CEO contractual protection and debt contracting*

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Abstract

CEO employment agreements and severance pay agreements are prevalent among S&P1500 firms. While prior research has examined their impact on corporate decision from shareholders' perspective, there is little research on their impact from debtholders' perspective. We examine the effect on debt contracting of CEO contractual protection, in the form of employment agreements and severance pay agreements. We find that compared with other loans, loans issued by firms with CEO contractual protection contain more financial covenants, particularly performance covenants, are more likely to have performance pricing provisions, and have higher loan spreads. We further find that this effect increases with the monetary strength of CEO contractual protection and CEOs' appetite and opportunities for risk-taking. Collectively these results shed light on the impact of CEO contractual protection on debt contracting.

Key words: employment agreement, severance pay agreement, debt contracting

JEL codes: G32, M40

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1. Introduction

CEO employment agreements and severance pay agreements are widely used by companies. As of 2008, over 80% of S&P 1500 firms have such agreements with their CEOs. An important purpose of using such agreements is to align CEOs' interests with shareholders' and motivate them to undertake risky projects because these agreements protect them from downside risk. Consistent with this purpose, recent studies have provided evidence that firms use CEO contractual agreements to motivate CEOs to undertake risky projects and that the existence of CEO contractual agreements is positively associated with firms' investments and risk (e.g., Huang 2011; Xu 2011; Rau and Xu 2013; Cziraki and Groen-Xu 2015; Cadman et al. 2016).

CEOs' incentives to invest in risky projects have important implications for debt contracting. Risky projects can lead to a deterioration of credit quality and adversely affect debtholders' payoffs. As a result, when lending to firms with CEO employment agreements or severance pay agreements, referred to as CEO contractual protection, debtholders have incentives to monitor the firms more closely to ensure that the firms can pay interest and principal in due course, and potentially charge a higher interest rate. In this study, we focus on these debt-contracting consequences of CEO contracts; evidence of higher monitoring and borrowing cost highlights a significant cost of CEO contracts, which so far has been overlooked by prior research.

Following Chen et al. (2015), in this paper we focus on two types of CEO contractual protection: CEO employment agreements and standalone *ex-ante* severance pay agreements. As discussed in detail later, CEO employment agreements are fixed-term comprehensive contracts between CEOs and firms. They typically specify the termination payments and other terms such as non-competition and confidentiality. CEOs with employment agreements cannot be fired

within the term without good cause. Unlike employment agreements, standalone severance pay agreements do not have a fixed term. They stipulate the amount and terms of payments that CEOs can receive when their employment is terminated. These agreements are the outcomes of the negotiation between the firm and the CEO.[1] From the shareholders' perspective, such agreements increase the cost of firing the CEO, therefore enhancing CEOs' job security. However, they benefit the firm by motivating the CEO to undertake long-term risky projects. From the CEOs' perspective, such agreements offer protection by compensating them for termination and downside risk (Rusticus 2006; Xu 2013).

CEO contracts protect CEOs from downside risk and short-term performance swings (e.g., Rau and Xu 2013). As a result, CEOs with contractual protection are more likely to invest in risky projects than those without. Anticipating this, debtholders will resort to various mechanisms to monitor managerial actions and protect themselves. We focus on private debt in the main analyses since public debtholders often delegate monitoring to private lenders (e.g., Beatty, Liao, and Weber 2012). Prior research argues that financial covenants can help debtholders to monitor management by reducing managers' discretion and by defining the circumstances under which debtholders can intervene (e.g., Smith and Warner 1979; Aghion and Bolton 1992). Performance-pricing provisions, by linking borrowing costs to firm performance, play a similar role. Hence, we predict that compared with other firms, firms with CEO contractual protection will have more financial covenants and are more likely to have performance pricing provisions in their loan contracts. If the use of additional covenants and provisions cannot fully address the potentially greater downside risk of investments, lenders will require a higher rate of return and hence firms with CEO contractual protection are expected to

[1] Whether the CEO can obtain such agreements and the terms of the agreements depend on the uncertainty of the business environment, the likelihood of the CEO being replaced, and the CEO's ability, among other things. See Section 2.1 for more detailed discussions.

have higher loan spreads than the other firms.

Besides the above risk-taking argument, CEO contractual protection can affect the use of financial covenants and performance pricing provisions through another channel. Whether firms use these covenants depends on the quality of accounting information. When accounting information quality is higher, firms are more likely to use financial covenants and performance pricing provisions to address debtholder-shareholder agency problems, and vice versa. Because prior research finds that firms with CEO contractual protection have weaker incentives to engage in earnings management (Chen et al.2015), these firms likely have higher accounting information quality and are thus more likely to rely on financial covenants and performance pricing provisions. However, this argument implies the opposite prediction for loan spread. Under this argument, the debtholder-shareholder agency conflict does not change with the use of CEO contractual protection, and a greater use of financial covenants and performance pricing provisions reduces the agency conflict and in turn loan spread. Thus, the results based on loan spread can shed light on which argument – the risk-taking argument or the accounting information quality argument – is more applicable in this setting.

We test our predictions using 6,470 loans issued by S&P 1500 firms with required data over the period 1995-2008. We hand collect information on CEO employment agreements and severance pay agreements from proxy statements. Given that the existence of CEO contractual protection varies with firm and CEO characteristics (e.g., Gillan et al. 2009; Rau and Xu 2013), we control for the endogeneity of CEO contractual protection using both the instrumental variable approach and the Heckman approach (e.g., Doidge et al. 2004). We find that, consistent with our prediction, firms with CEO contractual protection include more financial covenants, are more likely to have performance pricing provisions in their loans, and have higher loan spreads

than those without such protection. These results hold before and after controlling for the determinants of debt contracting as shown in prior research, CEO compensation structure and ownership, loan type and purpose fixed effects, and industry fixed effects. The effect of CEO contractual protection is also economically significant. Compared with loans issued by other firms, those issued by firms with CEO contractual protection have 6.7 percent more financial covenants, are 11.4 percent more likely to include performance pricing provisions, and have 8.1 percent higher yield. These results are consistent with the argument that the use of CEO contractual protection induces CEOs to be more risk-taking and debtholders are more likely to use financial covenants and performance pricing provisions to protect their interest and charge a higher loan spread. The results based on loan spread suggest that the accounting information quality argument is not dominant in this setting.

There are two types of financial covenants, performance covenants and capital covenants. Performance covenants are based on current performance metrics, which are timely and forward-looking indicators of negative trends in credit quality. In contrast, capital covenants rely on cumulated profitability and protect debtholders' interest by limiting the amount of debt the firm can have. As such, unlike performance covenants, capital covenants are less useful in facilitating lenders' monitoring of firms' risky investments (Christensen and Nikolaev 2012). As a result, we expect that loans issued by firms with CEO contractual protection have more performance covenants, but we do not expect that firms with and without CEO contractual protection differ in the number of capital covenants. Our results are consistent with these two predictions. This test helps sharpen our inferences and sheds light on the mechanism that debtholders use to protect their welfare in the presence of CEO contractual protection.[2]

[2] This test also helps us further address the possibility that our results may be driven by high risk firms self-selecting into having CEO contractual protection, not by CEO contracts that create concerns for debtholders. Under this

CEO employment agreements and severance pay agreements vary in the monetary strength. When the monetary strength of CEO contractual protection is stronger, its effect on CEOs' risk-taking behavior is also more pronounced. Thus we predict that the effect of CEO contractual protection on debt contracting increases with its monetary strength. We find results consistent with this prediction.

The main argument underlying our predictions is that CEO contractual protection changes CEOs' risk-taking behavior. Hence, the effect of CEO contractual protection on debt contracting should vary systematically with CEOs' appetite for risk-taking and with their opportunities to undertake risky projects. Based on prior research, we argue that CEOs are less likely to undertake risky projects when they are older (Dechow and Sloan 1991; Cheng 2004) or when they have longer tenure (e.g., Berger, Ofek and Yermack 1997). As such, we expect that the effect of CEO contractual protection is weaker for older CEOs and CEOs with longer tenures. In addition, prior research finds that firms in the growth stage have more growth opportunities than other firms (e.g., Hribar and Yehuda 2015). It thus follows that the effect of CEO contractual protection is stronger for firms in the growth stage. The empirical analyses are consistent with these predictions. We find that as expected, the effect of CEO protection on debt contracting is weaker when CEOs have a lower appetite for risk-taking (older CEOs and longer-tenured CEOs) and is stronger when CEOs have more opportunities for risk-taking (i.e., firms in the growth stage of life-cycle).

Lastly, we conduct a series of additional tests to reinforce our inferences and to provide additional insights. First, we extend our analyses to public bond yield spread. We focus on bond yield spread because bondholders lack the monitoring incentives and renegotiation flexibility,

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alternative explanation, loans issued by firms with CEO protection should also contain more capital covenants, but we do not observe this result.

and prefer to protect themselves via price terms (e.g., Bharath et al. 2008). Consistent with the finding for private debt, we find that firms with CEO contractual protection have higher bond yield spread than other firms. This result validates our inferences using private debt. Second, while some firms consistently use or do not use CEO protection throughout the sample period (non-switch firms), other firms switch back and forth. To ensure that non-switch firms do not drive our results, we examine whether our results hold for the switch firms. The results are qualitatively similar. In addition, when we use the difference-in-differences research design for the switch firms and non-switch firms, our inferences continue to hold. Third, our results also hold after we control for additional governance variables such as board independence, E-index, and a founder CEO indicator, and CEO inside debt based on the subsample for which the data are available. Lastly, in the main analyses, we combine employment agreements and severance pay agreements together. When we separately examine the effect of these two types of agreements, we find that the results hold for both types.

