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THE DISAPPEARING DELAWARE EFFECT

Guhan Subramanian

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Harvard Law School
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The Disappearing Delaware Effect

Guhan Subramanian*
Griswold 402
Harvard Law School
Cambridge, MA 02138
617-495-9784
subraman@law.harvard.edu

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ABSTRACT: Refining and extending the methodology introduced by Daines (2001), I present evidence that firms incorporated in Delaware were worth 2-3% more than non-Delaware firms during the period 1991-1996, but not significantly more after 1996. I present two potential explanations for this "disappearing" Delaware effect. First, doctrinal movements in the mid-1990s might have solidified the Just Say No defense in Delaware, making Delaware's corporate law undifferentiated from the corporate law of other states. Second, "adaptive devices" (Kahan & Rock 2002), notably the increase in stock compensation during the 1990s, might have made takeover law no longer a binding constraint in many M&A transactions. I find some support in the empirical evidence for both of these explanations.

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Guhan Subramanian
Harvard Law School

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1. Introduction

In an important and influential new study, Robert Daines provides evidence that Delaware firms are worth more than non-Delaware firms in 12 out of 16 years between 1981 and 1996 (Daines 2001). The study has served as a critical piece of empirical evidence in the ongoing debate on the quality of Delaware corporate law (e.g., Lipton & Rowe 2001, Gilson 2001a, Bebchuk & Ferrell 2001, Macey 2002). Critics of the study have argued that Daines does not adequately control for potential endogeneity problems (Bebchuk & Ferrell 2001) and that the instability of the result over time suggests that it cannot be a manifestation of higher-quality corporate law in Delaware (Bebchuk, Cohen & Ferrell 2002). In subsequent empirical work, Gompers, Ishii & Metrick (2001) find a negative correlation between Delaware incorporation and firm value after controlling for a firm-level antitakeover index and other factors.

This paper extends the Daines model in three ways: (1) it attempts to control for specific mix issues identified in Subramanian (2002a) and Bebchuk & Cohen (2002); (2) it improves the specification of certain variables to provide a more robust estimate of Delaware wealth effects; and (3) it extends the sample five years to include the period 1997-2001. These extensions provide three new findings: (1) Delaware firms were worth approximately 3% more than non-Delaware firms between 1991 and 1993, with the stability of the coefficients serving to bolster Daines' result for this period; (2) the magnitude of this effect decreased to approximately 2% of firm value between 1994 and 1996; and (3) the difference between Delaware and non-Delaware firms became statistically and economically insignificant after 1996.

I provide two potential explanations for these results, and test them against the available empirical evidence. First, two antitakeover movements in Delaware's law in the mid-1990s – one with respect to companies with staggered boards and another more generally – might have solidified the Just Say No defense and made Delaware corporate law undifferentiated from the law of other states. Second, “adaptive devices” (Kahan & Rock 2002), notably the growth of

stock option compensation in the 1990s, might have transformed many takeovers in the second half of the 1990s into “very friendly” takeovers in which the background corporate law was not a binding constraint. I find some support in the empirical evidence for both of these explanations.

The remainder of this paper is organized as follows. Section 2 reviews the already substantial literature surrounding Daines’ result. Section 3 documents my methodology and model specification, including my refinements to the Daines model. Section 4 provides my results. Section 5 provides two possible explanations for these results – antitakeover movements in Delaware, and adaptive devices. Section 6 tests these explanations against the available empirical evidence. Section 7 discusses implications for the current debate among academics and practitioners about the quality of Delaware law. Section 8 concludes.

2. Prior research

Legal commentators have scrutinized and debated the quality of Delaware corporate law ever since that state began to dominate the corporate charter market in the mid-1960s (e.g., Cary 1974). With half of all U.S. public companies today incorporated in Delaware, and an even greater share of large public companies incorporated there (Subramanian 2002a, Bebchuk & Cohen 2002), the issue has important legal, business, and public policy implications. Taking a new approach to this old question, Daines (2001) examines Tobin’s Q for Delaware and non-Delaware firms during the period 1981 to 1996 and finds that Delaware firms are generally worth more than firms incorporated elsewhere – “approximately 5% more” in 1996. Daines further finds that Delaware firms are more likely to attract takeover bids than companies incorporated in other states. In view of the well-accepted finding that takeovers increase returns for target shareholders, Daines argues that Delaware’s relatively mild antitakeover statute facilitates takeovers, which in turn yields, at least in part, the higher Tobin’s Qs that he finds.

The Daines “Delaware result” has received considerable practitioner and scholarly attention. Even before the paper was published, it was featured in the *Wall Street Journal*¹ and the *Washington Post*.² Lipton & Rowe (2002) use the Daines result as an important piece of their

¹ Steven Lipin, *Firms Incorporated in Delaware Are Valued More By Investors*, Wall Street Journal (Feb. 28, 2000).

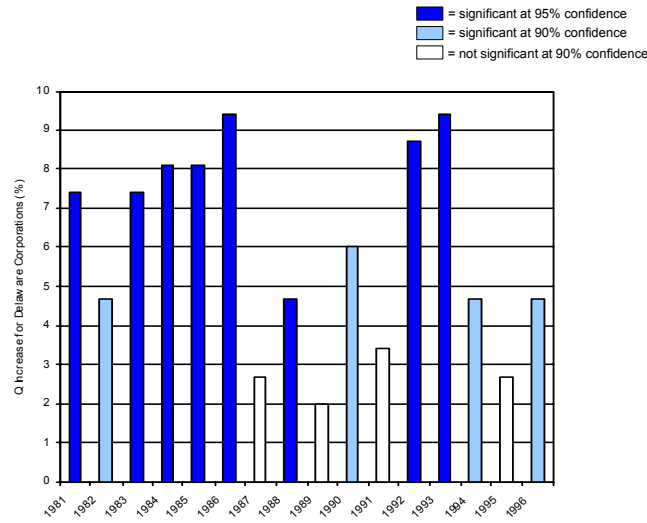
² Albert Crenshaw, *Delaware, Inc.*, Washington Post (May 7, 2000).

defense of Delaware law, in response to Gilson's critique of the same (Gilson 2002a, 2002b). Macey (2002) uses the Daines result to argue against Bebchuk & Ferrell's proposal for a federal corporate law regime. Others use the Daines result as evidence in favor of regulatory competition (Sitkoff 2002) and a "race to the top" (Grossfeld 2002).

Three more critical responses have emerged as well. First, Gompers, Ishii & Metrick (2001) challenge the basic econometric result. In their model of Tobin's Q, they find that the Delaware coefficient is significant and negative after controlling for their "governance index." They acknowledge that the difference between their result and Daines' "may be due to differences in the samples, time periods, or control variables." In addition, the Gompers et al. governance index is problematic because it simply adds up takeover defenses (e.g., pill + staggered board + supermajority voting provision = 3), without any theoretical motivation for doing so. Defenses interact in non-linear ways (Coates 1999), and not all defenses are the same: some defenses, such as effective staggered boards, are extremely potent and have negative shareholder wealth consequences (Bebchuk, Coates & Subramanian 2002a); other defenses have only mildly negative or even pro-shareholder consequences (e.g., indemnification provisions); and still others, such as poison pills, are irrelevant *ex ante* for most public companies (Coates 2000). As a result there is no conceptual basis for why the addition of the governance index variable to the Daines model should change the overall finding. Perhaps as a manifestation of this point, the Delaware coefficient in the Gompers et al. model is insignificant in each individual year, and only becomes significant when averaged across all years.

A second line of critique accepts Daines' basic econometric finding but challenges the conclusion that it is Delaware law that causes firms to be worth more. Bebchuk & Ferrell (2001) hypothesize that Daines may be capturing a selection effect having little to do with the quality of Delaware law, though they acknowledge that Daines has made "considerable effort" to control for this possibility through his examination of only mature firms. Bebchuk, Cohen & Ferrell (2002) point out that the coefficient for the Delaware dummy variable fluctuates considerably in the Daines model. Figure 1 shows graphically the fluctuation of Daines' Delaware coefficient during his sample period:

Figure 1: Delaware Effect 1981 – 1996 (derived from Daines 2001)



Bebchuk, Cohen & Ferrell conclude that “[t]hese huge fluctuations from year to year are deeply puzzling if one takes the view that differences in value between Delaware and non-Delaware companies are the result of the benefits of Delaware law.”

Finally, even if Delaware law causes firms to be worth more, a final line of argument challenges Daines’ conclusion that “Delaware is not leading a national ‘race to the bottom.’” Bebchuk, Cohen & Ferrell (2002) point out that “[t]he relative performance of Delaware in a state competition regime and the overall performance of the state competition system are two separate issues.” Bar-Gill, Barzuzza, and Bebchuk (2001) provide one particular formalization of this point. They construct a model showing, first, that Delaware companies will reap benefits from Delaware’s legal infrastructure and from network externalities, and second, that Delaware has incentives to charge below the full benefit that these firms reap in order to discourage other states from challenging its dominance. This underpricing of Delaware corporate law could fully explain the higher Tobin’s Qs that Daines reports.

This paper revisits the Daines result at the first level, on the basic econometric finding, and refines and extends the model in ways that yield new results. It then provides two potential explanations for these results and tests these explanations against the available empirical evidence.

