

**Boards of Directors and their Legal Incentives:  
Evidence on the Impact of Non-Shareholder  
Constituencies Acts on Corporate Outcomes**

**Antonio B. Vázquez\***

Universidad Carlos III de Madrid

Email: anvazque@emp.uc3m.es

*Very Early Draft*

PROPOSAL FOR THE XIV INTERNATIONAL ACCOUNTING RESEARCH  
SYMPOSIUM

PLEASE DO NOT CIRCULATE. DO NOT QUOTE WITHOUT PERMISSION

---

\*For their helpful comments, I wish to thank Ian Appel, María Gutiérrez Urriaga, Oguzhan Karakas, Nadya Malenko, and Josep Tribó. I gratefully acknowledge the hospitality of the Carroll School of Management (Boston College) and Sandra Waddock while working on this project. All errors remain my own. The usual disclaimers apply.

# Boards of Directors and their Legal Incentives: Evidence on the Impact of Non-Shareholder Constituencies Acts on Corporate Outcomes

## Abstract

This paper evaluates the impact of a change in boards of directors' legal incentives on firms payout and investment policies. This change is produced by the adoption of Non-Shareholder Constituencies Acts (NSHCAs), which are a set of staggered, state-level US laws that allow boards of directors to deviate from shareholder value maximization to the benefit of other stakeholders such as employees or creditors. Results indicate that firms subject to the NSHCAs show lower levels of payout, even net of capital issues. Alternatively, these laws are associated with an increase in investment. The impact of NSHCAs on investment is largest in settings where firms are prone to underinvest or in settings with large levels of ownership by short-term shareholders.

*Keywords:* law and finance, payout policy, stakeholder orientation.

*JEL Codes:* G34, G35, G39.

# 1 Introduction

In this paper, I investigate the impact of a change in the legal incentives of boards of directors on firms' payout and investment policies. I exploit the adoption of a set of United States laws known as Non-Shareholder Constituencies Acts (NSHCAs, hereafter) as a source of plausibly exogenous variation in the legal incentives of boards of directors.<sup>1</sup> These laws allow boards of directors to deviate from their fiduciary duties to shareholders in favor of other non-shareholder constituencies, i.e., creditors, employees, customers, and the community.<sup>2</sup> I exploit this plausible source of exogenous variation to test a direct and measurable channel through which legal incentives of the board affect corporate outcomes in the US legal setting. The estimates suggest that firms with positive payouts incorporated in a state that adopts an NSHCA show an average net payout yield that is 15% smaller after the passage of the law.

Boards of directors are in charge of overseeing the structural and operational decisions of firms (Adams, Hermalin, and Weisbach, 2010). According to the US corporate law, boards of directors hold fiduciary duties towards the shareholders of the corporation. These fiduciary duties are the duty of loyalty and the duty of care. On the one hand, the duty of loyalty states that directors should run a firm's operations in the interest of the shareholder instead of their own. On the other hand, the duty of care indicates that directors need to pay careful attention in their decision making process, i.e., directors must try to make good decisions (Black, 2001). Unfortunately, boards of directors possess a different utility function from that of the shareholders. Shareholders are the diversified residual claimants of corporations, whereas board members have undiversified and fixed claims on the corporation. Given this conflict of interests, the effectiveness of boards of directors critically hinges on their incentives to uphold their fiduciary duties (Bebchuk and Weisbach, 2010). These incentives are remuneration, reputation and legal incentives, which have received heterogeneous attention in the corporate governance literature. First, remuneration incentives should align the interests of the board with those of the shareholders but they are limited and contro-

---

<sup>1</sup>These laws are also known as Director Duties (Karpoff and Wittry, 2017), Stakeholder Laws, Non-Monetary Factor Provisions (Bainbridge, 1992) or Expanded Constituency Laws (Cain, McKeon, and Solomon, 2017).

<sup>2</sup>For example, Ohio's act states that in the event of a change in control, i.e., a takeover, the board of directors can reject an offer based on the increased utility of non-shareholder stakeholders that would result if the offer were rejected. NSHCAs can also be applied to operational decisions (Bainbridge, 1992).

versial.<sup>3</sup> Additionally, reputation incentives can work against shareholders' interests provided that board members might want to create *manager-friendly* reputations if their future career outcomes depend on managers' decision (Levit and Malenko, 2016). Finally, legal incentives indicate that boards of directors are expected to uphold their fiduciary duties given that their decisions could be subject to judicial review by courts (Laux (2010), Brochet and Srinivasan (2014)).

In this paper I focus on the legal incentives of boards of directors for two reasons. First, there is scarce evidence on the legal incentives of boards of directors in the US setting (see for instance Grinstein and Rossi, 2015). This is probably due to the fact that disclosure of directors and officers' insurance information (commonly known as D&O insurance) is not compulsory. For instance, in China, the reporting of D&O insurance premiums and coverage is mandated by the regulator, which spurred an increased number of published papers about legal incentives of boards (Chen, Li, and Zou (2016), Lin, Officer, and Zou (2011), Lin, Officer, Wang, and Zou (2013), Yuan, Sun, and Cao (2016)). The caveat is that the institutional and legal settings in China might endanger the external validity of their results. Furthermore, even in the instance in which D&O insurance information was observable in the US, the fact that its contracting is a firm choice adds to the difficulty of identifying the causal impact of lessened legal incentives. Secondly, compared to the possibly heterogeneous impact of remuneration and reputation incentives on different board members, legal incentives should affect all board members in the same manner. To circumvent both issues I exploit the staggered adoption of the NSHCAs. These laws state that boards of directors may consider in making their decisions the interests of stakeholders other than shareholders, which might imply a deviation from their role as shareholders' fiduciaries. The adoption of the NSHCAs can act as plausibly exogenous variation in the level of legal incentives of the boards, as their decisions could be shielded from judicial review.

Next I define the setting from which I derive a prediction on the impact of NSHCAs on the payout and investment policies. First, boards of directors control the amount of earnings that each year are distributed as dividends or reinvested in the firm. Boards of directors have a preference for reinvesting earnings back into the firm versus distributing them back to shareholders. But in

---

<sup>3</sup>Boards members receive heterogeneous remuneration incentives, i.e., managerial compensation is based on a fixed salary, short-term bonuses and equity awards, whereas outside directors receive a mix of fixed fees and of variable remuneration in the form of shares or derivatives of shares. Yermack (2004) shows not only that remuneration incentives can be strong for outside directors, but also that these incentives are controversial, as boards set their own pay.

a normal setting, there is a cost of not distributing earnings back to shareholders, i.e., litigation costs make it possible for shareholders to enforce their desired level of dividends and investment that maximizes their utility. Once a NSHCA is adopted the cost of litigation is lessened and thus boards of directors will move to higher levels of investment and lower levels of dividends than those preferred by the shareholders. This is in line with the NSHCAs, which state that other constituencies' objectives can be pursued. The fact that boards of directors are undiversified fixed claimants will make it more likely to pursue the same objectives as those of other undiversified fixed claimants such as creditors or employees. My prediction then is that the adoption of a NSHCA will lead to lower levels of payout and larger levels of investment.

The results show that the passage of an NSHCA leads to lower dividends, repurchases, and total and net payout yields. Specifically, on average, adopting an NSHCA leads to a 15.5% lower total payout yield (15.1% for net payout of capital issues) for a sample of firms with positive payout levels. This implies that NSHCAs have a statistically significant impact on boards' decision-making processes. These results show that NSHCAs have a positive impact on non-CAPEX and net investment, while increasing the presence of focused M&As (less suspect of being the outcome of managerial empire building). I also document a positive impact of the NSHCAs on Q and a negative impact on firm risk. This is consistent with the prediction that boards of directors will pursue more investment and less payout levels when allowed by lessened legal incentives. This option is preferred by stakeholders due to the profile of their payoffs. Finally, I show that NSHCAs have a positive impact on firms' social and environmental performance, which is testament to the increased utility of stakeholders other than shareholders.

Additionally, I discuss the case of firms in settings that are prone to underinvestment or where there is relatively large stake held by short-term institutional investors. The impacts of NSHCAs on shareholder remuneration and investment seem to suggest that firms were perhaps channelling resources back to shareholders when they should have been reinvesting these resources. As such, I examine the impact of NSHCAs for a subset of firms that in the previous period exhibited high levels of cash, low levels of indebtedness, large growth opportunities and low investment. I use this definition of underinvestment rather than that proposed by Biddle, Hilary, and Verdi (2009), as their measure identifies cases in which firms do not possess cash or the ability to borrow from creditors. These results show that for those firms in settings that are prone to underinvestment, the

impact of NSHCAs becomes positive and statistically significant for all forms of investment, i.e., CAPEX, non-CAPEX and net investment. However, using the underinvestment proxy of Biddle et al. (2009), I do not identify an additional effect of NSHCAs on investment, which indicates that this proxy captures firms that are cash constrained rather than passing on investment opportunities. Finally, I test whether NSHCAs have a larger impact on investment in settings where shareholders might have short-term investment horizons. In these settings, the conflict between shareholders and stakeholders is more acute, as stakeholders possess longer investment horizons. As expected, NSHCAs have a stronger effect on investment in settings where firms possess relatively high levels of ownership by short-term institutions as defined by Bushee (2001).

The impact of NSHCAs on payout policy is robust to a set of checks that test for the quality of the empirical setting and the strength of the shock. Following advice from Atanasov and Black (2015), I examine the treatment dynamics of the NSHCAs on payout policy. Using binary variables that capture the impact of NSHCAs at specific moments in time, I show that there is no impact in the years just prior to the adoption of an NSHCA, which strengthens the case for a causal impact. The effect starts taking place only from two years after adoption onward. The key assumption in a difference-in-differences setting is that absent the shock, the treated observations would have evolved exactly as the control group, i.e., they would exhibit parallel trends. To increase confidence that the control group is comparable to the treatment group, I proceed to eliminate from the sample all observations that are never treated. Next, I eliminate firms incorporated in the states of Delaware, Texas, and Nebraska since these could bias my conclusions (see Section 6). The results remain unchanged in all instances. Finally, I test the main analyses using a sample of matched firms in terms of industry, firm size, leverage, profitability, book-to-market, sales growth and cash to total assets. The negative impact of NSHCAs on dividend, total payout and net payout yields, holds for a sample of matched firms.

This study contributes to the literature on the effects of boards of directors legal incentives on the payout and investment policies by identifying a clear and direct channel through which shareholders are affected by the decision to benefit stakeholders at their expense. Specifically, I attempt to identify the effects of a change in stakeholder influence over the managerial decision-making process that negatively affects payout policy and increases investment. This is evidence on the negative impact of possibly excessive payouts to shareholders that could be used to improve

firm value through new investment opportunities and decreased risk.

