Directors' Duties Laws and Long-Term Firm Value

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Abstract

This paper analyzes the long-term value impact of enhanced director discretion to consider the interests of all stakeholders by exploiting the quasi-natural experiment provided by the staggered adoption of directors' duties laws (also known as corporate constituency statutes) in 35 U.S. states over the period 1984 to 2006. We document that the enactment of these laws results in an economically and statistically significant increase in firm value. The increase in firm value is stronger for larger and more complex firms, firms more exposed to endogenous uncertainty and with stronger stakeholder relationships. Our results support the bonding hypothesis that enhanced director discretion to protect stakeholder interests promotes long-term firm value by reducing a firm's contracting costs. They also support the view that enhanced director discretion help internalize the externalities that firms create in incomplete markets, leading to more efficient production to the benefit of all stakeholders, including shareholders.

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1. Introduction

Since the pioneering work of Garvey and Hanka (1999) and Bertrand and Mullainathan (1999), several studies have used the staggered adoption of state antitakeover laws to identify changes in corporate governance that are plausibly exogenous to individual firms (see Karpoff and Wittry, 2018 for a review). Directors' duties laws – also known, especially in the legal literature, as "corporate constituency statutes" or "non-shareholder constituency statutes" (Bainbridge, 1992) – are one kind of state antitakeover law, which have now been adopted by 35 U.S. states (although not Delaware). While these laws' exact provisions tend to vary from state to state, the core content is the same across-the-board: the statutes enable directors to consider the impact of corporate decisions (such as whether to accept or defeat an acquisition offer) on an expanded set of stakeholder interests, including the interests of employees, suppliers, customers, creditors and local communities.

As compared to other antitakeover laws, however, directors' duties laws have captured the attention of finance scholars only marginally.[1] From a legal perspective, this is puzzling, as the enactment of these laws engendered a heated debate among legal scholars during the 1990s, when the majority of the enacting states introduced this legislation. Within that debate, directors' duties laws garnered attention primarily as a development that revived perennial questions about the desirability of a shareholder or stakeholder model of the corporation (Bainbridge, 1992), contractarian vs. institutionalist theories of the firm, and the appropriate allocation of power between boards and shareholders (Bratton, 1989; 1993). In the finance literature, the only echo of that debate was the inclusion of directors' duties laws in the G-Index of Gompers, Ishii, Metrick

[1] For example, in the list of papers investigating the effects of antitakeover laws recently compiled by Karpoff and Wittry (2018), only 11 out of 65 papers examine constituency statutes.

as one of 24 governance features capturing weaker shareholder rights (Gompers, Ishii, Metrick, 2003).[2]

In more recent times, however, finance scholars have departed from the suspicion with which they have traditionally considered the role of enhanced director discretion to consider stakeholder interests (Jensen, 2001). For example, Magil, Quinzii, and Rochet (2015) developed a theoretical model that shows that firms are exposed to endogenous risks created by their investments, which may fail due to the inadequate allocation of resources to appropriate precautions. Adverse effects follow for the firm's stakeholders – for example, in the form of lower wages for employees or higher product prices for customers. Viewed through this lens, an instruction to directors and managers to maximize total stakeholder welfare helps internalize the externalities that firms create in incomplete markets, especially when firms are large and more invested in riskier innovative projects. In another recent theoretical paper, Hart and Zingales (2017) posit that "shareholder value maximization is not the appropriate goal of a company in many circumstances" (page 270). In support of this conclusion, several empirical studies have also recently produced evidence that empowering boards to protect stakeholder interests against the threat of a takeover might serve a positive corporate governance function for a subset of firms (Cen, Dasgupta, and Sen, 2015; Johnson, Karpoff, and Yi, 2015, 2016; Cremers, Litov, and Sepe, 2017). Further, indications from the real corporate world suggest that major governance players like large institutional investors are increasingly willing to accept, or even advocate for, a corporate model with increased stakeholder protection and reduced pressure on shareholder wealth maximization (Sorkin, 2018; Flammer and Kacperczyk, 2015).

[2] An exception is Alexander, Spivey and Marr (1997), although their analysis is limited to studying the effect of directors' duties laws enacted in three states, New York, Indiana, and Ohio.

Motivated both by this more recent research and by these developments in practice, in this paper we analyze the value implications of greater director discretion to consider stakeholder interests by exploiting the quasi-natural experiment provided by the staggered adoption of directors' duties laws over the period 1983 to 2006. Other recent studies have examined the impact of directors' duties laws on innovation (Atanassov, 2013b;[3] Flammer and Kacperczyk, 2015),[4] procurement contracts (Flammer, 2015) and investments by high fiduciary duty institutions (Geczy, Musto, Jeffers, Tucker, 2015), as well as the value implications of the interaction of directors' duties laws with other anti-takeover laws (Atanassov, 2013b). As far as we know, however, this paper is the first to systematically examine the impact of directors' duties laws on long-term firm value.

Our main finding is that the passage of directors' duties laws results in a statistically and economically significant increase in the Tobin's Q of the affected firms. This finding is robust to various methodologies, including pooled panel first difference regressions, the incorporation of possible selection effects through the creation of a matched sample, and a stock portfolio return approach. We also find that the increase in Tobin's Q is more pronounced for larger and more complex firms, more innovative firms, and firms where stakeholder investments are more relevant.

Overall, our results support the "bonding hypothesis" that empowering boards to protect stakeholder interests against the disruption caused by takeovers reduces uncertainty in stakeholder investments, thereby decreasing a firm's cost of contracting and, in the long-term, increasing its

[3] Atanassov's sample only covers the period 1976-2006, which misses Texas directors' duties law and the significant number of firms covered by that legislation. Further, he includes Maryland as a control, rather than a target firm, although Maryland passed a directors' duties law in 1999. On the other hand, he does not include controls for other anti-takeover laws, which Karpoff and Wittry (2018) show might result in an omitted variable bias.

[4] Flammer and Kacperczyk (2015) find that the passage of these laws has a positive impact on several innovation proxies. In auxiliary results, they also examine the effect of directors' duties laws on firm value, finding that these laws are associated to an increase in Tobin's Q, consistent with our results.

value (Shleifer and Summers, 1988; Laffont and Tirole, 1988; Johnson, Karpoff, and Yi, 2015). Likewise, our results support the view that enhanced director discretion to consider stakeholder interests – that is, vesting boards with expanded authority in the face of market pressures – improves the performance of a subset of firms, by helping to mitigate the externalities that arise from firm production and that cannot be internalized in incomplete markets (Magil, Quinzii, and Rochet, 2015; Hart and Zingales, 2017; Bratton and Sepe, 2018).

We begin our analysis by addressing the preliminary concern that specific state-level circumstances can explain a state's propensity to pass a directors' duties law (Karpoff and Wittry, 2018), investigating the likelihood that the passage of these laws followed from state-level institutional, political and economic characteristics. With the exception of the prior adoption of fair price laws,[5] we find no significant predictors for the adoption of directors' duties laws. This suggests that these laws' adoption has been plausibly exogenous to then-prevailing market and economic environments, consistent with our central identification assumption.

We then move to the heart of the analysis, estimating the effect of directors' duties laws on the long-term value of firms incorporated in the enacting states over the period 1983 to 2015 using pooled panel Tobin's Q regressions that include firm and year fixed effects. We find that the passage of these laws results in a positive and statistically significant increase in firm value, with an economic significance of 3.3% in our baseline specification. This finding is confirmed when we regress changes in *Q* on the first difference of the *Directors' Duties Law* indicator, where the results indicate that the positive impact on the value of the affected firms increases over time.

Next, to address the concern that any estimated effect might be confounded by other events that take place over the long-time period of our sample (1983 to 2015), we employ a differences-

[5] Fair price laws are another antitakeover law, which typically prohibit business combinations between a target firm and a large stockholder unless certain conditions involving supermajority approval or a stipulated price are met.

in-differences methodology in a matched sample. In constructing our matched sample, we match all sample firms in each of the 35 enacting states to a control firm with similar observable ex-ante characteristics but incorporated in a state without this legislation. We find that the difference in the Tobin's Q between treated and control firms, as well as in firm characteristics capturing the importance of stakeholder relationships (and hence a possible selection effect), is insignificant in the three-year period preceding the law passage in the treated firms' state of incorporation. Conversely, and consistent with our pooled panel regressions, the difference is significantly positive in the three-year period following the law passage.

We further show that stock returns give similar results as using Tobin's Q through a long-term stock return event study, constructing long (short) portfolios buying (selling) treated (control) stocks from the matched sample group around the time their (matched sample counterpart's) state of incorporation adopts a directors' duties law.

We then turn to examine the possible economic channels through which greater director discretion to consider stakeholder interests, as enabled by the passage of directors' duties law, may contribute to firm value. Consistent with the traditional focus of the literature on the takeover implications of directors' duties law, we begin by considering the "bargaining power hypothesis" of Stulz (1988) and Harris (1990). This hypothesis suggests that enhancing the bargaining power of directors in a takeover context – in this case, based on the directors' ability to also consider the interests of stakeholders – enables directors to obtain a higher purchasing price for the benefit of the target's shareholders.

We then move to examine two additional (and partially overlapping) hypotheses, which we view as complementary. The first is the "bonding hypothesis," which primarily considers the takeover implications of directors' duties law by posing that enhancing directors' ability to protect

stakeholders from a takeover threat can improve firm value by bonding stakeholders more closely to the firm (Shleifer and Summers, 1988; Laffont and Tirole, 1988; Johnson, Karpoff, and Yi, 2015). The second is the "stakeholder orientation hypothesis," which focuses on the more general implications of directors' duties laws for the purpose of the firm debate and the appropriate allocation of corporate power between boards and shareholders. This hypothesis maintains that enhancing director discretion to consider stakeholder interests improve long-term firm performance by internalizing the externalities that firms create in incomplete markets, especially when they are large and more invested in risky innovative projects (Jensen, 2001; Magill, Quinzii, and Rochet, 2015; Hart and Zingales, 2017).

We find no evidence supporting the bargaining power hypothesis. Conversely, consistent with both the bonding hypothesis and the stakeholder orientation hypothesis, we find that covered firms in which stakeholder relationships are likely more relevant – such as firms that are larger and have more complex operations, have a large customer, are in a strategic alliance, where long-term investments are more important, and are more labor- or creditor- intensive – experience a higher increase in *Q*.

In conclusion, this paper makes three main contributions to the literature. First, it contributes to the scholarship examining the relationship between takeover defenses and shareholder wealth. We find no evidence in favor of the entrenchment view (Manne, 1965; Cary, 1969; Jensen, 1988; Easterbrook and Fischel, 1981), while our results support the bonding hypothesis of takeover defenses (Laffont and Tirole, 1988; Shleifer and Summers, 1988), consistent with other recent empirical papers (Cen, Dasgupta, and Sen, 2015; Johnson, Karpoff, and Yi, 2015, 2016; Cremers, Litov, and Sepe, 2017). Second, the paper shows that vesting boards with expanded authority in the face of market pressures might be instrumental to long-term value maximization at a subset of

firms (Jensen, 2001; Magill, Quinzii, and Rochet, 2015; Hart and Zingales, 2017). Third, it also adds to recent studies that seek to correct misperceptions in the finance literature concerning antitakeover laws (Karpoff and Witty, 2018; Cain, McKeon, and Solomon, 2017; Cremers, and Sepe, 2017; Catan and Kahan 2016), providing evidence that directors duties' laws meaningfully affect a firm's takeover protection, as well as evidence that the underlying legal context matter for the incremental takeover protection these laws provide. Taken together, our results highlight the importance of the firm's relationships with *all* stakeholders and point to important novel avenues of research.

2. Legal Background

In the typical account in finance studies, directors' duties laws enable directors to consider the welfare interests of a firm's stakeholders, in addition to the interests of its shareholders, in deciding whether to approve or resist an acquisition offer (e.g., Gompers, Ishii, Metrick, 2003; Karpoff and Wittry, 2018). This account, by cabining directors' duties laws in the antitakeover category, oversimplifies their actual features.

Some directors' duties laws apply more broadly than others. Only nine states enacted directors' duties laws that expand the scope of directors' discretion only in the takeover context or in change-in-control situations.[6] In the other 26 enacting states, directors' duties laws do not just provide an additional takeover defense but rather enable the structural consideration of stakeholder interests in all director decision-making. In addition, 24 out of 35 enacting states specify that considering the long-term interest of the corporation *also* provides an appropriate legal basis for

[6] These states are Iowa, Kentucky, Louisiana, Maryland, Missouri, Oregon, Rhode Island, South Dakota, and Tennessee. Further, four states (Connecticut, South Dakota, Tennessee, and Vermont) restrict the applicability of directors' duties laws to public companies only, and two states (Georgia and Maryland) make enhanced director discretion an opt-in choice by allowing corporations to include an ad-hoc provisions in their corporate charters.

the lawful exercise of directorial authority.[7] This suggests that most states deem the grant of authority to consider non-shareholder interests as instrumental to the maximization of long-term firm value (Keay, 2013).

The theoretical and policy questions implicated by directors' duties laws thus are not delimited by the takeover context. They extend to the quintessential questions about the role and purpose of the corporation. It is thus unsurprising that, in the tradition of the famous debate on those questions initiated by Adolph Berle and Merrick Dodd in the 1930s (Berle, 1931, 1932; Dodd, 1932), the corporate law scholarship on directors' duties laws has primarily focused on two, partially overlapping, strands of research. Under the first strand, legal scholars widely debated whether these laws imported a stakeholderist deviation from the shareholder maximization norm, creating a new class of directors' fiduciary duties toward non-shareholder constituencies (Bainbridge, 1992; Ho, 2010). Under the second, directors' duties laws occasioned renewed debate over contractarian versus institutionalist conceptions of the corporation. In particular, discussants asked whether these laws should be interpreted to challenge the prevailing contractarian view of directors as mere agents of the shareholders (Easterbrook and Fischel, 1983; Jensen and Meckling, 1976) and support, instead, an institutionalist conception centered on enhanced board authority as necessary for the coordination of complex economic activities (Bratton, 1989, 1993).

A consensus interpretation has emerged. Commentators largely agree that these laws do not trump shareholder primacy even as they do expand the zone of directorial discretion and so board authority (Geczy, Jeffers, Musto, and Tucker, 2015; Barzuza, 2009; Fisch, 2006). They also agree, however, that this expansion operates to protect director decision-making against fiduciary actions

[7] Only Georgia, Indiana, Louisiana, Maine, Maryland, Missouri, Nebraska, Tennessee, and Wisconsin do not expressly authorize the consideration of the long-term interest of the corporation. Conversely, Idaho makes the consideration of this interest a mandatory, rather than a permissive, requirement for director decision-making.

by the shareholders without granting injured stakeholders a corresponding "offensive" claim vis-à-vis directors (Keay, 2013).[8]

There is also a subsidiary question concerning the interplay between Delaware fiduciary caselaw, which is often applied by courts in other states, and the directives of other states' directors' duties statutes. In general, director decision-making is protected by the business judgement rule and thus exempt from judicial review, both in Delaware and elsewhere. Change-of-control situations, however, are different. There directors of Delaware firms are subject to the "enhanced" fiduciary scrutiny established in the landmark *Unocal*[9] and *Revlon*[10] decisions. An issue accordingly arises in other states as to whether their directors' duties laws block application of Delaware's enhanced duties and, if so, to what extent (Geczy, Jeffers, Musto, and Tucker, 2015; Barzuza, 2009).

Unocal and *Revlon* duties are distinguishable at this point. While *Unocal* raises directors' fiduciary standards (relative to the plain application of the business judgement rule),[11] it is generally interpreted as allowing directors to justify their resistance to a takeover also on the basis of the long-term interest of the corporation and, in some cases, stakeholder interests (Bainbridge, 1992). It follows that *Unocal* and directors' duties laws do not necessarily come into conflict. *Revlon*, however, is another matter, as it specifies that the *exclusive* duty of a sell-side board is to obtain the best present price for the firm's shareholders. This means that *Revlon* prohibits directors to consider stakeholder interests at the expense of shareholder interests (Bainbridge, 1992; Turner,

[8] Indeed, directors' duties laws provide for permissive (rather than mandatory) language in all 35 enacting states. The Connecticut's law was the only one that originally mandated that directors "shall" consider other constituencies, but the statute was amended in May of 2010 (effective in October 2010) to replace the mandatory language with a permissive grant of authority ("may").
[9] Unocal Corp. v. Mesa Petroleum Co., 493 A.2d 946, 954 (Del. 1985).
[10] Revlon, Inc. v. MacAndrews & Forbes Holdings, Inc., 506 A.2d 173, 180 n.10 (Del. 1986).
[11] Under *Unocal*, the use of defensive tactics by the incumbent board is valid if the board can show that there was a cognizable threat to the firm's policy and that the defensive measure in question is proportional to the threat posed. Nevertheless,

1999). Therefore, unlike *Unocal*, *Revlon* cannot be reconciled with directors' duties laws. Indeed, a few of them (e.g., Indiana) state this explicitly.

Consistent with these observations, more recent studies of the cases applying directors' duties laws conclude that substantial variation exists among the states as regards the reception of Delaware law, with some states' statutes and cases rejecting only the enhanced duties established in *Revlon*, with others also rejecting the *Unocal* standard, and with still others falling in between these positions (Cain, McKeon, and Solomon, 2017; Geczy, Jeffers, Musto, and Tucker, 2015; Barzuza, 2010).

In sum, and contrary to what the finance literature seems to suggest, all directors' duties laws do not grant directors the same level of protection in the exercise of expanded decisionmaking authority, either in takeover contexts or more generally.

3. Theoretical Background

In corporate finance and economics, the shareholder model of the corporation, under which share value maximization provides the exclusive yardstick for managerial performance, has commanded widespread acceptance ever since Milton Friedman's celebrated 1970 article (Friedman, 1970; see also Friedman, 1962) and, perhaps, even before then (Hart and Zingales, 2017; Jensen, 2001). This might explain why finance scholars, unlike corporate law scholars, have largely ignored any potential stakeholderist implications of directors' duties laws and focused almost exclusively on this legislation's antitakeover implications.

Theoretically, the claim in favor of a shareholder model of the corporation relies on two main arguments: the shareholders' status as principals-residual claimants (Jensen and Meckling, 1976; Fama and Jensen, 1983) and the informational efficiency of market prices (Fama, 1970). The first argument poses that shareholders, as residual risk holders, can be expected to unanimously agree

on a single plan of investments that pursues the objective of the maximization of the present value of the firm's returns. It follows that directing managers to maximize shareholder value provides an objective criterion for overall firm value maximization (Jensen, 2001). Furthermore, leaving managers free to pursue the interests of other stakeholders would increase the chances of managerial moral hazard, as managers could rationalize *any* action under a stakeholder criterion (Tirole, 2001). The second argument complements the residual-claimant argument by maintaining that managerial choices are reflected in market prices that accurately capture a firm's underlying fundamental values. Consequently, a firm's share price provides the natural benchmark against which evaluating managerial performance.

Still, part of the literature has explored alternative corporate models, especially in more recent times. For example, Jensen (2001) departs from Friedman-type articulations of the shareholder model of the corporation, which exclude any consideration of stakeholder interests. In what he terms "enlightened stakeholder theory," Jensen puts forward an instrumental view of stakeholder welfare, which directs managers to consider stakeholder interests when this serves to enhance a corporation's long-term market value. Further departing from the assumption of fully informational market prices, Jensen also specifies that a long-term horizon is necessary because "it is possible for markets not to know the full implications of a firm's policies until they begin to show up in cash flow over time" (page 309).

Perhaps the strongest criticism to the shareholder model comes from general equilibrium studies (for a summary, see Bratton and Sepe, 2018). These studies emphasize the implications of departing from the idealized assumption underpinning the shareholder model of an Arrow-Debreu complete markets economy and assume the existence of incomplete markets (Geanakoplos, 1990; Geanakoplos, Magill, Quinzii and Dreze, 1990). They then show that under this more realistic

assumption, shareholders' different marginal propensities to consume matter and, consequently, the classic arguments supporting the shareholder model no longer hold (Hart and Zingales, 2017). With incomplete markets, the goal of profit maximization becomes a question of subjective decision-making varying with the shareholders' idiosyncratic preferences regarding risk and the tradeoff between current and future consumption. It follows that shareholders might disagree on what managers should do and equilibrium prices might well be multiple rather than unique (Magill and Quinzii, 2008).

Magil, Quinzii and Rochet (2015) and Hart and Zingales (2017) have recently taken the conclusion of general equilibrium studies one step further, proposing theoretical models that depart from standard principal-agent representations of the corporation and embrace a more institutional perspective. In particular, Magill, Quinzii and Rochet (2015) develop a model that shows that firms are exposed to endogenous risks created by their investments, which may fail due to the inadequate allocation of resources to appropriate precautions. Adverse effects follow for the firm's stakeholders – employees through lower wages and customers through higher product prices. Viewed through this lens, enhanced director authority to protect stakeholder interests promotes a firm's investment in adequate precaution, leading to more efficient production for the benefit of *all* stakeholders, including shareholders. In a similar vein, Hart and Zingales (2017) show that when a firm's activities are "non-separable," meaning that profit-making activity carries externalities that cannot be undone through action taken by either individuals or the government, directing managers to maximize shareholder (market) value is not the appropriate social criterion in many circumstances.

4. Data and Descriptive Statistics

4.1 Data

Our data come from several sources. The main sample covers the period 1983 to 2015 and consists of 101,989 firm-year observations for all industrial firms (excluding utilities and financials) in the Compustat database, with publicly traded stock price observations in the CRSP database, incorporated in the U.S., and without missing observations for the dependent and independent variables of our baseline pooled panel regression model. Table 1 provides descriptions for the main variables of interest.

To avoid any overlap with the adoption and subsequent invalidation of first-generation antitakeover legislation, [12] we begin our sample period in 1983 and end it in 2015, five years after Texas' directors' duties law became applicable to all the firms incorporated in the state in 2010. [13]

The key explanatory variable, *Directors' Duties Law* is an indicator of whether a firm's state of incorporation has an effective directors' duties law. Our information on when directors' duties laws become effective in each state is provided by Barzuza (2009) and Karpoff and Wittry (2018). We provide a graphical illustration of the dispersion of enacting states by decade in Figure 1, and a catalogue of each of those enacting states' effective month/year dates in Table 2.

We construct *Directors' Duties Law* using incorporation-year observations, supplementing the current incorporation data provided by Compustat with historical incorporation information from

[12] First-generation laws were enacted by 38 states between 1968 and 1981, and provided substantial takeover protection to firms incorporated in enacting states—so much so, that they were eventually invalidated by the U.S. Supreme Court decision in *Edgar v. Mite Corp*. in 1982. As detailed in Karpoff and Wittry (2018), these laws likely create considerable estimation noise for researchers interested in the effect of second-generation laws and so we follow heed to mitigate this obfuscation by starting the panel in 1983.

[13] Texas adopted a directors' duties statute in 2003, but allowed firms to voluntarily opt-in prior to 1/1/2006. However, even after 1/1/2006, only newly incorporated Texas firms were bound to the laws, while firms incorporated in the state prior to 2006 were still allowed to voluntarily opt-in. It is only after 1/1/2010, that the Texas' law became directly applicable to all the firms incorporated in the state. Following Karpoff and Wittry (2018), we consider 2006 as the effective date of the Texas law and hence refer to the effective dates of directors' duties laws in other states too, although in all the enacting states, except Texas, the effective date coincides with the adoption date.

Compact Disclosure and the CRSP Historical U.S. stock database that is available from the University of Chicago directly (rather than through WRDS). Compact Disclosure covers historical incorporation information from 1988 to 2006 and CRSP spans the period 1990 to 2015. We approximate the state of incorporation for the years 1982 to 1987 by backfilling firm-year incorporation data using the oldest data point of historical incorporation information available (i.e., generally from Compact Disclosure, and otherwise from CRSP). This assumes that firms did not reincorporate between 1982 and 1987, though we verify that our results are robust if we use samples that commence in any year between 1983 and 1988. With the effective dates and historical incorporation data, we create the indicator variable, *Directors' Duties Law*, which equals one in the effective year and afterwards for all firms incorporated in the enacting states, and zero in the years prior to the effective date, or always zero for corporations in states that never adopted a directors' duties law in our sample.

Our main dependent variable is firm value, which we measure using Tobin's Q (*Q*). Consistent with prior empirical work investigating the value relevancy of various external and internal corporate governance arrangements (Demsetz and Lehn, 1985; Morck, Shleifer, and Vishny, 1988; Lang and Stulz, 1994; Yermack, 1996; Daines, 2001; and Gompers, Ishii, and Metrick, 2003). Following Fama and French (1992), we measure *Q* as the ratio of market to book value of assets using financial data from Compustat. Additionally, in robustness tests, we also use data from the CRSP database to analyze stock returns (*Monthly Stock Returns*) surrounding the effective dates of directors' duties laws (see subsection 6.3 for more details).