3. Model specification

3.1. Methodology

In developing the baseline model I use the same basic methodology as Daines (2001). The variable to be modeled is Tobin's Q, or the firm's market value divided by its replacement cost. Following Kaplan & Zingales (1997) and Gompers, Ishii & Metrick (2001), I define Q as the market value of assets divided by the book value of assets (Compustat data item 6), where the market value of assets is computed as book value of assets plus the market value of common stock (Compustat item 24 x item 25) less the sum of book value of common stock (Compustat item 60) and balance sheet deferred taxes (Compustat item 74). Following Gompers, Ishii & Metrick (2001), book values for fiscal year t are combined with the market value of common equity at the calendar end-of-year t . Daines uses a different definition of Tobin's Q, which does not subtract deferred taxes.

I include the set of independent variables that Daines includes in his baseline model. The variable of interest is DEL, a dummy variable that is set to 1 for firms incorporated in Delaware in the observation year. ROA and lagged ROA, both scaled by total assets in the observation year, are included as basic controls for accounting performance. ROA is defined as current-year operating income after depreciation (Compustat item 13 minus item 14) divided by total assets from the prior year. Because firms with greater investment opportunities are likely to have higher Tobin's Q, I include R&D expense (Compustat item 46), also scaled by total assets from the prior fiscal year, as a rough proxy for the investment opportunity available to the firm. To control for the possibility that diversified firms may have lower Tobin's Q, I include the number of business segments for which the company reports audited financial statements in its annual reports, as a rough proxy for firm diversification. I include the log of the company's net sales as a control for firm size. Finally, I include industry dummy variables at the 2-digit SIC code level to control for industry effects. All of these independent variables are defined as in Daines (2001) except as noted in the remainder of this Section.

3.2. Sample

The sample includes all exchange-traded firms in Compustat's database of industrial firms between 1991 and 2001. Following Daines, I omit regulated utilities, banks, and financial firms

“because the corporate governance of such firms differs due to significant federal regulation.” Company financials and current incorporation data are taken from the Compustat current file of industrial companies. Historical incorporation data are taken from Compustat back tapes.³ Data on number of business segments for 1991-1994 is constructed from segment financials reported in the Wharton Research Data Services (WRDS) Compustat database.

I begin with 22,020 companies from the Compustat database of current and research (archived) firms. I delete ADR's (696 companies), companies with no sales during the sample period (5,726 companies), financial firms, defined as SIC codes 60-67 (3,034 companies), utilities, defined as SIC codes 4911-4941 (386 companies), companies with either headquarters or incorporation outside the U.S. (900 companies), and other miscellaneous companies that should be excluded, for example, second Compustat listings for pre-FASB financial statements (27 companies). To avoid survivorship bias I do not follow Daines in deleting companies with fewer than five years of data, though the overall results remain unchanged if I do. The final database includes 11,251 companies. Table 1 presents summary statistics for this data set.

[insert Table 1 about here]

Table 1 shows that Delaware firms generally have higher Tobin's Q, net sales, and R&D expenditures than non-Delaware firms, at 95% confidence. Table 1 also shows that Delaware firms have lower ROA and fewer business segments than non-Delaware firms toward the later years of the sample. These findings are consistent with Subramanian (2002a), which finds that lower ROA and higher Q are correlated with Delaware incorporation in 2000. Overall, Table 1 identifies important differences between Delaware and non-Delaware firms that should be controlled for, to the extent possible, in order to isolate the effect of Delaware law on firm value.

3.3. Refinements to the Daines model

3.3.1. Quantile transformation of dependent variable

I make three refinements to the Daines baseline methodology. The first departure involves the treatment of outliers in the sample. For Tobin's Q, Daines eliminates observations in the top

³ In contrast, Daines uses data from Romano (1985), Comment and Schwert (1995), and a Lexis/Nexis search to detect reincorporations during his sample period.

and bottom 1% of the sample in his baseline model because “corporate law is unlikely to explain extremely high or low valuations.” This baseline model yields “approximately 5% greater market value” in 1996. Daines finds that the results are “similar” if Q values in the upper and lower 1%, 5%, or 10% of the sample are eliminated. Specifically, Daines reports that when observations with Tobin’s Q values in the upper and lower 10% are eliminated, “the estimated difference in pooled regressions is lower, but still economically significant (roughly 1-2%).”

My analysis suggests that eliminating the upper and lower 1% tails (or even 5% or 10%) may not be sufficient to eliminate all outlier observations. The distribution of Tobin’s Q for the sample of all exchange-traded firms has long tails, for the simple reason that a small asset base in the denominator will amplify small market value differences in the numerator. Small firms in particular may have unreasonably large Tobin’s Q. The prior studies cited by Daines that use Tobin’s Q as a dependent variable are not vulnerable to this critique because these studies generally examine large firms (Yermack 1996; Morck, Shleifer & Vishny 1988; La Porta, Lopez-de-Silanes & Shleifer 1999), or at least employ a size cut-off to eliminate very small firms (Lang & Stulz 1994). Moreover, most of these studies use a more sophisticated measure of replacement value than book value of assets.

Using Daines’ definition of Tobin’s Q, I find an upper and lower 1% range of (0.38, 70.49) in 1991. Other years provide a similar range. Tobin’s Q of 0.38 is extremely low – in theory firms with Tobin’s Q substantially less than one are good candidates for liquidation, because their assets are worth more than the value that they are generating. Tobin’s Q of 70.49 is extremely high – by way of comparison, Enron’s Tobin’s Q at the height of its stock market valuation was 6.8. I hypothesize that these outlier observations have strong influence in the OLS model that Daines runs, and are at least partly responsible for the large fluctuations in the annual results that Bebchuk, Cohen & Ferrell (2002) have used as evidence against a true Delaware effect.⁴ The outlier problem is compounded further by the fact that Daines does not truncate or Winsorize ROA or lagged ROA in his data set, even though these variables will also have high variance for the same reasons as described above with respect to Q. Eliminating the

⁴ This point assumes that there are at least some (spurious) correlations between outlier Q’s and Delaware incorporation for some years. In Table 3 I provide some evidence that this assumption is correct. If, instead, the outlier observations were perfectly orthogonal to Delaware incorporation, in all years, they would have no effect on the Delaware coefficient.

upper and lower 10% tails yields a Tobin's Q range of (0.75, 8.92) still difficult to justify at the extremes as being a result of corporate law. Moreover, this alternative approach that Daines reports has the obvious drawback of eliminating 20% of the observations in the sample.

Using the Kaplan & Zingales (1997) definition of Tobin's Q, I obtain a Q estimate that has a lower standard deviation and smaller tails than the Daines approach. Still, certain years, particularly 1999 and 2000 (at the height of the stock market bubble), have long tails that begin before the final 1% or even 5% of the sample. Instead of eliminating observations, therefore, I use percentile rank of Tobin's Q in the observation year as the dependent variable in my baseline model. This quantile transformation uses the distribution of Tobin's Q against the data and effectively brings in outlier observations so that the dependent variable is bounded at [0,1]. I apply a similar transformation to ROA and lagged ROA so that they are also bounded at [0,1]. To ensure robustness, I also report results without this transformation and using a log transformation of the dependent variable.

3.3.2. Other refinements

I make two other refinements to the Daines baseline model. First, I attempt to control for a specific selection effect identified in Subramanian (2002a) and Bebchuk & Cohen (2002). These studies find that companies are more likely to remain in their headquarters state if that state has certain antitakeover statutes. As a result, Delaware has a disproportionate share of companies from states that do not have antitakeover protections – for example, Subramanian (2002a) reports that companies headquartered in California (a state with no antitakeover statutes) represent 22% of all companies incorporated in Delaware, but only 11% of all other companies. If companies headquartered in California were different from companies headquartered in other states, then what appears as a Delaware effect might simply reflect the different mix of Delaware companies relative to all other states collectively. To manage this potential mix effect, I include a dummy variable for each headquarters state in the baseline model.

Finally, I attempt to control more carefully for firm size.⁵ Daines (2001), Subramanian (2002a) and Bebchuk & Cohen (2002) show that larger firms are more likely to be incorporated in Delaware, and Lang & Stulz (1994) shows that larger firms tend to have lower Tobin's Q.

⁵ I thank George Baker for helpful conversations on this point.

Daines includes log of net sales in his model, which controls for one particular functional form of the relationship between firm size and Tobin's Q, but there is no theoretical reason to believe that the true relationship follows this particular specification. It is possible, therefore, that what appears as a Delaware Q effect is simply a mis-specification of the relationship between firm size and Tobin's Q. To mitigate this possibility, I include seven size dummies in the baseline model (with net sales cut-offs at \$50 million, \$100 million, \$250 million, \$500 million, \$1 billion, \$2.5 billion, and \$5 billion, for each observation year), along with interactions between these dummy variables and log of net sales.

4. Results

4.1. Baseline model

The model is run as a two-sided Tobit regression,⁶ with the dependent variable bounded at [0,1]. Results from the baseline model are reported in Table 2.

