STAKEHOLDER ORIENTATION AND FIRM VALUE

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Abstract

This paper analyzes enhanced director discretion to consider stakeholder interests by exploiting the quasi-natural experiment provided by the staggered adoption of directors' duties laws in 35 U.S. states from 1984 to 2006. We find that these laws result in economically and statistically significant increases in firm value, especially for firms that are larger, more complex or innovative and with stronger stakeholder relationships. Our results suggest that enhanced director discretion promotes long-term value by reducing contracting costs with stakeholders (the "bonding hypothesis") and mitigating the externalities that stakeholders may bear due to conflicts of interests with shareholders (the "stakeholder model hypothesis").

Keywords: directors' duties statutes, stakeholder orientation, firm value, anti-takeover statutes, takeover defenses, bonding hypothesis, stakeholder relationships, innovation

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I. INTRODUCTION

Since the pioneering work of Garvey and Hanka (1999) and Bertrand and Mullainathan (1999, 2003), many 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 as "corporate constituency statutes" or "stakeholder laws" or "non-shareholder constituency statutes" (Bainbridge, 1992) – are one kind of state antitakeover legislation that has now been adopted by 35 U.S. states. While these laws' exact provisions vary, their core content is the same: the statutes enable directors to consider the impact of corporate decisions (such as whether to accept 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 not been studied extensively in the financial economics literature (Karpoff and Wittry, 2018). From a legal perspective, this is puzzling, as the enactment of these statutes engendered a heated debate among legal scholars during the 1990s, when many states introduced this legislation. Within that debate, directors' duties laws ("DDLs") revived perennial questions about the desirability of a shareholder or stakeholder model of the corporation (Bainbridge, 1992), contractarian versus institutionalist theories of the firm, and the appropriate allocation of power between boards and shareholders (Bratton, 1989; 1993). In the financial economics literature, the only echo of that debate was the inclusion of DDLs in the G-Index of Gompers, Ishii, Metrick (2003) as one of 24 governance features capturing weaker shareholder rights.[1]

Several recent papers, however, have reexamined the consideration of stakeholder interests by corporate directors. Magil, Quinzii, and Rochet (2015), for example, developed a theoretical model supporting the efficiency of a stakeholder model of the corporation, under which directors have discretion to act in the interest of a broader group of stakeholders rather than just shareholders. In particular, they argue that firms may be exposed to certain risks arising from their own investment and production decisions (i.e., "endogenous risks"),[2] which may generate negative externalities on

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

[2] Magil, Quinzii, and Rochet (2015) assert "…all firms operate in an environment in which they face risks, some of them exogenous, linked to the general state of the economy, many of them endogenous, linked to the particular

stakeholders but not shareholders. This results in a competitive equilibrium where stakeholders under-invest in their relationship with the firm. Orienting directors toward stakeholder interests, through enhanced discretion, can help internalize these externalities, especially when firms are large and complex, and invest more in riskier, innovative and long-term projects. Along similar lines, Hart and Zingales (2017, page 270) recently concluded that "shareholder value maximization is not the appropriate goal of a company" when a firm's activities are "non-separable," that is, carry externalities that cannot be undone through other activities due to market or contract incompleteness.[3] Further, several recent empirical studies also provide 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, 2018; Cremers, Litov, and Sepe, 2017). In addition, major governance players like large institutional investors seem increasingly willing to accept, or even advocate for, a corporate model with increased stakeholder protection (Sorkin, 2018; Flammer and Kacperczyk, 2015).

Motivated by this recent research and practical developments, in this paper we analyze the value implications of stakeholder orientation in corporate decision-making – that is, greater director discretion to consider stakeholder interests – by exploiting the quasi-natural experiment provided by the staggered adoption of DDLs over the period 1983 to 2006. Other recent studies have examined the impact of DDLs on innovation (Atanassov, 2013a;[4] Flammer and Kacperczyk, 2015),[5] procurement contracts (Flammer, 2015), and investments by high fiduciary duty institutions (Geczy et al., 2015), as well as the value implications of the interaction of DDLs with

circumstances of the firm. A firm has no control over exogenous aggregate risks, while typically it can control the [*endogenous*] risks which are specific to its technology or its market by spending resources to increase the probability of favourable outcomes and/or decrease the probability of adverse outcomes" (p. 1686).

[3] As contract incompleteness is a source of market incompleteness, in the rest of the article we will simply refer to market incompleteness.

[4] Atanassov's sample only covers the period 1976-2006, which misses Texas' DDL and the significant number of firms covered by that legislation. Further, he includes Maryland as a control, rather than a treated state, although Maryland passed a DDL 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.

[5] 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 DDLs on firm value, finding that these laws are associated with an increase in Tobin's Q, consistent with our results. Like Atanassov (2013a), however, their study does not control for the confounding effects of other anti-takeover laws and, thus, their models are misspecified according to Karpoff and Wittry (2018).

other anti-takeover laws (Atanassov, 2013a). As far as we know, however, this paper is the first to systematically examine the impact of DDLs on stakeholder orientation and long-term firm value.

Our main finding is that the passage of DDLs results in an increase in the Tobin's Q of the affected firms that is both statistically and economically significant. This finding is robust to various methodologies, including pooled panel first difference regressions; pooled panels with higher dimensional fixed effects that control for unobserved and time-varying state-of-location and industry sources of variation; the incorporation of possible selection effects through the creation of a matched sample; and a stock portfolio approach that can be interpreted as a long-term event study. 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 view that stakeholder orientation in corporate decision-making benefits firms and shareholders alike, under two different hypotheses. The first is the "bonding hypothesis" that empowering boards with enhanced discretion 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 a firm's value (Shleifer and Summers, 1988; Laffont and Tirole, 1988; Johnson, Karpoff, and Yi, 2015). The second is the "stakeholder model hypothesis," under which enhanced director discretion to consider stakeholder interests improves the performance of a subset of firms where stakeholders are more likely required to make specific investments in their relationship with the firm. In this subset of firms, stakeholder orientation helps to mitigate the externalities which a firm's endogenous risks may generate for stakeholders and which 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 DDL, investigating the likelihood that the passage of these laws depended from state-level institutional, political and economic characteristics (similar to Karpoff and Wittry, 2018). With the exception of the prior adoption of fair price laws,[6] we find no significant predictors for the adoption of DDLs. This suggests that the adoption of these laws is not associated with the then-prevailing market and economic

[6] 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.

environments, consistent with our central identification assumption that these laws identify changes in corporate governance that are plausibly exogenous.

We then estimate the relationship between the adoption of DDLs and 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 increased orientation of directors toward stakeholder interests brought about by the passage of DDLs results in a positive and statistically significant increase in firm value, with an economic significance of 3.2% in our baseline specification. Regressions of changes in *Q* on an indicator for the passage of DDLs give similar results. Results are further robust to the inclusion of state-of-location-by-year and industry-by-year higher dimensional fixed effects, suggesting that some other unobserved, time-varying factors (e.g., political economy or business cycle variables) are not driving our main results.

We next address the concern that selection effects might explain the increase in value of firms incorporated in states that adopt a DDL, and hence have greater stakeholder orientation, by employing a differences-in-differences methodology in a matched sample. We construct our matched sample by matching the firms in each of the 35 DDL-enacting states (i.e., the treated firms) to a control firm operating in the same industry and with similar 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 laws' passage in the treated firms' state of incorporation. Conversely, and consistent with our pooled panel regressions, the difference in the Tobin's Q is significantly positive in the three-year period following the laws' passage. Stock returns give similar results as using Tobin's Q, as we show through a long-term stock return event study, constructing long (short) portfolios by buying (selling) treated (control) stocks from the matched sample group around the time their (matched sample counterpart's) state of incorporation adopts a DDL.

We then examine the possible economic channels through which greater stakeholder orientation in directors' decision-making, as enabled by the passage of DDLs, may contribute to firm value. Consistent with the traditional focus of the financial economics literature on the takeover implications of DDLs, we first consider the "bargaining power hypothesis" of Stulz (1988) and Harris (1990). Under this hypothesis, 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.

Second, we consider the "bonding hypothesis," which poses 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).

Third, we consider the "stakeholder model hypothesis," which focuses on the more general implications of DDLs for possible conflicts of interests between shareholders and stakeholders. Under this hypothesis, stakeholder orientation in corporate decision-making improves long-term firm performance by internalizing the externalities that a firm's endogenous risk imposes on stakeholders in incomplete markets, especially when firms are large and more invested in risky, innovative and long-term projects (Jensen, 2001; Magill, Quinzii, and Rochet, 2015; Hart and Zingales, 2017). We interpret the bonding hypothesis and the stakeholder model hypothesis as partially overlapping and complementary.

We find no evidence supporting the bargaining power hypothesis. Conversely, consistent with both the bonding hypothesis and the stakeholder model hypothesis, we find that treated 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 two main contributions to the literature. First, it contributes to the scholarship examining the relationship between takeover defenses and shareholder wealth, supporting 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, 2018; Cremers, Litov, and Sepe, 2017). In particular, our paper shows that stakeholder orientation in corporate decision-making might contribute to long-term value creation at a subset of firms and, thus, be in the very interest of shareholders (Jensen, 2001; Magill, Quinzii, and Rochet, 2015; Hart and Zingales, 2017).

Second, our results add to the recent body of work seeking to correct misperceptions in the earlier financial economics literature concerning antitakeover laws (Cremers and Sepe, 2015; Catan and Kahan 2016; Gormley and Matsa, 2016; Cain, McKeon, and Solomon, 2017; Karpoff

and Witty, 2018). Consistent with this more recent literature, we provide evidence that DDLs meaningfully affect a firm's takeover protection, as well as that the underlying legal context matters to the extent for which these laws provide incremental takeover protection.

Taken together, these results highlight the importance of a firm's relationships with *all* stakeholders and point to important novel avenues of research.

II. LEGAL BACKGROUND

In the typical account of DDLs as given in the financial economics literature, these laws enable directors to consider the welfare interests of all firm stakeholders, in addition to the interests of shareholders, in deciding whether to approve or resist an acquisition offer (e.g., Gompers, Ishii, Metrick, 2003; Karpoff and Wittry, 2018). This account, which limits the relevance of DDLs to only decisions related to acquisitions, constitutes an overly restricted interpretation of their actual features.

In fact, most DDLs apply significantly more broadly. Only nine states enacted DDLs that expand the scope of directors' discretion only in the takeover context or change-of-control situations.[7] In the other 26 enacting states, DDLs enable the structural consideration of stakeholder interests in all director decision-making (Keay, 2013). 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 board decisions (Keay, 2013).[8] This suggests that most states deem the grant of directorial authority to consider non-shareholder interests as instrumental to the maximization of long-term firm value.

As a consequence, the theoretical and policy questions implicated by DDLs are not limited to the takeover context. Rather, they extend to quintessential questions about the role and purpose of the corporation. Thus, it is 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), corporate law scholarship on DDLs has primarily focused on two, partially overlapping, strands of research.

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[7] 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 DDLs 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.

[8] 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.

Under the first strand, legal scholars have 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, DDLs occasioned renewed debate over contractarian versus institutionalist conceptions of the corporation. Defending a view of directors as mere agents of the shareholders (Jensen and Meckling, 1976; Easterbrook and Fischel, 1983), contractarians also defended the idea that DDLs should be restrictively interpreted. On the contrary, institutionalists supported an expansive interpretation of these laws on the argument that only enhanced board authority allows to efficiently coordinate economic activities within complex social organizations (Bratton, 1989, 1993).

In more recent corporate law literature, a consensus answer has emerged that DDLs do not trump shareholder primacy, even though they expand the zone of directorial discretion and so board authority (Fisch, 2006; Barzuza, 2009; Geczy et al., 2015). Enhanced board authority, however, only operates to protect directors against fiduciary actions brought by shareholders against directorial decisions that consider stakeholder interests in addition to shareholder interests. It does not operate to also grant stakeholders an "offensive" claim against directors to force them to consider their interests (Keay, 2013).[9]

The above conclusion should not be interpreted as implying that all DDLs grant directors the same level of protection in the exercise of enhanced decision-making authority. In general, director decision-making in ordinary circumstances is protected by the business judgement rule and is, thus, exempt from judicial review, both in Delaware and elsewhere. Change-of-control situations, however, constitute extraordinary circumstances, where the rules are different and directors of Delaware firms are subject to the "enhanced" fiduciary scrutiny established in the landmark *Unocal*[10] and *Revlon*[11] decisions, under which courts have a substantial ability to scrutinize board decisions. An issue accordingly arises about the interplay between Delaware case law, which is often applied by courts in other states, and the directives of other states' DDLs. Indeed, the question is whether other states' DDLs depart from the doctrine of Delaware's enhanced duties

[9] Indeed, DDLs provide for permissive (rather than mandatory) language in all 35 enacting states. 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").
[10] Unocal Corp. v. Mesa Petroleum Co., 493 A.2d 946, 954 (Del. 1985).
[11] Revlon, Inc. v. MacAndrews & Forbes Holdings, Inc., 506 A.2d 173, 180 n.10 (Del. 1986).

under the *Unocal* and *Revlon* decisions and, if so, to what extent (Barzuza, 2009; Geczy et al., 2015).

The duties of the board arising under the *Unocal* and *Revlon* decisions are related, but distinct. Both decisions raise the directors' fiduciary standards (relative to the plain application of the business judgement rule), though with the following difference. The *Unocal* decision is generally interpreted as allowing directors to justify their resistance to a takeover on the basis of the long-term interest of the corporation and, in some cases, in the interest of stakeholders (Bainbridge, 1992). [12] This implies that *Unocal* and DDLs do not necessarily come into conflict. *Revlon*, however, is another matter, as it specifies that the *exclusive* duty of a board that has decided to sell the company 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, 1999) in the specific case where the board has decided that the company is for sale. Therefore, unlike *Unocal*, *Revlon* cannot be reconciled with DDLs.[13]

Consistent with these observations, more recent studies of the cases applying DDLs affirm that substantial variation exists among the states regarding the extent to which Delaware law applies in other states, with some states' statutes and cases rejecting only the enhanced duties established in *Revlon*, others also rejecting the *Unocal* standard, and still others falling in between these positions (Barzuza, 2009; Geczy et al., 2015; Cain, McKeon, and Solomon, 2017). In sum, and contrary to suggestions in some of the financial economics literature, DDLs in different states do not grant directors the same level of protection in the exercise of stakeholder oriented decision-making, either in the takeover context or more generally.

III. 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 (Jensen, 2001; Hart and

[12] More specifically, under *Unocal*, the use of defensive tactics by the incumbent board is valid if the board can show that there was a "cognizable threat" (i.e., a clearly identifiable threat) to the firm's policy and that the defensive measure in question is "proportional" to the threat posed (i.e., neither coercive or preclusive and within the "range of reasonableness").

[13] Indiana's law, for example, explicitly states that the duties arising out of the Delaware *Revlon* case do not apply to corporations incorporated in their state.

Zingales, 2017). This might explain why financial economics scholars, unlike corporate law scholars, have largely sidestepped any potential stakeholderist implications of DDLs 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 (Malkiel and 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 cash flows. 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 of informationally-efficient markets 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 to evaluate managerial performance.

Still, part of the literature has explored alternative corporate models. 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. 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), which emphasize the implications of departing from the idealized assumptions of an Arrow-Debreu complete markets economy and assume the existence of incomplete markets (Geanakoplos, 1990; Geanakoplos, Magill, Quinzii and Dreze, 1990). Under the more realistic assumption of incomplete markets, general equilibrium

studies show that the heterogeneity of shareholders' different marginal propensities to consume matters 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 and hence no longer provide a reliable, one-dimensional benchmark for evaluating managerial performance (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 with incomplete markets, firms are exposed to risks created by their own investments and the inadequate allocation of resources to appropriate precautions (i.e., endogenous risks). All of the firm's stakeholders are exposed to these risks, including in the form of adverse effects on employees through lower wages and on customers through higher product prices. Enhanced director authority to protect stakeholder interests in incomplete markets thus promotes a firm's investment in adequate precautions, 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 activities carry externalities that cannot be undone through action taken by either individuals or the government (i.e., a form of market incompleteness), directing managers to maximize shareholder (market) value is not the appropriate social criterion in many circumstances.

