the sued firm in terms of both firm size and book-to-market ratio. The G-Index is the Gompers, Ishii, and Metrick (2003) index. Bsize is the number of directors on the board. Outside is the percentage of outside independent directors on the board. ACsize and ACoutside are defined similarly. Duality is a dummy variable coded as 1 when the CEO or president is also the chairman of the board, and 0 otherwise. Instown is the percentage of shares owned by institutional shareholders relative to the r total number of shares outstanding. ΔInstown is the change in institutional ownership from quarter T-4 to T. CEOown is the percentage of shares owned by CEO over total number of shares outstanding. Female is a dummy variable coded as 1 when the CEO is a female, and 0 otherwise. Age is the age of the CEO. Tenure represents the number of years the CEO served the firm. Salary (%) is the dollar value of the CEO's base salary divided by his/her total compensation earned by CEO. Option (%) is the dollar value of option awards (FAS 123R) over total compensation. LTIP (%) is the dollar value of long term incentive programs over total compensation. Rshare (%) is the dollar value of restricted shares over total compensation. Volatility is the annualized standard deviation of daily stock returns for the fiscal year. Turnover is the average daily trading volume as a percentage of the number of shares outstanding for the fiscal year. Bhr is the holding period return during a period of 252 trading days before the date of filing. INTAN is the natural logarithm of the firm's intangible assets. R&DEx are the research and design expenditures of the firm. ROA is earnings before interest divided by total assets. Leverage is the ratio of total debt to total assets. Size is the natural logarithm of the total assets. BM is the ratio of book equity to market capitalization of the firm. Dividend is the ratio of total dividend over earnings before interests and taxes. Frequency is the total number of lawsuits that took place during a one year period before the filing date. Female is a dummy variable coded as 1 if a company is in high-tech industry, and 0 otherwise. Analyst is measured as the total number of analyst forecasts for the firm one year before the lawsuit. Significance levels are computed for the difference in mean (medians) using a t-test and a Wilcoxon t -test.

| | Sued-Firms | | | Non-Sued Firms | | | Equality Tests | |
| | | | | | | | T-Test | Wilxicon Test |
	Mean	Median	Std. Dev.	Mean	Median	Std Dev.	(p-value)	(p-value)
G-Index	5.911	6	1.935	5.426	5	1.861	<.0001	<.0001
Bsize	9.012	9	2.986	7.677	7	3.760	<.0001	<.0001
ACsize	3.247	3	1.494	2.978	3	1.641	<.0001	<.0001
Boutside	0.690	0.727	0.195	0.632	0.667	0.226	<.0001	<.0001
ACoutside	0.924	1	0.167	0.929	1	0.187	0.4458	0.0008
Duality	0.533	1	0.499	0.382	0	0.486	<.0001	<.0001
Instown	0.503	0.516	0.287	0.575	0.593	0.253	<.0001	<.0001
ΔInstown	-0.006	-0.001	0.109	-0.00019	0.004	0.073	0.1197	0.0092
CEOown	0.032	0.009	0.071	0.044	0.022	0.071	0.0011	<.0001
Female	0.049	0	0.145	0.036	0	0.155	0.031	<.0001
Age	55.199	56	6.496	56.331	56	7.401	<.0001	0.0073
Tenure	9.786	8	6.727	12.252	9.450	9.530	<.0001	<.0001
Salary (%)	0.271	0.215	0.208	0.533	0.567	0.238	<.0001	<.0001
Bonus (%)	0.145	0.109	0.146	0.125	0.079	0.125	0.0004	0.003
Option (%)	0.507	0.526	0.294	0.305	0.309	0.224	<.0001	<.0001
LTIP (%)	0.015	0	0.062	0.010	0	0.045	0.0374	0.0138
Rshare (%)	0.062	0	0.072	0.028	0	0.032	<.0001	<.0001
Volatility	0.053	0.05	0.029	0.046	0.040	0.024	<.0001	<.0001
Turnover	16.317	11.748	23.120	6.700	4.605	7.022	<.0001	<.0001
Bhr	-0.276	-0.425	0.705	0.168	-0.010	0.932	<.0001	<.0001
INTAN	18.520	18.587	2.705	17.350	17.256	1.900	<.0001	<.0001
R&DEx	22.200	0	234.280	1.278	0	13.609	0.0011	<.0001
ROA	-0.048	0.049	0.467	-0.080	0.014	0.259	0.0067	<.0001
Leverage	0.195	0.080	0.697	0.170	0.041	0.237	0.1547	<.0001
Size	20.136	19.773	2.082	19.213	18.998	1.384	<.0001	<.0001
BM	0.577	0.383	0.713	0.808	0.735	0.584	<.0001	<.0001
Dividend	0.060	0	0.766	0.060	0	1.299	0.9973	0.129
Tech	0.489	0	0.5	0.489	0	0.500	1	1
Frequency	223.667	216	85.302	223.667	216	85.302	1	1
Analysis	18.846	11	24.321	20.181	10	26.105	0.0417	0.0261

