"There's only one thing that matters, and that's who gets to decide who sits on the board."

– Nell Minow, Cofounder of the Corporate Library[1]

1. Introduction

Major corporate scandals such as Enron and Worldcom led to swift response from the major stock exchanges to try to restore investors' confidence in the stock market. In particular, effective January 1, 2004, the National Association of Securities Dealers Automated Quotations (NASDAQ) and the New York Stock Exchange (NYSE) changed their listing requirements by requiring that companies have fully independent *nomination* committees to prevent Chief Executive Officers (CEOs) from having formal influence over director nominations. However, CEOs can still wield significant influence on director appointments. For example, Wal-Mart Stores Inc. states that the CEO usually interviews candidates for board of directors. Do stakeholders care about the board of directors' appointment? What is the financing and economic implications of having CEO's influence in this process? In this study, we examine whether a specific time series property of how board members are appointed is associated with firms' bank loan contracting. In particular, we investigate whether firms with more board members appointed after the CEO assumes office have higher cost of bank loans and more restrictive loan contracts.

Our investigation builds upon the observation of the relative timing of CEO appointment and board member appointment. CEO and board member appointment can occur at different time. Consider a hypothetical case of two scenarios. Both scenarios have identical board composition. The only difference is that in the first scenario, the CEO arrives at the board when all other members are appointed whereas in the second scenario, the CEO arrives first at the board and all

[1] Refer to the Forbes article online at: https://www.forbes.com/2011/02/04/corporate-board-reform-leadership-managing-governance.html#46e217e31d95.

other members are appointed subsequently. Is the strength of monitoring the same in the two scenarios? Do banks perceive the board members who arrive *before* and *after* the CEO's appointment differentially when writing the loan contracts?

Our study is also motivated by the anecdotes from the recent financial press. For example, Nell Minow, credited as one of the founders of the governance industry, has recently stated: "[N]o study has successfully drawn a credible connection between independence on the board and reduced risk or enhance returns. That is not because independence is unimportant. It is because our indicators of 'independence' are inadequate and flawed."[2] This statement implies that there is much information left ignored in the traditional measures of corporate board independence. The relative timing of board members versus CEO appointment captures one dimension of the board independence. Our study echoes their inquiries by probing how debt capital providers perceive the board independence and board member election process. To the extent that the creditors are also an important stakeholder of the firm and that the financing cost is ultimately levied on equity investors, it is an important empirical question how banks perceive the independence issues implied by the relative timing of board member appointment versus CEO appointment.

Ex ante, how banks perceive the relative timing of board member appointment versus CEO appointment is unclear. On the one hand, strong board monitoring improves the borrowing firm's performance, thereby reducing the cost of borrowing charged by banks. In contrast, poor governance increases the risks that rent-seeking managers would engage in excessively risky activities that endanger the wealth of the debt holders, resulting in higher cost of debt. If more directors are appointed after the current CEO is appointed, it is more likely that the CEO might have influenced the selection of directors in favor of his/her interests, impairing the strength of

[2] The quote is available at: http://ondirectorship.com/ondirectorship/2013/10/29/corporate-governance-paradigm-or-groupthink

internal governance. To the extent that the interest rates charged by banks reflect the future default risk, we hypothesize that in writing debt contracts, debt holders price the quality of a borrowing firm's governance implied by the sequence of board member appointment. Banks assess higher lending risks and require higher interest rates for firms with more board members appointed after the CEO's arrival. We refer this to the "*management hegemony*" hypothesis.

On the other hand, analytical models also show that having a management-friendly board enhances directors' advising role. For example, Adams and Ferreira (2007) show that outside directors rely on management for firm-specific information in order to provide quality advising. A highly independent board uses information disclosed by the CEO to intensely monitor the CEO and intervenes in management decisions, thereby discouraging the CEO to share information with the board. In contrast, a more management-friendly board help enhance firm value by creating an atmosphere conducive to information flows, leading to better board advising. Indeed, Kang, Liu, Low and Zhang (2018) find that firms with management friendly boards enjoy higher firm value and have more innovation outputs, captured by the number of patents and patent citations. As such, if more directors are appointed after the current CEO is appointed, the information communication and feedback will be more upfront as the CEO knows better about the directors' expertise. In return, the CEO will receive more appropriate advising from the board he has more influence in the selection and feels comfortable to work with, leading to better firm performance. Anticipating these benefits, banks will charge lower spreads to firms with more co-opted boards. We refer this as the "*informative advising*" hypothesis.

We choose to study bank loans for several reasons. First, bank loans are a major channel to finance a firm's operations. Graham, Li and Qiu (2008) show that in the flow of funds data, net debt security issuances ($780 billion) are much larger than net equity issuances ($2 billion) over

the past decade. Bradley and Roberts (2004) also report that private debt ranges from two to three times the amount of new public debt using data from 1993 to 2001. As such, understanding the determinants of bank loan pricing is of immense economic importance. Second, unlike public bond investors that are diffuse and less specialized in assessing the lending risks, banks have better access to firm-level information and have better ability to process information. This allows us to use bank loans as a powerful setting to probe how banks perceive the importance of the order of board member appointment. Third, bank loan contracting is a multi-faceted process and bank loans have both pricing (interest rate) and non-pricing (such as covenants) provisions, providing a rich environment to investigate the relationship between board co-option and bank loan contracting. Fourth, debt holders and equity investors have distinct payoff structures. While a management-friendly board atmosphere benefits a firm with higher firm value (Kang et al. 2018), it may not be in the interest of debtholders.

We follow an important study to derive the time-series property of how board members are selected, i.e., how board members are co-opted by the CEO.[3] Coles, Daniel and Naveen (2014) define board co-option as the fraction of the board comprised of directors appointed after the CEO assumed office. They find that higher levels of board co-option lead to higher CEO pay, a lower likelihood of CEO turnover after poor performance, and increased investment in tangible assets. Their findings suggest that board co-option relates to less effective monitoring. Following their studies, we calculate board co-option as the proportion of board members who joined the board after the current CEO's appointment. As a unique measure of board independence, board co-option captures the time-series property of the board of director election and appointment process. We designate a director whose arrival is after the CEO's appointment as a co-opted director by the

[3] Throughout this paper, we use board co-option and board co-option by the CEO interchangeably.

CEO. This designation assumes that the CEO can exert influence on the director selection process and that directors who join the board after the CEO's appointment (i.e., the co-opted directors) may feel a sense of allegiance to the CEO such that their effectiveness as monitors is impaired.[4]

We conduct our empirical tests using a broad sample of S&P 1,500 firms covered by RiskMetrics from 1995 to 2012 with private debt arrangements. Consistent with our expectations, we find a positive relation between board co-option and loan spreads. An interquartile increase of *co-option* is associated with an increase of 5.5 basis points in loan spreads. Our findings are robust to using an alternative board co-option measure weighted by board member tenure as well as a co-option measure based on independent directors. We also find that more co-opted boards are associated with higher likelihood of collateral requirement, higher number of covenants and financial covenants, higher covenants intensity. In addition, more co-opted boards are associated with worse credit ratings.

We next perform several cross-sectional variation tests to examine whether certain conditions moderate the effect of board co-option on the cost of bank loans. We first explore whether the moderating impact of CEO tenure on the sensitivity between board co-option and the cost of bank loans. When a CEO has been managing the firm for an extended period of time, it is more likely that the CEO is more entrenched with the firm, exhibiting more severe "management hegemony" problems. Second, we consider the effect of CEO power. When a CEO is also the chairperson of the board, consolidation of the two most senior positions will grant the highest CEO power and create a unity of command at the top of the organization. All else being equal, the board of directors has even weaker monitoring for a co-opted board. We find that the effect of board co-

[4] Prior studies show that CEOs have a tendency of appointing sympathetic board members as actions of these directors are more aligned with interests of the CEO rather than shareholders (Westphal and Zajac 1995, 1996; Gerety et al. 2001).

option on the cost of bank loans is more pronounced for firms that have CEOs with long tenures and firms that have a CEO at the same time being the board chairperson.