Our paper makes several important contributions. First, we contribute to the emerging literature on CEO employment contracts. So far, this literature mainly focuses on the determinants of CEO employment contracts and how they affect managers' investment and reporting behavior from shareholders' perspective. We extend this line of research by focusing on the implications of CEO employment contracts for debt contracting. Our findings suggest that while CEO contractual protection aligns CEOs' and shareholders' interests, it can adversely affect debtholders' interest and thus affect debt contracting, which represents an unintended cost of such contracts. Thus our paper complements prior research that has focused on the benefits of CEO contracts to shareholders and, together with prior research, provides a more complete understanding of the economic consequences of CEO employment contracts.

Second, our paper also contributes to the literature on the relationship between CEO equity incentives and debt contracting. Prior studies have examined how managerial ownership and equity-based compensation affect the pricing of public debt (Bagnani et al. 1994; Begley and Feltham 1999; Ortiz-Molina 2006) and debt maturity (Datta, Iskandar-Datta, and Raman 2005; Brockman, Martin, and Unlu 2010). [3] Both CEO contractual protection and equity incentives can align the interests of CEOs and shareholders and adversely affect debtholders, but the underlying reasons are different. While equity incentives enhance the upside potential of risky investments for CEOs, contractual protection increases their job security and limits the downside risk. We provide evidence on the incremental effect of CEO contractual protection, which is widely used in practice. In addition, we examine both private debt and public debt, providing a more comprehensive picture of the impact of CEO employment contracts on debt contracting than prior research. Finally, because private lenders have stronger incentives and greater resources to monitor firms (Beatty et al. 2012), we examine not only the pricing of debt as in prior studies, but also the monitoring mechanisms (financial covenants and performance-pricing provisions) that private lenders use in response to CEO contracts.

The remainder of this paper is organized as follows. Section 2 reviews prior literature and develops the hypotheses. Section 3 discusses the sample and data. Section 4 reports the main analyses, Section 5 the cross-sectional tests, and Section 6 the additional analyses. Section 7 concludes.

2. Literature review and hypotheses development

[3] Another stream of literature examines how CEO debt-like compensation (i.e., CEO inside debt) can be used to align the interests of CEOs and debtholders and reduce debt contracting costs (e.g., Sundaram and Yermack 2007; Chava, Kumar, and Warga 2010; Wei and Yermack 2011; Anantharaman, Fang, and Gong 2014). Our paper, in contrast, focuses on the unintended debt contracting consequences of using CEO employment contracts to align the interests of CEOs and shareholders. In addition, our results hold after controlling for CEO inside debt.

2.1 Literature review

Prior research on CEO employment agreements and severance pay agreements

Following Chen et al. (2015), we focus on CEO contractual protection in the form of CEO employment agreements and severance pay agreements. As discussed in Gillan et al. (2009), CEO employment agreement (EA) is a comprehensive *written* agreement that specifies the employment terms between a firm and its CEO, including the CEO's responsibilities, compensation, perquisites, termination conditions and payments (e.g., severance pay), and restrictions on outside activities. An EA typically has a fixed term, ranging from two to five years. It can be renewed, amended, or extended. Within the contract terms, the CEO cannot be dismissed without good cause. Good cause typically includes a breach of fiduciary duties and willful misconduct, but it does not include poor performance. Unlike those with EAs, CEOs without EAs are employed at will. These CEOs can be removed whenever the boards find it to be in the best interest of the firms. As described in Rau and Xu (2013), Chen et al. (2015), and Cadman et al. (2016), a severance pay agreement (SA) specifies conditions and the amount of the payments to a CEO upon the CEO's dismissal without good cause. Unlike an EA, an SA does not have a fixed term and thus it covers the CEO for the foreseeable future.

Both EAs and SAs are the outcome of negotiations between CEOs and their firms. From the CEOs' perspective, such agreements are beneficial because they offer protection. The benefit likely increases with the uncertainty over whether the CEO is a good fit for the firm and the likelihood of CEO dismissal (Schwab and Thomas 2006). From the firm's perspective, such agreements make it more costly to renegotiate with a CEO or to terminate the CEO's employment. However, these agreements allow the firm to attract good CEO candidates who might not consider the position otherwise. These agreements can be used *ex ante* to address the

agency problems, such as CEOs engaging in suboptimal behavior to increase short-term performance at the expense of long-term firm value or avoiding risky but positive net present value projects (Almazan and Suarez 2003; Inderst and Mueller 2005; Rau and Xu 2013).

Several recent studies examine the determinants of EAs or SAs and generally conclude that the use of EAs and SAs is the outcome of optimal contracting. For example, Gillan et al. (2009) find that CEOs are more likely to have EAs when the uncertainty of the business environment is higher, when the likelihood of CEO being replaced is greater, and when CEOs have more to lose if replaced. Rau and Xu (2013) and Cadman et al. (2016) find that SAs are more likely to be used when executives' human capital is at greater risk and conclude that SAs are largely a means of compensating for risk.[4]

Prior research on CEO equity incentives and debt contracting

CEO equity incentives, while aligning the interests of CEOs and shareholders, can adversely affect debt contracting. Prior research examines how CEO equity incentives affect the pricing of public debt and debt maturity. For example, Bagnani et al. (1994) document a positive correlation between managerial ownership and bond return premia. Ortiz-Molina (2006) documents a positive correlation between managerial ownership, particularly the ownership of stock options, and bond yield. Begley and Feltham (1999) find that managerial ownership is positively correlated with the use of dividend and borrowing covenants for public debt. Datta et al. (2005) find that managerial ownership is negatively associated with debt maturity. Brockman et al. (2010) find a negative (positive) association between CEO portfolio delta (vega) and the

[4] As discussed in Chen et al. (2015), it can also be argued that EAs and SAs are the outcome of CEO entrenchment (e.g., Bebchuk and Fried 2004). For example, Yermack (2006) and Rusticus (2006) find that the use of SAs is higher for firms with weaker corporate governance. As discussed later, CEO entrenchment cannot explain the adverse implications of CEO contractual protection for debt contracting because some prior studies argue that CEO entrenchment reduces debtholder-shareholder agency conflict, leading to a prediction that is opposite to our findings. In addition, it cannot explain our cross-sectional results that the effect of CEO contractual protection on debt contracting varies predictably with CEO's risk-taking appetite and risk-taking opportunities.

proportion of short-term debt in total debt. Our study differs from and complements the above-mentioned studies by investigating the impact on debt contracting of CEO contractual protection, which reduces CEOs' downside risk. In addition, we examine both the pricing and non-pricing elements (i.e., financial covenants and performance-pricing provisions) of debt contracting, providing a comprehensive picture of the impact of CEO contractual protection on debt contracting.

2.2 The main predictions

When deciding the loan terms, creditors are concerned with managers' actions that affect their investment return, i.e., the firms' ability to pay interest and principal. CEO contractual protection can affect the loan terms because it can change CEOs' risk-taking behavior. First, as discussed in prior research, it is more costly for a firm to dismiss a CEO with contractual protection. Thus CEOs with contractual protection are better protected from poor performance and have higher job security. The evidence in prior studies is consistent with this argument. For example, Rusticus (2006) and Xu (2011) find that the likelihood of CEO turnover after poor performance is lower when CEOs have employment agreements and severance pay agreements. Second, CEO contractual protection, at least partly, compensates CEOs for downside risk. As argued in Rau and Xu (2013), the termination payment is a form of deferred compensation and protects CEOs from downside risk.

Both the enhanced job security and the deferred risk premium encourage the CEO to undertake risky, long-term projects. For example, Gillan et al. (2009) argue that "CEOs facing less uncertainty are less likely to avoid risky positive net present value projects." Huang (2011) and Xu (2011) provide evidence that CEO contractual protection positively influences the level of firms' long-term investments.

It thus follows that when CEOs have contractual protection, lenders will monitor the firms more closely. Prior research argues that financial covenants can help debtholders to monitor management by reducing managers' discretion and by defining the circumstances under which debtholders can intervene (e.g., Smith and Warner 1979; Aghion and Bolton 1992). Christensen and Nikolaev (2012) further argue that performance covenants, an important group of financial covenants, act as tripwires to detect early signals of financial distress; when a performance covenant is violated, lenders can have the control rights and take actions to limit their losses (e.g., through renegotiation and the acceleration of loans). Performance pricing provisions, which tie interest rates to pre-specified performance measures, also facilitate lenders' monitoring (Asquith, Beatty, and Webber 2005).

Besides the above risk-taking argument, CEO contractual protection can affect the use of financial covenants and performance pricing provisions through another channel. Whether firms use these covenants depends on the quality of accounting information. When accounting information quality is higher, firms are more likely to use financial covenants and performance pricing provisions to address debtholder-shareholder agency problems, and vice versa. For example, Costello and Whittenberg-Moerman (2010) find that banks reduce the use of accounting-based covenants after firms disclose internal control material weaknesses, which can reduce accounting information quality. Because prior research finds that firms with CEO contractual protection are less likely to engage in myopic behavior and have weaker incentives to engage in earnings management (Chen et al. 2015), these firms likely have higher accounting information quality and thus their lenders are more likely to rely on financial covenants and performance pricing provisions.

The above discussion leads to our first two hypotheses:

H1: Ceteris paribus, loans issued by firms with CEO contractual protection have more financial covenants than those issued by other firms.

H2: Ceteris paribus, loans issued by firms with CEO contractual protection are more likely to have performance pricing provisions than those issued by other firms.

