

Delaware Incorporation and the Board of Directors

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This study investigates the impact of Delaware law on the composition and size of the board of directors. Our empirical evidence reveals that Delaware firms have smaller and more independent boards than their non-Delaware counterparts. Given that we find no value-premium for firms that incorporate in Delaware, we interpret our findings as consistent with Delaware law benefiting managers. The more shareholder-friendly boards in Delaware exist to offset the benefits that managers derive from Delaware incorporation.

Introduction

Corporate law has been argued to affect firm value through its impact on agency costs. Legal rules determine investors' rights and managers' duties. If corporate law mitigates agency conflicts, it should increase firm value. But when legal rules protect managers, promote managerial opportunism, and entrench incumbent managers, the rules should decrease firm value (Daines, 2001). Companies can choose to incorporate in any of the 50 states. The choice may be important because firms are governed by the corporate laws of the state in which they incorporate, not the state in which they operate. More than 50 percent of all U.S. publicly traded firms are incorporated in the state of Delaware, and, as a result, it is important to understand how Delaware law impacts corporations.

Our focus in this paper is to investigate the impact of Delaware incorporation on board size and composition. The board of directors is charged with protecting shareholders' wealth. Its responsibility is to ensure that managers take actions that are beneficial to the shareholders. Efficacious boards help alleviate agency conflicts, while ineffective boards exacerbate them. Because legal rules can impact agency

costs and the board of directors is designed to resolve agency conflicts, we argue that there is an association between corporate law and board structure.

Much of the literature on boards concentrates on board composition, i.e., the percentage of independent directors. The implicit assumption is that boards with more independent directors are more independent from managers and are more effective in monitoring them.¹ Another factor that can represent board effectiveness is board size. The current literature suggests that smaller boards are more effective (Yermack, 1996; Jensen, 1993; Lipton and Lorsch, 1992; and Eisenberg, Sundgren, and Wells, 1998).

We focus on the impact of Delaware incorporation on board size and composition. We document that Delaware incorporation affects board structure. Specifically, the boards of Delaware firms are more independent and smaller relative to those of non-Delaware firms. The evidence is robust even after controlling for several factors, including ownership structure. Bebchuk, Cohen and Ferrell (2002) argue that states compete for company incorporations. Because managers often make the decision on where to incorporate, this competition may cause states to write corporate laws that give weight to management interests. We propose that the stronger governance and structure of Delaware firms may occur to offset benefits provided managers under Delaware law. We cannot completely discount the possibility, however, that Delaware law somehow encourages better governance structure.

Second, we link the governance structure to firm value to further confirm the role of Delaware law in mitigating agency conflicts. Prior research on the effect of Delaware law on firm value has produced mixed findings. For example, Daines (2001) finds that Delaware firms are more valuable than non-Delaware firms. Others, however, question this Delaware effect (Bebchuk, Cohen and Ferrell, 2002; Gompers, Ishii, and Metrick, 2003; Bebchuk and Cohen, 2003; and Subramanian, 2004). After controlling for the Gompers, Ishii, and Metrick index, we find no difference in the value of Delaware and non-Delaware corporations and do not find that the improved governance structure of Delaware firms is related to firm value. This leads us to conclude that improved governance structure exists to offset gains that may accrue to managers through Delaware incorporation.

Finally, we examine the effect of the Sarbanes-Oxley Act (SOX). SOX is intended to promote managerial accountability, thus mitigating agency costs. We posit that the role of Delaware law in reducing agency costs may be made less necessary after the passage of SOX. The evidence does not confirm this conjecture, as the impact of Delaware law on board structure does not change significantly after the enactment of SOX.

¹The empirical evidence on this issue can be found in a large number of studies (Brickley and James, 1987; Weisbach, 1988; Brickley, Coles, and Terry, 1994; Hermalin and Weisbach, 1988; Rosenstein and Wyatt, 1990)

This study makes several contributions to the literature. First, this study shows that legal variation within the U.S. does have an economic impact on corporate governance. Second, we contribute to the strand of the literature that examines the benefits and costs of Delaware incorporation (Lipton and Rowe, 2002, Gilson 2002a, 2002b, Macey, 2002, Sitkoff, 2002, Grossfeld, 2002, Bebchuk and Ferrell, 2001, Bebchuk, Cohen, and Ferrell, 2002, Bar-gill, Barzuza, and Bebchuk, 2001). Finally, the impact of the Sarbanes-Oxley Act continues to be debated in the literature. We contribute to the debate by offering evidence on the effect of Sarbanes-Oxley on board structure.

Prior Literature and Hypothesis Development

Possible Impact of Delaware Incorporation

Why would incorporating in Delaware or any other state matter? There are three views on this issue. The first is that it would not matter. The second is that firms incorporate in Delaware to protect managers from market forces. The third is that Delaware law promotes firm value maximization by encouraging a governance structure that promotes shareholder wealth maximization. We discuss these views below.

The Domicile Irrelevance Hypothesis

The domicile irrelevance hypothesis suggests that the state of incorporation does not matter and can be regarded as unimportant and trivial (Black, 1990).² This hypothesis assumes that state laws are either uniform or that there are arrangements that would offset any costs or benefits of incorporating in Delaware or any other state. That is, “managers can eliminate differences between jurisdictions by customizing the firm’s securities and charter provisions and by providing substitute arrangements (such as management compensation or board structure)” (Daines, 2001, p. 527). The alternative arrangements could take the form of improved governance provisions that serve as substitutes for state laws or that complement them.

The irrelevance proposition does not seem likely. If state laws were uniform or if other arrangements offset the differences in the laws, there would be a more even distribution of states of incorporation. Under a strict interpretation of the domicile irrelevance proposition, there neither would be a need for better governance mechanisms nor would there be anything creating worse governance provisions.