In section 2, I analyze NSHCAs. Section 3 presents the data and methodology, section 4 presents and discusses the main results, section 5 presents additional analyses, and section 6 reports the robustness checks. Section 7 concludes the paper.

## 2 Non-Shareholder Constituencies Acts

NSHCAs are usually identified as anti-takeover laws. Anti-takeover legislation emerged in the United States of America in the late 1960s, when the Williams Act was adopted. In 1968, the Williams Act amended the SEC Act of 1934 to require, among other things, an increased level of disclosure in tender offers with the objective of protecting target shareholders. At the state level, various states adopted extensions of the Williams Act to regulate the spread of mergers and acquisitions. These first-generation anti-takeover laws were declared unconstitutional by a US Supreme Court decision in *Edgar v. MITE Corp* in 1982, where the Illinois anti-takeover act was declared unconstitutional under the Supremacy and Commerce clauses of the Federal Constitution. The previous ruling indicated that the jurisdiction of the Illinois anti-takeover act could not be extended to out-of-state incorporated firms, since this imposed excessive burdens in terms of securities and corporate control on inter-state commerce.

Within four years of the Supreme Court ruling, 21 US states adopted new anti-takeover laws that would not violate the Federal Constitution, i.e., that would only apply to firms incorporated in those states. These second-generation anti-takeover laws were, apart from the NSHCAs, the *Business Combination*<sup>4</sup>, *Fair Price*<sup>5</sup>, *Control Share Acquisition*<sup>6</sup>, and *Poison Pill*<sup>7</sup> laws. These laws were declared constitutional in the US Supreme Court decision *CTS Corp. v. Dynamics Corp. of America* in 1987. In this decision, Indiana's *Control Share Acquisition* act was deemed

---

<sup>4</sup>Most Business Combination laws impose a moratorium of five years since the initial acquired status of influential shareholders (typically over 10%) for a broad range of transactions, not only mergers.

<sup>5</sup>Most Fair Price laws prohibit business transactions between firms and influential shareholders, i.e., usually shareholders with over 10% of shares, unless one of two conditions is met. The acquirer either needs to pay a very high price to minority shareholders or acquire the approval of a supermajority of shareholders (not counting the acquirer's stock).

<sup>6</sup>Almost all Control Share Acquisition acts state that shares acquired in a share acquisition with the purpose of taking control will receive no voting rights unless shareholders approve it. Consequent to shareholders' approval, the acquires' shares would receive voting rights. This requires that acquirers must attempt to convince noninterested shareholders to gain a foothold in the target firm.

<sup>7</sup>Poison Pill laws offer the right to set up poison pill defenses to firms under the coverage of the statute.

constitutional on the grounds that the act applied only to shareholders of the state of Illinois, and not beyond. Although NSHCAs are viewed as anti-takeover legislation, Orts (1992) states that the theoretical foundations of the NSHCAs can be traced back to stakeholder theory and the original corporate social responsibility debate. Furthermore, Karpoff and Wittry (2017) and Catan and Kahan (2016) argue that none of the second-stage anti-takeover laws seem to be effective mechanisms to deter takeovers. The authors of the first study argue and show that most previous studies using *Business Combinations* laws as negative shocks to governance failed to account for first-generation anti-takeover legislation and that institutional and political characteristics drive most of the prior literature’s results. The second study is more explicit in defining *Poison Pill* laws and poison pills to be the most effective takeover deterrents. Given this, I argue that NSHCAs might also be a source of variation in stakeholder orientation.

## **2.1 Non-Shareholder Constituencies Acts as Variation in the Boards of Directors Legal Incentives**

NSHCAs are a set of laws that were enacted in the US from the early 1980s until the 2000s. These acts were directed at expanding the fiduciary duties of corporate directors to a broader set of stakeholders, i.e., non-shareholder stakeholders. Their aim was to provide a legal basis to justify decisions that do not maximize shareholder value. The acts were cited in over 800 court cases from 1983 until 2013 (Geczy, Jeffers, Musto, and Tucker, 2015). For instance, Pennsylvania’s NSHCA general rule of board of directors’ exercise of power states the following:

“In discharging the duties of their respective positions, the board of directors, committees of the board and individual directors of a business corporation may, in considering the best interests of the corporation, consider to the extent they deem appropriate: (1) The effects of any action upon any or all groups affected by such action, including shareholders, employees, suppliers, customers and creditors of the corporation, and upon communities in which offices or other establishments of the corporation are located. (2) The short-term and long-term interests of the corporation, including benefits that may accrue to the corporation from its long-term plans and the possibility that these interests may be best served by the continued independence of the corporation...”



(15 PA. CONS. STAT. §1715-16 (Supp. 1991)<sup>8</sup>)

As in the case of Pennsylvania's NSHCA, most such laws are intended not only to deter takeovers but also to include stakeholders' interests in operational decisions to redistribute gains among the firm's various constituencies (Bainbridge, 1992). Boards of directors may decide to favor both operational and structural decisions that benefit stakeholders' interests over those of the shareholders. Alternatively, some NSHCAs allow boards to either benefit stakeholders and/or to consider the long-term interests of companies. This includes the possibility that these long-term interests may be best served by the continued independence of the board of directors with respect to shareholders (Bainbridge, 1992). Furthermore, these statutes are permissive in that they indicate that directors may attend to stakeholder interests in lieu of shareholder interests.<sup>9</sup> This reinforces the first alternative that NSHCAs might have no impact whatsoever on corporate policy and, specifically, payout policy.

## 2.2 Political Economy of the Non-Shareholder Constituencies Acts

One concern is that NSHCAs were brought into existence by a coalition of interested parties in takeovers, which makes it more difficult to argue for the exogenous nature of such legislation with respect to individual firms. Romano (1987) argues that the anti-takeover statutes were not adopted because of coalition pressure. Barzuza (2009) also argues that the statutes were adopted in many cases to protect a local firm amidst a battle for corporate control. Managers of such corporations thought it better to champion anti-takeover legislation than to amend corporate their corporate charters, perhaps because the statutes grant them greater flexibility than what shareholders would have approved (Barzuza, 2009). This is more important in the context of NSHCAs, as it could be in non-shareholder constituencies' interests to actively engage in the adoption of such statutes. Nonetheless, stakeholders do not seem to have actively participated in the adoption of NSHCAs (Coffee, 1988). Karpoff and Malatesta (1989) and Gartman (2000) provide further evidence on the characteristics of second-stage anti-takeover legislation lobbying. They show that individual firms, rather than groups of firms, were the key players in bringing about anti-takeover statutes in the US.

---

<sup>8</sup> Available at: <http://www.legis.state.pa.us/cfdocs/legis/LI/consCheck.cfm?txtType=HTM&ttl=15&div=0&chpt=17>

<sup>9</sup> Only the state of Connecticut mandates that directors, within their duty of care, must evaluate the impact of structural decisions on all of a firm's stakeholders (Bainbridge, 1992).

For instance, Pennsylvania’s NSHCA was lobbied for by *Armstrong World Industries* in response to a tender offer by known “greenmailers” (Holihan, 1990), not by a group of firms seeking, for my purposes, lower shareholder compensation.

### 2.3 Prior Evidence of the Impact of Non-Shareholder Constituencies Acts

The first study to investigate the impact of NSHCAs is Romano (1993), who evaluates the shareholder value impact of the adoption of NSHCAs using an event study methodology. Roberta Romano’s conclusions are that NSHCAs have no apparent effect on shareholder value, which she attributes to their likely lack of impact on takeover rather than the lack of a clear date to identify such an impact.<sup>10</sup> Consistent with Romano (1993), Afonso (2011) sets out to inspect the impact of the *Poison Pill* statutes and NSHCAs on the likelihood of receiving a takeover bid. He finds that Poison Pill statutes lead to decreases (increases) in the probability of receiving a bid (implementing a poison pill). However, the author finds no significant (negative) impact on the probability of receiving a bid (implementing a poison pill). Alternatively, Geczy et al. (2015) studies the impact of NSHCAs on the investment behavior of high fiduciary duty institutional investors. The authors argue that high fiduciary duty institutional investors, if any organization, should respond to a change in fiduciary duties toward shareholders. They fail to find a statistically significant impact of NSHCAs on high fiduciary duty institutional investors’ investing behavior.

In contrast to previous studies, Atanassov (2014) finds that NSHCAs increase firm value and innovation, albeit only in settings with strong corporate governance. The author interacts the impact of NSHCAs with *Business Combination* laws and finds that only states that adopted an NSHCA and not a *Business Combination* law show an increase in innovation and firm value. This suggests that managers in firms with weaker governance exploit NSHCAs to entrench themselves and extract private rents from shareholders and stakeholders alike. In line with Atanassov (2014), Flammer and Kacperczyk (2015) provide further evidence on the impact of NSHCAs on innovation. They show that the adoption of an NSHCA leads to increases in the number of patents and patent citations. This effect is driven by larger experimentation and enhanced employee productivity.

Furthermore, Gao, Li, and Ma (2016) show that NSHCAs lead to a decrease in the cost of

---

<sup>10</sup>The author seeks to identify the impact of NSHCAs using both the adoption and newspaper dates, to no avail. Her conclusion is in line with that of Karpoff and Wittry (2017) and Catan and Kahan (2016), who contend that firms have the proper takeover-deterrence mechanisms in the form of poison pills.

debt financing. The authors cite as a mechanism the reduction in firm risk after the adoption of an NSHCA, which is consistent with the alignment of boards' interests with those of non-shareholder constituencies. Additionally, in the context of banks, Leung and Chen (2017) show that banks incorporated in states that adopted an NSHCA are less risky, lend to safer borrowers, and fared better during the recent financial crisis. Furthermore, Nguyen, Kecskés, and Mansi (2017) study the impact of corporate social responsibility on firm value when managers are monitored by long-term shareholders. The authors measure corporate social responsibility using the NSHCAs and define long-term shareholders as institutional investors with a three-year horizon turnover smaller than 35%. The study shows that corporate social responsibility has a positive impact on shareholder value only when long-term shareholders monitor managers. Other papers that measure (or instrument) corporate social responsibility using NSHCAs are Flammer (2017) and Flammer, Hong, and Minor (2017); the former shows that corporate social responsibility increases the probability of obtaining procurement contracts, and the latter indicates that corporate social contracting leads to increases in firm value, among other outcomes.