We also include a number of control variables shown by the corporate governance literature to be related to Tobin's Q. Our default specifications include the following controls: *Size, Ln(Age), HHI, Sales Growth, Loss, Debt-to-Equity, Firm Liquidity, CAPX/Assets, R&D/Sales, Inst.*

Ownership, *State-Year Q*, and *Industry-Year Q*. The financial data used to construct most of the controls comes from Compustat, while the data for the institutional ownership measure is provided by Thomson Reuters. We also employ the controls *State-Year Q* and *Industry-Year Q* to capture common time-variant sources of unobserved heterogeneity (i.e., annual "shocks" to Q) related to a firm's state of incorporation or three-digit SIC code industry (following Giroud and Mueller, 2010). Further, following Karpoff and Wittry (2018), who show that the exclusion of other antitakeover laws creates an omitted variable bias, all of our main tests include indicator variables for the other four most common forms of state antitakeover legislation: *Business Combination Law*, *Control Share Law*, *Fair Price Law*, and *Poison Pill Law* (all defined as in Karpoff and Wittry, 2018).

Lastly, to mitigate the influence of extreme outliers, we winsorize all continuous dependent and independent variables in our sample at the 2.5% level in both tails, and, additionally, we adjust dollar values for inflation using 2015 dollars.

4.2 Descriptive Statistics

We present summary statistics for all of the variables used in our pooled panel regression models in Table 3. In particular, Panel A of Table 3 reports the mean, standard deviation, median, and 25^{th} and 75^{th} percentiles for the main dependent, independent, and interacted variables over the covered period, 1983 to 2015.

The average *Q* for all firm-year observations in our main sample is 1.92 with a standard deviation of 1.39, while 26.3% of firm-years in our dataset are affected by a *Directors' Duties Law*. Figure 2 plots the ratio of the number of sample firms incorporated in a state with an effective directors' duties law to the total number of sample firms in a given year. Over the first seven years of our panel (1983-1990), 29 states enacted directors' duties legislation, which translates to about

33% of our firm-year observations having a *Directors' Duties Law* equal to one by the end of 1990. Over the next 16 years (1991-2006), six other states enacted directors' duties laws, keeping the number of affected firms around 30%. By the end of our sample period, the average proportion of firms incorporated in states with a directors' duties law is about 25%.

Panel B of Table 3 shows the summary statistics for our main dependent, independent, and interacted variables partitioned by treatment status, where we consider a firm as part of the treated group if its incorporation state has a directors' duties law in place and, otherwise, as part of the control group. In particular, we provide the mean, standard deviation, and number of observations for each cohort of firm-year observations, as well as the differences across the two groups with corresponding *t*-statistics to indicate if those differences are significant. As shown by the second-to-last and last column, all of the main dependent and independent variables, with the exception of *Firm Liquidity*, are significantly different across the treated and control groups at the 5% significance level or higher. Thus, Panel B of Table 3 underscores the importance of controlling for these covariates in our baseline pooled panel regressions.[14] We do so in subsection 6.2, where we provide evidence that these differences in the pooled panel are not driving our main results through the use of a propensity score matched sample based on nearest neighbor matching.

5. Identification Strategy and Methodology

To investigate the corporate value implications of directors' duties law on covered firms, we primarily employ a staggered differences-in-differences research design (following Bertrand, Duflo, and Mullainathan, 2004). A key working assumption of this methodology is that the enactment of directors' duties laws created exogenous variation in the scope of director authority

[14] Panel C of Table 3 provides full sample summary statistics for additional dependent and interacted variables used in auxiliary tests.

and stakeholder protection. Therefore, an essential step in providing evidence for the exogeneity of our identification strategy is to examine whether state legislatures were more likely to enact directors' duties laws conditional on the ex-ante value of companies incorporated in their jurisdictions. In particular, if we were to find that states with ex-ante higher (lower) valued firms were more likely to adopt directors' duties laws, this would raise a reverse causality concern and thus challenge our identification assumption. Further, our identification strategy could also fail to meet the exclusion restriction if the changes in firm value and the enactment of these laws were spuriously correlated with underlying state-level economic and institutional conditions.

To address these concerns, we estimate a linear probability model to investigate if the adoption of directors' duties laws is predicted by pre-determined state-of-incorporation level averages of firm and industry characteristics, macroeconomic and institutional conditions, and unobserved time-invariant factors within the incorporating state and within the year (i.e., fixed effects for state of incorporation and year). We exclude all firm-year observations from the sample after their state of incorporation adopts a directors' duties law (i.e., a "failure event" takes place). This analysis is performed on our main dataset over the period 1983 to 2015. We estimate robust standard errors based on independent double clustering at the incorporation state and year level, which results in the more conservative standard error than clustering on either one of these dimensions only. Finally, as indicated in our data section, all of our predictor variables are pre-determined, as we lag each by one year, and all continuous variables are standardized to have a mean of zero and unit variance in order to facilitate easy comparisons across coeffcients.

Table 4 presents estimates of the marginal effect of each predictor variable on the adoption of a directors' duties law. In column (1), we include three variables related to ex-ante firm value at the state of incorporation and industry level: the average level and average change in *Q* within the

incorporation state, and the mean three-digit SIC code industry level of *Q* within an incorporation state. In this first specification, we do not find any of the marginal effects, whether in levels or changes, to be significant predictors of the enactment of directors' duties laws. This suggests that there were no pre-trends in firm value. Moving to column (4), we include additional predictors capturing incorporation state-level averages of firm characteristics, as well as macroeconomic and institutional conditions. From this fourth specification, we find that the only significant (and positive) predictor of the adoption of directors' duties law is whether the adopting state has already enacted a fair price law.[15] Lastly, in a test to examine if states with pre-determined levels of stakeholder intensity are more likely to adopt a directors' duties law, we include incorporation state-year averages of proxies for these relationships in column (5). Again, however, we only document a significant relationship between previously enacted fair price laws and the adoption of directors' duties legislation.

Therefore, we conclude that, overall, we do not find evidence invalidating the exclusion restriction of our identification strategy, but rather we document results that are consistent with our central assumption that the introduction of directors' duties laws provides an exogenous shock to the scope of director authority and stakeholder protection.[16]

[15] We also document that out of the 27 states with fair-price laws (FPL), 74 percent adopted directors' duties laws (DDL) either in the same year (7 states) or later (13 states). Finally, only 3 states with FPL do not have DDL. A plausible explanation for the evidence that FPL are a positive predictor of DDL is that FPL and DDL can be considered weak form of anti-takeover protection compared to other anti-takeover laws, such as business combinations laws and poison pill laws. Further, DDL and FPL share the common feature of providing for permissive rather than mandatory language, so that a board can decide to opt out of a fair price provision, as it can decide *not* to consider stakeholder interests even when the firm is covered by a directors' duties law.

[16] We provide additional evidence for the validity of our identification strategy in subsection 6.1 by investigating the timing of the change in firm value relative to the timing of the effective date of directors' duties law. We present these results after first documenting that directors' duties laws are value relevant. However, for the purpose of this subsection, we briefly note our evidence from Figure 3 and Table 6 that the impact of a directors' duties law on *Q* transpires *after* the effective date of the laws and not before. This offers some reassuring evidence that the value of firms incorporated in enacting and non-enacting states would have evolved in a similar fashion absent the mandate of this legislation (i.e., the parallel trends assumption likely holds).

Moving to discuss our methodology in more detail, we primarily use a pooled panel regression model with Tobin's Q as the dependent variable and an indicator variable for whether a firm's state of incorporation has an effective directors' duties law as the main explanatory variable. In all our specifications, we include firm fixed effects (following Gormley and Matsa, 2014) to control for time-invariant unobserved heterogeneity within different firms and exploit the time-series dimension of our panel, and we cluster the standard errors by firm (consistent with Petersen, 2009).[17] The baseline specifications also control for various firm characteristics and four additional antitakeover legislation dummies (Karpoff and Wittry, 2018). Some of our models, however, exclude all controls (as outlined in Section 4.1), because some of these controls are also likely impacted by directors' duties laws and could thus bias our coefficient estimates (as discussed in Roberts and Whited, 2013).

We further estimate two alternative specifications, which either include year fixed effects or industry-year fixed effects. The first approach captures the value implication of a directors' duties law for firms incorporated in the enacting state relative to all firms unaffected by such legislation. The second approach allows us to test the impact of a directors' duties law on a corporation's *Q* relative to the *Q* of firms competing in the same industry but incorporated in states without similar laws. Including such high-dimensional fixed effects provides additional robustness to our methodology, allowing us to effectively control for common sources of industry or time-dependent unobserved heterogeneous variation (Gormley and Matsa, 2014, 2016; Catan, 2017; Karpoff and Wittry, 2018).

[17] The choice to cluster standard errors by firm is essentially motivated by our interaction analysis as most of the interacted variables are at the firm level. However, all of our results remain robust when we cluster at the state level. In general, clustering the standard errors at the state level tends to improve statistical significance. In a few cases, statistical significance marginally reduces, but always remains within the limits of the confidence intervals specified in the tables. Overall, clustering at the firm level is a more conservative strategy.

6. Directors' Duties Laws and Firm Value

6.1 Pooled Sample

Table 5 begins our examination of the value relevance of directors' duties laws by reporting estimates from differences-in-differences pooled panel regressions of *Q* on a *Directors' Duties Law* indicator variable over the period 1983 to 2015. In each column, we include firm fixed effects and estimate robust standard errors, clustered by firm. Further, columns (1) – (4) include year fixed effects, whereas the last column replaces the year fixed effects with Fama-French 49 industry-year fixed effects. In columns (3) – (5), we include our baseline firm characteristic controls (*Size*, *Ln(Age)*, *HHI*, *Sales Growth*, *Loss*, *Debt-to-Equity*, *Firm Liquidity*, *CAPX/Assets*, *R&D/Sales*, and *Inst. Ownership*), as well as *State-Year Q*, and *Industry-Year Q*. Further, columns (2) and (4) – (5) include additional indicator variables for other state antitakeover laws.

In column (1), we find that firms incorporated in a state that adopts a directors' duties law experience an increase in *Q* of 5.9 percentage points relative to firms incorporated in states without such legislation. This represents an economically significant increase of 3.1% (=0.059/1.918) relative to the sample mean's *Q*. The regression specification in column (4) confirms that directors' duties laws have positive value implications, as affected firms have *Q*s that are 6.3 percentage points higher than those of firms incorporated in unaffected states. This represents an economically significant increase of 3.3% (=0.063/1.918) relative to the sample mean's *Q*. We find similar evidence in column (5) when controlling for unobserved time-varying heterogeneity related to a firm's Fama-French 49 industry, with an economically significant increase in *Q* of 3.5% (=0.067/1.918) relative to the sample mean. This increase in economics magnitudes, from column (1) to columns (4) and (5), is consistent with the evidence in Karpoff and Wittry (2018),[18] whereby

[18] This increase in coefficient magnitude is also likely due to a reduction in estimation noise, since many of the directors' duties laws were adopted in the same year as one or more of the other antitakeover statutes. Thus, including

neglecting other important state antitakeover factors can create an omitted variable bias (which in the case of our findings attenuates our estimates toward zero).[19]

We next move to studying the timing of changes in firm value relative to the timing of directors' duties laws. These tests are especially relevant for assessing the validity of the main assumption underlying our identification strategy, namely whether firms incorporated in both affected and unaffected states have similar trends in firm value in the years before a directors' duties law is adopted.

Following Acharya, Baghai, and Subramanian (2014) and Serfling (2016), we first create Figure 3, where in Panel A we regress *Q* on year fixed effects, indicators for other state antitakeover laws, and dummy variables signifying the year relative to the effective date of the directors' duties laws. We create these dummies for up to 10 years before and after a directors' duties law becomes effective, with the final dummy equal to one if 10 or more years have elapsed since the introduction of the directors' legislation. We plot the corresponding coefficient for the $\pm$ five relative year dummies, as it varies across the time relative to the effective date of the laws. In order to indicate statistical significance on the figure, we include 90% confidence intervals (i.e., significance at 10% level) for the regression estimates, constructed from robust standard errors clustered by firm, and plot triangular markers when the coefficient's confidence interval is different from zero (i.e., where we reject the null hypothesis at 10% significance level). Panel B of Figure 3 repeats this approach except that we also include industry-year fixed effects (as in Catan, 2017).

these additional indicators allows our model to more accurately separate the effect of the directors' duties laws from the other statutes.

[19] In Table A1 of the online appendix, we also isolate the differential effect of directors' duties laws on the value of S&P 500 firms. Our results remain economically and statistically significant. For example, in our baseline regression specification (in column 4), we document that a directors' duties law differentially increases the *Q* of S&P 500 firms by 6.4% (=0.123/1.918), relative to the sample mean.

Both panels show that covered firms had similar *Q*s as firms in the control group in the five years prior to the effective date of the directors' duties laws. In contrast, as shown by Panel B, the 90% confidence intervals do not contain zero after the laws become effective, suggesting that firm value is significantly higher for the covered firms afterwards. Therefore, overall, Figure 3 suggests that covered firms share similar pre-treatment trends with uncovered firms, while there is a clear post-event trend in value for the covered firms, relative to the control group after the legislation becomes effective. This graphical evidence is consistent with our main identifying assumption of the difference-in-differences research design that the ex-ante movements or pre-trends in the average *Q* of the treated and control groups are parallel.

Next, in Table 6 we consider the dynamics of the documented positive relation between directors' duties laws and *Q* by using the following three indicator variables surrounding the effective date of the laws. First, we construct a placebo test by falsely assigning affected status to firms incorporated in states with directors' duties laws one year before the legislation actually becomes effective, and label this placebo dummy as *Directors' Duties Law*$^{[-1]}$. Second, we create the dummy *Directors' Duties Law*$^{[0]}$, which indicates affected status the year a directors' duties law actually becomes effective in the firm's state of incorporation. Third, we use *Directors' Duties Law*$^{[+1]}$, which we set equal to one if a company is incorporated in a state with a directors' duties law that has been effective for one or more years. Substituting these three indicator variables for the main independent variable, *Directors' Duties Law*, we then run analogue models to those in columns (1) – (5) of Table 5.

In all five columns of Table 6, we find a lack of statistical and economic evidence for the placebo estimate (i.e., the coefficient of *Directors' Duties Law*$^{[-1]}$), whereas the effect of *Directors' Duties Law*$^{[+1]}$ is always positive and both statistically and economically significant. Overall, we

find evidence consistent with our research design's main assumption of parallel trends, as firms in both enacting and non-enacting states have insignificantly different values prior to the effective date of the laws, whereas the companies incorporated in the enacting states experience increases in value after the laws become effective.

As a final test in this subsection, we examine the time series dimension of the documented relation between firm value and directors' duties laws. We perform this analysis by regressing changes-in-*Q* on the first difference of our main explanatory variable, *Directors' Duties Law*. To measure the change in firm value, we subtract the value of *Q* at the end of the fiscal year when the directors' duties law first becomes effective in the firm's state of incorporation from the subsequent value of *Q* one to five years later. The pooled panel regression estimates in Table 7 confirm that firm value increases for covered firms, showing a monotonic increase in the change in *Q* as the coefficients gradually increase in magnitude across the five columns (see, for instance, the point estimates of columns (1) [0.047], (3) [0.068], and (5) [0.091]). This progressive increase in firm value is also consistent with the coefficient plots in Figure 3 for relative years one, two, and five.

6.2 Matched Sample

We now shift to assessing the reliability of these findings in a matched sample. Indeed, because we employ a long panel (33 years of firm-year observations in our pooled sample), some other unobserved confounding events or differences in ex-post observed (see Panel B of Table 3) and unobserved firm characteristics might be correlated with both the adoption of directors' duties laws and firm value, potentially creating a spurious correlation between *Q* and *Directors' Duties Law*. Further, corporations more (less) reliant on stakeholder relationships and long-term

investments might self-select into (out of) states with directors' duties legislation, making the control group of firms a poor counterfactual for testing the causal effect of these laws.

In constructing our matched sample, we consider treated and control firms with equidistant pre- and post-estimation windows surrounding the 35 effective dates of directors' duties laws. In particular, we match all sample firms in each of the states that adopted a directors' duties law to a control firm in a state that does not have such legislation during the five-year period after the directors' duties law becomes effective in the treated firms' incorporation state. This matching procedure is conducted in the year prior to the effective date of each of the 35 directors' duties laws.[20] We initially use propensity scores with nearest neighbor matching on *Q*, and *Size*, as well as the following proxies for stakeholder relationships and long-term investments to address the concern of a self-selection effect: *Supplier Dependency, Unsecured Debt,* and *Ln(Patents)*. In addition, we use exact matching on two-digit SIC codes, and *Strategic Alliance* (all as defined in Table 1).

Panel A of Table 8 presents the pre-treatment year summary statistics for the resultant matched sample. Columns (1) and (2) show the means and standard deviations (in parentheses) of the matching variables, as well as other covariates, for the treated and control firms. We then present the differences between the treated and control group variables and corresponding *t*-statistics (in parentheses) in column (3). This panel shows that the treated and control groups are insignificantly different from one another for each of these characteristics. Hence, our matched sample mitigates the two main concerns surrounding our pooled panel approach discussed above. Panel B of Table

[20] Whereas we ex-post find some statistically significant difference between the treated group and the control group, we also include other matching variables. In particular, we also included *Ln(Age), Loss,* and *Inst. Ownership* once we noticed that not matching for these variables determined a statistically significant difference between the treated and control groups across these dimensions.

8 reports the means, standard deviations, and medians of the matched and other control variables used in our full matched sample.

Table 9 provides the matched sample differences-in-differences estimates of a *Treated* × *Post* interaction term on *Q*, where *Treated* is always equal to one for firms incorporated in a state with a directors' duties law, and zero otherwise, and *Post* is set equal to one in the year of, and the three years after, the enacting states' effective date, and zero in the period before. We include firm and year fixed effects in all four columns, but exclude the *Treated* indicator due to its multicollinearity with firm fixed effects, and estimate standard errors with firm-level clustering. Columns (2) and (4) append dummies for the other antitakeover law controls, while columns (3) and (4) also specify the baseline controls for firm and industry characteristics.

In column (1), without including the control variables, we find that the treated firms experience economically and statistically significant increases in *Q* of 6.4 percentage points relative to the matched control firms over a ± three-year estimation window.[21] This represents a substantial 4% (=0.064/1.583) increase in firm value relative to the matched sample average value of *Q* of 1.583.[22] Consistently, when we estimate the fully specified baseline matched sample regression in column (4), we document a relative increase of 4.7% (=0.074/1.583) in *Q* relative to the control firms. This increase in magnitude from column (1) to column (4) is almost entirely driven by the addition of the other antitakeover law controls. Again, this is consistent with Table 5 (and Karpoff and Wittry, 2018), which shows that excluding controls for anti-takeover laws creates a negative bias that

[21] Table A2 of the online appendix documents qualitatively similar results for varying estimation windows of ± four, five, and six years.

[22] The matched sample average *Q* is noticeably different from the average in the pooled panel. This is an artifact of both increasing *Q*s over time, and the majority of the directors' duties laws being enacted, and thus matched, earlier in the time series (1984-1990).

attenuates our estimate toward zero. In sum, we find robust evidence in our pooled panel and matched sample *Q* regressions that directors' duties laws increase firm value.[23]

6.3. Portfolio Analysis

As a further robustness check to our pooled panel regressions, we consider if our finding of a positive and significant effect of *Directors' Duties Law* on *Q* is robust to an alternative measure of changes in firm value: equity returns. To carry out this test, we perform a long-run event study of equity returns surrounding the effective date of a directors' duties law. Following prior work (Gompers, Ishii, and Metrick, 2003; Bebchuk, Cohen, and Ferrell, 2009; Cremers and Ferrell, 2014; Cremers, Sepe, and Litov, 2017; Cremers, Guernsey, Litov, and Sepe, 2018), we create long and short portfolios of stocks from the matched sample's treated and control firms around the time directors' duties laws become effective. Table 10 reports the respective abnormal returns of equally weighted portfolios for the long, short, and long-short investment strategies.[24]

We find consistent evidence across three different holding periods, "6m12", "6m24", and "12m24", and two separate specifications, the four-factor Carhart (1997) and three-factor Fama-French (1993) models, that firms incorporated in treated states experience positive and significant abnormal returns, while the control group does not. For instance, when we long stocks of treated firms 12 months before the effective date of directors' duties laws covering such firms to 24 months after it ("12m24"), we find an annualized abnormal return of 4.2% (6%) using the four-factor (three-factor) model. In contrast, shorting control group stocks for a similar investment horizon, with either of the two risk-adjustment approaches, does not result in significant abnormal stock returns. Further, when we combine these two portfolios in a long-short mixture, we show

[23] Additionally, we show in Table A3 of the online appendix that the quasi-monotonic relation between changes in firm value and directors' duties laws in the pooled sample (presented in Table 7) also holds in the matched sample.
[24] We provide results for value weighted portfolios in Table A4 of the online appendix. The estimated abnormal returns from these specifications are qualitatively similar in magnitude and significance to those in Table 10.

evidence of a positive and significant annualized abnormal return of 3.9% for the four-factor model, and 5.2% using the three-factor approach. Overall, we conclude that the documented positive relation between directors' duties laws and firm value is robust to using abnormal stock returns.

7. The Channels of Value

Having established evidence that the introduction of directors' duties laws is positively related to firm value, we now turn to examining possible explanations for how enhanced director authority to consider stakeholder interests, as enabled by the passage of these laws, may contribute to firm value. Consistent with the traditional focus of the finance literature on the takeover implications of directors' duties law, we begin by considering the "bargaining power hypothesis" of Stulz (1988) and Harris (1990). This hypothesis suggests that enhancing the bargaining power of directors in a takeover context – in this case, based on the directors' ability to consider also the interests of stakeholders – enables directors to obtain a higher purchasing price for the benefit of the target's shareholders.

We further consider two additional – and, in our view, complementary – hypotheses. The first is the "bonding hypothesis," which poses that increased director power to protect stakeholders from the threat of a takeover can bond stakeholders more closely to the firm, thereby decreasing a firm's contracting costs and improving long-term firm value (Shleifer and Summers, 1988 and Laffont and Tirole, 1988).

The second is the "stakeholder orientation hypothesis," which focuses on the broader implications of directors' duties laws for the purpose of the firm debate and the relevance of shareholder vs. stakeholder interests in ordinary corporate decision-making rather than just in the takeover context. In particular, in the recent theoretical model proposed by Magill, Quinzii and

Rochet (2015), firms – especially if large, more complex and more innovation-intensive – are exposed to endogenous risks created by their investments, while these investments may fail (likely due to the inadequate allocation of resources to appropriate precautions) and adversely affect a firm's stakeholders (e.g., employees through lower wages, customers through higher product prices). Within this framework, enhanced director authority to consider stakeholder interests help internalize the externalities derived from a firm's endogenous risks, increasing a firm's investments in precautions and leading to more efficient production to the benefit of all stakeholders, including shareholders.

7.1 M&As

In this subsection, we consider if the positive relation we document between firm value and directors' duties laws might be explained by an increase in the "bargaining power" for target firms incorporated in the enacting states (Stulz, 1988; Harris, 1990). Directors' duties laws provide a target's boards of directors with this power by increasing directorial discretion in takeover negotiations, since under these laws directors can defend against an acquisition bid based on the consideration of the interests of all stakeholders, rather than being legally obligated to only consider shareholder interests. To test this potential M&A channel of value, we analyze both takeover likelihoods and the target acquisition premium.

We first test the bargaining power hypothesis by examining the effect of directors' duties laws on the propensity for affected firms to receive a takeover bid, as well as its impact on the likelihood of successful completion of a deal. We measure takeover bids (*Bid*) and completed deals (*Completed*) using data from the SDC M&A and CRSP (delisting codes) database. In particular, *Bid* is an indicator variable set to one if a target firm announces that it has received a bid in the SDC M&A database or has a delisting code in the 200s in the CRSP database, and equal to zero

otherwise. *Completed* is a dummy variable equal to one if a company announces that a deal has been completed in the SDC M&A database or is assigned a delisting code in the 200s in the CRSP database, and is set to zero otherwise.[25] Each specification includes three-digit SIC code industry fixed effects and all of the controls in our baseline *Q* regression model. Finally, we estimate robust standard errors clustered by firm.

In columns (1) and (2) of Table 11, we find that the coefficient on *Directors' Duties Law* is an insignificant predictor of whether a target firm receives a bid. That is, companies incorporated in states with a directors' duties law are equally likely to receive a takeover bid as companies in states without these laws. We document similar results in columns (3) and (4), when we specify *Completed* as the dependent variable. These findings are consistent with those in Karpoff, Schonlau, and Wehrly (2018), who also document a lack of evidence that directors' duties laws deter takeover likelihood for the covered firms.

The evidence in Table 11, however, cannot, by itself, verify or reject the bargaining power hypothesis of directors' duties law, although it constitutes a necessary step toward that goal. The required additional step is verifying whether target firms that are covered by directors' duties laws experience increases in value.

In Table 12, we accordingly explore the value implications for target firms incorporated in enacting states, using two sets of tests. First, in Panel A, we regress three measures of takeover premia on the *Directors' Duties Law* indicator variable. These measures come from the SDC M&A database and include the *1-Day Premium*, *1-Week Premium*, and *4-Week Premium*, measured as the percentage difference between the offer price relative to the target's respective closing price 1-day, 1-week, and 4-weeks prior to the announcement date. In all of these specifications, we include

[25] We apply the following data filtering process in constructing our takeover likelihood sample: U.S. target firms, with deal sizes of at least $100 million and bids that are for at least a 50% controlling stake.