Table 3:Correlation Matrix

This table reports correlation coefficients between all variables we use in our research. For exceptional covariance, we only report variable pairs whose correlation coefficients are larger than 0.5 here. All variables are defined in Table 2.

	Variable	2	4	11	13	14	15	18	19	22	23
1	Gindex										
2	Bsize	1.00									
3	ACsize	**0.81*****									
4	Boutside	-0.28*	1.00								
5	ACoutside	-0.08	**0.64*****								
6	Duality	0.07	-0.04								
7	Instown	0.01	0.36**								
8	ΔInstown	-0.06	0.24								
9	Female	0.25*	0.08								
10	Age	-0.10	0.27*								
11	Tenure	-0.20	-0.14	1.00							
12	CEOown	-0.19	-0.19	**0.59*****							
13	Salary (%)	0.03	0.03	-0.20	1.00						
14	Bonus (%)	-0.04	0.06	-0.10	**0.60*****	1.00					
15	Option (%)	0.03	-0.08	-0.14	**0.74*****	**0.54*****	1.00				
16	LTIP (%)	-0.05	0.19	0.05	-0.03	0.14	0.06				
17	Rshare (%)	0.04	0.19	-0.19	0.39***	0.21	0.11				
18	Analysis	-0.01	0.06	-0.09	**0.70*****	0.45***	**0.80*****	1.00			
19	Volatility	0.21	-0.42***	-0.09	0.12	-0.21	0.08	-0.03	1.00		
20	Turnover	-0.09	0.16	0.07	0.25*	0.43***	0.15	0.26*	-0.05		

Continued.		2	4	11	13	14	15	18	19	22	23
21	Bhr	-0.10	0.21	-0.05	-0.09	0.08	-0.08	0.05	-0.24		
22	INTAN	0.01	0.02	-0.14	**0.79*****	**0.58*****	**0.70*****	**0.60*****	-0.07	1.00	
23	ROA	-0.21	0.22	-0.05	0.24	0.276*	0.12	0.03	-0.15	0.22	1.00
24	Leverage	0.10	-0.08	-0.15	0.05	0.00	-0.05	-0.11	**0.54*****	0.06	0.17
25	Size	0.03	0.16	-0.23	**0.85*****	**0.54*****	**0.51*****	**0.50*****	0.01	**0.71*****	0.43***
26	BM	0.03	0.08	0.16	-0.05	-0.07	-0.14	-0.10	-0.09	-0.08	-0.01
27	Dividend	-0.06	0.30**	-0.13	-0.09	-0.17	-0.12	-0.18	0.00	-0.07	0.18
28	Tech	0.28*	-0.30**	-0.06	-0.20	-0.22	-0.07	-0.02	0.04	-0.17	**-0.55*****
29	Frequency	0.36	-0.27*	-0.23	0.39***	0.10	**0.52*****	0.42***	0.39***	0.22	-0.02

Table 4: Multivariate Analysis of Shareholder Litigation and Corporate Governance

This table presents results for a series of logit regressions in which we regress our litigation dummy variables (sued) against the firms' corporate governance characteristics and various control variables. Our sued firm sample consists of 1,613 firms subject to a shareholder lawsuit between 1996 and 2012. The non-sued sample consists of 1,613 firms that were matched with the sued firms on industry, size and book-to-market ratio. The dependent variable is dummy variable that is coded as 1 if the firm is subject to a shareholder lawsuit, and 0 otherwise. All other variables are defined in Table 2. Standard errors are listed in parenthesis. The 10%, 5%, and 1% level is indicated by *, **, and ***, respectively.