IV. DATA AND DESCRIPTIVE STATISTICS

IV.A. 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 A.1 in the appendix provides descriptions for the main variables of interest.

To avoid any overlap with the adoption and subsequent invalidation of first-generation antitakeover legislation,[14] we begin our sample period in 1983 and end it in 2015, five years after the DDL of Texas, which was the last state to adopt such a law in our sample, became applicable to all the firms incorporated in the state. [15]

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

We construct *DDL* using incorporation-year observations, supplementing the current incorporation data provided by Compustat with historical incorporation information from Compact Disclosure and the CRSP Historical U.S. stock database that is available from the University of Chicago (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 (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, *DDL*, 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, and always equals zero for corporations in states that never adopted a DDL in our sample.

[14] 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.

[15] Texas adopted a DDL 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 DDL, 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' DDL and, hence, refer to the effective dates of DDLs in other states too, although in all the enacting states, except Texas, the effective dates always coincides with the adoption years.

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 DDLs (see subsection VI.C. for more details).

We also include a number of control variables shown by the corporate governance literature to be associated with 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,* and *Inst. Own*. 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. 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 (*BCL*), control share law (*CSL*), fair price law (*FPL*), and poison pill law (*PPL*) (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.

IV.B. Descriptive Statistics

We present summary statistics for all of the variables used in our pooled panel regression models in Table I. In particular, Table I reports the mean, standard deviation, median, and 25th and 75th 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 DDL. Figure IA.2 in the internet appendix plots the ratio of the number of sample firms incorporated in a state with an effective DDL 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 *DDL* equal to one by the end of 1990. Over the next 16 years (1991-2006), six other states enacted DDLs, 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 DDL is about 25%.[16]

V. IDENTIFICATION STRATEGY AND METHODOLOGY

V.A. Identification Strategy

To investigate the corporate value implications of directors' stakeholder orientation, as proxied by the adoption of DDLs, 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 DDLs creates exogenous variation in the scope of director authority 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 DDLs 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 DDLs, this would raise a reverse causality concern and not support 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 whether the adoption of DDLs 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 DDL (i.e., after 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 more conservative standard errors than clustering on either one of these dimensions alone. Finally, as

[16] Panel A of Table IA.2 in the internet appendix further decomposes the summary statistics by treatment status, where we consider a firm as part of the treated group if its incorporation state has a DDL in place and, otherwise, as part of the control group. Moreover, this panel underscores the importance of controlling for the summarized covariates in our baseline pooled panel regressions and motivates our use of a matched sample for robustness. Panel B of Table IA.2 provides full sample summary statistics for additional dependent and interacted variables used in auxiliary tests.

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 coefficients.

Table II presents estimates of the marginal effect of the main predictor variables on the adoption of a DDL.[17] 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 standard industrial classification (SIC) 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 DDLs, which suggests that there were no pre-trends in firm value. In column (3), we include additional predictors capturing incorporation state-level averages of firm characteristics, as well as macroeconomic and institutional conditions. From this third specification, we find that the only significant (and positive) predictor of the adoption of DDLs is whether the adopting state has already enacted a fair price law.[18] Lastly, in a test to examine if states with pre-determined levels of stakeholder intensity are more likely to adopt a DDL, we include incorporation state-year averages of proxies for these relationships in column (4). Again, however, we only document a significant relationship between previously enacted fair price laws and DDL adoption.

Therefore, we conclude that, overall, we do not find evidence invalidating the exclusion restriction of our identification strategy, as these results seem consistent with our central assumption that the introduction of DDLs provided an exogenous shock to the scope of stakeholder orientation in directors' decision-making.[19]

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[17] To conserve space, Table II only reports the main predictor variable coefficients. We include Table IA.3 in the internet appendix, which presents each predictor variable's marginal effect and test statistic.

[18] We also document that out of the 27 states with fair-price laws (FPL), 74 percent adopted DDLs either in the same year (7 states) or later (13 states). Finally, only 3 states with FPLs do not have DDLs. A plausible explanation for the evidence that FPLs are a positive predictor of DDLs is that they can both be considered weak forms of anti-takeover protection compared to other anti-takeover laws, such as business combinations laws and poison pill laws. Further, DDLs and FPLs 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 DDL.

[19] We provide additional evidence for the validity of our identification strategy in subsection VI.A. by investigating the timing of the change in firm value relative to the timing of the effective date of DDL. We present these results after first documenting that DDLs are value relevant. However, for the purpose of this subsection, we briefly note our evidence from Figure I and Table IV that the impact of a DDL 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).

V.B. Methodology

For our methodology to estimate the relation between firm value and DDLs, 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 DDL 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).[20] 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 (outlined in section IV.A), because some of these controls are also likely impacted by DDLs and could, thus, bias our coefficient estimates (as discussed in Roberts and Whited, 2013).

The above specifications also alternate between the inclusion of year fixed effects and industry-by-year fixed effects. This is because the first approach captures the value implication of a DDL for firms incorporated in the enacting state relative to all firms unaffected by such legislation. The second approach, instead, allows us to test the impact of a DDL 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, 2018; Karpoff and Wittry, 2018).[21]

VI. THE VALUE OF STAKEHOLDER ORIENTATION

VI.A. Pooled Sample

Table III begins our examination of the value relevance of stakeholder orientation by reporting estimates from differences-in-differences pooled panel regressions of *Q* on a *DDL* indicator variable over the period 1983 to 2015. In each column, we include firm fixed effects and estimate

[20] 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 by state of incorporation. 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.

[21] In robustness tests, we also append state-of-location-by-year fixed effects to our baseline pooled panel regression model and find our results hold.

robust standard errors clustered by firm.[22] Further, columns (1) – (3) include year fixed effects, whereas the last column replaces the year fixed effects with Fama-French 49 industry-by-year fixed effects. In columns (3) – (4), 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. Own*). Further, columns (2) – (5) include additional indicator variables for other state antitakeover laws.

In column (1), without any controls, we find that firms incorporated in a state that adopts a DDL 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 (3) confirms that DDLs have positive value implications even after including controls for firm characteristics and other antitakeover provisions, as affected firms have *Q*s that are 6.2 percentage points higher than those of firms incorporated in unaffected states. This represents an economically significant increase of 3.2% (=0.062/1.918) relative to the sample mean's *Q*. We find similar evidence in column (4) 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% (=0.068/1.918) relative to the sample mean. The economic magnitude of these results increases from column (1) to columns (3) and (4) as we include additional controls, which is consistent with Karpoff and Wittry (2018),[23] who show that neglecting other important state antitakeover factors can create an omitted variable bias (which in the case of our findings, attenuates our estimates toward zero).[24]

We next move to studying the timing of changes in firm value relative to the timing of DDLs. 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 DDL is adopted.

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[22] As referenced in footnote 20, this clustering choice is conservative to instead clustering standard errors by state of location.

[23] This increase in coefficient magnitude is also likely due to a reduction in estimation noise, since many of the DDLs were adopted in the same year as one or more of the other antitakeover statutes. Thus, including these additional indicators allows our model to more accurately separate the effect of the DDLs from the other statutes.

[24] In Table IA.4 in the internet appendix, we also isolate the differential effect of DDLs on the value of S&P 500 firms. Our results remain economically and statistically significant. For example, in our baseline regression specification (in column (3)), we document that a DDL differentially increases the *Q* of S&P 500 firms by 6.4% (=0.122/1.918), relative to the sample mean.

Following Acharya, Baghai, and Subramanian (2014), Gormley and Matsa (2016), and Serfling (2016), we first create Figure I, 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 DDLs. We create these dummies for up to 10 years before and after a DDL becomes effective, where, for example, the final dummy equals one if 10 or more years have elapsed since the introduction of the directors' legislation. We plot the corresponding coefficient for the ± five relative-year dummies, i.e., relative to the effective date of the laws. We indicate statistical significance on the figure by including 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 the 10% significance level). Panel B of Figure I repeats this approach except that we include industry-by-year fixed effects (as in Catan, 2018).

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 DDLs. In contrast, the 90% confidence intervals do not contain zero after the laws become effective, indicating that firm value is significantly higher for the covered firms afterwards. Overall, Figure I 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 differences-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 IV we consider the dynamics of the documented positive relation between DDLs and *Q* by using the following indicator variables surrounding the effective date of the laws (as in, e.g., Giroud and Mueller, 2010; Atanassov, 2013b; and Serfling, 2016). First, we construct a placebo test by falsely assigning affected status to firms incorporated in states with DDLs one or two years before the legislation actually becomes effective and label this placebo dummy as $DDL^{[-2 \text{ or } -1]}$. Second, we create the dummy $DDL^{[0]}$, which indicates the affected status the year a DDL actually becomes effective in the firm's state of incorporation. Third, we use $DDL^{[1,\ 2,\ and\ 3+]}$, which we set equal to one if a company is incorporated in a state with a DDL that became effective one, two, and three or more years ago. Substituting these indicator variables for the main independent variable, *DDL*, we then run analogue models to those in columns (1) – (4) of Table III.

In all four columns of Table IV, we find a lack of statistical and economic evidence for the placebo estimators (i.e., the coefficients of $DDL^{[-2 \text{ or } -1]}$), whereas the effect of $DDL^{[1,2, \text{ and } 3+]}$ are 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.

Another way to examine the time series dimension of the relation between firm value and stakeholder orientation is to regress changes-in-*Q* on the first difference of our main explanatory variable, *DDL*. We measure the change in firm value by subtracting the value of *Q* at the end of the fiscal year when the DDL first becomes effective in the firm's state of incorporation from the subsequent value of *Q* one to five years later. The pooled panel changes-in-*Q* regression estimates in Table V confirm that firm value increases for covered firms, showing a quasi-monotonic increase in the change in *Q*, as the coefficients on the change in *DDL* gradually increase in magnitude across the five columns (see, for instance, the point estimates of columns (1) [0.057], (3) [0.077], and (5) [0.127]). This progressive increase in firm value is also consistent with the coefficient plots in Figure I for relative years one, two, and five.

As a final test in this subsection, we consider the possibility that some unobserved, time-varying source of variation is potentially driving the results of our primary pooled panel regressions. For instance, it could be that some political economy or business cycle factor coincides with or leads to the adoption of DDLs.[25] We address this concern following the approach in Gormley and Matsa (2016), which employs the use of state-by-year and industry-by-year fixed effects. Effectively, the identification in such specification comes from comparing firms incorporated in states with (treated) and without (control) DDLs but where these firms are headquartered in the same state and are also operating in the same industry. Table VI presents the findings, using robust standard errors clustered by either firm or state of incorporation.

In each of the first three columns in Table VI, the positive relation between *Q* and *DDL* is robust to controlling for unobserved, time-varying factors at the state of location and industry levels. For instance, in column (2), we exclude all endogenous regressors, specifying only *DDL* and the four other antitakeover laws and find that, relative to the sample average, firms

[25] Although, the evidence from Table II seems to indicate otherwise.

incorporated in states passing a DDL experience increases in *Q* of 3.3% (=0.063/1.918), when compared with unaffected firms operating in the same state of location and the same Fama-French 49 industry.[26] This initial evidence suggests that our earlier pooled panel findings are not confounded by some other unobserved, time-variant factor(s).

However, the use of state-by-year fixed effects suffers from two major issues in our particular empirical setting. First, the amount of available variation captured by *DDL* is quite limited once state-by-year fixed effects are included, since more than 62% (67%) of treated firms (firm-year observations) are incorporated and headquartered in the same state.[27] Second, and in a similar vein to the first issue, more than 58% (65%) of non-Delaware control firms (firm-year observations) also share the same state of incorporation and location. In contrast, more than 99% of our Delaware control firms and firm-year observations correspond to companies incorporated and located in different states. Thus, the use of state-by-year fixed effects in our setting suffers from a lack of variation in both treated and non-Delaware controls firms, restricting statistical power.

As an alternative, we use an approach similar to that in Gormley and Matsa (2016, Section 6.2, p. 437), where we create dummy variables indicating whether a firm's state of incorporation is the same as its state of location (*Same Inc-HQ State*) or is different (*Diff. Inc-HQ State*) and interacts each of these with *DDL*. This allows us to disentangle these two sets (same vs. different incorporation and headquarter state) of firms. The results from these interactions are shown in columns (4) – (6) of Table VI.

In all three columns ((4) – (6)), we find that the coefficient on *DDL* × *Same Inc-HQ State* is positive and statistically significant. For example, in column (6), with all of our baseline controls and firm, state-by-year and industry-by-year fixed effects, we document that companies affected by directors' duties legislation that are incorporated and headquartered in the same state experience differential increases in *Q* of 4% (=0.076/1.918) relative to the sample mean. Meanwhile, treated firms with different states of incorporation and location do not exhibit significantly higher *Q*s (although all coefficient estimates are positive). We attribute the latter non-result to (i) a lack of power since more than 67% of the treated firm-year observations are measured by *DDL* × *Same Inc-HQ State*, leaving virtually no variation for the estimate on *DDL* × *Diff. Inc-HQ State*, and (ii)

[26] A quick inspection of the standard errors in Table VI, indicates that clustering by firm yields the more conservative inferences (four out of six specifications).

[27] By comparison, in Gormley and Matsa's (2016) study using business combination laws, more than 60% of their sample firms are incorporated and located in different states.

a limited pool of comparison firms as roughly 65% of the non-Delaware control firm-years also incorporate and locate in the same state, which creates a potential "Delaware bias" as 90% of the different incorporation/location state control firms are incorporated in Delaware and are being used as the primary point of comparison for treated firms.

Overall, the evidence from Table VI suggests that the results in the main pooled panel analysis in Table III are robust to controlling for unobserved, time-varying factors at the state of location and industry levels.[28, 29]

VI.B. Matched Sample

We now shift to the construction of a matched sample, in order to mitigate the possibility that some other unobserved confounding events or differences in ex-post observed (see Panel A of Table IA.2 in the internet appendix) and unobserved firm characteristics might be correlated with both the adoption of DDLs and firm value, potentially creating a spurious correlation between *Q* and *DDL*. Further, corporations more (less) reliant on stakeholder relationships and long-term investments might self-select into (out of) states with directors' duties legislation, potentially making the control group of firms a poor counterfactual for testing the effect of these laws on firm value.

In constructing our matched sample, we consider treated and control firms with equidistant pre- and post-estimation windows surrounding the 35 effective dates of DDLs. In particular, we match all sample firms in each of the states that adopted a DDL to a control firm in a state that does not have such legislation during the five-year period after the DDL 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 DDLs. We initially construct propensity scores for 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

[28] This is also consistent with the findings in Table II.

[29] We provide additional robustness on the reliability of our pooled panel sample and baseline regression model in Figures IB.1 and IB.2 and Tables IB.5 and IB.6 of subsection IB.B. in the internet appendix, by performing bootstrapped analyses for tests of "size" and "power". We find that our sample has good size in that committing Type I error at the 5% significance level happens in less than 4.3% of our 1,000 bootstrapped samples, and, likewise, we have good power as we are able to detect a statistically significant relationship (avoiding Type II error) at the 5% level in more than 83% of the 1,000 bootstrapped samples when we induce an increase in Q of 0.02 (where induced changes come from the size test coefficients) after a firm is randomly assigned a DDL.

Ln(Patents).[30] In addition, we use exact matching on two-digit SIC codes, and *Strategic Alliance* (all as defined in Table A.1 in the appendix).