One major concern about this study is that the positive relation may be driven by the endogeneity nature of board co-option (Wintoki, Linck and Netter, 2012). For example, additional unobserved firm characteristics may co-determine debt contracts as well as board composition. To alleviate this concern and further identify causality, inspired by Coles et al. (2014), we take advantage of a quasi-natural experiment of the rules enacted in 2002 by NASDAQ and NYSE. Specifically, both exchanges require that all listed firms have a majority of independent directors on their board (50%). Taking advantage of the fact that firms who do not qualify for this listing requirement have to increase the number of independent directors, the selection process is by default influenced by their CEOs. We partition firms into compliant and noncompliant groups prior to the enactment. Noncompliant firms are expected to increase their independent directors after the rule takes effect and the selection of the new independent directors are likely to be influenced by the current CEO, increasing board co-option. To the extent that the passage of Sarbanes-Oxley Act (SOX) also happened in 2002, we further purge the effect of SOX by adding an interaction of a post-enactment indicator (the time indicator), a non-compliant firm indicator (the treatment indicator) as well as the board co-option measure in a "clean" design. If noncompliant firms increase their board co-option after the enactment, then the sensitivity between loan spreads and co-option would be more negative for these noncompliant firms after the enactment. We find that this is indeed the case, lending support to our results that board co-option is positively related to loan spreads.

We make several important contributions to the literature. First, we contribute to the emerging literature of investigating the economic impact of CEO's influence on director

appointment. CEOs cannot exercise formal influence on director appointment given the listing requirements of NYSE and NASDAQ that requires fully independent nominating committees in the post Sarbanes-Oxley period. The pioneering study of Coles et al. (2014) shows that higher levels of board co-option lead to higher CEO pay, a lower likelihood of CEO turnover after poor performance, and increased investment in tangible assets. However, whether the findings of Coles et al. (2014) can be extended to the bank loan contracting is an empirical issue since banks can overcome a company's governance concerns by having access to proprietary company information and increasing their monitoring efforts. Our findings speak directly to the issue of the economic impact of CEO's influence on director appointment.

Second, we add to the literature by investigating a new dimension of board independence in the cost of private loans. Prior studies (e.g., Fields et al. 2012) find that the cost of debt is inversely related to traditional measures of board quality such as board independence and board size. However, the way in which the board is formed is generally overlooked. We contribute to this line of research by employing board co-option, a measure that captures the "order" in which directors are appointed. This measure reveals time-series properties about how directors are selected and has implications about anticipated firm behaviors. We show that, in writing loan contracts, banks have to provide additional efforts to monitor the firms when the borrower's board members are co-opted by the CEO. In turn, these extra efforts are reflected in bank loan terms. Investors have to pay more expensive financing cost when their boards are co-opted by the CEO.

Third, our findings shed light on the current debate on granting investors more access to the director nomination process.[5] Referring back to the quotes by practitioners, our findings echo

[5] For example, the media criticizes the CEO of J.P. Morgan Jamie Dimon has wielded large influence over the board appointment. In particular, the Reuters said that "for years, JPMorgan Chase & Co Chairman and CEO Jamie Dimon and other executives have hand-picked new directors, in a practice that is now unusual for a major U.S. bank. Selecting directors in this way can create the appearance that the board may be too close to Dimon and his senior management team."

their assertions that stakeholders should indeed care about the process how board directors are selected and appointed to the company. In particular, the importance of board composition and access to director nominations is highlighted in the Sarbanes-Oxley Act of 2002 (SOX).[6] Our study provides evidence of the benefits from having less co-opted boards, i.e., more favorable terms of loan financing from banks. In contrast, shareholders from co-opted firms are paying higher cost of loans to fund their operations.

The rest of the paper proceeds as follows. Section 2 discusses the prior literature and develops the hypotheses. Section 3 outlines the variable construction and sample selection process. Section 4 discusses the main empirical results. Section 5 provides additional analyses and Section 6 concludes.

2. Prior literature and hypotheses development

The board of directors is expected to monitor the actions of managers (Jensen and Meckling 1976; Shleifer and Vishny 1997; Armstrong et al. 2010). Prior studies have developed measures to capture the intensity of board monitoring. For example, Ryan and Wiggins (2004) use the proportion of outside or independent directors on the board to measure board independence. Ferris, Jagannathan and Pritchard (2003) calculate the number of directorship held for an individual to measure "busyness" of a given director. While these measures have their empirical appeals, they generally overlook the specific fashion how the board directors are chosen. CEOs can influence the director selection process both directly, by controlling which board members are nominated, and indirectly, by using "subtle political tactics" (Tosi et al. 2003).

[6] We refer to the detailed discussion in Cassell et al. (2016). Specifically, in 2010, the SEC adopted Exchange Act Rule 14a-11, which would have required companies to include shareholder nominated directors in the proxy materials, but the U.S. Court of Appeals repealed Rule 14a-11 in July of 2011 (SEC 2012). Although Rule 14a-11 was repealed, shareholders can presumably use Rule 14a-8 to influence the director nomination process because Rule 14a-8(i)(8) requires companies to include any shareholder proposal that would amend or request an amendment to a company's director nomination procedures or disclosures.

On the one hand, the most important role of a corporate board is to monitor managerial behaviors. The managerial hegemony literature in organizational behaviors suggests that the monitoring effectiveness of boards can be compromised due to the specific way board of directors are selected. Specifically, theory suggests that managers have implied, rather than formal, power over board members (Mace 1971; Herman 1981). In addition, the institutional theory view also shed lights on the effectiveness of board of directors monitoring. With a board of directors chosen with substantial influence from the CEO, the organizational structures may become symbolic displays of conformity and social accountability (Kalbers and Fogarty 1998).

Coles et al. (2014) develop an innovative measure to capture the potential influence from the CEO in the board of directors' appointment process. Specifically, by focusing on the order of board members arrivals, they measure board co-option as the proportion of directors who joined the board after the CEO's appointment. They argue that a board with more directors who arrive after the current CEO's appointment signifies greater tendency to compromise the CEO's decisions. Indeed, they find a positive relation between board co-option and both CEO pay and investment in tangible assets and a negative relation between board co-option and CEO turnover following poor performance. They interpret these results as suggesting that higher levels of board co-option lead to less effective board monitoring. Relatedly, Cassell et al. (2016) investigate the relation between audit committee co-option and financial reporting quality. Consistent with the idea that a more co-opted audit committee provides less effective monitoring in financial reporting, they find a positive relation between the audit committee co-option and the incidence of misstatements and a positive relation between audit committee co-option and absolute discretionary accruals, a proxy for earnings management.

In writing debt contracts, the lenders carefully examine the potential borrowing risks stemming from the default risk and information risk. Due to the agency conflicts, to extract private benefits, opportunistic managers may engage in projects that are excessively risky or divert cash away externally from the firm. These activities may create future default risks if the borrower cannot make debt payment and the likelihood of defaults due to managerial opportunism will adversely affect the loan pricing when banks lend funds. Strong board monitoring alleviates the risks that rent-seeking managers would engage in such activities that endanger the wealth of the debt holders.

The time series properties of the appointment of board of directors reveal the strength of internal governance. For example, if more directors are appointed after the current CEO is appointed, it is more likely that the incumbent CEO might have influenced the selection of directors in favor of his/her interests. This in turn will affect the strength of internal governance. Decisions that are in line with the CEO's personal preference are more likely to be approved, which is likely to endanger other stakeholders' interest. The likelihood of tunneling incentives also increases with more co-opted boards. As such, as an outside monitor, the bank perceives heightened default risks and has to exert more efforts in monitoring the firm to assure that the CEO behaves. In return, the bank will demand a higher loan spread to compensate for the additional monitoring of co-opted firms. In contrast, when lending funds to a firm with more directors appointed before the CEO's arrival, the bank will spend less effort as these firms can get internal monitoring from its board of directors themselves. To the extent that the selection of directors are less likely to be influenced by the current CEO, decisions that are in line with the CEO's personal preference are more likely to be vetoed, resulting in more effective monitoring. More effective

monitoring from the board may alleviate the monitoring need for the banks. Reduced efforts in bank monitoring will lower the loan spread charged by banks.