²Black (1990) also proposes that if there were truly substantial benefits to Delaware incorporation, that we would see a much larger percentage of firms incorporating in Delaware rather than the 50 to 60 percent that do so now.

Does Delaware Law Exacerbate the Agency Conflict?

A second view concerning incorporating in Delaware is that managers choose this state because its lenient laws entrench and protect managers (Cary, 1974). Delaware is a small state but attracts a disproportionate number of incorporations. As a result, the revenue from incorporation fees represents a significant portion of the total state income (as high as 20 percent by some estimates). This economic dependence on incorporations may motivate Delaware to design its legal rules in favor of managers, who decide where to have the firm incorporated, rather than in favor of atomistic, relatively powerless, shareholders (Cary, 1974).

This view argues that Delaware produces legal rules that are unjustifiably lax or pro-management, leading to a national race to the bottom in legal rules. For instance, Delaware was one of the first states to eliminate managers' mandatory fiduciary duty of care, appraisal rights for dissenting shareholders in public firms, and certain shareholder voting and meeting requirements.

Suppose that Delaware laws favor managers over shareholders. Unless there were explicit provisions in the law that causes governance structure to be weakened, the laws that favor managers could create a demand for better governance. That is, the demand for shareholder-oriented governance would be caused by agency problems that are exacerbated by Delaware law; if there were no agency problems, there would not be a need for governance mechanisms. Here, we would expect that boards of Delaware companies would be smaller and more independent than their non-Delaware counterparts.

Does Delaware Law Alleviate Agency Problems?

The third and final view is that state law can improve firm value (Winter, 1977). Here, market forces (including competition for capital, products, and corporate control) lead states to provide, and incorporators to select, legal rules that maximize shareholder welfare. State laws that impair the rights of shareholders seem to cause companies to incorporate or reincorporate elsewhere (Macey, 1998). Rather than exploiting shareholders, Delaware's famed laxity may improve firm value by allowing firms to customize their contracts with shareholders and other stakeholders that limit or reduce agency problems (Easterbrook and Fischel, 1991). Choi, Kamma, and Weintrop (1989) argue that the Delaware legal system is consistent and predictable. The consistency and predictability of the laws and judicial system in Delaware reduce the cost and amount of conflict.

The exact way that Delaware corporate law accomplishes this increase in value is unclear. One possibility is that Delaware law encourages shareholder-oriented governance structure, implying that boards would be smaller and/or more independent and more in pursuit of shareholder interests. This encouragement is likely indirect rather than direct because Delaware law does not mandate specific governance structures.

There are at least two ways that laws in Delaware could promote a more shareholder-oriented governance structure. First, Delaware has separate courts for business problems such as solving disputes with shareholders (Black, 1990). These specialized courts reduce legal delays and lessen uncertainty. Litigation is costly, especially to the party that loses the dispute. As firms expect courts to quickly resolve disputes with shareholders, often in the shareholders' favor, shareholders may encourage firms to find ways to avoid possible litigation costs. Delaware firms may find it cost effective to create more shareholder-oriented boards by appointing a greater proportion of independent directors and having smaller board sizes. By increasing the fiduciary responsibility of the board (or at least giving the appearance of increasing it), Delaware firms may be able to avoid costly litigation.³

Second, Delaware law encourages takeover bids by creating fewer delays and hurdles when bids are hostile and prohibiting extreme takeover defenses (Daines, 2001). As a result, bidders may view Delaware firms as lower cost takeover targets.⁴ Given the greater likelihood of a takeover attempt, Delaware firms may choose a more shareholder-oriented governance structure so they can negotiate with bidders from a stronger position. Whether or not the governance structure of Delaware firms is more shareholder-oriented is an important empirical question whose answer will permit us to better understand how Delaware law promotes increased firm value.

While there is some possible merit to these arguments, if Delaware laws lessened agency problems and somehow promoted better internal governance, it seems likely that Delaware firms would trade at a premium. While this view seems consistent with the empirical findings of increased firm value in Daines (2001), more recent research has discounted the existence of this Delaware effect (Bebchuk, Cohen, and Ferrell, 2002; Gompers, Ishii, and Metrick, 2003; Bebchuk and Cohen, 2003; and Subramanian, 2004).

The Impact of Sarbanes-Oxley (SOX)

The Sarbanes-Oxley Act was enacted on July 30, 2002 as a consequence of Congressional hearings conducted after the first admissions of fraudulent behavior

³An alternate argument is that having shareholder-oriented courts would lessen the need for shareholder-oriented boards in much the same way that bank regulation changes the need for shareholder-oriented boards in banks (Booth, Cornett, and Tehranian, 2002). The courts would be a substitute for internal governance. Because arguments can be made both ways, the answer may be best answered empirically.

⁴Whether or not governance structure impacts the likelihood and outcome of hostile takeovers has been studied elsewhere. The results have produced mixed conclusions. For example, Shivdasani (1993) and Alcalde and Espitia (2003) find that poor governance structure increases the likelihood of hostile takeover bids, and Cotter, Shivdasani, and Zenner (1997) find that targets with more independent boards earn greater abnormal returns. Henry (2004), however, finds that governance structure has only a minimal effect on the outcome of takeover attempts.

made by Enron. President George W. Bush characterized this act as “the most far-reaching reforms of American business practices since the time of Franklin D. Roosevelt.”⁵ The act introduces new provisions for management, directors, auditors, and analysts and significantly raises criminal penalties for securities fraud, for destroying, altering, or fabricating records in federal investigations or any scheme or attempt to defraud shareholders.