	G Index only	Board Structure	Audit Committee Structure	Ownership Structure	CEO Characteristics	Compensation Components	Compensation Components		
Model	1	2	3	4	5	6	7	8	9
Intercept	-31.0829***	-36.3359***	-33.0768***	-36.8061***	-43.9339***	0.1384	-30.0464***	-418.4000*	-33.0208***
	(4.6087)	(5.8314)	(6.0647)	(9.4350)	(7.3175)	(0.7974)	(5.0623)	(224.5000)	(9.2725)
Gindex	0.0367							13.6524**	
	(0.0955)							(6.9516)	
Bsize		-0.0330							
		(0.0621)							
ACsize			-0.0915					-4.7529	
			(0.1771)					(3.9206)	
Boutside		-0.7523							
		(1.2928)							
ACoutside			-2.8893					68.7980	
			(1.8108)					(96.3543)	

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Continued.	G Index only	Board Structure	Audit Committee Structure	Ownership Structure	CEO Characteristics	Compensation Components	Compensation Components		
Model	1	2	3	4	5	6	7	8	9
Duality		0.3509	-0.0101					-1.0614	
		(0.4774)	(0.5069)					(18.8412)	
CEOown				5.4813					
				(4.1861)					
Instown				-0.3866				-32.1157	
				(2.2605)				(28.2946)	
ΔInstown				-0.6635				-46.6708	
				(5.2851)				(79.2374)	
Female					0.1888			42.9864	
					(1.3280)			(102.3000)	
Age					0.0476			6.0406	
					(0.0377)			(3.6962)	
Tenure					-0.0150			-11.6957**	
					(0.0301)			(5.7746)	
Salary(%)						-3.8513***		-38.2696	
						(1.0042)		(32.5409)	
Bonus(%)							0.1875		5.0497*
							(1.8748)		(2.8663)

Continued.	G Index only	Board Structure	Audit Committee Structure	Ownership Structure	CEO Characteristics	Compensation Components	Compensation Components		
Model	1	2	3	4	5	6	7	8	9
Option(%)							1.4969		1.8931
							(1.1248)		(1.7997)
LTIP(%)						1.2131	-1.5286	308.9000*	-1.7119
						(3.2915)	(4.0493)	(168.0000)	(6.6630)
Rshare(%)						1.9984	1.1496	25.8892	6.2985
						(1.2684)	(1.8469)	(39.0041)	(3.9894)
Volatility	9.1519	17.5409	10.6349	1.4872	16.6540	7.2306	30.5040*	1157.0000	32.0675
	(13.4150)	(18.1668)	(19.4972)	(28.9154)	(17.8489)	(12.8720)	(16.8661)	(762.9000)	(24.9394)
Turnover	0.1132***	0.1263***	0.1316***	0.0999*	0.1397***	0.1491***	0.1466***	2.1964*	0.1131*
	(0.0279)	(0.0343)	(0.0344)	(0.0569)	(0.0366)	(0.0312)	(0.0342)	(1.2928)	(0.0647)
Bhr	-0.3940	-0.6153	-0.5780	-0.2517	-0.5638	-1.1000***	-1.0272***	-20.6611	-3.8447***
	(0.2996)	(0.3980)	(0.4017)	(0.6354)	(0.4217)	(0.3101)	(0.2897)	(14.1277)	(1.1187)
INTAN	0.1239	0.3540**	0.3752**	0.5353*	0.4287**				-0.3944
	(0.1421)	(0.1681)	(0.1688)	(0.3006)	(0.1825)				(0.3600)
R&DEx	1.1973	0.6483	0.5036	0.5902	0.2389	0.2045	0.0754		
	(0.7982)	(0.9976)	(1.0158)	(5.4691)	(0.8173)	(0.2367)	(0.2296)		
ROA	-0.0872	-0.8661	-0.2947	-0.5301	-1.6311	0.0964	-1.4112	3.9597	-1.9393
	(1.5591)	(1.8616)	(1.8885)	(3.9214)	(2.0063)	(0.7604)	(0.8745)	(113.9000)	(2.6485)
Leverage	-4.1165***	-6.3191***	-5.5843***	-6.7594***	-7.3651***	1.6662	-3.9178**	-22.1936	-5.6635**
	(1.1924)	(1.5601)	(1.6140)	(2.6016)	(1.7341)	(1.0540)	(1.5990)	(43.9388)	(2.6662)