However, we might not find results consistent with H1 and H2 for a couple of reasons. First, the use of CEO contractual protection might not incentivize managers to undertake risky projects. Some prior studies (e.g., Bebchuk and Fried 2004; Yermack 2006; Rustics 2006) argue and document results implying that the use of CEO contractual agreements reflects CEO entrenchment. Chava et al. (2010) show that CEO entrenchment can reduce shareholder-debtholder agency conflict and reduce the use of debt covenants. Second, Armstrong et al. (2010) argue that it is difficult to use debt covenants to address firms' excessive risk-taking behavior. Thus, whether CEO contractual protection affect the use of financial covenants and performance pricing provisions, as hypothesized in H1 and H2, is an empirical question.

Lenders use covenants and interest rates jointly to address the problem of CEOs undertaking risky investments. To the extent that debt covenants cannot fully address the problem or the use of debt covenants becomes too restrictive and costly, interest rate is expected to be higher in firms with CEO contractual protection than in other firms. As such, we expect the following:

H3: Ceteris paribus, loans issued by firms with CEO contractual protection have higher spread than those issued by other firms.

However, the accounting information quality argument implies the opposite prediction for loan spread. Unlike the risk-taking argument where the debtholder-shareholder conflict is expected to increase due to the increased risk-taking incentives of CEOs with contractual protection, the debtholder-shareholder agency conflict does not change with the use of CEO contractual protection under the accounting information quality argument. This argument implies

that a greater use of financial covenants and performance pricing provisions reduces the agency conflict and in turn loan spread. Thus, the results from the test of H3 can shed light on which argument – the risk-taking argument or the accounting information quality argument – is more applicable in this setting.

Monetary strength of CEO contractual protection

As discussed in Chen et al. (2015), the monetary strength of CEO contractual protection varies across firms. While some firms offer the annual base salary as the severance pay, others pay three times more. When the monetary strength of CEO contractual protection is stronger, its effect on CEOs' risk-taking behavior is expected to be more pronounced and its effect on corporate decisions is also stronger (Chen et al. 2015).[5] It thus follows that the effect of CEO contractual protection on the use of debt covenants and interest rate increases with the monetary strength of CEO contractual protection. Thus we hypothesize that:

H4: Ceteris paribus, the effect of CEO contractual protection on the use of debt covenants and spread, as hypothesized in H1, H2, and H3, increases with the monetary strength of CEO contractual protection.

2.3 Cross-sectional variation

In this section, we develop hypotheses on the cross-sectional variation in the effect of CEO contractual protection on debt contracting. When developing the main predictions (H1, H2, and H3), we argue that CEO contractual protection affects debt contracting because it changes CEOs' risk-taking behavior. Hence, the effect of CEO contractual protection on debt contracting should vary systematically with CEOs' appetite for risk-taking and their opportunities to undertake risky projects.

Some CEOs have a lower appetite for risk-taking than others because of their concerns

[5] Unlike Chen et al. (2015), we do not examine the duration of CEO contractual protection because of its low cross-sectional variation, leading to low power of test.

with the adverse effect of increased firm risk on their welfare.[6] CEO contractual protection is expected to be less effective in inducing these CEOs to undertake risky investments. It then follows that the effect of CEO contractual protection on debt contracting will be weaker for the CEOs who have a lower appetite for risk-taking. Based on prior research, we identify two types of CEOs who have a lower appetite for risk-taking. First, Dechow and Sloan (1991) and Cheng (2004) argue that since older CEOs are closer to retirement, they have a shorter investment horizon and are less likely to undertake risky, long-term investments. Second, prior studies argue that because longer-tenured CEOs have more firm-specific human capital invested in their firms and are less diversified, they are less likely to undertake risky projects in order to reduce firm risk (Berger, Ofek and Yermack 1997; Chakraborty, Sheikh and Subramanian 2007). Thus, we have the following prediction:

H5: Ceteris paribus, the effect of CEO contractual protection on the use of debt covenants and spread, as hypothesized in H1, H2, and H3, is weaker for older CEOs and CEOs with longer tenures than for other CEOs.

In addition, CEOs' ability to undertake risky projects depends on the firms' growth opportunities. The impact of CEO contractual protection on CEOs' risk-taking is thus likely to vary with the firm's growth opportunities. Prior research (e.g., Hribar and Yehuda 2015) argues that firms in the growth stage of their life cycles have more growth opportunities than those in the other stages such as mature and declining stages. Such firms' CEOs will have more opportunities to undertake risky long-term projects. Hence the effect of CEO contractual protection on CEOs' risk-taking behavior and then on debt contracting should be stronger for such firms, leading to our last hypothesis:

[6] Note that firms might be more likely to use CEO contractual protection in order to induce CEOs with low risk appetite to undertake risky projects. Here we investigate that given the existence of CEO contractual protection, how its effect on debt contracting varies with CEOs' risk appetite. The same applies to CEOs' opportunities to undertake risky projects. We obtain the same inferences when including these factors in the determinant model of CEO contractual protection.

H6: Ceteris paribus, the effect of CEO contractual protection on the use of debt covenants and spread, as hypothesized in H1, H2, and H3, is stronger for firms in the growth stage of life-cycle than for other firms.

3. Sample and research design

3.1 Sample and data

The sample for the main analyses includes loans issued by S&P 1500 firms over the 1995-2008 period. We first hand collect CEO protection information from firms' proxy statements. The Securities and Exchange Commission (SEC) requires that firms disclose any material employment agreements or severance pay agreements they have with their top executives in proxy statements (Regulation S-K, 17 CFR 299.601). There are 18,936 firm-years that have proxy statements available from the SEC's EDGAR online database. We then match these firm-years with loan issuance data from the DealScan database. We exclude firm-years without loan data, those from financial firms, and those with missing values for the regression variables. For the remaining 4,173 firm-years, we obtain all the loans issued in the sample period. Our final sample consists of 6,470 loans. Table 1, Panel A summarizes the sample selection process.

Table 1, Panel B presents the sample loan distribution by year. In general, the number of loans increases from the mid-1990s to 2000s, except the sharp drop right before the financial crisis period. Out of the sample loans, 77 percent are issued by firms with CEO contractual protection. The percentage of loans issued by firms with CEO contractual protection increases over time, from around 60 percent in the mid-1990s to more than 80 percent in the last few years of the sample period.[7] The last two columns of the table report the number of loans issued by firms with employment agreements and by those with standalone severance pay agreements, respectively, both with an increasing time trend. In the main analyses, we combine the two types

[7] In the empirical analyses, we control for the time trend. The inferences are the same if we control for year fixed effects instead.

of agreements together and in an additional analysis, we examine their separate effects.

Table 2 reports descriptive statistics for the full sample and then separately for loans issued by firms with and without CEO protection. Panel A reports descriptive statistics on loan contract terms. The average number of financial covenants is 1.50 for the full sample, but it is significantly higher for loans issued by firms with CEO protection (1.55) than those by firms without CEO protection (1.33). This difference is driven by the greater number of performance covenants for loans of firms with CEO protection. Consistent with our prediction in H1, these loans on average have 17 percent more financial covenants (17% = [1.55-1.33]/1.33) and 25 percent more performance covenants (25% = [1.09-0.87]/0.87) than the other loans. There is no difference in the number of capital covenants between the loans issued by the two groups of firms.

With respect to the use of performance pricing provisions, 56% of loans have this provision. However, 58 percent of loans of firms with CEO protection include this loan contract provision, whereas only 51 percent of the other loans do so. The difference of 7 percentage points, or a 14 percent relative increase, is significantly different from zero, consistent with H2.

We also find that loans of firms with CEO protection on average have a higher loan spread (129.91) than the other loans (102.13). The 27.78 basis point difference represents a relative increase of 27 percent. This result is consistent with H3.

Regarding other loan contract terms, we find that loans of firms with CEO protection have a slightly longer maturity and a smaller size, and are more likely to be secured, while they are less likely to have missing information on loan security.[8]

Panel B reports descriptive statistics on firm characteristics. Firms with CEO protection are

[8] For the sake of completeness, we also examine whether CEO contractual protection affects loan maturity and security, but we do not find any significant results in multivariate regressions.

smaller and have a lower market-to-book ratio, higher leverage, lower return on assets, lower z-score, and lower CEO equity ownership. Due to these differences, we control for all these firm characteristics in our multivariate analyses.

3.2 Research design

Our hypotheses H1-H3 predict that loans issued by firms with CEO contractual protection have more financial covenants, are more likely to have performance pricing provisions, and have higher loan spreads. To test these predictions, we follow prior literature (e.g., Ortiz-Molina 2006; Bharath, Sunder, and Sunder 2008; Kim, Song, and Zhang 2011; Christensen and Nikolaev 2012) and use the following regression model:

$$\begin{aligned} Loan\_Feature_{i,j,t} = \alpha + \beta CEO\_Protection_{i,t} + \gamma_1 Borrower\text{-}specific\_Control_{i,t} + \\ \gamma_2 CEO\_Equity\_Incentives_{i,t} + \gamma_3 Loan\text{-}specific\_Control_{j,t} + \\ \gamma_4 Economy\text{-}wide\_Control_t + Loan\_Type\_Indicators + \\ Loan\_Purpose\_Indicators + Industry\_Indicators + \varepsilon_{i,j,t}\,, \end{aligned} \quad (1)$$

where the dependent variable, *Loan_Feature*, is one of the three loan features of a loan contract: (1) the number of financial covenants (*Covenants*), (2) the indicator for the existence of performance pricing provisions (*Performance_Pricing*), and (3) the logged value of loan spread (*Loan_Spread*), which is measured as the drawn all-in spread charged by the bank over the LIBOR for the drawn portion of the loan facility, as commonly defined in prior research (e.g., Kim et al. 2011). Given the distribution of these three dependent variables, we adopt the Poisson, Logit, and OLS regression methods for these three dependent variables, respectively.