On the other hand, the role of the board also includes advising. Analytical models also show the benefits of management-friendly boards in providing more effective advising. For example, endogenizing information disclosure in the model, Adams and Ferreira (2007) show that having "friends" on the corporate board encourages timely information disclosure to directors. Because outside directors rely on management for firm-specific information in order to provide quality advising, an independent board use information disclosed by the CEO to intensely monitor the CEO and intervene in management decisions. Anticipating these adverse effects, the CEO may be reluctant to share information with the board to avoid unwanted intervention. In contrast, a more management-friendly board may help enhance firm value by creating an atmosphere conducive to information flows, leading to better board advising. Following this line of reasoning, if more directors are appointed after the current CEO is appointed, the information communication and feedback will be more upfront as the CEO knows better about the directors' expertise. In return, the CEO will receive more appropriate advising from the board he/she has influenced its selection and feels comfortable to work with, leading to better firm performance. Anticipating these benefits, banks will charge lower spreads to firms with more co-opted boards.

The two explanations offer competing predictions. We refer the first explanation as the *managerial hegemony* hypothesis and refer the second explanation as the *informative advising* hypothesis. We state the two competing hypotheses in the alternative form as follows:

H1a (*managerial hegemony*): Firms with more co-opted boards have higher loan spreads.

H1b (*informative advising*): Firms with more co-opted boards have lower loan spreads.

3. Main variable construction and sample selection

3.1. Main variable construction

We obtain raw corporate governance variables from RiskMetrics. Specifically, we match firm IDs and director IDs in RiskMetricks with firm-level characteristics in Compustat using the procedures outlined in Coles et al. (2014). To the extent that firms hold meetings at different points in a year, we calculate our co-option measure at different meeting dates and then match the loan contracts with the co-option measure immediately before the loan's origination time.

Our first co-option measure *Co-option* is defined as the number of board members who joined the board after the current CEO's appointment divided by the number of board members. Mathematically, it is expressed as:

$$Co-option = \frac{\#Co-opted directors}{Board size}$$

where the denominator (*Board size*) is the total number of board members and the numerator (*# Co-opted directors*) refers to the number of board members who joined the board after the current CEO's appointment.

To assess the sensitivity of our results, we also calculate two additional co-option measures. Specifically, the second measure *TWCo-option* is referred to as the tenure-weighted co-option. *TWCo-option* is defined as the number of years served on the board by board members who joined the board after the current CEO's appointment divided by the number of years served by all board members. While the first co-option measure treats different co-opted directors identically, *TWCo-option* assigns a higher weight for co-opted directors that have longer tenure within the firm. In other words, firms with co-opted directors, who have longer tenures in a given company, have more severe board co-option problems. Mathematically, it is expressed as:

$$TWCo-option = \frac{\sum_{i=1}^{boardsize} Tenure_i * Co-opted\ director\ indicator_i}{\sum_{i=1}^{boardsize} Board\ tenure}$$

While the first two co-option measures investigate the effect of co-option from all board of directors, the third co-option measure probes the degree of board co-option for independent directors. We define *Co-option-ind* as the number of independent board members who joined the board after the current CEO's appointment divided by the number of board members. Mathematically, this is expressed as:

$$Co-option-ind = \frac{\#Co-opted independent directors}{Board size}$$

By construction, all co-option measures are bounded between 0 and 1. A higher co-option measure indicates a board with more members arriving at the board after the CEO takes office. We designate a board with a higher co-option value as a board co-opted by the CEO, or a co-opted board. In our follow-up empirical analysis, while we base our inferences on the first co-option measure, we also use the other two measures as additional robustness checks.

3.2. Sample selection

We merge the RiskMetrics database with the bank loan data from Loan Pricing Corporation's (LPC) DealScan using the linking table provided by Michael Roberts at Wharton. To align loan initiation dates with the meeting dates, we require that the loan initiation dates fall between two consecutive meeting dates for a given firm and use the board co-option measures from the previous meeting to proxy the board co-option for these loans.[7] As such, the cooption measure best captures the board composition at the time of a loan's origination. In addition, we

[7] For example, a company holds meetings on February 10, 2005 and February 7, 2006. We assign the board co-option measures as of February 10, 2005 to all loans issued between February 10, 2005 and February 7, 2006.

apply the following data filters: (1) the firm must have at least one bank loan issued within a fiscal year; (2) the loans are denominated in U.S. dollars; (3) the following information about the loans is available: all-in-drawn spreads, the covenant type, the performance pricing type, the maturity, the offering amount, the loan type (i.e., term loan, revolver greater than one year, revolver less than one year, and 364-day facility), and the primary purpose. Our final sample has 9,825 observations at the facility-level and 7,492 observations at the package-level, covering 17 years from 1996 to 2012.[8]

4. Empirical design and results

4.1. The regression framework

We investigate the impact of co-opted boards on bank loan contracting. Specifically, we estimate the relation between board co-option and cost of bank loans using the following specification:

$$Log(Loan\ spread) = \alpha + \beta_1 Co\text{-}option\ measure + Firm\ characteristics\ controls + Loan\ characteristics\ controls + Board\ characteristics\ controls + Industry\ fixed\ effects + Year\ fixed\ effects + \varepsilon \quad (1)$$

where *Loan spread* is defined as all-in-drawn spread, i.e., the sum of upfront fees, spread over LIBOR, utilization fee, annual fee specified in a facility at the inception of the facility. Following the convention, we take the natural logarithm of the loan spread as the dependent variable so that the equation is in a semi-elastic form.

Drawing from the debt pricing literature (e.g., Qian and Strahan, 2007; Boubakri and Ghouma, 2010; Qi et al., 2010), we control for firm characteristics and loan characteristics. Specifically, we include *Firm Size* (the natural logarithm of market value of equity), *ROA* (the

[8] We end our sample in 2012 because the latest linking table from Professor Michael Roberts at Wharton ends in 2012.

earnings before extraordinary items and discontinued operation divided by the total assets), *BTM* (the book-to-market ratio), *Leverage* (the sum of long-term debt plus debt in current liabilities divided by total assets, *Tangibility* (the net property, plant and equipment divided by total assets, *Z-score* (the Altman's Z-score), and *Std(CFO)* (the standard deviation of net operating cash flow minus extraordinary items and discontinued operations scaled by lagged total assets over the past five years). To further make sure that the relation between loan contracts and board co-option does not go through financial reporting quality (i.e., Cassell et al. 2016), we include *Accounting Quality* (defined as the residual term from the Dechow and Dichev (2002) model). In the loan characteristics control list, we include whether the loan is subordinated (*subordinate*), performance pricing (*Performance Pricing*), number of facilities (*# of Facilities*), the natural log of the number of months to maturity (*Ln(Maturity)*), loan amount (*Loan amount*), and number of lenders (*# of lenders*).

Drawing from prior studies (for example, Anderson et al. 2003; Bhojraj and Sengupta 2003; Masulis and Mobbs 2014), we control for several governance related variables in the regression. Specifically, we include *Board Size* (the total number of directors on board), *Independence* (the number of independent directors, divided by the total number of directors on board), *Blockholder* (an indicator variable equal to one if there is at least one blockholder owning more than 10% of the firm's shares, and zero otherwise). We also include *Advisory Presence* (the percentage of board members with outside executive positions (CEO and CFO)) to control for the advisory role from senior management outside the firm. To control for the experience of directors, we include *Experienced Directors* (the percentage of board members with more than 15 years of service on the board). To control for the effect of lack of efforts due to multiple seats on different firms (Ferris and Jagannathan 2003), we include *Busy Directors* (the percentage of board members with more

than four other board appointments). Finally, to control for the potential effect of female directors, we include *Women directors* (the percentage of female board members).

Following prior studies (e.g., Houston, Jiang, Lin and Ma 2014), we include industry and year fixed effects to absorb any industry-wide or time-related variations in the loan prices. We define industry memberships using the Fama-French 48 industry classifications (Fama and French, 1997). We use bank type fixed effects to differentiate whether there is at least one investment bank lender, one U.S. bank lender or one foreign bank lender. We also use loan type fixed effects and loan purpose indicators. The appendix provides the detailed descriptions of variable definitions.