Continued.	G Index only	Board Structure	Audit Committee Structure	Ownership Structure	CEO Characteristics	Compensation Components	Compensation Components		
Model	1	2	3	4	5	6	7	8	9
Size	1.3557***	1.4537***	1.3951***	1.2441**	1.5755***		1.4413***		1.8952***
	(0.2781)	(0.3278)	(0.3290)	(0.4876)	(0.3502)		(0.2637)		(0.6759)
BM	-0.8489**	-0.6349	-0.5262	0.3836	-0.1380	-0.2301	-0.6006*	54.3433*	-0.7204*
	(0.4192)	(0.5407)	(0.5585)	(0.6635)	(0.5504)	(0.3012)	(0.3434)	(28.1735)	(0.3907)
Dividend	0.1607	0.2724	0.3759	0.3221	0.2054	2.6074**	1.3389	148.7000	2.2226
	(0.4308)	(0.6984)	(0.8167)	(0.9316)	(0.5718)	(1.2563)	(1.7945)	(99.6764)	(2.7338)
Tech	1.5281***	1.2610**	1.3047**	0.6734	1.2452**	-0.1760	0.5956	86.1864	0.2500
	(0.4602)	(0.5783)	(0.5960)	(1.2088)	(0.6050)	(0.4106)	(0.5385)	(58.6071)	(0.8324)
Frequency	0.0007	-0.0007	-0.0020	0.0018	0.0009	-0.0029	-0.0057**	-0.1154	-0.0068*
	(0.0020)	(0.0024)	(0.0029)	(0.0039)	(0.0027)	(0.0019)	(0.0025)	(0.0720)	(0.0036)
Analysis	-0.0051	-0.0014	0.0050	0.0481	0.0032				0.0379**
	(0.0111)	(0.0128)	(0.0135)	(0.0406)	(0.0133)				(0.0180)
N	366	293	278	103	281	261	261	46	144
Chi-Square	266.4023	234.123	221.2819	69.9975	233.2026	147.7702	201.2655	62.2886	121.068
P-value	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001

Table 5: Multivariate Analysis of the Tech vs. Non-Tech Sub Sample

This table presents results for a series of multivariate logit regressions for both a tech and non-tech sub-sample of our dataset. Panel A presents results for tech firms. Panel B reports results for non-tech firms. Our dependent variable describe here is dummy variable coded as 1 if the firm is subject to a shareholder lawsuit, and 0 otherwise. All other variables are defined in Table 2. Standard errors are listed in parenthesis. The 10%, 5%, and 1% level is indicated by *, **, and ***, respectively.

Panel A: Tech Firms

	G Index only	Board Structure	Audit Committee Structure	Ownership Structure	CEO Characteristics	Compensation Components	Compensation Components
Model	1	2	3	4	5	6	7
Intercept	-15.2985	-69.9309*	-20.7289	-820.3000	-9.3572	1.9212	-23.9021**
	(10.5684)	(39.4454)	(21.1587)	(10146.7000)	(18.2303)	(2.5641)	(11.1900)
Gindex	-0.0870						
	(0.2809)						
Bsize		0.1695					
		(0.1564)					
ACsize			-0.1297				
			(1.6274)				
Boutside		17.7246					
		(12.2296)					
ACoutside			-10.7820				
			(10.3660)				
Duality		-3.1810	-4.7861**				
		(2.1994)	(2.4174)				

Continued.	G Index only	Board Structure	Audit Committee Structure	Ownership Structure	CEO Characteristics	Compensation Components	Compensation Components
Model	1	2	3	4	5	6	7
CEOown				704.9000			
				(7309.8000)			
Instown				21.7726			
				(353.5000)			
ΔInstown				8.3782			
				(1840.1000)			
Female					-7.8493		
					(7.3030)		
Age					-0.0620		
					(0.1389)		
Tenure					-0.1665		
					(0.1194)		
Salary(%)						-6.1948**	
						(3.0691)	
Bonus(%)							-1.5700
							(5.1379)
Option(%)							1.7757
							(2.8013)
LTIP(%)						13.1211	0.2621
						(15.3430)	(19.4068)