SOX is intended to hold managers more accountable to shareholders. The increased accountability should bring manager and shareholder interests in better alignment, thereby alleviating agency costs. It is conceivable that this diminution of agency problems may affect board structure, as the board of directors is a crucial governance mechanism designed to combat agency conflicts (and because the act imposes some specific requirements on board structure).⁶ As a direct result of SOX, both the New York Stock Exchange and Nasdaq adopted new requirements mandating the use of more independent directors on the board. These rules tightened the definition of independent directors and mandated that they must constitute a majority of the board, mandated meeting of independent directors without the presence of insiders, mandated that shareholders must approve all option plans, and mandated that members of the audit committee must be independent and be financially literate.

The enactment of the Sarbanes-Oxley Act, coupled with the new exchange rules, may alter differences between Delaware governance structure and that of non-Delaware firms. The provisions in SOX may create more uniformity in governance structure and lessen any differences between states. We, therefore, expect that the differences between the governance structure of Delaware and non-Delaware firms will decrease following SOX.

Sample Selection and Data

The initial sample comes from the Investor Responsibility Research Center (IRRC), which collects corporate governance data for about 1,500 firms. IRRC identifies states in which firms incorporate. IRRC collects data only periodically and has data on incorporations only for 1993, 1995, 1998, 2000, 2002, and 2004. We then eliminate firms whose board of director data are not available from the IRRC. The data on directors are available only from 1996 to 2004. We employ the same director classification as in Baysinger and Butler (1985). In addition, we exclude firms that do not have sufficient accounting and financial data in COMPUSTAT. Furthermore, we eliminate financial firms from the sample because their boards, particularly those

⁵Elizabeth Bumiller, “Bush Signs Bill aimed at Fraud in Corporations,” *N.Y. Times*, July 31, 2002.

⁶Linck, Netter, and Yang, (2006) document that board structure is, indeed, different after the enactment of Sarbanes-Oxley.

of depository institutions, have been found to possess unique characteristics.⁷ Our final sample consists of 2,560 observations from 1998 to 2004. Table 1 shows the sample distribution. Of the total 2,560 observations, 1,546 are incorporated in Delaware, constituting 60.39 percent of the sample. It is obvious that Delaware, albeit a small state by any measure, attracts the majority of firms in the U.S.

Table 1—Sample Distribution

The original sample comes from the Investor Research Responsibility Center (IRRC). Financial firms are excluded (SIC codes 6000-6999). Firms are not included whose financial data are not available in COMPUSTAT. Likewise, firms with unavailable board data are excluded

Year	Delaware	Elsewhere	Total	Percent Delaware
1998	363	238	601	60.40%
2000	357	231	588	60.71%
2002	389	265	654	59.48%
2004	437	280	717	60.95%
Total	1,546	1,014	2,560	60.39%

Empirical Results

Summary Statistics

Table 2 shows the summary statistics based on whether the sample firms are incorporated in Delaware. Panel A displays the descriptive statistics for firm characteristics. Delaware firms average \$3,455 million in total assets, while non-Delaware firms average \$3,156 million. The difference is not statistically significant. The average sales for Delaware firms are \$3,485 million, while non-Delaware firms average \$2,384 million. The difference is statistically significant. The long-term debt ratio averages 19.55 percent for Delaware firms and 18.79 percent for non-Delaware firms, an insignificant difference. The ratio of free cash flow to total assets averages 13.12 percent for Delaware firms and 14.66 percent for non-Delaware firms, a significant difference at the 5 percent level.⁸ The average market-to-book ratio for Delaware firms is 8.13, while the average for non-Delaware firms is 3.21; there is no significant difference between these two averages. Finally, Delaware firms are younger (28.37 years) than non-Delaware firms (33.06 years), and this difference is significant at the 1 percent level.

Panel B of Table 2 exhibits summary statistics for board composition and size. Several interesting findings emerge. First, the percentage of independent outside directors averages 61.66 percent in Delaware firms and 60.47 percent in non-Delaware firms. The t-statistics for the difference are not significant. Second, board size is smaller in Delaware firms. The average board has 8.14 directors in Delaware firms and 8.54 in non-Delaware firms. The difference is nominally small, but it is highly

⁷Several studies find that boards of financial firms are different from those of industrial firms. (for instance, Adams and Mehran, 2003; Belkhir, 2004; Subramanyam, Rangan, and Rosenstein, 1997).

⁸We calculate free cash flow as earnings + depreciation – capital expenditures.

significant. Third, the proportion of firms where one person is both the chair of the board and the CEO is 0.67 for those incorporated in Delaware and 0.66 for those incorporated elsewhere. Finally, directors own a total of 11.52 percent of equity, on average, in Delaware firms, whereas those in non-Delaware firms hold 12.67 percent of equity ownership. The difference is, nevertheless, not significant.

Table 2—Descriptive Statistics

The debt ratio is calculated as long-term debt divided by total assets. The free cash flow ratio is calculated as (earnings + depreciation - capital expenditures)/total assets. The market-to-book ratio is the book value of debt plus the market value of equity scaled down by total assets. Director classification is from Baysinger and Butler (1985). Board ownership is computed as the percentage of equity ownership held by all directors on the board

	Delaware Mean (Median)	Elsewhere Mean (Median)	Difference (t-statistics)
Number of Firms	1,546	1,014	-
Panel A: Firm Characteristics			
Total Assets	3,455 (1,013)	3,156 (795)	0.66
Sales	3,485 (951)	2,384 (864)	2.76***
Debt Ratio	19.55% (17.43%)	18.79% (17.52%)	1.04
Free Cash Flow Ratio	13.12% (13.79%)	14.66% (14.30%)	-2.50**
Market-to-Book Ratio	8.13 (2.75)	3.21 (2.34)	1.26
Firm Age	28.37 (30.00)	33.06 (34.00)	-7.64***
Panel B: Board Size and Composition			
% Independent Directors	61.66% (63.64%)	60.47% (62.50%)	1.61
Board Size (No. of Directors)	8.14 (8.00)	8.54 (8.00)	-4.28***
CEO Duality	0.67 (-)	0.66 (-)	-
Board Ownership	11.52% (3.60%)	12.67% (5.35%)	-1.35

*** Significant at the 0.01 level

** Significant at the 0.05 level

* Significance at the 0.1 level

Board Structure and Delaware Incorporation

The primary objective of this study is to ascertain the impact of Delaware incorporation on board structure. Therefore, we examine board composition and size in a multivariate framework which allows us to control for other factors. In addition, following Linck, Netter, and Yang (2006), we examine board leadership, which is represented by whether the chairman of the board is the CEO as well (CEO duality).