Panel A of Table VII 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 for the treated and control firms.[31] We 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 IA.5 in the internet appendix reports the means, standard deviations, and medians of the matched and other control variables used in our full matched sample.

Panel B of Table VII provides the matched sample differences-in-differences estimates of the *Treated* × *Post* interaction term on *Q*, where *Treated* is always equal to one for firms incorporated in a state with a DDL, 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 use robust standard errors with firm-level clustering. Columns (2) and (4) append dummies for the other antitakeover law controls, while columns (3) and (4) also add the baseline controls for firm and industry characteristics.

In column (1), without including any of the control variables, we find that the treated firms experience economically and statistically significant increases in *Q* of 6.5 percentage points relative to the matched control firms over a ± three-year estimation window.[32] This represents a substantial 4.1% (=0.065/1.583) increase in firm value relative to the matched sample average value of *Q* of 1.583.[33] Consistently, when we estimate the fully specified baseline matched sample

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

[31] Table IA.5 in the internet appendix presents a similar table of descriptive statistics for the remaining control variables.

[32] Table IA.6 in the internet appendix documents qualitatively similar results for varying estimation windows of ± four, five, and six years.

[33] 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 DDLs being enacted, and thus matched, earlier in the time series (1984-1990).

regression in column (4), we document a relative increase of 4.8% (=0.076/1.583) 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 III (and Karpoff and Wittry, 2018), which shows that excluding controls for anti-takeover laws likely creates a negative bias that attenuates our estimate toward zero. In sum, we find robust evidence in our pooled panel and matched sample *Q* regressions that orienting directors towards stakeholders' interests through the adoption of DDLs increase firm value.[34]

VI.C. Portfolio Analysis

As a further robustness check to our finding of a positive and significant effect of *DDL* on *Q*, we consider equity returns as an alternative measure of firm value, by performing a long-run event study of stock returns surrounding the effective date of a DDL. Following prior work (Gompers, Ishii, and Metrick, 2003; Bebchuk, Cohen, and Ferrell, 2009; Cremers and Ferrell, 2014; Cremers, Litov, and Sepe, 2017), we create long (short) portfolios of stocks from the matched sample's treated (control) firms around the time DDLs become effective. The idea is that if DDLs – that is, greater stakeholder orientation in corporate decision-making – matter for long-term firm performance, but the effect of these laws is not incorporated immediately into equity prices because of, for instance, informational inefficiencies across states and time for the "average" investor, then the realized returns on the stock of the treated firms would differ systematically from those of the control firms.[35]

Table VIII reports the respective abnormal returns of equally weighted portfolios for the long, short, and long-short investment strategies.[36] Across three different holding periods, "6m12," "6m24," and "12m24," and two separate specifications to estimate abnormal returns, namely the four-factor Carhart (1997) and three-factor Fama-French (1993) models, we consistently find that firms incorporated in treated states experience positive and significant abnormal stock returns, while the control group does not. For instance, when we buy stocks of treated firms 12 months before the effective date of DDLs covering such firms until 24 months after ("12m24"), we find

[34] Additionally, we show in Table IA.7 in the internet appendix that the quasi-monotonic relation between changes in firm value and DDLs in the pooled sample (presented in Table V) also holds in the matched sample.

[35] Another possible explanation for the differences in realized returns between treated and control firms is that the risk characteristics of the treated firms change with the enactment of an effective DDL. For instance, later in the manuscript (Table IX) we show that DDL-affected firms increase their investments in risky innovative projects, which in turn, likely changes the overall risk profile of the treated firms.

[36] We provide results for value weighted portfolios in Table IA.8 in the internet appendix. The estimated abnormal returns from these specifications are qualitatively similar in magnitude and significance to those in Table VIII.

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, the resulting long-short portfolio that buys the treated and sells the controls firms has a positive and significant annualized abnormal stock 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 DDLs and firm value is robust to using stock returns.

VII. THE CHANNELS FOR THE VALUE OF STAKEOHOLDER ORIENTATION

This section considers how greater stakeholder orientation in directors' decision-making, as enabled by the passage of DDLs, may contribute to firm value. Consistent with the traditional focus of the financial economics literature on the takeover implications of DDLs, we begin by considering the "bargaining power hypothesis" of Stulz (1988) and Harris (1990). Under this hypothesis, enhancing the bargaining power of directors in a takeover context – in this case, based on the directors' ability to consider the interests of *all* stakeholders rather than just shareholders – 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 model hypothesis," which focuses on the broader implications of DDLs for how the board considers shareholder versus stakeholder interests in ordinary corporate decision-making rather than just the takeover context. In particular, in the model proposed by Magill, Quinzii and Rochet (2015), in incomplete markets, firms – especially if they are more complex, more innovation-intensive and engaged in long-term investments – are exposed to risks that arise from within, created by their own investment and production decisions (i.e., endogenous risks), which may 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 helps to internalize the externalities derived from a firm's endogenous risks on stakeholders other than shareholders when markets are incomplete, leading to more efficient production.

VII.A. The Bargaining Power Hypothesis: A Discussion

In this subsection, we consider whether the positive relation between firm value and DDLs might be explained by an increase in the "bargaining power" for target firms incorporated in the enacting states (Stulz, 1988; Harris, 1990). DDLs provide a target's board of directors with increased bargaining power by enhancing 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 channel of value, we analyze both takeover likelihoods and the target acquisition premium and value.

We first examine the effect of DDLs on the propensity for affected firms to receive a takeover bid (*Bid*), as well as its impact on the likelihood of successful completion of a deal (*Acquired*). In the first (last) two columns of Table IA.9 in the internet appendix, we find that the coefficient on *DDL* is an insignificant predictor of whether a target firm receives a *Bid* (or is *Acquired*). That is, companies incorporated in states with a DDL are equally likely to receive a takeover bid or be acquired as companies in states without these laws. This evidence by itself is necessary but not sufficient to verify or reject the bargaining power hypothesis of DDLs. The required additional step is verifying whether target firms that are covered by these laws have a higher takeover premium.

In Table IA.10 in the internet appendix, we consider how DDLs are associated with takeover premia using two sets of tests. First, in Panel A, we regress three measures of takeover premia (*1 Day, 1 Week,* and *4 Week Premiums*)[37] on the *DDL* indicator variable. Second, in Panel B, we consider an alternative test of the effect of DDLs on target firm value by proxying for the target firms' risk of being acquired (*Inc. State-Year M&A Volume* and *Industry-Year M&A Volume*) and interact these proxies with *DDL* to gauge any heterogeneous effect on *Q*. In both Panels A and B, we do not find evidence that affected firms experience increases in takeover premia, concluding that the data do not provide support for the bargaining power hypothesis.[38]

[37] In unreported tests, we scale the three premium measures by proxies for firm fundamentals (e.g., book equity, earnings, and ROA) to alleviate concerns that the non-result is biased by market anticipation of higher bargaining power. Even after this transformation, we do not find that DDLs increased takeover premiums for treated firms.

[38] There are of course challenges with this analysis that make it difficult to empirically test for unobservable changes in the takeover market of affected firms. In particular, (i) we are unable to measure how many takeover bids and would-be-successful attempts never materialized on account of DDLs, and (ii) how many ex-ante targets became too costly following the enactment of a DDL as we demonstrate that the affected firms' market values significantly increased afterwards, making them more expensive to acquire.

VII.B. 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 model hypothesis might explain the positive relation between *Q* and DDLs. The first subsection focuses on the bonding hypothesis, the second on the stakeholder model hypothesis, and the third covers tests that apply to both hypotheses.

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 and strategies that would be at risk of reversal if the firm was acquired by another organization (Shleifer and Summers, 1988; Laffont and Tirole, 1988; Johnson, Karpoff, and Yi, 2015). Innovation provides the classic example of such firm-specific investments, whereby the stability added from takeover defenses would then promote better firm performance by allowing the firm to commit to this long-term, risky operational strategy. To test if this applies to the anti-takeover implications of DDLs, 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 to a firm's basic corporate policies, examining whether DDLs impact the size of the firm's assets (*Size*), as well as changes in financial leverage (*Debt-to-Equity*) and capital expenditure (*CAPX/Assets*) (Garvey and Hanka, 1999; Bertrand and Mullainathan, 1999, 2003; Karpoff and Wittry, 2018). 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)*) (Atanassov, 2013a, 2013b; Flammer and Kacperczyk, 2015; Karpoff and Wittry, 2018). The first four of these measures are constructed from financial data on Compustat, whereas the patent data covers all utility patents issued by the United States Patent Office (USPTO) from 1926 to 2010.[39] Moreover, since DDLs likely affect policy and innovation with a lag, we lead the dependent variables by one year (t+1).

Panel A of Table IX presents the pooled panel estimates from regressing each of the above five policy and innovation variables on *DDL*. 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 DDLs lead to significant differences in standard corporate policy variables. However, as predicted

[39] This data is publicly available on Noah Stoffman's website (KPSS patent data).

by the bonding hypothesis, we document positive and statistically significant increases in covered firms' next year's research and development expenditure and citation-weighted patents (consistent with Atanassov, 2013a and Flammer and Kacperczyk, 2015). For instance, in column (4), we find that after a firm is covered by a DDL, 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 stakeholder orientation in directors' decision-making are more likely to have better financial health. In particular, 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 (MacKie-Mason, 1990). 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 IX 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 DDLs on next year's financial soundness (t+1). Again, we 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 DDL 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 (Giroud and Mueller, 2010): 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 in Panel C, we find evidence that *DDL* 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 DDL. Thus, we conclude that Table IX provides evidence consistent with the bonding hypothesis of takeover defenses for the value added by stakeholder orientation.

2. Complexity, Endogenous Risk and Firm Value. In this subsection, we continue our evaluation of the sources of value of DDLs 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 model hypothesis can explain the value added by stakeholder orientation in directors' decision-making this value should be more prominent for this subset of firms.

As shown by Table X, we begin our investigation by first performing triple difference estimates of the effect of DDLs 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 additional differential increases in *Q* of 2.4% (=0.046/1.918) 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 3.8% (=0.033×2.197/1.918) and 4% (=0.038×2.027/1.918) relative to the respective sample mean.[40]

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*

[40] These results are also consistent with those in footnote 24, where we report results that S&P 500 firms experience economically and statistically significant increases in *Q* after becoming covered by an effective DDL.

(Bushee, 1998; Chan, Lakonishok, and Sougiannis, 2001; Eberhart, Maxwell, and Siddique, 2004). Second, we create the variable *Investment Rate* as the sum of capital expenditures and acquisitions minus the sale of property and divided by the book value of assets (Sanati, 2018). 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, 2013b; 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 XI 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 XI indicates that when directors are more oriented to consider stakeholder interests in their decision-making 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 5.1% (=1.142×0.086/1.918), relative to the sample mean. Similar results are found in column (3), which shows results for the effect of DDLs 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 3.9% (=0.038×1.029). Therefore, we conclude that the evidence in Table XI and XII supports the stakeholder orientation hypothesis of DDLs.

3. Stakeholders and Firm Value. Our last set of tests concerning the channels through which greater stakeholder orientation, as enabled by the adoption of DDLs, 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 model hypothesis of the valued added by greater stakeholder orientation (i.e., DDLs.)

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, 2018). 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 XII presents the pooled panel regressions of *Q* on our four proxies for non-financial 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 DDL and in a *Strategic Alliance* experience an additional increase in *Q* of 6.5% (=0.124/1.918) 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 *DDL* with four proxies for the importance of stakeholder-creditors.[41] These proxies are: (i) *Unsecured Debt*, defined as the

[41] We also test the differential value effect of DDLs for involuntary creditors in Table IA.11 in the internet 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 decision making 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.

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 VII.B.

Table XIII 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 model hypothesis, column (1), for example, shows that affected firms with greater levels of unsecured debt experience differential gains in value. In 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 a one standard deviation increase in *Default Risk* results in an additional increase in firm value of 3.4% (=0.069×0.499) for corporations covered by a DDL.

We conclude that, overall, a likely driver of the positive relation between *Q* and *DDL* is these laws' attribution to the board of greater 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 IX – XIII suggests that expanding board authority serves the interests of all stakeholders, including shareholders, by both bonding a firm's stakeholders more closely and moderating the externalities that might be created by a firm's endogenous risks.

VIII. LEGAL HETEROGENEITY AND THE COMMON LAW

Up to this point in our analysis, consistent with the common approach of prior studies that have examined DDLs, 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 II, the strength of the enhanced authority granted by DDLs to a board of directors varies across states. In particular, this strength depends on whether the related defensive claim attributed to the directors in considering stakeholder interests (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 DDLs in the various

enacting states) have concluded that substantial variation exists both between different states and relative to Delaware (Barzuza, 2009; Geczy et al., 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 DDLs. We do so by creating a directors' duties strength index (*DDS-Index*) that aims to capture heterogeneity in the enhanced board authority enabled by DDLs in different states (and relative to Delaware). That is, the *DDS-Index* can be interpreted as capturing the strength of a board's "local" stakeholder orientation.

Table IA.12 in the internet appendix describes the construction of the *DDS-Index*. Following Barzuza (2009) in determining the relative strength of DDLs 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 DDL. For example, when an incorporating state has a DDL, 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 DDLs with median levels of strength, we set our index equal to two and one-third for firms incorporated in states with a DDL 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 DDLs 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 DDLs (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 Table XIV, 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-by-year fixed effects we find a positive and statistically significant coefficient of 0.022 (*t*-stat=1.67) with an economic impact of 1.2% (0.022/1.918) increase in *Q* per unit increase in the *DDS-Index*.[42]

IX. 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 both the takeover implications of directors' duties laws (DDLs) 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 DDLs 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, pooled panel regressions that additionally specify state-of-location-by-year, and industry-by-year fixed effects to account for unobserved, time-variant factors, 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 also support the institutionalist view that expanding stakeholder orientation in directors' decision-making reduces the externalities that firms create for stakeholders other than shareholders 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

[42] We conduct a battery of additional robustness tests; however, to conserve space, we include these analyses in section IB in the internet appendix.

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.

APPENDIX I: VARIABLE DESCRIPTIONS

TABLE A.1

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 DDL, (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.
$Takeover\ Complete\ (Acquired)$	*Acquired* 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.
$Short\text{-}Term\ Debt$	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
$Directors'Duties\ Law\ (DDL)$	An indicator variable equal to one if a firm is incorporated in a state with an effective DDL, 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.
$DDS\text{-}Index$	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 Table IA.12 in the internet appendix.
DDL- Texas Adjusted	An indicator variable that replaces the "1" in *DDL* 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 *DDL* 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.
DDL-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 *DDL* 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. *DDL-Texas Index* is set equal to zero for other *DDL* 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.
Same Inc-HQ State	An indicator variable set equal to one if a firm's state of incorporation is also its state of location, and zero otherwise.
Diff. Inc-HQ State	An indicator variable set equal to one if a firm's state of incorporation is different from its state of location, and zero otherwise.
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.
BCL	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 (2017) and Karpoff and Wittry (2018).
CSL	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 (2017) and Karpoff and Wittry (2018).
FPL	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 (2017) and Karpoff and Wittry (2018).
PPL	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 (2017) and Karpoff and Wittry (2018).
Predictor Variables	Description
$Inc.State\text{-}Year$ [$Variable\ Name$]	The average [Variable Name] of all firms incorporated within a state, in a given year, where [Variable Name] is as defined above.
$Inc.State\text{-}Year\ \Delta\ Q$	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.
$Ln(Inc\ State\ Per\ Capita\ GDP)$	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.