Continued.	G Index only	Board Structure	Audit Committee Structure	Ownership Structure	CEO Characteristics	Compensation Components	Compensation Components
Model	1	2	3	4	5	6	7
Rshare(%)						-1.5660	0.9385
						(3.7415)	(4.6769)
Volatility	-8.9910	70.0895	-33.6564	767.5000	-103.1000	-17.3167	26.8295
	(37.2388)	(84.4435)	(67.5861)	(10042.5000)	(96.8067)	(27.6676)	(39.3545)
Turnover	0.2325**	0.3712	0.2440*	-6.8433	0.6083*	0.2547***	0.1849**
	(0.1016)	(0.2658)	(0.1446)	(101.3000)	(0.3111)	(0.0935)	(0.0897)
Bhr	-1.7309*	-4.2545**	-3.2200*	20.9269	-5.9683*	-0.7938**	-0.7328*
	(0.9146)	(1.9992)	(1.9243)	(299.5000)	(3.5053)	(0.3698)	(0.3803)
INTAN	0.7039	-0.1951	0.3264	17.2325	-0.1594		
	(0.5426)	(1.1109)	(0.7227)	(262.5000)	(0.6740)		
R&DEx	0.1209	0.0500	0.2454	1.6419	0.1511	0.1207	0.0984
	(0.9846)	(0.7287)	(0.5882)	(25.7465)	(1.3585)	(0.1836)	(0.1641)
ROA	4.6858	14.4970	8.8876	-69.4512	9.6750	-0.9067	-1.6788
	(4.6400)	(12.3942)	(9.8444)	(1372.6000)	(10.6543)	(1.1451)	(1.4797)
Leverage	1.2125	9.0698	9.3233	-140.0000	17.5796	3.2382	-0.5350
	(3.7008)	(6.8460)	(7.8901)	(1840.8000)	(12.2006)	(2.6883)	(3.8018)
Size	0.2043	2.6810	1.4173	26.5794	0.8041		1.2562**
	(0.8709)	(2.3539)	(1.2662)	(348.2000)	(1.1959)		(0.6327)
BM	-0.7807	1.4238	0.0447	2.0151	3.8594	-0.2321	-1.0910
	(1.1592)	(2.4279)	(1.6323)	(218.0000)	(2.8979)	(0.9066)	(1.1570)

Continued.	G Index only	Board Structure	Audit Committee Structure	Ownership Structure	CEO Characteristics	Compensation Components	Compensation Components
Model	1	2	3	4	5	6	7
Dividend	1.2309	12.9030	2.9678	-493.1000	10.6191	5.6102	6.8971
	(5.1019)	(27.3906)	(16.0113)	(7492.6000)	(23.4600)	(4.7994)	(5.3258)
Frequency	-0.0116*	-0.0127	-0.0245	-0.0206	-0.0228*	-0.0088	-0.0162**
	(0.0066)	(0.0123)	(0.0154)	(0.4980)	(0.0125)	(0.0054)	(0.0080)
Analysis	0.0195	0.0329	0.0397	0.0711	0.0044		
	(0.0203)	(0.0257)	(0.0299)	(4.4968)	(0.0199)		
N	130	105	99	16	101	99	99
Chi-Square	135.2069	123.1713	113.3182	22.1775	116.2418	86.495	93.2577
P-value	<.0001	<.0001	<.0001	0.1032	<.0001	<.0001	<.0001

Panel B: Non-tech Firms

	G Index only	Board Structure	Audit Committee Structure	Ownership Structure	CEO Characteristics	Compensation Components	Compensation Components
Model	1	2	3	4	5	6	7
Intercept	-31.6463***	-37.9507***	-34.7277***	-31.7603***	-46.9466***	-0.0121	-36.9213***
	(5.4430)	(6.8639)	(6.9815)	(9.6844)	(8.9673)	(0.9437)	(7.1235)
Gindex	0.0380						
	(0.1119)						
Bsize		-0.0546					
		(0.1059)					
ACsize			-0.1018				
			(0.2101)				
Boutside		-1.4864					
		(1.4402)					
ACoutside			-2.9233				
			(2.1200)				
Duality		0.5551	0.2850				
		(0.5382)	(0.5588)				
CEOown				4.8697			
				(4.2264)			
Instown				-1.6402			
				(2.4041)			