We include the following control variables. Lehn, Patro, and Zhao (2005) and Crutchley, Garner, and Marshall (2004) argue that larger firms demand more outside directors because their large size gives rise to more significant agency problems. Therefore, we control for firm size using the natural log of the firms' assets.

Second, debt may help reduce agency costs by increasing the proportion of managerial ownership, by reducing free cash flow, and by motivating managers to work harder to avoid bankruptcy (Jensen and Meckling, 1976; Jensen, 1986; and Grossman and Hart, 1982).⁹ Debt may be a substitute for independent directors in controlling agency conflicts. Therefore, we include the debt ratio as a control variable.

Third, Raheja (2005) argues that additional monitoring is needed when managers have more opportunities to consume private benefits. Thus, we include the ratio of free-cash-flow to total assets to represent managers' potential private benefits. High growth firms (with large book-to-market ratios) impose more monitoring costs (Lehn et al., 2005; Coles, Daniel, and Naveen, 2008; Linck, Netter, and Yang, 2006; and Raheja, 2005; Boone, Field, Karpoff, and Raheja, 2007) and, hence, may require more independent directors. We, therefore, include the market-to-book ratio as a control variable as in Boone et al. (2007). Regulation may attenuate agency costs as regulation deprives managers of a certain degree of managerial discretion. As a result, we include a dummy variable that is equal to one if the firm is regulated and zero if not.¹⁰ Finally, Boone, Field, Karpoff, and Raheja (2007) find that board size and composition depend on firm age. We include firm age as a control variable.

Table 3 documents the regression results. In model 1, the dependent variable is the proportion of independent directors on the board. The independent variable of interest is the Delaware dummy, which exhibits a positive and highly significant estimated coefficient. Our results suggest that firms incorporated in Delaware have more independent boards than those incorporated outside Delaware. In model 2, we employ board size (the number of directors) as the dependent variable. The estimated coefficient of the Delaware dummy is negative and highly significant, implying that Delaware firms have smaller boards than non-Delaware firms. Finally, model 3 shows the logistic regression result where CEO duality dummy is the dependent

⁹Leverage has been argued to alleviate agency costs in several ways. First, one way to reduce agency conflicts is to cause managers to increase their ownership in the firm (Jensen and Meckling, 1976). By increasing the use of debt financing (effectively, displacing equity capital), firms shrink their equity bases, thereby increasing the percentage of equity owned by management. Second, the use of debt increases the probability of bankruptcy and job loss. This additional risk may further motivate managers to decrease their consumption of perks and increase their efficiency (Grossman and Hart, 1982). Finally, the obligation of interest payments resulting from the use of debt helps resolve the free cash flow problem (Jensen, 1986).

¹⁰We classify utility firms as regulated. These firms have SIC codes between 4900 and 4999.

variable.¹¹ The estimated coefficient for the Delaware dummy is not significant, indicating no impact of Delaware incorporation on CEO duality. Taken together, the empirical evidence suggests that Delaware law may help mitigate agency problems as we find that Delaware firms have smaller and more independent boards than their non-Delaware counterparts.

Table 3—Regressions of Board Attributes on the Delaware Dummy and Controls

The debt ratio is calculated as long-term debt divided by total assets. The free cash flow ratio is calculated as (earnings + depreciation - capital expenditures)/total assets. The market-to-book ratio is the book value of debt plus the market value of equity scaled down by total assets. Director classification is from Baysinger and Butler (1985). Firms are classified as regulated if their SIC codes are between 4900 and 4999. Board ownership is computed as the percentage of equity ownership held by all directors on the board

	Model 1 (t-stats)	Model 2 (t-stats)	Model 3 (Wald-stats)	Model 4 (t-stats)	Model 5 (t-stats)	Model 6 (Wald-stats)
Dependent Variable	Board Independence	Board Size	CEO Duality	Board Independence	Board Size	CEO Duality
Intercept	0.531*** (25.79)	2.626*** (10.24)	-0.571** (5.343)	0.604*** (25.65)	2.316*** (6.98)	-0.644*** (4.72)
Delaware Inc.	0.024*** (3.10)	-0.258*** (-3.04)	-0.068 (0.546)	0.017** (2.01)	-0.227** (-2.18)	-0.104 (0.92)
Log (Total Assets)	0.005* (1.78)	0.672*** (19.89)	0.165*** (19.11)	-0.001 (-0.36)	0.660*** (15.75)	0.204*** (20.44)
Debt Ratio	-0.041* (-1.90)	0.426* (1.77)	0.391 (2.19)	-0.02 (-0.90)	0.355 (1.25)	0.197 (0.44)
Free Cash Flow Ratio	-0.090*** (-3.90)	0.300 (1.18)	-0.218 (0.63)	-0.069*** (-2.91)	0.396 (1.39)	-0.251 (0.70)
Market-to-Book Ratio	-0.000 (-1.33)	-0.000 (-0.78)	-0.000 (0.79)	-0.000 (-0.97)	-0.000 (-0.83)	-0.001 (0.74)
Regulated	0.103*** (6.02)	0.183 (0.97)	-0.473** (5.50)	0.081*** (4.16)	0.364 (1.55)	-0.452* (3.52)
Firm Age	0.000*** (3.53)	0.035*** (11.93)	0.005 (2.48)	0.000** (2.42)	0.040*** (11.07)	0.000 (0.05)
% Independent Directors	-	-0.031 (-0.14)	-	-	0.148 (0.51)	-
CEO Duality	0.025*** (3.21)	-0.031 (-0.36)	-	0.026 (2.97)	0.078 (0.74)	-
Board Ownership	-	-	-	-0.004*** (-16.83)	0.005 (1.49)	0.001 (0.11)
Adjusted-R ² /Pseudo-R ²	3.85%	27.23%	1.20%	17.32%	26.62%	2.5%