### **3 Data and Methodology**

#### **3.1 Data**

The main data in this paper come from Compustat, provided by Standard and Poor's. I use Compustat data to calculate payout measures and define the staggered treatment effects of the NSHCAs. For NSHCAs, I employ the 2016 state of incorporation information provided by Compustat. This information was reported in the year 2016, and may have changed at some time in the past. Nonetheless, anecdotal evidence shows that state reincorporations are rare (Romano, 1993). This is similar to the approaches of most studies that employ state-level legislation in the US as a quasi-exogenous shock (see, for instance, Bertrand and Mullainathan, 2003). Additional data on mergers and acquisitions come from SDC Platinum, which are supplemented by data on market prices from CRSP. Data on environmental and social performance are obtained from Thomson Reuters ESG (formerly known as ASSET4 ESG). Finally, data on CEOs and top management are obtained from Execucomp and ISS (formerly known as RiskMetrics). The sample comprises all publicly quoted US-incorporated firms from 1983 until 2016. The sample begins in 1983 because

open-market share repurchases in the US were not common until then, perhaps because of legal restrictions (Allen and Michaely, 2003). After the adoption of Rule 10b-18 in 1982 (also known as the safe harbor rule), firms could be confident that SEC prosecution would not follow certain forms of share repurchases.

### 3.2 Methodology

I examine the impact of NSHCAs on payout policy using a difference-in-differences framework. I estimate the following baseline equation:

$$Y_{it} = \alpha NSHCA_{jt} + \beta SSL_{jt} + \kappa X_{it-1} + \pi_i + \rho_t \times \delta_l + \varepsilon_{it} \quad (1)$$

where  $Y_{it}$  is the dependent variable for firm  $i$  in year  $t$ ,  $NSHCA_{jt}$  is an indicator that takes value one whenever a state  $j$  has adopted an NSHCA,  $SSL_{jt}$  is a set of indicators that take value one whenever a state  $j$  has adopted a second-stage antitakeover law such as a *Business Combination*, *Fair Price*, *Control Share Acquisition* or *Poison Pill* law,  $X_{it-1}$  is a set of lagged firm-level standard controls such as firm size, leverage, cash holdings, book-to-market, operating profitability and sales growth,  $\pi_i$  represents firm fixed effects, and  $\rho_t \times \delta_l$  represents the interaction of the state-of-headquarters  $l$  and time  $t$  fixed effects. Finally, my focus is on the sign and statistical significance of  $\alpha$ , which would be the estimate of the plausible causal impact of NSHCAs.

The literature on difference-in-differences usually explains the setting using a similar example to the following. If one wished to calculate the impact of the adoption of Massachusetts' NSHCA in 1989 on the level of payout for firms incorporated in Massachusetts, we would need to subtract the average payout in Massachusetts prior to the passage of the law from that after the law's adoption. This would be the end of the process if we could be certain that no other event occurred in 1989 and affected firms' payout policy. This is an unlikely setting, and thus, we need to define a proper control group. We could select firms incorporated in Maine as a suitable control group, because they might have been affected by similar economic shocks in 1989. After selecting a suitable control group, e.g., Maine, we proceed to repeat the first step (calculate the average payout for Maine firms after and before 1989), and then we subtract Maine's difference from Massachusetts' difference to obtain the difference-in-difference estimate of the adoption of Massachusetts' NSHCA on firms'

payout policy. Using panel data regression techniques accounts for the fact that NSHCAs are staggered over time, i.e., that observations bound to be treated in the future belong to the control group until that time. This increases confidence in the suitability of the control group as a close approximation of the treatment group. In a robustness check, equation (1) is estimated when the sample is defined as firms incorporated in states that will eventually pass an NSHCA (Table 8).

There are several concerns related to the use of a difference-in-differences methodology. The main requirements that should be met to ensure the plausibility of a causal estimation of the impact of a shock are the as-if-random assignment to treatment, the parallel trends assumption, covariate balance, and the only-through condition (Atanasov and Black, 2015). The standard assumption in a difference-in-differences setting is that the assignment to the treatment should be as good as random. That is to say that firms cannot self-select themselves into either the treatment or control group. One concern is that regulation does not arise in a vacuum, i.e., regulators do not appear to randomly adopt laws. In the NSHCA setting, one could argue that groups of firms or stakeholders seeking a change in the legal landscape that would favor them combined to promote the adoption of NSHCAs. However, this is unlikely to be the case, as Romano (1987) and Karpoff and Wittry (2017) argue that lobbying for anti-takeover legislation was performed by single actors (firms). In fact, Karpoff and Wittry (2017) reproduces a list of firms that lobbied for the passage of an NSHCA, and I proceed to verify that none of the firms that lobbied for an NSHCA are part of my sample.

The second concern is that there are no pre-treatment parallel trends in the outcome variable for treated and control units. This could indicate that there are differences that could explain why some states might adopt an NSHCA while others might not. The availability of panel data allows me to test for pre-treatment parallel trends by using the leads-and-lags model (Atanasov and Black, 2015) and to visually represent pre-treatment trends for the treatment and control groups (Figure 2). In robustness checks, I show the leads-and-lags model of the impact of NSHCAs on payout policy, which supports the existence of parallel trends. In Figure 2, I show the treatment dynamics of NSHCAs on firms' net payout in the treatment and control groups from three years prior to the adoption of an NSHCA until three years after adoption. It appears that there are similar trends in net payouts before the adoption of an NSHCA. Finally, one additional step is to generate placebo shocks before and after treatment. I show in Figure 3 the distribution of the test statistics from

10,000 replications of the main equation for payout policy with randomly generated NSHCAs.

The third concern is that there could be pre-treatment differences in the level of a set of covariates that would suggest unobservable differences between the treatment and control groups. I test in Table 2 the pre-treatment differences in Firm\_Size, Leverage, BM, Sales\_Growth, ROA, and Cash. I calculate the t-stats for the pre-treatment difference between the never-treated units and eventually treated units. In the first three columns, I show the pre-treatment sample one year before the adoption of an NSHCA for an unmatched sample of firms (the main sample), and in the last three columns, I present the pre-treatment sample for one year before the adoption of an NSHCA for a matched sample of firms. There is covariate balance in all covariates except for Firm\_Size and BM, where the never-treated units seem to be larger and have lower book-to-market ratios than the eventually treated units for an unmatched sample of firms. This might not be a concern for several reasons. First, because of the staggering of the NSHCAs, firms in the eventually treated group are, at some point, both control and treatment units. Second, I visually test for the treatment dynamics of the NSHCAs on the different sets of covariates. In Figure 3, I show that the treatment and control groups show similar trends before and after the adoption of an NSHCA. This reinforces the idea that there are no differences in the growth of covariates prior to the adoption of an NSHCA that could affect the likelihood of a state receiving the treatment. Finally, I show in a robustness check that the main effect of NSHCAs on payout policy remains after dropping all observations that are never treated from the control group. Dropping these never-treated observations means that the control group comprises those observations that will eventually be treated, thus reinforcing the idea that the treatment and control groups are similar in unobservable characteristics that could bias the difference-in-differences estimate. Nevertheless, I proceed to create a sample of matched firms on their propensity of eventually receiving the treatment. Table 2 Columns (4), (5) and (6) show that after balancing the sample of unmatched firms there are not pre-treatment covariate differences between the never-treated and eventually treated units. Further evidence presented in Table 8 Panel B, shows that the main results hold when I make use of the matched sample. The final concern is the only-through condition of the impact of NSHCAs on payout policy. This condition states that there could be contemporaneous laws that might drive the results. In the setting of NSHCAs, other anti-takeover laws are contemporaneous to NSHCAs: *Business Combination*, *Fair Price*, *Control Share Acquisition* and *Poison Pill* laws. To account for these contemporaneous

laws, I proceed to control for them in all analyses performed. In unreported tests, I retain only states that eventually adopted an NSHCA in a year other than those in which any other major second-stage anti-takeover law or that only possess an NSHCA and find that the main results hold.

## 4 Results

### 4.1 Descriptive Statistics

Table 1 presents the descriptive statistics for the main variables (for a description, see Appendix A) used in the analyses. The number of observations change with the sample size used in the analysis in which a variable has been used, and all continuous variables are winsorized at the 99% level to reduce the impact of extreme outliers. On average, a given firm exhibits a dividend yield of 1.2%, repurchase yield of 1.5%, total payout yield of 2.7%, and net payout yield of -0.7%. Most of these figures are similar to those reported by Boudoukh, Michaely, Richardson, and Roberts (2007). The average firm has a log value of total assets of 5.18, its debt-to-equity ratio is 0.85, its book-to-market is 0.57, its sales growth is 18.9%, its operating profitability is -7.9%, and its cash to total assets represents 11.1% of its total assets. Furthermore, in Table 2, I report the pre-treatment averages of firm size, leverage, book-to-market, sales growth, profitability, and cash to total assets for firms that are incorporated in states that never adopt an NSHCA and those that eventually do. Table 2 presents the same information for one year before the adoption of an NSHCA for an unmatched sample and a propensity score matched sample. In the first three columns of Table 2, I present evidence on the unmatched sample and show that never-treated firms are larger and have a lower book-to-market ratio relative to those that will eventually receive the treatment. This might pose a serious problem if these pre-treatment differences account for the propensity to adopt an NSHCA. However, given the staggered nature of the NSHCAs, this does not pose such a serious threat to the difference-in-differences estimate, as the control group consists of firms that are never treated and those that will eventually receive treatment, i.e., a firm's state of incorporation will adopt an NSHCA. Further evidence eases the concern of differences in pre-treatment covariates, as Figure 3 reports the average values of the covariates (firm size, leverage, profitability, book-to-market, sales growth and cash) for the eventually treated and never-treated groups before and after the treatment. No apparent differences in trends are apparent between treatment and control groups.

Finally, I test the pre-treatment covariate balance of a sample of eventually treated firms that have been matched with the never-treated sample. I proceed to match firms on their propensity to receive the treatment, i.e., the propensity to eventually adopt a NSHCA. I match firms on industry, firm size, leverage, profitability, book-to-market, sales growth and cash to total assets. In Table 2, the last three columns (Columns (4), (5) and (6)) show that after the matching procedure there are no pre-treatment covariate differences between the eventually treated observations and the never-treated ones.<sup>11</sup>

## 4.2 The Impact of NSHCAs on Payout Policy

There are two arguments that NSHCAs should have no impact on payout policy. The first argument is advanced by Bainbridge (1992): NSHCAs are mere codifications of prior state and federal law and should not modify firms' behavior. The second argument is that even if NSHCAs modify firm behavior, this impact would be attenuated by the voluntary directives in most of the state statutes. This first alternative is supported by Romano (1987), who finds no significant impact on share prices due to the announcement or adoption of NSHCAs. Further evidence that supports the no-effect alternative is found in Afonso (2011) and Geczy et al. (2015): the first study finds no impact of NSHCAs on takeover behavior, and the second finds, again, no impact of NSHCAs on the investment behavior of institutional investors. I find statistically significant evidence that does not support this first alternative.