[insert Table 2 about here]

F-tests indicate that all models are statistically significant at 99% confidence. Virtually all control variables are statistically significant, with coefficients that are consistent with the existing literature: ROA, lagged ROA, and R&D expense are positively correlated with Tobin's Q; and log of sales and number of business segments are negatively correlated with Tobin's Q. Most importantly, Table 2 shows that the coefficient for Delaware incorporation is highly significant ($p < 0.001$) and positive during the period 1991-1993. This result is consistent with Daines' overall finding. The Delaware coefficient declines slightly in 1994-96 but is still statistically significant at 99% confidence. After 1996, the Delaware coefficient is substantially smaller and is no longer statistically significant at any conventional level.

To provide a rough quantification of the Delaware effect over time, I estimate the percent impact for a firm with median Tobin's Q in each year of the sample period. Figure 2 shows the results of this analysis:

⁶ Results are virtually identical when I run the model as an OLS regression.

Figure 2: Delaware Effect 1991-2001

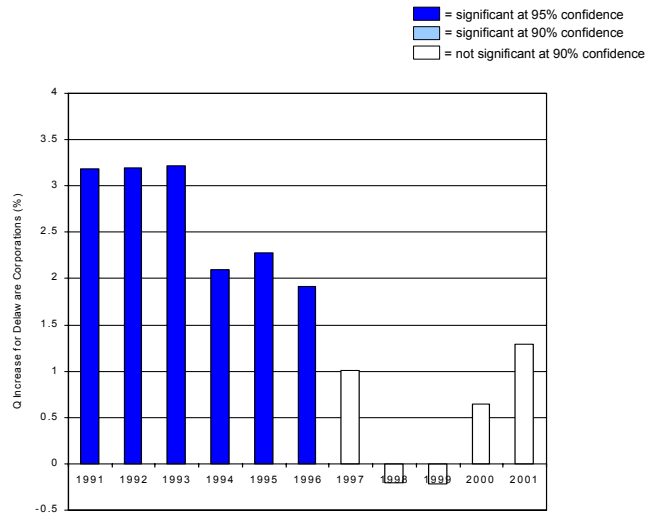


Figure 2 shows that Delaware firms were worth approximately 3% more than non-Delaware firms during the period 1991-1993, and approximately 2% more than non-Delaware firms during 1994-1996. This result is roughly consistent with Daines. After 1996, the value of Delaware firms relative to other firms is no more than +/- 1.5% different, and is no longer statistically significant. This finding is not inconsistent with Daines, who ends his sample in 1996 and finds that the results for the last two years of the sample (1995-1996) are significant only at 90% confidence. It is consistent with Bebchuk & Cohen (2002), who find no correlation between Tobin's Q and Delaware incorporation for a sample of exchange-traded firms in 1999. Finally, this finding is similar in direction to Gompers, Ishii & Metrick (2001), whose negative Delaware effect is the strongest at the end of their sample period, in the late 1990s. Therefore, all three studies – Daines (2001), Bebchuk & Cohen (2002), and Gompers et al. (2001) – are consistent with the finding presented in Table 2 that something changed in Delaware in the mid-1990s. I provide two possible explanations for this change in the next Section.

Note that the results reported here cast some doubt on the selection story hypothesized by Bebchuk & Ferrell (2001) and Bebchuk, Cohen & Ferrell (2002). They argue that Delaware firms might be worth more not because of the beneficial effects of Delaware law, but rather because better-managed companies will choose to incorporate there. As one version of this story, “sophisticated and ambitious” managers might be more likely to choose New York City

lawyers as outside counsel, who in turn will be more likely to recommend Delaware incorporation. But it is difficult to reconcile this story with the disappearance of the Delaware effect after 1996. When I run the baseline model only on companies that remained in their 1991 state of incorporation throughout the sample period (approximately 95% of the overall sample), I get the same results as presented in Table 3. So the selection story raises a puzzle as to why the same set of companies exhibit a Delaware effect in 1991-1996 but do not show a Delaware effect in 1997-present.⁷

4.2. Alternative specifications

The basic “disappearing” finding is robust to other specifications of the model. Table 3 shows the Delaware coefficients for four alternative specifications.

[insert Table 3 about here]

In all models reported in Table 3, virtually all the coefficients for control variables (e.g., ROA, lagged ROA) have the same signs and same statistical significance as in Table 2. Model #1 of Table 3 runs the model using the natural log of Tobin’s Q as the dependent variable, after truncating the top and bottom 1% of the sample. Model #2 runs the baseline model using Q (untransformed) as the dependent variable, also after truncating the top and bottom 1% of the sample. For comparability with Daines, Model #3 runs the identical specification, using the same dependent variable as in Model #2 and omitting the headquarters dummies and all size controls except log of sales. Finally, Model #4 runs the Daines model baseline model as a robust regression rather than as an OLS regression.

⁷ One response might be that better-managed companies moved to Delaware in the 1980s, and during the next decade simple mean reversion made these companies indistinguishable from non-Delaware companies. However, this theory suggests that whatever mechanism drove better-managed companies to Delaware in the 1980s did not exist in the 1990s, a feature that is not part of the currently-articulated selection story. So, for example, if New York City law firms recommended Delaware incorporation in the 1980s, and better-managed companies were more likely to choose New York City lawyers, it is not clear why this causal mechanism should have broken down in the 1990s. Still, this paper does not present direct evidence on the question of whether the Delaware effect of the early 1990s can be partially or even entirely explained with a selection story. Subramanian (2002a) and Bebchuk & Cohen (2002) model incorporation choice using standard financial measures and find that a large portion of the incorporation decision cannot be explained by just these variables, suggesting that selection along some more qualitative dimensions may be at work. Instead of focusing on why a Delaware effect might exist, and whether selection might explain it, this paper solidifies the econometric finding that a Delaware effect existed, and focuses on the reasons why the Delaware effect has disappeared.

All four models exhibit the same “disappearing” effect as documented in the baseline model, with coefficients that are positive and statistically significant up to the mid-1990s, and then smaller in magnitude and statistically insignificant (with one exception) afterwards. Nevertheless there are three important differences between these models and the baseline model. First, while the pre-1996 coefficients exhibit the same general downward trend, they are considerably less stable in Models #1-#3: in Model #1 the coefficients range from 0.030 to 0.060; in Model #2 they range from 0.070 to 0.161; and in Model #3 they range from 0.063 to 0.115. A second difference from the baseline model is that the Delaware coefficient is positive and highly significant in Model #3 in 1999, contrary to the general trends in the other models. Finally, the coefficients in Models #1-#3 imply a Delaware effect of approximately 5-7% of firm value, substantially higher than the 2-3% of firm value derived from Table 2.

Follow-on analyses suggest that all three of these differences from the baseline model are due to the influence of outliers. Recall that Models #2 and #3 do not transform Q; even Model #1, which uses a log transformation, does not adequately bring in the outlier observations. When I truncate Q at the top and bottom 5% (rather than 1%) the coefficients in all three of these models become more stable and smaller in magnitude, closer to the 2-3% Delaware effect reported in Table 2. Recall that when Daines truncates the 10% tails rather than the 1% tails in his sample, the magnitude of his Delaware effect similarly declines, from 5% to 2%. Model #4 provides a final piece of evidence on this point: by giving less weight to outlier observations, the robust regressions reported in this model yield highly stable coefficients for the 1991-1994 period and a Delaware effect of approximately 3% of firm value, consistent with the baseline model.

The fact that outliers have such influence on the Delaware coefficient suggests that outlier observations are not perfectly orthogonal to Delaware incorporation, and instead, have some influence on the Delaware coefficients. The coefficient of 0.459 in Model #3 for 1999 provides an illustration: it implies an implausibly large Delaware effect of more than 30%, an effect that does not exist in the prior year and disappears in the very next year. No case law or other change that I am aware of can explain this large and fleeting of an effect. More likely this coefficient is the result of a spurious correlation due to outlier observations. Note that the result goes away when the identical model is run as a robust regression (Model #4). Daines does estimate the log of Tobin’s Q, but does not report the results from this model. With respect to Daines’ reported

results, Model #3 suggests that inadequate accommodation of outliers is at least part of the explanation for the large fluctuations in the Delaware coefficient over time that he finds.

5. Possible explanations

The econometric results presented in the previous Section suggest that something changed in the mid-1990s. This Section presents two potential explanations for this change.⁸ First, antitakeover movements in Delaware's corporate law in the mid-1990s might have provided an inflection point in the quality of Delaware's offering. Second, "adaptive devices" such as greater board independence from management and enormous growth in stock option compensation during the 1990s might have made corporate law no longer a binding constraint in the takeover marketplace. (Kahan & Rock 2002) In this Section I describe these two explanations in more detail. In the next Section I provide empirical evidence suggesting that both may be part of the explanation for the disappearing Delaware effect.