*** Significant at the 0.01 level
 ** Significant at the 0.05 level
 * Significance at the 0.1 level

Because agency costs arise from the divergence of ownership and control, ownership structure obviously is relevant to the severity of agency conflicts. Boone et al. (2007) and Linck, Netter, and Yang (2006) find that ownership structure is a signifi-

¹¹This dichotomous variable is set to one if the board chair and the CEO are the same person and zero otherwise.

cant determinant of board structure. As a result, we include board ownership as a control variable.¹² Ownership data are available for only 1,843 of the total 2,560 observations. For this somewhat smaller subsample, we re-estimate all models including board ownership as an additional control variable.¹³ The regression results are in models 4, 5, and 6. The Delaware dummy exhibits qualitatively similar coefficients even after board ownership is taken into consideration.¹⁴

Delaware Incorporation, Board Structure, and Firm Value

So far, we have documented that Delaware firms have more independent and smaller boards. It is our conjecture that the difference between Delaware and non-Delaware firms is driven by agency costs. That is, if Delaware laws favor management and create agency costs, then a more shareholder-oriented governance system might develop to offset these increased agency costs. Since the shareholder-oriented governance structure offsets managerial benefits, we might not expect to find that Delaware firms have greater value (as in Bebchuk, Cohen & Ferrell, 2002; Gompers, Ishii & Metrick, 2003; Bebchuk & Cohen, 2003; and Subramanian, 2004). On the other hand, if Delaware law favors shareholders and encourages superior governance structure, we might expect to find that Delaware firms have increased value. This argument would be consistent with the results reported by Daines (2001), who finds that Delaware firms exhibit significantly higher firm value than their non-Delaware counterparts.¹⁵

We test these competing ideas by estimating the Delaware premium in our sample firms and determining if the value of Delaware firms is related to board composition and size. Because we have found that Delaware firms have more shareholder-oriented board structure, if we also find a Delaware premium that is related to this board structure, then our evidence would be more consistent with Delaware laws being beneficial to shareholders. If we find no Delaware premium, however, then our

¹²Board ownership is computed as the percentage of equity ownership held by all directors on the board.

¹³We employ OLS estimates. Because firms rarely change their state of incorporation, the fixed-effects approach is not appropriate here for there is too little variation in the Delaware dummy.

¹⁴The coefficient of the Delaware dummy in Model 4 loses its significance at the 1 percent level, but remains significant at the 10 percent level.

¹⁵Daines (2001) argues that reduced restrictions for takeovers explain part of this Delaware premium. He notes that this takeover explanation may explain only part of the value premium. We explore this issue by examining the sample firms that were takeover targets during the sample period. Consistent with prior literature, target firms enjoy a substantial increase in shareholder wealth upon announcement. We do not find evidence that shareholders' wealth changes differ significantly between Delaware and non-Delaware firms, however. The results are available upon request.

findings would seem to support the idea that the improved governance structure of Delaware firms occurs to offset agency costs.

The empirical results appear in Table 4. Firm value is represented by Tobin's q .¹⁶ We control for firm size (logarithm of total assets), leverage (debt ratio), profitability (EBITDA/total assets), growth opportunities (market-to-book ratio), firm age, and the GIM index.¹⁷ We also include board composition and board size in the models to determine their relation to firm value. In model 1, we estimate a model

Table 4—Regressions of Tobin's q on the Delaware Dummy and Controls

The debt ratio is long-term debt divided by total assets. The free cash flow ratio is calculated as (earnings + depreciation - capital expenditures)/total assets. Profitability is EBIT divided by total assets. The market-to-book ratio is the book value of debt plus the market value of equity divided by total assets. Director classification is from Baysinger and Butler (1985). Board ownership is the percentage of equity ownership held by all directors on the board

Dependent Variable	Model 1 (t-statistics) Tobin's q
Intercept	1.586*** (7.25)
Delaware	0.073 (1.06)
Log (Total Assets)	0.058* (1.92)
Debt Ratio	-0.671*** (-3.43)
Profitability	4.177*** (14.67)
Market-to-Book Ratio	0.000** (2.28)
Firm Age	-0.014*** (-5.83)
The Governance Index	-0.021 (-1.49)
% Independent Directors	0.164 (0.88)
Board Size	-0.035** (-2.11)
Adjusted-R ²	11.85%

*** Significant at the 0.01 level

** Significant at the 0.05 level

* Significance at the 0.1 level

with Tobin's q as the dependent variable and include the variables listed above as independent variables. The estimated coefficient for the Delaware dummy variable is

¹⁶Tobin's q has been employed to represent firm value in a large number of previous studies, including Daines (2001). Our Tobin's q is calculated based on Chung and Pruitt (1994).

¹⁷GIM stands for Gompers, Ishii, and Metrick (2003).

statistically insignificant.¹⁸ The estimated coefficient for the percent of independent directors is insignificant while the estimated coefficient for board size is negative and significant.