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TABLE I
SUMMARY STATISTICS

Main Dependent Variable:	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.
DDL_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
BCL_t	0.761	0.426	1	1	1	101,989
CSL_t	0.218	0.413	0	0	0	101,989
FPL_t	0.266	0.442	0	0	1	101,989
PPL_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

Notes. This table reports full sample summary statistics for the dependent and explanatory variables used in the pooled panel regressions. 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 A.1 in the appendix provides variable definitions.

TABLE II
EXPLAINING THE ADOPTION OF DIRECTORS' DUTIES LAWS

Dep. Variable: DDL_t	1983 - 2015			
Variables	(1)	(2)	(3)	(4)
$Inc.State\text{-}Year\ Q_{t-1}$	0.007	0.015	0.019	0.020
	(0.30)	(0.66)	(0.75)	(0.77)
$Inc.State\text{-}Year\ \Delta\ Q_{t-1}$	-0.016	-0.012	-0.004	-0.006
	(-0.85)	(-0.69)	(-0.22)	(-0.30)
$Inc.State\ Industry\text{-}Year\ Q_{t-1}$	-0.028	-0.034	-0.032	-0.030
	(-0.82)	(-0.99)	(-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)
$Ln(Inc\ State\ Per\ Capita\ GDP)_{t-1}$			0.079	0.093
			(1.32)	(1.42)
$Inc.State\text{-}Year\ Strategic\ Alliance_{t-1}$				-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)
$Inc.State\text{-}Year\ Ln(Patents)_{t-1}$[1]				-0.006
				(-0.27)
Inc. State and year fixed effects	Yes	Yes	Yes	Yes
# of unique firms	8,826	8,826	8,826	7,968
N	75,177	75,177	75,177	59,385
Adjusted R^2	0.249	0.304	0.322	0.332

Notes. This table reports results from linear probability models analyzing the determinants of state adoption of DDLs. The dependent variable is the passage of a *DDL*. Once a firm is covered by a directors' duties law they are excluded from the rest of the panel. Independent variables are lagged one-year. We standardize continuous explanatory variables to have zero mean and unit variance and include incorporation state and year fixed effects. Other unreported insignificant predictors include incorporation state-year averages of: *Size, Ln(Age), HHI, Sales Growth, Loss, Debt-to-Equity, Firm Liquidity, CAPX/Assets, R&D/Sales, Inst. Own, GDP Growth,* and *Percent Republican*. Table A.1 in the appendix shows variable definitions. Continuous variables are winsorized at the 2.5% level in both tails, and dollar values are expressed in 2015 dollars. t-statistics (independently double clustered by incorporation state and year) are reported in parentheses. *10%, **5%, and ***1% significance level.

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

TABLE III
THE VALUE OF STAKEHOLDER ORIENTATION

Dep. Variable: Q_t	1983 - 2015			
Variables	(1)	(2)	(3)	(4)
DDL_t	0.059**	0.079**	0.062**	0.068**
	(2.14)	(2.55)	(2.07)	(2.30)
$Size_{t-1}$			-0.346***	-0.353***
			(-25.86)	(-26.11)
$Ln(Age)_{t-1}$			-0.284***	-0.239***
			(-9.05)	(-7.35)
HHI_{t-1}			0.039	0.016
			(0.82)	(0.32)
$Sales\ Growth_{t-1}$			0.223***	0.223***
			(12.69)	(12.48)
$Loss_{t-1}$			-0.072***	-0.069***
			(-7.14)	(-6.87)
$Debt\text{-}to\text{-}Equity_{t-1}$			-0.030***	-0.026***
			(-6.03)	(-5.50)
$Firm\ Liquidity_{t-1}$			0.018	-0.007
			(0.38)	(-0.15)
$CAPX/Assets_{t-1}$			0.428***	0.348***
			(4.19)	(3.43)
$R\&D/Sales_{t-1}$			2.671***	2.631***
			(12.65)	(12.41)
$Inst.Own_{t-1}$			0.393***	0.389***
			(9.86)	(9.81)
Other takeover law controls	No	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	No
Industry-year fixed effects	No	No	No	Yes
# of unique firms	11,264	11,264	11,264	11,264
N	101,989	101,989	101,989	101,989
Adjusted R^2	0.548	0.548	0.581	0.596

Notes. This table reports the results for pooled panel regressions of Tobin's Q on a DDL indicator variable over the sample period 1983 to 2015. The main variables of interest, *Q,* and *DDL*, are measured contemporaneously, whereas the remaining controls are lagged one period. Columns (2) – (4) include dummies for the other four antitakeover laws: *BCL, CSL, FPL,* and *PPL*. Table A.1 in the appendix 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. *10%, **5%, and ***1% significance level.

TABLE IV
THE TIMING OF DIRECTORS' DUTIES LAWS AND FIRM VALUE IMPLICATIONS

Dep. Variable: Q_t	1983 - 2015			
Variables	(1)	(2)	(3)	(4)
$DDL_t^{[-2\ or\ -1]}$	-0.001	-0.003	-0.000	0.001
	(-0.03)	(-0.15)	(-0.01)	(0.06)
$DDL_t^{[0]}$	0.024	0.030	0.032	0.037
	(0.83)	(1.02)	(1.12)	(1.33)
$DDL_t^{[1]}$	0.045	0.064*	0.060*	0.062*
	(1.45)	(1.88)	(1.83)	(1.91)
$DDL_t^{[2]}$	0.059*	0.079**	0.081**	0.080**
	(1.71)	(2.05)	(2.17)	(2.18)
$DDL_t^{[3+]}$	0.071**	0.096**	0.067*	0.072**
	(2.19)	(2.53)	(1.81)	(1.98)
Other takeover law controls	No	Yes	Yes	Yes
Control variables	No	No	Yes	Yes
Inc. State time trend	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	No
Industry-year fixed effects	No	No	No	Yes
# of unique firms	11,264	11,264	11,264	11,264
N	101,989	101,989	101,989	101,989
Adjusted R^2	0.548	0.548	0.581	0.596

Notes. This table reports the results for pooled panel regressions of Tobin's Q on DDL indicator variables for Compustat firms over the period 1983 to 2015. $DDL^{[-2\ or\ -1]}$ is an indicator variable equal to one if a firm is incorporated in a state that will enact an effective DDL in one or two years and equal to zero otherwise. $DDL^{[0]}$ is an indicator variable equal to one if a firm is incorporated in a state that enacted an effective DDL in the current year and equal to zero otherwise. $DDL^{[1\ or\ 2]}$ is an indicator variable equal to one if a firm is incorporated in a state that enacted an effective DDL one or two years ago and equal to zero otherwise. $DDL^{[3+]}$ is an indicator variable equal to one if a firm is incorporated in a state that enacted an effective DDL three or more years ago and equal to zero otherwise. All control variables are lagged one-period and those included in columns (2) – (4) are: *BCL, CSL, FPL,* and *PPL* dummies. Further, columns (3) – (4) specify: *Size, Ln(Age), HHI, Sales Growth, Loss, Debt-to-Equity, Firm Liquidity, CAPX/Assets, R&D/Sales,* and *Inst. Own*. Table A.1 in the appendix 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. *10%, **5%, and ***1% significance level.

TABLE V
CHANGES IN STAKEHOLDER ORIENTATION AND FIRM VALUE

	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)
$\Delta DDL_{t-1,\,t}$	0.057**	0.085***	0.077**	0.075**	0.127***
	(2.46)	(2.73)	(2.26)	(2.01)	(3.29)
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	0.033	0.047	0.048	0.055	0.054

Notes. This table reports the results for pooled panel regressions of changes in Q on the first difference in a *DDL* ($\Delta\ DDL_{t-1,\ t}$) 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 ($\Delta\ Q_{t,t+n}$), 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*, *BCL, CSL, FPL,* and *PPL*. Table A.1 in the appendix 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. *10%, **5%, and ***1% significance level.

TABLE VI
STAKEHOLDER ORIENTATION, HIGHER DIMENSIONAL FIXED EFFECTS, AND FIRM VALUE

	1983 to 2015					
Dep. Variable: Q_t						
Variables	(1)	(2)	(3)	(4)	(5)	(6)
DDL_t	0.061**	0.063*	0.058*			
Firm clustering	(2.11)	(1.94)	(1.85)			
State of incorporation clustering	(2.69)	(2.08)	(1.82)			
$DDL_t \times Same\ Inc\text{-}HQ\ State_t$				0.073**	0.074*	0.076**
Firm clustering				(2.11)	(1.90)	(2.05)
State of incorporation clustering				(2.13)	(1.92)	(1.89)
$DDL_t \times Diff.Inc\text{-}HQ\ State_t$				0.047	0.049	0.030
Firm clustering				(1.08)	(1.10)	(0.72)
State of incorporation clustering				(1.49)	(1.23)	(0.81)
Other takeover law controls	No	Yes	Yes	No	Yes	Yes
Control variables	No	No	Yes	No	No	Yes
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
State-year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry-year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
# of unique firms	11,082	11,082	11,082	11,082	11,082	11,082
N	100,679	100,679	100,679	100,679	100,679	100,679
Adjusted R^2	0.566	0.566	0.597	0.566	0.566	0.597

Notes. This table reports results for higher dimensional fixed effects regressions of *Q* on *DDL* and its interaction with *Same Inc-HQ State* and *Diff. Inc-HQ State* over the sample period 1983 to 2015. *Same* (*Diff.*) *Inc-HQ State* is an indicator variable equal to one if a firm's state of incorporation is the same as (different than) its state of location, and zero otherwise. The main variables of interest, *Q, DDL*, *DDL* × *Same Inc-HQ State, DDL* × *Diff. Inc-HQ State,* are measured contemporaneously, whereas the remaining controls are lagged one period. Columns (2) – (3) and (5) – (6) include dummies for the other four antitakeover laws: *BCL, CSL, FPL,* and *PPL*, while columns (3) and (6) specify firm-level controls. The control variables include: *Size, Ln(Age), HHI, Sales Growth, Loss, Debt-to-Equity, Firm Liquidity, CAPX/Assets, R&D/Sales,* and *Inst. Own.* Table A.1 in the appendix provides variable definitions. State of location fixed effects are defined using firms' headquarter state. Industry fixed effects are measured with 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 either firm or state of incorporation and are reported in parentheses. *10%, **5%, and ***1% significance level.

TABLE VII
THE VALUE OF STAKEHOLDER ORIENTATION IN A MATCHED SAMPLE

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

	(1)	(2)	(3)
Matched Variables:	Treated	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)
N (by group)	1,428	1,428	

Panel B: Matched Sample Regression Results with a ($t\pm3$) Estimation Window

Dep. Variable: Q_t	(t-3) to (t+3)			
Variables	(1)	(2)	(3)	(4)
$Treated_t \times Post_t$	0.065*	0.078**	0.066**	0.076**
	(1.94)	(2.29)	(2.07)	(2.29)
$Post_t$	-0.047**	-0.049**	-0.021	-0.021
	(-2.03)	(-2.07)	(-0.92)	(-0.93)
Other takeover law controls	No	Yes	No	Yes
Control variables	No	No	Yes	Yes
Firm and 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	0.687	0.687

Notes. This table reports summary statistics and regression results for a matched sample. *Treated* (control) firms are defined as companies incorporated in states with (without) an effective DDL (in at least the five-year period following the effective date for its matched counterpart). We use propensity score 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 codes and *Strategic Alliance*. Panel A shows the pre-treatment year summary statistics. "Difference" provides the difference between the treated and control sample mean (*t*-stat in parentheses). Panel B provides matched sample regression results. The main variables of interest, *Q*, *Treated* × *Post*, and *Post* are measured contemporaneously, whereas remaining controls are lagged one year. Included controls: *Size, Ln(Age), HHI, Sales Growth, Loss, Debt-to-Equity, Firm Liquidity, CAPX/Assets, R&D/Sales*, *Inst. Own* and the other law controls (column specific). *Treated* is omitted due to collinearity with firm fixed effects. Table A.1 in the appendix 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 (clustered by firm) are reported in parentheses. *10%, **5%, and ***1% significance level.

TABLE VIII
PORTFOLIO ANALYSIS: DIRECTORS' DUTIES LAWS AND ABNORMAL 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

Notes. This table reports abnormal returns of equally weighted monthly portfolios of firms that are incorporated in states that have effective DDLs. 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 DDL 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 DDL 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). Table A.1 in the appendix provides variable definitions. 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). *10%, **5%, and ***1% significance level. 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.

TABLE IX
STAKEHOLDER ORIENTATION, POLICY AND INNOVATION, FINANCIAL SOUNDNESS, AND PROFITABILITY

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)[1]
DDL_t	0.008	-0.021	0.001	0.001*	0.041*
	(0.60)	(-0.89)	(0.79)	(1.66)	(1.73)
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	9,502
N	90,922	90,808	90,922	90,922	82,192
Adjusted R^2	0.967	0.364	0.564	0.840	0.794

Notes. This table reports the results for pooled panel regressions of proxies for *Policy* and *Innovation, Financial Soundness*, and *Profitability*, respectively, on a *DDL* indicator variable over the period 1983 to 2015. Panel A investigates the effect of *DDL* 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 *Short-Term 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. *Short-Term 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, Short-Term Debt, ROA, ROE,* and *ROCE,* are led one year (*t*+1). *DDL* 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, BCL, CSL, FPL*, and *PPL*. Table A.1 in the appendix provides variable definitions. 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. *10%, **5%, and ***1% significance level.

[1] 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 IX

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)
DDL_t	-0.021**	-0.026**	-0.014*
	(-2.10)	(-2.43)	(-1.66)
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	0.382	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)
DDL_t	0.008**	0.014*	0.011**
	(2.22)	(1.89)	(2.26)
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	8,756	8,463	8,564
N	90,844	84,705	86,775
Adjusted R^2	0.481	0.452	0.578

TABLE X
STAKEHOLDER ORIENTATION, COMPLEXITY, AND FIRM VALUE

Dep. Variable: Q_t	1983 – 2015					
Variables	(1)	(2)	(3)	(4)	(5)	(6)
$DDL_t \times Large\ Firm_t$	0.046*	0.047*				
	(1.79)	(1.80)				
$DDL_t \times Firm\ Sales_t$			0.032**	0.033***		
			(2.51)	(2.56)		
$DDL_t \times Size_t$					0.037***	0.038***
					(3.06)	(3.13)
DDL_t	0.038	0.051*	-0.132	-0.117	-0.155**	-0.138*
	(1.38)	(1.66)	(-1.63)	(-1.47)	(-2.05)	(-1.84)
$Large\ Firm_t$	0.001	0.001				
	(0.06)	(0.06)				
$Firm\ Sales_t$			0.180***	0.180***		
			(9.84)	(9.81)		
$Size_t$					-0.257***	-0.257***
					(-18.42)	(-18.38)
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	0.581	0.581	0.584	0.584	0.573	0.573

Notes. This table reports the results for pooled panel regressions of Tobin's Q on a *DDL* × *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 *DDL* × *Complexity*, *DDL,* 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* and *Inst. Own*. The even-numbered columns include controls for the other antitakeover laws: *BCL, CSL, FPL,* and *PPL*. Table A.1 in the appendix 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. *10%, **5%, and ***1% significance level.

TABLE XI
STAKEHOLDER ORIENTATION, LONG-TERM INVESTMENTS, AND FIRM VALUE

Dep. Variable: Q_t	1983 – 2015			
Variables	(1)	(2)	(3)[1]	(4)
$DDL_t \times R\&D/Sales_t$	1.142***			
	(2.62)			
$DDL_t \times Investment\ Rate_t$		0.237*		
		(1.88)		
$DDL_t \times Ln(CW\ Patents)_t$			0.038***	
			(2.68)	
$DDL_t \times Research\ Quotient_t$				0.702**
				(2.04)
DDL_t	0.026	0.034	0.022	-0.063
	(0.81)	(1.08)	(0.70)	(-0.91)
$R\&D/Sales_t$	0.554***			
	(3.39)			
$Investment\ Rate_t$		0.268***		
		(3.79)		
$Ln(CW\ Patents)_t$			-0.004	
			(-0.42)	
$Research\ Quotient_t$				-0.127
				(-0.71)
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	0.577	0.582	0.584	0.597

Notes. This table reports the results for pooled panel regressions of Tobin's Q on a *DDL* × *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*, *DDL* × *Long-Term Investments*, *DDL,* and *Long-Term Investments*, are measured contemporaneously, whereas the remaining controls are lagged one period. Table A.1 in the appendix 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, BCL, CSL, FPL,* and *PPL*. 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. *10%, **5%, and ***1% significance level.