The variable of interest, $CEO\_Protection_{i,t}$, is an indicator variable for CEO contractual protection, which is equal to 1 if the firm has an employment agreement or a standalone severance pay agreement with its CEO, and 0 otherwise. The hypotheses imply that the coefficient on *CEO_Protection*, β, is positive for all three loan features. The standard errors are adjusted for firm clustering.

We control for the borrower-specific characteristics that prior research has shown to affect the terms of loan contracts. Prior studies show that debt covenants are more prevalent in the loan contracts when the borrowing firms are smaller, less profitable, more levered and have higher growth (e.g., Ball, Li, and Shivakumar 2015). Hence, we control for firm size (*Size*), return on assets (*Return on Assets*), leverage (*Leverage*), and the market-to-book ratio (*Market-to-Book*). In addition, the availability of collateral, as proxied for by the amount of tangible assets, default risk, and cash flow volatility, of the borrowers also affect the loan contract terms (e.g., Chava, Kumar and Warga 2010; Kim et al. 2011). Consequently, we control for firm's asset tangibility (*Tangibility*), the modified Altman's z-score (*Z-score*), and the volatility of operating cash flows (*Cash Flow Volatility*).

Prior studies find that CEOs' ownership and compensation structure affect their exposure to risk and hence debt contracting (e.g., Brockman et al. 2010). Therefore, we control for CEOs' ownership and compensation structure. Specifically, we include three variables of CEO equity incentives: (1) *CEO Equity Compensation*, measured as the ratio of the CEO's stock and option grants to his/her total compensation; (2) *CEO Equity Ownership*, measured as the CEO's stock and option holdings in shares divided by the firm's total number of shares outstanding; and (3) *CEO Portfolio Sensitivity* (to stock volatility), defined as the change in the value of the CEO's option portfolio resulting from a 1% increase in the firm's annualized standard deviation of stock return.

The cost of debt and the use of covenants in the loan contracts are also affected by loan characteristics. Prior research finds that lenders charge a lower interest rate for loans with shorter maturity and larger facilities (e.g., Graham et al. 2008). Therefore, we include the maturity (*Loan_Maturity*) and size of the loan (*Loan_Amount*) in the regression. Moreover, because the

contract terms can affect loan spread, we add four more loan-specific variables to the model of loan spread: the number of covenants (*Number of Covenants*), the indicator for performance pricing provisions (*Performance_Pricing*), the indicator for secured loans (*Secured_Loan*), and the indicator for loans with missing information on loan security (*Secured_Missing*).

Lastly, following prior studies (Kim et al. 2011; Campello and Gao 2015), we also control for the potential effect of macroeconomic conditions by adding the GDP growth (ΔGDP) and the time trend variable (*Time Trend*) to the regressions.

We measure the borrower-specific characteristics in the fiscal year immediately before the debt issuance date and the other control variables concurrently with the loan issuance. Appendix A provides the detailed variable measurements. For all the regressions, we also control for the loan type, loan purpose, and industry fixed effects. Because of the inclusion of these fixed effects, we do not report the intercept.

3.3 Controlling for the endogeneity of CEO contractual protection

As discussed in prior research (e.g., Gillan et al. 2009; Rau and Xu 2013; and Chen et al. 2015), CEO contractual protection is endogenously determined. Some firm and CEO characteristics can affect both the use of CEO contractual protection and debt contracting (i.e., the use of covenants and loan spread). Following Chen et al. (2015), we use two approaches to address the potential endogeneity of CEO contractual protection. First, in Equation (1), we replace the CEO contraction protection indicator with the predicted value estimated from a determinants model of CEO contractual protection. Second, we adopt the Heckman (1979) approach and add to Equation (1) the Inverse Mills Ratio estimated from the determinant model. Both approaches have been widely used in the literature to address endogeneity (e.g., Doidge et al. 2004).

For the CEO contractual protection determinant model, we adopt the specification in Chen et al. (2015). The determinants include a number of firm and CEO characteristics (R&D, market-to-book ratio, market-adjusted returns, ROA, indicator for outside CEOs, CEO age, CEO abnormal compensation, CEO incentive-based compensation, board independence, indicator for founder CEO, leverage, and assets) and five state policy variables (public policy, implied contract, good faith and fair dealing, anti-takeover regulation, and the Garmaise index) that affect the use of CEO contractual protection. Please see Chen et al. (2015) for details. The results of the determinant model based on our sample of S&P 1500 firms are similar to those reported in Chen et al. (2015) for S&P 500 firms. As such, we do not report the results to save space. The five state policy variables are the *exogenous* instrumental variables. Untabulated tests indicate that the state policy variables are valid and effective instruments. We also follow Larcker and Rusticus's (2010) recommendation and report results when the potential endogeneity is not controlled for in order to ensure the robustness of the results.

4. Main analyses – Tests of H1, H2, and H3

4.1 Results for H1

In this section, we use Poisson regressions to examine the impact of CEO contractual protection on the use of financial covenants in loan contracts. Panel A of Table 3 reports the regression results. We first report the regression results without controlling for endogeneity (Column (1)). We then report the regression results after controlling for endogeneity by replacing the CEO contractual protection indicator with its predicted value in Column (2) and including the Inverse Mills Ratio in Column (3).

Column (1) shows that CEO contractual protection is positively correlated with the number

of financial covenants (p-value = 0.043). (We use one-sided p-values for variables of interest throughout the paper.) The untabulated marginal effect of *CEO_Protection* suggests that the loan contracts for firms with CEO protection have on average 0.089 more financial covenants than other firms, or a relative increase of 6.7 percent from the sample average for firms without CEO contractual protection (which is 1.33 as reported in Table 2). In Column (2), we use the predicted value for the probability of having CEO contractual protection. We find that the coefficient on CEO contractual protection remains significantly positive (p-value = 0.091). In the last column where we include the Inverse Mills Ratio, the result for CEO protection is similar with a positive coefficient on *CEO_Protection* (p-value = 0.069). These results are consistent with H1 that when the borrowing firm's CEO is better protected, the lenders seek for better protection for their loans by adding more financial covenants.

With respect to control variables, we find that loan contracts contain fewer financial covenants for the firms that are larger and have higher growth potential (higher market-to-book ratio). On the other hand, loan contracts contain more financial covenants for firms with higher leverage and higher CEO equity ownership. In addition, loans with a larger amount tend to include more financial covenants and there is an increasing trend in the use of financial covenants. These results are consistent with the findings in prior studies (e.g., Christensen and Nikolaev 2012).

Performance versus capital covenants

As discussed in Christensen and Nikolaev (2012), the two types of financial covenants, performance and capital covenants, limit debt-related agency problems in different ways. Performance covenants are based on current performance metrics, which are timely and forward-looking indicators of negative trends in credit quality. Therefore, performance covenants serve as

efficient tools in monitoring firms' ongoing performance and provide lenders with options to renegotiate or restrain managerial actions when firm performance deteriorates. This type of covenants is effective in monitoring the potential adverse consequences of excessive risk taking.

In contrast, capital covenants address debt-related agency problems by ensuring that shareholders have enough money inside the firm (through limiting the amount of debt, raising additional equity capital, or cutting back on dividends). This type of covenants can ensure that there will be enough money left to debtholders in case of financial distress and that shareholders' wealth is sensitive to managerial actions in order to incentivize them to monitor management. However, since capital covenants are based on cumulated profitability, they are less useful to lenders in close monitoring of managerial actions and intervening with firm decisions when necessary.

As discussed above, the main concern with CEO protection for debtholders is that CEOs with contractual protection are more inclined to take on risky projects. Thus, capital covenants' role will be limited in addressing the impact of CEO protection because they are not breached as long as firms maintain adequate amount of equity capital. Hence we expect performance covenants to be used more often for firms with CEO protection than for the other firms, but we do not expect capital covenants to differ between firms with and without CEO contractual protection.

To investigate whether firms with and without CEO contractual protection differ in the use of performance and capital covenants, as predicted above, we use a similar research design as in Panel A of Table 3 when we examine the number of financial covenants. Panel B reports the results for the analyses of performance covenants. Column (1) shows that CEO contractual protection is positively correlated with the number of performance covenants (p-value = 0.041).

The untabulated marginal effect suggests that the loan contracts for firms with CEO protection have on average 0.074 more performance covenants than other firms, or a relative increase of 8.5 percent from the sample average for firms without CEO contractual protection (which is 0.87 as reported in Table 2). In Column (2) we use the predicted value of the probability of having CEO protection, and find that the coefficient on CEO contractual protection remains significantly positive (p-value = 0.030). In the last column where we include the Inverse Mills Ratio, the result for CEO protection is similar with a positive coefficient and a p-value of 0.024. These results are consistent with the argument that when the borrowing firm's CEO is better protected by employment agreements or severance pay agreements, the lenders seek better protection for their loans by adding more performance covenants.

Panel C of Table 3 reports the results for the analyses of capital covenants. As expected, we find that the number of capital covenants in loan contracts does not differ significantly between firms with and without CEO contractual protection. This result indicates that private lenders use covenants selectively to achieve the goal of monitoring risky investments.[9] This test also helps us further refute an alternative explanation for our results – debt contracting is affected by high-risk firms self-selecting into having CEO contractual protection, not by the CEO contracts per se. Under this alternative explanation, the loans issued by firms with CEO protection should have more capital covenants than loans issued by other firms. However, we do not observe this result.