4.2. Main results

Table 1 presents the summary statistics of the main dependent and independent variables. Similar to Coles et al. (2014), the average *Co-option* is 0.455. This indicates that on average, around 45.5% of the board members are appointed after the CEO's arrival. The average *TWCo-option* is 0.314, similar to the mean *TWCo-option* reported in Coles et al. (2014). The average *Co-option-ind* is 0.373, meaning that approximately 37.3% of the independent directors are appointed after the CEO takes office. This number casts doubts on whether these independent directors are truly "independent", given the possibility that their appointment to the board may have been influenced by the CEO.

Table 1 also reports the loan characteristics studied in the sample. We calculate loan spreads at the facility-level and calculate loan covenants at the package-level. For example, on average, the loan spread is 139.553 basis points and a loan package is associated with 1.36 covenants. Regarding corporate governance characteristics, the median board size is 8.000 members while the mean board independence level is 0.711. The observation that the majority of the board members are independent is consistent with our sample choice decision. After 2002,

both NASDAQ and NYSE require that all listed firms have a majority of independent directors on their board. We have more years after this requirement than pre-requirement years.

Table 2 presents the correlation table. Most importantly, *Loan spread* and *Co-option* is positively correlated. The correlation between *Loan spread* and *TW Co-option* and the correlation between *Loan spread* and *Co-opt Independence* are also positive and significant at the 1% level. This evidence is consistent with the "*management hegemony*" hypothesis. Interestingly, the correlation between *Co-option* and *Independence* is indistinguishable from zero. This indicates that *Co-option* and *Independence* may capture distinct facets of corporate governance. Having more members that are independent from the firm implies very little about the board co-option.

Table 3 presents the OLS results of regressing loan spreads using the main co-option measure. The dependent variable is defined as the natural logarithm of all-in-drawn loan spreads at the facility-level. In column (1), we include firm characteristics, loan characteristics and industry and year fixed effects while we add additional corporate governance controls in column (2). In column (1), the coefficient on *Co-option* is 0.0629 with a *t*-value of 2.30, statistically significant at the 5% level. On average, an interquartile increase of *co-option* is associated with 3.93% increase in loan spreads (i.e., 5.5 basis points applying the mean loan spreads).[9] This is consistent with the management hegemony hypothesis that firms with more co-opted boards pay higher interest rates for bank loans. Column (1) also shows that control variables are generally estimated with expected signs. Firms that are larger, more profitable, with higher asset tangibility, and distant from default have lower loan spreads. Firms with higher book-to-market ratio, higher leverage and more volatile cash flows have higher loan spreads. On average, loans with more facilities have higher spreads. Longer maturity loans and larger amounts have lower spreads. In column (2), the

[9] The regression equation is in a semi-elastic form. We calculate the 3.93% increase by doing 0.0629*(0.750 – 0.125).

coefficient on *Co-option* remains positive and statistically significant at the 5% level after controlling for corporate governance variables such as board size and board independence. Similar to the findings in Fields et al. (2012), firms with larger board size have lower loan spreads. Firms with board members with outside executive positions and firms with more experienced directors have lower loan spreads. The percentage of female directors and the percentage of busy directors do not seem to affect loan spreads at the conventional level.

To summarize, the results in Table 3 are generally consistent the management hegemony hypothesis that loan spreads demanded by banks are higher for firms with more severe board co-option problems.

4.3. Cross-sectional variations

We next perform several cross-sectional variation tests to examine whether certain conditions moderate the effect of board co-option on the cost of bank loans. We first explore whether the CEO tenure increases the effect of board co-option. As argued in Berger, Ofek and Yermack (1997), the CEO tenure measures the degree to which a CEO has control over the internal monitoring mechanism. As the CEO tenure gets longer, it is likely that the internal monitoring mechanism gets impaired, exhibiting more severe management hegemony problems. In that case, a firm with high board co-option would imply that the CEO may have influenced the way the directors are selected, in order to make his entrenchment persist. Compared with a firm with a shorter CEO tenure, the potential threat to the banks' fund would be higher for a firm with a longer CEO tenure. Thus, we expect that the lender's concern of the default risk would be more salient in the case of a weakened internal governance system. As a result, we expect that the relation between the loan spreads and board co-option is more pronounced for firms with longer CEO tenures.

We present the results in Panel A of Table 4. We split the sample by the median CEO tenure (i.e., 6 years). In column (1), the coefficient on *Co-option* is positive but statistically indistinguishable from zero for firms with shorter CEO tenures. In column (2), the coefficient on *Co-option* is positive and statistically significant at the 5% level. The difference in the coefficients in columns (1) and (2) is statistically significant at the 10% levels.

Second, we consider the effect of CEO power. When a CEO is also the chairperson of the board, consolidation of the two most senior positions will grant the highest CEO power. The joint appointment creates a unity of command at the top of the organization, creating the more severe "Yes man" problem. All else being equal, the board of directors has even weaker monitoring for a co-opted board when the CEO has higher power.

To empirically capture CEO power, we use the presence of *CEO duality* and partition the sample into a non-CEO-duality subsample and a CEO-duality subsample. We present the results in Panel B of Table 4. In column (1), the coefficient on *Co-option* is positive but statistically indistinguishable from zero for firms with no CEO duality. In column (2), the coefficient on *Co-option* is positive and statistically significant at the 5% level for firms with CEO simultaneously serving as the chairperson of the board. The difference in coefficient estimates is also marginally statistically significant at the 10% levels, consistent with the idea that the relation between the loan spreads and board co-option is more pronounced for firms with high CEO power.

4.4. Robustness analyses

4.4.1 Alternative measures of board co-option

Table 3 presents the results of estimating loan spreads on the main co-option measures. To assess the sensitivity of our results, we employ the other co-option measures: the tenure-weighed

co-option *TWCo-option* and independent director co-option *Co-option-ind*. While the main co-option measure treats different co-opted directors identically, *TWCo-option* assigns a higher weight for co-opted directors that have longer tenure within the firm, accounting for the possibility that co-option problem is more severe when the co-opted director has long tenure in the firm. *Co-option-ind* captures the degree of board co-option for independent directors. We present the results in Panel A of Table 5. In column (1), the coefficient on *TWCo-option* is positive and statistically significant at the 5% level. In column (2), the coefficient on *Co-option-ind* is positive and statistically significant at the 10% level. Taken together, we conclude that our main results that firms associated with co-opted board are associated with higher cost of bank financing are robust to the use of alternative co-option measures.

4.4.2 Alternative measures of financial reporting quality

In equation (1), we use the residual term from the modified Dechow and Dichev (2002) model as a proxy for financial reporting quality, to isolate the effect of board co-option on the cost of bank loans from the effect of financial reporting quality (Cassell et al. 2016). To the extent that different proxies may capture different aspects of financial reporting quality, in Panel B of Table 5, we repeat the analysis with other commonly used financial reporting quality measures. Specifically, we use two proxies based on reported numbers from the financial statements. In column (1), we use *Minus Accruals Quality*, defined as negative one times the standard deviation of the firm-level residuals from the modified Dechow and Dichev (2002) model over the five-year rolling window. In column (2), we use *Minus Abs*(*DDresid*), defined as negative one times the absolute value of the firm-level residual from the modified Dechow and Dichev (2002) model. To further capture the idea that disclosure quality in the annual 10-K filings also affects the cost of borrowing (Ertugrul, Lei, Qiu and Wan, 2017), we include two linguistically-based measures. In

column (3), *Readability Index* is the 10-K readability, calculated as 206.835–1.015*(#words/#sentences)–84.6*(#syllables/#words)). In column (4), *Uncertainty* is the percentage of uncertain words in the 10-K filings. We follow Loughran and McDonald (2010) to designate a list of key words, such as approximate, contingency, depend, fluctuate, indefinite, uncertain, etc. Higher *Minus Accruals Quality*, *Minus Abs*(*DDresid*), and *Readability Index* represent higher financial reporting quality. Panel B of Table 5 presents the results after controlling for alternative financial reporting quality measures. We find that higher financial reporting quality is generally associated with lower loan spreads. Firms that disclose more uncertainty in their 10-K filings have higher loan spreads. Most importantly, we continue to find a negative association between board co-option and loan spreads.