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

TABLE XII
STAKEHOLDER ORIENTATION, STAKEHOLDER RELATIONSHIPS, AND FIRM VALUE

Dep. Variable: Q_t	1983 – 2015			
Variables	(1)	(2)	(3)	(4)
$DDL_t \times Strategic\ Alliance_t$	0.124**			
	(1.97)			
$DDL_t \times Large\ Customer_t$		0.085*		
		(1.84)		
$DDL_t \times Supplier\ Dependency_t$			0.949**	
			(2.01)	
$DDL_t \times Labor\ Intensity_t$				0.039***
				(3.11)
DDL_t	0.057*	0.058*	0.059**	0.058*
	(1.90)	(1.93)	(1.98)	(1.94)
$Strategic\ Alliance_t$	-0.016			
	(-0.41)			
$Large\ Customer_t$		0.043		
		(1.41)		
$Supplier\ Dependency_t$			0.010**	
			(2.47)	
$Labor\ Intensity_t$				0.013*
				(1.71)
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	0.585	0.586	0.586	0.586

Notes. This table reports the results for pooled panel regressions of Tobin's Q on a *DDL* × *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*, *DDL* × *Stakeholder Relationship*, *DDL*, and *Stakeholder Relationship,* are measured contemporaneously, whereas the remaining controls are lagged one period. Table A.1 in the appendix 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, BCL, CSL, FPL,* and *PPL*. 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. *10%, **5%, and ***1% significance level.

TABLE XIII
STAKEHOLDER ORIENTATION, CREDITORS, AND FIRM VALUE

Dep. Variable: Q_t	1983 – 2015			
Variables	(1)	(2)	(3)	(4)
$DDL_t \times Unsecured\ Debt_t$	0.052*			
	(1.79)			
$DDL_t \times Industry\ CF\ Risk_t$		0.125**		
		(2.07)		
$DDL_t \times Creditor\ Reliance_t$			0.055**	
			(2.07)	
$DDL_t \times Default\ Risk_t$				0.069**
				(2.46)
DDL_t	0.027	0.030	0.035	0.035
	(0.83)	(0.93)	(1.02)	(1.11)
$Unsecured\ Debt_t$	0.015			
	(0.86)			
$Industry\ Cash\text{-}\ Flow\ Risk_t$		-0.178***		
		(-4.64)		
$Creditor\ Reliance_t$			-0.268***	
			(-18.62)	
$Default\ Risk_t$				-0.239***
				(-15.92)
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	0.593	0.581	0.584	0.584

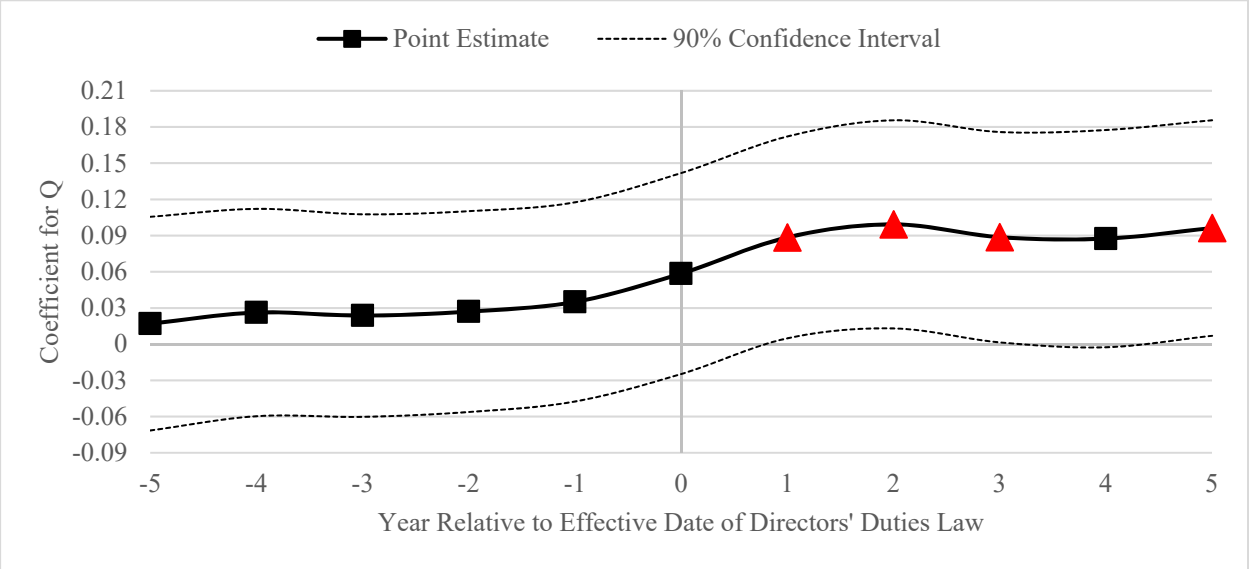
Notes. This table reports the results for pooled panel regressions of Tobin's Q on a *DDL* × *Creditor Stakeholder* interaction term. *Creditor Stakeholder* proxies include the following: *Unsecured Debt, Industry CF Risk, Creditor Reliance,* and *Default Risk*. The main variables of interest, *Q*, *DDL* × *Creditor Stakeholder*, *DDL*, and *Creditor Stakeholder,* are measured contemporaneously, whereas the remaining controls are lagged one period. Table A.1 in the appendix 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, BCL, CSL, FPL,* and *PPL*. 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. *10%, **5%, and ***1% significance level.

TABLE XIV
DIRECTORS' DUTIES STRENGTH INDEX AND FIRM VALUE

Dep. Variable: Q_t	1983 - 2015			
Variables	(1)	(2)	(3)	(4)
$DDS\text{-}Index_t$	0.027**	0.034**	0.023*	0.022*
	(2.11)	(2.44)	(1.70)	(1.67)
Other takeover law controls	No	Yes	Yes	Yes
Control variables	No	No	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	No
Industry-year fixed effects	No	No	No	Yes
# of unique firms	11,264	11,264	11,264	11,264
N	101,989	101,989	101,989	101,989
Adjusted R^2	0.548	0.548	0.573	0.596

Notes. This reports results from pooled panel regressions of *Q* on the *DDS-Index* over the period 1983-2015. The main variables of interest, *Q*, and *DDS-Index*, are measured contemporaneously, whereas the remaining controls are lagged one period. Table IA.12 in the internet appendix provides a description of the index. Columns (2), and (4) – (5) include dummies for the other antitakeover laws: *BCL, CSL, FPL,* and *PPL*. Columns (3) – (5) specifies controls for: *Size, Ln(Age), HHI, Sales Growth, Loss, Debt-to-Equity, Firm Liquidity, CAPX/Assets, R&D/Sales* and *Inst. Own*. Table A.1 in the appendix 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). *10%, **5%, and ***1% significance level.

PANEL A: Without Industry-by-Year Fixed Effects



PANEL B: Includes Industry-by-Year Fixed Effects

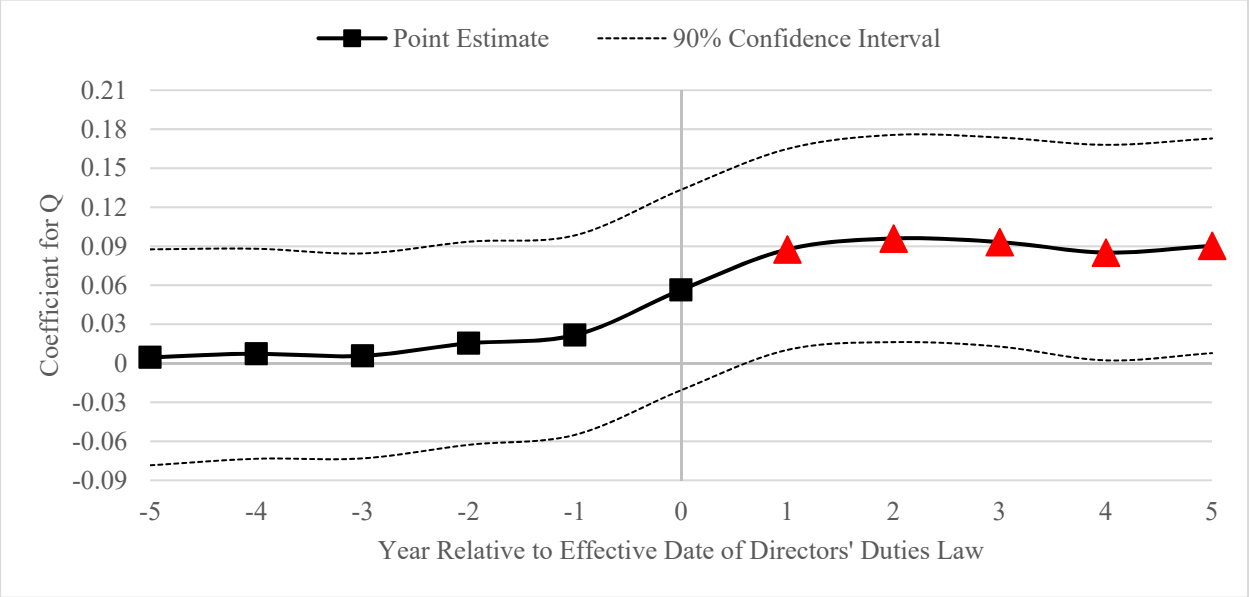


FIGURE I

The Impact of an Effective Directors' Duties Law on Firm Value

This figure shows the impact of an effective directors' duties law (DDL) 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 DDL 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 DDL and zero otherwise. Panel B supplements the top panel by specifying industry-by-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 DDLs. 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.

Internet Appendix for

"STAKEHOLDER ORIENTATION AND FIRM VALUE"

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

This Internet Appendix contains the following material:

- Section IA includes 12 supplementary tables and 2 supplementary figures.
- Section IB includes a supplementary robustness analysis section with 6 corresponding tables and 2 corresponding figures.

ADDITIONAL REFERENCES

Barber, Brad M., John D. Lyon, "Detecting Abnormal Operating Performance: The Empirical Power and Specification of Test Statistics," *Journal of Financial Economics*, 41 (1996), 359–399.

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Cremers, K.J. Martijn, Scott B. Guernsey, Lubomir P. Litov, and Simone M. Sepe, Shadow Pills and Long-Term Firm Value, unpublished paper, University of Notre Dame, 2018.

Guernsey, Scott B., Product Market Competition and Long-Term Firm Value: Evidence from Reverse Engineering Laws, unpublished paper, University of Cambridge, 2018.

TABLE IA.1
STATE-LEVEL DIRECTORS' DUTIES LAWS

State	Directors' Duties Law	# of Unique Firms	State	Directors' Duties Law	# of Unique Firms
Alabama		10	Montana		3
Alaska		2	Nebraska[1]	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[2]	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

Notes. Sources: Barzuza (2009), and Karpoff and Wittry (2018).

[1] Nebraska's constituency statute was repealed in April of 1995, before being reenacted in March of 2007.
[2] Texas adopts a DDL 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 IA.2
SUMMARY STATISTICS

PANEL A: Main Full Sample Variables by Treatment

	Treated (*DDL* = 1)			**Control (*DDL* = 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
BCL_t	0.833	0.373	26,795	0.736	0.441	75,194	0.097***	32.06
CSL_t	0.690	0.462	26,795	0.050	0.217	75,194	0.640***	300
FPL_t	0.841	0.365	26,795	0.061	0.240	75,194	0.780***	390
PPL_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

Notes. This table reports full sample summary statistics for the dependent and explanatory variables used in the pooled panel regressions. Panel A 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 DDL, it is included in the treated group, and in the control group otherwise. Panel B 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 A.1 in the appendix provides variable definitions. *10%, **5%, and ***1% significance level.

TABLE IA.2

PANEL B: Additional Full Sample Variables

Additional Dependent Variables:	Mean	St. Dev.	P25	Median	P75	Obs.
$\Delta\, Q_{t-1,tt}$	-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 IA.3
EXPLAINING THE ADOPTION OF DIRECTORS' DUTIES LAWS

Dep. Variable: DDL_t	1983 - 2015			
Variables	(1)	(2)	(3)	(4)
$Inc.State\text{-}Year\ Q_{t-1}$	0.007	0.015	0.019	0.020
	(0.30)	(0.66)	(0.75)	(0.77)
$Inc.State\text{-}Year\ \Delta\ Q_{t-1}$	-0.016	-0.012	-0.004	-0.006
	(-0.85)	(-0.69)	(-0.22)	(-0.30)
$Inc.State\ Industry\text{-}Year\ Q_{t-1}$	-0.028	-0.034	-0.032	-0.030
	(-0.82)	(-0.99)	(-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)
$Inc.State\text{-}Year\ Size_{t-1}$			0.035	0.037
			(0.92)	(0.72)
$Inc.State\text{-}Year\ Ln(Age)_{t-1}$			0.015	0.032
			(0.49)	(0.67)
$Inc.State\text{-}Year\ HHI_{t-1}$			0.022	0.019
			(1.32)	(1.19)
$Inc.State\text{-}Year\ Sales\ Growth_{t-1}$			-0.005	-0.002
			(-0.41)	(-0.13)
$Inc.State\text{-}Year\ Loss_{t-1}$			0.002	0.007
			(0.19)	(0.42)
$Inc.State\text{-}Year\ Debt\text{-}to\text{-}Equity_{t-1}$			-0.009	-0.011
			(-0.97)	(-1.02)
$Inc.State\text{-}Year\ Firm\ Liquidity_{t-1}$			-0.006	-0.006
			(-0.48)	(-0.38)
$Inc.State\text{-}Year\ CAPX/Assets_{t-1}$			0.016	0.014
			(1.28)	(0.37)
$Inc.State\text{-}Year\ R\&D/Sales_{t-1}$			0.014	0.003
			(0.47)	(0.08)
$Inc.State\text{-}Year\ Inst.Own_{t-1}$			0.005	-0.013
			(0.16)	(-0.21)
$Ln(Inc\ State\ Per\ Capita\ GDP)_{t-1}$			0.079	0.093
			(1.32)	(1.42)
$Inc.State\ GDP\ Growth_{t-1}$			-0.002	-0.005
			(-0.11)	(-0.26)
$Inc.State\ Percent\ Republican_{t-1}$			0.025	0.041
			(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)
$Inc.State\text{-}Year\ Ln(Patents)_{t-1}$[1]				-0.006
				(-0.27)
Inc. State and year fixed effects	Yes	Yes	Yes	Yes
# of unique firms	8,826	8,826	8,826	7,968
N	75,177	75,177	75,177	59,385
Adjusted R^2	0.249	0.304	0.322	0.332

Notes. This table presents marginal effects from linear probability models analyzing the determinants of state adoption of a DDL from 1983 to 2015. We define the dependent variable as the passage of a DDL. Once a firm becomes covered by a DDL 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 A.1 in the appendix 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). *10%, **5%, and ***1% significance level.