In sum, we find results consistent with H1 that when the borrowing firm's CEO is better protected by employment agreements or severance pay agreements, the lenders seek better protection for their loans by adding more financial covenants. This result is driven by performance covenants as they are more effective in constraining CEOs' excessive risk-taking

[9] An alternative, non-exclusive, explanation for our finding on capital covenants is that the use of capital covenants (mostly balance-sheet based) has been less prevalent over time due to the movement to fair value accounting and the compromised value of balance sheet numbers for debt contracting (Demerjian 2011).

behavior. As such, for the following analyses of covenants, we focus on performance covenants only to increase the power of test.

4.2 Results for H2

We then examine the impact of CEO contractual protection on the likelihood of including performance pricing provisions in loan contracts. Table 4 reports the regression results. As shown in Column (1), CEO protection is positively correlated with the inclusion of performance pricing provisions in loan contracts (p-value = 0.016). The effect is also economically significant: the untabulated marginal effect of CEO contractual protection is 0.058, a relative increase of 11.4 percent from the sample average for firms without CEO contractual protection (which is 0.51 as reported in Table 2). The positive correlation still holds after we control for the potential endogeneity in both columns (2) and (3) (p-value = 0.001 in both columns).

The regression results also show that loans are less likely to include performance pricing provisions for larger firms and firms with higher growth. With respect to loan characteristics, we find that the performance pricing provisions are more likely to be included in loans with a longer maturity and a larger amount. There is also an increasing trend in the use of performance pricing provisions.

In sum, these findings are consistent with H2 that compared with loans of other firms, loans issued by firms with CEO contractual protection are more likely to contain performance pricing provisions.

4.3 Results for H3

Table 5 presents the regression results for loan spread (*Loan_Spread*) as the dependent variable. As reported in Column (1), the coefficient on the indicator for CEO contractual protection is significantly positive (p-value = 0.005), consistent with H3. The magnitude of the

coefficient (0.078) suggests an 8.1% increase in spread for firms with CEO contractual protection compared with those without ($e^{0.078}$=1.081). Combined with the findings in previous sections, this result suggests that the lenders, on average, charge a higher cost of debt for firms with CEO contractual protection, albeit they use more performance covenants and are more likely to include performance pricing provisions in loan contracts. After controlling for endogeneity, we continue to find a positive correlation between CEO contractual protection and loan spread in columns (2) and (3) (p-value = 0.013 and 0.005, respectively). In sum, these findings are consistent with H3 that compared with loans of other firms, loans issued by firms with CEO contractual protection have higher spreads. The findings also indicate that the risk-taking argument, instead of the accounting information quality argument, is more applicable in the setting of CEO protection and debt contracting.

The results on the control variables are generally consistent with prior studies on loan pricing (e.g., Graham et al. 2008; Kim et al. 2011). Specifically, we find that loan spread is negatively associated with firm size, the market-to-book ratio, return on assets, and z-score, and is positively correlated with firms' leverage and CEO equity ownership. For loan-specific variables, we document a lower loan spread for the loans with a longer maturity, a larger amount, and more covenants; and a higher loan spread for the loans with performance pricing provisions, secured loans, and the loans with missing information on loan security. Moreover, the loan spread is smaller when the macroeconomic conditions are better (i.e., higher GDP growth) and is increasing over the sample period.

5. Cross-sectional analyses – Tests of H4, H5, and H6

In this section, we report cross-sectional analyses results – tests of H4, H5, and H6. For

these analyses, we only tabulate the results based on the Heckman approach to save space. Using the raw or predicted value of the probability of CEO contractual protection in the regressions leads to the same inferences.

5.1 CEO contractual protection and loan contracting—the monetary strength of protection

In this section, we report the tests of H4—whether the effect of CEO contractual protection on debt contracting increases with its monetary strength. Following prior studies (e.g., Rau and Xu 2013; Chen et al. 2015), we measure the monetary strength of CEO contractual protection using the amount of the pre-determined severance pay. Specifically, we calculate the severance pay multiple as the ratio of the severance pay to the base salary, and we then construct an ordinal variable, *Strength*, to capture the monetary strength of CEO contractual protection.[10] *Strength* is coded as 2 (1, 0) if the multiple is above three (between two and three, below two). For the loans of firms without CEO contractual protection, we also code *Strength* as 0. We exclude from this analysis those loan observations from firms with CEO contractual protection but without the information on severance pay.[11] The following regression is used to test the incremental effect of the monetary strength of CEO contractual protection:

$$\begin{aligned} Loan\_Feature_{i,j,t} = {} & \alpha + \beta_1 CEO\_Protection_{i,t} + \beta_2 CEO\_Protection_{i,t} \times Strength_{i,t} + \\ & \gamma_1 Borrower\text{-}specific\_Control_{i,t} + \gamma_2 CEO\_Equity\_Incentives_{i,t} + \\ & \gamma_3 Loan\text{-}specific\_Control_{j,t} + \gamma_4 Economy\text{-}wide\_Control_t + \\ & Loan\_Type\_Indicators + Loan\_Purpose\_Indicators + \\ & Industry\_Indicators + \varepsilon_{i,j,t} . \quad (2) \end{aligned}$$

Because *Strength* is coded as 0 for firm-years without CEO contractual protection, *CEO_Protection* × *Strength* is the same as *Strength* and thus we do not include *Strength* in the regression. The coefficient on the variable of interest, *CEO_Protection* × *Strength*, captures the

[10] As noted in Rau and Xu (2013) and Chen et al. (2015), employment agreements and severance pay agreements usually also allow unexercisable options (unvested stocks) to become immediately exercisable (vested). However, the value is difficult to quantify *ex ante*.

[11] Among the loan contracts for firms with CEO contractual protection and information on severance pay, 58.7 (23.0, 18.3) percent have a severance pay multiple above three (between two and three, below two).

incremental effect of CEO protection with stronger monetary protection (i.e., *Strength* =1 or 2). We expect a positive coefficient on this interaction term.

Table 6 presents the regression results, Column (1) for the number of performance covenants, Column (2) for the use of performance pricing provisions, and Column (3) for loan spreads. As shown in Table 6, the coefficients on *CEO_Protection* are positive but only statistically significant in Column (2), suggesting that the effect of CEO protection is weak when the severance pay multiple is low. Consistent with our expectation, the coefficient on *CEO_Protection* × *Strength* is significantly positive in all three regressions (p-value = 0.051, 0.004 and 0.014, respectively), indicating a larger effect of CEO contractual protection for those firms with stronger monetary protection in CEOs' contracts.

In sum, we find that the effect of CEO contractual protection on loan features increases with its monetary strength. These findings reinforce the inference from the main analyses.

5.2 CEO contractual protection and loan contracting—CEOs' appetite for risk-taking

In this section, we report the results from the tests of H5. We add to the regressions the main effect of the conditional variable and its interaction with the CEO contractual protection indicator:

$$\begin{aligned} Loan\_Feature_{i,j,t} = {} & \alpha + \beta_1 CEO\_Protection_{i,t} + \beta_2 Conditional\_Var_{i,t} + \beta_3 CEO\_Protection_{i,t} \times \\ & Conditional\_Var_{i,t} + \gamma_1 Borrowerspecific\_Control_{i,t} + \\ & \gamma_2 CEO\_Equity\_Incentives_{i,t} + \gamma_3 Loan\text{-}specific\_Control_{j,t} + \\ & \gamma_4 Economy\text{-}wide\_Control_{t} + Loan\_Type\_Indicators + \\ & Loan\_Purpose\_Indicators + Industry\_Indicators + \varepsilon_{i,j,t} \,. \end{aligned} \quad (3)$$

The conditional variable, *Conditional_Var*, is one of the following two indicator variables, *Old_CEO* and *Long_Tenure*. *Old_CEO* equals one if the CEO's age is 64 or higher, and zero otherwise. *Long_Tenure* equals one if the CEO's tenure is four years or more, and zero otherwise. (The sample median of CEO tenure is four years.) H5 predicts that the effect of CEO protection on debt contracting is weaker for firms with an old CEO and for firms whose CEO's

tenure is long. As such, the coefficient on the interaction term, β_3, is expected to be negative.

Table 7 reports the results for the tests of H5, Panel A for CEO age and Panel B for CEO tenure. As reported in Panel A, the coefficient on *CEO_Protection* is significantly positive in all three regressions, suggesting that the effect of CEO protection is strong when the CEO is relatively young and the contractual protection is expected to induce risk taking. However, when the CEO is older and has a weaker appetite to pursue risky projects, the effect of CEO contractual protection is attenuated; the coefficient on *CEO_Protection* × *Old_CEO* is significantly negative in both Columns (1) and (3) where the number of performance covenants and loan spreads are examined, respectively (p-value = 0.013 and 0.039, respectively).

The results based on CEO tenure are similar. As reported in Panel B of Table 7, the coefficient on CEO_ *Protection* is significantly positive in all three regressions, indicating that the effect of CEO contractual protection is strong when the CEO is relatively new to the company. However, when the CEO has served longer and his appetite of risk-taking becomes weaker, the effect of CEO protection is weakened; the coefficient on *CEO_Protection* × *Long_Tenure* is significantly negative in all three regressions (p-value = 0.000, 0.026, and 0.087, respectively).