5.1. Mid-1990s antitakeover movements in Delaware's corporate law

The "antitakeover movement" theory for the disappearance of the Delaware effect requires an examination of Delaware's corporate law during the 1990s. The discussion focuses on the law of takeovers, because few other substantive aspects of Delaware's corporate code would be capable of generating or destroying 2-3% of firm value. In the 1990s marketplace, takeovers generally provided large returns to target shareholders, so any reduction in the likelihood of takeover should have reduced firm value on average.⁹ In Part 5.1.1, I describe one antitakeover

⁸ In unreported regressions I consider but find no evidence to support a third explanation that focuses on the "other constituency" statutes that were passed by a majority of the states, but not Delaware, in the late 1980s and early 1990s. These statutes were thought to "revolutionize corporate law" (Hanks 1991) when they were first passed and "may radically alter some of the basic premises on which corporation law has been constructed" (ABA Committee on Corporate Laws, 1990), thereby making wealth transfers from shareholders to managers "highly likely" (Bainbridge 1992). In fact, constituency statutes have played a role in only two takeover contests in the 1990s (Norfolk Southern/Conrail and ITT/Hilton), and most commentators agree that concerns voiced about them in the early 1990s have not been realized. Therefore, Delaware may have differentiated itself from other states in 1991-1996 by not passing a constituency statute; as the true influence of constituency statutes began to play out, Delaware became less differentiated. (I thank Leo Strine for this hypothesis.) To test this theory, I include a constituency statute dummy variable in the baseline model, set to one for companies incorporated in states that had constituency statutes in the observation year. The prediction is that this variable will be significant and negative in the beginning of the sample period and then approach zero toward the end of the period. However, in unreported regressions, the constituency statute variable is not statistically significant and the model overall does not yield the predicted results.

⁹ Note that a completely unfettered market for corporate control might reduce value for target shareholders because of the possibility of structurally coercive bids and "distorted choice" among shareholders facing a collective action

movement in the mid-1990s that was specific to companies with staggered boards. In Part 5.1.2, I describe a second, more general, antitakeover movement in the Delaware case law. Both of these moves, I argue, solidified the Just Say No defense in Delaware in ways that might have either reduced the value of Delaware companies relative to non-Delaware companies, or (not necessarily inconsistent) made Delaware companies undifferentiated from companies in other states.

The starting point for the analysis is *Time Warner*, the 1989 Delaware Supreme Court decision that a target could maintain its poison pill to protect a friendly merger-of-equals “unless there is clearly no basis to sustain the corporate strategy.” While “Just Say No” became accepted shorthand for many in characterizing Delaware’s takeover jurisprudence after *Time-Warner*, others were more cautious. One prominent M&A practitioner commented at the time that “whether just saying ‘no’ . . . is a reasonable and proportionate response under *Unocal* remains an open question in Delaware,”¹⁰ and another noted that “the effect of *Time Warner* on the ‘just say no’ defense is certainly far from clear.”¹¹ In retrospect, academic commentators have noted that *Time-Warner* was not squarely a pill decision (Allen, Jacobs & Strine 2002), and could easily have been limited to its particular facts involving a bust-up bidder seeking to “jump” a strategic merger-of-equals (Bebchuk, Coates & Subramanian 2002a). Instead, it would take four takeover contests, all occurring within the three year period 1994 to 1996, for practitioners to understand just how far the Just Say No defense actually extended.¹²

problem. (Bebchuk 1985) However, the procedural and substantive restrictions imposed by the Williams Act in 1968, the development of potent firm-level takeover defenses in the 1970s and 1980s, and the proliferation of third-generation antitakeover statutes in the 1980s and 1990s all make the concern about structurally coercive bids minimal (at most) for the 1990s takeover marketplace. (Subramanian 1998)

¹⁰ James C. Freund & Rodman Ward Jr., *What’s “In”, “Out”, in Takeovers in Wake of Paramount v. Time*, National Law Journal (March 26, 1990).

¹¹ Gregory P. Williams, *The Time-Warner Decision: Further Guidance, But Questions Remain*, Insights (June 1990).

¹² Even assuming, *arguendo*, that the contours of Just Say No were perfectly clear after *Time Warner*, it might be the case that investors needed to see the implications of this movement play out in practice before they were willing to incorporate it into stock prices. Thus the movements described in the remainder of this Part might have been important not for their clarification of the substantive doctrine, but rather for their illustrations of it. This version of the antitakeover movement theory gains some support from social psychological research documenting a “salience effect” in assessing subjective probabilities (Tversky & Kahneman, 1974). Because this behavioral version of the theory is not inconsistent with the overall analysis (either the substantive law changed or practitioners’ assessment of it) I do not attempt to isolate it in the econometric tests presented in Section 6.

5.1.1. The Younkers, Wallace Computer and Circon trilogy

Three of these takeover contests, taken together, had important implications for targets with staggered boards: Carson Pirie Scott's hostile takeover bid for Younkers, announced in October 1994; Moore's hostile bid for Wallace Computer, announced in July 1995; and U.S. Surgical's hostile bid for Circon, announced in August 1996. These three contests shared an identical chronology of events, as follows:

- the target was a Delaware company;
- the target had an “effective” staggered board, meaning a staggered board that could not be dismantled or “packed” by a hostile bidder (Bebchuk, Coates & Subramanian 2002a);
- the bidder launched an all-cash tender offer at a substantial premium over the target's stock price (48% over the price four weeks prior to announcement in the case of Younkers, 56% in the case of Wallace Computer, and 35% in the case of Circon);
- a majority of shareholders tendered into the bidder's offer (54% in the case of Younkers, 74% in the case of Wallace Computer, and 73% in the case of Circon);
- the target had a pill, thus preventing the bidder from buying these shares (so-called “morning-after” pills in the case of Younkers and Circon);
- with the tender offer route blocked, the bidder ran a proxy contest to replace one-third of the target's directors;
- the bidder won a first proxy contest and had its insurgent slate seated.

At this point an important legal question was implicitly posed in all three cases: could a target with an effective staggered board continue to maintain its pill after losing a first proxy contest against a hostile bidder? The outcomes of all three cases suggested that, in Delaware, the answer was yes. In Younkers, the Carson Pirie Scott slate was elected in May 1995; Younkers promptly expanded its board and re-seated the incumbent directors who had been voted out. Bidder and target continued negotiating until January 1996, when Younkers agreed to sell itself to Proffitt for stock. Moore won its proxy contest in December 1995, continued

negotiating with Wallace, and eventually withdrew in frustration in August 1996. U.S. Surgical won its proxy contest in October 1997 and withdrew in May 1998, when it was itself taken over by Tyco International which had a policy of not making hostile bids. Thus all three bidders were unsuccessful even though they had received support from a majority of shareholders and had replaced one-third of the targets' boards with their candidates.

This trilogy has not received much, if any, attention from legal commentators because none of these takeover contests generated any binding case law in Delaware. Yet among practitioners the Wallace Computer case in particular received substantial attention because of its implications for the staggered board as a takeover defense. The *Wall Street Journal* reported that “the [Moore] hostile bid has been closely watched among merger professionals because it was one of the cleanest examples of the just-say-no defense. Wallace didn't try to find a friendly bidder, didn't engage in a big share buyback and told that the courts that it had a plan to boost shareholder value.”¹³ And in reporting on Union Pacific Resources' hostile bid for Pennzoil six months later, the *Journal* reported that “targets are emboldened by the recent success of a Just Say No defense by Wallace Computer Services Inc. against a bid by Moore Corp.”¹⁴ In fact, the Circon board explicitly relied on the Wallace Computer precedent to justify its defensive maneuvers against Surgical. According to dissident Circon director Charles Elson:

Circon's strategy was to stall. Circon's public view was, “we have some great value here that the world doesn't realize.” They were using the *Wallace Computer* model. That was the game plan in *Moore v. Wallace Computer*, which was the legal game plan that Larry Sonsini was advising Circon to follow. The idea was, so what if they elect two people?, it's still going to take them another year. With the pill and the staggered board, they will not get control of this board until the following year (Hall, Rose & Subramanian 2001).

Thus the YWC trilogy had important implications for the more than half of U.S. public companies that have staggered boards. Bebchuk, Coates & Subramanian (2002a) find that not a single hostile bidder has ever lasted through two proxy contests, as is necessary to win board control against a target with an effective staggered board. The YWC trilogy, which occurred in rapid succession in the mid-1990s, would turn out to provide the only evidence on the question

¹³ Steven Lipin & Larry M. Greenberg, *Moore Drops Bid to Acquire Wallace Computer*, Wall Street Journal (Aug. 7, 1996) at A3.

¹⁴ Steven Lipin, *Will Pennzoil 'Just Say No' to Union Pacific*, Wall Street Journal (June 30, 1997) at A3.

of board resistance after losing a first proxy contest until 2001.¹⁵ These three takeover contests, therefore, implicitly gave a majority of Delaware companies an extremely potent defensive weapon for at least the period 1996-2001, precisely the same period that I document for the disappearance of the Delaware effect.

5.1.2. The solidification of Just Say No more generally

While the YWC trilogy may have provided an important signal to Delaware companies with staggered boards, the Delaware Supreme Court's 1995 decision in *Unitrin v. American General Corp.* may have solidified the Just Say No defense more generally. In this case, the Delaware Supreme Court reversed a Chancery Court ruling and upheld a target board's defensive recapitalization against a hostile bidder. In doing so the Court extended the Just Say No defense in two important ways. First, the *Unitrin* Court interpreted *Unocal*'s "reasonable in relation to the threat posed" requirement to mean that defensive tactics must fall within a "range of reasonable responses." This restatement of *Unocal* is "operationally similar to the business judgment rule: an action will be sustained if it is attributable to *any* reasonable judgment;" thus *Unitrin* "makes clear how limited an 'enhancement' to the business judgment rule *Unocal* really is." (Allen & Kraakman 2002) (emphasis in original).