5. Additional analyses

5.1. Evidence from a quasi-natural experiment

One major concern about the previous analysis is that the results may suffer from endogeneity issues. For example, certain unobserved firm characteristics may at the same time determine both the board co-option and the cost of debt. To alleviate this concern, we take advantage of a quasi-natural experiment of the rules enacted in 2002 by the NASDAQ and the NYSE.

Specifically, the NYSE and the NASDAQ approved the proposals that require a majority of independent directors on their boards in August 2002 and October 2002, respectively. Given the fact that firms that do not satisfy this requirement have to increase the number of their independent directors, this offers a quasi-natural shock to the board co-option. Non-compliant firms have to increase the number of independent directors and the new directors are appointed to

those firms after the CEO's arrival, leading to an increase in board co-option. In contrast, compliant firms do not have to increase their independent directors to qualify for the requirement.

To operationalize the test, we first identify firms to be non-compliant if they are listed in the NASDAQ or the NYSE but fail to satisfy the requirement for majority of independent directors. Specifically, we use an indicator variable *Non-compliant* that takes a value of one to describe firms that did not satisfy the requirement using board information in 2001 prior to the natural experiment. We use an indicator variable *Post* that takes a value of one to describe loans that are issued after the requirement takes effect. As such, we are able to exploit the effect of this experiment using a difference-in-differences design. All unobserved firm characteristics are held constant before and after the listing requirement change.

The standard difference-in-differences design has caveats in this setting. The classic difference-in-differences design estimates the following equation:

$$Log(Loan\ spread) = \alpha + \beta_1 Post + \beta_2 Non\text{-}compliant + \beta_3 Post^{*}\ Non\text{-}compliant + controls + \varepsilon \quad (2)$$

Conventionally, β_3 would be the coefficient of interest. However, it may not be appropriate here because the change in listing requirement coincides with the passage of Sarbanes-Oxley (SOX). The Sarbanes–Oxley was approved on July 24, 2002 and was enacted on July 30, 2002. It is important to note that SOX may have its own effect on loan spreads. In other words, β_3 combines both the effect through the increase of board co-option and the standalone effect of SOX itself. Following the methodology described in Coles et al. (2014), we design our test to allow for a direct channel for SOX to affect loan spreads. Specifically, we estimate:

$$Log(Loan\ spread) = \alpha + \beta_1 Co\text{-}option + \beta_2 Post^{*}\ Co\text{-}option + \beta_3 Non\text{-}compliant^{*}Co\text{-}option + \beta_4 Post^{*}Non\text{-}compliant^{*}Co\text{-}option + \beta_5 Post + \beta_6 Non\text{-}compliant + Controls + \varepsilon \quad (3)$$

In equation (3), we interact both *Post* and *Non-compliant* with *Co-option*. This specification isolates the impact due to increase in *Co-option* for non-compliant firms after the requirement takes effect (β_4) from the impact due to SOX itself.[10] In other words, because co-option will increase for *non-compliant* firms in the *post-requirement* period, β_4 measures the increase in the *additional* sensitivity between loan spreads and co-option for *non-compliant* firms in the *post-requirement* period. We present the results in Panel B of Table 6. For the purpose of comparison, we also estimate the classic difference-in-differences design in column (1) but we give more emphasis on the augmented design in column (2), i.e., the "clean" regression.

Table 6 presents the results using this quasi-natural experiment. We first validate the use of this experiment and probe whether co-option measures increase after the adoption of the listing requirement. Panel A of Table 6 presents the mean of board independence and co-option measures prior to and after the change of listing requirement for compliant and non-compliant firms partitioned based on information in 2001. We have 512 observations from non-compliant firms and 2,747 observations from compliant firms using board information in 2001, respectively. It is obvious that non-compliant firms increase their board independence from 0.38 to 0.57. The board independence for compliant firms remains relatively constant. More importantly, all co-option measures increase for non-compliant firms after the change of listing requirement. For example, *co-option* increases from 0.49 to 0.59 by 0.10 for non-compliant firms.

Panel B of Table 6 presents the regression results. We first estimate the classic difference-in-differences model in column (1). As expected, the coefficient on *Post*Non-compliant* is positive and statistically significant at the 10% level, suggesting that firms that do not qualify for the new listing requirement but have to increase their independent directors experience higher loan

[10] We appreciate the excellent exposition in Coles et al. (2014).

spreads after the requirement. This estimation, however, does not isolate the effect of SOX and the effect of the listing requirement through the increase of board co-option. In the augmented design, we represent a "cleaner" estimation by allowing for the direct effect of SOX on loan spreads. Now, only the effect of the listing requirement on *Co-option* is captured by the coefficient on *Post*Non-compliant*Co-option* (β_4). In column (2), the coefficient on *Post*Non-compliant*Co-option* is positive and statistically significant at the 10% level. This suggests that loan spreads are significantly higher when the board co-option measure increases due to the new listing requirement in NASDAQ and NYSE.

5.2. The effect of board co-option on non-pricing terms of bank loans

In this subsection, we examine the effect of board co-option on other non-pricing provisions of bank loans. Specifically, we ascertain the effect of board co-option on the use of collaterals, the number of loan covenants and covenant intensity. To the extent that firms with more board co-option require more outside monitoring from banks, we expect that firms with more co-opted boards are more likely to have secured loans, restricted by more covenants and the covenants are more intensive.

Specifically, we employ *Secured loan*, defined as an indicator variable that takes the value of one if the loan is secured by collateral, and zero otherwise; *# of Covenants*, defined as the number of covenants at the inception of the loan package; *# of Financial Covenants*, defined as the number of financial covenants at the inception of the loan package; *Covenant Intensity*, defined as the covenant intensity index (Bradley and Roberts, 2004, i.e., the sum of six covenant indicators: collateral, dividend restriction, more than two financial covenants, asset sales sweep, equity issuance sweep, and debt issuance sweep); As we calculate *Secured loan* on the facility-level and

# of Covenants, *# of Financial Covenants* and *Covenant Intensity* at the package-level, we use slightly different control variables and fixed effects.

We tabulate the results in Panel A of Table 7. The coefficient on *co-option* is positive and statistically significant at the 10% level or better in all columns. We interpret these findings as consistent with firms with more co-opted boards being more likely to have secured loans, loans with more covenants, loans with more financial covenants and loans with more intensive covenants.

5.3. The effect of board co-option on credit ratings

In this subsection, we probe how other market participants, i.e., credit analysts, perceive the board co-option. Specifically, we look at whether board co-option has an impact on the credit ratings provided by the credit rating agency. To the extent that a more co-opted board signifies more lending risks and more need to monitor, firms with more board co-option are expected to have worse ratings. We use the Standard and Poor's long-term credit rating for corporate debt as the dependent variable. We use the index of 1 to 23 to indicate the S&P domestic debt credit rating, for AAA through D-rated debt. The lower the number, the better the rating and the lower the credit risk. We present the results in Panel B of Table 7. For the sake of brevity, we include all control variables but only present the coefficient of interest. The coefficient on *Co-option* is positive and statistically significant. We conclude that the higher the board co-option, the higher the credit risk assessed by the credit rating agency.

6. Conclusion

We study the effect of board co-option by the CEO on bank loans, where board co-option is measured as the proportion of board members who joined the board after the appointment of the

current CEO. Theory offers two competing hypotheses: the "*management hegemony*" and the "*informative advising*" hypotheses. Using a sample of bank loans from 1996 to 2012, we find that firms with more co-opted boards have higher loan spreads, consistent with the "management hegemony" hypothesis that banks have to spend more efforts in monitoring when the internal monitoring mechanism is less effective. Our cross-sectional tests reveal that the effect of board co-option on the cost of bank loans is more pronounced for firms that have longer CEO tenures and firms that have CEO at the same time being the board chairperson. To further identify causality, we exploit the setting of the change in listing requirement by the NASDAQ and the NYSE. We find that loan spreads are significantly higher when the board co-option measure increases due to the new listing requirement in the NASDAQ and the NYSE. We also find a positive relation between board co-option and non-pricing terms of bank loans. More co-opted boards are associated with higher likelihood of collateral requirement, higher number of covenants and financial covenants, and higher covenants intensity. We further find that more co-opted boards are associated with worse credit ratings.