Continued.	G Index only	Board Structure	Audit Committee Structure	Ownership Structure	CEO Characteristics	Compensation Components	Compensation Components
Model	1	2	3	4	5	6	7
ΔInstown				-0.2234			
				(5.3086)			
Female					0.5306		
					(1.4508)		
Age					0.0410		
					(0.0444)		
Tenure					0.0000		
					(0.0351)		
Salary(%)						-3.3568***	
						(1.2575)	
Bonus(%)							-0.3348
							(2.4066)
Option(%)							0.6068
							(1.6294)
LTIP(%)						0.6435	-2.7993
						(3.4567)	(4.6079)
Rshare(%)						2.6540*	0.4864
						(1.4924)	(2.4686)
Volatility	17.9070	18.2473	14.9011	-0.1221	10.9523	4.2693	13.7239
	(15.0109)	(20.2439)	(21.4741)	(29.1641)	(20.3773)	(17.4768)	(22.3117)

Continued.	G Index only	Board Structure	Audit Committee Structure	Ownership Structure	CEO Characteristics	Compensation Components	Compensation Components
Model	1	2	3	4	5	6	7
Turnover	0.0953***	0.1196***	0.1190***	0.1068*	0.1380***	0.1243***	0.1850***
	(0.0306)	(0.0404)	(0.0396)	(0.0581)	(0.0439)	(0.0364)	(0.0522)
Bhr	-0.2432	-0.5825	-0.5095	-0.1081	-0.5369	-1.5755***	-2.1203***
	(0.3312)	(0.4449)	(0.4446)	(0.6499)	(0.4829)	(0.4254)	(0.5005)
INTAN	0.0526	0.3581*	0.3551*	0.5847*	0.4538**		
	(0.1561)	(0.1935)	(0.1944)	(0.3107)	(0.2162)		
R&DEx	0.8578	0.1236	0.0386	0.3574	0.0346	0.2800	-0.0021
	(2.3855)	(3.1821)	(3.2032)	(4.6135)	(2.7400)	(0.3995)	(0.1219)
ROA	-1.4698	-0.9211	-0.1615	-2.3775	-2.4042	-0.1073	-2.4881
	(1.6456)	(1.9790)	(2.1294)	(4.4583)	(2.1027)	(1.4782)	(1.7249)
Leverage	-4.2973***	-7.1837***	-6.5660***	-7.1863***	-8.3055***	1.1115	-6.4170***
	(1.3693)	(1.7954)	(1.8486)	(2.7264)	(1.9986)	(1.3054)	(2.1558)
Size	1.4401***	1.5707***	1.4924***	1.0101**	1.7184***		1.7916***
	(0.3174)	(0.3742)	(0.3668)	(0.5075)	(0.4001)		(0.3694)
BM	-0.9062**	-0.7628	-0.6002	0.3236	-0.1918	-0.2200	-0.4813
	(0.4551)	(0.6422)	(0.6617)	(0.6734)	(0.6460)	(0.3250)	(0.3466)
Dividend	0.1159	0.2486	0.2853	0.2953	0.0816	2.2296	1.0441
	(0.3400)	(0.7361)	(0.8237)	(0.6602)	(0.4480)	(1.3762)	(2.0100)
Frequency	0.0019	-0.0005	-0.0013	0.0023	0.0025	-0.0015	-0.0023
	(0.0022)	(0.0027)	(0.0032)	(0.0039)	(0.0030)	(0.0022)	(0.0029)

Continued.	G Index only	Board Structure	Audit Committee Structure	Ownership Structure	CEO Characteristics	Compensation Components	Compensation Components
Model	1	2	3	4	5	6	7
Analysis	-0.0062	-0.0013	0.0110	0.0576	-0.0024		
	(0.0155)	(0.0196)	(0.0212)	(0.0459)	(0.0206)		
N	236	188	179	87	180	162	162
Chi-Square	143.6223	128.3705	121.3539	52.7929	131.8377	73.975	121.9859
P-value	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001