The second important extension of Just Say No in *Unitrin* is the Court's explicit endorsement of "substantive coercion." In an influential article in the wake of *Unocal*, Gilson & Kraakman (1989) define substantive coercion as "the risk that shareholders will mistakenly accept an underpriced offer because they disbelieve management's representations of intrinsic value." In *Unitrin*, the Court explicitly endorsed the concept of substantive coercion as a threat sufficient to meet *Unocal*'s requirements for defensive tactics: "The record appears to support Unitrin's argument that the Board's justification for adopting the Repurchase Program was its reasonably perceived risk of substantive coercion, i.e., that Unitrin's shareholders might accept American General's inadequate Offer because of 'ignorance or mistaken belief' regarding the Board's assessment of the long-term value of Unitrin's stock."¹⁶

¹⁵ In that year Boston Bank of Commerce won a first proxy contest against Carver Bancorp, and Weyerhaeuser won a first proxy contest against Willamette. Bebchuk, Coates & Subramanian (2002a).

¹⁶ In the same year as *Unitrin*, *Moore v. Wallace Computer* (the one takeover contest among the YWC trilogy that generated case law) similarly endorsed substantive coercion, though the case was decided in the federal district court for Delaware and therefore did not generate binding precedent under Delaware corporate law.

While Strine (2002) suggests that *Time-Warner* itself endorsed substantive coercion in 1989, my reading of *Time-Warner* suggests a subtle but important extension in *Unitrin*. In *Time-Warner*, the Court was concerned about shareholders' "ignorance or a mistaken belief of the strategic benefit *which a business combination with Warner might produce*" (emphasis added). In *Unitrin*, the target board was concerned solely about shareholders' ignorance as to the future value of their firm as a stand-alone entity. To again use the Gilson & Kraakman (1989) terminology, the threat envisioned in *Time-Warner* was "substantive coercion" combined with "opportunity loss" (i.e., the risk that "a hostile offer might deprive target shareholders of the opportunity to select a superior alternative offered by management"), while the threat envisioned in *Unitrin* was exclusively substantive coercion

In short, at the same time that the YWC trilogy was solidifying Just Say No for the majority of public corporations that have staggered boards, *Unitrin* was strengthening the Just Say No defense for companies more generally through its retreat from *Unocal*'s intermediate standard of review and its endorsement of substantive coercion. Roe (2002) argues that Delaware began to move in an antitakeover direction in the 1990s due to a diminished risk of federal intervention. If correct, this political analysis would provide an interesting root cause for the doctrinal moves that I identify in this Section. Whatever the root cause, these antitakeover moves might have reduced or eliminated Delaware's distinctiveness as a takeover-friendly jurisdiction in the mid-1990s, which in turn may have eliminated the Delaware effect that Daines (2001) reports and I confirm here for the first half of the decade.

5.2. Adaptive devices

The second potential explanation for the disappearing Delaware effect involves two "adaptive devices" identified by Kahan & Rock (2002): the gradual increase in board independence from management during the 1990s, and the large increases in CEO stock compensation and parachute payments during the same period. On the first "device," the percent of independent directors on public company boards grew from approximately 54% in the 1980s (Yermack 1996) to approximately 65% by the late 1990s. (Investor Responsibility Research Center 2002; Bebchuk, Coates & Subramanian 2002b) On the second device, CEO stock compensation grew dramatically during the 1990s: among the S&P 500 companies, for example, stock-based compensation for the median CEO grew from 8% of total compensation in 1990 to

66% of total compensation by 2001 (Hall & Murphy 2002). Stock and stock options (which typically vest with a change in control) may have given CEO's substantial financial incentives to accept a high-premium offer for their company.

Though Kahan & Rock argue that these two devices were a response to antitakeover innovations such as the poison pill, this causal story is not necessary in order to believe that the second device – the growth in stock option compensation – transformed bids that used to be negotiated in the “shadow of the law” into “very friendly” transactions in which the law was no longer a binding constraint (Subramanian 2002b; cf. Mnookin & Kornhauser 1979). Or, put differently, one could believe that the growth of stock option compensation was a wholly exogenous phenomenon rather than an “adaptive device,” and still conclude that it had an important impact on the incentives for target managers to sell in the 1990s. In fact, rather than resisting a sale, target management might have actually desired a sale during this period in order to accelerate vesting of their options and to trigger lucrative parachutes.

Consistent with this theory, M&A activity increased dramatically during the 1990s – Flom (2000) reports 45% nominal growth in U.S. deal volume between 1991 and 1999, setting a new record in each year before reaching a plateau in 2000 and declining in 2001. Takeover defenses and the background corporate law are irrelevant in situations where a hostile bid is not contemplated by the bidder (Subramanian 2002b). If stock and stock option compensation shifted the mix of late-1990s deals toward the “very friendly” variety described above, then Delaware law (and corporate law in general) might no longer be a binding constraint in many takeover situations. This analysis would predict that there should be no difference in bid incidence between Delaware and non-Delaware firms in the late-1990s. If differential bid incidence is driving the Delaware effect of the early 1990s, then an absence of a differential might further explain the disappearance of the Delaware effect after 1996.

In response, one might argue that all takeovers are negotiated in the shadow of the background corporate law, however distant this background might be. Schwert (2000) finds that hostile and friendly bids are difficult to distinguish in terms of their financial characteristics, consistent with the view that many friendly deals are negotiated in the shadow of a potential hostile bid. Proponents of takeover defenses typically argue that they give managers bargaining

power in friendly deals (e.g., Lipton 1979, Lipton 2002), which similarly implies that friendly deals are negotiated in the shadow of a potential hostile bid. In the next Section I present an empirical test which assumes that all M&A deals are negotiated in the shadow of the background corporate law. I then relax this assumption and attempt to exclude the potentially “very friendly” deals that might not be negotiated in this way.

6. Empirical tests

In this Section I attempt to test the two theories that might explain the disappearing Delaware effect. Under the antitakeover movement theory, the solidification of Just Say No in the mid-1990s led to convergence in takeover law and the disappearance of the Delaware effect. Under the adaptive devices theory, any takeover-related benefits of Delaware law were swamped by the influence of stock compensation in the second half of the 1990s. These two theories are observationally equivalent in key respects: both predict a change in roughly the same time period (the mid-1990s); both predict that Delaware firms will receive more takeover bids in the early 1990s; and both predict that Delaware firms will no longer receive more bids than non-Delaware firms in the late-1990s. In Section 6.1 I first present evidence that confirms these overall trends. In Section 6.2 I then attempt to disentangle the two theories with a more refined test.

6.1. Overall bid incidence test

In this Section, I follow Daines in directly measuring bid incidence. My bid incidence model tests the general hypothesis that Delaware law facilitated takeovers before 1996 and did not after 1996. If the YWC trilogy and *Unitrin* solidified Just Say No in a way that reduced Delaware’s facilitation of takeover bids, or if adaptive devices eliminated Delaware’s distinctiveness with respect to takeovers, or both, then the incidence of bids for Delaware firms should be higher before 1996, and no different after 1996, relative to other states.

Daines measures the incidence of bids against Delaware and non-Delaware firms between 1995 and mid-1998, as well as cohorts of firms from 1985 and 1990, and finds that Delaware firms receive significantly more bids. I expand the timeframe to examine bid incidence over my full sample period, 1991-2001. Bid incidence data comes from Thompson Financial Corporation’s (formerly Securities Data Corporation) (SDC) mergers and acquisitions database.

Following Ambrose & Megginson (1992), I define a takeover bid as an announced attempt by one firm to accumulate or acquire majority voting power (50.1 percent or more of the outstanding voting shares) over another firm. I therefore exclude partial interest acquisitions, asset acquisitions, recapitalizations, and stock buybacks. I also exclude “rumored” deals that are often included in the SDC database. Figure 3 shows bid incidence against Delaware and non-Delaware firms during the sample period:

Figure 3: Annual Bid Incidence, 1991-2001

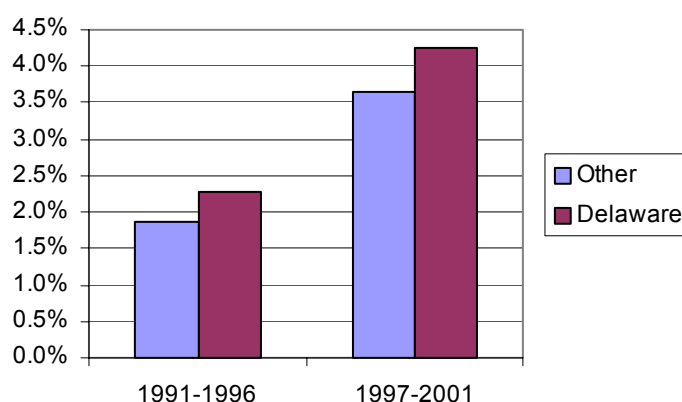


Figure 3 shows that Delaware firms received more bids than non-Delaware firms in both the 1991-96 period and the 1997-2001 period. In absolute terms the difference is 0.43% annual incidence in 1991-1996 and 0.60% in 1997-2001; in percentage terms Delaware firms were 25% more likely to receive a bid during the first period and 16% more likely to receive a bid in the second. Z-statistics show that both of these differences are statistically significant at 99% confidence.