In Table 3 Panels A and B, I study the relevance of these arguments by evaluating the effect of the NSHCAs on firms' dividend, repurchase, total payout and net payout yields. Table 3 Panel A contains the analysis of NSHCA on payout policy for a set of firms with non-negative levels of payout, whereas Table 3 Panel B uses a sample of firms with positive levels of payout. I measure payout in yields to avoid size issues and consider both compensation mechanisms (cash dividends and repurchases) to account for their possible complementarity, as well as the payout measure net of equity issues, as suggested by Boudoukh et al. (2007). The coefficient of interest in both panels of Table 3, is that of *NSHCA*, an indicator variable that takes value one whenever an NSHCA has been adopted in the state of incorporation of a given firm. All the regressions reported in Panel A

---

<sup>11</sup>Further robustness checks (Table 8 Panel B) show the main regression analyses using the matched sample. The main results hold in the propensity score-matched sample.



and B of Table 3 include firm fixed effects and year-location fixed effects. In this and all subsequent tables, I allow for clustering of the error term at the state of incorporation level to account for the presence of autocorrelation of the dependent variable at the state of incorporation level, and all controls are lagged to overcome the issue of bad controls.

The results reported in Table 3 Panels A and B contradict the previous no-effect argument.<sup>12</sup> In Panel A, I show that NSHCAs have a consistently statistically significant negative impact on dividend (Columns (1) and (2)), repurchase (only in the estimation with controls in Column (4)), total payout (Columns (5) and (6)) and net payout yields (Columns (7) and (8)). This impact is found both in the sample of firms with non-negative payout levels and in the one with positive payout levels. This is, in Panel B, I find a negative and statistically significant impact of the NSHCAs on dividend yield (only in the estimation without controls, i.e., Column (1)), repurchase yield (Columns (3) and (4)), total payout yield (Columns (5) and (6)), and net payout yield (Columns (7) and (8)). The point estimate of the impact of NSHCAs on net payout yield represents a 15.1% (Table 3 Panel B Column (8)) negative difference in net payout for the treatment group with respect to the control group. This impact represents more than one standard deviation of the average net payout from firms in the sample. All controls in Panel B behave as expected with respect to payout policy, as larger firms, firms with low leverage, mature firms (small sales growth and large book-to-market ratios), profitable firms and firms with higher liquidity are more likely to distribute more to shareholders.

### 4.3 The Impact of NSHCAs on Investment Policy

I evaluate the impact of NSHCAs on *CAPEX*, *NON\_CAPEX*, and *Net Investment* in Table 4, Columns (1), (2), and (3). I also test the impact of NSHCAs on the likelihood of the announcement of a merger or acquisition (M&A) and whether this M&A is diversifying (Columns (4), (5), and (6)). Finally, I test in Table 4 the impact of NSHCA on firm risk and Tobin's Q (Columns (7) and (8)). These results indicate that NSHCAs lead to increases in investment (*NON\_CAPEX*, and *Net Investment*) and M&As, which does not seem to indicate empire-building behavior, as the impact is found only in focused M&As (Kempf, Manconi, and Spalt, 2016). These results indicate

---

<sup>12</sup>The difference between a sample of firms with positive and non-negative payout levels can be accurate. In Panel A the results are smaller in economic terms as observations with zero levels of payout are included.

that NSHCAs lead to decreases in firm risk and increases in firm value (Columns(7) and (8)). These results are at least partially consistent with those provided by Atanassov (2014), Flammer and Kacperczyk (2015), and Gao et al. (2016). Whereas Atanassov (2014) shows that NSHCAs leads to increases in value for states that only adopt an NSHCA, his results are found in a general sample without conditioning NSHCAs on states that do not adopt a *Business Combination* law. As Flammer and Kacperczyk (2015) present evidence on the impact of NSHCAs on innovation outputs (patents and patent citations), I present evidence on the positive impact of an NSHCA on *NON\_CAPEX* investment (investment in R&D and acquisitions).<sup>13</sup> Finally, consistent with my results on increased managerial sensitivity to risk and decreased firm risk, Gao et al. (2016) show that the cost of debt decreases after the adoption of NSHCAs.

Evidence on the impact of NSHCAs on payout policy and investment policy and quality points to the support of my predictin, whereby a decrease in the legal incentives of boards of directors leads to decreases in shareholder remuneration and increases in investment. I further check whether these investments also affect stakeholder outcomes, which would be consistent with the theoretical roots of NSHCAs (Orts, 1992). I measure stakeholder outcomes through the environmental and social scores from the Thomson Reuters ESG database. Table 5 shows the impact of NSHCAs on the social (Column (1)) and environmental (Column (2)) scores and the combined score (Column (3)). The adoption of NSHCAs leads to increases in both the social and the environmental scores of firms: on average, the point estimate of NSHCAs is 27%, which equates to one standard deviation from the average combined social and environmental score. This is evidence that NSHCAs lead to increases in stakeholder outcomes, which reinforces the idea that NSHCAs redistribute rents from shareholders to stakeholders.

## 5 Additional Analyses

### 5.1 Non-Shareholder Constituencies Acts and Firm Underinvestment

In this subsection, I test the positive impact of NSHCAs on investment for a cross-section of firms in settings prone to underinvestment. The results in Tables 3 and 4 suggest that there might be

---

<sup>13</sup>In unreported results, I explore the impact of NSHCAs on R&D expenditures and find that the impact of NSHCAs is statistically significant and positive.

a tradeoff between distributing rents to shareholders and investment. I test whether the impact of NSHCAs is larger in settings where firms might be distributing larger rents to shareholders and foregoing investment. I proceed to define underinvestment settings in two ways. First, I follow Biddle et al. (2009) in defining settings prone to underinvestment as those where firms present large levels of indebtedness and low levels of cash. However, in this setting, firms simply do not possess the rents to direct either at shareholders or investment. Second, I define a new setting in which firms present high levels of cash, low levels of indebtedness, and high levels of sales growth but low levels of investment. I test the prediction that in settings prone to underinvestment, NSHCAs will have a larger impact on investments in *CAPEX* and *NON-CAPEX*, as well as *Net\_Investment*, than in settings less prone to underinvestment.

Table 6 shows the results of interacting the *NSHCA* variable with the indicator for underinvestment, using my alternative definition of settings prone to underinvestment (Columns (1), (2), and (3)) and that suggested by Biddle et al. (2009) (Columns (4), (5), and (6)). These results indicate that the impact of NSHCAs on investment is larger in settings prone to underinvestment ( $\beta_2$ ) only when I define settings prone to underinvestment as those where firms have high levels of cash, and sales growth and lower levels of leverage and investment. The impact of NSHCAs is now statistically significant even for investment in *CAPEX*, while in Table 4, it was positive but not significant. However, the interaction with the underinvestment proxy of Biddle et al. (2009) is not statistically significant, which implies that this proxy likely captures cash constraints. Both underinvestment proxies have a negative impact on investment, but that of Biddle et al. (2009) has a larger negative impact on investment than mine does.

## 5.2 Non-Shareholder Constituencies Acts and Short-Term Institutional Investors

In this subsection, I inspect the possibility that shareholders extract rents from stakeholders given their investment horizon. If shareholders have short-term investment horizons, this would clash with the long-term outlook of most stakeholders. For instance, employees have largely undiversified investments in human capital and depend on the sustainability of the firm over time. Thus, NSHCAs should have a larger impact on investment in firms that might be redistributing rents from stakeholders to shareholders, i.e., firms with relatively higher levels of ownership by short-term investors. I define short-term investor ownership as the share of ownership by transient institutional

investors (Bushee, 2001), which are those that have a largely diversified portfolio and high turnover. Table 7 reports the impact of NSHCA and the interaction of NSHCA with the indicator for relatively high levels of short-term investors. The impact on CAPEX (Column (1)) does not support my conjecture that short-term institutional investors decrease investment. However, in Columns (2) and (3), there is evidence that supports the idea that NSHCAs have a larger impact on investment in *NON.CAPEX* and *Net\_Investment* when firms present relatively high levels of short-term institutional investors. This effect seems to be a different channel from the underinvestment one, given the evidence presented in Columns (4), (5), and (6). In firms in which short-term institutional investors hold relatively large stakes, the adoption of an NSHCA leads to higher levels of investment in R&D, acquisitions and total investment (including capital expenditures) net of asset disposals.

## 6 Robustness Checks

In Table 8 Panels A and B, I present evidence to check the robustness of the main results of the paper. Panel A presents evidence on the treatment dynamics of NSHCAs on payout policy (Column (1)), also on an alternative control group composed only of observations that are eventually treated (Column (2)), on a sample that drops all firms incorporated in Delaware (Column (3)), and the states of Texas and Nebraska (Column (4)). The reason for inspecting the treatment dynamics of NSHCAs is that it allows me to check whether there are pre-treatment differences or the laws were anticipated. According to Atanasov and Black (2015), the estimates from the indicators before the adoption of the laws should be close to zero and not statistically significant, which they are. The negative impact of NSHCAs on net payout yield seems to take two years to emerge but remains after 4 years. Furthermore, that impact remains after dropping from the control group those firms that are incorporated in states that never adopt an NSHCA. This implies that firms in the control group will eventually be treated and that the same firm is in the control and treatment groups, which reinforces the parallel trends condition. Finally, in Columns (3) and (4), I drop observations from firms incorporated in the state of Delaware (given the Delaware effect) and the states of Nebraska and Texas (since Nebraska adopted an NSHCA, then dropped it and later readopted it, and Texas has the NSHCA that resembles the rest the least). After dropping those observations,

the main result remains. Finally, Table 8 Panel B, shows the main results presented in Table 3 for a sample of firms with non-negative levels of payout that are matched on their propensity of being incorporated in a state that eventually adopts a NSHCA. I match firms on their propensity to receive the treatment, i.e., to be incorporated in a state that eventually adopts a NSHCA, based on pre-treatment covariates such as firm size, leverage, sales growth, cash to total assets, profitability, book-to-market ratio and industry. The results show that the statistically significant negative impact of NSHCAs on dividend, total payout and net payout yields remains for the smaller sample of matched firms.

## 7 Conclusion

This paper sets out to investigate the impact of boards of directors' legal incentives on firms' payout and investment policies. I make use of the adoption of a set of staggered laws in the US to measure a decrease in boards' legal incentives. These laws are the Non-Shareholder Constituencies Acts (NSHCAs), which state that boards of directors can make decisions that harm shareholders to the benefit of stakeholders, i.e., employees, creditors, customers, and the community. I investigate the impact of NSHCAs on payout policy and find that the adoption of NSHCAs leads to lower levels of payout yield. Nonetheless, the undistributed rents from shareholders are rather reinvested in the firm. NSHCAs lead to increases in net investment and stakeholder outcomes measured by firms' social and environmental performance. The impact on investment seems to be larger in settings where firms are prone to forgo investment and where firms have relatively higher shares of ownership by short-term institutional investors. Finally, I check whether these results remain after checking the treatment dynamics of NSHCAs, using a stricter control group (firms that are eventually treated), accounting for the Delaware effect, and using a sample of matched firms on pre-treatment covariates for which the eventual adoption of a NSHCA is more likely to be exogenous.