Fama-French 49 industry fixed effects and cluster our standard errors by firm. In each of the six columns in Panel A of Table 12, we find that the affected firms do not experience increases in their 1-day, 1-week, or 4-week premiums relative to the unaffected firms, inconsistent with the bargaining power hypothesis of directors' duties laws.

As a robustness test to Panel A, we also consider an alternative test of the value effect of directors' duties laws on target firm value. In Panel B, we proxy for the target firms' risk of being acquired (*M&A Activity*) and interact this proxy with the *Directors' Duties Law* indicator to gauge any heterogeneous effect on *Q*. In particular, we use two alternative proxies for *M&A Activity*. First, we proxy for the risk of acquisition using *Inc. State-Year M&A Volume*, which is measured as the ratio of completed M&A dollar volume to total market capitalization per state of incorporation in a given year (Cremers, Guernsey, Litov, and Sepe, 2018). Our second proxy variable is *Industry-Year M&A Volume* and is defined as the ratio of completed M&A dollar volume to total market capitalization per Fama-French 49 industry in a given year (Cremers, Litov, and Sepe, 2017). Each of our four specifications in Panel B include firm and year fixed effects, financial and industry characteristic controls, and standard errors robust to heteroscedasticity and autocorrelation with clustering performed at the firm-level. Additionally, the even-numbered columns also include controls for the other four antitakeover law dummies.

In each of the four columns, our regression estimates indicate a lack of evidence for the bargaining power hypothesis, as none of the interaction terms is statistically significant on *Q* for target firms incorporated in the enacting states. In sum, the totality of evidence from Tables 11 and 12 suggest that it is unlikely that directors' duties laws create value by increasing the negotiating ability of a target firm's board of directors, thereby rejecting the bargaining hypothesis.

7.2 The Bonding Hypothesis and the Stakeholder Orientation Hypothesis

In the next three subsections, we investigate whether the bonding hypothesis of takeover defenses and/or the broader stakeholder orientation hypothesis might explain the positive relation between *Q* and directors' duties laws. While these hypotheses tend to overlap, especially in their empirical verification, the first subsection focuses, in particular, on the bonding hypothesis, the second on the stakeholder orientation hypothesis, and the third covers tests that apply to both hypotheses.

7.2.1 Firm Policy and Innovation, Financial Soundness and Profitability

Under the bonding hypothesis of takeover defenses, these defenses enable directors to credibly bond a firm to long-term strategies that involve firm-specific stakeholder investments, startegies that would be at risk of reversal if the firm was acquired by another organization. Innovation provides the classic example of such firm-specific investments. The stability added by takeover defenses would then promote better firm performance. To test if this applies to the anti-takeover implications of directors' duties laws, we consider the effect of these laws on corporate policy expecting to find an increase in innovation as well as improved firm performance.

We first consider changes in the size of the firm's assets (*Size*), as well as changes in financial leverage (*Debt-to-Equity*) and capital expenditure (*CAPX/Assets*). We then proxy for long-term investments in innovation using *R&D/Sales* and citation-weighted patents, measured by the natural logarithm of one plus citation-weighted patents (*Ln(CW Patents)*). The first four of these measures are constructed from financial data on Compustat, whereas the patent data comes from the United States Patent Office (USPTO) and are available from 1926 to 2010.[26] Moreover, since directors' duties laws likely affect policy and innovation with a lag, we lead the dependent variables by one year (t+1).

[26] This data is publicly available on Noah Stoffman's website.

Panel A of Table 12 presents the pooled panel estimates from regressing each of the above five policy and innovation variables on *Directors' Duties Law*. In each of these columns, we include our baseline set of controls and firm and year fixed effects. From columns (1) – (3), we do not find evidence that directors' duties laws lead to significant differences in standard corporate policy variables. However, as predicted by the bonding hypothesis, we document positive and statistically significant increases in the covered firms' next year research and development expenditure, and citation-weighted patents (consistent with Atanassov, 2013 and Flammer and Kacperczyk, 2015). For instance, in column (4), we find that after a firm is covered by a directors' duties law, next year's *R&D/Sales* increases by 2.1% (=0.001/0.048) relative to the sample mean value of 0.048.

Next, we assess the overall financial soundness of covered firms, conjecturing that firms that are arguably better able to commit to more stable corporate strategies and stakeholder investments via the access to enhanced director authority are more likely to have better financial health. In particular, because under the bonding hypothesis creditors should be less at risk of being subject to wealth expropriations in favor of shareholders (Smith and Warner, 1979) when directors have more discretion to consider non-shareholder interests, this should especially improve a firm's financial soundness.

We measure financial soundness using three proxy variables. The first proxy is an indicator variable equal to one if a company has negative net income in a given year (*Loss*), and zero otherwise (Cain, McKeon, and Solomon, 2017). The second is *Default Risk*, which is a dummy equal to one if a firm has a modified Z''-score below the sample-year median, and zero otherwise. Lastly, we use *Short-Term Debt* defined as the percentage of short-term debt to total debt (Bowen, DuCharme, and Shores, 1995).

Panel B of Table 13 includes three columns for the three different dependent variables, all of which control for the baseline covariates and firm and year fixed effects. Similar to Panel A, we consider the impact of directors' duties laws on next year's financial soundness (t+1). We, again, document empirical evidence consistent with the bonding hypothesis as all three proxies for financial soundness improve for the covered firms as compared to the uncovered firms. For instance, column (2) suggests that corporations covered by a directors' duties law are 2.6% less likely to have a modified Z''-score below next year's sample median.

In our final test in this subsection, we evaluate whether the above documented increases in innovation and financial soundness translates into higher operating profits. We use three measures of profitability: return on assets (*ROA*), return on equity (*ROE*) and return on capital employed (*ROCE*). Each of the three dependent variables is led by one-year, and all models include the baseline controls and firm and year fixed effects. From each of these specifications, we find evidence that *Directors' Duties Law* are associated with an increase in profitability. Specifically, in column (1), we show that next year's *ROA* is 7% (=0.008/0.114) higher, relative to the sample median value of 0.114, for firms incorporated in states with a directors' duties law. We thus conclude that Table 13 provides evidence consistent with the bonding hypothesis of takeover defenses.

7.2.2 Complexity, Endogenous Risk and Firm Value

In this subsection, we continue our evaluation of the sources of value of directors' duties laws by considering their heterogenous effects on companies that are larger, characterized by operational complexity and involved in long-term investment projects. According to Magill, Quinzii, and Rochet (2015), these firms can arguably be expected to have greater levels of investment activity and hence be more exposed to endogenous risks that may lead to externalities

toward non-shareholder constituencies. We therefore conjecture that if the stakeholder orientation hypothesis can explain the value added by the introduction of enhanced director discretion to consider stakeholder interests, this value should be more prominent for this subset of firms.

As shown by Table 14, we begin our investigation by first performing triple difference estimates of the effect of directors' duties laws for more informationally complex firms on value. We proxy for complexity using the following three measures: (i) *Large Firm*, an indicator variable set equal to one if a company's *Size* is in its four-digit SIC code sample's top quartile, in a given year, and zero otherwise; (ii) *Firm Sales*, that is the natural logarithm of sales revenue (as in Cremers, Litov, and Sepe, 2017); and (iii) company *Size*. Columns (1) – (6) include the baseline controls, and firm and year fixed effects, whereas the even-numbered columns also control for other antitakeover laws.

Consistent with the theoretical predictions of Magill, Quinzii, and Rochet (2015), we find evidence in columns (1) – (6), that giving the board enhanced discretion to consider stakeholder interests yields a stronger effect for large, more complex firms. For instance, in column (1), we show that the largest companies in a given four-digit SIC code industry experience an additional differential increases in *Q* of 2.5% (=0.048/1.918) relative to the sample mean. Similar results are confirmed in columns (4) and (6), as covered firms with a one standard deviation increase in *Firm Sales* and *Size* experience an additional increase in value of 3.7% (=0.032×2.197/1.918) and 3.9% (=0.037×2.027/1.918) relative to the respective sample mean.[27]

Next, we investigate the heterogenous value implications for corporations that are more engaged in long-term investments, using four empirical proxies. The first measure is *R&D/Sales* (Bushee, 1998; Chan, Lakonishok, and Sougiannis, 2001; Eberhart, Maxwell, and Siddique, 2004).

[27] These results are also consistent with those in footnote 19, where we report results that S&P 500 firms experience economically and statistically significant increases in *Q* after becoming covered by an effective directors' duties law.

Second, we create the variable *Investment Rate* as the sum of capital expenditures and acquisitions minus the sale of property, divided by the book value of assets (Sanati, 2017). The third proxy for long-term investments is innovation that results in patent citation, as defined by the natural logarithm of one plus citation-weighted patents *(Ln(CW Patents)* (Hall, Jaffe, and Trajtenberg, 2005; Atanassov, 2013a; Kogan et al., 2017). The last proxy is *Research Quotient* (as proposed in Knott, 2008), which measures the output elasticity of R&D, and is provided on WRDS in the Research Quotient database.

Table 15 shows our results. Columns (1) – (4) include our full set of baseline controls, and firm and year fixed effects. Consistent again with the theoretical predictions of Magill, Quinzii, and Rochet (2015), Table 15 indicates that when boards of directors are given enhanced authority, firms that are more engaged in long-term innovation, and hence have greater exposure to endogenous risks, benefit more. For example, in column (1), we find that a one standard deviation increase in *R&D/Sales* results in an economically significant additional increase in *Q* of 5.2% (=1.153×0.086/1.918), relative to the sample mean. Similar results are found in column (3), when we inspect the effect of directors' duties laws on firms reliant on novel innovation, as affected companies with citation-weighted patent portfolios in the 75th percentile of the sample distribution experience additional increases in value of 3.2% (=0.031×1.029). We therefore conclude that the evidence in Table 14 and 15 supports the stakeholder orientation hypothesis of directors' duties laws.

7.2.3 Stakeholders and Firm Value

Our last set of tests concerning the channels through which directors' duties laws may affect firm value explores whether covered firms with important stakeholder relationships experience differential gains in value. As these additional tests focus more generally on the importance of

protecting stakeholder relationships in firms where those relationships plausibly matter the most, they arguably serve to verify both the bonding hypothesis and stakeholder orientation hypothesis of directors' duties laws.

We first use four proxies to capture firms where investments by *non-financial* stakeholders are likely to matter more. The first proxy, *Strategic Alliance*, is constructed to indicate whether a firm has a long-term partnership with another firm (following Bodnaruk, Massa, and Simonov, 2013). We create this variable by setting it equal to one in all firm-years in which the firm participates in an active strategic alliance, and, otherwise giving it a value of zero (Johnson, Karpoff, and Yi, 2015; Fich, Harford, and Yore, 2017). The second is *Large Customer*, which also is an indicator. This variable equals one if a firm's percentage of customer sales, based on the Compustat segment level database, is above the sample average, and zero otherwise. The third is *Supplier Dependency*, which captures the dependency of a company on its suppliers and is defined as the product of the supplier's R&D expenditure and the fraction of sales to the customer, scaled by the supplier's book value of assets (following Kale and Shahrur, 2007; Raman and Shahrur, 2008; and Phua, Tham, and Wei, 2017). The fourth proxy is *Labor Intensity*, which captures how intensely businesses rely on their human capital and is measured as the number of employees divided by real sales revenue (Dewenter and Malatesta, 2001), where we adjust sales in (inflation-adjusted) 2015 dollars.

Table 16 presents the pooled panel regressions of *Q* on our four proxies for stakeholder relationships over the period 1983 to 2015. In each of the models (1) – (4), we include our full set of baseline controls, firm and year fixed effects, and estimate robust standard errors with clustering by firm. Consistent with our conjectures under both the bonding hypothesis and the stakeholder orientation hypothesis, we find in column (1) that firms incorporated in states with a directors' duties law and in a *Strategic Alliance* experience an additional increase in *Q* of 6.9%

(=0.133/1.918) relative to the sample mean. Similarly, column (4) shows that a one standard deviation increase in *Labor Intensity* yields a 1.2% (=0.039×0.313) additional gain in *Q* for covered firms.

Next, we focus on *financial* stakeholders other than shareholders, that is, creditors, under the more specific conjecture that creditors are especially subject to the risk of wealth expropriation when directors are mandated to exclusively maximize shareholder wealth, due to the well-known asset substitution problem (Smith and Warner, 1979). Along similar lines, creditor interests are also especially threatened by a potential change in control, due to the leverage restructuring plans often triggered by takeovers and related claim dilution issues (Smith and Warner, 1979).

We investigate the heterogenous effects on creditors by interacting *Directors' Duties Law* with four proxies for the importance of stakeholder-creditors.[28] These proxies are: (i) *Unsecured Debt*, defined as the ratio of unsecured debt to total debt (Valta, 2016); (ii) *Industry CF Risk*, defined as the standard deviation of operating cash flows for a three-digit SIC code industry over seven-year rolling windows (Serfling, 2016); (iii) *Creditor Reliance*, an indicator variable for the reliance of a firm on creditors, which is set equal to one for a firm with a debt-to-equity ratio greater than the sample year median, and zero otherwise; (iv) *Default Risk*, defined as in subsection 7.2.1.

Table 17 reports the results of our regressions for specifications that include our baseline controls, and firm and year fixed effects in each column. Providing further evidence for both the bonding hypothesis and the stakeholder orientation hypothesis, column (1), for example, shows that affected firms with greater levels of unsecured debt experience differential gains in value. In

[28] We also test the differential value effect of directors' duties laws for involuntary creditors in Table A5 of the online appendix. We hypothesize that firms operating in manufacturing and products-based industries are more likely to cause potential damage to consumers and other involved parties, and thus giving directors' the authority to consider these stakeholders will reduce the externality to a subset of involuntary creditors that corporate decisionmaking may create. While this is a relatively crude approach, we do find that affected firms operating in manufacturing and products industries experience gains in *Q* relative to firms without such legislation and to both affected and unaffected firms operating outside of these industries.

particular, a one standard deviation increase in *Unsecured Debt* yields a positive increase in *Q* of 2.1% (=0.052×0.405). Similarly, column 4 shows that one standard deviation increase in *Default Risk* results in an additional increase in firm value of 3.5% (=0.070×0.499) for corporations covered by a directors' duties law.

We conclude that, overall, a likely driver of the positive relation between *Q* and *Directors' Duties Law* is these laws' attribution to the board of greater authority and, in particular, authority to consider the interests of all stakeholders when making important business decisions, including decisions about potential acquisitions and risky long-term or innovative investments. Indeed, the evidence across Tables 13 – 17 suggests that expanding board authority serves the interests of all stakeholders, including the shareholders, by both bonding a firm's stakeholders more closely and moderating the externalities that might be created by a firm's endogenous risks.

8. Legal Heterogeneity and the Common Law

Up to this point in our analysis, consistent with the common approach of prior studies that have examined directors' duties laws, we have assumed that each of these laws provides boards with a similar level of enhanced authority. Using this approach, we document a strong and robust relation between the enactment of these laws and firm value. However, in actuality, as discussed in section 2, the strength of the enhanced authority granted by directors' duties laws to a board of directors varies across states. In particular, this strength depends on whether the related defensive claim attributed to the directors (i.e., against a fiduciary action by the shareholders) can trump Delaware's enhanced duties requirements, as established in *Unocal* and *Revlon*, respectively. Recent studies that have examined this issue (using the history of case law on directors' duties laws in the various enacting states) have concluded that substantial variation exists both between

different states and relative to Delaware (Barzuza, 2009; Geczy, Jeffers, Musto, and Tucker, 2015; Cain, McKeon, and Solomon, 2017).

Consistent with this conclusion, in this section we try to separate the average effect of the directors' duties legislation found in the main specification by measuring the relative strength of the different laws. We do so by creating a directors' duties strength index (*DDS-Index*) that aims to capture heterogeneity in the enhanced board authority enabled by directors' duties laws in different states (and relative to Delaware). That is, the *DDS-Index* can be interpreted as capturing the strength of a board's "local" authority.

Panel A of Table 18 describes the construction of the *DDS-Index*. Following Barzuza (2009) in determining the relative strength of directors' duties laws against the benchmark of Delaware's enhanced duties, we assign to each enacting state a value ranging from zero to three, where a higher value denotes greater relative authority bestowed to the board of directors by a directors' duties law. For example, when an incorporating state has a directors' duties law, but this law does not explicitly provide for the protection of the business judgement rule (BJR) or does not explicitly state that directors can consider other constituencies at the expense of shareholder interests, we code the value of the *DDS-Index* as equal to one. Moving to statutes with median levels of strength, we set our index equal to two and one-third for firms incorporated in states with a directors' duties law that explicitly applies the BJR protection to day-to-day decision making, but does not explicitly state that this standard also applies to change-of-control situations. The strongest directors' duties laws either explicitly apply the BJR to any directorial decision (including in *Revlon*-like end-of-the-game contexts) or reject the notion that directors' have enhanced duties (as established in both *Unocal* and *Revlon*) to shareholders during change-of-control events. Accordingly, we assign firms bound to these statutes a *DDS-Index* value of three. Further, the

DDS-Index can also be set to two ("intermediate strength") or two and two-thirds ("strong"), depending on the strength of the language of the statutes (for example, laws that rejects *Revlon*, but not *Unocal* fall under the intermediate strength category), and is equal to zero for states without any legislation.

In Panel B of Table 18, we then investigate the relation between the *DDS-Index* and firm value. The first column excludes all of our baseline covariates, but does include firm and year fixed effects and clusters standard errors by firm. From this specification, we find a positive and statistically significant coefficient of 0.027 (*t*-stat=2.11). Economically, this means that a unit increase in the *DDS-Index* is associated with a 1.4% (0.027/1.918) increase in *Q*. Overall, we find that increases in the relative strength of the authority granted to boards of directors to consider stakeholder interests is positively related to *Q*. Similarly, when we add our full set of controls including firm- and industry-year fixed effects we find a positive and statistically significant coefficient of 0.024 (*t*-stat=1.78), with an economic impact of 1.25% (0.0024/1.918) increase in *Q* per unit increase in the *DDS-Index.*

9. Robustness

9.1 Legal Robustness

9.1.1. Negative Delaware Effect

We begin our legal robustness analysis by testing if the positive effect we find between an increased authority for the board of directors to consider all stakeholders and firm value is actually a manifestation of a negative Delaware effect. Since Delaware firms are unaffected by directors' duties laws and over 60 percent of publicly listed firms are incorporated in Delaware, Delaware is our primary source for the control group. We accordingly aim to verify if our results of an increase in the *Q* of the treated firms relative to the control firms is partly driven by the fact that Delaware

firms represent the largest share of our control firms. To this end, in Table A6 of the online appendix, we investigate the effect of *Directors' Duties Law*, in columns (1) – (3), and *Treated* × *Post* with a new matched sample excluding Delaware in columns (4) – (6), on firm value. It is worth emphasizing that after excluding Delaware-incorporated firms, our sample reduces from 101,989 to 56,734 firm-year observations, as many fewer firms are available as potential control firms.

In column (1), we only include firm and year fixed effects (and none of the standard controls) and show that covered firms experience increases in *Q* of 6.8 percentage points relative to non-covered firms that are incorporated in states other than Delaware. Adding on the full set of controls to our model in column (3), and employing firm fixed-effects as well as industry-year fixed effects, we find that firms incorporated in jurisdictions with directors' duties laws experience increases in *Q* of 6.4 percentage points relative to non-covered firms that are incorporated in states other than Delaware. This corresponds to an economic significance of 3.5% (0.064/1.821), relative to the non-Delaware firms sample mean.

We then move to our matched sample, where we follow the same approach discussed in subsection 6.2, only this time we exclude firms incorporated in Delaware from the possible pool of controls.[29] In each of columns (4) – (6), we find a positive and statistically significant relation between *Treated* × *Post* and *Q*. For example, in column (6), with the full set of baseline controls specified, we find that coverage of an effective directors' duties law results in an increase of *Q* of 4.1% (=0.069/1.684), relative to the pre-treatment year sample mean. In sum, we do not find evidence that a negative Delaware effect is driving our main pooled panel or matched sample findings, which supports the view that the Delaware judiciary has unique expertise in the

[29] In Panel B of Table A6, we present summary statistics for this alternative matched sample in the year before treatment occurs; our treated and control firms are similar on observable characteristics.

administration of directors' duties and the fine-tuning required for an efficient application of fiduciary standards rather than rules.

9.1.2. Texas Directors' Duties Law

The next examination of the legal robustness of our main results concerns Texas directors' duties law. As referenced in subsection 4.1 and Table 2, the Texas legislature adopted a directors' duties law in May of 2003, but firms incorporated in the state were permitted to voluntarily opt-in until the effective date in January of 2006. However, even after the effective date, only newly incorporated firms in Texas were bound by the directors' duties law, while companies existing prior to the effective date were still allowed to opt-in to coverage. It is only after January of 2010, that all firms incorporated in Texas were required to adhere to the directors' duties legislation. In Table A7 of the online appendix, we test whether our assumption (following the extant literature) to assign treatment to all Texas firms in January of 2006, somehow biases our main results.

In Panel A of Table 6, we first adjust our directors' duties law indicator variable (*Directors' Duties Law-Texas Adjusted*) by replacing the "1" for firms incorporated in Texas with a value ranging from one-third to one to capture the relative enforceability of the Texas law until 2010. In particular, we set *Directors' Duties Law-Texas Adjusted* for firms incorporated in Texas equal to one-third from 2003 through 2005, then to two-thirds in 2006 through 2009, and finally set it equal to one in 2010 and afterwards. Furthermore, all other affected states retain their value of "1" in the indicator variable. In column (1), we exclude other takeover and firm and industry controls, but do specify firm and year fixed effects, and find a coefficient estimate (point estimate=0.058) that is nearly identical to its analogue in column (1) of Table 5 (point estimate=0.059). Column (5) includes the full set of controls and swaps out year fixed effects for industry-year fixed effects,

and, again, documents a point estimate (=0.065) that is qualitatively similar to that of the model in Table 5 (point estimate=0.067).

In Panel B, we try a different approach for affected Texas firms. In columns (1) – (6), we create an index specific to companies incorporated in Texas (*Directors' Duties Law-Texas Index*) by assigning each of their firm-year observations a value of one starting in 2003 and through 2005, then we increase the value to two beginning in 2006 and through 2009, before increasing the value one last time to three in 2010 and afterwards. Prior to 2003, this index is set equal to zero for Texas firms, and is always zero for all other firm-year observations, including other affected states. In columns (1) – (3), we exclude firm-year observations from other states with directors' duties laws, before bringing them back into the analysis in columns (4) – (6). Our main finding is robust to the heterogenous coverage of the Texas directors' duties law in every specification. In fact, we find that the magnitude on the *Directors' Duties Law-Texas Index* coefficient is much larger than the average effect in Table 5, suggesting that our treatment (as well as the extant literature's treatment) of Texas affected firms starting from 2006 in the main pooled panel regressions is a conservative approach.

9.2 Additional Robustness

We provide additional robustness to our main finding of a positive relation between directors' duties laws and firm value with two supplementary tables in the online appendix. Our first robustness check verifies the validity of our matched sample results by conducting a placebo test using the matching procedure outlined in subsection 6.2, with the exception that this time we purposefully move back the actual effective date by five years (Cremers, Guernsey, Litov, and Sepe, 2018). For example, Maryland's constituency statute is effective as of June 1999, so in our

placebo match, we assume that the effective date was actually in June of 1994. We then match on the same covariates as before, but this time in the year prior to the pseudo effective date.

Panel A of Table A8 shows the respective means and standard deviations (in parentheses) for each of the 1,303 treated and control firm-year main variables in the pre-placebo treatment year. Further, we provide the differences in the last column, along with corresponding *t*-stats (in parentheses) to test for significant differences between the two groups. We find that our treated and controls groups are similar on each of these observable characteristics. Shifting down to Panel B, we report the placebo matched sample differences-in-differences coefficients over $\pm$ three-year estimation windows. In each of the four separate specifications, we find insignificant point estimates on the placebo *Treated* × *Post* estimator, providing additional robustness for our main results, as well as, for the parallel pre-trends assumption, in the matched sample.

Our second robustness check confirms that our main findings in both the pooled panel and matched sample regressions are supported using an alternative measure of firm value: Total Tobin's Q (*Total Q*), as proposed in Peters and Taylor (2017). This different measure of firm value attempts at explicitly accounting for intangible assets (which are neglected by *Q*). Accordingly, it seems particularly useful in assessing our results, since we document that investments in intangible assets (i.e., innovation) are a key driving force behind the value gains from directors' duties laws.

The first three columns of Table A9 present estimates from pooled panel regressions of *Total Q* on *Directors' Duties Law* over the period 1983 to 2015. We show that, irrespective of using the full set of controls, or year versus industry-year controls, directors' duties laws remain a significant determinant of firm value for the covered firms. For instance, in column (3), with firm and industry-year fixed effects, and the full set of baseline controls, we find that firms incorporated in a state with an effective directors' duties law experience increases in *Total Q* of 5.3%

(=0.055/1.039)**,** relative to the sample average. We then check the robustness of our matched sample results in columns (4) – (6), where we regress *Total Q* on the *Treated* × *Post* estimator over ± three-year treatment windows. We document that granting a board the authority to protect stakeholder interests remains value relevant in this alternative matched sample specification, as all three coefficients predict positive and significant increases in Total Tobin's Q. We thus conclude that we find evidence that directors' duties laws are significantly positively related to long-term firm value irrespective of whether value is measured through *Q, Monthly Stock Returns*, profitability or *Total Q*.