To control for the known differences between Delaware and non-Delaware firms identified in Table 1, I follow Daines in running a multivariate regression model to predict bid incidence. I split the DE dummy variable from the baseline model into two Delaware dummies: the first set to one for Delaware incorporation during 1991-1996, and the second set to one for Delaware incorporation during 1997-2001.¹⁷ The regression is run as a Cox proportional hazards model,

¹⁷ In view of the results reported in Table 3, I run the model using the windows 1991-95 and 1996-2001 and obtain similar results. I also obtain similar results when I run the two time periods as separate models rather than as a single model.

with each firm-year as a separate observation and “failure” representing a bid for the company in the sample year (with multiple failures possible). Following Daines, I include basic controls for firm characteristics and financial performance: Tobin’s Q, ROA, lagged ROA, log of total assets, and firm leverage, defined as debt to total capital. Also following Daines, I include an additional control for firms incorporated in Massachusetts, Ohio, and Pennsylvania, because of the potent antitakeover statutes in these three states that may deter bids. I also include year dummy variables to control for the overall level of M&A activity. The results are reported in Table 4.

[insert Table 4 about here]

Model #1 of Table 4 shows the results from a single-stage model, in which Tobin’s Q enters directly. Among controls, Tobin’s Q and ROA are negative and statistically significant, suggesting that firms that are poorer performers are more likely to be takeover candidates even in the ostensibly “strategic” merger wave of the 1990s. None of the other controls are statistically significant at 95% confidence. Examining the variables of interest, the Delaware coefficient for the period 1991-1996 is positive and highly significant, confirming the results from the univariate analysis suggesting that Delaware firms are more likely to receive takeover bids than non-Delaware firms during this period. However, the Delaware coefficient for the period 1997-2001 is much smaller in magnitude and is not statistically significant. This finding is consistent with the hypothesis that Delaware’s facilitation of bids disappeared after 1996, possibly due to either antitakeover moves in takeover law or adaptive devices.¹⁸

In Model #2, I follow Daines in estimating a two-stage model to control for potential endogeneity in the Tobin’s Q measure. The argument is that Tobin’s Q might be endogenous to bid incidence because firms that are likely takeover targets will be bid up in the marketplace before the bid is announced. To attempt to control for this potential effect I first estimate Tobin’s Q, using the baseline model specified in Table 2, and then use these predicted values to

¹⁸ It might be argued that the increase in overall bid incidence for Delaware firms during the 1990s, shown in Figure 3, is evidence against the antitakeover movement hypothesis, which predicts a decrease in overall bid incidence for Delaware firms. However, it is difficult to isolate the effect of antitakeover movement, if any, from other concurrent macroeconomic phenomena – most clearly, the enormous stock market gains during the 1990s. For this reason I only draw inferences from relative bid incidence between Delaware and non-Delaware firms within each time period, and not from overall levels of takeover activity.

construct the Tobin's Q variable for the bid incidence model. The results from the second-stage model are reported in Model #2 of Table 4.

Results are similar to Model #1. The coefficient for Tobin's Q is more than twice as large in absolute value than in Model #1 and highly significant, perhaps reflecting the fact that endogenous run-up in Tobin's Q is now stripped out in this two-stage specification. The coefficient for ROA continues to be negative but is no longer statistically significant at 95% confidence. Most importantly, the Delaware coefficient for 1991-1996 is still highly significant and positive in Model #2, consistent with the view that Delaware incorporation facilitated bids during this period. As in Model #1, the Delaware coefficient for 1997-2001 is substantially smaller in absolute value and is no longer statistically significant, suggesting that Delaware no longer facilitated bids in the second half of the 1990s.¹⁹

The magnitude of the bid incidence result is roughly consistent with the magnitude of the Delaware wealth effect reported in Section 4. Using the method of recycled predictions and the coefficients from Model #2 of Table 4, I estimate that Delaware firms had a 0.55% additional chance of receiving a takeover bid than non-Delaware firms during the period 1991-96. The median final bid premium during this period (measured from four weeks prior to the announcement of the bid) was 38%. Consistent with Daines, I find no statistically significant difference between premia for Delaware firms and non-Delaware firms. Putting these factors together and using a 10% discount rate, Model #2 predicts a 2.1% higher Tobin's Q for Delaware firms than non-Delaware firms during this period. This prediction is of an order of magnitude that could explain the Delaware effect that I find.

Note that Figure 3 shows that Delaware firms receive more takeover bids in the period 1997-2001, while Table 4 shows no correlation between Delaware incorporation and takeover bids during this period after controlling for other factors. What is the intuition that reconciles these two results? First, note that the percentage difference in bid incidence between Delaware and non-Delaware firms declines in Figure 3, from 25% to 16%. Second, at least part of the explanation can be found in the ROA differences between Delaware and non-Delaware firms over time. Table 1 shows that Delaware firms reported lower ROA than non-Delaware firms

beginning in 1996, and statistically significant at 95% confidence beginning in 1999. Table 4 shows that ROA is negatively correlated with bid incidence, consistent with other work identifying a “disciplinary” element even in the ostensibly strategic takeover wave of the 1990 (Baker & Subramanian 2002). Therefore, the ROA effect would predict that we should see more takeover bids against Delaware firms in the second half of the 1990s, as Figure 3 shows. Table 4 shows that once we control for this effect, the remaining effect due to Delaware incorporation is not statistically significant in the period 1997-2001.

6.2. Bid incidence isolating the effect of corporate law

In Section 6.1 I presented evidence consistent with either the antitakeover movement theory or the adaptive devices theory. In this Section I refine the bid incidence test in an attempt to distinguish the two. To do this, I exclude friendly deals in which the target board recommends the bidder’s initial offer, or the target solicits the offer from the bidder. This refinement attempts to exclude “very friendly” deals in which no hostile bid is contemplated, and focuses on deals in which the background corporate law might plausibly have played a role. Figure 4 shows bid incidence under this new definition, against Delaware and non-Delaware firms during the sample period:

Figure 4: Annual Bid Incidence Excluding “Very Friendly” Deals, 1991-2001

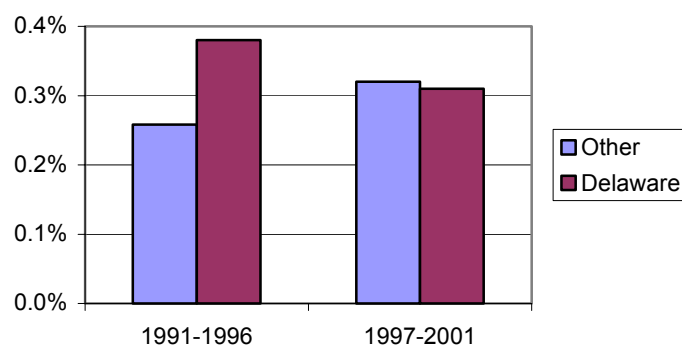


Figure 4 shows a pronounced bid incidence effect. Delaware firms were more likely to receive a takeover bid than non-Delaware firms than non-Delaware firms in the 1991-1996

¹⁹ The number of observations is slightly lower in Model #2 because the Table 2 models require Net Sales to predict Tobin’s Q, and some firm-year observations have sufficient data to calculate Tobin’s Q but do not have net sales.

period, at 95% confidence, and slightly less likely to receive a takeover bid (though not at a statistically significant level) in the 1997-2001 period. Unlike Figure 3, Figure 4 attempts to capture only bids that are influenced by the shadow of the takeover law, and attempts to exclude bids that might be driven by factors such as the proliferation of stock compensation. The fact that the aggregate bid incidence level reported in Figure 4 does not increase between 1991-1996 and 1997-2001, even though overall deal activity increases dramatically between these two periods, might suggest some success in this effort.

Consistent with the approach taken in the previous Section, I also run both a single-stage and a two-stage multivariate regression, to control for other factors that might influence bid incidence. The results are reported in Table 5.

[insert Table 5 about here]

Table 5 presents the same overall finding as Table 4, and is consistent with the univariate results presented in Figure 4: Delaware firms are more likely to receive a takeover bid during 1991-1996, at 95% confidence, and are no longer more likely to receive a bid afterwards. Because this model attempts to focus on bids that are driven by the shadow of the corporate law, it suggests that changes in the corporate law are at least partially responsible for the disappearing Delaware effect.

One important qualification to this analysis is that the magnitude of the Delaware effect when I exclude “very friendly” bids is quite small. Figure 4 shows a 0.12% difference in annual bid incidence between Delaware and non-Delaware firms during the period 1991-1996, which would predict a 0.5% Delaware Q effect, only one-fifth of the actual Delaware effect that I report in Table 2. Thus the question of whether a takeover story explains the entire Delaware effect turns on whether and to what extent ostensibly friendly deals are negotiated in the “shadow” of the law. Under the view that all deals are negotiated in the shadow of the law, as Schwert (2000), Daines (2001), and Lipton (1979) suggest, then the takeover story can provide a fairly complete explanation for the Delaware effect in the 1991-1996 period. Under the view that “very friendly” deals are not negotiated in the shadow of the law, the takeover story can explain only a small part of the overall Delaware effect. Under this theory, adaptive devices such as stock

compensation may provide the primary explanation for the disappearance of the effect in the late 1990s.