We contribute to the understanding of the economic consequence of having CEO influence on board of directors. We also contribute to the emerging literature on board co-option by providing evidence from the perspective of private loan originators. We further add to the literature linking strong board governance to lower cost of debt (Bhojraj and Sengupta, 2003, Anderson et al., 2004; Fields et al., 2012). Our study highlights the importance of building a board that will receive the most monitoring from its board members. Our findings should be of interest to regulators, investors, and other stakeholders.

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Appendix: Variable definitions

Variables	Definitions
Dependent Variables	
Loan Spreads	The natural log of loan spreads. Loan spreads are all-in-drawn spread expressed in basis points. The all-in-drawn spread is the sum of upfront fees, spread over LIBOR, utilization fee, annual fee specified in a facility at the inception of the facility.
Variables of Interest	
Co-option	Number of co-opted directors, divided by total number of directors on board.
TW Co-option	Tenure-weighted co-option measured as sum of tenure of co-opted directors divided by the sum of tenure of all directors.
Co-opt Independence	Number of co-opted independent directors divided by board size.
Loan characteristics	
Subordinate	An indicator variable that takes a value of one for subordinate debt, and zero otherwise.
Performance Pricing	An indicator variable equal to one if the loan facility uses performance pricing and zero otherwise.
# of Facilities	The number of loan facilities in the package.
Loan maturity	Natural logarithm of loan maturity in months.
Loan amount	Natural logarithm of loan offering amount.
# of Lenders	The number of loan lenders.
Secured Loan	An indicator variable that takes a value of one if the loan is secured by collateral, and zero otherwise.
# of Covenants	The total number of financial and net worth covenants at the inception of the loan package.
# of Financial Covenants	The total number of financial covenants at the inception of the loan package.
Covenant Intensity	The covenant intensity index (Bradley and Roberts 2004), which is the sum of six covenant indicators (collateral, dividend restriction, more than two financial covenants, asset sales sweep, equity issuance sweep, and debt issuance sweep).
Corporate Governance Characteristics	
Board Size	The total number of directors on board.
CEO Duality	An indicator variable equals to one if CEO is also the Chairman, and zero otherwise.
Independence	The number of independent directors, divided by total number of directors on board.
Blockholder	An indicator variable equals to one if there is at least one block holder owning more than 10% of the firm's shares, and zero otherwise.
Advisory Presence	The percentage of board members with outside executive positions (CEO and CFO).
Experienced Directors	The percentage of board members with more than 15 years of service on the board.
Busy Directors	The percentage of board members with more than four other board appointments.
Women Directors	The percentage of female board members.
CEO Tenure	The number of years as being CEO of the firm.
Firm Characteristics	
Firm Size	The natural logarithm of market value of equity.
ROA	Earnings before extraordinary items and discontinued divided by the total assets.
Book-to-market	The book value of common equity divided by market value of equity.
Leverage	The sum of long-term debt plus debt in current liabilities, divided by total assets.
Tangibility	Net Property, plant and equipment divided by total assets.
Altman's Z-score	For manufacturing firms, Altman's Z-score = [4.34+0.08×working capital/total assets-0.04×retained earnings/total assets+0.1×EBIT/total assets+0.22×market value of equity/book value of total liabilities-0.06×sales/total assets] (Hillegeist, Keating, Cram and Lundstedt 2004); for non-manufacturing firms, Altman's Z-score = [6.56×working capital/total assets + 3.26×retained earnings/total assets + 6.72×EBIT/total assets + 1.05×book value of equity/book value of total liabilities] (Altman 2000).
Accounting Quality	This variable is calculated as negative one times the residual from the modified Dechow and Dichev (2002) model. We estimate the following regression for each year and each industry: $\Delta WC_t=\beta_0+\beta_1 CFO_{t-1}+\beta_2 CFO_t+\beta_3 CFO_{t+1}+\beta_4(\Delta Rev_{i,t}-\Delta AR_{j,t})+\beta_5 PPE_{i,t}+\varepsilon$, where *CFO* is firms' cash flows from operations, *Rev* is sales, *AR* the account receivable and *PPE* is net PP&E, all scaled by lagged total assets.

Std(OCF)	Standard deviation of net operating cash flow minus extraordinary items and discontinued operations scaled by lagged total assets over the past five years (including the current year).
Minus Accruals Quality	This variable is calculated as negative one times the standard deviation of a firm's residuals from the modified Dechow and Dichev (2002) model over the five-year rolling window.
Minus Abs(*DDresid*)	This variable is calculated as negative one times the absolute value of the residual from the modified Dechow and Dichev (2002) model.
Readability Index	This variable captures 10-K readability and is calculated as 206.835 - 1.015 * (#words / #sentences) -84.6* (#syllables / #words).
Uncertainty	The proportion of uncertainty words as defined in Loughran and McDonald (2011).
Credit Rating	We use the index of 1 to 23 to indicate the S&P domestic long-term debt credit rating, from AAA to D rated debt.

Table 1: Summary Statistics

This table presents the summary statistics for all the variables used in the paper. The sample period is 1996 to 2012. Definitions of all variables are reported in Appendix.

	N	Mean	P25	Median	P75	Std.
Variables of Interest						
Co-option	6255	0.455	0.125	0.429	0.750	0.350
TW Co-option	6255	0.314	0.021	0.182	0.529	0.339
Co-opt Independence	6255	0.373	0.100	0.333	0.625	0.299
Loan facility-level variables						
Log(Spread)	9825	139.553	50.000	110.000	200.000	118.377
Subordinate	9825	0.000	0.000	0.000	0.000	0.020
Performance Pricing	9825	0.532	0.000	1.000	1.000	0.499
Loan Maturity	9825	3.562	2.485	3.932	4.094	0.724
Loan Amount	9825	5.608	4.828	5.704	6.397	1.222
Secured Loan	9825	0.328	0.000	0.000	1.000	0.470
Loan package-level variables						
# of Facilities	7492	1.339	1.000	1.000	2.000	0.687
# of Lenders	7492	10.320	4.000	8.000	14.000	7.775
# of Covenants	7492	1.360	0.000	1.000	2.000	1.340
# of Financial Covenants	7492	1.193	0.000	1.000	2.000	1.177
Covenant Intensity	7492	1.529	0.000	1.000	2.000	1.754
Firm Characteristics						
CEO Duality	6255	0.687	0.000	1.000	1.000	0.464
Board Size	6255	7.690	6.000	8.000	9.000	2.348
CEO Tenure	6255	7.471	3.000	6.000	10.000	6.109
Independence	6255	0.711	0.615	0.750	0.846	0.166
Blockholder	6255	0.108	0.000	0.000	0.000	0.310
Advisory Presence	6255	0.093	0.000	0.071	0.154	0.114
Experienced Directors	6255	0.146	0.000	0.111	0.250	0.155
Women Directors	6255	0.106	0.000	0.100	0.167	0.089
Busy Directors	6255	0.024	0.000	0.000	0.000	0.054
Firm Size	6255	8.003	6.929	7.912	9.078	1.440
ROA	6255	0.044	0.022	0.046	0.079	0.073
Book-to-market	6255	0.514	0.276	0.448	0.663	0.629
Leverage	6255	0.271	0.159	0.269	0.371	0.159
Tangibility	6255	0.337	0.146	0.275	0.511	0.234
Altman's Z-score	6255	3.678	2.130	4.426	4.800	1.933
Accounting Quality	6255	-0.038	-0.047	-0.029	-0.017	0.032
Std (CFO)	6255	0.047	0.022	0.036	0.060	0.038
Minus Accruals Quality	6255	0.001	-0.023	-0.002	0.019	0.055
Minus Abs (DDresid)	6255	0.034	0.009	0.021	0.042	0.044
Readability Index	5201	25.534	23.096	25.551	28.027	3.717
Uncertainty	5201	0.013	0.011	0.014	0.016	0.003