5.3 CEO contractual protection and loan contracting—CEOs' opportunities for risk-taking

To test H6 that the effect of CEO contractual protection on debt contracting is stronger when CEOs have more opportunities for risk-taking, we use the same design as the tests of H5. For this purpose, *Conditional_Var* in Equation (3) is an indicator variable for growth stage, *Growth_Stage*. *Growth_Stage* equals one if the firm-year is in the growth stage of the life cycle, and zero otherwise. Following Hribar and Yehuda (2015), we create a life-cycle-stage score by summing the standardized values of (1) sales growth, (2) capital expenditures, (3) net-capital

transactions, and (4) (inverse ranking of) firm age.[12] Firm-years ranked in the top quintile based on the summary score are classified into the growth life-cycle stage. H6 predicts a stronger effect for firms in their growth life-cycle stage. As such, the coefficient on the interaction term, β_3, is expected to be positive.

Table 8 reports the results for the tests of H6. The coefficient on *CEO_ Protection* is insignificant in the three regressions, suggesting that the effect of CEO contractual protection is weak when the firm is outside of the growth stage of its life cycle. However, when the firm is in its growth stage and hence has more investment opportunities and greater risk-taking propensity, the effect of CEO contractual protection is stronger; the coefficient on *CEO_Protection* × *Growth_Stage* is significantly positive in all three regressions (p-value = 0.004, 0.016, and 0.080, respectively).

In sum, consistent with H5 and H6, the effect of CEO contractual protection on debt contracting is weaker for firms with an old CEO and for firms with a longer-tenured CEO, but is stronger for firms in the growth life-cycle stage. These results suggest that the effect of CEO contractual protection on debt contracting varies systematically with CEOs' appetite for risk-taking and CEOs' risk-taking opportunities.

6. Additional tests

6.1 CEO contractual protection and bond yield spread

In this section, we examine the impact of CEO contractual protection on the pricing of public bond, i.e., bond yield. This test helps to broaden the scope of study by including public debt, and finding consistent results helps to strengthen the inferences based on private debt

[12] We standardize each variable by subtracting its mean and dividing it by its standard deviation. The calculation uses firm-year observations from the Compustat universe during the sample period. For each firm-year, we sum the four standardized values together to obtain a summary life-cycle-stage score.

contracting. Following Bharath et al. (2008), we focus on the pricing of public bond and do not examine the non-price terms of public debt. Public debt lacks renegotiation flexibility because firms must receive the unanimous consent of public bondholders to alter any of the material terms, making re-contracting extremely difficult for public debt. In addition, due to the small ownership of individual bond holders and free-riding problems, bond holders lack the incentives to monitor the firm. Hence we argue that in the case of public debt, the price term is the primary contractual feature used to address the riskiness of investments in the presence of CEO contractual protection.

As in prior research (e.g., Liao 2015; Pan, Wang, and Weisbach 2015), we measure bond yield spread as the difference between the offering yield of a bond and the yield of treasure bills with a similar maturity. This variable is measured in percentage for ease of result interpretation. We use the same list of control variables and the same research design as the earlier analyses to be consistent. The sample includes 2,201 new bond issuances by the sample firms over the period 1995-2008.

Table 9 reports the regression results. As expected, the bond yield spread is significantly higher for firms with CEO contractual protection than for the other firms (p-value = 0.053 in column (1)). The coefficient on *CEO_Protection* in Column (1) (0.206) implies that compared to bonds issued by firms without CEO contractual protection, those issued by firms with CEO contractual protection have 20.2% higher spread (the average bond yield spread is 1.02 percent for firms without CEO contractual protection). The results hold after controlling for the endogeneity of CEO contractual protection in columns (2) and (3) (p-value = 0.027 and 0.018, respectively).

In sum, the result based on public bonds is consistent with those based on private debt and

further strengthens the main inference.[13]

6.2 Switch firms

As noted in Chen et al. (2015), while some firms consistently use or do not use CEO protection throughout the sample period (referred to as non-switch firms), other firms switch back and forth (referred to as switch firms). To ensure that non-switch firms do not drive our results and to further alleviate the endogeneity concern, we examine whether our results hold for the switch firms (i.e., using the same firm as control). The untabulated analysis indicates that the results are qualitatively similar.

In addition, we conduct a difference-in-differences analysis using a subset of switch firms – the firms that do not have CEO contractual protection in the earlier years and have it in the later years of the sample period. The control firms include those firms that do not have CEO contractual protection throughout the sample period. Table 10 reports the regression results.[14] We find that compared to the control firms, the switch firms are not significantly different in the number of performance covenants, the likelihood of performance pricing provisions, and the loan spread in the years when these switch firms do not CEO contractual protection. However, once these firms have CEO contractual protection, they experience an increase in the number of performance covenants, the likelihood of performance pricing provisions, and loan spread.

Overall, these results confirm the earlier results and strengthen our inferences.

6.3 CAPEX covenants

Some loans contain covenants that restrict firms' capital investments by specifying the maximum capital expenditures (referred to as CAPEX covenants). Given that one of the key

[13] We also conduct similar cross-sectional analyses as in Section 5 and find similar results, with the exception of life cycle where we do not find significant results.

[14] Because firms issue new loans in different years and the number of control firms is small, it is impractical to match treatment (switch) firms with control firms. As such, we use loans of all control firms as the benchmark.

arguments for our hypotheses is that CEOs with contractual protection are more likely to undertake risky projects, it seems natural to expect that loans issued by these firms are more likely to include CAPEX covenants so that debtholders can directly restrict firms' risk-taking behavior. However, such covenants are very restrictive and are thus costly to the firms. Firms, especially those that would like the CEOs to undertake investments, are less willing to accept such covenants. In addition, these covenants are usually included only for firms with high default risk, where the asset substitution issue is particularly severe. Lastly, not all risky projects are in the form of capital investments. For example, investment in R&D is usually not covered in CAPEX covenants. Because of these reasons, we do not have clear prediction for the use of CAPEX covenants and do not investigate CAPEX covenants in the main analyses.

Nevertheless, for completeness, we examine whether CEO contractual protection is positively associated with the use of CAPEX covenants. For this purpose, we use the same methodology as for performance pricing provisions by replacing the dependent variable with an indicator for the use of CAPEX covenants. We do not find any significant results for the full sample. However, for the sample of firms with high default risk (i.e., Z-score lower than 1.8 as in Graham et al. 2008), we find that the coefficient on the CEO contractual protection indicator is significantly positive when using the predicted value of CEO protection or using the Heckman approach to address potential endogeneity ($p = 0.025$ and 0.042, respectively). That is, we find some evidence that the loans issued by firms with CEO contractual protection are more likely to include CAPEX covenants when they have high default risk.

6.4 Sensitivity tests

We conduct a series of sensitivity tests to ensure the robustness of our results. For the sake of brevity we do not tabulate the results.

Our inferences remain the same after controlling for the potential effect of corporate governance (board independence, E-index, and a founder CEO indicator). The sample size is reduced by almost half after the inclusion of these variables. To ensure that the model specifications are tractable and the results are generalizable, we do not include these variables in the main analyses.

Our inferences also remain the same after controlling for CEO inside debt for the three years when inside debt data is available (2006-2008). We also find that CEO inside debt is negatively associated with the number of performance covenants, the likelihood of performance pricing provisions, and loan spread.

In the main analyses, we combine employment agreements and standalone severance pay agreements because both types of agreements protect CEOs from downside risk and short-term performance swings. In an untabulated analysis, we investigate whether the results hold for both types. For this purpose, we construct two indicator variables separately for employment agreements and standalone severance pay agreements, and then replace *CEO_Protection* in the above analyses with these two indicators. We find that both indicators have significantly positive coefficients with the exception of the impact of standard alone severance pay agreements on the number of performance covenants. These results indicate that both employment agreements and standalone severance pay agreements significantly affect debt contracting.

7. Conclusion

In this paper, we examine whether CEO contractual protection, in the form of employment agreements and standalone severance pay agreements, affects debt contracting. Compared with other CEOs, those with contractual protection are protected from downside risk and short-term

performance swings. As such, they have stronger incentives to undertake risky projects. Because debtholders do not enjoy the upside potential but bear the negative consequences if the risky projects do not pay off, rational debtholders will monitor the firms more closely to protect themselves. As such, we predict that compared with loans issued by firms without CEO contractual protection, those issued by firms with CEO contractual protection have more financial covenants, particularly performance covenants, and are more likely to include performance pricing provisions. If the additional covenants and provisions cannot fully address the incremental agency conflict between shareholders and debtholders, these loans will also have higher spread.

Based on 6,470 loans issued by S&P 1500 firms over the period 1995-2008, we document results that are consistent with our predictions. We find that CEO contractual protection is associated with a larger number of performance covenants, a higher likelihood of performance pricing provisions, and higher loan spreads. We further find that the effect of CEO contractual protection increases with the monetary strength of the protection and CEOs' appetite and opportunities for risk-taking. In an additional analysis, we also find a higher yield spread for the public bonds issued by firms with CEO contractual protection than those issued by firms without CEO contractual protection. Our results are robust to the inclusion of additional control variables (corporate governance and CEO inside debt) and hold for the subset of firms that switch between having and not having CEO contractual protection over the sample period.

Our paper contributes to the literature by examining how CEO contractual protection affects debt contracting. The findings suggest that CEO contractual protection increases the cost of debt, a potentially unintended consequence of using CEO employment agreements and severance pay agreements. Therefore, our study complements prior studies that investigate how

CEO contractual protection affects corporate decisions from shareholders' perspectives.