To determine how board composition and size affect the Delaware companies differently than the non-Delaware companies, we create an interaction term by multiplying the Delaware dummy variable by the percentage of independent director and then by board size. Neither the percent of independent directors nor the interaction term is statistically significant. (Results are not shown, but are available upon request.)

The Impact of Sarbanes-Oxley (SOX)

The Sarbanes-Oxley Act (SOX) was designed to increase managerial accountability and, thus, reduce agency conflicts. This reduction in agency costs may affect the impact of Delaware incorporation on board structure. As we have shown, Delaware firms have smaller and more independent boards. After the implementation of SOX, however, we expect that the regulation will make boards more homogeneous across states of incorporation.

We have one sample year in the post-SOX period, i.e. 2004. We classify the observations from 2004 as our post-SOX period, which encompasses 717 observations. The rest of the observations are in the pre-SOX period. We create a dummy variable equal to one for the post-SOX period and zero otherwise. The results are in Table 5.

In model 1, we estimate a model where the proportion of independent directors is the dependent variable. The estimated coefficient for the Delaware dummy variable is positive and significant, suggesting that Delaware law fosters board independence pre-SOX. We also include an interaction variable of the Delaware dummy variable and a dummy variable for post-SOX. The estimated coefficient for this variable is statistically insignificant. In model 2, we estimate a model with board size as the dependent variable. The estimated coefficient for the Delaware dummy variable is still significant, but the estimated coefficient for the interaction term between the Delaware dummy and the post-SOX dummy variable is insignificant. The results in these two regressions suggest that the impact of Delaware law on board structure and size was not materially affected by the passage of SOX.

¹⁸When we do not include the GIM index, the Delaware dummy variable is positive and significant as in Daines (2001). By including the GIM index, the Delaware dummy variable becomes insignificant. This result is consistent with those in Gompers, Ishii, and Metrick (2003).

Table 5—Regressions of Board Attributes and Firm Value on the Delaware Dummy and Controls (Pre- and Post-Sarbanes-Oxley)

The debt ratio is long-term debt divided by total assets. The free cash flow ratio is (earnings + depreciation - capital expenditures)/total assets. Profitability is the ratio of EBIT divided by total assets. The market-to-book ratio is the book value of debt plus the market value of equity scaled down by total assets. Director classification is from Baysinger and Butler (1985). Firms are regulated if their SIC codes are between 4900 and 4999. Board ownership is computed as the percentage of equity ownership held by all directors

Dependent Variable	Model 1 (t-statistics)	Model 2 (t-statistics)
	Board Independence	Board Size
Intercept	0.532*** (26.10)	2.601*** (9.98)
Delaware × Post-SOX	-0.001 (-0.03)	0.038 (0.21)
Delaware	0.023*** (2.64)	-0.269*** (-2.71)
Log (Total Assets)	0.002 (0.52)	0.671*** (19.65)
Debt Ratio	-0.019 (-0.90)	0.446* (1.83)
Profitability	-0.004 (-0.08)	0.516 (0.99)
Free Cash Flow Ratio	-0.084** (-2.49)	0.017 (0.04)
Market-to-Book Ratio	-0.000 (-1.24)	-0.000 (-0.81)
Firm Age	0.000*** (3.32)	0.035*** (11.90)
Regulated	0.101*** (6.07)	0.195 (1.03)
% Independent Directors	-	-0.006 (-0.03)
CEO Duality	0.025*** (3.23)	-0.003 (-0.35)
Post-SOX	0.087*** (6.90)	-0.066 (-0.46)
Adjusted-R ²	8.23%	27.17%

*** Significant at the 0.01 level

** Significant at the 0.05 level

* Significance at the 0.1 level

Consistent with the more recent literature, we do not find that Delaware firms exhibit higher value. This result, in combination with the previous results on board structure, implies that despite better board structure (more independent and smaller), Delaware firms are not more valuable. There is no evidence that Delaware firms show significantly lower value either. It appears that Delaware law exacerbates agency conflicts, but that the detriment of the agency costs is offset by the benefit of more shareholder-oriented board structure in Delaware firms. This is why, on bal-

ance, Delaware firms do not exhibit significantly higher or lower value than other firms.

Potential Endogeneity

One potential limitation of this study lies in the possible presence of endogeneity. In the context of this study, endogeneity would imply that Delaware incorporation does not necessarily impact board structure; rather, firms whose boards are structured in a particular manner tend to have been incorporated in Delaware. It is unlikely, however, that endogeneity exists between board structure and Delaware incorporation. Daines (2001) argues that the decision on where to incorporate is largely exogenous. The only predictor of domicile is the domicile chosen at IPO. It is not clear why factors determining domicile at the IPO stage would be relevant to board composition and size in the firm decades later as ownership and firm and industry conditions change.¹⁹ Domicile is also fixed in that neither managers nor shareholders can change domicile without other parties' approval. For these reasons, we contend that endogeneity is probably unlikely.

In any event, we attempt to address endogeneity by trying to examine the change in board structure relative to the change in domicile. Unfortunately, re-incorporation in another state is so rare in our sample (and in general) that there are not a sufficient number of observations to test for the impact of re-incorporation on board structure. Perhaps this is an area where future research should be conducted.

Additional Results

We perform several additional empirical tests that are worth noting. First, several recent studies investigating the impact of classified boards report that classified boards promote managerial entrenchment, exacerbate agency conflicts, and diminish firm value (Bebchuck and Cohen, 2005; Faleye, 2007). Because our study is related to agency costs, the presence of a classified board may be germane. In additional regressions, we include a dummy variable representing the presence of a classified board in the Tobin's *q* analysis.²⁰ In accordance with prior studies, we find that classified boards are associated with lower firm value. Then, to ascertain whether the adverse impact of classified boards is uniform across Delaware and non-Delaware firms, we create an interaction of the Delaware dummy variable with the classified board dummy variable and include the interaction term in the regressions. Because the interaction variable does not show a significant coefficient, we conclude that the

¹⁹Hence, the longer the firm has been in existence, the less likely it is that endogeneity poses a problem. Of all the sample firms where firm age is available, 97 percent of them have existed for more than ten years. The median firm age is 24 years. These facts seem to suggest that endogeneity is unlikely.