Table 2: Correlation matrix

This table presents the Pearson/Spearman correlation matrix. Pearson's (Spearman's) correlation coefficients are presented in the lower (upper) triangle. Definitions of all variables are reported in Appendix. ***Bold*** indicates significance at the 10% level or better.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Loan Spread (1)		**0.13**	**-0.33**	**-0.34**	**0.20**	**0.18**	**-0.05**	**-0.18**	**-0.21**	**0.17**	**0.02**	0.02	**0.25**	**0.25**	**-0.33**	**-0.16**
Co-opt Ind (2)	**0.12**		0.00	**0.03**	**0.04**	**-0.06**	**-0.05**	0.01	0.01	**0.02**	0.00	**0.02**	0.00	**0.05**	0.00	-0.01
Firm Size (3)	**-0.32**	0.00		**0.05**	**-0.05**	**0.24**	**0.18**	**-0.27**	**0.28**	**-0.31**	0.00	**-0.13**	**0.06**	**-0.16**	**0.65**	**0.41**
ROA (4)	**-0.38**	**0.03**	**-0.06**		**-0.19**	**-0.26**	**-0.05**	**0.34**	**0.26**	**-0.08**	0.00	**0.05**	**-0.07**	0.02	**0.15**	**0.04**
Book-to-market (5)	**0.29**	**0.06**	**-0.07**	**-0.45**		-0.01	**0.05**	**-0.05**	**0.03**	0.01	0.00	0.00	-0.01	0.00	**-0.09**	**-0.05**
Leverage (6)	**0.17**	**-0.05**	**0.24**	**-0.37**	0.05		**0.26**	**-0.43**	**0.08**	**-0.17**	0.01	**-0.06**	**0.24**	0.01	**0.12**	**0.16**
Tangibility (7)	**-0.08**	**-0.06**	**0.20**	**-0.12**	**0.12**	**0.28**		**-0.38**	**0.22**	**-0.16**	0.01	**-0.06**	**-0.04**	**-0.06**	**0.07**	**0.05**
Altman's Z-score (8)	**-0.20**	0.00	**-0.29**	**0.47**	**-0.24**	**-0.44**	**-0.35**		**-0.02**	**0.09**	-0.01	**0.04**	**-0.05**	**0.03**	**-0.10**	**-0.12**
Accounting Quality (9)	**-0.22**	0.00	**0.30**	**0.07**	**0.09**	**0.13**	**0.30**	**-0.13**		**-0.49**	0.00	0.00	0.00	**-0.03**	**0.18**	**0.10**
Std (CFO) (10)	**0.17**	**0.01**	**-0.35**	**0.03**	-0.02	**-0.21**	**-0.17**	**0.15**	**-0.51**		0.00	**0.02**	**-0.04**	0.01	**-0.20**	**-0.10**
Subordinate (11)	**0.02**	0.00	0.00	0.00	0.01	0.01	0.01	-0.01	0.00	-0.01		**-0.02**	**0.04**	0.01	-0.01	0.00
Performance Pricing (12)	0.00	**0.02**	**-0.13**	**0.04**	0.03	**-0.05**	**-0.07**	**0.04**	-0.02	**0.05**	**-0.02**		-0.01	**0.16**	**0.08**	**0.24**
# of Facilities (13)	**0.23**	-0.01	**0.04**	**-0.09**	-0.03	**0.20**	**-0.04**	**-0.06**	-0.03	**-0.03**	**0.01**	**0.01**		**0.21**	**-0.07**	**0.17**
Loan Maturity (14)	**0.20**	**0.03**	**-0.12**	0.03	-0.02	0.02	**-0.06**	**0.02**	**-0.03**	0.00	0.01	**0.11**	**0.22**		-0.01	**0.05**
Loan Amount (15)	**-0.32**	0.00	**0.66**	**0.08**	**-0.13**	**0.12**	**0.07**	**-0.11**	**0.18**	**-0.20**	-0.02	**0.06**	**-0.07**	0.03		**0.53**
# of Lenders (16)	**-0.18**	0.01	**0.41**	**0.03**	**-0.08**	**0.15**	**0.06**	**-0.11**	**0.11**	**-0.11**	-0.01	**0.26**	**0.15**	**0.09**	**0.56**	

Table 3: Loan spreads and board co-option

This table presents the OLS regression of loan spreads on board co-option. The dependent variable is the natural logarithm of the loan spread. The independent variable of interest is *Co-option*. Definitions of all variables are reported in Appendix. We include all firm-level characteristics, loan characteristics, corporate governance characteristics and loan purpose, loan type, bank type, year, industry fixed effects. T-statistics are presented underneath the coefficient estimates. Standard errors are clustered by firm. Significance at the 10%, 5%, and 1% level is indicated by *, **, and ***, respectively.

	(1)	(2)
	Log(Spread)	
Co-option	0.0629**	0.0781**
	(2.30)	(2.36)
Loan characteristic controls		
Subordinate	0.511	0.507
	(1.43)	(1.45)
Performance Pricing	0.00785	0.00978
	(0.42)	(0.53)
Loan Maturity	-0.0420*	-0.0432*
	(-1.82)	(-1.89)
Loan Amount	-0.0772***	-0.0786***
	(-6.78)	(-6.98)
# of Facilities	0.0830***	0.0786***
	(6.05)	(5.78)
# of Lenders	0.000565	0.000236
	(0.43)	(0.18)
Firm governance characteristic controls		
Firm Size	-0.149***	-0.127***
	(-12.66)	(-9.95)
ROA	-1.732***	-1.733***
	(-9.07)	(-9.20)
Book-to-market	0.144***	0.141***
	(4.25)	(4.23)
Leverage	0.789***	0.755***
	(9.84)	(9.51)
Tangibility	-0.240***	-0.230***
	(-3.36)	(-3.26)
Altman's Z-score	-0.0645***	-0.0638***
	(-7.93)	(-7.98)
Accounting Quality	-0.25	-0.145
	(-0.67)	(-0.39)
Std (CFO)	1.781***	1.656***
	(5.62)	(5.33)
Corporate governance controls		
Board Size		-0.0210***
		(-3.76)
Independence		0.00388
		(0.05)
Blockholder		0.0517
		(1.60)
Advisory Presence		-0.515***
		(-4.14)
Experienced Directors		-0.134**
		(-1.97)
Women Directors		-0.198
		(-1.58)
Busy Directors		0.131
		(0.64)
CEO Tenure		-0.00226
		(-1.21)
Fixed Effects	Fixed loan type, loan purpose, bank type, industry and year effects	
N	9,825	9,825
Adj. R-sq	0.646	0.650

Table 4: The role of board co-option

Panel A: Split by CEO tenure

This table presents the OLS regression of loan spreads on board co-option for firms with weak CEO power and strong CEO power. We use *CEO tenure* to measure CEO power. The dependent variable is the natural logarithm of the loan spread. The independent variable of interest is *Co-option*. Definitions of all variables are reported in Appendix. We include all firm-level characteristics, loan characteristics, corporate governance characteristics, and loan purpose, loan type, bank type, year, industry fixed effects. T-statistics are presented underneath the coefficient estimates. Standard errors are clustered by firm. Significance at the 10%, 5%, and 1% level is indicated by *, **, and ***, respectively.

	(1)	(2)
	Log(Spread)	
	CEO Tenure	
	Short	*Long*
Co-option	0.0610	0.151***
	(1.42)	(3.57)
Firm characteristic controls	Yes	Yes
Loan characteristic controls	Yes	Yes
Fixed Effects	Fixed loan type, loan purpose, bank type, industry and year effects	
N	4,864	4,961
Adj.R-sq	0.662	0.657
t-test ($\beta_1^{(1)}<\beta_1^{(2)}$)	p=0.06	

Panel B: Split by CEO duality

This table presents the OLS regression of loan spreads on board co-option for firms with weak CEO power and strong CEO power. We use *CEO Duality* to measure CEO power. The dependent variable is the natural logarithm of the loan spread. The independent variable of interest is *Co-option*. Definitions of all variables are reported in Appendix. We include all firm-level characteristics, loan characteristics, corporate governance characteristics, and loan purpose, loan type,7 bank type, year, industry fixed effects. T-statistics are presented underneath the coefficient estimates. Standard errors are clustered by firm. Significance at the 10%, 5%, and 1% level is indicated by *, **, and ***, respectively.