7. Discussion

At the highest level, this paper supports Daines' conclusion that "[c]orporate law affects firm value." The point of departure, however, is Daines' implicit assumption that Delaware corporate law was uniform during his sample period, 1981 to 1996. In fact, there were enormous changes in Delaware's takeover jurisprudence during this time period – to take just the highlights, the introduction of the pill (1983), *Moran* (1985), *Unocal* (1985), *Revlon* (1986), Delaware's business combination statute (1987), *Time-Warner* (1989), *QVC* (1993), and (as argued here) the Younkers/Wallace/Circon trilogy and *Unitrin* in the mid-1990s. Regardless of whether one characterizes this evolution as pro-management or pro-shareholder, the particular path that Delaware took was by no means inevitable. If "corporate law affects firm value," it would be difficult to believe that investors held a single view of Delaware corporate law during this sixteen year period.

It is critical, therefore, to examine the "first derivative" of the Daines Delaware effect, i.e., changes in the Delaware effect over time. This paper does so and finds evidence that something changed in the mid-1990s. Admittedly, the precise source for this change is difficult to discern. One possible explanation is doctrinal: the substantive corporate law of Delaware moved in an antitakeover direction in the mid-1990s, thereby reducing the likelihood of takeover and eliminating Delaware's distinctiveness as a relatively takeover-friendly jurisdiction. A second explanation is that stock and stock option compensation acted as an "adaptive device" (Kahan & Rock 2002) that counteracted the antitakeover effects of the poison pill and made the takeover law of all states, including Delaware, no longer a binding constraint in the second half of the 1990s. Both of these theories find some support in the econometric evidence presented here.

Even in the absence of a single, definitive explanation, this paper provides two new empirical findings that are clear-cut and highly robust: Delaware firms were worth approximately 2-3% more than non-Delaware firms between 1991 and 1996; and this difference disappears after 1996. These findings provide a new, middle-ground assessment of what has already become an important fixture in the corporate law and corporate finance literatures. On one hand, this paper

defends the Daines result against theorists who dismiss the Delaware effect as solely a manifestation of selection, or econometricians who use a theoretically unmotivated control to find a negative Delaware effect. This paper strengthens the claim that Delaware was in fact different in the first half of the 1990s, in a way that benefited shareholders of Delaware companies. On the other hand, this paper should send a cautionary message to commentators who unquestioningly use the Daines result as a trump card against Delaware critics. During the 1990s, there is some evidence that Delaware squandered its lead among the states in delivering higher-quality corporate law.

8. Conclusion

In the *Wall Street Journal* article featuring the Daines Delaware result, Bernard Black of the Stanford Law School is quoted as saying, “It’s carefully done, but my instincts tell me that he’s wrong.” In a similar vein, I first encountered Daines’ paper while writing a Harvard Business School case study on the Circon takeover contest (Hall, Rose & Subramanian 2001), and wondered how a state corporate code that permitted such value destruction in that situation could nevertheless yield higher valuations overall. This paper presents new evidence that reconciles Daines’ important large-sample results with Black’s intuition and my anecdotal evidence. Delaware corporate law no longer adds value for Delaware firms, and has not for the past five years. I find a 2-3% Delaware effect from 1991-1996, consistent with Daines’ result for this period. The effect that I find is highly stable during this timeframe, suggesting that Delaware law was different, as Daines argues. However, the Delaware effect becomes statistically and economically insignificant from 1997 to 2001, raising the obvious question of what changed.

One potential explanation is that antitakeover movements in Delaware’s substantive corporate law solidified the Just Say No defense in the mid-1990s, and reduced the value of Delaware corporate law to the same level as that of other states. Another explanation is that the “adaptive device” of CEO stock compensation shifted the mix of M&A activity toward “very friendly” transactions in which the background corporate law played a minimal role at most. Under either theory, Delaware corporations became undifferentiated from corporations in other states in the mid-1990s.

Testing these theories against the available empirical evidence, I find mixed results. I find some evidence that Delaware firms were more likely to receive takeover bids than non-Delaware firms in the period 1991-1996, and no evidence of this effect after 1996, consistent with either the antitakeover movement theory or the adaptive devices theory. Between these two, I present some evidence supporting the view that corporate law changes were at least partially responsible for the disappearing Delaware effect, though I cannot rule out the possibility that the growth of stock compensation was partly (if not mainly) responsible as well.

In closing, I note that my antitakeover movement theory implies a fairly tight (i.e., responsive) connection between corporate law and firm value. This connection, if correct, leaves open the possibility that the Delaware effect might re-appear sometime in the future. Pro-shareholder decisions in Delaware toward the end of the sample period, such as *Toll Brothers* (1998), *Quickturn* (1998), and *Chesapeake* (2000), might foreshadow a new move in Delaware toward shareholder interests. Re-examining Figure 2, it is interesting to note (though admittedly speculative) that the most positive, though still statistically insignificant, Delaware effect over the past five years occurs in 2001, the last year of the sample period. In a recent *University of Chicago Law Review* symposium, two sitting Vice-Chancellors and a former Chancellor of the Delaware Chancery Court state that “[i]t is . . . doubtful that courts would establish a ‘bright-line’ precedent that gives boards a carte blanche to ‘just say no’” (Allen, Jacobs & Strine 2002). In a recent *Stanford Law Review* symposium, Vice-Chancellor Leo Strine similarly (and tantalizingly) predicts that “we in the Delaware judiciary may find these [Just Say No] questions harder to avoid” in the future (Strine 2002). If, as I argue, the potency of Just Say No during the second half of the 1990s is responsible for the disappearance of the Delaware effect, then a judicial pronouncement establishing limits on the reach of Just Say No might differentiate Delaware once again from other states.

Table 1: Summary statistics

Descriptive statistics for a sample of 11,251 exchange-traded firms between 1991 and 2001. Financial firms, utilities, foreign firms, ADR's, and firms with no sales during the sample period are excluded. Firm financial data comes from Compustat. Domicile data comes from Compustat and Compustat back tapes. Means for Q, ROA, and R&D/assets are Winsorized at the 1% tails and are weighted by net sales. Differences in means that are statistically different at the 5% level are bolded.

Mean (Median)	Q		ROA (%)		Net Sales (\$MM)		R&D/Assets (%)		# of business segments	
	DE	Oth	DE	Oth	DE	Oth	DE	Oth	DE	Oth
1991	4.34 (1.25)	3.81 (1.23)	12.24 (8.25)	11.64 (8.75)	142.9 (47.8)	106.1 (27.7)	16.49 (2.82)	10.95 (3.42)	1.56 (1.00)	1.52 (1.00)
1992	4.28 (1.35)	3.82 (1.36)	14.71 (9.02)	13.67 (9.57)	143.4 (50.6)	110.8 (29.0)	24.24 (3.41)	15.07 (3.66)	1.52 (1.00)	1.51 (1.00)
1993	3.84 (1.47)	3.48 (1.45)	13.84 (9.67)	13.73 (10.16)	145.6 (52.2)	114.3 (30.2)	16.88 (3.40)	13.77 (4.14)	1.49 (1.00)	1.49 (1.00)
1994	3.49 (1.39)	3.10 (1.32)	15.03 (10.98)	14.11 (10.97)	154.4 (57.5)	117.3 (32.7)	17.95 (3.63)	12.50 (4.65)	1.45 (1.00)	1.46 (1.00)
1995	3.80 (1.43)	3.19 (1.40)	16.95 (10.95)	15.02 (11.69)	150.3 (52.0)	116.5 (33.6)	27.63 (4.05)	15.39 (4.59)	1.40 (1.00)	1.42 (1.00)
1996	3.66 (1.50)	3.19 (1.51)	13.40 (10.99)	14.27 (11.96)	156.8 (56.2)	124.0 (38.0)	14.23 (3.99)	11.37 (4.65)	1.35 (1.00)	1.38 (1.00)
1997	3.62 (1.56)	3.08 (1.53)	12.18 (11.27)	12.72 (12.08)	158.3 (58.2)	134.2 (44.2)	9.12 (4.27)	4.87 (4.93)	1.32 (1.00)	1.37 (1.00)
1998	3.64 (1.31)	3.11 (1.36)	12.14 (10.18)	12.37 (11.30)	154.0 (50.9)	136.7 (43.2)	15.93 (4.59)	7.78 (4.68)	1.78 (1.00)	1.89 (1.00)
1999	4.16 (1.31)	3.37 (1.23)	7.53 (8.38)	11.12 (10.28)	158.4 (56.3)	138.4 (38.5)	18.00 (5.41)	12.14 (4.61)	2.18 (1.00)	2.29 (2.00)
2000	3.74 (1.21)	3.24 (1.14)	4.06 (7.78)	8.93 (8.78)	171.0 (69.4)	145.8 (43.2)	15.12 (6.66)	10.12 (5.09)	2.19 (1.00)	2.34 (2.00)
2001	3.87 (1.39)	3.27 (1.29)	4.38 (6.21)	6.75 (6.89)	179.1 (73.7)	150.5 (43.5)	3.58 (5.10)	2.81 (3.74)	2.18 (1.00)	2.32 (2.00)

Table 2: Baseline model results

Regression estimates of the relationship between Tobin's Q and Delaware incorporation. The sample includes 48,814 annual observations of 11,251 exchange-traded firms between 1991 and 2001. Company financials and current incorporation data are taken from the Compustat current file of industrial companies. Historical incorporation data are taken from Compustat back tapes. Data on number of business segments for 1991-1994 is constructed from segment financials reported in the Wharton Research Data Services (WRDS) database. Financial firms, utilities, foreign firms, ADR's, and firms with no sales during the sample period are excluded. The dependent variable is Tobin's Q at the end of the fiscal year, ranked against all other companies for that year (quantile transformation). All models are run as two-sided Tobit regressions bounded at [0,1]. All models include headquarter dummies, size dummies, interactions between log(sales) and size dummies, industry dummies (2-digit SIC code level), and a constant term (not reported). Standard errors are given in parentheses; coefficients that are statistically significant at 95% confidence are in bold.