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

TABLE IA.4
STAKEHOLDER ORIENTATION, S&P 500 CONSTITUENTS, AND FIRM VALUE

Dep. Variable: Q_t	1983 to 2015			
Variables	(1)	(2)	(3)	(4)
$DDL_t \times S\&P\ 500_t$	0.197***	0.201***	0.122**	0.095*
	(3.21)	(3.26)	(2.10)	(1.65)
DDL_t	0.031	0.052*	0.046	0.056*
	(1.06)	(1.65)	(1.49)	(1.86)
$S\&P\ 500_t$	-0.082*	-0.083*	0.312***	0.311***
	(-1.78)	(-1.79)	(7.21)	(7.27)
Other antitakeover laws	No	Yes	Yes	Yes
Control variables	No	No	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	No
Industry-year fixed effects	No	No	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	0.548	0.548	0.582	0.597

Notes. This table reports the results for pooled panel regressions of Tobin's Q on a *DDL × 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, DDL × S&P 500, DDL,* 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: *BCL, CSL, FPL,* and *PPL*. Columns (3) – (5) specifies the following controls: *Size, Ln(Age), HHI, Sales Growth, Loss, Debt-to-Equity, Firm Liquidity, CAPX/Assets, R&D/Sales* and *Inst. Own*. Table A.1 in the appendix 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. *10%, **5%, and ***1% significance level.

TABLE IA.5
MATCHED SAMPLE SUMMARY STATISTICS

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

	(1)	(2)	(3)
Matched Variables:	Treated	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	

Notes. This table reports summary statistics for a matched sample. Treated firms are defined as companies incorporated in states with an effective DDL, whereas the control firms are incorporated in states without DDLs in at least the five-year period following the effective date of a law for its matched counterpart. We use propensity score 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. Panel B shows the summary statistics for the full matched panel. Table A.1 in the appendix 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. *10%, **5%, and ***1% significance level.

TABLE IA.5

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 IA.6
THE VALUE OF STAKEHOLDER ORIENTATION IN A MATCHED SAMPLE WITH VARYING ESTIMATION WINDOWS

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)
$Treated_t \times Post_t$	0.067**	0.071**	0.068**	0.072**	0.071**	0.072**
	(1.98)	(1.98)	(1.96)	(2.01)	(2.00)	(1.99)
$Post_t$	-0.011	-0.009	-0.003	0.000	0.000	0.003
	(-0.44)	(-0.35)	(-0.10)	(0.00)	(0.00)	(0.09)
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	0.621	0.621

Notes. This table reports the results for matched sample regressions of Tobin's Q on a *Treated* × *Post* interaction term for varying estimation windows of ($t\pm4$), ($t\pm5$), and ($t\pm6$), respectively. *Treated* is an indicator variable equal to one if the firm is incorporated in a state that adopted a DDL. *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, *Treated* × *Post*, and *Post,* are measured contemporaneously, whereas the remaining controls are lagged one period. *Treated* is omitted in the regression because of collinearity with its firm fixed effect. Table A.1 in the appendix 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* and *Inst. Own*. The even-numbered columns further specify: *BCL, CSL, FPL,* and *PPL* 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. *10%, **5%, and ***1% significance level.

TABLE IA.7
CHANGES IN STAKEHOLDER ORIENTATION AND FIRM VALUE

Dep. Variables:	$\Delta Q_{t,tt+1}$	$\Delta Q_{t,tt+2}$	$\Delta Q_{t,tt+3}$	$\Delta Q_{t,tt+4}$	$\Delta Q_{t,tt+5}$
Variables	(1)	(2)	(3)	(4)	(5)
$\Delta(Treated_{t,tt-1} \times Post_{t,tt-1})$	0.030**	0.064***	0.053*	0.066**	0.070**
	(2.26)	(3.01)	(1.86)	(2.06)	(2.05)
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	1,726
N	13,595	12,707	11,840	11,079	10,406
Adjusted R^2	0.023	0.039	0.044	0.063	0.046

Notes. This table reports the results for matched sample regressions of changes in *Q* on the first difference in a *Treated* × *Post* ($\Delta(Treated_{t,t-1} \times Post_{t,t-1})$) 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*, *BCL, CSL, FPL,* and *PPL*. Table A.1 in the appendix 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. *10%, **5%, and ***1% significance level.

TABLE IA.8
PORTFOLIO ANALYSIS: VALUE WEIGHTED MONTHLY PORTFOLIOS

	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

Notes. This table reports abnormal returns of value weighted monthly portfolios of firms that are incorporated in states that have effective DDLs. 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 DDL 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 DDL 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 (1993) 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). *10%, **5%, and ***1% significance level. 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.

TABLE IA.9
DIRECTORS' DUTIES LAWS AND TAKEOVER LIKELIHOOD

	1983 to 2015			
Dep. Variables:	Bid_t		$Acquired_t$	
Variables	(1)	(2)	(3)	(4)
DDL_t	-0.001	-0.000	-0.000	0.000
	(-0.29)	(-0.14)	(-0.09)	(0.06)
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	0.008	0.013	0.010	0.017

Notes. This table reports the results for pooled panel regressions of *M&A Activity* on a *DDL* indicator variable over the period 1983 to 2015. *M&A Activity* dependent variables include the following: *Bid* and *Acquired*. *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. *Acquired* 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, $Acquired$, and *DDL*, are measured contemporaneously, and the controls are lagged one period. Table A.1 in the appendix provides variable definitions. The included controls are: *Size, Ln(Age), HHI, Loss, Debt-to-Equity, Firm Liquidity, CAPX/Assets, R&D/Sales, Inst. Own*, *BCL, CSL, FPL,* and *PPL*. 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 using Fama-French 49 industry groupings. The estimated *t*-statistics are based on robust standard errors clustered by firm and are reported in parentheses. *10%, **5%, and ***1% significance level.

TABLE IA.10
DIRECTORS' DUTIES LAWS AND TARGET FIRM VALUE

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)
DDL_t	0.006	0.025	0.006	0.035	0.008	0.017
	(0.40)	(0.89)	(0.40)	(1.19)	(0.49)	(0.51)
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	0.119	0.118	0.105	0.105	0.098	0.097

Notes. This table reports results for pooled panel regressions analyzing the effect of DDLs on target firm value. Panel A presents the estimates of a *Takeover Premium* dependent variable on *DDL* 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 *DDL* × *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, $DDL \times M\&A\ Activity$, DDL, and $M\&A\ Activity$, are measured contemporaneously, and the controls are lagged one period. Table A.1 in the appendix 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* and *Inst. Own*. The even-numbered columns in both panels further append: *BCL, CSL, FPL,* and *PPL*. 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 two-digit SIC code level. The estimated *t*-statistics are based on robust standard errors clustered by firm and are reported in parentheses. *10%, **5%, and ***1% significance level.

TABLE IA.10

PANEL B: Tobin's Q

Dep. Variable: Q_t	1983 to 2015			
Variables	(1)	(2)	(3)	(4)
$DDL_t \times Inc.State\text{-}Year\ M\&A\ Volume_t$	-0.373	-0.370		
	(-0.68)	(-0.67)		
$DDL_t \times Industry\text{-}Year\ M\&A\ Volume_t$			-0.092	-0.092
			(-0.56)	(-0.56)
DDL_t	0.055*	0.066**	0.053*	0.065**
	(1.95)	(2.06)	(1.82)	(2.03)
$Inc.State\text{-}Year\ M\&A\ Volume_t$	0.181	0.175		
	(1.33)	(1.29)		
$Industry\text{-}Year\ M\&A\ Volume_t$			-0.000	-0.000
			(-0.00)	(-0.00)
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	0.581	0.581	0.581	0.581

TABLE IA.11
STAKEHOLDER ORIENTATION, INVOLUNTARY CREDITORS, AND FIRM VALUE

Dep. Variable: Q_t	1983 - 2015			
Variables	(1)	(2)	(3)	(4)
DDL_t	0.073**	0.026	0.089**	0.031
	(1.96)	(0.53)	(1.99)	(0.77)
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	0.598	0.584	0.584	0.590

Notes. This table reports the results for pooled panel regressions of Tobin's Q on a *DDL* 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 *DDL*, 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, BCL, CSL, FPL,* and *PPL*. Table A.1 in the appendix 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. *10%, **5%, and ***1% significance level.

TABLE IA.12
DIRECTORS' DUTIES STRENGTH INDEX AND FIRM VALUE

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 DDL 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 DDL 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 DDL 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 DDL 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.

Notes. This table describes the directors' duties strength index (*DDS-Index*).

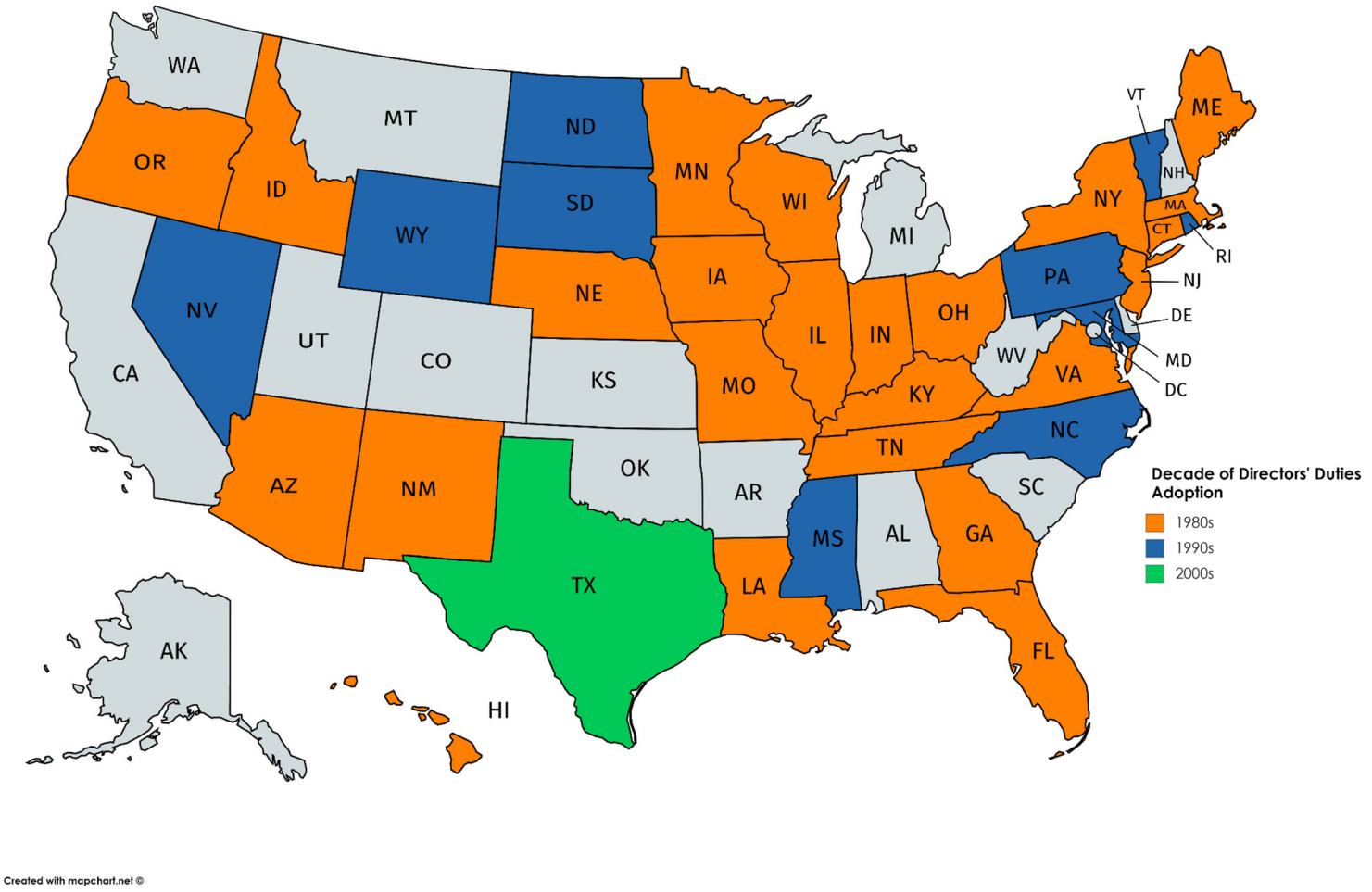


FIGURE IA.1
States with a Directors' Duties (Constituency) Statute

The chart below shows the states that have an effective DDL. 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 DDL. *Created with*: https://mapchart.net/.

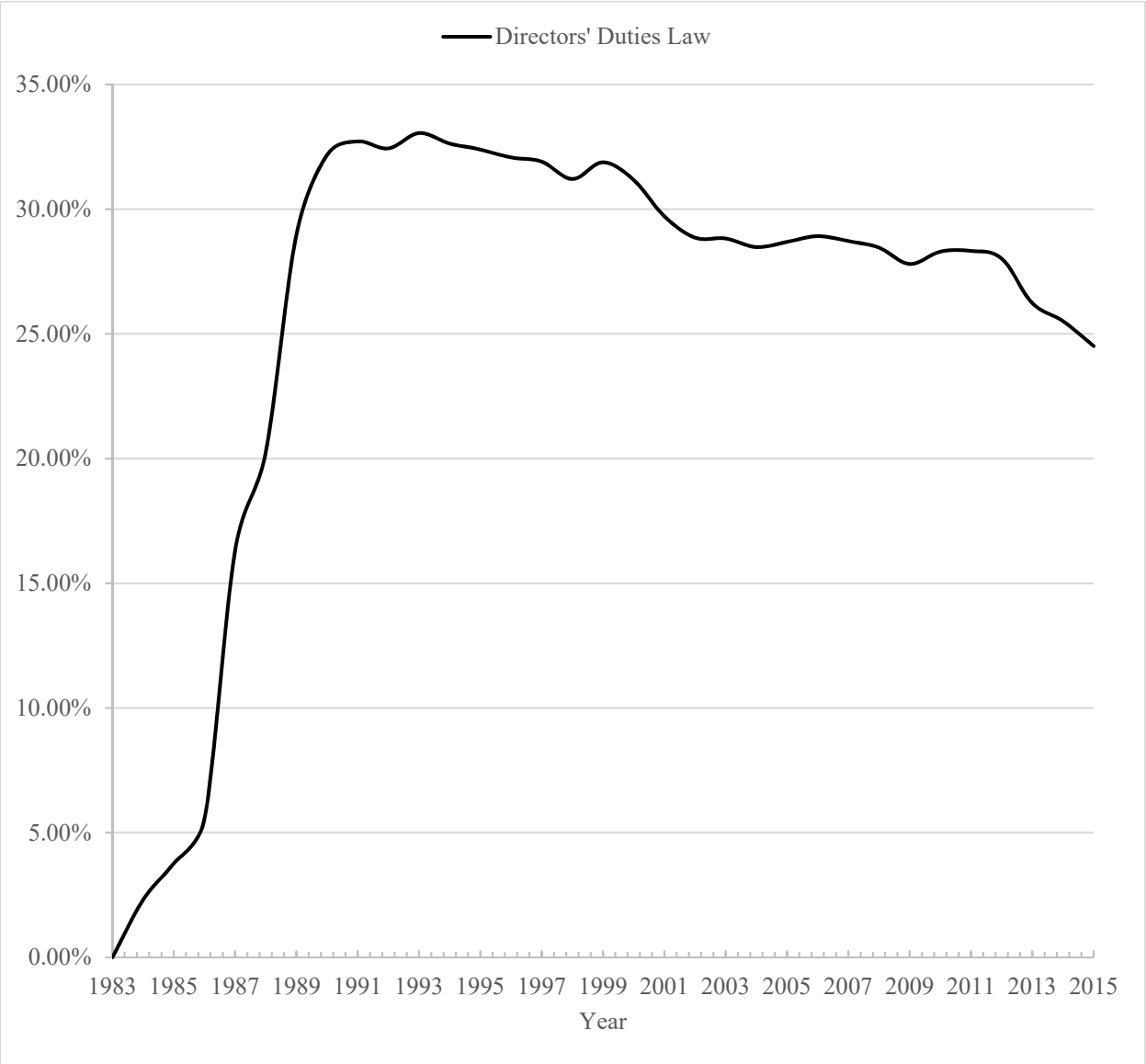


FIGURE IA.2
Percentage of Firms Affected by Directors' Duties Laws
The chart below shows the percentage of firms incorporated in a state with an effective DDL in our sample, each year from 1983 to 2015. Excluded from the sample are financial and utility firms.