²⁰Results are not shown, but are available upon request.

detrimental impact of classified boards does not differ materially between Delaware and non-Delaware firms.

Second, the divergence of ownership and control is the origin of agency problems. Hence, we explore the effect of ownership structure on firm value conditional on Delaware incorporation. In the Tobin's q analysis, we create an interaction term of the ownership variable with the Delaware dummy variable and include the interaction term as an independent variable. The estimated coefficient of the interaction term is, however, not significant, implying no differential impact of ownership on firm value between Delaware and non-Delaware firms.

Concluding Remarks

Delaware attracts a disproportionate number of incorporations due to its unique corporate law. This phenomenon has galvanized a great deal of debate on the benefits and costs of Delaware law in the literature in law, economics, and finance (Daines, 2001; Lipton and Rowe, 2002; Gilson 2002a, 2002b; Macey, 2002; Sitkoff, 2002; Grossfeld, 2002; Bebchuk and Ferrell, 2001; Bebchuk, Cohen, and Ferrell, 2002; Bar-Gill, Barzuza, and Benchuk, 2001). We contribute to the debate by examining the effect of Delaware law on a crucial corporate governance mechanism, i.e., the board of directors. Legal rules either can alleviate or exacerbate agency problems depending on whether they are designed more in favor of managers or of shareholders. Boards are specifically charged with monitoring managers and, essentially, minimizing agency conflicts. Because legal rules influence agency costs and boards are structured to mitigate agency costs, we contend that there is a relation between board structure and Delaware incorporation. Specifically, we investigate how boards of Delaware firms differ from those of non-Delaware firms in terms of composition and size.

There are three possible outcomes to state of incorporation. The first is that the state of incorporation has a neutral effect on corporations. Given the preponderance of firms that choose to incorporate in Delaware and the more independent and smaller boards that we find in Delaware firms, the neutral effect of state of incorporation seems unlikely.

The second outcome of state of incorporation is that laws such as those in Delaware reduce agency problems and lead to increased firm value. Consistent with recent research (Bebchuk, Cohen, and Ferrell, 2002; Gompers, Ishii, and Metrick, 2003; Bebchuk and Cohen, 2003; and Subramanian, 2004), we do not find that Delaware incorporation increases firm value after controlling for the GIM index. Because Delaware firms have more independent and smaller boards and because these effects are not associated with improved firm value, the totality of our results is inconsistent with this second explanation.

The third possible outcome is that state laws such as those in Delaware protect and entrench managers, thereby increasing agency costs. This could result in lower

firm value for Delaware firms. We do not find this outcome. Combined with our finding of smaller and more independent boards in Delaware firms, however, we conclude that the more shareholder-oriented board structure likely occurs to offset potential agency costs created through Delaware incorporation.

References

1. Adams, R., and H. Mehran, "Is Corporate Governance Different for Bank Holding Companies?" *FRBNY Economic Policy Review* (April 2003), pp. 123-142.
2. Alcade, N., and M. Espita, "The Characteristics of Takeover Targets: The Spanish Experience 1991-1997," *Journal of Management and Governance*, 7 (2003), pp. 1-26.
3. Bar-gill, O., M. Barzuza, and L. Bebchuk, "The Market for Corporate Law," Harvard Law School, working paper (2001).
4. Baysinger, B., and H. Butler, "Corporate Governance and the Board of Directors: Performance Effects of Changes in Board Composition," *Journal of Law Economics, and Organization*, 1 (1985), pp. 101-124.
5. Bebchuk, L., and A. Ferrell, A., "A New Approach to Takeover Law and Regulatory Competition," *Virginia Law Review*, 87 (2001), pp. 111-164.
6. Bebchuk, L., and A. Ferrell, "Firms' Decisions Where to Incorporate," *Journal of Law and Economics*, 46 (2003), pp. 383-425.
7. Bebchuk, L., and A. Cohen, "The Costs of Entrenched Boards," *Journal of Financial Economics*, 78, no. 2 (2005), pp. 409-433.
8. Bebchuk, L., A. Cohen, and A. Ferrell, "Does the Evidence Favor State Competition for Corporate Law?" *University of California Law Review* (2002), pp. 1775-1821.
9. Belkhir, M., "Board of Directors Size and Performance in Banking," working paper, University of Orleans (France) (2004).
10. Black, B., "Is Corporate Law Trivial? A Political and Economic Analysis," *Northwestern Law Review*, 84 (1990), pp. 542-597.
11. Boone, A., L. Field, J. Karpoff, and C. Raheja, "The Determinants of Corporate Board Size and Composition: An Empirical Analysis," *Journal of Financial Economics*, 46 (2007), pp. 66-101.
12. Booth, J., M. Cornett, and H. Tehranian, "Board of Directors, Ownership, and Regulation," *Journal of Banking and Finance*, 26 (2002), pp. 1973-1996.
13. Brickley, J., J. Coles, and R. Terry, "Outside Directors and the Adoption of Poison Pills," *Journal of Financial Economics*, 35 (1994), pp. 371-390.
14. Brickley, J., and C.M. James, "The Takeover Market, Corporate Board Composition, and Ownership Structure: The Case of Banking," *Journal of Law and Economics* (April 1987), pp. 161-180.
15. Cary, W., "Federalism and Corporate Law: Reflection upon Delaware," *Yale Law Journal*, 83 (1974), pp. 663-705.
16. Chung K., and S. Pruitt, "A Simple Approximation of Tobin's q," *Financial Management*, 23 (1994), pp. 70-75.
17. Choi, D., S. Kamma, and J. Weintrop, "The Delaware Courts, Poison Pills, and Shareholder Wealth," *Journal of Law, Economics, and Organization*, 5 (1989), pp. 375-393.
18. Coles, J., N. Daniel, and L. Naveen, "Boards: Does One Size Fit All?" *Journal of Financial Economics*, 87 (2008), pp. 329-356.