Year →	1991	1992	1993	1994
Delaware incorporation	0.028 (0.001)	0.027 (0.008)	0.026 (0.008)	0.019 (0.008)
ROA/Assets	0.378(0.022)	0.387 (0.022)	0.459 (0.023)	0.431 (0.023)
Lagged ROA/Assets	0.095 (0.021)	0.071 (0.021)	-0.000 (0.021)	0.025 (0.021)
R&D/Assets	0.287 (0.018)	0.327 (0.018)	0.312 (0.018)	0.320 (0.017)
# of business segments	-0.014 (0.004)	-0.009 (0.004)	-0.011 (0.004)	-0.019 (0.004)
Log (sales)	-0.075 (0.004)	-0.082 (0.005)	-0.079 (0.005)	-0.065 (0.005)
Number of observations	3,433	3,621	3,853	4,162
Log likelihood	225.6	203.1	161.0	192.6
Year →	1995	1996	1997	1998
Delaware incorporation	0.019 (0.007)	0.015 (0.007)	0.006 (0.007)	-0.003 (0.007)
ROA/Assets	0.366 (0.019)	0.422 (0.019)	0.432 (0.019)	0.387 (0.020)
Lagged ROA/Assets	0.040 (0.018)	0.004 (0.018)	0.021 (0.018)	-0.024 (0.019)
R&D/Assets	0.391 (0.016)	0.420 (0.016)	0.370 (0.015)	0.372 (0.016)
# of business segments	-0.014 (0.004)	-0.015 (0.004)	-0.008 (0.004)	-0.009 (0.003)
Log (sales)	-0.042 (0.004)	-0.048 (0.004)	-0.046 (0.004)	-0.048 (0.004)
Number of observations	4,576	4,825	5,313	5,155
Log likelihood	388.6	367.0	33.5	140.6
Year →	1999	2000	2001	
Delaware incorporation	-0.002 (0.007)	0.005 (0.007)	0.010 (0.008)	
ROA/Assets	0.254 (0.018)	0.424 (0.022)	0.366 (0.024)	
Lagged ROA/Assets	-0.071 (0.017)	-0.036 (0.020)	0.027 (0.023)	
R&D/Assets	0.472 (0.015)	0.459 (0.015)	0.493 (0.017)	
# of business segments	-0.009 (0.002)	-0.004 (0.002)	-0.005 (0.003)	
Log (sales)	-0.038 (0.003)	-0.051 (0.004)	-0.046 (0.004)	
Number of observations	4,894	4,927	4,055	
Log likelihood	686.4	309.6	187.0	

Table 3: Alternative model specifications

Regression estimates of the relationship between Tobin's Q and Delaware incorporation using alternative specifications of the dependent variable. The sample includes 48,814 annual observations of 11,251 exchange-traded firms between 1991 and 2001. Financial firms, utilities, foreign firms, ADR's, and firms with no sales during the sample period are excluded. All models include the same independent variables as in Table 2, including headquarter dummies, size dummies, interactions between log(sales) and size dummies, industry dummies (2-digit SIC code level), and a constant term (not reported). Standard errors are given in parentheses; coefficients that are statistically significant at 95% confidence are in bold.

Model # → Description →	1 Log (Tobin's Q) as dependent variable, with top/bottom 1% truncated	2 Tobin's Q as dependent variable, with top/bottom 1% truncated	3 Daines (2001) model without modifications or transformations	4 Model #3 run as robust regression
	Delaware coefficient (standard error):			
1991	0.059 (0.002)	0.120 (0.056)	0.063 (0.056)	0.043 (0.018)
1992	0.053 (0.017)	0.115 (0.046)	0.096 (0.048)	0.040 (0.020)
1993	0.060 (0.016)	0.161 (0.047)	0.115 (0.048)	0.045 (0.033)
1994	0.036 (0.014)	0.070 (0.033)	0.090 (0.035)	0.044 (0.018)
1995	0.045 (0.015)	0.137 (0.044)	0.095 (0.045)	0.021 (0.019)
1996	0.030 (0.014)	0.086 (0.042)	0.091 (0.044)	0.022 (0.019)
1997	0.012 (0.014)	0.027 (0.039)	0.038 (0.041)	0.000 (0.021)
1998	0.006 (0.016)	0.048 (0.048)	0.032 (0.049)	-0.033 (0.019)
1999	0.011 (0.020)	0.143 (0.113)	0.459 (0.114)	-0.011 (0.022)
2000	0.004 (0.018)	-0.021 (0.052)	0.081 (0.053)	0.018 (0.019)
2001	0.020 (0.018)	0.029 (0.047)	0.066 (0.048)	0.028 (0.023)

Table 4: Bid incidence model

Regression estimates of the relationship between Delaware incorporation and bid incidence. The sample includes 41,589 observations of 11,251 exchange-traded firms between 1991 and 2001. Financial firms, utilities, foreign firms, ADR's, and firms with no sales during the sample period are excluded. Bid incidence data comes from Thompson Financial Corporation's mergers and acquisitions database. A takeover bid is defined as an announced attempt by one firm to accumulate or acquire majority voting power (50.1% or more of the outstanding voting shares) over another firm (Ambrose & Megginson 1992). The model is run as a Cox proportional hazards regression with two time windows: 1991-1996, and 1997-2001. Both models include industry dummies (2-digit SIC code level), year dummies, and a constant term (not reported). The regression is run as a panel data set, with each firm-year included as a separate observation and "failure" representing a bid in the sample year (multiple failures possible). Model #1 is run as a single-stage model. To control for potential endogeneity Model #2 uses predicted values for Tobin's Q from Table 2 in place of firms' actual Tobin's Q.

Model # → Description →	1 Single-Stage Model	2 Two-Stage Model
Delaware incorporation 1991-1996	0.304(0.098)	0.322 (0.098)
Delaware incorporation 1997-2001	0.126 (0.089)	0.138 (0.089)
Mass/Ohio/Penn incorporation	-0.156 (0.154)	-0.177 (0.155)
Tobin's Q	-0.428 (0.122)	-1.189 (0.271)
ROA	-0.525 (0.189)	-0.312 (0.204)
Lagged ROA	0.190 (0.173)	0.159 (0.174)
Log (total assets)	0.009 (0.018)	0.004 (0.018)
Debt-to-total capital	0.277 (0.128)	0.224 (0.131)
Number of observations	50,776	48,624
Log likelihood	-8751.8	-8628.7

Table 5: Bid incidence model isolating the effect of corporate law

Regression estimates of the relationship between Delaware incorporation and bid incidence. The sample includes 41,589 observations of 11,251 exchange-traded firms between 1991 and 2001. Financial firms, utilities, foreign firms, ADR's, and firms with no sales during the sample period are excluded. Bid incidence data comes from Thompson Financial Corporation's mergers and acquisitions database. A takeover bid is defined as an announced attempt by one firm to accumulate or acquire majority voting power (50.1% or more of the outstanding voting shares) over another firm (Ambrose & Megginson 1992). I exclude friendly deals in which the target board recommends the initial offer or the target solicits the offer from the bidder. The model is run as a Cox proportional hazards regression with two time windows: 1991-1996, and 1997-2001. The regression is run as a panel data set, with each firm-year included as a separate observation and "failure" representing a bid in the sample year (multiple failures possible). Model #1 is run as a single-stage model. To control for potential endogeneity Model #2 uses predicted values for Tobin's Q from Table 2 in place of firms' actual Tobin's Q.

Model # → Description →	1 Single-Stage Model	2 Two-Stage Model
Delaware incorporation 1991-1996	0.461 (0.224)	0.510 (0.224)
Delaware incorporation 1997-2001	0.107 (0.217)	0.142 (0.217)
Mass/Ohio/Penn incorporation	-0.010 (0.333)	-0.027 (0.332)
Tobin's Q	-1.490 (0.312)	-2.862 (0.684)
ROA	-0.562 (0.484)	-0.207 (0.516)
Lagged ROA	0.205 (0.433)	0.116 (0.430)
Log (total assets)	0.190 (0.041)	0.185 (0.042)
Debt-to-total capital	-0.351 (0.313)	-0.469 (0.315)
Number of observations	50,776	48,624
Log likelihood	-1571.1	-1566.0

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