IB. ROBUSTNESS

IB.A. Legal Robustness

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 DDLs 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 IB.1 in the internet appendix, we investigate the effect of *DDL*, 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 45,255 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 8.1 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-by-year fixed effects, we find that firms incorporated in jurisdictions with DDLs experience increases in *Q* of 6 percentage points relative to non-covered firms that are incorporated in states other than Delaware. This corresponds to an economic significance of 3.3% (0.060/1.821), relative to the non-Delaware firms sample mean.

We then move to our matched sample, where we follow the same approach discussed in subsection VI.B., only this time we exclude firms incorporated in Delaware from the possible pool of controls.[1] 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 DDL results in an increase of *Q* of 3.8% (=0.064/1.684), 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 administration of

[1] In Panel B of Table IB.1, 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.

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

2. Texas Directors' Duties Law. The next examination of the legal robustness of our main results concerns Texas' DDL. As referenced in subsection IV.A. and Table IA.1 in the internet appendix, the Texas legislature adopted a DDL 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 DDL, 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 IB.2 in the internet 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 IB.2 in the internet appendix, we first adjust our DDL indicator variable (*DDL-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 *DDL-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 III (point estimate=0.059). Column (4) includes the full set of controls and replaces year fixed effects with industry-by-year fixed effects, and, again, documents a point estimate (=0.057) that is qualitatively similar to that of the model in Table III (point estimate=0.068).

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 (*DDL-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 DDLs, before bringing them back

into the analysis in columns (4) – (6). Our main finding is robust to the heterogenous coverage of the Texas DDL in every specification. In fact, we find that the magnitude on the *DDL-Texas Index* coefficient is much larger than the average effect in Table III, 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.

IB.B. Additional Robustness

We provide additional robustness to our main finding of a positive relation between stakeholder orientation and firm value with three supplementary analyses in this section of the internet 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 VI.B., with the exception that this time we purposefully move back the actual effective date by five years (Cremers, et al., 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 IB.3 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*-statistics (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 DDLs.

The first three columns of Table IB.4 present estimates from pooled panel regressions of *Total Q* on *DDL* over the period 1983 to 2015. We show that, irrespective of using the full set of controls,

or year versus industry-by-year fixed effects, DDLs remain a significant determinant of firm value for the covered firms. For instance, in column (3), with firm and industry-by-year fixed effects, and the full set of baseline controls, we find that firms incorporated in a state with an effective DDL 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 DDLs are significantly positively related to long-term firm value irrespective of whether value is measured through *Q, Monthly Stock Returns*, profitability or *Total Q*.

We conclude this robustness section by evaluating the "size" and "power" of the pooled panel sample we use to make inferences about the value relevance of DDLs and the possible economic mechanisms through which value might materialize.[2] Specifically, in the size test we are assessing the likelihood that we might inadvertently be committing a Type I error (i.e., rejecting a "true" null hypothesis that *Q* is not significantly related to *DDL*), and in the power test we try and gauge the likelihood that our baseline regression model with firm and year fixed effects might commit a Type II error (i.e., failing to reject a false null hypothesis, in which *Q* is actually significantly related to *DDL*). In order to perform these two tests, we create random samples with replacement that closely resemble the actual pooled panel dataset using the bootstrapping procedure outlined below.

First, in constructing the bootstrapped samples for the size test, we estimate the baseline regression model of *Q* on *DDL* plus the full set of standard controls and fixed effects, as in column (3) of Table III. From this regression, we trifurcate each observation of *Q* into (i) the component that is predicted by the estimated control variable coefficients and firm and year fixed effects, but excluding the *DDL* coefficient, (ii) the component that is predicted solely by the regression coefficient on *DDL*, and (iii) the component of actual *Q* unexplained by any of the regressors, including the DDL indicator, the control variables and firm and year fixed effects (i.e., the residual part of predicted *Q*).

[2] For examples of bootstrapped analyses of size and power in the financial economics literature, see Barber and Lyon (1996, 1997).

In the next step of our procedure, we create "synthetic" values of *Q* constructed using the first and third components described above, but intentionally omitting the second component. Therefore, by construction, these synthetic *Q*s are designed to be statistically uncorrelated with *DDL*. We implement this procedure in each bootstrapped sample, whereby each firm's first component is combined with the complete history of the residual component of a sample firm chosen randomly with replacement during the same year the two components of *Q* are estimated (e.g., if the first component is estimated in 2010, then it is combined with a randomly chosen firm's residual component also estimated in 2010).[3]

In the final step of our procedure, we randomly assign a DDL to firms in the bootstrapped sample so that in each year the count of firms with a bootstrapped DDL equals the count of firms with a DDL in the actual data. We repeat this process 1,000 times yielding a total number of 101,989,000 firm-year observations (=1,000 × 101,989) across the 1,000 bootstrapped samples of the original pooled panel dataset. Taken together then, these bootstrapped samples that we construct for the size test are very similar to the actual data, with the key exception that we know with certainty that in each of the bootstrapped samples, we constructed the "synthetic data" such that there is no relationship between Tobin's Q and the randomly assigned enhancement in directors' discretion to consider all stakeholders. Our tests for power also employ the same bootstrapped samples, except in these tests we induce various levels of decreases and increases in the synthetic Tobin's Q in a way we are sure, by construction, that an actual significant relationship between bootstrapped *Q*s and bootstrapped *DDL* exists in the synthetic data.

We begin by examining the "size" (i.e., the likelihood we inadvertently commit Type I error) of our main pooled panel sample in Table IB.5. The findings reported in this panel come from our 1,000 bootstrapped samples estimated using the baseline model in column (3) of Table III on the actual pooled panel dataset (101,989 firm-year observations) that spans the period 1983 to 2015. Importantly, we construct these samples so that there is no relationship between the synthetically created *Q*s and randomly assigned DDLs, and thus, if our pooled panel sample has good size, we do not expect to find a statistically significant relation between these variables.

[3] We employ this particular procedure in constructing synthetic Tobin's Qs since a key feature of this value measure is its tendency to persist within firm and exhibit heteroskedastic standard errors. Using our procedure of combining the first and third components of predicted *Q*s allows us to retain the full correlation structure of actual Tobin's Q (in the pooled panel dataset) in the bootstrapped samples, ensuring that our synthetic data will have similar cross-sectional and time-series correlations as that found in the actual data.

First, Panel A of Table IB.5 tests this intuition by presenting percentiles of the estimated coefficients and *t*-statistics of *DDL* on *Q* for the pooled panel regressions with firm and year fixed effects on the 1,000 bootstrapped samples. Inspecting the panel from left to right, we find a coefficient of -0.017 (or even more negative) and a corresponding *t*-statistic of -2.48 (or even more negative) on the bootstrapped *DDL* indicator variable in only 0.50% of the synthetic datasets, making it highly unlikely we would find this negative magnitude and level of significance between firms with DDLs and their levels of Tobin's Q in the actual data. Moving further into the panel, we evaluate our findings relative to the common 5% significance level threshold in a two-sided test by considering the 2.5% and 97.5% percentiles. Using this criterion, we find a coefficient of -0.013 (or more negative) and 0.013 (or more positive) with corresponding *t*-statistics of -1.90 (or more negative) and 1.94 (or more positive), respectively, in these 2.5% tail-end percentiles. Therefore, we infer from this bootstrapped analysis that we would mistakenly find these magnitudes of coefficients and *t*-statistics in no more than 5% of the bootstrapped samples. Then, relative to the *t*-statistic of 2.07 we find in column (3) of Table III, we seem to have good size as it is quite rare to find such a large *t*-statistic in bootstrapped samples where there is no actual relation, by construction, between *DDL* and *Q*.

As supplementary evidence on the size of our pooled panel analysis, Panel B of Table IB.5 presents the percentage of cases in which we would conclude from the bootstrapped samples that there is a statistically significant relation between the synthetic *Q*s and randomly assigned DDLs using default critical *t*-statistic values in two-side tests. Focusing on the coefficients and *t*-statistics that correspond to the 5% significance level in a two-side test, we document that in only 4.3% (=2% + 2.3%) of the bootstrapped samples would we find a *t*-statistic that is $\pm$1.96 (or more negative or positive, respectively). Therefore, using a 5% percent significance level, we infer from the bootstrapped analysis that the likelihood we would falsely reject a "true" null hypothesis that there is no relationship between *Q* and *DDL* occurs with only a 4.3% probability which is less than the 5% allowed, suggesting that our main pooled panel analysis has good size.

Next, we move to assessing the "power" (i.e., likelihood of committing Type II error) of our baseline pooled panel regression model using the 1,000 bootstrapped samples constructed as outlined above from the 101,989 firm-year observations that span the period 1983 to 2015. However, we modify the samples slightly to induce a statistically significant relationship between synthetic *Q*s and bootstrapped *DDL*. To bring about this significant relation we use the same level

of significance we find in column (3) of Table III, that is a *t*-statistic of 2.07, in the bootstrapped samples. We determine that the minimum coefficient in the bootstrapped samples to exactly equal a bootstrapped *t*-statistic of 2.07 is 0.0145. Correspondingly, we permanently increase synthetic *Q*s by 0.0145 whenever a firm is randomly assigned a DDL.

Table IB.6 reports the percentage of bootstrapped samples in which we would accurately conclude that the estimated coefficient of the *DDL* indicator is significantly different from zero at conventional levels of statistical significance (10%, 5%, and 1%, respectively) using firm and year fixed effects regressions. Focusing exclusively on the positive bootstrapped *t*-statistics, we find that our baseline model has good power as it is able to correctly infer statistical significance in 68.4%, 56.4%, and 41.3% of the cases at the 10%, 5%, and 1% significance levels, respectively.[4] These percentages on power are especially convincing since there are firms with actual DDLs and that actually experience increases in *Q* that are not assigned a bootstrapped *DDL* but are included in the regressions and attenuate the bootstrapped coefficients toward zero.[5] Overall, we find that are baseline model with firm and year fixed effects has good power, allowing us to avoid Type II error and not falsely reject a "true" positive relationship between *Q* and *DDL*.

[4] Figure IB.1, Panels A and B, plot the distribution of bootstrapped coefficients and *t*-statistics, respectively, on randomly assigned *DDL*. From Panel A, it is evident that the distribution surrounds the value of 0.0145, consistent with our inducement of an increase in *Q* at that level. Correspondingly, Panel B shows that the majority of bootstrapped *t*-statistics fall above the 1.645 and 1.96 critical values, suggesting that we have good power.

[5] Figure IB.2 shows that when the permanent change in synthetic *Q* is induced at values greater than 0.0145 the power becomes even stronger. For instance, when synthetic *Q* is incremented up by 0.02 whenever a firm is randomly assigned a DDL, the power of the test increases to 89.8%, 83.10%, and 72,4% at the respective 10%, 5%, and 1% significance levels.

TABLE IB.1
THE VALUE OF STAKEHOLDER ORIENTATION WITHOUT DELAWARE CORPORATIONS

PANEL A: Pooled and Matched Sample Regressions

Dep. Variable: Q_t	Pooled Panel: 1983 to 2015			Matched Sample: (*t*-3) to (*t*+3)		
Variables	(1)	(2)	(3)	(4)	(5)	(6)
DDL_t	0.081**	0.068**	0.060*			
	(2.41)	(2.06)	(1.83)			
$Treated_t \times Post_t$				0.065*	0.061*	0.064*
				(1.86)	(1.74)	(1.97)
$Post_t$				-0.028	-0.011	-0.011
				(-1.10)	(-0.51)	(-0.52)
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	0.578	0.590	0.690	0.707	0.704

Notes. This table reports the results for pooled panel and matched sample regressions of Tobin's Q on *DDL* or *Treated* × *Post* indicator variables, excluding firms incorporated in Delaware from the pool of controls. The main variables of interest, *Q, DDL, Treated* × *Post*, and *Post*, are measured contemporaneously, whereas the remaining controls are lagged one period. *Treated* 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,* and *Inst. Own*. Further, columns (1) – (3), and (4) and (6) specify: *BCL, CSL, FPL,* and *PPL*. Table A.1 in the appendix 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 matched sample excluding Delaware control firms. Treated firms are defined as companies incorporated in states that have an effective DDL, whereas the control firms are incorporated in states without DDLs in at least the five-year period following the effective date of a law for its matched counterpart. We use matching with replacement in year *t-1* to create a sample matched on propensity scores created from *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. All continuous variables are winsorized at the 2.5% level in both tails, and the dollar values are expressed in 2015 dollars. *10%, **5%, and ***1% significance level.

TABLE IB.1

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

Matched Variables:	Treated	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 IB.2
DIRECTORS' DUTIES LAWS, ADJUSTED FOR HETEROGENEITY IN TEXAS, AND FIRM VALUE

PANEL A: Texas Adjusted

Dep. Variable: Q_t	1983 – 2015			
Variables	(1)	(2)	(3)	(4)
$DDL\text{-}Texas\ Adjusted_t$	0.058**	0.075**	0.048*	0.057*
	(2.06)	(2.42)	(1.75)	(1.90)
Other takeover law controls	No	Yes	Yes	Yes
Control variables	No	No	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	No
Industry-year fixed effects	No	No	No	Yes
# of unique firms	11,264	11,264	11,264	11,264
N	101,989	101,989	101,989	101,989
Adjusted R^2	0.548	0.548	0.581	0.581

Notes. This table reports the results for regressions of Tobin's Q on an adjusted DDL indicator variable. Panel A creates a *DDL-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 DDL in this state. In particular, prior to 2003, Texas firms have *DDL* 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 *DDL-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. The main variables of interest, *Q, DDL-Texas Adjusted,* and *DDL-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: *BCL, CSL, FPL,* and *PPL*, 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* and *Inst. Own*. In Panel B, columns (2) – (3), and (5) – (6) include the full set of controls. Industry-by-year fixed effects are defined at the Fama-French 49 industry grouping. Table A.1 in the appendix 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. *10%, **5%, and ***1% significance level.

TABLE IB.2

PANEL B: Texas Index

Dep. Variable: Q_t	1983 – 2015					
Variables	(1)	(2)	(3)	(4)	(5)	(6)
$DDL\text{-}Texas\ Index_t$	0.096** (2.50)	0.150*** (3.27)	0.120*** (2.87)	0.077** (2.06)	0.136*** (3.25)	0.100*** (2.68)
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	0.558	0.592	0.607	0.547	0.581	0.596

TABLE IB.3
MATCHED SAMPLE PLACEBO TEST

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

Matched Variables:	Treated	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	

Notes. 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 DDL 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). "Difference" provides the difference between the treated and control sample mean (*t*-stat in parentheses). Panel B shows results from matched sample regressions of Tobin's Q on a *Treated* × *Post* interaction term. *Treated* is an indicator variable equal to one if the firm is incorporated in a state that has an effective DDL, 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, Treated* × *Post,* and *Post* are measured contemporaneously, whereas the remaining controls are lagged one period. *Treated* is omitted in the regression because of collinearity with its firm fixed effect. Table A.1 in the appendix provides variable definitions. Columns (2) and (4) specify: *BCL, CSL, FPL,* and *PPL*. Columns (3) - (4) includes controls for: *Size, Ln(Age), HHI, Sales Growth, Loss, Debt-to-Equity, Firm Liquidity, CAPX/Assets, R&D/Sales* and *Inst. Own*. 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 *10%, **5%, and ***1% significance level.