10. Conclusion

Previous studies have used state antitakeover laws to identify changes in corporate governance that are plausibly exogenous to the firm. Only a minority of these studies, however, have considered directors' duties laws (or, in the law literature, "constituency statutes"), which grant directors enhanced authority to take into account stakeholder interests, in addition to (or even at the expense of) the interests of shareholders.

In this paper, we revisit the takeover implications of directors' duties laws and examine their broader implications for the debate on the appropriate objective function of the corporation, investigating the value implications of these laws for covered firms over the period 1983-2015. Our main finding is that the passage of directors' duties laws results in a statistically and economically significant increase in firm value, especially for larger and more complex firms, more innovative firms, and firms where stakeholder investments are more relevant. This finding is robust to various methodologies, including pooled panel first difference regressions, the incorporation of possible selection effects through the creation of a matched sample, and a stock portfolio return approach.

Overall, our results support the "bonding hypothesis" of takeover defenses, according to which empowering boards to protect stakeholder interests against the disruption caused by takeovers decreases a firm's cost of contracting and, in the long-term, increases its value. More broadly, our results support the institutionalist view that expanding the authority of the board of directors (to consider stakeholder interests and vis-à-vis market pressures) reduces the externalities that firms create in incomplete markets, especially when firms are large and more invested in long-term innovative projects. This does not negate the basic conclusion of incentive theory that shareholders have an incentive to monitor and should use the stock price in so doing. It does, however, provide empirical support for the view that directors serve both shareholder and societal interests when they act as centralized coordinators charged with addressing the trade-offs that arise in an imperfect world, rather than as mere agents of the shareholders.

References

Acharya, V.V., R. P. Baghai, and K. V. Subramanian. (2014). Wrongful discharge laws and innovation, *Review of Financial Studies* 27, 301-346.

Alexander J.C., M. F. Spivey and M. W. Marr, Nonshareholder Constituency Statutes and Shareholder Wealth: A Note, *Journal of Banking & Finance* 21, 417-432 (1997)

Altman, E. I., R. G. Haldeman, and P. Narayanan. (1977). ZETA analysis A new model to identify bankruptcy risk of corporations. *Journal of Banking and Finance* 1, 29-54.

Atanassov, J. (2013a). Do hostile takeovers stifle innovation? Evidence from antitakeover legislation and corporate patenting, *Journal of Finance* 68, 1097-1131.

Atanassov, J. (2013b). Corporate governance, non-financial stakeholders, and innovation: Evidence from a natural experiment. Working paper.

Barzuza, M. (2009). The state of state antitakeover law. *Virginia Law Review* 95, 1973-2052.

Bainbridge S. (1992). Interpreting nonshareholder constituency statutes. *Pepperdine Law Review* 19, 971-1025.

Bebchuk, L. A., A. Cohen, and A. Ferrell. (2009). What matters in corporate governance?. *Review of Financial Studies* 22, 783-827.

Berle AA Jr. (1931). Corporate powers as powers in trust. *Harvard Law Rev* 44, 1049–1074.

Berle, AA Jr.. (1932). For whom corporate managers are trustees: A note. *Harvard Law Review* 45, 1365-1372.

Bertrand, M. and Mullainathan S. (1999). Is there discretion in wage setting? A test using takeover legislation. *Rand Journal of Economics* 30, 535–554.

Bertrand, M., E. Duflo, and S. Mullainathan. (2004). How much should we trust differences-in-differences estimates?. *Quarterly Journal of Economics* 119, 249-275.

Bodnaruk, A., M. Massa, and A. Simonov. (2013). Alliances and corporate governance. *Journal of Financial Economics* 107, 671-693.

Bowen, R. M., L. DuCharme, and D. Shores. (1995). Stakeholders' implicit claims and accounting method choice. *Journal of Accounting and Economics* 20, 255-295.

Bratton, W.W. (1989). The 'Nexus of contracts" corporation: A critical appraisal. *Cornell Law Review* 74, 407-65.

Bratton, W.W. (1993). Confronting the ethical case against the ethical case for constituency rights. *Washington and Lee Law Review* 50, 1449-75.

Bratton, W.W. and S. M. Sepe. (2018). Shareholder power in incomplete markets. working paper.

Bushee B. (1998). The influence of institutional investors on myopic R&D investment behavior. *The Accounting Review* 73, 305-333.

Cain, M. D., S.B. McKeon, and S. D. Solomon (2017). Do takeover laws matter? Evidence from five decades of hostile takeovers. *Journal of Financial Economics* 124, 464-485.

Carhart, M. M. (1997). On persistence in mutual fund performance. *Journal of Finance* 52, 57-82.

Cary, W. (1969). Corporate devices used to insulate management from attack. *Antitrust Law Journal* 39, 318-324.

Catan, E. (2017). The insignificance of clear-day poison pills, working paper.

Chan, L. K. C., J. Lakonishok, and T. Sougiannis. (2001). The stock market valuation of research and development expenditures. *Journal of Finance* 56, 2431-56.

Cremers, K.J. M. and A. Ferrell. (2014). Thirty years of shareholder rights and firm value. *Journal of Finance* 69, 1167-1196.

Cremers, K.J. M. and S. M. Sepe. (2015). The financial value of corporate law: Evidence from (re) incorporations. Working paper.

Cremers, K.J. M., L. P. Litov, and S. M. Sepe. (2017). Staggered boards and long-term firm value, revisited, *Journal of Financial Economics* 126, 422-444.

Cremers, K. J. M., S. Guernsey, L. P. Litov and S. M. Sepe. (2017). Shadow pill and long-term firm value. Working paper.

Daines, R. (2001). Does Delaware law improve firm value?. *Journal of Financial Economics* 62, 525-558.

Demsetz, H. and K. Lehn. (1985). The structure of corporate ownership: Causes and consequences. *Journal of Political Economy* 93, 1155-1177.

Dewenter, K.L. and P. H. Malatesta. (2001). State-owned and privately owned firms: An empirical analysis of profitability, leverage, and labor intensity. *American Economic Review* 91, 320-334.

Dodd EM Jr. (1932). For whom are corporate managers trustees?. *Harvard Law Rev* 45, 1145–1163.

Easterbrook, F. and D. Fischel. (1981). The proper role of a target's board in responding to a tender offer, *Harvard Law Review* 94, 1161-1204.

Easterbrook F. and D. Fischel. (1983). Voting in corporate law, *Journal of Law and Economics* 26, 395 - 427.

Eberhart, A.C., W.F. Maxwell, and A.R. Siddique. (2004). An examination of long-term abnormal stock returns and operating performance following R&D increases. *Journal of Finance* 59, 623–650.

Fama, E.F. (1970). Efficient capital markets: A review of theory and empirical work. *Journal of Finance* 25, 383-417.

Fama, E.F. (1983). Separation of ownership and control. *Journal of Law and Economics* 26, 301-25.

Fama, E. F. and K. R. French. (1992). The cross-section of expected stock returns. *Journal of Finance* 47, 427-465.

Fama, E. F. and K. R. French. (1993). Common risk factors in the returns on stocks and bonds. *Journal of Financial Economics* 33, 3-56.

Fich, E. M., J. Harford and A. S. Yore (2017). Does takeover protection matter? Evidence from a natural experiment. Working paper.

Fisch, J. E. (2006). Measuring efficiency in corporate law: The role of shareholder primacy, Journal of Corporate Law, 31: 637-674.

Flammer, C. (2015). Corporate responsibility and the allocation of procurement contracts: Evidence from a natural experiment. Working paper.

Flammer, C. and A. Kacperczyk (2015). The impact of stakeholder orientation on innovation: Evidence from a natural experiment. *Management Science* 62, 1982-2001.

Friedman, M. 1962. Capitalism and Freedom. Chicago: University of Chicago Press.

Friedman, M. (1970). The social responsibility of business is to increase its profits. *New York Times Magazine*. September 13.

Garvey, G. and Hanka G. (1999). Capital structure and corporate control: the effect of antitakeover statutes on firm leverage. *Journal of Finance* 54, 519–546.

Geczy, C., J. S. Jeffers, D. K. Musto, and A.M. Tucker. (2015). Institutional Investing when shareholders are not supreme. *Harvard Business Law Review* 5, 73-139.

Geanakoplos, J., M. Magill, M. Quinzii and Jean Dreze. (1990). Generic inefficiency of stock market equilibrium when markets are incomplete, *J. Mathematical Econ.* 19, 113-151.

Geanakoplos, J., An introduction to general equilibrium with incomplete asset markets, 19 J. *Mathematical Econ.* 1, 1-38 (1990).

Giroud, X. and H. M. Mueller. (2010). Does corporate governance matter in competitive industries?. *Journal of Financial Economics* 95, 312-331.

Gompers, P., J. Ishii, and A. Metrick. (2003). Corporate governance and equity prices. *Quarterly Journal of Economics* 118, 107-155.

Gormley, T. A. and D. A. Matsa. (2014). Common errors: How to (and not to) control for unobserved heterogeneity. *Review of Financial Studies* 27, 617-661.

Gormley, T. A. and D. A. Matsa. (2016). Playing it safe? Managerial preferences, risk, and agency conflicts. *Journal of Financial Economics* 122, 431-455.

Guernsey, S. B. (2018). Product Market Competition and Long-Term Firm Value: Evidence from Reverse Engineering Protections. Working paper.

Hall, B. H., A. Jaffe, and M. Trajtenberg. (2005). Market value and patent citations. *RAND Journal of Economics* 36, 16-38.

Harris, E. G. (1990). Antitakeover measures, golden parachutes, and target firm shareholder welfare. *RAND Journal of Economics* 21, 614-625.

Hart O. and L. Zingales. (2017). Companies should maximize shareholder welfare not market value. *Journal of Law, Finance, and Accounting* 2, 247-274.

Ho, V.H. (2010). Enlightened shareholder value: Corporate governance beyond the shareholder-stakeholder divide. *Journal of Corporation Law* 36, 61-112.

Jensen, M.C. and W. Meckling (1976). Theory of the firm: Managerial behavior, agency cost, and ownership structure. *Journal of Financial Economics* 3, 305-360.

Jensen, M.C. (1988). Takeovers: Their causes and consequences. *Journal of Economic Perspective* 2, 21-48.

Jensen, M.C. (2001) Value maximization, stakeholder theory, and the corporate objective function. *European Financial Management* 7, 297-317.

Johnson, W.C., J. M. Karpoff, and S. Yi, 2015, The bonding hypothesis of takeover defenses: Evidence from IPO firms. *Journal of Financial Economics* 117, 307-332.

Johnson, William C., Jonathan M. Karpoff and Sangho Yi. (2017). The lifecycle effects of firm takeover defenses. Working paper.

Kale, J. R. and H. Shahrur. (2007). Corporate capital structure and the characteristics of suppliers and customers. *Journal of Financial Economics* 83, 321-365.

Karpoff, J. M. and Wittry, M. D. (2017). Institutional and legal context in natural experiments: The case of state antitakeover laws. *Journal of Finance* (forthcoming).

Karpoff, J. M., R. Schonlau, and E. Wehrly. (2017). Which antitakeover provisions matter?, working paper.

Keay, A. (2013). The enlightened shareholder value principle and corporate governance. Routledge. London and New York.

Knott, A. M. (2008). R&D/returns causality: Absorptive capacity or organizational IQ. *Management Science* 54, 2054-2067.

Kogan, L., D. Papanikolaou, A. Seru, and N. Stoffman. (2017). Technological innovation, resource allocation, and growth. *Quarterly Journal of Economics* 132, 665-712.

Laffont, J. and J. Tirole (1988). Repeated auctions of incentive contracts, investment and bidding parity, with an application to takeovers, *RAND Journal of Economics* 19, 516-537.

Lang, L. HP and R. M. Stulz. (1994). Tobin's q, corporate diversification, and firm performance. *Journal of Political Economy* 102, 1248-1280.

Macey, J. (1991). An economic analysis of the various rationales for making shareholder the exclusive beneficiaries of directors' fiduciary duties. *Stetson Law Review* 21, 23-44.

MacKie-Mason, J.K. (1990). Do taxes affect corporate financing decisions?. Journal of Finance 45, 1471-1493.

Magill, M., M. Quinzii, and J-C Rochet, 2015, A theory of the stakeholder corporation, *Econometrica* 83, 1685-1725.

Magill, M. and M. Quinzii. (2008). Incomplete markets, Volume 1, Finite horizon economies, International Library of Critical Writings in Economics. Cheltenham, Edward Elgar Publishing Company.

Manne, H. G (1965). Mergers and the market for corporate control, *Journal of Political Economy* 73, 110-120.

Morck, R., A. Shleifer, and R. W. Vishny. (1988). Management ownership and market valuation: An empirical analysis. *Journal of Financial Economics* 20, 293-315.

Peters, R. H., and L. A. Taylor. (2017). Intangible capital and the investment-q relation. *Journal of Financial Economics* 123, 251-272.

Petersen, M.A. (2009). Estimating standard errors in finance panel data sets: Comparing approaches. *Review of Financial Studies* 22, 435-480.

Phua, K., T. M. Tham, and C. Wei. (2017). Are overconfident CEOs better leaders? Evidence from stakeholder commitments. *Journal of Financial Economics*, forthcoming.

Raman, K. and H. Shahrur. (2008). Relationship-specific investments and earnings management: Evidence on corporate suppliers and customers. *The Accounting Review* 83, 1041-1081.

Roberts, M.R. and T.M. Whited. (2013). Endogeneity in empirical corporate finance, in: Handbook of the Economics of Finance (Elsevier).

Sanati, A. (2017). How does labor mobility affect corporate leverage and investment?, working paper.

Serfling, M. (2016). Firing costs and capital structure decisions. *Journal of Finance* 71, 2239-2286.

Sorkin, A. R (2018). BlackRock's message: contribute to society, or risk losing our support. *The New York Times*, January 16.

Shleifer, A. and L. Summers. (1988). Breach of trust in hostile takeovers, in A.J. Auerbach (ed.), Corporate takeovers: Causes and consequences.

Smith, C. W. Jr. and J. B. Warner. (1979). On financial contracting: An analysis of bond covenants. *Journal of Financial Economics* 7, 117-61.

Stulz, R. M. (1988). Managerial control of voting rights: Financing policies and the market for corporate control. *Journal of Financial Economics* 20, 25-54.

Tirole, J. (2001). Corporate governance, *Econometrica* 69, 1–35.

Turner, C. R. (1999). Shareholders vs. the world: "Revlon Duties" and state constituency statutes. ABA Section of business law - Business Law Today.

Valta, P. (2016). Strategic default, debt structure, and stock returns. *Journal of Financial and Quantitative Analysis* 51, 197-229.

Yermack, D. (1996). Higher market valuation of companies with a small board of directors. *Journal of Financial Economics* 40, 185-211.

Figure 1. States with a Directors' Duties (Constituency) Statute. The chart below shows the states that have an effective directors' duties law. States colored with orange indicates that the law became effective during the 1980s' decade. Blue colored states denote the effective date of a directors' duties statute in the 1990s' decade. The green colored state (Texas) signifies effective directors' duties legislation during the 2000s. The grey colored states indicate states without a directors' duties law. *Created with*: https://mapchart.net/.

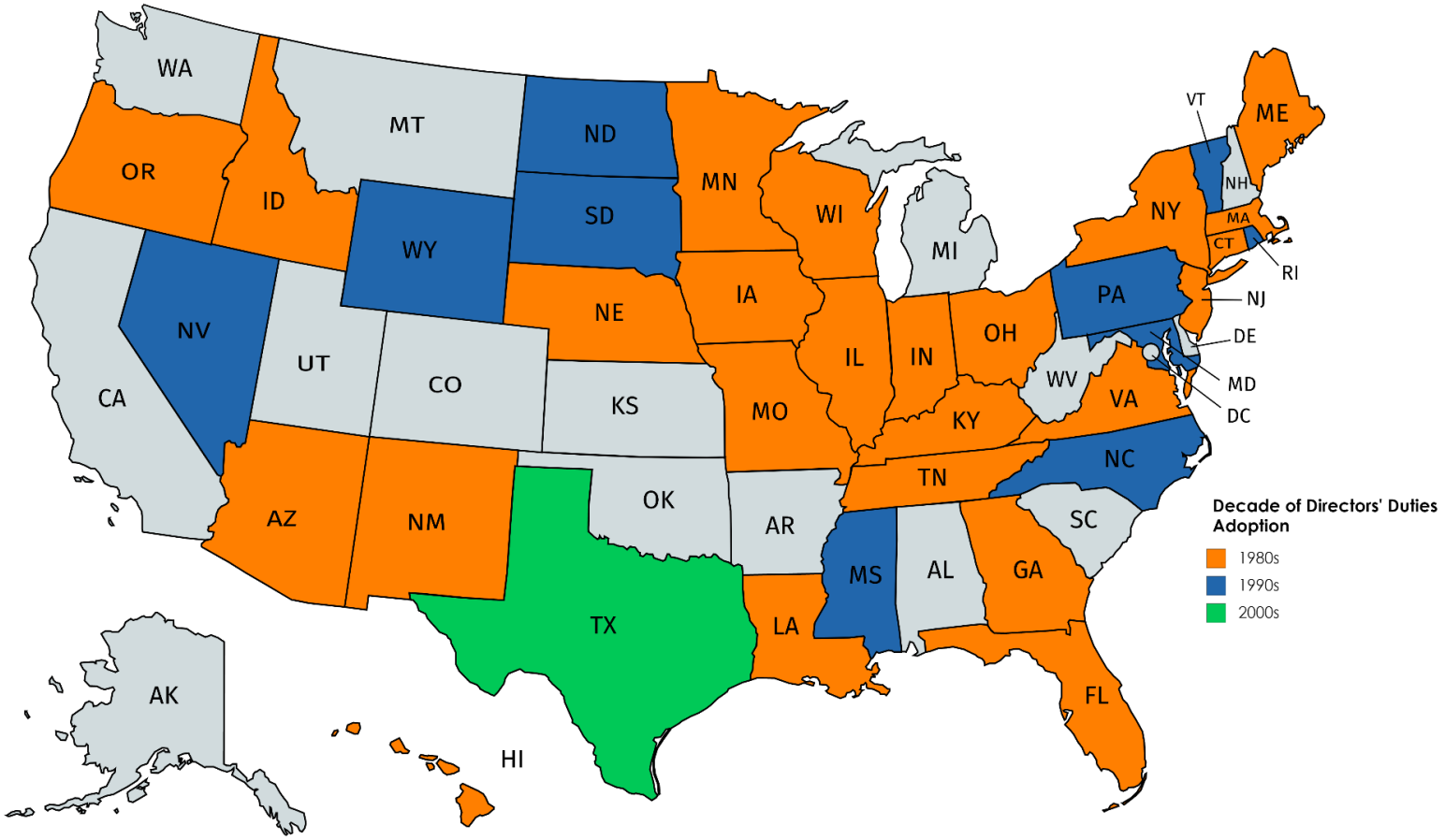


Figure 2. Percentage of Firms Affected by Directors' Duties Laws. The chart below shows the percentage of firms incorporated in a state with an effective directors' duties law in our sample, each year from 1983 to 2015. Excluded from the sample are financial and utility firms.

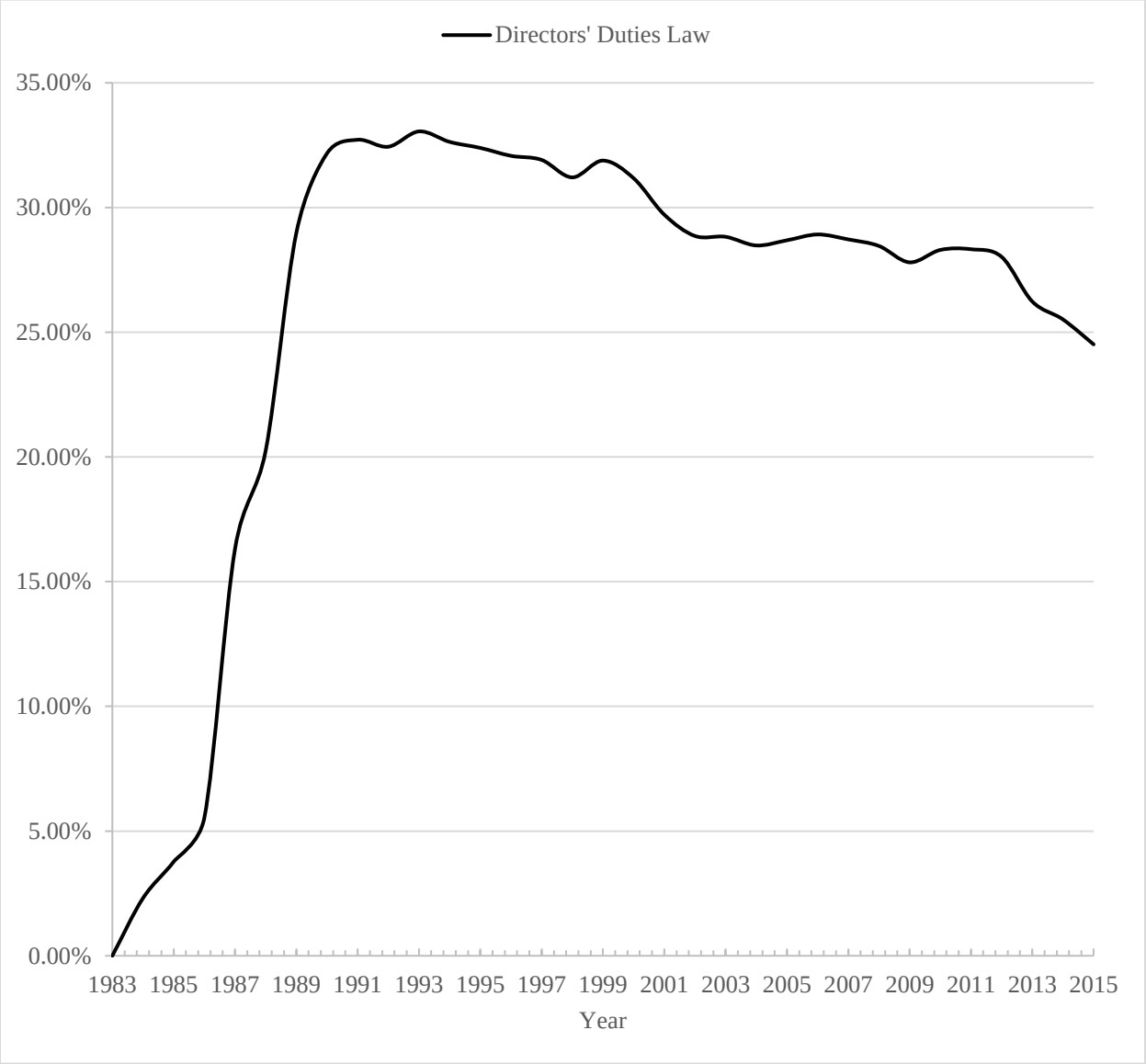
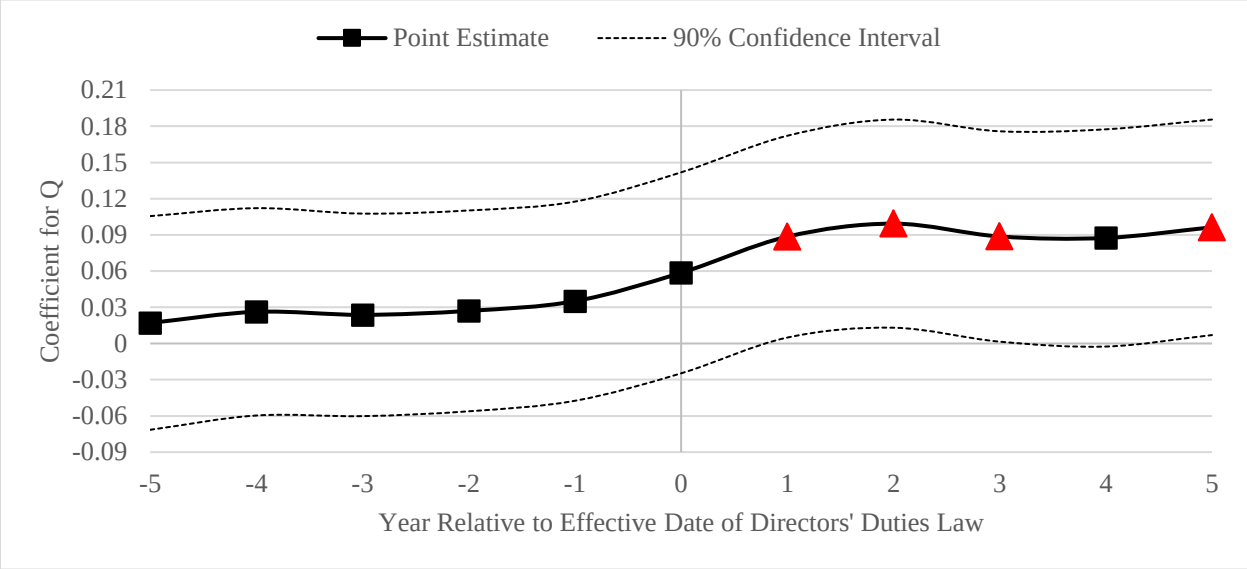


Figure 3: The impact of an effective directors' duties law on firm value. This figure shows the impact of an effective directors' duties law on *Q*. Panel A plots the coefficient estimates from regressing *Q* on year fixed effects, four other antitakeover laws, and dummy variables indicating the year relative to the effective date of the directors' duties law on the y-axis. Our dummies are created for up to 10 years before and after their effective dates. The last dummy is set to one if 10 or more years have expired after the effective date of the directors' duties law and zero otherwise. Panel B supplements the top panel by specifying industry-year fixed effects, with industry measured by Fama-French 49 industry definitions. The x-axis in both panels shows the time relative to the effective date of the directors' duties laws. Dashed lines correspond to the 90% confidence intervals of the coefficient estimates, calculated from robust standard errors clustered by firm. Red triangles denote significance at the 10% level. The sample period is from 1983-2015.