## Appendix A: Description of Variables

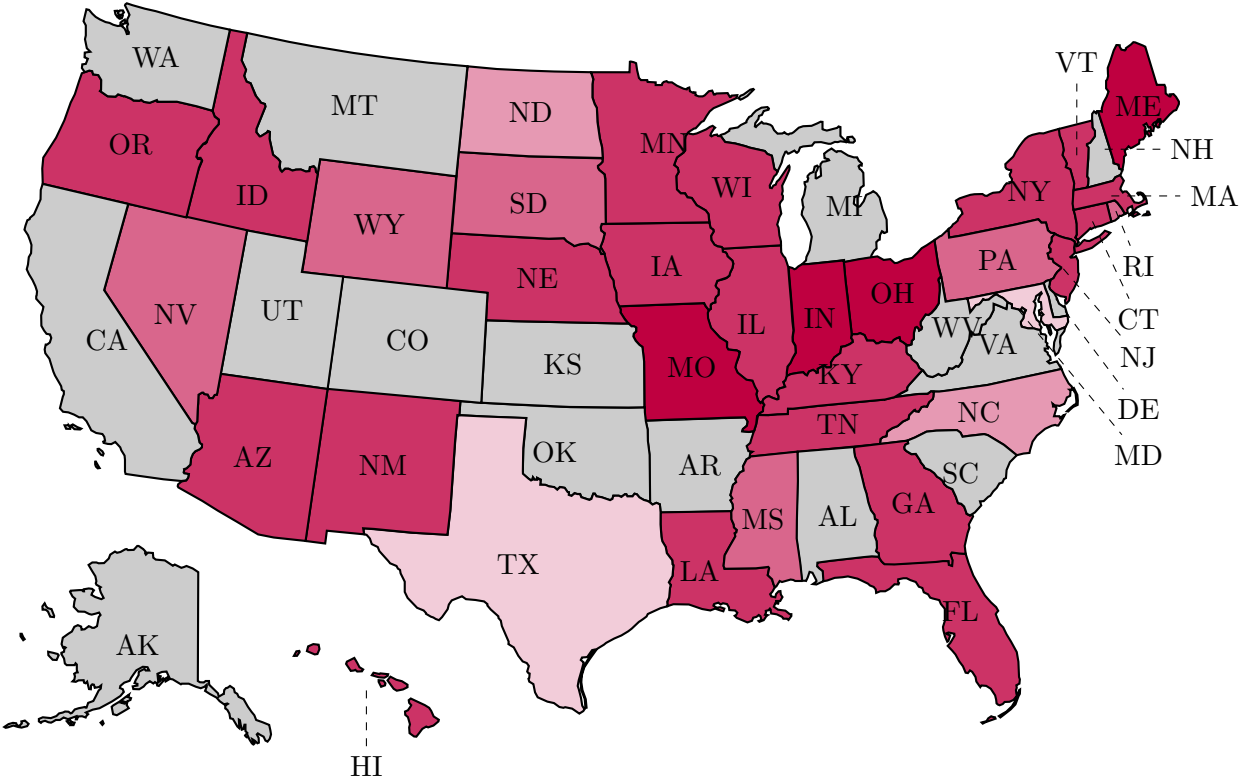
Variable	Description	Source
Dividends	$DVC/(PRCC\_F*CSHO)$	Capital IQ Compustat
Repurchases	$PRSTKC/(PRCC\_F*CSHO)$	Capital IQ Compustat
TotalPayout	$(DVC+PRSTKC)/(PRCC\_F*CSHO)$	Capital IQ Compustat
NetPayout	$(DVC+PRSTKC-SSTK)/(PRCC\_F*CSHO)$	Capital IQ Compustat
Firm_Size	$\ln(AT)$	Capital IQ Compustat
Leverage	$(DLC+DLTT)/CEQ$	Capital IQ Compustat
BM	$CEQ/(PRCC\_F*CSHO)$	Capital IQ Compustat
Sales_Growth	$(SALE-L.SALE)/L.SALE$	Capital IQ Compustat
ROA	$IB/AT$	Capital IQ Compustat
Cash	$CH/AT$	Capital IQ Compustat
CAPEX	$CAPX/AT$	Capital IQ Compustat
Non_CAPEX	$(AQC + XRD)/AT$	Capital IQ Compustat
Net_Investment	$(AQC + XRD + CAPX - SPPIV)/AT$	Capital IQ Compustat
M&A	Dummy that takes value 1 whenever a firm announces an M&A deal in a given year.	SDC Platinum
Focus_M&A	Dummy that takes value 1 whenever a firm announces an M&A deal with a firm within the same 2-digit SIC industry in a given year.	SDC Platinum
Div_M&A	Dummy that takes value 1 whenever a firm announces an M&A deal with a firm in a different 2-digit SIC industry in a given year.	SDC Platinum
Firm_Risk	$\ln((1-R_{4F}^2)/R_{4F}^2)$ . From a 4-Factor regression.	CRSP & WRDS suites
Q	$((PRCC\_F*CSHO)+DLTT+DLC+PSTKL+TXDB)/AT$	Capital IQ Compustat
ENV	The environmental percentage rank score.	TR Datastream
SOC	The social percentage rank score.	TR Datastream
Asset4	$(ENV+SOC)/2$	TR Datastream

UnderInv (BHV)	Dummy variable that takes value 1 whenever a firm is under the median annual value of Cash and over the median annual value of Leverage at the beginning of the year. I follow Biddle et al. (2009) to create this measure.	Capital IQ Compustat
UnderInv (Alternative)	Dummy variable that takes value 1 whenever a firm is over the annual median value of Cash, under the annual median value of Leverage, over the annual median value of Sales_Growth, and under the annual median value of Net_Investment at the beginning of the year.	Capital IQ Compustat
ST_SHARE	Dummy variable that takes value 1 whenever a firm is over the annual median value of transient institutional ownership. Transient institutional investors are defined by Bushee (2001) to be those institutional investors that have a diversified portfolio with very high turnover.	TR 13F

---

# Appendix B: Adoption of Non-Shareholder Constituencies Acts.

Figure 1: States Adopting the Non-Shareholder Constituencies Acts.



Adoption Year: **1984/1986** **1986/1989** **1990/1992** **1993/1995** **1999/2003**



**State (Year of Adoption)**

---

Arizona (1987)  
Connecticut (1988)  
Florida (1989)  
Georgia (1989)  
Hawaii (1989)  
Idaho (1988)  
Illinois (1988)  
Indiana (1986)  
Iowa (1989)  
Kentucky (1988)  
Louisiana (1988)  
Maine (1985)  
Maryland (1999)  
Massachusetts (1989)  
Minnesota (1987)  
Mississippi (1990)  
Missouri (1986)  
Nebraska (1988)<sup>14</sup>  
Nevada (1991)  
New Jersey (1989)  
New Mexico (1987)  
New York (1987)  
North Carolina (1993)  
North Dakota (1993)  
Ohio (1984)  
Oregon (1989)  
Pennsylvania (1990)  
Rhode Island (1990)  
South Dakota (1990)  
Tennessee (1988)  
Texas (2003)  
Vermont (1988)  
Wisconsin (1987)  
Wyoming (1990)

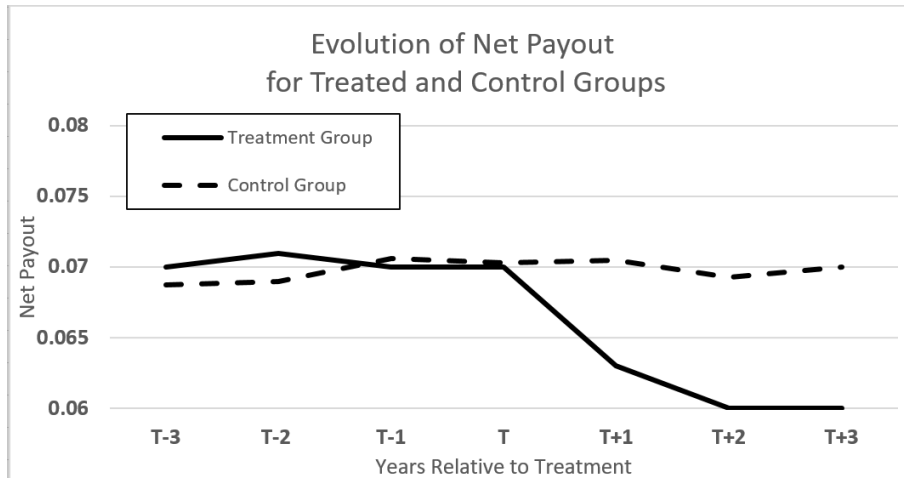
---

Source: Karpoff and Wittry (2015) and annotated state codes.