	(1)	(2)
	Log(Spread)	
	CEO Duality	
	No	*Yes*
Co-option	0.0242	0.106***
	(0.46)	(2.61)
Firm characteristic controls	Yes	Yes
Loan characteristic controls	Yes	Yes
Fixed Effects	Fixed loan type, loan purpose, bank type, industry and year effects	
N	2,946	6,879
Adj.R-sq	0.657	0.652
t-test ($\beta_1^{(1)}< \beta_1^{(2)}$)	p=0.10	

Table 5: Robustness checks

Panel A: Alternative measures of board co-option

Panel A presents the OLS regression of the loan spreads on alternative measures of board co-option. The dependent variable is the natural logarithm of the loan spread. The independent variable of interest is *TW Co-option* and *Co-opt Ind*. Definitions of all variables are reported in Appendix. We include all firm-level characteristics, loan characteristics, corporate governance characteristics, and loan purpose, loan type, bank type, year, industry fixed effects. T-statistics are presented underneath the coefficient estimates. Standard errors are clustered by firm. Significance at the 10%, 5%, and 1% level is indicated by *, **, and ***, respectively.

	(1)	(2)
	Log(Spread)	
TW Co-option	0.0874***	
	(2.60)	
Co-opt Ind		0.0648*
		(1.68)
Firm characteristic controls	Yes	Yes
Loan characteristic controls	Yes	Yes
Corporate governance controls	Yes	Yes
Fixed Effects	Fixed loan type, loan purpose, bank type, industry and year effects	
N	9,825	9,825
Adj.R-sq	0.650	0.650

Panel B: Alternative measures of the financial reporting quality

Panel B presents the OLS regression of loan spreads on board co-option after controlling for other measures of financial reporting quality, i.e., *Minus Accruals Quality* (column 1), *Minus Abs*(*DDresid*) (column 2), *Readability Index* (column 3) and *Uncertainty* (column 4). The dependent variable is the natural logarithm of the loan spread. Definitions of all variables are reported in Appendix. We include all firm-level characteristics, loan characteristics, corporate governance characteristics, and loan purpose, loan type, bank type, year, industry fixed effects. T-statistics are presented underneath the coefficient estimates. Standard errors are clustered by firm. Significance at the 10%, 5%, and 1% level is indicated by *, **, and ***, respectively.

	(1)	(2)	(3)	(4)
	Log(Spread)			
Co-option	0.0791**	0.0786**	0.0731**	0.0702**
	(2.39)	(2.36)	(2.07)	(2.00)
Minus Accruals Quality	-0.983***			
	(-5.69)			
Minus Abs(DDresid)		-0.520*		
		(-1.94)		
Readability Index			-0.0048	
			(-1.41)	
Uncertainty				12.22***
				(2.89)
Firm characteristic controls	Yes	Yes	Yes	Yes
Loan characteristic controls	Yes	Yes	Yes	Yes
Fixed Effects	Fixed loan type, loan purpose, bank type, industry and year effects			
N	9,825	9,825	8,053	8,053
Adj.R-sq	0.653	0.651	0.654	0.655

Table 6: The effects of co-option: A natural experiment using the change in listing requirement in NASDAQ and NYSE

Panel A: Summary statistics

This panel reports the average of co-option measures and *Independence* during the pre-change period and the post-change period, and the difference between these two periods for the compliant group and the non-compliant group, respectively. We designate firms as *Non-compliant* if they do not have a majority of independent directors in 2001 prior to the experiment.

	Compliant			Non-compliant		
Variables	Pre-change	Post- change	Difference (Post-Pre)	Pre- change	Post- change	Difference (Post-Pre)
Co-option	0.44	0.48	0.04	0.49	0.59	0.10
TW Co-option	0.31	0.32	0.01	0.34	0.41	0.07
Co-opt Ind	0.35	0.41	0.06	0.24	0.43	0.21
Independence	0.71	0.76	0.05	0.38	0.57	0.19
N	2,747	2,113		512	394	

Panel B: Estimates of the effects of co-option on loan spreads

This panel reports the effect of co-option on the loan spreads using a natural experiment. We exploit the 2002 NYSE/NASDAQ listing requirement that a majority of the board be comprised of independent directors. The dependent variable is the natural logarithm of the loan spread. *Non-compliant* that takes a value of one to describe firms that did not satisfy the requirement using board information in 2001 prior to the experiment and zero otherwise. *Post* takes a value of one to indicator to describe loans that are issued after the requirement takes effect and zero otherwise. In column (1), we follow the difference-in-difference methodology. The independent variable of interest is *NonCompliant*Post*. In column (2), we revise the difference-in-differences methodology. Specifically, following Coles, Daniel and Naveen (2014), we allow for the possibility that the concurrent passage of SOX and associated listing provisions have a direct effect on the loan spreads. To do this, we interacting both *Non-compliant* and *Co-option* with *Co-option* to isolate the impact due to increase in co-option for non-compliant firms after the requirement takes effect from the impact due to SOX itself. The independent variable of interest is *Co-option*Post*NonCompliant*. Definitions of all variables are reported in Appendix. We include all firm-level characteristics, loan characteristics, corporate governance characteristics, and loan purpose, loan type, bank type, year, industry fixed effects. T-statistics are presented underneath the coefficient estimates. Standard errors are clustered by firm. Significance at the 10%, 5%, and 1% level is indicated by *, **, and ***, respectively.

	Log(Spread)	
Post	-0.034	
	(-0.69)	
NonCompliant	-0.093	
	(-1.63)	
*Post*NonCompliant*	0.067*	
	(1.89)	
Co-option		0.074
		(1.51)
Co-option*Post		-0.002
		(-0.03)
Co-option*NonCompliant		0.082
		(0.75)
Co-option*Post*NonCompliant		0.100*
		(1.82)
Post		-0.031
		(-0.54)
NonCompliant		-0.136*
		(-1.93)
Firm characteristic controls	Yes	Yes
Loan characteristic controls	Yes	Yes
Fixed Effects	Fixed loan type, loan purpose, bank type, industry and year effects	
N	5,766	5,766
Adj.R-sq	0.635	0.638

Table 7: Additional tests

Panel A: The effects of board co-option on non-pricing provisions of bank loans

This panel presents the regression results of the non-pricing provisions of banks loans on board co-option. The dependent variable is *Secured Loan* (Column 1), *# of Covenants* (Column 2*), # of Financial Covenants* (Column 3) and *Covenant Intensity* (Column 4). The independent variable of interest is *Co-option.* Definitions of all variables are reported in Appendix. We include all firm-level characteristics, corporate governance characteristics, and year, industry fixed effects. T-statistics are presented underneath the coefficient estimates. Standard errors are clustered by firm. Significance at the 10%, 5%, and 1% level is indicated by *, **, and ***, respectively.

	(1)	(2)	(3)	(4)
	Secured Loan	# of Covenants	# of Financial Covenants	Covenant Intensity
Co-option	0.080***	0.099*	0.139***	0.152*
	(3.65)	(1.77)	(2.72)	(1.89)
Firm characteristic controls	Yes	Yes	Yes	Yes
Loan characteristic controls	Yes	Yes	Yes	Yes
Corporate governance controls	Yes	Yes	Yes	Yes
Fixed Effects	Fixed loan type, loan purpose, bank type, industry and year effects	Fixed industry and year effects		
N	9,825	7,492	7,492	7,492
Adj.R-sq	0.37	0.256	0.242	0.307

Panel B: The effects of board co-option on credit ratings

This panel presents the regression results of the S&P long-term issuer credit rating on board co-option. The dependent variable is *Credit Rating*. The independent variable of interest is *Co-option.* Definitions of all variables are reported in Appendix. We include all firm-level characteristics, corporate governance characteristics, and year, industry fixed effects. T-statistics are presented underneath the coefficient estimates. Standard errors are clustered by firm. Significance at the 10%, 5%, and 1% level is indicated by *, **, and ***, respectively.

	(1)
	Credit Rating
Co-option	0.432***
	(3.40)
Firm characteristic controls	Yes
Corporate governance controls	Yes
Fixed Effects	Fixed industry and year effects
N	4,416
Adj.R-sq	0.618