Panel A: Without Industry-Year Fixed Effects



Panel B: Includes Industry-Year Fixed Effects

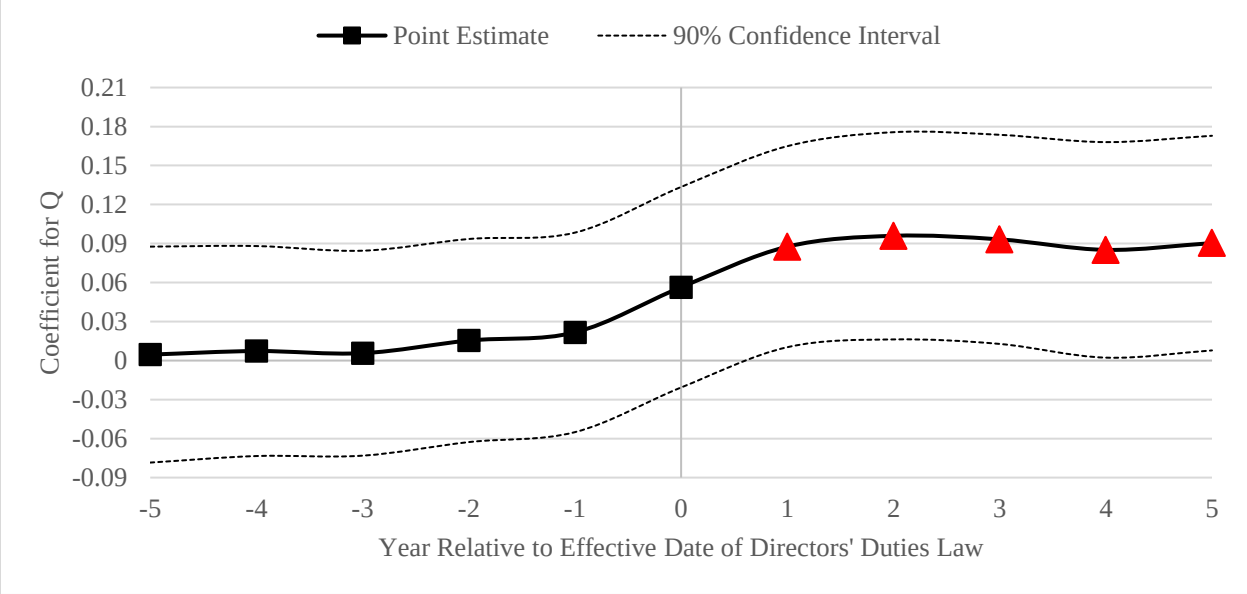


Table 1. Variable Descriptions.

Dependent Variables	Description
Q	Market value of assets (at – book equity + market equity (prcc_f*csho)) divided by the book value of assets (at). Book equity and this measure, in general, follows Fama and French (1992).
$Monthly\ Stock\ Returns$	Monthly stock returns of a portfolio created by either (i) longing the stocks of matched firms incorporated in states with an effective directors' duties law, (ii) shorting the stocks of matched companies incorporated in states without directors' duties legislation, and (iii) combining both (i) and (ii) into a long-short investment strategy. In all three portfolios, we begin the holding period 6 or 12 months before the effective date and continue to hold until 12 ("6m12") or 24 ("6m24" and "12m24") months after the laws are enacted.
$Takeover\ Bid\ (Bid)$	*Bid* is an indicator variable equal to one if a firm receives a takeover bid as catalogued by the SDC M&A database and CRSP delisting codes (200s), and zero otherwise.
$Takeover\ Complete\ (Completed)$	*Completed* is an indicator variable equal to one if a firm is successfully acquired as catalogued by the SDC M&A database and CRSP delisting codes (200s), and zero otherwise.
1-$Day\ Premium$	Premium of offer price to target closing stock price 1-day prior to the original announcement date, expressed as a percentage. Data comes from the SDC M&A database.
1-$Week\ Premium$	Premium of offer price to target closing stock price 1-week prior to the original announcement date, expressed as a percentage. Data comes from the SDC M&A database.
4-$Week\ Premium$	Premium of offer price to target closing stock price 4-week prior to the original announcement date, expressed as a percentage. Data comes from the SDC M&A database.
$Size$	The natural logarithm of the value of total book assets (at) in millions, where assets are adjusted using 2015 dollars; also a control variable in the *Q* regressions.
$Debt\text{-}to\text{-}Equity$	Long-term debt (*dltt*) divided by book equity, where book equity is calculated as in Fama and French (1992); also a control variable in the *Q* regressions.
$CAPX/Assets$	Capital expenditures (*capx*) divided by the value of total book assets (*at*); also a control variable in the *Q* regressions.
$R\&D/Sales$	Research and development expense (*xrd*) divided by the value of sales (*sale*); also a main interaction variable and a *Q*-regression control variable in separate tests.
$Ln\ (CW\ Patents)$	The natural logarithm of one plus citation-weighted patents. Source of data comes from Noah Stoffman's

	website and is available from 1926 to 2010; also a main interaction variable.
Loss	An indicator variable set to one if a firm has negative net income (*ni*) during a fiscal year, and zero otherwise; also a control variable in *Q* specifications.
Default Risk	An indicator variable equal to one if a firm has a modified Z'' score below the sample median in a given year. Modified Z'' score is a measure to indicate the likelihood of a company going bankrupt or having significant financial distress defined as 3.25 + 6.56*(*wcap/at*) + (3.26**re/at*) + (6.72**ebit*/*at*). Z'' is more suitable for evaluating the financial health of firms in different industries, while the original measure, Z, was created solely for manufacturing firms (Altman, Haldeman, and Narayanan, 1977). *Modified* characterizes the exclusion of the last term (*beq*/*lt*) in the original Z'' measure (MacKie-Mason, 1990); *Default Risk* is also a main interaction variable in a separate test.
Short-Term Debt	Short-term debt (*dlc*) as a fraction of total debt (*dltt* + *dlc*).
ROA	Return on assets, measured as net income (*ni*) scaled by the total book value of assets (*at*).
ROE	Return on equity, measured as net income (*ni*) divided by common equity (*ceq*).
ROCE	Return on capital employed, measured as earnings before interest and taxes (*oibdp*) over the sum of debt in long-term and current liabilities and common/ordinary equity.
Total Q	Total Tobin's Q equals the market value of outstanding equity (*prcc_f*csho*) plus the book value of debt (*dltt* + *dlc*) minus the firm's current assets (*act*) divided by the sum of physical (*ppegt*) and intangible capital. Intangible capital is defined as the sum of externally purchased (*intan*) and internally created intangible capital (knowledge plus organizational capital). This measure (*q_tot*) is proposed by Peters and Taylor (2017) and is available on WRDS from 1950 to 2015.
Main Explanatory Variables	Description
Directors'Duties Law	An indicator variable equal to one if a firm is incorporated in a state with an effective directors' duties law, and zero otherwise. We use effective (and adoption) dates provided by Barzuza (2009) and Karpoff and Wittry (2018).
Alpha	Monthly portfolio abnormal returns, estimated using either the four-factor Carhart (1997) or three-factor Fama-French (1993) models, respectively.
DDS-Index	An index variable created to capture the relative strength of the directors' duties statutes by state of incorporation and year. *DDS-Index* ranges from zero to three, with higher values indicating greater relative strength of the

	laws. For a detailed description of its construction see Panel A of Table 18.
Directors' Duties Law- Texas Adjusted	An indicator variable that replaces the "1" in *Directors' Duties Law* for affected firms incorporated in Texas, with a ratio from zero to one to capture heterogeneity in the relative strength of directors' duties in this state. In particular, prior to 2003, Texas firms have *Directors' Duties Law* equal zero, then, in between 2003 and 2006 it switches to one-third, then, it adjusts to two-thirds in between 2006 and 2010, and finally, equals one in 2010 and after.
Directors' Duties Law-Texas Index	An index variable for affected firms incorporated in Texas to capture heterogeneity in the relative strength of directors' duties in this state. In particular, prior to 2003, Texas firms have *Directors' Duties Law* equal zero, then, in between 2003 and 2006 it switches to one, then, it adjusts to two in between 2006 and 2010, and finally, equals three in 2010 and after. *Directors' Duties Law-Texas Index* is set equal to zero for other *Directors' Duties Law* affected firms outside of Texas.
Main Interaction Variables	Description
S&P 500	An indicator variable equal to one if a firm is an S&P 500 index constituent in a given year, and equal to zero otherwise. Data comes from Compustat's Index Constituents database.
Inc. State-Year M&A Volume	The ratio of mergers & acquisitions' dollar volume in SDC to the total market capitalization from Compustat per state of incorporation, in a given year. We only include ordinary stocks (i.e., we exclude American depositary receipts (ADRs) and real estate investment trusts (REITs)). Further, we only consider SDC transactions that are completed and where the acquirer achieves control of the target; also included as a predictor variable.
Industry-Year M&A Volume	The ratio of mergers & acquisitions' dollar volume in SDC to the total market capitalization from Compustat per Fama-French 49 industry groupings, in a given year. We only include ordinary stocks (i.e., we exclude American depositary receipts (ADRs) and real estate investment trusts (REITs)). Further, we only consider SDC transactions that are completed and where the acquirer achieves control of the target; also included as a predictor variable.
Large Firm	An indicator variable equal to one if a firm is in the top quartile of *Ln(Assets)* in its four-digit SIC code industry, and zero otherwise.
Firm Sales	The natural logarithm of the value of total sales revenue (*sale*) in millions, where sales are adjusted using 2015 dollars.
Investment Rate	Capital expenditures (*capx*) plus acquisitions (*aqc*) minus the sale of property (*sppe*), over the book value of assets (*at*).

Research Quotient	Firm-specific output elasticity of R&D, representing the percentage change in revenues for a 1% change in R&D, as proposed by Knott (2008). Source of data for 1983 - 2015 is WRDS.
Strategic Alliance	An indicator variable equal to one if the firm is in an active strategic alliance based on the SDC Strategic Alliances database. We only include strategic alliances with at least three partners.
Large Customer	An indicator variable equal to one if a firm's percentage of customer sales is greater than the sample average. Source of customer sales data is the historic Compustat Segment tapes.
Supplier Dependency	Relationship specific investment (*RSI*). *RSI* equals the product of the supplier's R&D expenditure and the fraction of sales to the customer, divided by total assets of the supplier. Source of customer sales data is the historic Compustat Segment tapes.
Labor Intensity	Number of employees divided by real sales, where sales are adjusted using 2015 dollars.
Unsecured Debt	The ratio of unsecured debt to total debt (*dltt + dlc)*, where unsecured debt equals total debt minus secured debt (*dm*).
Industry CF Risk	The operating cash flow volatility for a three-digit SIC code industry, where cash flow volatility is the standard deviation of ROA over a 7-year rolling window.
Creditor Reliance	An indicator variable equal to one for a firm with a debt-to-equity ratio greater than the sample year median, and equal to zero otherwise.
Control Variables	Description
$Ln(Age)$	The natural logarithm of one plus the number of firm-year observations since the firm's first appearance in Compustat.
HHI	The Herfindahl-Hirschman Index for a particular industry defined as the sum of squared market shares for all firms in a three-digit SIC industry. The market share of firm i is defined as the value of sales (*sale*) of firm i divided by the total value of sales in the industry of firm i.
Sales Growth	The natural logarithm of the value of sales (*sale*) in millions in year t divided by the value of sales in millions in year t-1.
Firm Liquidity	Current assets (*act*) minus current liabilities (*lct*) divided by the value of total book assets (*at*).
Inst. Own	The percent ownership of a firm by its institutional owners, measured by their equity ownership in their 13F holdings reports from Thomson Reuters, weighted by the firm's market capitalization.
State-Year Q	Control for local shocks, measured as the mean of *Tobin's Q* in the firm's state of location in a given year, excluding the firm itself.

Industry-Year Q	Control for industry shocks, measured as the mean of *Tobin's Q* in the firm's three-digit SIC industry in a given year, excluding the firm itself.
Business Combination Law	An indicator variable equal to one if a firm is incorporated in a state that has an effective business combination law, and zero otherwise. We use effective (and adoption) dates provided by Cain, McKeon and Solomon (2016) and Karpoff and Wittry (2018).
Control Share Law	An indicator variable equal to one if a firm is incorporated in a state that has an effective control share law, and zero otherwise. We use effective (and adoption) dates provided by Cain, McKeon and Solomon (2016) and Karpoff and Wittry (2018).
Fair Price Law	An indicator variable equal to one if a firm is incorporated in a state that has an effective fair price law, and zero otherwise. We use effective (and adoption) dates provided by Cain, McKeon and Solomon (2016) and Karpoff and Wittry (2018).
Poison Pill Law	An indicator variable equal to one if a firm is incorporated in a state that has an effective poison pill law, and zero otherwise. We use effective (and adoption) dates provided by Cain, McKeon and Solomon (2016) and Karpoff and Wittry (2018).
Predictor Variables	Description
$Inc.State\text{-}Year\ Q$	The average Tobin's Q of all firms incorporated within a state, in a given year.
$Inc.State\text{-}Year\ \Delta\ Q$	The average change in Tobin's Q of all firms incorporated within a state, in a given year.
$Inc.State\ Industry\text{-}Year\ Q$	The average *Industry-Year Q* of all firms incorporated within a state and in a three-digit SIC code industry, in a given year.
$Inc.State\text{-}Year\ Size$	The average natural logarithm of total assets of all firms incorporated within a state, in a given year, where assets are adjusted using 2015 dollars.
$Inc.State\text{-}Year\ Ln(Age)$	The average natural logarithm of one plus the number of firm-year observations since the firm's first appearance in Compustat of all firms incorporated within a state, in a given year.
$Inc.State\text{-}Year\ HHI$	The average Herfindahl-Hirschman Index of all firms incorporated within a state, in a given year.
$Inc.State\text{-}Year\ Sales\ Growth$	The average sales growth of all firms incorporated within a state, in a given year.
$Inc.State\text{-}Year\ Loss$	The average percent of all firms incorporated within a state experiencing negative net income, in a given year.
$Inc.State\text{-}Year\ Debt\text{-}to\text{-}Equity$	The average debt-to-equity of all firms incorporated within a state, in a given year.
$Inc.State\text{-}Year\ Firm\ Liquidity$	The average firm liquidity of all firms incorporated within a state, in a given year.

$Inc.State\text{-}Year\ CAPX/Assets$	The average ratio of capital expenditure to total assets of all firms incorporated within a state, in a given year.
$Inc.State\text{-}Year\ R\&D/Sales$	The average ratio of research and development expenditure to sales of all firms incorporated within a state, in a given year.
$Inc.State\text{-}Year\ Inst.Own$	The average percentage of institutional ownership of all firms incorporated within a state, in a given year.
$Ln(Inc\ State\ Per\ Capita\ GDP)$	The natural logarithm of an incorporating state's GDP (in thousands) divided by its total population. We use data from the U.S. Bureau of Economic Analysis.
$Inc.State\ GDP\ Growth$	The incorporated state-level GDP growth rate over the fiscal year. We use data from the U.S. Bureau of Economic Analysis.
$Inc.State\ Percent\ Republican$	The proportion of incorporated state-level representatives in the U.S. House of Representatives whom belong to the Republican party, in a given year. We use data from the Book of the States for this measure.
$Inc.State\text{-}Year\ Strategic\ Alliance$	The average percent of all firms incorporated within a state that are engaged in an active strategic alliance based on the SDC Strategic Alliances database. We only include strategic alliances with at least three partners.
$Inc.State\text{-}Year\ Large\ Customer$	The average percent of all firms incorporated within a state that has at least one large customer based on the Compustat Customer Segments database.
$Inc.State\text{-}Year\ Supplier\ Dependency$	The average *RSI* of all firms incorporated within a state, in a given year.
$Inc.State\text{-}Year\ Labor\ Intensity$	The average *Labor Intensity* of all firms incorporated within a state, in a given year.
$Inc.State\text{-}Year\ Unsecured\ Debt$	The average *Unsecured Debt* of all firms incorporated within a state, in a given year.
$Inc.State\text{-}Year\ Investment\ Rate$	The average *Investment Rate* of all firms incorporated within a state, in a given year.
$Inc.State\text{-}Year\ Ln(Patents)$	The average *Ln(Patents)* of all firms incorporated within a state, in a given year.

Table 2. State-Level Directors' Duties Laws. This table reports the date in which a state has an effective directors' duties law (with the adoption date in parentheses, when different from the effective date). The "# of unique firms" column shows the total number of distinct firms in the respective incorporating state in our sample from 1983-2015. *Sources:* Barzuza (2009), and Karpoff and Wittry (2018).

State	Directors' Duties Law	# of Unique Firms	State	Directors' Duties Law	# of Unique Firms
Alabama		10	Montana		3
Alaska		2	Nebraska[30]	04/1988	10
Arizona	07/1987	36	Nevada	10/1991 (06/1991)	373
Arkansas		10	New Hampshire		2
California		662	New Jersey	02/1989	224
Colorado		218	New Mexico	04/1987	12
Connecticut	06/1988	42	New York	07/1987	509
Delaware		6,814	North Carolina	10/1993 (07/1993)	87
Florida	06/1989	297	North Dakota	08/1993 (04/1993)	3
Georgia	07/1989 (04/1989)	151	Ohio	10/1984 (07/1984)	216
Hawaii	06/1989	10	Oklahoma		48
Idaho	03/1988	6	Oregon	03/1989	79
Illinois	08/1985	46	Pennsylvania	04/1990	240
Indiana	04/1986 (03/1986)	97	Rhode Island	07/1990	11
Iowa	12/1989 (06/1989)	26	South Carolina		23
Kansas		28	South Dakota	07/1990 (02/1990)	4
Kentucky	07/1988	10	Tennessee	03/1988	72
Louisiana	07/1988	27	Texas[31]	01/2006 (05/2003)	261
Maine	09/1985 (06/1985)	11	Utah		96
Maryland	06/1999 (05/1999)	122	Vermont	04/1998	4
Massachusetts	07/1989	255	Virginia	03/1988	125
Michigan		109	Washington		123
Minnesota	06/1987	320	West Virginia		7
Mississippi	07/1990 (04/1990)	15	Wisconsin	06/1987	84
Missouri	05/1986	52	Wyoming	01/1990 (03/1990)	12

[30] Nebraska's constituency statute was repealed in April of 1995, before being reenacted in March of 2007.
[31] Texas adopts a directors' duties law in May of 2003, but allows firms to voluntarily opt-in prior to January of 2006. Only after 1/1/2010, the Texas law becomes directly applicable to all firms incorporated in the state.

Table 3. Summary Statistics. This table reports summary statistics for the dependent and explanatory variables used in the pooled panel regressions. Panel A presents the full sample variable summary statistics. Panel B reports main full sample variable summary statistics by treated and control firm grouping. If a firm is incorporated in a state that has an effective directors' duties law, it is included in the treated group, and in the control group otherwise. Panel C shows summary statistics for additional full sample variables (used in later tests). The sample is composed of Compustat industrial firms over the period 1983 to 2015. Continuous variables are winsorized at the 2.5% and 97.5% levels and dollar values are expressed in 2015 dollars. Table 1 provides variable definitions. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Panel A: Main Full Sample Variables

Main Dependent Variables:	Mean	St. Dev.	P25	Median	P75	Obs.
Q_t	1.918	1.388	1.083	1.437	2.160	101,989
Main Independent Variables:	Mean	St. Dev.	P25	Median	P75	Obs.
$Directors' Duties\ Law_t$	0.263	0.440	0	0	1	101,989
$Size_t$	5.457	2.027	3.939	5.372	6.878	101,989
$Ln(Age)_t$	2.684	0.637	2.197	2.708	3.178	101,989
HHI_t	0.227	0.179	0.097	0.180	0.280	101,989
$Sales\ Growth_t$	0.058	0.292	-0.061	0.046	0.170	101,989
$Loss_t$	0.349	0.477	0	0	1	101,989
$Debt\text{-}to\text{-}Equity_t$	0.494	0.993	0	0.188	0.643	101,989
$Firm\ Liquidity_t$	0.273	0.238	0.094	0.261	0.439	101,989
$CAPX/Assets_t$	0.059	0.060	0.020	0.040	0.076	101,989
$R\&D/Sales_t$	0.048	0.086	0	0.002	0.060	101,989
$Inst.Own$	0.298	0.314	0	0.185	0.565	101,989
$State\text{-}Year\ Q_t$	2.142	0.462	1.795	2.067	2.433	101,989
$Industry\text{-}Year\ Q_t$	2.112	0.815	1.498	1.921	2.548	101,989
$Business\ Combination\ Law_t$	0.761	0.426	1	1	1	101,989
$Control\ Share\ Law_t$	0.218	0.413	0	0	0	101,989
$Fair\ Price\ Law_t$	0.266	0.442	0	0	1	101,989
$Poison\ Pill\ Law_t$	0.273	0.446	0	0	1	101,989
Main Interacted Variables:	Mean	St. Dev.	P25	Median	P75	Obs.
$S\&P\ 500$	0.114	0.318	0	0	0	101,989
$Large\ Firm_t$	0.265	0.442	0	0	1	101,989
$Firm\ Sales_t$	5.403	2.197	3.911	5.450	6.937	101,989
$Strategic\ Alliance_t$	0.110	0.313	0	0	0	101,989
$Large\ Customer_t$	0.119	0.324	0	0	0	101,989
$Supplier\ Dependency_t$	0.008	0.020	0	0	0.004	101,989
$Labor\ Intensity_t$	0.016	0.313	0.004	0.006	0.011	100,500
$Unsecured\ Debt_t$	0.583	0.405	0.127	0.704	0.998	87,421
$Industry\ Cash\text{-}Flow\ Risk_t$	0.308	0.262	0.133	0.251	0.397	101,989
$Creditor\ Reliance_t$	0.516	0.500	0	1	1	101,989
$Default\ Risk_t$	0.467	0.499	0	0	1	101,989
$Investment\ Rate_t$	0.076	0.078	0.023	0.051	0.100	89,894
$Ln(Patents)_t$	0.071	0.185	0	0	0.039	90,776
$Ln(CW\ Patents)_t$	0.702	1.280	0	0	1.029	90,776
$Research\ Quotient_t$	0.118	0.089	0.077	0.121	0.165	37,750

Table 3 – *(Continued)*

Panel B: Main Full Sample Variables by Treatment

	Treated (*Directors' Duties Law* = 1)			**Control (*Directors' Duties Law* = 0)**				
Main Dependent Variable:	Mean	St. Dev.	Obs.	Mean	St. Dev.	Obs.	Diff.	*t*-stat
Q_t	1.811	1.251	26,795	1.956	1.431	75,194	-0.145***	-14.68
Main Independent Variables:	Mean	St. Dev.	Obs.	Mean	St. Dev.	Obs.	Diff.	*t*-stat
$Size_t$	5.420	2.029	26,795	5.470	2.026	75,194	-0.051***	-3.52
$Ln(Age)_t$	2.861	0.645	26,795	2.620	0.622	75,194	0.241***	53.84
HHI_t	0.243	0.184	26,795	0.221	0.176	75,194	0.022***	17.22
$Sales\ Growth_t$	0.051	0.261	26,795	0.060	0.302	75,194	-0.010***	-4.75
$Loss_t$	0.295	0.456	26,795	0.369	0.482	75,194	-0.073***	-21.69
$Debt\text{-}to\text{-}Equity_t$	0.481	0.918	26,795	0.498	1.018	75,194	-0.017**	-2.40
$Firm\ Liquidity_t$	0.272	0.232	26,795	0.273	0.240	75,194	-0.001	-0.63
$CAPX/Assets_t$	0.056	0.056	26,795	0.060	0.061	75,194	-0.005***	-10.58
$R\&D/Sales_t$	0.035	0.067	26,795	0.052	0.091	75,194	-0.017***	-28.44
$Inst.Own$	0.304	0.306	26,795	0.295	0.316	75,194	0.009***	4.02
$State\text{-}Year\ Q_t$	2.094	0.432	26,795	2.159	0.471	75,194	-0.065***	-19.90
$Industry\text{-}Year\ Q_t$	2.068	0.796	26,795	2.127	0.821	75,194	-0.059***	-10.24
$Business\ Combination\ Law_t$	0.833	0.373	26,795	0.736	0.441	75,194	0.097***	32.06
$Control\ Share\ Law_t$	0.690	0.462	26,795	0.050	0.217	75,194	0.640***	300
$Fair\ Price\ Law_t$	0.841	0.365	26,795	0.061	0.240	75,194	0.780***	390
$Poison\ Pill\ Law_t$	0.910	0.287	26,795	0.046	0.210	75,194	0.863***	520
Main Interacted Variables:	Mean	St. Dev.	Obs.	Mean	St. Dev.	Obs.	Diff.	*t*-stat
$S\&P\ 500_t$	0.121	0.326	26,795	0.111	0.315	75,194	0.010***	4.36
$Large\ Firm_t$	0.243	0.429	26,795	0.273	0.446	75,194	-0.030***	-9.60
$Firm\ Sales_t$	5.495	2.137	26,795	5.370	2.217	75,194	0.125***	7.98
$Strategic\ Alliance_t$	0.106	0.308	26,795	0.111	0.314	75,194	-0.005**	-2.07
$Large\ Customer_t$	0.122	0.328	26,795	0.118	0.323	75,194	0.004*	1.85
$Supplier\ Dependency_t$	0.006	0.016	26,795	0.009	0.022	75,194	-0.003***	-22.14
$Labor\ Intensity_t$	0.017	0.473	26,456	0.016	0.231	74,044	0.001	0.62
$Unsecured\ Debt_t$	0.598	0.406	23,266	0.577	0.404	64,155	0.021***	6.91
$Industry\ Cash\text{-}Flow\ Risk_t$	0.287	0.250	26,795	0.316	0.266	75,194	-0.028***	-12.06
$Creditor\ Reliance_t$	0.539	0.498	26,795	75,194	0.508	75,194	0.032***	8.87
$Default\ Risk_t$	0.382	0.486	26,795	0.497	0.500	75,194	-0.114***	-32.40
$Investment\ Rate_t$	0.073	0.076	24,482	0.077	0.079	65,412	-0.004***	-6.04
$Ln(Patents)_t$	0.069	0.185	23,816	0.071	0.184	66,960	-0.002*	-1.76
$Ln(CW\ Patents)_t$	0.663	1.249	23,816	0.717	1.290	66,960	-0.054***	-5.58
$Research\ Quotient_t$	0.116	0.081	10,398	0.119	0.092	27,352	-0.002**	-2.25