---

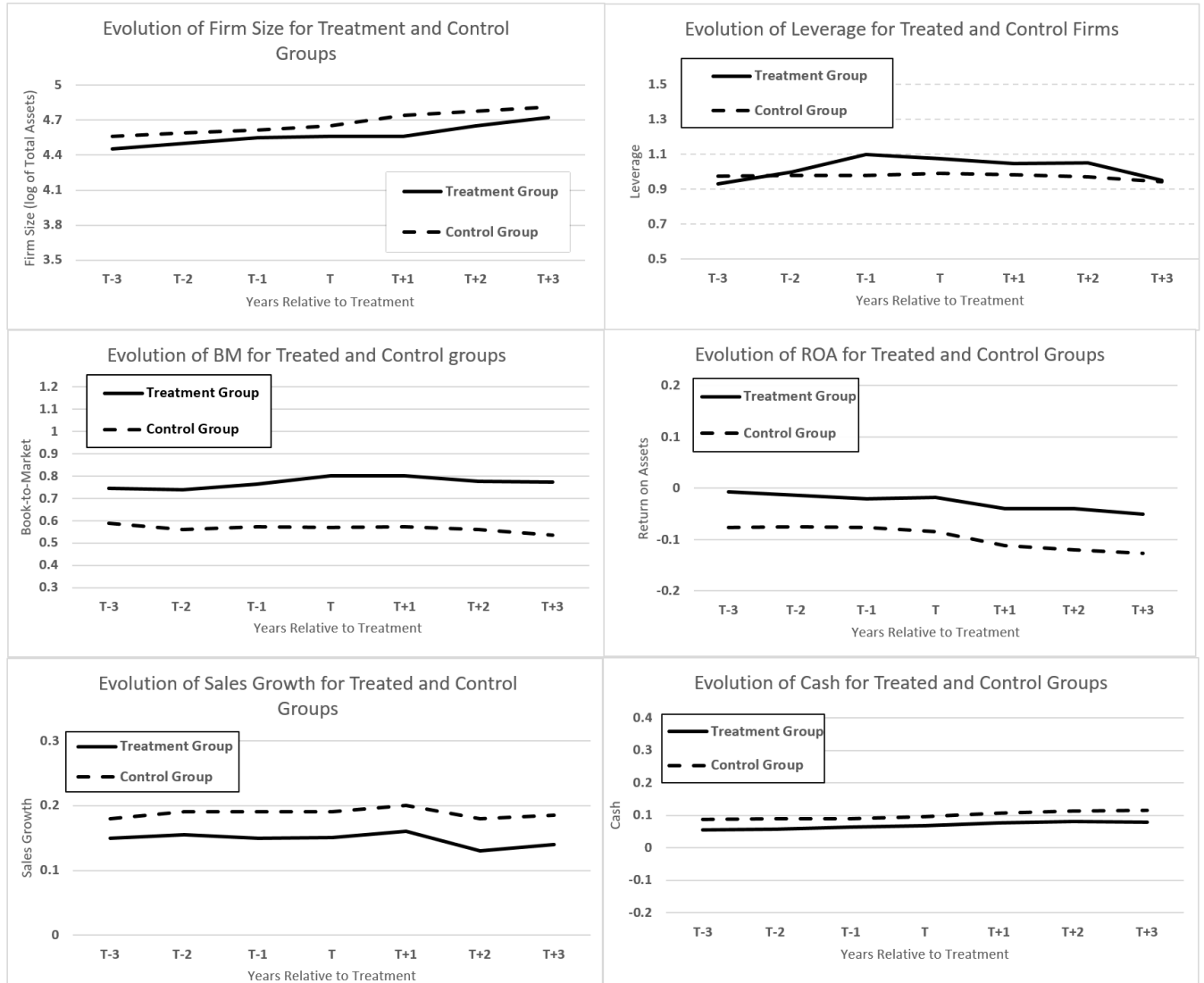
<sup>14</sup>Nebraska adopted an NSHCA in 1988, repealed it in 1995, and readopted it in 2007.

**Figure 2:** Evolution of Net Payout for Treatment and Control Groups.



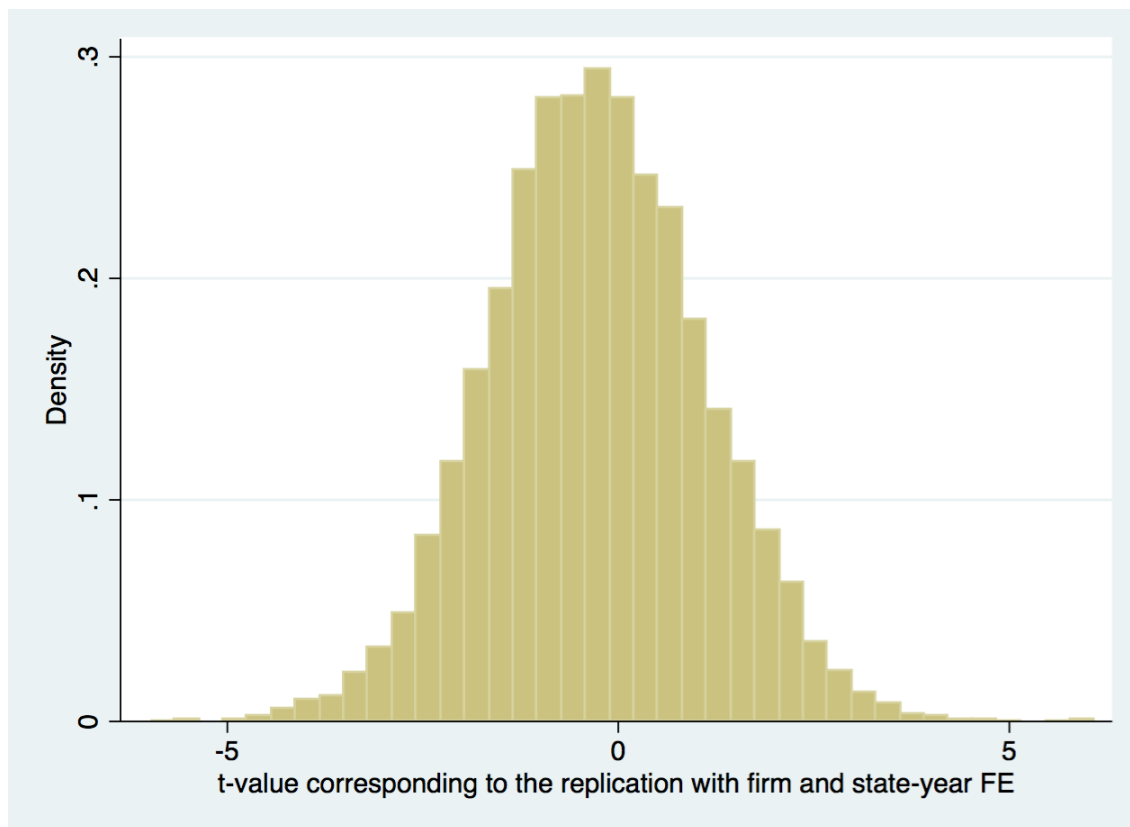
All variable definitions are located in Appendix A. This figure shows the average values of Net Payout for the treatment and control groups for three, two and one years prior to the adoption of an NSHCA, the year of adoption of an NSHCA, and three years after having adopted an NSHCA.

**Figure 3:** Evolution of Controls for Treatment and Control Groups.



All variable definitions are located in Appendix A. This figure shows the average values of Firm\_Size, Leverage, BM, Sales\_Growth, ROA, and Cash for the treatment and control groups for three, two and one years prior to the adoption of an NSHCA, the year of adoption of an NSHCA, and three years after having adopted an NSHCA.

**Figure 3:** Placebo Shocks to the impact of Non-Shareholder Constituencies Acts on Payout Policy.



This figure shows the distribution of the t-statistics of  $\alpha$  from the following regression:

$$\ln(\text{Net Payout})_{it} = \alpha \text{NSHCA}_{jt} + \beta \text{SSL}_{jt} + \kappa X_{it} + \pi_i + \rho_t \times \delta_l + \varepsilon_{it}$$

where NSHCA is randomly generated 10,000 times.

## References

- Adams, R. B., B. E. Hermalin, and M. S. Weisbach. 2010. The role of boards of directors in corporate governance: A conceptual framework and survey. *Journal of economic literature* 48:58–107.
- Afonso, E. 2011. State poison pill endorsement statutes and the market for corporate control. *The University of Georgia Working Paper* .
- Allen, F., and R. Michaely. 2003. Payout policy. In *Handbook of the Economics of Finance*, vol. 1, pp. 337–429. Elsevier.
- Atanasov, V., and B. Black. 2015. Shock-based causal inference in corporate finance research. *Critical Finance Review* .
- Atanassov, J. 2014. Corporate governance, non-financial stakeholders, and innovation: Evidence from a natural experiment. Available at SSRN: <https://ssrn.com/abstract=2181766> .
- Bainbridge, S. 1992. Interpreting nonshareholder constituency Statutes(1992). *Pepperdine Law Review* 19:971.
- Barzuza, M. 2009. The state of state antitakeover law. *Virginia Law Review* pp. 1973–2052.
- Bebchuk, L. A., and M. S. Weisbach. 2010. The state of corporate governance research. *The Review of Financial Studies* 23:939–961.
- Bertrand, M., and S. Mullainathan. 2003. Enjoying the quiet life? Corporate governance and managerial preferences. *Journal of political Economy* 111:1043–1075.
- Biddle, G. C., G. Hilary, and R. S. Verdi. 2009. How does financial reporting quality relate to investment efficiency? *Journal of accounting and economics* 48:112–131.
- Black, B. S. 2001. The Principal Fiduciary Duties of Boards of Directors. *Asia Bus. L. Rev.* 33:3–9.
- Boudoukh, J., R. Michaely, M. Richardson, and M. R. Roberts. 2007. On the importance of measuring payout yield: Implications for empirical asset pricing. *The Journal of Finance* 62:877–915.
- Brochet, F., and S. Srinivasan. 2014. Accountability of independent directors: Evidence from firms subject to securities litigation. *Journal of Financial Economics* 111:430–449.
- Bushee, B. J. 2001. Do institutional investors prefer near-term earnings over long-run value? *Contemporary Accounting Research* 18:207–246.
- Cain, M. D., S. B. McKeon, and S. D. Solomon. 2017. Do takeover laws matter? Evidence from five decades of hostile takeovers. *Journal of Financial Economics* 124:464–485.
- Catan, E. M., and M. Kahan. 2016. The law and finance of antitakeover statutes. *Stanford Law Review* 68:629.
- Chen, Z., O. Z. Li, and H. Zou. 2016. Directors and officers liability insurance and the cost of equity. *Journal of Accounting and Economics* 61:100–120.
- Coffee, J. C. 1988. The uncertain case for takeover reform: An essay on stockholders, stakeholders and bust-ups. *Wisconsin Law Review* p. 435.

- Flammer, C. 2017. Competing for government procurement contracts: The role of corporate social responsibility. *Strategic Management Journal* .
- Flammer, C., B. Hong, and D. Minor. 2017. Corporate Governance and the Rise of Integrating Corporate Social Responsibility Criteria in Executive Compensation: Effectiveness and Implications for Firm Outcomes. Available at SSRN: <https://ssrn.com/abstract=2831694> .
- Flammer, C., and A. Kacperczyk. 2015. The impact of stakeholder orientation on innovation: Evidence from a natural experiment. *Management Science* 62:1982–2001.
- Gao, H., K. Li, and Y. Ma. 2016. Stakeholder orientation and the cost of debt: Evidence from a natural experiment. Available at SSRN: <https://ssrn.com/abstract=2878415> .
- Gartman, G. A. 2000. State Antitakeover Laws. *Investor Responsibility Research Center* .
- Geczy, C., J. S. Jeffers, D. K. Musto, and A. M. Tucker. 2015. Institutional investing when shareholders are not supreme. *Harvard Business Law Review* 5:73.
- Grinstein, Y., and S. Rossi. 2015. Good monitoring, bad monitoring. *Review of Finance* 20:1719–1768.
- Holihan, G. M. 1990. Pennsylvania’s Antitakeover Statute: An Impermissible Regulation of the Interstate Market for Corporate Control. *Chicago-Kent Law Review* 66:863.
- Karpoff, J. M., and P. H. Malatesta. 1989. The wealth effects of second-generation state takeover legislation. *Journal of Financial Economics* 25:291–322.
- Karpoff, J. M., and M. D. Wittry. 2017. Institutional and legal context in natural experiments: The case of state antitakeover laws. *The Journal of Finance* .
- Kempf, E., A. Manconi, and O. Spalt. 2016. Distracted shareholders and corporate actions. *The Review of Financial Studies* 30:1660–1695.
- Laux, V. 2010. Effects of litigation risk on board oversight and CEO incentive pay. *Management Science* 56:938–948.
- Leung, W. S., Woon Sau, and J. Chen. 2017. Does bank stakeholder orientation enhance financial stability? Evidence from a natural experiment. *Cardiff University Working paper* .
- Levit, D., and N. Malenko. 2016. The labor market for directors and externalities in corporate governance. *The Journal of Finance* 71:775–808.
- Lin, C., M. S. Officer, R. Wang, and H. Zou. 2013. Directors’ and officers’ liability insurance and loan spreads. *Journal of Financial Economics* 110:37–60.
- Lin, C., M. S. Officer, and H. Zou. 2011. Directors’ and officers’ liability insurance and acquisition outcomes. *Journal of Financial Economics* 102:507–525.
- Nguyen, P.-A., A. Kecskés, and S. Mansi. 2017. Does corporate social responsibility create shareholder value? The importance of long-term investors. *Journal of Banking & Finance* .
- Orts, E. W. 1992. Beyond shareholders: Interpreting corporate constituency statutes. *George Washington Law Review* 61:14.