Table 6: Multivariate Analysis of the Pre- vs. Post-Crisis Sub Sample

This table presents results for a series of multivariate logit regressions for both pre- vs. post-crisis sub-sample of our dataset. The pre-crisis sub-sample includes all lawsuits filed before 2008. The post-crisis sample includes all lawsuits filed in and after 2008. Our dependent variable is a dummy variable coded as 1 if the firm is subject to a shareholder lawsuit, and 0 otherwise. Our dependent variable describe here is dummy variable coded as 1 if the firm is subject to a shareholder lawsuit, and 0 otherwise. All other variables are defined in Table 2. Standard errors are listed in parenthesis. The 10%, 5%, and 1% level is indicated by *, **, and ***, respectively.

Panel A: Pre-crisis Period

	G Index only	Board Structure	Audit Committee Structure	Ownership Structure	CEO Characteristics
Model	1	2	3	4	5
Intercept	-29.6417***	-45.7417***	-42.9378***	-532.2000	-56.0030***
	(6.3180)	(11.0387)	(11.2197)	(700.0000)	(13.9168)
Gindex	0.0757				
	(0.1189)				
Bsize		0.0616			
		(0.0674)			
ACsize			0.2266		
			(0.3591)		
Boutside		-0.4743			
		(2.0430)			
ACoutside			-4.7560		
			(3.1007)		
Duality		-0.5679	-0.9833		
		(0.8283)	(0.8540)		
CEOown				100.1000	
				(150.0000)	
Instown				55.8254	
				(50.3551)	
ΔInstown				-200.3000	
				(129.4000)	

Continued.	G Index only	Board Structure	Audit Committee Structure	Ownership Structure	CEO Characteristics
Model	1	2	3	4	5
Female					2.0681
					(1.9729)
Age					0.1385*
					(0.0787)
Tenure					-0.0486
					(0.0677)
Volatility	19.9322	47.3191	21.8543	437.3000	42.2626
	(16.9563)	(29.0725)	(35.6878)	(1884.2000)	(30.2432)
Turnover	0.0864**	0.1406**	0.1702**	2.9888	0.1361**
	(0.0412)	(0.0642)	(0.0695)	(2.8805)	(0.0621)
Bhr	-0.8543*	-2.1680**	-2.6578**	-29.6879	-2.3433**
	(0.4844)	(0.8590)	(1.0590)	(29.0200)	(0.9380)
INTAN	0.1519	0.4757	0.5539*	15.3459	0.5208*
	(0.1934)	(0.2969)	(0.2981)	(14.1239)	(0.2933)
R&DEx	0.5308	0.0917	0.1275	-1.2765	0.0833
	(0.8334)	(0.6057)	(1.3125)	(3.6202)	(0.6101)
ROA	0.8998	0.5080	1.5857	-149.7000	-1.7580
	(1.8798)	(3.3293)	(3.7029)	(223.8000)	(3.7897)
Leverage	-5.4039***	-11.8854***	-11.3461***	-155.2000	-12.5659***
	(1.6434)	(3.1559)	(3.3852)	(126.1000)	(3.3353)
Size	1.3084***	1.7622***	1.7404***	9.6217	1.8596***
	(0.3819)	(0.5775)	(0.5723)	(30.0984)	(0.5822)
BM	-0.7103*	0.6686	0.9339	24.6754	0.9791
	(0.4067)	(0.6815)	(0.7829)	(31.7694)	(0.6704)
Dividend	-1.8664	1.6704	1.8961	72.5483	1.3766
	(3.0779)	(2.6557)	(2.6910)	(575.2000)	(2.2917)
Tech	1.2567*	-0.9603	-1.3241	-2.7765	-0.6200
	(0.6596)	(1.2450)	(1.3448)	(23.2364)	(1.2216)

Continued.	G Index only	Board Structure	Audit Committee Structure	Ownership Structure	CEO Characteristics
Model	1	2	3	4	5
Frequency	-0.0023	-0.0033	-0.0034	-0.0646	-0.0021
	(0.0024)	(0.0033)	(0.0043)	(0.1090)	(0.0036)
Analysis	0.0051	0.0360*	0.0572**	1.0047	0.0339*
	(0.0139)	(0.0203)	(0.0280)	(1.2399)	(0.0197)
N	194	131	116	49	129
Chi-Square	135.8663	115.0795	102.9197	67.2149	117.4936
P-value	<.0001	<.0001	<.0001	<.0001	<.0001