Table 3 – *(Continued)*

Panel C: Additional Full Sample Variables

Additional Dependent Variables:	Mean	St. Dev.	P25	Median	P75	Obs.
$\Delta\, Q_{t-1,\ t}$	-0.037	0.737	-0.239	0	0.210	90,790
Bid_t	0.030	0.172	0	0	0	101,989
$Complete_t$	0.028	0.164	0	0	0	101,989
1-$Day\ Premium_t$	0.336	0.323	0.143	0.286	0.464	2,743
1-$Week\ Premium_t$	0.379	0.345	0.180	0.324	0.512	2,743
4-$Week\ Premium_t$	0.432	0.390	0.212	0.366	0.583	2,743
ROA_t	0.086	0.151	0.046	0.114	0.170	90,568
ROE_t	0.004	0.301	-0.043	0.075	0.152	85,885
$ROCE_t$	0.074	0.209	0.005	0.102	0.186	87,969
$Short\text{-}Term\ Debt_t$	0.316	0.318	0.055	0.193	0.507	89,867
$Total\ Q$	1.039	1.348	0.222	0.606	1.268	101,563
Additional Interacted Variables:	Mean	St. Dev.	P25	Median	P75	Obs.
$Inc.State\text{-}Year\ M\&A\ Volume_t$	0.036	0.051	0.004	0.019	0.042	101,989
$Industry\text{-}Year\ M\&A\ Volume_t$	0.034	0.050	0.005	0.017	0.042	101,989

Table 4. Explaining the Adoption of Directors' Duties Laws. This table presents marginal effects from linear probability models analyzing the determinants of state adoption of a directors' duties law from 1983 to 2015. We define the dependent variable as the passage of a directors' duties law. Once a firm becomes covered by a directors' duties law they are removed from the sample for the remainder of the panel. The independent variables are lagged one-year. We standardize continuous explanatory variables to have zero mean and unit variance and include year and incorporation state fixed effects. Table 1 provides variable definitions. Continuous variables are winsorized at the 2.5% level in both tails, and dollar values are expressed in 2015 dollars. t-statistics are estimated using robust standard errors with independent double clustering by year and incorporation state level (reported in parentheses). *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Dep. Variable: $Directors' Duties\ Law_t$	1983 - 2015				
Variables	(1)	(2)	(3)	(4)	(5)
$Inc.State\text{-}Year\ Q_{t-1}$	0.007	0.015	0.022	0.019	0.020
	(0.30)	(0.66)	(0.83)	(0.75)	(0.77)
$Inc.State\text{-}Year\ \Delta\ Q_{t-1}$	-0.016	-0.012	-0.015	-0.004	-0.006
	(-0.85)	(-0.69)	(-0.82)	(-0.22)	(-0.30)
$Inc.State\ Industry\text{-}Year\ Q_{t-1}$	-0.028	-0.034	-0.011	-0.032	-0.030
	(-0.82)	(-0.99)	(-0.30)	(-0.85)	(-0.73)
$Business\ Combination\ Law_{t-1}$		-0.010		-0.044	-0.050
		(-0.17)		(-0.58)	(-0.62)
$Control\ Share\ Law_{t-1}$		0.077		0.078	0.081
		(0.90)		(0.91)	(0.89)
$Fair\ Price\ Law_{t-1}$		0.220**		0.221**	0.227**
		(2.05)		(2.03)	(2.04)
$Poison\ Pill\ Law_{t-1}$		0.039		0.064	0.074
		(0.66)		(1.02)	(0.98)
$Inc.State\text{-}Year\ Size_{t-1}$			0.043	0.035	0.037
			(1.10)	(0.92)	(0.72)
$Inc.State\text{-}Year\ Ln(Age)_{t-1}$			0.034	0.015	0.032
			(0.92)	(0.49)	(0.67)
$Inc.State\text{-}Year\ HHI_{t-1}$			0.021	0.022	0.019
			(1.36)	(1.32)	(1.19)
$Inc.State\text{-}Year\ Sales\ Growth_{t-1}$			-0.008	-0.005	-0.002
			(-0.65)	(-0.41)	(-0.13)
$Inc.State\text{-}Year\ Loss_{t-1}$			0.002	0.002	0.007
			(0.17)	(0.19)	(0.42)
$Inc.State\text{-}Year\ Debt\text{-}to\text{-}Equity_{t-1}$			-0.010	-0.009	-0.011
			(-0.85)	(-0.97)	(-1.02)
$Inc.State\text{-}Year\ Firm\ Liquidity_{t-1}$			-0.009	-0.006	-0.006
			(-0.71)	(-0.48)	(-0.38)
$Inc.State\text{-}Year\ CAPX/Assets_{t-1}$			0.016	0.016	0.014
			(1.18)	(1.28)	(0.37)
$Inc.State\text{-}Year\ R\&D/Sales_{t-1}$			-0.002	0.014	0.003
			(-0.06)	(0.47)	(0.08)
$Inc.State\text{-}Year\ Inst.Own_{t-1}$			0.006	0.005	-0.013
			(0.23)	(0.16)	(-0.21)
$Ln(Inc\ State\ Per\ Capita\ GDP)_{t-1}$			0.028	0.079	0.093
			(0.58)	(1.32)	(1.42)
$Inc.State\ GDP\ Growth_{t-1}$			0.003	-0.002	-0.005
			(0.19)	(-0.11)	(-0.26)

$Inc.State\ Percent\ Republican_{t-1}$			0.048	0.025	0.041
			(1.23)	(0.92)	(1.23)
$Inc.State\text{-}Year\ Strategic\ Alliance_{t-1}$					-0.013
					(-0.25)
$Inc.State\text{-}Year\ Large\ Customer_{t-1}$					0.016
					(0.47)
$Inc.State\text{-}Year\ Supplier\ Dependency_{t-1}$					0.012
					(0.64)
$Inc.State\text{-}Year\ Labor\ Intensity_{t-1}$					0.015
					(1.01)
$Inc.State\text{-}Year\ Unsecured\ Debt_{t-1}$					-0.004
					(-0.25)
$Inc.State\text{-}Year\ Investment\ Rate_{t-1}$					0.003
					(0.10)
$Inc.State\text{-}Year\ Ln(Patents)_{t-1}$[32]					-0.006
					(-0.27)
Inc. State fixed effects	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes
# of unique firms	8,826	8,826	8,826	8,826	7,968
N	75,177	75,177	75,177	75,177	59,385
Adjusted R^2	0.249	0.304	0.270	0.322	0.332

[32] We only have patent data until 2010, and thus these observations are treated as missing from 2011 to 2015.

Table 5. Directors' Duties Laws and Firm Value. This table reports the results for pooled panel regressions of Tobin's Q on a directors' duties law indicator variable over the sample period 1983 to 2015. The main variables of interest, *Q,* and *Directors' Duties Law*, are measured contemporaneously, whereas the remaining controls are lagged one period. Columns (2), and (4) – (5) include dummies for the other four antitakeover laws: *Business Combination Law, Control Share Law, Fair Price Law,* and *Poison Pill Law*. Table 1 provides variable definitions. Industry fixed effects are defined using the Fama-French 49 industry definitions. All continuous variables are winsorized at the 2.5% level in both tails, and the dollar values are expressed in 2015 dollars. The estimated *t*-statistics are based on robust standard errors clustered by firm and are reported in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Dep. Variable: Q_t	1983 - 2015				
Variables	(1)	(2)	(3)	(4)	(5)
$Directors' Duties\ Law_t$	0.059**	0.079**	0.062**	0.063**	0.067**
	(2.02)	(2.40)	(2.19)	(1.99)	(2.28)
$Size_{t-1}$			-0.346***	-0.346***	-0.353***
			(-24.47)	(-24.45)	(-26.12)
$Ln(Age)_{t-1}$			-0.273***	-0.273***	-0.236***
			(-8.22)	(-8.22)	(-7.28)
HHI_{t-1}			0.052	0.052	0.020
			(1.02)	(1.03)	(0.40)
$Sales\ Growth_{t-1}$			0.217***	0.216***	0.223***
			(11.69)	(11.68)	(12.45)
$Loss_{t-1}$			-0.071***	-0.071***	-0.069***
			(-6.70)	(-6.70)	(-6.88)
$Debt\text{-}to\text{-}Equity_{t-1}$			-0.029***	-0.029***	-0.027***
			(-5.63)	(-5.62)	(-5.51)
$Firm\ Liquidity_{t-1}$			0.011	0.010	-0.008
			(0.22)	(0.19)	(-0.17)
$CAPX/Assets_{t-1}$			0.415***	0.416***	0.346***
			(3.84)	(3.84)	(3.42)
$R\&D/Sales_{t-1}$			2.681***	2.683***	2.630***
			(11.98)	(11.99)	(12.41)
$Inst.Own_{t-1}$			0.388***	0.389***	0.388***
			(9.22)	(9.21)	(9.80)
$State\text{-}Year\ Q_{t-1}$			0.066***	0.055***	0.042**
			(3.21)	(2.84)	(2.26)
$Industry\text{-}Year\ Q_{t-1}$			0.102**	0.102**	0.038***
			(9.02)	(8.95)	(3.14)
Other takeover law controls	No	Yes	No	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	No
Industry-Year fixed effects	No	No	No	No	Yes
# of unique firms	11,264	11,264	11,264	11,264	11,264
N	101,989	101,989	101,989	101,989	101,989
Adjusted R^2	0.548	0.548	0.582	0.582	0.596

Table 6. Directors' Duties Laws and the Timing of Firm Value Implications. This table reports the results for pooled panel regressions of Tobin's Q on directors' duties law indicator variables for Compustat firms over the period 1983 to 2015. *Directors' Duties Law*$^{[-1]}$ is an indicator variable equal to one if a firm is incorporated in a state that will enact an effective directors' duties law in one year and equal to zero otherwise. *Directors' Duties Law*$^{[0]}$ is an indicator variable equal to one if a firm is incorporated in a state that enacted an effective directors' duties law in the current year and equal to zero otherwise. *Directors' Duties Law*$^{[+1]}$ is an indicator variable equal to one if a firm is incorporated in a state that enacted an effective directors' duties law one or more years ago and equal to zero otherwise. All control variables are lagged one-period and those included in columns (3), (4), and (5) are: *Size, Ln(Age), HHI, Sales Growth, Loss, Debt-to-Equity, Firm Liquidity, CAPX/Assets, R&D/Sales, Inst. Own, State-year Q,* and *Industry-year Q*. Further, columns (2) and (4) – (5) specify: *Business Combination Law, Control Share Law, Fair Price Law,* and *Poison Pill Law* dummies. Table 1 provides variable definitions. Industry fixed effects are defined using the Fama-French 49 industry definitions. All continuous variables are winsorized at the 2.5% level in both tails, and the dollar values are expressed in 2015 dollars. The estimated *t*-statistics are based on robust standard errors clustered by firm and are reported in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Dep. Variable: Q_t	1983 - 2015				
Variables	(1)	(2)	(3)	(4)	(5)
$Directors' Duties\ Law_t^{[-1]}$	0.011	0.016	0.018	0.026	0.003
	(0.40)	(0.53)	(0.65)	(0.88)	(0.12)
$Directors' Duties\ Law_t^{[0]}$	0.025	0.034	0.039	0.047	0.039
	(0.76)	(0.95)	(1.24)	(1.37)	(1.22)
$Directors' Duties\ Law_t^{[+1]}$	0.063*	0.088**	0.067**	0.081**	0.070**
	(1.89)	(2.24)	(2.07)	(2.13)	(1.97)
Other takeover law controls	No	Yes	No	Yes	Yes
Control variables	No	No	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	No
Industry-year fixed effects	No	No	No	No	Yes
# of unique firms	11,264	11,264	11,264	11,264	11,264
N	101,989	101,989	101,989	101,989	101,989
Adjusted R^2	0.547	0.548	0.582	0.583	0.596

Table 7. Changes in Directors' Duties Laws and Firm Value. This table reports the results for pooled panel regressions of changes in *Q* on the first difference in a *Directors' Duties Law* (Δ *Directors' Duties Law*$_{t-1,\,t}$) indicator variable over the sample period 1983 to 2015. We define the changes in *Q* from *t* to *t+n*, where *n* ranges from one to five (Δ $Q_{t,t+n}$), in the respective columns (1) – (5). The dependent variables have been demeaned with their annual cross-sectional averages. All other controls, including the other antitakeover laws are also first differenced. Each column specifies first differences for the following controls: *Size, Ln(Age), HHI, Sales Growth, Loss, Debt-to-Equity, Firm Liquidity, CAPX/Assets, R&D/Sales, Inst. Own, State-year Q, Industry-year Q, Business Combination Law, Control Share Law, Fair Price Law,* and *Poison Pill Law*. Table 1 provides variable definitions. Industry fixed effects are defined using the Fama-French 49 industry groupings. All continuous variables are winsorized at the 2.5% level in both tails, and the dollar values are expressed in 2015 dollars. The estimated *t*-statistics are based on robust standard errors clustered by firm and are reported in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

	1983 - 2015				
Dep. Variables:	$\Delta Q_{t,\,t+1}$	$\Delta Q_{t,\,t+2}$	$\Delta Q_{t,\,t+3}$	$\Delta Q_{t,\,t+4}$	$\Delta Q_{t,\,t+5}$
Variables	(1)	(2)	(3)	(4)	(5)
$\Delta\, Directors' Duties\ Law_{t-1,\,t}$	0.047**	0.076**	0.068**	0.075**	0.091**
	(2.02)	(2.46)	(1.99)	(2.01)	(2.38)
Other takeover law controls	Yes	Yes	Yes	Yes	Yes
Control variables	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes
# of unique firms	9,811	8,703	7,656	6,857	6,197
N	90,790	81,090	72,627	65,291	58,831
Adjusted R^2	0.050	0.063	0.068	0.087	0.083

Table 8. Matched Sample Summary Statistics. This table reports summary statistics for a propensity score matched sample. Treated firms are defined as companies incorporated in states with an effective directors' duties law, whereas the control firms are incorporated in states without directors' duties laws in at least the five-year period following the effective date of a law for its matched counterpart. We use nearest-neighbor matching with replacement in year *t-1* to create a sample matched on *Q, Size, Ln(Age), Loss, Inst. Own, Ln(Patents), Unsecured Debt, Supplier Dependency*, and exactly on two-digit SIC industry codes and *Strategic Alliance* for each of the 35 treated states. Panel A presents the summary statistics for the year prior to treatment. The column "Difference (*t*-stat)" provides the difference between the treated and control sample mean and its test statistic in parentheses. The row "N (by group)" provides the number of unique firms for each treatment and control group. Panel B shows the summary statistics for the full matched panel. Table 1 provides variable definitions. All continuous variables are winsorized at the 2.5% level in both tails, and the dollar values are expressed in 2015 dollars. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Panel A: Pre-Treatment Year (*t*-1)

	(1)	(2)	(3)
Matched Variables:	Treat	Control	Difference
Q_t	1.699	1.748	-0.049
	(1.181)	(1.211)	(-1.09)
$Size_t$	4.760	4.803	-0.043
	(2.027)	(2.045)	(-0.57)
$Ln(Age)_t$	2.439	2.410	0.029
	(0.724)	(0.751)	(1.05)
$Loss_t$	0.305	0.286	0.020
	(0.461)	(0.452)	(1.15)
$Inst.Own_t$	0.159	0.160	-0.001
	(0.215)	(0.217)	(-0.13)
$Strategic\ Alliance_t$	0.013	0.013	0.000
	(0.111)	(0.111)	(0.00)
$Supplier\ Dependency_t$	0.004	0.004	-0.001
	(0.011)	(0.014)	(-1.38)
$Unsecured\ Debt_t$	0.536	0.555	-0.019
	(0.396)	(0.395)	(-1.28)
$Ln(Patents)_t$	0.066	0.062	0.004
	(0.187)	(0.180)	(0.60)
$SIC2\ Industry_t$	41.553	41.553	0.000
	(18.141)	(18.141)	(0.00)
Other Control Variables:			
HHI_t	0.262	0.264	-0.003
	(0.186)	(0.189)	(-0.38)
$Sales\ Growth_t$	0.080	0.079	0.001
	(0.287)	(0.288)	(0.083)
$Debt\text{-}to\text{-}Equity_t$	0.611	0.562	0.048
	(0.980)	(1.020)	(1.29)
$Firm\ Liquidity_t$	0.281	0.287	-0.005
	(0.224)	(0.226)	(-0.64)
$CAPX/Assets_t$	0.072	0.071	0.001
	(0.066)	(0.065)	(0.59)
$R\&D/Sales_t$	0.030	0.035	-0.005
	(0.077)	(0.082)	(-1.61)
N (by group)	1,428	1,428	

Table 8 – *(Continued)*

Panel B: (*t*-3) to (*t*+3)

Matched Variables:	Mean	St. Dev.	Median	Obs.
Q_t	1.583	1.034	1.255	14,536
$Size_t$	5.072	2.014	4.911	14,536
$Ln(Age)_t$	2.690	0.577	2.833	14,536
$Loss_t$	0.286	0.452	0	14,536
$Inst.Own_t$	0.189	0.233	0.082	14,536
$Strategic\ Alliance_t$	0.026	0.160	0	14,536
$Supplier\ Dependency_t$	0.004	0.013	0	14,536
$Unsecured\ Debt_t$	0.550	0.399	0.637	14,098
$Ln(Patents)_t$	0.077	0.198	0	14,536
Other Control Variables:	Mean	St. Dev.	Median	Obs.
HHI_t	0.258	0.172	0.224	14,536
$Sales\ Growth_t$	0.046	0.260	0.038	14,536
$Debt\text{-}\ to\text{-}\ Equity_t$	0.552	0.940	0.297	14,536
$Firm\ Liquidity_t$	0.278	0.217	0.285	14,536
$CAPX/Assets_t$	0.066	0.058	0.050	14,536
$R\&D/Sales_t$	0.031	0.059	0	14,536

Table 9. Directors' Duties Laws and Firm Value in a Matched Sample. This table reports the results for matched sample regressions of Tobin's Q on a *Treat* × *Post* interaction term. *Treat* is an indicator variable equal to one if the firm is incorporated in a state that adopts a directors' duties law. *Post* is an indicator variable equal to one in the year of and post treatment period, and zero otherwise. The main variables of interest Q, *Treat* × *Post*, and *Post* are measured contemporaneously, whereas the remaining controls are lagged one period. *Treat* is omitted in the regression because of collinearity with its firm fixed effect. Table 1 provides variable definitions. Columns (3) and (4) include the controls: *Size, Ln(Age), HHI, Sales Growth, Loss, Debt-to-Equity, Firm Liquidity, CAPX/Assets, R&D/Sales, Inst. Own, State-year Q,* and *Industry-year Q*. Further, columns (2) and (4) specify: *Business Combination Law, Control Share Law, Fair Price Law,* and *Poison Pill Law* dummies. All continuous variables are winsorized at the 2.5% level in both tails, and the dollar values are expressed in 2015 dollars. The estimated *t*-statistics are based on robust standard errors clustered by firm and are reported in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Dep. Variable: Q_t	(t-3) to (t+3)			
Variables	(1)	(2)	(3)	(4)
$Treat_t \times Post_t$	0.064*	0.078**	0.066*	0.074**
	(1.76)	(2.09)	(1.90)	(2.05)
$Post_t$	-0.047*	-0.049*	-0.020	-0.021
	(-1.86)	(-1.90)	(-0.83)	(-0.83)
Other takeover law controls	No	Yes	No	Yes
Control variables	No	No	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
# of unique firms	2,352	2,352	2,352	2,352
N	14,536	14,536	14,536	14,536
Adjusted R^2	0.673	0.673	0.688	0.688

Table 10. Portfolio Analysis: Directors' Duties Laws and Abnormal Returns. This table reports abnormal returns of equally weighted monthly portfolios of firms that are incorporated in states that have effective directors' duties laws. We construct the portfolios using the treated and control firms from the propensity score matched sample around the effective date of these laws. The long portfolios are composed in the following manner. For portfolios *6m12*, *6m24*, and *12m24* we include all stocks of matched firms that are incorporated in enacting states starting 6 or 12 months before the fiscal year-end of the year in which the incorporating state has an effective directors' duties law in place, and hold these stocks for 12 or 24 months. Similarly, the short portfolios are constructed by including all stocks of control firms that are matched to a treated company incorporated in enacting states starting 6 or 12 months before the fiscal year-end of the year in which that treated incorporating state has an effective directors' duties law in place, and short these control group stocks for 12 or 24 months. The long-short portfolios are then created by differencing the portfolio returns of the long and short portfolios, for each respective month. We use two models: the four-factor Carhart (1997) model (i.e., momentum, high minus low book-to-market (HML), small minus big (SMB), and market return), and the three-factor Fama-French model (i.e., HML, SMB, and market return). The portfolio returns are winsorized at the 2.5% level in both tails, and the estimated *t*-statistics are based on robust standard errors (presented in parentheses below the coefficients). *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively. The number of stocks in the long and short portfolios are averaged across all months and displayed in the "Average # firms" row. The "M" row shows the total number of monthly observations, and the "N" row shows the total number of firms with useable returns.