TABLE IB.3

PANEL B: Matched Sample Regressions

Dep. Variable: Q_t	(t-3) to (t+3)			
Variables	(1)	(2)	(3)	(4)
$Treated_t \times Post_t$	0.017	0.011	0.030	0.022
	(0.39)	(0.27)	(0.73)	(0.56)
$Post_t$	-0.042	-0.040	-0.019	-0.016
	(-1.38)	(-1.33)	(-0.63)	(-0.56)
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 IB.4
STAKEHOLDER ORIENTATION AND TOTAL Q

Dep. Variable: $Total\ Q_t$	1983 to 2015			(*t*-3) to (*t*+3)		
Variables	(1)	(2)	(3)	(4)	(5)	(6)
DDL_t	0.072**	0.056*	0.055*			
	(2.04)	(1.65)	(1.76)			
$Treated_t \times Post_t$				0.094*	0.092**	0.090*
				(1.90)	(1.97)	(1.85)
$Post_t$				-0.091***	-0.042	-0.037
				(-2.82)	(-1.38)	(-1.20)
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	2,349	2,349	2,349
N	101,560	101,560	101,560	14,503	14,503	14,503
Adjusted R^2	0.508	0.557	0.571	0.622	0.641	0.641

Notes. This table reports results for pooled panel and matched sample regressions of Total Tobin's Q on *DDL* or *Treated* × *Post* indicators. *Total Q* is from Peters and Taylor (2017). The main variables of interest, *Total Q, DDL,* and *Treat* × *Post,* and *Post,* are measured contemporaneously, whereas the remaining controls are lagged one period. *Treated* 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* and *Inst. Own*. Further, columns (1) – (3), and (4) and (6) specify: *BCL, CSL, FPL,* and *PPL* dummies. Table A.1 in the appendix 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). *10%, **5%, and ***1% significance level.

TABLE IB.5
SIZE TEST: STAKEHOLDER ORIENTATION AND FIRM VALUE

Panel A: Percentiles of bootstrapped coefficients and *t*-statistics of *DDL*

Percentile	0.50%	1%	2.50%	5%	95%	97.50%	99%	99.50%
Coefficient	-0.017	-0.016	-0.013	-0.011	0.011	0.013	0.016	0.017
t-statistic	-2.48	-2.24	-1.90	-1.55	1.57	1.94	2.25	2.35

Panel B: Percentage of bootstrapped *t*-statistics of *DDL* below/above critical values

Condition	Minimum Coefficient to meet Criterion	% of bootstraps
t-statistic < -1.645	-0.012	4.20%
t-statistic < -1.960	-0.014	2.00%
t-statistic < -2.326	-0.016	1.00%
t-statistic > 1.645	0.012	4.50%
t-statistic > 1.960	0.014	2.30%
t-statistic > 2.326	0.017	0.60%

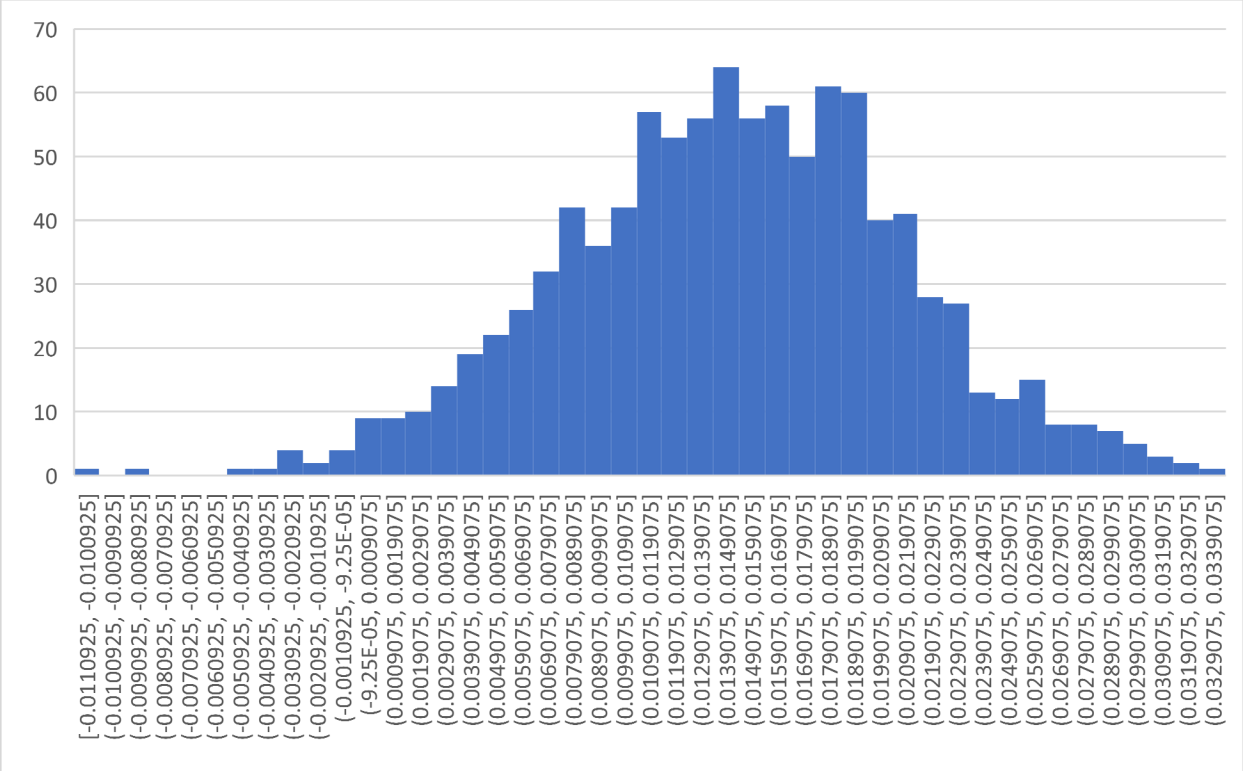
Notes. This table reports bootstrap results to test the size of the pooled panel *Q* regressions as shown in column (3) of Table III. Each bootstrapped sample is constructed to be very similar to the actual data, including the cross-sectional and time-series correlation structure, as described in the text. We construct a total of 1,000 bootstrapped samples in which there is no association between *Q* and *DDL*. For each bootstrapped sample, we run a pooled panel *Q* regression on contemporaneous *DDL*, and one period lagged *Size, Ln(Age), HHI, Sales Growth, Loss, Debt-to-Equity, Firm Liquidity, CAPX/Assets, R&D/Sales, Inst. Own*, *BCL, CSL, FPL,* and *PPL* with firm and year fixed effects. Panel A shows the 0.5th, 1st, 2.5th, 5th, 95th, 99th and 99.5th percentile of the coefficient of *DDL* and its *t*-statistic across all 1,000 pooled panel regressions, based on robust standard errors that are clustered by firm. Panel B reports the percentage of bootstrapped samples where the *t*-statistic of the coefficient of *DDL* is smaller or larger than the standard critical values for double-sided tests at the 10% level (+/- 1.645), 5% level (+/- 1.96) and 1% level (+/- 2.326).

TABLE IB.6
POWER TEST: STAKEHOLDER ORIENTATION AND FIRM VALUE

Condition	% of bootstraps
t-statistic < -1.645	0.00%
t-statistic < -1.960	0.00%
t-statistic < -2.326	0.00%
t-statistic > 1.645	68.4%
t-statistic > 1.960	56.4%
t-statistic > 2.326	41.3%

Notes. This table presents bootstrap results to test the power of the pooled panel *Q* regressions as shown in column (3) of Table III. Each bootstrapped sample is constructed to be very similar to the actual data, including the cross-sectional and time-series correlation structure, as described in the text. We construct a total of 1,000 bootstrapped samples in which there is an association between *Q* and *DDL*, where the data is constructed such that an adoption of a DDL is associated with an increase in *Q* of 0.0145. For each bootstrapped sample, we run a pooled panel *Q* regression on contemporaneous *DDL*, and one period lagged *Size, Ln(Age), HHI, Sales Growth, Loss, Debt-to-Equity, Firm Liquidity, CAPX/Assets, R&D/Sales, Inst. Own*, *BCL, CSL, FPL,* and *PPL* with firm and year fixed effects. We report the percentage of bootstrapped samples where the *t*-statistic of the coefficient of *DDL* is smaller or larger than the standard critical values for double-sided tests at the 10% level (+/- 1.645), 5% level (+/- 1.96) and 1% level (+/- 2.326).

PANEL A. Histogram of the bootstrapped coefficient of DDL



PANEL B. Histogram of the bootstrapped *t*-statistic of the coefficient of DDL

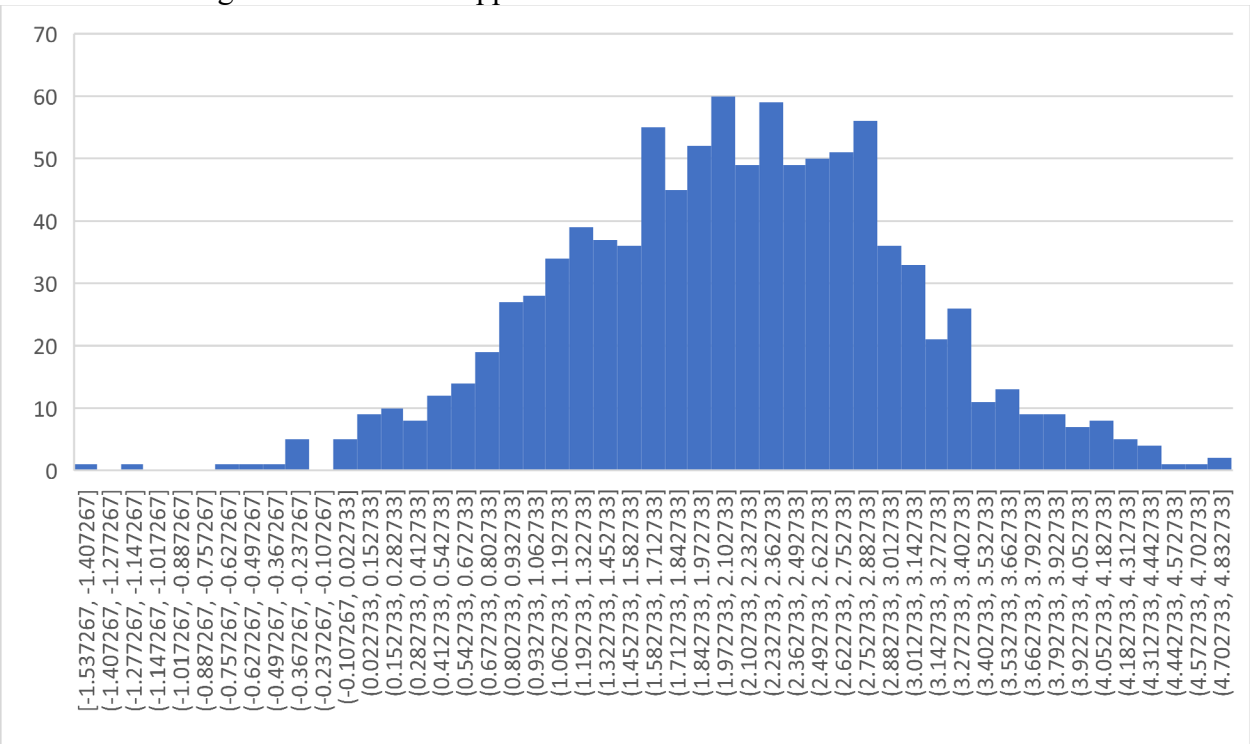


FIGURE IB.1
Histograms for Power Tests: Directors' Duties Law and Q

These figures present the histogram of the bootstrapped coefficient of *DDL* in Table IB.6, Panel A, and of the bootstrapped *t*-statistics of coefficient of *DDL* in Table IB.6, Panel B. We construct a total of 1,000 bootstrapped samples in which there is an association between *Q* and *DDL*, where the data is constructed such that an adoption of a DDL results in an increase in *Q* of 0.0145.

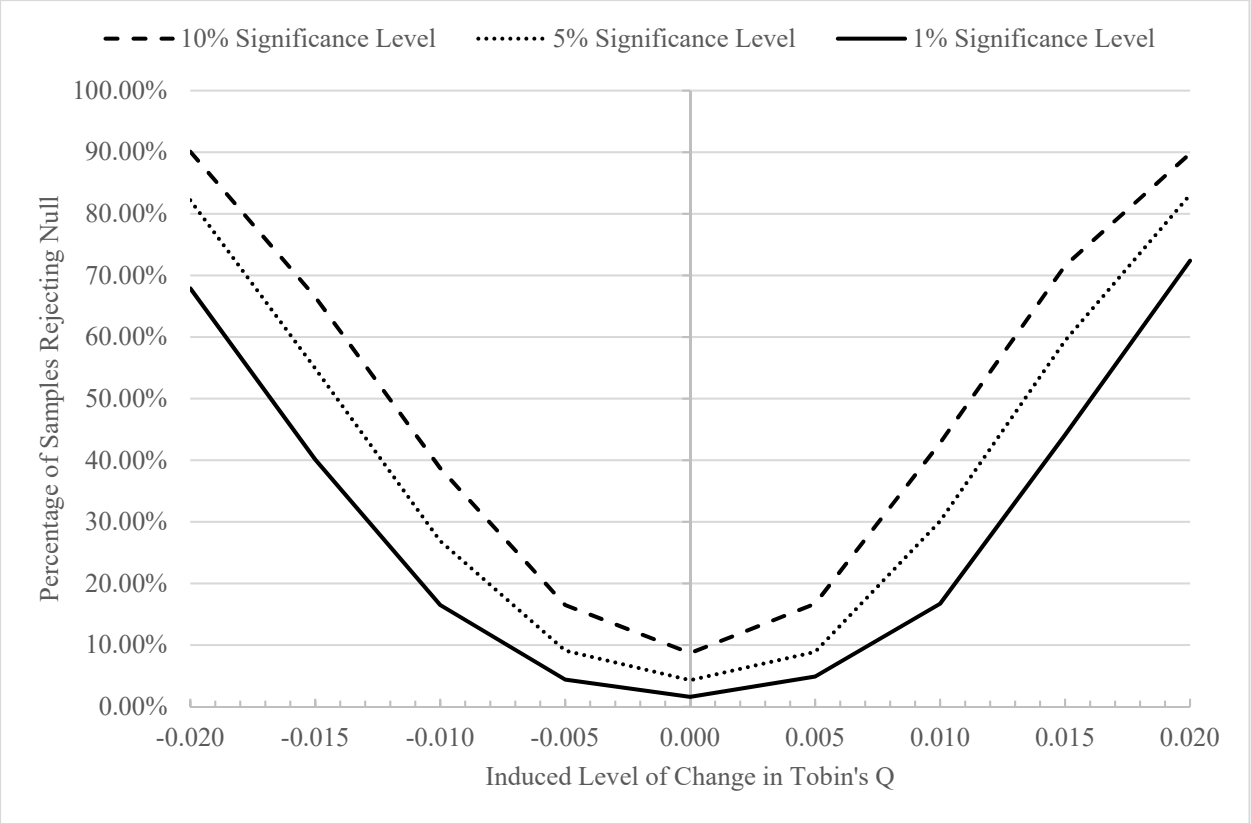


FIGURE IB.2
Power Test: Using a Range of Changes to Q

This figure plots the percentage of 1,000 random samples of 10,549 (101,898) firms (firm-years) rejecting the null hypothesis of no increase in Tobin's Q at various induced levels of permanent changes in Tobin's Q (horizontal axis) based on the bootstrapping procedure described in Section IB.B.