Table 7: Univariate Comparison of Corporate Governance Characteristics Before and After a Lawsuit

This table compares corporate governance characteristics before and after the lawsuit filing. Panel A presents changes from one year prior to the lawsuit to one year after the lawsuit. Panel B presents changes from one year prior to the lawsuit to two years after the lawsuit. All other variables are defined in Table 2. Significance levels are computed for the difference in mean (medians) using a t-test and a Wilcoxon t -test.

Panel A

Variable	N	Year T-1 Mean	Year T-1 Median	Year T-1 Std. Dev.	N	Year T+1 Mean	Year T+1 Median	Year T+1 Std. Dev.	Equality Tests T-Test (p-value)	Equality Tests Wilcoxon Test (p-value)
Gindex	677	5.854	6.000	1.913	582	5.857	6.000	1.819	0.9807	0.9388
Bsize	522	8.815	9.000	3.249	591	8.780	9.000	3.028	0.8502	0.8806
Boutside	522	0.684	0.727	0.212	591	0.720	0.750	0.195	0.0027	0.0020
Duality	523	0.549	1.000	0.498	591	0.519	1.000	0.500	0.3175	0.3172

Panel B

Variable	N	Year T-1 Mean	Year T-1 Median	Year T-1 Std. Dev.	N	Year T+2 Mean	Year T+2 Median	Year T+2 Std. Dev.	Equality Tests T-Test. (p-value)	Equality Tests Wilcoxon Test (p-value)
Gindex	677	5.854	6.000	1.913	582	5.859	6.000	1.754	0.9527	0.8497
Bsize	522	8.815	9.000	3.249	591	8.900	9.000	2.883	0.6377	0.4936
Boutside	522	0.684	0.727	0.212	591	0.736	0.778	0.188	<.0001	<.0001
Duality	523	0.549	1.000	0.498	591	0.475	0.000	0.500	0.0184	0.0184

Table 8: Multivariate Analysis of Governance Changes

This table presents results for a series of multivariate OLS regressions. In Panel A, the dependent variable is the change in the proportion of outside members on the board. In Panel B, the dependent variable is the change in CEO/Chairman duality. Model 1 considers changes from one year prior to the lawsuit to one year after the lawsuit. Model 2 considers changes from one year prior to the lawsuit to two years after the lawsuit. Sued is a dummy variable coded as 1 if the firm is subject to a shareholder lawsuit, and 0 otherwise. Free cash flow (FCF) is calculated as net operating cash flow minus dividends paid divided by total assets. All other variables are defined in Table 2. The 10%, 5%, and 1% level is indicated by *, **, and ***, respectively.

Panel A: Changes in the proportion of outside members on the board

Model	Model 1		Model 2	
Variable	Coefficient	SE	Coefficient	SE
Intercept	-0.0048	0.0198	0.0481	0.0256
Sued	0.0344	0.0278	0.0209	0.0319
Volatility	0.3873	0.9032	1.0743	1.1389
ΔINTAN	0.0000	0.0000	0.0000	0.0000
ΔROA	0.1276	0.1545	0.0397	0.1904
ΔLeverage	0.1120	0.1298	0.0411	0.1644
ΔSize	0.0524	0.0344	0.0588*	0.0331
ΔBM	-0.0325	0.0228	0.0100	0.0388
ΔFCF	-0.2145	0.1372	-0.1343	0.1890
ΔBsize	0.0146	0.0104	0.0089	0.0087
N	132		88	
R-Square	0.0908		0.0731	
Pr > F	0.2167		0.722	

Panel B: Changes in CEO/Chairman Duality

Model	Model 1		Model 2	
Variable	Coefficient	SE	Coefficient	SE
Intercept	-0.0513	0.0427	-0.1733	0.0592
Sued	-0.0243	0.0600	0.0244	0.0783
ΔAge	0.0125**	0.0059	0.0146**	0.0067
ΔTenure	-0.0036	0.0059	0.0039	0.0074
N	128		85	
R-Square	0.0374		0.0944	
Pr > F	0.1914		0.0444	