	Four-factor model			Three-factor model		
Portfolio "6m12"						
	Long	Short	Long - Short	Long	Short	Long - Short
Alpha (monthly)	0.488**	0.203	0.297	0.594***	0.201	0.397*
	(2.42)	(0.78)	(1.26)	(2.67)	(0.77)	(1.65)
Average # firms	140.83	139.79	-	140.83	139.79	-
M	170	170	170	170	170	170
N	1,379	1,373	-	1,379	1,373	-
Adjusted R^2	0.765	0.664	0.005	0.763	0.666	-0.001
	Four-factor model			Three-factor model		
Portfolio "6m24"						
	Long	Short	Long - Short	Long	Short	Long - Short
Alpha (monthly)	0.426**	0.071	0.367*	0.599***	0.120	0.486**
	(2.37)	(0.32)	(1.89)	(2.96)	(0.50)	(2.38)
Average # firms	181.81	179.01	-	181.81	179.01	-
M	212	212	212	212	212	212
N	1,381	1,377	-	1,381	1,377	-
Adjusted R^2	0.770	0.682	0.019	0.762	0.683	0.005
	Four-factor model			Three-factor model		
Portfolio "12m24"						
	Long	Short	Long - Short	Long	Short	Long - Short
Alpha (monthly)	0.348*	0.012	0.322*	0.502**	0.069	0.430**
	(1.93)	(0.06)	(1.77)	(2.54)	(0.37)	(2.25)
Average # firms	202.94	200.34	-	202.94	200.34	-
M	230	230	230	230	230	230
N	1,384	1,378	-	1,384	1,378	-
Adjusted R^2	0.761	0.757	0.021	0.755	0.757	0.009

Table 11. Directors' Duties Laws and Takeover Likelihood. This table reports the results for pooled panel regressions of *M&A Activity* on a *Directors' Duties Law* indicator variable over the period 1983 to 2015. *M&A Activity* dependent variables include the following: *Bid* and *Completed*. *Bid* is an indicator variable equal to one if a firm receives a takeover bid as catalogued by the SDC M&A database and CRSP delisting codes (200s), and zero otherwise. *Completed* is an indicator variable equal to one if a firm is successfully acquired as catalogued by the SDC M&A database and CRSP delisting codes (200s), and zero otherwise. The main variables of interest, Bid, $Completed$, and *Directors' Duties Law*, are measured contemporaneously, and the controls are lagged one period. Table 1 provides variable definitions. The included controls are: *Size, Ln(Age), HHI, Loss, Debt-to-Equity, Firm Liquidity, CAPX/Assets, R&D/Sales, Inst. Own, State-year Q, Industry-year Q*, *Business Combination Law, Control Share Law, Fair Price Law,* and *Poison Pill Law*. All continuous variables are winsorized at the 2.5% level in both tails and the dollar values are expressed in 2015 dollars. Industry fixed effects are defined at the three-digit SIC code level. The estimated *t*-statistics are based on robust standard errors clustered by firm and are reported in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

	1983 to 2015			
Dep. Variables:	$Bid_{[t]}$		$Completed_{[t]}$	
Variables	(1)	(2)	(3)	(4)
$Directors' Duties\ Law_t$	0.001	0.001	0.002	0.001
	(0.26)	(0.31)	(0.68)	(0.33)
Control variables	Yes	Yes	Yes	Yes
Other law controls	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	No	Yes	No	Yes
# of firms in regression	11,264	11,264	11,264	11,264
N	101,989	101,989	101,989	101,989
Adjusted R^2	0.011	0.014	0.012	0.018

Table 12. Directors' Duties Laws and Target Firm Value. This table reports results for pooled panel regressions analyzing the effect of directors' duties laws on target firm value. Panel A presents the estimates of a *Takeover Premium* dependent variable on *Directors' Duties Law* over the period 1983 to 2015. We use three *Takeover Premium* dependent variables: *1-Day Premium*, *1-Week Premium*, and *4-Week Premium*, all of which come from the SDC M&A database, and measure the premium of the offer price to the target closing price 1-day, 1-week, or 4-weeks prior to the announcement date, respectively. Panel B regresses Tobin's Q on a *Directors' Duties Law* × *M&A Activity* interaction term. *M&A Activity* interaction variables include the following: *Inc. State-Year M&A Volume* and *Industry-Year M&A Volume*. *Inc. State-Year M&A Volume* is measured as the ratio of completed M&A dollar volume to total market capitalization per state of incorporation. *Industry-Year M&A Volume* is defined as the ratio of completed M&A dollar volume to total market capitalization per Fama-French 49 industry grouping. The main variables of interest, $Takeover\ Premium$, Q, $Directors'\ Duties\ Law \times M\&A\ Activity$, $Directors'\ Duties\ Law$, and $M\&A\ Activity$, are measured contemporaneously, and the controls are lagged one period. Table 1 provides variable definitions. All columns in both panels include the following controls: *Size, Ln(Age), HHI, Loss, Debt-to-Equity, Firm Liquidity, CAPX/Assets, R&D/Sales, Inst. Own, State-year Q,* and *Industry-year Q*. The even-numbered columns in both panels further append: *Business Combination Law, Control Share Law, Fair Price Law,* and *Poison Pill Law*. Continuous variables are winsorized at the 2.5% level in both tails and the dollar values are expressed in 2015 dollars. Industry fixed effects are defined at the three-digit SIC code level. The estimated t-statistics are based on robust standard errors clustered by firm and are reported in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Panel A: Takeover Premiums

	1983 to 2015					
Dep. Variables:	1-$Day\ Premium_t$		1-$Week\ Premium_t$		4-$Week\ Premium_t$	
Variables	(1)	(2)	(3)	(4)	(5)	(6)
$Directors' Duties\ Law_t$	-0.001	0.016	-0.003	0.022	-0.001	0.008
	(-0.06)	(0.54)	(-0.21)	(0.73)	(-0.01)	(0.23)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes
Other takeover law controls	No	Yes	No	Yes	No	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
# of firms in regression	2,743	2,743	2,743	2,743	2,743	2,743
N	2,743	2,743	2,743	2,743	2,743	2,743
Adjusted R^2	0.120	0.120	0.109	0.108	0.104	0.103

Table 12 – *(Continued)*

Panel B: Tobin's Q

Dep. Variable: $Q_{[t]}$	1983 to 2015			
Variables	(1)	(2)	(3)	(4)
$Directors' Duties\ Law_t \times Inc.State\text{-}Year\ M\&A\ Volume_t$	-0.386	-0.383		
	(-0.71)	(-0.70)		
$Directors' Duties\ Law_t \times Industry\text{-}Year\ M\&A\ Volume_t$			-0.074	-0.074
			(-0.46)	(-0.46)
$Directors' Duties\ Law_t$	0.056**	0.067**	0.053*	0.066**
	(2.00)	(2.10)	(1.85)	(2.05)
$Inc.State\text{-}Year\ M\&A\ Volume_t$	0.195	0.189		
	(1.44)	(1.40)		
$Industry\text{-}Year\ M\&A\ Volume_t$			0.014	0.014
			(0.16)	(0.16)
Other takeover law controls	No	Yes	No	Yes
Control variables	Yes	Yes	Yes	Yes
Firm and year fixed effects	Yes	Yes	Yes	Yes
# of firms in regression	11,264	11,264	11,264	11,264
N	101,989	101,989	101,989	101,989
Adjusted R^2	0.582	0.582	0.582	0.582

Table 13. Directors' Duties Laws, Policy and Innovation, Financial Soundness, and Profitability. This table reports the results for pooled panel regressions of proxies for *Policy* and *Innovation*, *Financial Soundness*, and *Profitability*, respectively, on a *Directors' Duties Law* indicator variable over the period 1983 to 2015. Panel A investigates the effect of *Directors' Duties Law* on proxies for corporate policy and innovation. Our *Policy* and *Innovation* measures include: *Size, Debt-to-Equity, CAPX/Assets, R&D/Sales,* and *Ln(CW Patents)*. *CW Patents* denotes citation-weighted patents. Panel B shows the estimates for *Financial Soundness*. We proxy for *Financial Soundness* using the following: *Loss, Default Risk,* and *ST Debt/Total Debt*. *Loss* is an indicator variable equal to one for firms' with negative net incomes, and zero otherwise. *Default Risk* is an indicator set equal to one for firms' with modified Z double prime scores below the sample median and zero otherwise. *ST Debt/Total Debt* is defined as short-term debt as a fraction of total debt. Panel C presents results specific to *Profitability*. We proxy for *Profitability* using the following: *ROA, ROE,* and *ROCE*. *ROA* (return on assets) is measured as net income divided by total assets. *ROE* (return on equity) is defined as net income scaled by common/ordinary equity. *ROCE* (return on capital employed) equals earnings before interest and taxes over sales. The main variables of interest, *Size, Debt-to-Equity, CAPX/Assets, R&D/Sales, Ln(CW Patents), Loss, Default Risk, ST Debt/Total Debt, ROA, ROE,* and *ROCE,* are led one year (t+1). *Directors' Duties Law* is measured contemporaneously, while the controls are lagged one period. Included controls, unless specified as a dependent variable: *Size, Ln(Age), HHI, Loss, Debt-to-Equity, Firm Liquidity, CAPX/Assets, R&D/Sales, Inst. Own, State-year Q, Industry-year Q, Business Combination Law, Control Share Law, Fair Price Law*, and *Poison Pill Law*. All continuous variables, except *ROA, ROE,* and *ROCE* are winsorized at the 2.5% level in both tails and the dollar values are expressed in 2015 dollars. Meanwhile, given the extreme variation in both tails of the *ROA, ROE,* and *ROCE* distributions, we truncate these measures at the 2.5% level in both tails (following Giroud and Mueller, 2010). The estimated t-statistics are based on robust standard errors clustered by firm and are reported in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Panel A: Policy and Innovation

			1983 to 2015		
Dep. Variables:	$Size_{t+1}$	$Debt\text{-}to\text{-}Equity_{t+1}$	$CAPX/Assets_{t+1}$	$R\&D/Sales_{t+1}$	$Ln(CW\ Patents)_{t+1}$
Variables	(1)	(2)	(3)	(4)	(5)[33]
$Directors' Duties\ Law_t$	0.002	-0.021	0.002	0.001*	0.042*
	(0.06)	(-0.85)	(1.02)	(1.65)	(1.65)
Other takeover law controls	Yes	Yes	Yes	Yes	Yes
Control variables	Yes	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes
# of unique firms	9,826	9,822	9,826	9,826	9,435
N	90,922	90,808	90,922	90,922	79,915
Adjusted R^2	0.938	0.364	0.559	0.869	0.726

[33] The regression analysis in column (4) ends in 2009 since our patent data only extends to 2010 and our *Ln(CW Patents)* dependent variable is (*t*+1).

Table 13 – *(Continued)*

Panel B: Financial Soundness

	1983 to 2015		
Dep. Variables:	$Loss_{t+1}$	$Default\ Risk_{t+1}$	$Short\text{-}Term\ Debt_{t+1}$
Variables	(1)	(2)	(3)
$Directors' Duties\ Law_t$	-0.017* (-1.70)	-0.026** (-2.30)	-0.014* (-1.65)
Other takeover law controls	Yes	Yes	Yes
Control variables	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes
# of unique firms	9,826	9,826	9,322
N	90,921	90,922	79,576
Adjusted R^2	0.396	0.652	0.511

Panel C: Profitability

	1983 to 2015		
Dep. Variables:	ROA_{t+1}	ROE_{t+1}	$ROCE_{t+1}$
Variables	(1)	(2)	(3)
$Directors' Duties\ Law_t$	0.008** (2.09)	0.014* (1.77)	0.011** (2.12)
Other takeover law controls	Yes	Yes	Yes
Control variables	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes
# of unique firms	10,053	9,643	9,758
N	92,141	85,885	87,969
Adjusted R^2	0.500	0.473	0.589

Table 14. Directors' Duties Laws, Complexity, and Firm Value. This table reports the results for pooled panel regressions of Tobin's Q on a *Directors' Duties Law* × *Complexity* interaction term over the period 1983 to 2015. We proxy for *Complexity* in the following three ways: *Large Firm* is an indicator variable assigned a value of one for firms with *Ln(Assets)* in the top quartile of their four-digit SIC code industry, and zero otherwise. *Firm Sales* is equal to the natural logarithm of real sales revenue, adjusted using 2015 dollars. *Size* is measured as the natural logarithm of real assets, adjusted using 2015 dollars. The main variables of interest, *Q*, and *Directors' Duties Law* × *Complexity*, *Directors' Duties Law,* and *Complexity,* are measured contemporaneously, whereas the remaining controls are lagged one period. Columns (1) – (6) specifies the other control variables: *Size, Ln(Age), HHI, Sales Growth, Loss, Debt-to-Equity, Firm Liquidity, CAPX/Assets, R&D/Sales, Inst. Own, State-year Q,* and *Industry-year Q*. The even-numbered columns include controls for the other antitakeover laws: *Business Combination Law, Control Share Law, Fair Price Law,* and *Poison Pill Law*. Table 1 provides variable definitions. Continuous variables are winsorized at the 2.5% level in both tails and the dollar values are expressed in 2015 dollars. The estimated t-statistics are based on robust standard errors clustered by firm and are reported in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Dep. Variable: Q_t	1983 - 2015					
Variables	(1)	(2)	(3)	(4)	(5)	(6)
$Directors' Duties\ Law_t \times Large\ Firm_t$	0.048*	0.048*				
	(1.75)	(1.76)				
$Directors' Duties\ Law_t \times Firm\ Sales_t$			0.031**	0.032**		
			(2.34)	(2.39)		
$Directors' Duties\ Law_t \times Size_t$					0.036***	0.037***
					(2.85)	(2.92)
$Directors' Duties\ Law_t$	0.039	0.051	-0.128	-0.113	-0.151*	-0.134*
	(1.33)	(1.59)	(-1.50)	(-1.34)	(-1.89)	(-1.69)
$Large\ Firm_t$	-0.002	-0.002				
	(-0.12)	(-0.12)				
$Firm\ Sales_t$			0.179***	0.179***		
			(9.23)	(9.21)		
$Size_t$					-0.259***	-0.259***
					(-17.57)	(-17.54)
Other takeover law controls	No	Yes	No	Yes	No	Yes
Control variables	Yes	Yes	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
# of unique firms	11,264	11,264	11,264	11,264	11,264	11,264
N	101,989	101,989	101,989	101,989	101,989	101,989
Adjusted R^2	0.582	0.582	0.585	0.585	0.575	0.575

Table 15. Directors' Duties Laws, Long-Term Investments, and Firm Value. This table reports the results for pooled panel regressions of Tobin's Q on a *Directors' Duties Law × Long-Term Investments* interaction term. *Long-Term Investments* proxies include the following: *R&D/Sales, Investment Rate, Ln(CW Patents),* and *Research Quotient*. The main variables of interest, *Q, Directors' Duties Law × Long-Term Investments, Directors' Duties Law,* and *Long-Term Investments,* are measured contemporaneously, whereas the remaining controls are lagged one period. Table 1 provides variable definitions. The included controls are: *Size, Ln(Age), HHI, Sales Growth, Loss, Debt-to-Equity, Firm Liquidity, CAPX/Assets, R&D/Sales, Inst. Own, State-year Q, Industry-year Q, Business Combination Law, Control Share Law, Fair Price Law,* and *Poison Pill Law*. Continuous variables are winsorized at the 2.5% level in both tails and the dollar values are expressed in 2015 dollars. The estimated t-statistics are based on robust standard errors clustered by firm and are reported in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Dep. Variable: Q_t	1983 – 2015			
Variables	(1)	(2)	(3)[34]	(4)
$Directors' Duties\ Law_t \times R\&D/Sales_t$	1.153**			
	(2.48)			
$Directors' Duties\ Law_t \times Investment\ Rate_t$		0.239*		
		(1.79)		
$Directors' Duties\ Law_t \times Ln(CW\ Patents)_t$			0.039***	
			(2.60)	
$Directors' Duties\ Law_t \times Research\ Quotient_t$				0.699*
				(1.92)
$Directors' Duties\ Law_t$	0.026	0.035	0.030	-0.061
	(0.78)	(1.04)	(0.89)	(-0.83)
$R\&D/Sales_t$	0.547***			
	(3.16)			
$Investment\ Rate_t$		0.253***		
		(3.38)		
$Ln(CW\ Patents)_t$			-0.005	
			(-0.50)	
$Research\ Quotient_t$				-0.130
				(-0.68)
Other takeover law controls	Yes	Yes	Yes	Yes
Control variables	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
# of unique firms	11,264	9,719	10,769	3,706
N	101,989	89,894	90,776	33,605
Adjusted R^2	0.579	0.583	0.585	0.598

[34] The regression analysis in column (3) ends in 2010, since this is as far as our patent data extends.

Table 16. Directors' Duties Laws, Stakeholder Relationships, and Firm Value. This table reports the results for pooled panel regressions of Tobin's Q on a *Directors' Duties Law* × *Stakeholder Relationship* interaction term. *Stakeholder Relationship* proxies include the following: *Strategic Alliance, Large Customer, Supplier Dependency,* and *Labor Intensity*. The main variables of interest, *Q, Directors' Duties Law* × *Stakeholder Relationship*, *Directors' Duties Law*, and *Stakeholder Relationship,* are measured contemporaneously, whereas the remaining controls are lagged one period. Table 1 provides variable definitions. The included controls are: *Size, Ln(Age), HHI, Sales Growth, Loss, Debt-to-Equity, Firm Liquidity, CAPX/Assets, R&D/Sales, Inst. Own, State-year Q, Industry-year Q, Business Combination Law, Control Share Law, Fair Price Law,* and *Poison Pill Law*. Continuous variables are winsorized at the 2.5% level in both tails and the dollar values are expressed in 2015 dollars. The estimated t-statistics are based on robust standard errors clustered by firm and are reported in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Dep. Variable: Q_t	1983 - 2015			
Variables	(1)	(2)	(3)	(4)
$Directors' Duties\ Law_t \times Strategic\ Alliance_t$	0.133**			
	(1.99)			
$Directors' Duties\ Law_t \times Large\ Customer_t$		0.084*		
		(1.71)		
$Directors' Duties\ Law_t \times Supplier\ Dependency_t$			0.957*	
			(1.89)	
$Directors' Duties\ Law_t \times Labor\ Intensity_t$				0.039***
				(2.94)
$Directors' Duties\ Law_t$	0.065**	0.067**	0.068**	0.068**
	(2.07)	(2.11)	(2.15)	(2.12)
$Strategic\ Alliance_t$	-0.022			
	(-0.55)			
$Large\ Customer_t$		0.041		
		(1.27)		
$Supplier\ Dependency_t$			0.010**	
			(2.28)	
$Labor\ Intensity_t$				0.013
				(1.61)
Other takeover law controls	Yes	Yes	Yes	Yes
Control variables	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
# of unique firms	11,264	11,264	11,264	11,154
N	101,989	101,989	101,989	100,576
Adjusted R^2	0.587	0.587	0.587	0.588

Table 17. Directors' Duties Laws, Creditors, and Firm Value. This table reports the results for pooled panel regressions of Tobin's Q on a *Directors' Duties Law* × *Creditor Stakeholder* interaction term. *Creditor Stakeholder* proxies include the following: *Unsecured Debt, Industry CF Risk, Creditor Reliance*, and *Default Risk*. The main variables of interest, *Q, Directors' Duties Law* × *Creditor Stakeholder, Directors' Duties Law*, and *Creditor Stakeholder,* are measured contemporaneously, whereas the remaining controls are lagged one period. Table 1 provides variable definitions. The included controls are: *Size, Ln(Age), HHI, Sales Growth, Loss, Debt-to-Equity, Firm Liquidity, CAPX/Assets, R&D/Sales, Inst. Own, State-year Q, Industry-year Q, Business Combination Law, Control Share Law, Fair Price Law*, and *Poison Pill Law*. Continuous variables are winsorized at the 2.5% level in both tails and the dollar values are expressed in 2015 dollars. The estimated t-statistics are based on robust standard errors clustered by firm and are reported in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Dep. Variable: Q_t	1983 - 2015			
Variables	(1)	(2)	(3)	(4)
$Directors' Duties\ Law_t \times Unsecured\ Debt_t$	0.052*			
	(1.69)			
$Directors' Duties\ Law_t \times Industry\ CF\ Risk_t$		0.127**		
		(1.98)		
$Directors' Duties\ Law_t \times Creditor\ Reliance_t$			0.055**	
			(1.97)	
$Directors' Duties\ Law_t \times Default\ Risk_t$				0.070**
				(2.35)
$Directors' Duties\ Law_t$	0.035	0.033	0.038	0.035
	(1.02)	(0.97)	(1.06)	(1.07)
$Unsecured\ Debt_t$	0.015			
	(0.81)			
$Industry\ Cash\text{-}\ Flow\ Risk_t$		-0.204***		
		(-5.04)		
$Creditor\ Reliance_t$			-0.266***	
			(-17.52)	
$Default\ Risk_t$				-0.238***
				(-14.99)
Other takeover law controls	Yes	Yes	Yes	Yes
Control variables	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
# of unique firms	10,618	11,264	11,264	11,264
N	87,421	101,989	101,989	101,989
Adjusted R^2	0.595	0.583	0.585	0.583

Table 18. Directors' Duties Strength Index and Firm Value. This table describes the directors' duties strength index (*DDS-Index*) and reports results from pooled panel regressions of *Q* on the *DDS-Index* over the period 1983-2015. Panel A provides a description of the index. Panel B tests the effect of the *DDS-Index* on *Q*. The main variables of interest, *Q*, and *DDS-Index*, are measured contemporaneously, whereas the remaining controls are lagged one period. Columns (2), and (4) – (5) include dummies for the other antitakeover laws: *Business Combination Law, Control Share Law, Fair Price Law,* and *Poison Pill Law*. Columns (3) – (5) specifies controls for: *Size, Ln(Age), HHI, Sales Growth, Loss, Debt-to-Equity, Firm Liquidity, CAPX/Assets, R&D/Sales, Inst. Own, State-year Q,* and *Industry-year Q*. Table 1 provides variable definitions. Continuous variables are winsorized at the 2.5% level in both tails and dollar values are expressed in 2015 dollars. Estimated t-statistics are based on robust standard errors clustered by firm (reported in parentheses). *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Panel A: DDS-Index Description

State of Incorporation	Code	Explanation of *DDS-Index* Value Assignment
Always zero states: Alabama, Alaska, Arkansas, California, Colorado, Delaware, Kansas, Michigan, Montana, New Hampshire, Oklahoma, South Carolina, Utah, Washington, West Virginia.	= 0	If a firm is incorporated in a state without directors' duties legislation we code the index as a zero. This includes all firm-year observations in the period prior to eventual effective dates. These are the "0" cells from Barzuza (2009).
States assigned a value of one: Florida, Georgia, Maine, Nebraska, New York, Wisconsin.	= 1	If a firm is incorporated in a state that has an effective directors' duties law but does not explicitly apply the business judgement rule (BJR), and merely allows directors to take into account the interests of other constituencies or the long-term interests of the corporation, but without explicitly stating that they can do so at the expense of shareholder value we code their index value as a one. These are the weak "W" statutes from Barzuza (2009).
States assigned a value of two: Arizona, Connecticut, Hawaii, Idaho, Illinois, Iowa, Kentucky, Louisiana, Minnesota, Mississippi, Missouri, New Jersey, New Mexico, North Dakota, Oregon, Rhode Island, South Dakota, Tennessee, Texas, Vermont, Wyoming.	= 2	If a firm is incorporated in a state that has an effective directors' duties statute but does not explicitly apply the BJR, and allows directors to benefit other constituencies at the expense of shareholders or to consider the long-term interests of the firm we code their index value as two. These are the intermediate "I" statutes from Barzuza (2009).
States assigned a value of two and one-thirds: Massachusetts.	= 2 1/3	If a firm is incorporated in a state that has an effective directors' duties law that applies the BJR, but not explicitly to change-of-control events we code their index value as two and one-thirds. These are the intermediately strong "I+" statutes from Barzuza (2009).
States assigned a value of two and two-thirds: Nevada, Pennsylvania.	= 2 2/3	If a firm is incorporated in a state that has an effective directors' duties law that applies the BJR only to disinterested directors or only to acts that do not interfere with the shareholder franchise we code their index value as two and two-thirds. These are the strong "S-" statutes from Barzuza (2009).
States assigned a value of three: Indiana, Maryland, North Carolina, Ohio, Virginia.	= 3	If a firm is incorporated in a state that has an effective directors' duties law that explicitly applies the BJR or rejects the notion of enhanced duties with respect to change-of-control events we code their index value as a three. These are the strongest "S" statutes from Barzuza (2009).
Total	= 0 - 3	The final *DDS-Index* value ranges between zero and three.