- Romano, R. 1987. The political economy of takeover statutes. *Virginia Law Review* pp. 111–199.
- Romano, R. 1993. Comment: What is the value of other constituency statutes to shareholders? *The University of Toronto Law Journal* 43:533–542.
- Yermack, D. 2004. Remuneration, retention, and reputation incentives for outside directors. *The Journal of Finance* 59:2281–2308.
- Yuan, R., J. Sun, and F. Cao. 2016. Directors' and officers' liability insurance and stock price crash risk. *Journal of Corporate Finance* 37:173–192.

**Table 1.** Summary Statistics.

	<b>Obs.</b>	<b>Mean</b>	<b>S.D.</b>	<b>P25</b>	<b>P50</b>	<b>P75</b>
Dividends	120522	0.012	0.024	0	0	0.017
Repurchases	109563	0.015	0.037	0	0	0.009
TotalPayout	120692	0.027	0.049	0	0.004	0.036
NetPayout	120692	-0.007	0.112	-0.006	0	0.028
Firm_Size	120692	5.182	2.450	3.445	5.207	6.907
Leverage	120692	0.849	2.788	0.021	0.381	1.060
Sales_Growth	120692	0.189	0.766	-0.035	0.075	0.221
Cash	120692	0.111	0.155	0.015	0.049	0.141
ROA	120692	-0.079	0.631	-0.034	0.025	0.075
BM	120692	0.573	1.209	0.271	0.529	0.880
CAPEX	114938	0.053	0.064	0.013	0.033	0.068
NON_CAPEX	60455	0.118	0.347	0.008	0.053	0.14
Net_Investment	55442	0.172	0.218	0.057	0.113	0.206
M&A	120692	0.212	0.409	0	0	0
Focus_M&A	120692	0.125	0.33	0	0	0
Div_M&A	120692	0.087	0.283	0	0	0
Firm_Risk	49146	1.352	0.907	0.696	1.384	2.019
Q	120645	1.958	4.005	0.742	1.087	1.801
SOC	6403	49.416	28.464	23.27	46.84	75.91
ENV	6403	45.981	31.789	16.23	36.11	80.61
Asset4	6403	47.699	28.402	21.265	41.54	75.835

All variable definitions are located in Appendix A.



**Table 2.** Pre-treatment Covariate Balance.

	Unmatched Sample			Matched Sample		
	Never Treated (1)	Eventually Treated (2)	t-stat (3)	Never Treated (4)	Eventually Treated (5)	t-stat (6)
Firm_Size	5.80	5.33	5.54	4.32	4.36	-0.86
Leverage	0.95	0.95	0.08	1.01	1.07	-1.02
BM	0.70	0.85	-5.24	0.77	0.79	-1.47
Sales_Growth	0.11	0.11	-0.27	0.15	0.15	-0.44
ROA	0.05	0.06	-1.12	0.01	0.01	-0.34
Cash	0.07	0.05	1.30	0.06	0.06	1.47
Observations	11659	5667		5598	4401	

All variable definitions are located in Appendix A. This table shows the covariate balance between never-treated observations and eventually treated observations before the passage of the NSHCAs. Table 2 shows the average values of Firm\_Size, Leverage, BM, Sales\_Growth, ROA, and Cash for the sample used in the main analysis. The first three columns include information for one year before the adoption of an NSHCA for the unmatched sample, whereas the last three columns contain information for one year before the adoption of an NSHCA for a matched sample of firms. I used a propensity score matching procedure with a nearest neighbour and no replacement using all control variables plus industry and headquarters state dummies.

**Table 3.** The effect of Non-Shareholder Constituencies Acts on Payout Policy.**Panel A:** The effect of NSHCAs on Payout Policy for a subsample of firms with non-negative payout.

	$\ln(1+\text{Dividends})$		$\ln(1+\text{Repurchases})$		$\ln(1+\text{TotalPayout})$		$\ln(1+\text{NetPayout})$	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
NSHCA	-0.002** (-2.050)	-0.002** (-2.013)	-0.001 (-0.695)	-0.002** (-2.047)	-0.003*** (-5.379)	-0.004*** (-3.262)	-0.004* (-1.742)	-0.009*** (-3.478)
Firm_Size		0.001*** (6.119)		0.004*** (21.991)		0.005*** (13.232)		0.001 (1.372)
Leverage		-0.001** (-2.290)		-0.001*** (-5.324)		-0.001*** (-4.860)		0.001* (1.789)
Sale_Growth		-0.001 (-1.144)		-0.001*** (-6.577)		-0.001*** (-5.409)		-0.001** (-2.311)
Cash		0.004*** (8.859)		0.006*** (7.322)		0.008*** (8.518)		0.006* (1.949)
ROA		0.001*** (3.973)		0.001 (1.472)		0.001** (2.211)		-0.002*** (-3.783)
BM		-0.001 (-0.997)		0.001* (1.971)		0.001 (0.696)		0.001*** (2.901)
Observations	120,522	120,522	109,563	109,563	120,692	120,692	120,692	120,692
2nd Stage Laws?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
YearXState FE?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 3 continued

**Panel B:** The effect of NSHCAs on Payout Policy for a subsample of firms with positive payout.

	$\ln(\text{Dividends})$		$\ln(\text{Repurchases})$		$\ln(\text{TotalPayout})$		$\ln(\text{NetPayout})$	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
NSHCA	-0.058*	-0.054	-0.125**	-0.269**	-0.127***	-0.155***	-0.108***	-0.151**
	(-1.847)	(-1.160)	(-2.383)	(-2.160)	(-6.324)	(-3.627)	(-4.283)	(-2.582)
Firm_Size		0.057***		0.320***		0.250***		0.209***
		(4.890)		(14.021)		(15.864)		(8.426)
Leverage		2.963e-4		-0.015**		-0.013***		-0.016***
		(0.069)		(-2.356)		(-4.131)		(-4.232)
Sales_Growth		-0.083***		-0.058***		-0.101***		-0.110***
		(-4.299)		(-3.608)		(-10.531)		(-5.740)
Cash		0.241**		1.020***		0.823***		0.908***
		(2.397)		(11.783)		(14.695)		(9.174)
ROA		-0.324***		0.314***		0.269***		0.280***
		(-3.562)		(4.250)		(7.620)		(4.815)
BM		0.218***		0.150***		0.128***		0.111***
		(5.239)		(7.845)		(7.472)		(5.865)
Observations	57,253	49,750	45,393	41,334	81,333	72,257	61,842	55,221
2nd Stage Laws?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
YearXState FE?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

This table presents evidence on the effect of Non-Shareholder Constituencies Acts on payout policy. Panel A shows the results for the whole sample of firms with non-negative payout levels. Panel B presents the results for the sub-sample of firms with a positive level of payout. For variable descriptions, please see Appendix A. Standard errors are clustered at the state of incorporation level. \*, \*\*, and \*\*\* represent statistical significance at the 10%, 5% and 1% levels, respectively.

**Table 4.** The effect of Non-Shareholder Constituencies Acts on Investment Policy.

	CAPEX	Non CAPEX	Net Investment	M&A	Focus M&A	Div M&A	Firm Risk	Q
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
NSHCA	0.002 (0.725)	0.015*** (3.098)	0.023*** (3.156)	0.188** (2.282)	0.133* (1.857)	0.007 (0.035)	-0.099*** (-4.654)	0.349*** (2.785)
Firm_Size	-0.001 (-0.792)	-0.024*** (-12.402)	-0.031*** (-13.642)	0.523*** (13.081)	0.576*** (17.115)	0.583*** (16.573)	-0.206*** (-18.208)	-1.149*** (-10.436)
Leverage	-0.000*** (-3.214)	-0.001*** (-3.976)	-0.001*** (-4.799)	0.000 (0.009)	0.001 (0.316)	-0.001 (-0.905)	0.004*** (3.024)	0.022*** (3.569)
Sales_Growth	0.003*** (7.720)	-0.004*** (-3.832)	-0.002 (-1.435)	-0.021*** (-3.751)	-0.030*** (-7.410)	-0.025*** (-4.704)	-0.022*** (-6.891)	
Cash	0.019*** (4.547)	0.077*** (9.154)	0.080*** (5.536)	-0.441*** (-10.630)	-0.430*** (-8.090)	-0.548*** (-14.534)	-0.129*** (-2.882)	1.324*** (8.297)
ROA	0.000 (0.739)	-0.031*** (-3.977)	-0.016*** (-4.520)	0.026*** (2.733)	0.040*** (6.523)	0.029** (2.436)	-0.053*** (-6.233)	-0.796*** (-13.461)
BM	-0.001*** (-3.128)	0.002* (1.745)	-0.003*** (-3.433)	0.005 (0.940)	0.006 (1.244)	-0.004 (-0.699)	0.061*** (2.938)	-0.299*** (-5.335)
Observations	129,967	67,324	61,647	122,687	122,687	122,687	53,367	142,224
2nd Stage Laws?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
YearXState FE?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

This table presents evidence on the effect of Non-Shareholder Constituencies Acts on investment policy. Constant not reported. For variable definitions, please see Appendix A. Standard errors are clustered at the state of incorporation level. \*, \*\*, and \*\*\* represent statistical significance at the 10%, 5% and 1% levels, respectively.