19. Cotter, J., A. Shivdasani, and M. Zenner, "Do Independent Directors Enhance Target Shareholder Wealth During Tender Offers?" *Journal of Financial Economics*, 43 (1997), pp. 195-218.
20. Crutchley, C., J. Garner, and B. Marshall, "Does One-size Fit All? A Comparison of Boards between Newly Public and Mature Firms," working paper, Drexel University (2004).
21. Daines, R., "Does Delaware Law Improve Firm Value?" *Journal of Financial Economics*, 62 (2001), pp. 559-571.
22. Easterbrook, F., and D. Fischel, *The Economic Structure of Corporate Law* (Cambridge, MA: Harvard University Press, 1991).
23. Eisenberg, T., S. Sundgren, and M. Wells, "Larger Board Size and Decreasing Firm Value in Small Firms," *Journal of Financial Economics*, 48 (1998), pp. 35-54.
24. Faleye, Olubummi, "Classified Boards, Firm Value, and Managerial Entrenchment," *Journal of Financial Economics*, 8 (2007), pp. need page numbers.
25. Gilson, R., "Unocal Fifteen Years Later (and What We Can Do About It)," *Delaware Journal of Corporate Law*, 26 (2002a), pp. 491-513.
26. Gilson, R., "Lipton and Rowe's Apologia for Delaware: A Short Reply," *Delaware Journal of Corporate Law*, 26 (2002b), pp. 491-513.
27. Gompers, P., J. Ishii, and A. Metrick, "Corporate Governance and Equity Prices," *Quarterly Journal of Economics* (2003), pp. 329-356.
28. Grossfeld, B., "Global Valuation: Geography and Semiotics," *SMU Law Review*, 55 (2002), pp. 197-228.
29. Grossman, S., and O. Hart, "Corporate Financial Structure and Managerial Incentives," in John McCall (ed.), *The Economics of Information and Uncertainty* (University of Chicago Press, Chicago, IL, 1982).
30. Hermalin, B., and M. Weisbach, "The Determinants of Board Composition," *Rand Journal of Economics*, 19 (1988), pp. 589-606.
31. Jensen, M.C., "Agency Costs of Free Cash Flow, Corporate Finance and Takeovers," *American Economics Review*, 76 (1986), pp. 323-339.
32. Jensen, M., "The Modern Industrial Revolution Exit, and the Failure of Internal Control Systems," *Journal of Finance*, 48, no. 3 (1993), pp. 831-880.
33. Jensen, M.C., and W. Meckling, "Theory of the Firm: Managerial Behavior, Agency Costs, and Capital Structure," *Journal of Financial Economics*, 3 (1976), pp. 305-360.
34. Lehn, Kenneth, S. Patro, and M. Zhao, "Determinants of the Size and Structure of Corporate Boards: 1935-2000," working paper, University of Pittsburgh (2005).
35. Linck, J., J. Netter, and T. Yang, "Determinants of Board Structure," working paper, University of Georgia (2006).
36. Lipton, M., and J. Lorsch, "A Modest Proposal for Improved Corporate Governance," *Business Lawyer*, 48 (1992), pp. 59-77.
37. Lipton, M., and P. Rowe, "Pills, Polls, and Professors: A Reply to Professor Gilson," *Delaware Journal of Corporate Law* (2002), need page numbers
38. Macey, J.R., "The Legality of The Shareholder Rights By-law in Delaware: Preserving the Market for Corporate Control," *Journal of Applied Corporate Finance*, 4 (1998), pp. 63-68.
39. Macey, J.R., "Displacing Delaware: Can the Feds Do a Better Job than the States in Regulating Takeovers?" *Business Lawyer*, 57 (2002), pp. 1025-1046.
40. Raheja, C., "Determinants of Board Size and Composition: A Theory of Corporate Boards," *Journal of Finance and Quantitative Analysis*, 40 (2005), pp. 283-306.

41. Rosenstein, Stuart, and Jeffrey Wyatt, "Outside Directors, Board Independence and Shareholder Wealth," *Journal of Financial Economics*, 26 (1990), pp. 175-192.
42. Shivdasani, A., "Board Composition, Ownership Structure, and Hostile Takeovers," *Journal of Accounting and Economics*, 16 (1993), pp. 167-198.
43. Sitkoff, R., "Corporate Political Speech, Political Exhortation, and the Competition for Corporate Charters," *University of Chicago Law Review*, 69 (2002), pp. 1103-1166.
44. Subramanian, G., "The Disappearing Delaware Effect," *Journal of Law, Economics & Organization*, 20, no. 1 (2004), pp. 32-59.
45. Subramanyam, V., N. Rangan, S. Rosenstein, "The Role of Outside Directors in Bank Acquisitions," *Financial Management*, 26, no. 3 (1997), pp. 23-36.
46. Weisbach, Michael, "Outside Directors and CEO Turnover," *Journal of Financial Economics*, 20 (1988), pp. 431-460.
47. Winter, R.K., "State Law, Shareholder Protection, and the Theory of the Corporation," *Journal of Legal Studies*, 6 (1977), pp. 251-292.
48. Yermack, D., "Higher Market Valuation of Companies with a Smaller Board of Directors," *Journal of Financial Economics*, 40 (1996), pp. 185-211.

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