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Appendix A
Variable measurements

Loan contract variables

Financial Covenants$_{i,t}$	=	the number of financial covenants;
Performance Covenants$_{i,t}$	=	the number of performance covenants, defined according to Christensen and Nikolaev (2012), which include (i) cash interest coverage ratio, (ii) debt service coverage ratio, (iii) level of EBITDA, (iv) fixed charge coverage ratio, (v) interest coverage ratio, (vi) ratio of debt to EBITDA, and (vii) ratio of senior debt to EBITDA;
Capial Covenants$_{i,t}$	=	the difference between the number of financial covenants and performance covenants;
Performance_Pricing$_{i,t}$	=	1 if the loan facility includes the performance pricing provision, and 0 otherwise;
Loan_Spread$_{i,t}$	=	natural logarithm of the drawn all-in spread charged by the bank over the LIBOR for the drawn portion of the loan facility;
Loan Maturity$_{i,t}$	=	natural logarithm of the loan maturity in months;
Loan Amount$_{i,t}$	=	natural logarithm of loan facility amount in millions;
Secured_Loan$_{i,t}$	=	1 if the loan facility is secured by collateral, and 0 otherwise;
Secured_Missing$_{i,t}$	=	1 if the loan security information is not available from the Dealscan database, and 0 otherwise;
Loan Type Fixed Effects$_{i,t}$	=	indicator variables for loan types, including term loan, revolver greater than 1 year, revolver less than 1 year, and 364-day facility;
Loan Purpose Fixed Effects$_{i,t}$	=	indicator variables for loan purposes, including corporate purposes, debt repayment, working capital, and takeover.

CEO contractual protection

CEO_Protection$_{i,t}$	=	the indicator variable for CEO contractual protection, which is equal to 1 if the CEO has an employment agreement or a standalone severance pay agreement, and 0 otherwise;

Firm characteristics and other variables

Size$_{i,t-1}$	=	natural logarithm of total assets in millions;
Market-to-Book$_{i,t-1}$	=	sum of market value of equity and the book value of debt, scaled by total assets;
Leverage$_{i,t-1}$	=	sum of debt in current liabilities and long-term debt, scaled by total assets;
Return on Assets$_{i,t-1}$	=	operating income before depreciation, scaled by total assets;
Tangibility$_{,t-1}$	=	net property, plant and equipment scaled by total assets;
Cash Flow Volatility$_{i,t-1}$	=	standard deviation of quarterly cash flows from operations over the 4 fiscal years prior to the loan initiation year, scaled by sum of debt in current liabilities and long-term debt;
Z-Score$_{i,t-1}$	=	modified Altman's z-score [1.2(Working capital) + 1.4(Retained earnings) + 3.3(EBIT) + 0.999(Sales)], scaled by total assets. Following Graham et al. (2008), we do not include the ratio of market value of equity to book value of total debt, because a similar term, market-to-book, enters the regressions as a separate variable;
$\Delta GDP_{i,t}$	=	percent change in GDP in the quarter of loan initiation relative to the same

		quarter one year ago;
Time Trend$_{i,t}$	=	linear time trend variable (t – 1995);
CEO Equity Compensation$_{i,t}$	=	CEOs' equity-based compensation, calculated as the ratio of the value of CEOs' stock and option grants to their total compensation in year t;
CEO Equity Ownership$_{i,t}$	=	CEOs' equity ownership, calculated as the total number of CEOs' share and option holdings divided by the firm's total number of shares outstanding;
CEO Portfolio Sensitivity$_{i,t}$	=	CEOs' portfolio sensitivity to stock volatility, defined as the change in the value of the CEOs' option portfolio due to a 1% increase in the annualized standard deviation of the firm's stock return;
Industry fixed effects$_{i,t}$	=	indicator variables for different industries, defined according to Fama and French (1997) industry classifications;
i,t	=	loan i, year t subscripts.

TABLE 1
Sample selection, composition, and descriptive statistics

This table reports the sample selection, composition, and descriptive statistics for the sample of 6,470 loans issued by the S&P 1500 firms with proxy statements from EDGAR in the 1995-2008 period.

Panel A: Sample selection

		Sample size
Firm-years with proxy statements available from EDGAR for S&P 1500 firms in the 1995-2008 period		18,936
Less:		
Firm-years without loan information from DealScan	12,643	
Firm-years of financial firms	735	
Firm-years without Compustat data to calculate the regression variables	1,385	
Firm-years with required data		4,173
Number of loans issued by the sample firms		6,470

Panel B: Yearly distribution

				Type of CEO protection	
Year	# of loans (A)	# of loans issued by firms with CEO protection (B)	Percentage (B)/(A)	# of loans issued by firms with employment agreements	# of loans issued by firms with *standalone* severance pay agreements
1995	217	136	62.7%	65	71
1996	284	173	60.9%	99	74
1997	373	251	67.3%	144	107
1998	364	235	64.6%	142	93
1999	417	292	70.0%	192	100
2000	487	358	73.5%	222	136
2001	613	478	78.0%	298	180
2002	591	475	80.4%	274	201
2003	621	505	81.3%	326	179
2004	647	525	81.1%	310	215
2005	625	503	80.5%	321	182
2006	489	412	84.3%	249	163
2007	482	416	86.3%	231	185
2008	260	226	86.9%	118	108
Total	6,470	4,985	77.0%	2,991	1,994

TABLE 2
Descriptive statistics: Full sample and separately for loans of firms with and without CEO protection

This table reports descriptive statistics on loan contract terms and firm characteristics for our sample of 6,470 loans issued by S&P 1500 firms in the 1995-2008 period, and then separately for loans issued by firms with and those without CEO contractual protection. Panel A reports descriptive statistics on loan contract terms. Panel B reports descriptive statistics on firm characteristics for the sample firms that issued these loans. Please see Appendix A for variable measurement. *, ** denote a significant difference in the mean/median for loans of firms with and without CEO protection at the 0.05 and 0.01 levels, respectively.

	Full Sample (N=6,470)			Loans issued by firms with CEO protection (N=4,985)			Loans issued by firms without CEO protection (N=1,485)		
	Mean	Median	Std Dev.	Mean	Median	Std Dev.	Mean	Median	Std Dev.
Panel A: Loan contract terms									
Number of Financial Covenants	1.50	2.00	1.36	1.55	2.00	1.34	1.33**	1.00**	1.41
Performance Covenants	1.04	1.00	1.10	1.09	1.00	1.10	0.87**	0.00**	1.08
Capital Covenants	0.46	0.00	0.69	0.46	0.00	0.67	0.46	0.00	0.75
Performance_Pricing	0.56	1.00	0.50	0.58	1.00	0.49	0.51**	1.00**	0.50
Loan spread (basis points)	123.54	87.50	105.80	129.91	100.00	108.01	102.13**	65.00**	94.95
Log(spread) (Loan_Spread)	4.44	4.47	0.90	4.52	4.61	0.87	4.20**	4.17**	0.94
Loan maturity (months)	43.16	50.00	24.08	43.40	52.00	23.38	42.35	48.00	26.29
Log(maturity) (Loan Maturity)	3.54	3.91	0.76	3.55	3.95	0.75	3.49**	3.87	0.78
Loan amount ($million)	484.31	250.00	657.11	460.26	250.00	623.95	565.02**	275.00**	752.55
Log(loan amount) (Loan Amount)	5.48	5.52	1.26	5.46	5.52	1.23	5.56**	5.62**	1.35
Secured_Loan	0.33	0.00	0.47	0.35	0.00	0.48	0.27**	0.00**	0.44
Secured_Missing	0.37	0.00	0.48	0.34	0.00	0.47	0.46**	0.00**	0.50
Panel B: Firm characteristics									
Total assets ($million)	7544	2210	15650	6736	2112	13617	10258**	2548**	20867
Log of total assets (Size)	7.80	7.70	1.51	7.74	7.66	1.47	7.99**	7.84**	1.64
Market-to-Book	1.87	1.56	0.96	1.81	1.51	0.93	2.07**	1.73**	1.04
Leverage	0.28	0.27	0.16	0.29	0.28	0.16	0.27**	0.26**	0.16
Return on Assets	0.15	0.14	0.07	0.15	0.14	0.07	0.16**	0.16**	0.07
Tangibility	0.34	0.29	0.21	0.34	0.28	0.22	0.34	0.31**	0.20
Cash Flow Volatility	1.50	0.19	5.67	1.46	0.18	5.63	1.64	0.21**	5.82
Z-score	1.94	1.88	1.08	1.87	1.80	1.08	2.18**	2.11**	1.06
CEO Equity Compensation	0.45	0.46	0.28	0.45	0.47	0.28	0.44	0.45	0.31
CEO Equity Ownership	0.03	0.01	0.04	0.02	0.01	0.04	0.04**	0.01**	0.06
CEO Portfolio Sensitivity	4.22	4.35	1.58	4.24	4.35	1.50	4.15	4.32	1.82

TABLE 3
CEO contractual protection and financial covenants of loan contracts

This table reports results from the following Poisson regression of the number of covenants:

$$Covenants_{i,j,t} = \alpha + \beta CEO\_Protection_{i,t} + \gamma_1 Borrower\text{-}specific\_Control_{i,t} + \gamma_2 CEO\_Equity\_Incentives_{i,t} + \gamma_3 Loan\text{-}specific\_Control_{j,t} + \gamma_4 Economy\text{-}wide\_Control_t + Loan\_Type\_Indicators + Loan\_Purpose\_Indicators + Industry\_Indicators + \varepsilon_{i,j,t},$$

where *Covenants* is the total number of covenants and is measured in three alternative ways: the total number of financial covenants in Panel A, the number of performance covenants in Panel B, and the number of capital covenants in Panel C. See Appendix A for the measurement of other variables. In Column (1) of each panel, we report the Poisson regression of the above equation. In Column (2) of each panel, we replace *CEO_Protection* with the predicted value estimated from the *CEO_Protection* determinant model and report the Poisson regression results. In Column (3) of each panel, we add to the Poisson regression model the Inverse Mills Ratio estimated from the *CEO_Protection* determinant model. The sample includes 6,470 loans issued by S&P 1500 firms over the period 1995-2008. The sample size is smaller for columns (2) and (3) due to the additional data requirement for the estimation of the *CEO_Protection* determinant model. The p-values are based on standard errors adjusted for firm clustering. The p-values are one-sided for *CEO_Protection* and two-sided otherwise.