Table 18 – *(Continued)*

Panel B: Pooled Panel Regressions

Dep. Variable: Q_t	1983 - 2015				
Variables	(1)	(2)	(3)	(4)	(5)
$DDS\text{-}Index_t$	0.027**	0.034**	0.028**	0.023*	0.024*
	(2.11)	(2.44)	(2.24)	(1.70)	(1.78)
Other takeover law controls	No	Yes	No	Yes	Yes
Control variables	No	No	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	No
Industry-Year fixed effects	No	No	No	No	Yes
# of unique firms	11,264	11,264	11,264	11,264	11,264
N	101,989	101,989	101,989	101,989	101,989
Adjusted R^2	0.548	0.548	0.583	0.582	0.596

Internet Appendix for

"Directors' Duties Laws and Long-Term Firm Value"

by Simone M. Sepe, Scott B. Guernsey, and K.J. Martijn Cremers

This Internet Appendix contains 9 supplementary tables to the Main Article

Table A1. Directors' Duties Laws, S&P 500 Constituents, and Firm Value. This table reports the results for pooled panel regressions of Tobin's Q on a *Directors' Duties Law* × *S&P 500* interaction variable over the sample period 1983 to 2015. *S&P 500* is an indicator variable equal to one if a firm is an S&P 500 index constituent in a given year, and zero otherwise. The main variables of interest, *Q, Directors' Duties Law* × *S&P 500, Directors' Duties Law,* and *S&P 500*, are measured contemporaneously, whereas the remaining controls are lagged one period. Columns (2), (4), and (5) include dummies for the other four antitakeover laws: *Business Combination Law, Control Share Law, Fair Price Law,* and *Poison Pill Law*. Columns (3) – (5) specifies the following controls: *Size, Ln(Age), HHI, Sales Growth, Loss, Debt-to-Equity, Firm Liquidity, CAPX/Assets, R&D/Sales, Inst. Own, State-year Q,* and *Industry-year Q*. Table 1 provides variable definitions. Industry fixed effects are defined using the Fama-French 49 industry definitions. All continuous variables are winsorized at the 2.5% level in both tails, and the dollar values are expressed in 2015 dollars. The estimated *t*-statistics are based on robust standard errors clustered by firm and are reported in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Dep. Variable: $Q_{[t]}$	1983 to 2015				
Variables	(1)	(2)	(3)	(4)	(5)
$Directors' Duties\ Law_t \times S\&P\ 500_t$	0.197***	0.201***	0.122**	0.123**	0.097*
	(3.02)	(3.07)	(1.98)	(2.01)	(1.70)
$Directors' Duties\ Law_t$	0.031	0.052	0.044	0.049	0.057*
	(1.00)	(1.55)	(1.48)	(1.51)	(1.90)
$S\&P\ 500_t$	-0.082*	-0.083*	0.311***	0.310***	0.311***
	(-1.68)	(-1.69)	(6.82)	(6.81)	(7.26)
Other antitakeover laws	No	Yes	No	Yes	Yes
Control variables	No	No	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	No
Industry-year fixed effects	No	No	No	No	Yes
# of firms in regression	11,264	11,264	11,264	11,264	11,264
N	101,989	101,989	101,989	101,989	101,989
Adjusted R^2	0.548	0.548	0.583	0.583	0.597

Table A2: Directors' Duties Laws and Firm Value in a Matched Sample with Varying Estimation Windows. This table reports the results for matched sample regressions of Tobin's Q on a *Treat* × *Post* interaction term for varying estimation windows of ($t\pm4$), ($t\pm5$), and ($t\pm6$), respectively. *Treat* is an indicator variable equal to one if the firm is incorporated in a state that adopted a directors' duties law. *Post* is an indicator variable equal to one in the year of and post treatment period, and zero otherwise. The main variables of interest Q, *Treat* × *Post*, and *Post*, are measured contemporaneously, whereas the remaining controls are lagged one period. *Treat* is omitted in the regression because of collinearity with its firm fixed effect. Table 1 provides variable definitions. Columns (1) – (6) include the following controls: *Size, Ln(Age), HHI, Sales Growth, Loss, Debt-to-Equity, Firm Liquidity, CAPX/Assets, R&D/Sales, Inst. Own, State-year Q,* and *Industry-year Q*. The even-numbered columns further specify: *Business Combination Law, Control Share Law, Fair Price Law*, and *Poison Pill Law* dummies. All continuous variables are winsorized at the 2.5% level in both tails, and the dollar values are expressed in 2015 dollars. The estimated *t*-statistics are based on robust standard errors clustered by firm and are reported in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Dep. Variable: Q_t						
Windows:	(*t*-4) to (*t*+4)		(*t*-5) to (*t*+5)		(*t*-6) to (*t*+6)	
Variables	(1)	(2)	(3)	(4)	(5)	(6)
$Treat_t \times Post_t$	0.068*	0.069*	0.068*	0.071*	0.071*	0.071*
	(1.87)	(1.82)	(1.86)	(1.87)	(1.91)	(1.86)
$Post_t$	-0.011	-0.008	-0.002	0.001	0.001	0.004
	(-0.39)	(-0.28)	(-0.05)	(0.05)	(0.03)	(0.12)
Other takeover law controls	No	Yes	No	Yes	No	Yes
Control variables	Yes	Yes	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
# of unique firms	2,357	2,357	2,361	2,361	2,362	2,362
N	17,825	17,825	20,807	20,807	23,189	23,189
Adjusted R^2	0.661	0.661	0.642	0.642	0.622	0.622

Table A3. Changes in Directors' Duties Laws and Firm Value. This table reports the results for matched sample regressions of changes in *Q* on the first difference in a *Treat* × *Post* ($\Delta(Treat_{t,t-1} \times Post_{t,t-1})$) indicator variable over the sample period 1983 to 2015. We define the changes in *Q* from *t* to *t*+*n* ($\Delta\ Q_{t,t+n}$) where *n* ranges from one to five, in columns (1) – (5), respectively. All other controls, including the other antitakeover laws are also first differenced. Each column specifies first differences for the following controls: *Treat, Post, Size, Ln(Age), HHI, Sales Growth, Loss, Debt-to-Equity, Firm Liquidity, CAPX/Assets, R&D/Sales, Inst. Own, State-year Q, Industry-year Q, Business Combination Law, Control Share Law, Fair Price Law,* and *Poison Pill Law*. Table 1 provides variable definitions. Industry fixed effects are defined using the Fama-French 49 industry groupings. All continuous variables are winsorized at the 2.5% level in both tails, and the dollar values are expressed in 2015 dollars. The estimated *t*-statistics are based on robust standard errors clustered by firm and are reported in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

	1983 - 2015				
Dep. Variables:	$\Delta\ Q_{t,\ t+1}$	$\Delta\ Q_{t,\ t+2}$	$\Delta\ Q_{t,\ t+3}$	$\Delta\ Q_{t,\ t+4}$	$\Delta\ Q_{t,\ t+5}$
Variables	(1)	(2)	(3)	(4)	(5)
$\Delta(Treat_{t,t\ -1} \times Post_{t,\ t-1})$	0.032**	0.067***	0.056**	0.066**	0.072**
	(2.34)	(3.12)	(1.97)	(2.06)	(2.10)
Other takeover law controls	Yes	Yes	Yes	Yes	Yes
Control variables	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes
# of unique firms	2,266	2,185	2,018	1,861	1,723
N	13,595	12,707	11,840	11,079	10,380
Adjusted R^2	0.028	0.044	0.049	0.063	0.050

Table A4. Portfolio Analysis: Value Weighted Monthly Portfolios. This table reports abnormal returns of value weighted monthly portfolios of firms that are incorporated in states that have effective directors' duties laws. We construct the portfolios using the treated and control firms from the propensity score matched sample around the effective date of these laws. The long portfolios are composed in the following manner. For portfolios *6m12*, *6m24*, and *12m24* we include all stocks of matched firms that are incorporated in enacting states starting 6 or 12 months before the fiscal year-end of the year in which the incorporating state has an effective directors' duties law in place, and hold these stocks for 12 or 24 months. Similarly, the short portfolios are constructed by including all stocks of control firms that are matched to a treated company incorporated in enacting states starting 6 or 12 months before the fiscal year-end of the year in which that treated incorporating state has an effective directors' duties law in place, and short these control group stocks for 12 or 24 months. The long-short portfolios are then created by differencing the portfolio returns of the long and short portfolios, for each respective month. We use two models: the four-factor Carhart (1997) model (i.e., momentum, high minus low book-to-market (HML), small minus big (SMB), and market return), and the three-factor Fama-French model (i.e., HML, SMB, and market return). The portfolio returns are winsorized at the 2.5% level in both tails, and the estimated *t*-statistics are based on robust standard errors (presented in parentheses below the coefficients). *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively. The number of stocks in the long and short portfolios are averaged across all months and displayed in the "Average # firms" row. The "M" row shows the total number of monthly observations, and the "N" row shows the total number of firms with useable returns.

	Four-factor model			Three-factor model		
Portfolio "6m12"						
	Long	Short	Long - Short	Long	Short	Long - Short
Alpha (monthly)	0.522**	0.203	0.327	0.450*	0.036	0.411*
	(2.20)	(0.79)	(1.38)	(1.82)	(0.14)	(1.69)
Average # firms	140.83	139.79	-	140.83	139.79	-
M	170	170	170	170	170	170
N	1,379	1,373	-	1,379	1,373	-
Adjusted R^2	0.736	0.672	0.002	0.736	0.664	-0.002
	Four-factor model			Three-factor model		
Portfolio "6m24"						
	Long	Short	Long - Short	Long	Short	Long - Short
Alpha (monthly)	0.587**	0.199	0.397**	0.474**	-0.007	0.482**
	(2.44)	(0.87)	(2.04)	(2.12)	(-0.03)	(2.41)
Average # firms	181.81	179.01	-	181.81	179.01	-
M	212	212	212	212	212	212
N	1,381	1,377	-	1,381	1,377	-
Adjusted R^2	0.733	0.675	0.014	0.728	0.657	0.004
	Four-factor model			Three-factor model		
Portfolio "12m24"						
	Long	Short	Long - Short	Long	Short	Long - Short
Alpha (monthly)	0.482**	0.001	0.339*	0.362	-0.090	0.431**
	(2.02)	(0.62)	(1.86)	(1.62)	(-0.46)	(2.28)
Average # firms	202.94	200.34	-	202.94	200.34	-
M	230	230	230	230	230	230
N	1,384	1,378	-	1,384	1,378	-
Adjusted R^2	0.717	0.741	0.021	0.712	0.721	0.008

Table A5. Directors' Duties Laws, Involuntary Creditors, and Firm Value. This table reports the results for pooled panel regressions of Tobin's Q on a *Directors' Duties Law* indicator variable over the period 1983 to 2015 and split by industry characterization, where we hypothesize that firms in manufacturing or products-based industries are more likely to have involuntary creditors in the form of harmed consumers and other involved parties. Columns (1) and (2) presents the estimates from splitting by "Manufacturing" firm industry type. Manufacturing is an indicator variable equal to one if a firm operates in a 2000 to 3999 SIC code industry, and zero otherwise. Columns (3) and (4) shows the regression coefficients from partitioning the sample by "Product" firm industry characterization. Product is an indicator variable equal to one if a firm belongs to a two-digit SIC industry that manufactures tangible products. Two-digit products-based SIC codes come from Guernsey (2018) and are as follows: 24–25, 30–32, 34–39. The main variables of interest, *Q*, and *Directors' Duties Law*, are measured contemporaneously, whereas the remaining controls are lagged one period. Columns (1) – (4) include the following controls: *Size, Ln(Age), HHI, Sales Growth, Loss, Debt-to-Equity, Firm Liquidity, CAPX/Assets, R&D/Sales, Inst. Own, State-year Q, Industry-year Q, Business Combination Law, Control Share Law, Fair Price Law,* and *Poison Pill Law*. Table 1 provides variable definitions. Continuous variables are winsorized at the 2.5% level in both tails and the dollar values are expressed in 2015 dollars. The estimated t-statistics are based on robust standard errors clustered by firm and are reported in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Dep. Variable: Q_t	1983 - 2015			
Variables	(1)	(2)	(3)	(4)
$Directors' Duties\ Law_t$	0.081** (2.06)	0.025 (0.47)	0.098** (2.08)	0.030 (0.71)
Manufacturing sample	Yes	No	No	No
Products sample	No	No	Yes	No
Other takeover law controls	Yes	Yes	Yes	Yes
Control variables	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
# of unique firms	5,708	6,318	3,921	8,022
N	55,765	46,224	37,177	64,812
Adjusted R^2	0.599	0.586	0.586	0.591

Table A6: Directors' Duties Laws and Firm Value without Delaware Corporations. This table reports the results for pooled panel and matched sample regressions of Tobin's Q on *Directors' Duties Law* or *Treat* × *Post* indicator variables, excluding firms incorporated in Delaware from the pool of controls. The main variables of interest, *Q, Directors' Duties Law, Treat* × *Post*, and *Post*, are measured contemporaneously, whereas the remaining controls are lagged one period. *Treat* is omitted in the regression because of collinearity with its firm fixed effect. Columns (1) – (3) provides pooled panel regression estimates over the period 1983 to 2015. Columns (4) – (6) shows the matched sample DID results over (*t*-3) to (*t*+3) windows. Control variables included in columns (2) – (3), and (5) – (6): *Size, Ln(Age), HHI, Sales Growth, Loss, Debt-to-Equity, Firm Liquidity, CAPX/Assets, R&D/Sales, Inst. Own, State-year Q,* and *Industry-year Q*. Further, columns (1) – (3), and (4) and (6) specify: *Business Combination Law, Control Share Law, Fair Price Law,* and *Poison Pill Law* dummies. Table 1 provides variable definitions. The estimated *t*-statistics are based on robust standard errors clustered by firm (reported in parentheses). Panel B reports summary statistics for the year prior to treatment for a propensity score matched sample excluding Delaware control firms. Treated firms are defined as companies incorporated in states that have an effective directors' duties law, whereas the control firms are incorporated in states without directors' duties laws in at least the five-year period following the effective date of a law for its matched counterpart. We use nearest-neighbor matching with replacement in year *t-1* to create a sample matched on *Q, Size, Ln(Age), Loss, Inst. Own, Ln(Patents), Unsecured Debt, Supplier Dependency*, and exactly on two-digit SIC industry codes and *Strategic Alliance* for each of the 35 treated states. The row "N (by group)" provides the number of unique firms for each treatment and control group. All continuous variables are winsorized at the 2.5% level in both tails, and the dollar values are expressed in 2015 dollars. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Panel A: Pooled and Matched Sample Regressions

Dep. Variable: $Total\ Q_{[t]}$	Pooled Panel: 1983 to 2015			Matched Sample: (*t*-3) to (*t*+3)		
Variables	(1)	(2)	(3)	(4)	(5)	(6)
$Directors' Duties\ Law_t$	0.068**	0.064**	0.064**			
	(2.04)	(1.97)	(1.99)			
$Treat_t \times Post_t$				0.065*	0.063*	0.069**
				(1.86)	(1.82)	(2.12)
$Post_t$				-0.028	-0.012	-0.012
				(-1.10)	(-0.55)	(-0.55)
Other antitakeover laws	Yes	Yes	Yes	Yes	No	Yes
Control variables	No	Yes	Yes	No	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	No	Yes	Yes	Yes
Industry-year fixed effects	No	No	Yes	No	No	No
# of firms in regression	5,087	5,087	5,087	1,822	1,822	1,822
N	45,255	45,255	45,255	13,054	13,054	13,054
Adjusted R^2	0.549	0.579	0.591	0.690	0.708	0.704

Table A6 – *(Continued)*

Panel B: Pre-Treatment Year (*t*-1)

Matched Variables:	Treat	Control	Difference
Q_t	1.695	1.673	0.022
	(1.168)	(1.174)	(0.49)
$Size_t$	4.620	4.643	-0.023
	(1.958)	(1.944)	(-0.30)
$Ln(Age)_t$	2.404	2.391	0.013
	(0.718)	(0.684)	(0.48)
$Loss_t$	0.289	0.297	-0.008
	(0.453)	(0.457)	(-0.41)
$Inst.Own_t$	0.149	0.142	0.007
	(0.206)	(0.184)	(0.89)
$Strategic\ Alliance_t$	0.006	0.006	0.000
	(0.078)	(0.078)	(0.00)
$Supplier\ Dependency_t$	0.004	0.004	0.000
	(0.012)	(0.013)	(0.03)
$Unsecured\ Debt_t$	0.538	0.526	0.012
	(0.394)	(0.393)	(0.78)
$Ln(Patents)_t$	0.056	0.056	0.001
	(0.170)	(0.157)	(0.10)
$SIC2\ Industry_t$	41.682	41.680	0.002
	(17.926)	(17.935)	(0.00)
Other Control Variables:			
HHI_t	0.257	0.255	0.002
	(0.183)	(0.187)	(0.24)
$Sales\ Growth_t$	0.081	0.087	-0.006
	(0.290)	(0.290)	(-0.47)
$Debt\text{-}to\text{-}Equity_t$	0.596	0.524	0.072**
	(0.973)	(0.902)	(1.97)
$Firm\ Liquidity_t$	0.283	0.282	0.001
	(0.226)	(0.215)	(0.10)
$CAPX/Assets_t$	0.072	0.076	-0.004
	(0.066)	(0.068)	(-1.40)
$R\&D/Sales_t$	0.034	0.033	0.001
	(0.086)	(0.074)	(0.38)
N (by group)	1,319	1,319	

Table A7. Directors' Duties Laws, Adjusted for Heterogeneity in Texas, and Firm Value. This table reports the results for regressions of Tobin's Q on an adjusted directors' duties law indicator variable. Panel A creates a *Directors' Duties Law-Texas Adjusted* indicator variable by replacing the "1" for affected firms incorporated in Texas, with a ratio between one-third and one to capture heterogeneity in the relative strength of the directors' duties law in this state. In particular, prior to 2003, Texas firms have *Directors' Duties Law* equal zero, then, in 2003 through 2005 it switches to one-third, then, it adjusts to two-thirds from 2006 through 2010, and finally, equals one in 2010 and afterwards. Meanwhile, all other affected states retain their value of "1" in the indicator. Panel B takes a different approach, constructing a *Directors' Duties Law-Texas Index* whereby we assign firms incorporated in Texas a value of zero before 2003, one from 2003 through 2005, two from 2006 through 2010, and three starting in 2010 and afterwards. Meanwhile, all other states, including those treated by constituency statutes are assigned a value of zero in this index. The main variables of interest, *Q*, *Directors' Duties Law-Texas Adjusted*, and *Directors' Duties Law-Texas Index*, are measured contemporaneously, whereas the remaining controls are lagged one period. In Panel A, columns (2), and (4) – (5) includes controls for the other antitakeover laws: *Business Combination Law*, *Control Share Law*, *Fair Price Law*, and *Poison Pill Law*, while columns (3) – (5) further specifies the following controls*: Size, Ln(Age), HHI, Sales Growth, Loss, Debt-to-Equity, Firm Liquidity, CAPX/Assets, R&D/Sales, Inst. Own, State-year Q*, and *Industry-year Q*. In Panel B, columns (2) – (3), and (5) – (6) include the full set of controls. Industry-year fixed effects are defined at the Fama-French 49 industry grouping. Table 1 provides variable definitions. All continuous variables are winsorized at the 2.5% level in both tails and dollar values are expressed in 2015 dollars. The estimated t-statistics are based on robust standard errors clustered by firm and are reported in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Panel A: Texas Adjusted

Dep. Variable: Q_t	1983 – 2015				
Variables	(1)	(2)	(3)	(4)	(5)
$Directors' Duties\ Law\text{-}Texas\ Adjusted_t$	0.058*	0.075**	0.060**	0.059*	0.065**
	(1.94)	(2.29)	(2.10)	(1.83)	(2.17)
Other takeover law controls	No	Yes	No	Yes	Yes
Control variables	No	No	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	No
Industry-Year fixed effects	No	No	No	No	Yes
# of unique firms	11,264	11,264	11,264	11,264	11,264
N	101,989	101,989	101,989	101,989	101,989
Adjusted R^2	0.548	0.548	0.582	0.582	0.596

Table A7 – *(Continued)*

Panel B: Texas Index

Dep. Variable: Q_t	1983 – 2015					
Variables	(1)	(2)	(3)	(4)	(5)	(6)
Directors' Duties Law-Texas Index	0.096** (2.33)	0.145*** (3.01)	0.120*** (2.89)	0.077* (1.94)	0.132*** (3.06)	0.101*** (2.70)
Texas treated firms	Yes	Yes	Yes	Yes	Yes	Yes
Other treated firms	No	No	No	Yes	Yes	Yes
Control firms	Yes	Yes	Yes	Yes	Yes	Yes
Other takeover law controls	No	Yes	Yes	No	Yes	Yes
Control variables	No	Yes	Yes	No	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	No	Yes	Yes	No
Industry-Year fixed effects	No	No	Yes	No	No	Yes
# of unique firms	9,820	9,820	9,820	11,264	11,264	11,264
N	75,554	75,554	75,554	101,989	101,989	101,989
Adjusted R^2	0.556	0.593	0.607	0.547	0.582	0.596

Table A8: Matched Sample Placebo Test. This table reports summary statistics and placebo regressions. The matched sample is created from propensity scores with nearest neighbor matching in the year prior to placebo treatment. We purposely move back treatment five years to serve as a falsification test. For example, Maryland had an effective directors' duties law in 1999, however, in this analysis we assume the law becomes effective in 1994. We then consider a plus or minus three-year window. Thus, actual treatment never occurs. Panel A provides summary statistics for the full sample in pre-placebo treatment year (*t*-1). The standard deviation is included in the parentheses below the mean of each variable. Column "Difference" provides the difference between the treated and control sample mean (test statistic in parentheses). Row "N (by group)" provides the number of unique firms for each group. Panel B shows results from matched sample regressions of Tobin's Q on a *Treat* × *Post* interaction term. *Treat* is an indicator variable equal to one if the firm is incorporated in a state that has an effective directors' duties law, and zero otherwise. *Post* is an indicator variable equal to one in the year of and post pseudo-treatment period, and zero otherwise. The main variables of interest, *Q*, *Treat* × *Post*, and *Post* are measured contemporaneously, whereas the remaining controls are lagged one period. *Treat* is omitted in the regression because of collinearity with its firm fixed effect. Table 1 provides variable definitions. Columns (2) and (4) specify: *Business Combination Law*, *Control Share Law*, *Fair Price Law*, and *Poison Pill Law*. Columns (3) - (4) includes controls for: *Size*, *Ln(Age)*, *HHI*, *Sales Growth*, *Loss*, *Debt-to-Equity*, *Firm Liquidity*, *CAPX/Assets*, *R&D/Sales*, *Inst. Ownership*, *State-year Q*, and *Industry-year Q*. Estimated t-statistics are based on robust standard errors clustered by firm (reported in parentheses). All continuous variables are winsorized at the 2.5% level in both tails and dollar values are expressed in 2015 dollars. Panel B's *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Panel A: Pre-Placebo Treatment Year (*t*-1)

Matched Variables:	Treat	Control	Difference
Q_t	1.613	1.616	-0.003
	(1.253)	(1.291)	(-0.06)
$Size_t$	4.984	5.020	-0.036
	(1.942)	(1.993)	(-0.47)
$Ln(Age)_t$	2.435	2.432	0.003
	(0.667)	(0.672)	(0.12)
$Loss_t$	0.236	0.231	0.006
	(0.425)	(0.422)	(0.33)
$Inst.Own_t$	0.113	0.109	0.004
	(0.175)	(0.179)	(0.58)
$Strategic\ Alliance_t$	0.007	0.007	0.000
	(0.087)	(0.087)	(0.00)
$Supplier\ Dependency_t$	0.003	0.003	-0.000
	(0.010)	(0.010)	(-0.40)
$Unsecured\ Debt_t$	0.457	0.449	0.008
	(0.406)	(0.407)	(0.53)
$Ln(Patents)_t$	0.073	0.075	-0.001
	(0.193)	(0.197)	(-0.20)
$SIC2\ Industry_t$	39.53	39.59	-0.057
	(17.75)	(17.77)	(-0.08)
Other Control Variables:			
HHI_t	0.246	0.243	0.003
	(0.188)	(0.181)	(0.38)
$Sales\ Growth_t$	0.048	0.043	0.005
	(0.278)	(0.292)	(0.41)
$Debt\text{-}to\text{-}Equity_t$	0.570	0.552	0.018
	(0.866)	(0.825)	(0.54)
$Firm\ Liquidity_t$	0.294	0.286	0.008
	(0.218)	(0.214)	(0.90)
$CAPX/Assets_t$	0.083	0.086	-0.002
	(0.072)	(0.074)	(-0.77)
$R\&D/Sales_t$	0.045	0.045	0.001
	(0.068)	(0.062)	(0.16)
N (by group)	1,303	1,303	

Table A8 – *(Continued)*

Panel B: Matched Sample Regressions

Dep. Variable: Q_t	(t-3) to (t+3)			
Variables	(1)	(2)	(3)	(4)
$Treat_t \times Post_t$	0.017	0.011	0.029	0.022
	(0.39)	(0.27)	(0.72)	(0.54)
$Post_t$	-0.042	-0.040	-0.018	-0.016
	(-1.38)	(-1.33)	(-0.62)	(-0.55)
Other takeover law controls	No	Yes	No	Yes
Control variables	No	No	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
# of unique firms	2,098	2,098	2,098	2,098
N	10,072	10,072	10,072	10,072
Adjusted R^2	0.671	0.671	0.700	0.700

Table A9: Directors' Duties Laws and Total Q. This table reports results for pooled panel and matched sample regressions of Total Tobin's Q on *Directors' Duties Law* or *Treat* × *Post* indicators. *Total Q* is from Peters and Taylor (2017). The main variables of interest, *Total Q, Directors' Duties Law*, and *Treat* × *Post*, and *Post*, are measured contemporaneously, whereas the remaining controls are lagged one period. *Treat* is omitted in the regression because of collinearity with its firm fixed effect. Columns (1) – (3) provides pooled panel regression estimates over the period 1983 to 2015. Columns (4) – (6) shows the matched sample DID results over (*t*-3) to (*t*+3) windows. Control variables included in columns (2) – (3), and (5) – (6): *Size, Ln(Age), HHI, Sales Growth, Loss, Debt-to-Equity, Firm Liquidity, CAPX/Assets, R&D/Sales, Inst. Own, State-year Q,* and *Industry-year Q*. Further, columns (1) – (3), and (4) and (6) specify: *Business Combination Law, Control Share Law, Fair Price Law,* and *Poison Pill Law* dummies. Table 1 provides variable definitions. All continuous variables are winsorized at the 2.5% level in both tails and the dollar values are expressed in 2015 dollars. The estimated *t*-statistics are based on robust standard errors clustered by firm (reported in parentheses). *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Dep. Variable: $Total\ Q_{[t]}$	1983 to 2015			(*t*-3) to (*t*+3)		
Variables	(1)	(2)	(3)	(4)	(5)	(6)
$Directors'\ Duties\ Law_t$	0.072**	0.056*	0.055*			
	(2.04)	(1.65)	(1.76)			
$Treat_t \times Post_t$				0.093*	0.095**	0.089*
				(1.85)	(2.02)	(1.82)
$Post_t$				-0.087***	-0.044	-0.038
				(-2.69)	(-1.46)	(-1.24)
Other antitakeover laws	Yes	Yes	Yes	Yes	No	Yes
Control variables	No	Yes	Yes	No	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	No	Yes	Yes	Yes
Industry-year fixed effects	No	No	Yes	No	No	No
# of firms in regression	11,238	11,238	11,238	2,350	2,350	2,350
N	101,560	101,560	101,560	14,515	14,515	14,515
Adjusted R^2	0.508	0.557	0.571	0.622	0.640	0.641