**Table 5.** The effect of Non-Shareholder Constituencies Acts on Stakeholder Outcomes.

	SOC (1)	ENV (2)	Asset4 (3)
NSHCA	23.905*** (14.249)	30.147*** (22.079)	27.026*** (18.723)
Firm_Size	5.304*** (6.123)	3.864*** (5.282)	4.584*** (6.625)
Leverage	-0.018 (-0.227)	0.022 (0.215)	0.002 (0.037)
Sales_Growth	0.725 (0.874)	1.130 (0.786)	0.927 (0.834)
Cash	14.947*** (3.776)	8.876 (1.571)	11.911*** (3.084)
ROA	5.006 (1.056)	-0.743 (-0.191)	2.131 (0.500)
BM	-1.920** (-2.377)	-1.557*** (-4.016)	-1.739*** (-3.193)
Observations	6,423	6,423	6,423
2nd Stage Laws?	Yes	Yes	Yes
Firm FE?	Yes	Yes	Yes
YearXState FE?	Yes	Yes	Yes

This table presents evidence on the effect of Non-Shareholder Constituencies Acts on Stakeholder Outcomes. For variable definitions, please see Appendix A. Standard errors are clustered at the state of incorporation level. \*, \*\*, and \*\*\* represent statistical significance at the 10%, 5% and 1% levels, respectively.

**Table 6.** The effect of Non-Shareholder Constituencies Acts on Investment Policy: The Case of Underinvestment.

	Alternative Measure			BHV (2009) Measure		
	CAPEX (1)	Non CAPEX (2)	Net Investment (3)	CAPEX (4)	Non CAPEX (5)	Net Investment (6)
NSHCA ( $\beta_1$ )	0.002 (0.686)	0.014*** (3.008)	0.025*** (3.460)	0.002 (0.850)	0.015*** (3.245)	0.024*** (3.606)
NSHCA*UnderInv ( $\beta_2$ )	0.003*** (2.779)	0.007** (2.283)	0.011* (1.980)	-0.001 (-0.768)	-0.001 (-0.334)	0.002 (0.699)
UnderInv	-0.002*** (-8.604)	-0.005*** (-3.141)	-0.005*** (-4.160)	-0.004*** (-15.216)	-0.006*** (-4.016)	-0.013*** (-9.898)
Firm_Size	-0.000 (-0.755)	-0.024*** (-12.371)	-0.032*** (-13.427)	-0.000 (-0.511)	-0.024*** (-12.203)	-0.031*** (-13.258)
Leverage	-0.000*** (-3.226)	-0.001*** (-3.998)	-0.001*** (-5.417)	-0.000** (-2.565)	-0.001*** (-3.770)	-0.001*** (-5.017)
Sales_Growth	0.003*** (7.709)	-0.004*** (-3.846)	-0.002 (-1.304)	0.003*** (7.637)	-0.004*** (-3.962)	-0.002 (-1.443)
Cash	0.019*** (4.616)	0.077*** (9.172)	0.075*** (5.140)	0.017*** (4.265)	0.076*** (9.223)	0.071*** (4.839)
ROA	0.000 (0.748)	-0.031*** (-3.974)	-0.017*** (-4.894)	0.000 (0.678)	-0.031*** (-3.979)	-0.017*** (-4.899)
BM	-0.001*** (-3.145)	0.002* (1.743)	-0.003*** (-3.295)	-0.001*** (-2.880)	0.002* (1.820)	-0.003*** (-3.047)
$\beta_1 + \beta_2$	0.004* (1.680)	0.021*** (3.780)	0.035*** (4.560)	0.002 (0.550)	0.014** (2.510)	0.027*** (3.380)
Observations	129,967	67,324	57,975	129,967	67,324	57,975
2nd Stage Laws?	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE?	Yes	Yes	Yes	Yes	Yes	Yes
YearXState FE?	Yes	Yes	Yes	Yes	Yes	Yes

This table presents evidence on robustness checks of the effect of Non-Shareholder Constituencies Acts on investment policy for firms prone to underinvest. For variable definitions, please see Appendix A. Standard errors are clustered at the state of incorporation level. \*, \*\*, and \*\*\* represent statistical significance at the 10%, 5% and 1% levels, respectively.

**Table 7.** The effect of Non-Shareholder Constituencies Acts on Investment Policy: The Case of Short-Term Shareholders.

	<u>Short-Term Investors</u>			<u>ST Investors &amp; Underinvestment</u>		
	CAPEX (1)	Non CAPEX (2)	Net Investment (3)	CAPEX (4)	Non CAPEX (5)	Net Investment (6)
NSHCA ( $\beta_1$ )	0.007* (1.982)	0.020*** (2.790)	0.027*** (3.142)	0.007** (2.381)	0.018** (2.354)	0.027*** (3.292)
NSHCA*ST_SHARE ( $\beta_2$ )	-0.001 (-0.866)	0.008*** (3.590)	0.007*** (2.685)	-0.001 (-0.701)	0.008*** (3.545)	0.006** (2.506)
NSHCA*UnderInv ( $\beta_3$ )				-0.000 (-0.053)	0.010** (2.142)	0.011* (1.835)
ST_SHARE	0.003*** (5.656)	-0.002 (-1.536)	-0.001 (-0.483)	0.003*** (6.444)	-0.002 (-1.535)	0.000 (0.127)
UnderInv				0.002*** (5.073)	-0.005*** (-4.527)	-0.006*** (-3.931)
Firm_Size	-0.001 (-1.226)	-0.027*** (-11.425)	-0.031*** (-12.554)	-0.001 (-1.163)	-0.027*** (-11.610)	-0.032*** (-12.400)
Leverage	-0.000*** (-2.730)	-0.001*** (-5.680)	-0.001*** (-5.413)	-0.000*** (-2.849)	-0.001*** (-6.086)	-0.001*** (-6.088)
SALE_G	0.002*** (4.857)	-0.002 (-1.397)	-0.002 (-1.137)	0.002*** (4.602)	-0.002 (-1.476)	-0.002 (-0.993)
CASH	0.017*** (3.783)	0.051*** (3.015)	0.082*** (5.348)	0.018*** (3.797)	0.048*** (2.735)	0.077*** (4.674)
ROA	0.000 (0.622)	-0.018*** (-4.265)	-0.014*** (-3.192)	0.000 (0.547)	-0.018*** (-4.394)	-0.014*** (-3.457)
BM	-0.001** (-2.010)	0.002* (1.996)	-0.004*** (-3.906)	-0.001 (-1.633)	0.002* (1.981)	-0.003*** (-3.552)
$\beta_1 + \beta_2$	0.005* (1.670)	0.028*** (3.590)	0.034*** (3.860)			
$\beta_1 + \beta_2 + \beta_3$				0.006** (2.050)	0.028*** (3.560)	0.038*** (4.600)
Observations	54,335	52,744	55,410	52,133	52,133	52,133
2nd Stage Laws?	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE?	Yes	Yes	Yes	Yes	Yes	Yes
YearXState FE?	Yes	Yes	Yes	Yes	Yes	Yes

This table presents evidence on robustness checks of the effect of Non-Shareholder Constituencies Acts on investment policy for firms with large levels of short-term-oriented shareholders. For variable definitions, please see Appendix A. Standard errors are clustered at the state of incorporation level. \*, \*\*, and \*\*\* represent statistical significance at the 10%, 5% and 1% levels, respectively.

**Table 8.** The effect of Non-Shareholder Constituencies Acts on Payout Policy: Robustness Checks.

**Panel A:** Parallel trends, eventually treated sample, and dropping Delaware, Nebraska and Texas.

	Treatment Dynamics (1)	Eventually Treated (2)	Dropping Delaware (3)	Drop. Nebraska & Texas (4)
NSHCA <sup>-3</sup>	-0.053 (-0.471)			
NSHCA <sup>-2</sup>	-0.041 (-0.773)			
NSHCA <sup>-1</sup>	0.009 (0.255)			
NSHCA <sup>0</sup>	-0.027 (-0.716)			
NSHCA <sup>+1</sup>	-0.064* (-1.794)			
NSHCA <sup>+2</sup>	-0.099*** (-3.480)			
NSHCA <sup>3+</sup>	-0.105*** (-3.046)			
NSHCA		-0.070*** (-3.335)	-0.085*** (-3.690)	-0.103*** (-3.719)
Firm_Size	0.045** (2.607)	0.080*** (7.552)	0.077*** (7.420)	0.051*** (3.588)
Leverage	0.001 (1.167)	-0.003 (-1.419)	-0.003 (-1.519)	-0.000 (-0.188)
Sale_Growth	0.003 (1.244)	0.007 (0.778)	0.000 (0.015)	-0.002 (-0.770)
Cash	0.019 (0.805)	0.063 (0.819)	0.080 (1.119)	0.119*** (3.836)
ROA	-0.070*** (-5.499)	-0.022 (-1.456)	-0.019 (-1.562)	-0.023*** (-3.507)
BM	0.004 (0.505)	-0.005 (-0.562)	-0.000 (-0.004)	0.011** (2.136)
Observations	119,658	44,559	55,104	118,177
2nd Stage Laws?	Yes	Yes	Yes	Yes
Firm FE?	Yes	Yes	Yes	Yes
YearXState FE?	Yes	Yes	Yes	Yes



Table 8 continued

**Panel B:** Main results using a propensity-score matched sample.

	ln(1+Dividends) (1)	ln(1+Repurchases) (2)	ln(1+TotalPayout) (3)	ln(1+NetPayout) (4)
NSHCA	-0.002** (-2.506)	-0.002 (-1.606)	-0.004** (-2.683)	-0.010** (-2.250)
Firm_Size	0.002*** (11.968)	0.004*** (13.391)	0.006*** (19.968)	0.003*** (3.355)
Leverage	-0.001* (-1.836)	-0.001* (-1.913)	-0.001** (-2.322)	0.001 (1.498)
Sale_Growth	-0.001 (-0.285)	-0.001 (-1.525)	-0.001** (-2.544)	-0.001 (-0.250)
Cash	0.005** (2.344)	0.005** (2.346)	0.007* (1.989)	0.003 (0.261)
ROA	0.001** (2.453)	0.000 (0.089)	0.001 (0.943)	-0.010*** (-4.321)
BM	-0.001** (-2.282)	0.001* (1.861)	-0.001 (-0.561)	0.000 (0.088)
Observations	31,785	29,336	31,833	31,833
2nd Stage Laws?	Yes	Yes	Yes	Yes
Firm FE?	Yes	Yes	Yes	Yes
YearXState FE?	Yes	Yes	Yes	Yes

This table presents evidence on robustness checks of the effect of Non-Shareholder Constituencies Acts on payout policy. In Panel A, the dependent variable is the natural logarithm of Net Payout plus one for all columns. In Panel B, the sample is made of firms matched on their propensity to eventually adopt a NSHCA. For variable definitions, please see Appendix A. Standard errors are clustered at the state of incorporation level. \*, \*\*, and \*\*\* represent statistical significance at the 10%, 5% and 1% levels, respectively.