TABLE 3 (Cont'd)

Panel A: Analysis of financial covenants

	(1) Using the raw value of CEO contractual protection		(2) Using the predicted value of CEO protection		(3) Using the Heckman approach	
	Coef.	P-value	Coef.	P-value	Coef.	P-value
CEO_Protection	**0.070**	**0.043**	**0.083**	**0.091**	**0.096**	**0.069**
Size	-0.296	0.000	-0.310	0.000	-0.308	0.000
Market-to-Book	-0.119	0.000	-0.122	0.000	-0.121	0.000
Leverage	0.451	0.000	0.424	0.002	0.425	0.002
Return on Assets	0.405	0.212	0.328	0.374	0.324	0.381
Tangibility	-0.096	0.392	-0.112	0.404	-0.104	0.435
Cash Flow Volatility	0.003	0.253	0.003	0.363	0.003	0.340
Z-score	-0.013	0.581	-0.016	0.536	-0.015	0.558
CEO Equity Compensation	-0.063	0.231	-0.047	0.419	-0.046	0.428
CEO Equity Ownership	0.711	0.015	0.658	0.084	0.736	0.051
CEO Portfolio Sensitivity	0.015	0.219	0.017	0.233	0.016	0.267
Loan Maturity	-0.044	0.186	-0.066	0.091	-0.065	0.093
Loan Amount	0.124	0.000	0.142	0.000	0.141	0.000
ΔGDP	1.337	0.198	0.901	0.425	0.940	0.406
Time Trend	0.012	0.020	0.009	0.180	0.009	0.188
Inverse Mills Ratio					-0.026	0.509
Loan type fixed effects	YES		YES		YES	
Loan purpose fixed effects	YES		YES		YES	
Industry fixed effects	YES		YES		YES	
N	6,470		5,388		5,388	
Pseudo R^2	0.124		0.122		0.122	

TABLE 3 (Cont'd)

Panel B: Analysis of performance covenants

	(1) Using the raw value of CEO contractual protection		(2) Using the predicted value of CEO protection		(3) Using the Heckman approach	
	Coef.	P-value	Coef.	P-value	Coef.	P-value
CEO_Protection	**0.092**	**0.041**	**0.155**	**0.030**	**0.169**	**0.024**
Size	-0.334	0.000	-0.349	0.000	-0.348	0.000
Market-to-Book	-0.114	0.000	-0.105	0.003	-0.104	0.003
Leverage	0.785	0.000	0.808	0.000	0.808	0.000
Return on Assets	0.609	0.149	0.341	0.482	0.339	0.486
Tangibility	-0.379	0.008	-0.467	0.007	-0.458	0.008
Cash Flow Volatility	0.005	0.055	0.005	0.139	0.005	0.125
Z-score	-0.044	0.111	-0.021	0.494	-0.020	0.506
CEO Equity Compensation	-0.134	0.037	-0.115	0.120	-0.114	0.123
CEO Equity Ownership	0.446	0.238	0.442	0.360	0.539	0.263
CEO Portfolio Sensitivity	0.036	0.029	0.039	0.041	0.038	0.050
Loan Maturity	0.080	0.036	0.057	0.194	0.057	0.192
Loan Amount	0.135	0.000	0.146	0.000	0.145	0.000
ΔGDP	0.828	0.484	0.651	0.622	0.704	0.594
Time Trend	0.044	0.000	0.040	0.000	0.040	0.000
Inverse Mills Ratio					-0.060	0.264
Loan type fixed effects	YES		YES		YES	
Loan purpose fixed effects	YES		YES		YES	
Industry fixed effects	YES		YES		YES	
N	6,470		5,388		5,388	
Pseudo R^2	0.155		0.156		0.156	

TABLE 3 (Cont'd)

Panel C: Analysis of capital covenants

	(1) Using the raw value of CEO contractual protection		(2) Using the predicted value of CEO protection		(3) Using the Heckman approach	
	Coef.	P-value	Coef.	P-value	Coef.	P-value
CEO_Protection	**0.045**	**0.270**	**-0.060**	**0.690**	**-0.043**	**0.639**
Size	-0.196	0.000	-0.197	0.000	-0.195	0.000
Market-to-Book	-0.138	0.001	-0.166	0.001	-0.164	0.001
Leverage	-0.525	0.029	-0.643	0.019	-0.638	0.020
Return on Assets	-0.302	0.592	-0.018	0.977	-0.026	0.967
Tangibility	0.644	0.004	0.727	0.004	0.737	0.004
Cash Flow Volatility	-0.004	0.326	-0.004	0.463	-0.004	0.477
Z-score	0.073	0.100	0.015	0.776	0.017	0.750
CEO Equity Compensation	0.107	0.215	0.103	0.283	0.104	0.274
CEO Equity Ownership	1.220	0.037	1.174	0.065	1.262	0.048
CEO Portfolio Sensitivity	-0.017	0.500	-0.017	0.535	-0.018	0.501
Loan Maturity	-0.323	0.000	-0.351	0.000	-0.350	0.000
Loan Amount	0.083	0.005	0.112	0.001	0.112	0.001
ΔGDP	2.889	0.082	1.846	0.300	1.882	0.291
Time Trend	-0.065	0.000	-0.065	0.000	-0.065	0.000
Inverse Mills Ratio					0.057	0.469
Loan type fixed effects	YES		YES		YES	
Loan purpose fixed effects	YES		YES		YES	
Industry fixed effects	YES		YES		YES	
N	6,470		5,388		5,388	
Pseudo R^2	0.103		0.099		0.099	

TABLE 4
CEO contractual protection and performance pricing provisions in loan contracts

This table reports results from the following Logit regression of the likelihood of including the performance pricing provisions in loan contracts (*Performance_Pricing*):

$$Prob(Performance\_Pricing_{i,j,t} = 1) = \alpha + \beta CEO\_Protection_{i,t} + \gamma_1 Borrower\text{-}specific\_Control_{i,t} + \gamma_2 CEO\_Equity\_Incentives_{i,t} + \gamma_3 Loan\text{-}specific\_Control_{j,t} + \gamma_4 Economy\text{-}wide\_Control_t + Loan\_Type\_Indicators + Loan\_Purpose\_Indicators + Industry\_Indicators + \varepsilon_{i,j,t},$$

where *Performance_Pricing* is an indicator variable that equals 1 if the loan contract includes the performance pricing provision, and 0 otherwise. See Appendix A for the measurement of other variables. In Column (1), we report the Logit regression of the above equation. In Column (2), we replace *CEO_Protection* with its predicted value estimated from the *CEO_Protection* determinant model and report the Logit regression results. In Column (3), we add to the Logit regression model the Inverse Mills Ratio estimated from the *CEO_Protection* determinant model. The sample includes 6,470 loans issued by S&P 1500 firms over the period 1995-2008. The sample size is smaller for columns (2) and (3) due to the additional data requirement for the estimation of the *CEO_Protection* determinant model. The p-values are based on standard errors adjusted for firm clustering. The p-values are one-sided for *CEO_Protection* and two-sided otherwise.

TABLE 4 (Cont'd)

	(1) Using the raw value of CEO contractual protection		(2) Using the predicted value of CEO protection		(3) Using the Heckman approach	
	Coef.	P-value	Coef.	P-value	Coef.	P-value
CEO_Protection	**0.236**	**0.016**	**0.527**	**0.001**	**0.559**	**0.001**
Size	-0.414	0.000	-0.397	0.000	-0.393	0.000
Market-to-Book	-0.197	0.002	-0.193	0.005	-0.186	0.006
Leverage	0.031	0.931	0.002	0.997	0.015	0.970
Return on Assets	1.372	0.142	1.561	0.120	1.520	0.130
Tangibility	0.219	0.513	-0.159	0.667	-0.128	0.730
Cash Flow Volatility	-0.005	0.455	-0.005	0.524	-0.005	0.536
Z-score	0.074	0.258	0.053	0.483	0.057	0.449
CEO Equity Compensation	0.029	0.836	0.132	0.389	0.136	0.378
CEO Equity Ownership	0.415	0.691	1.771	0.144	2.016	0.102
CEO Portfolio Sensitivity	0.016	0.654	0.003	0.948	-0.001	0.989
Loan Maturity	0.187	0.036	0.176	0.078	0.178	0.075
Loan Amount	0.432	0.000	0.436	0.000	0.436	0.000
ΔGDP	-3.666	0.144	-2.267	0.389	-2.168	0.410
Time Trend	0.026	0.061	0.028	0.085	0.027	0.090
Inverse Mills Ratio					-0.234	0.046
Loan type fixed effects	YES		YES		YES	
Loan purpose fixed effects	YES		YES		YES	
Industry fixed effects	YES		YES		YES	
N	6,470		5,388		5,388	
Pseudo R^2	0.145		0.152		0.152	

TABLE 5
CEO contractual protection and loan spread

This table reports results from the following OLS regression of loan spread (*Loan_Spread*):

$$Loan\_Spread_{i,j,t} = \alpha + \beta CEO\_Protection_{i,t} + \gamma_1 Borrower\text{-}specific\_Control_{i,t} + \gamma_2 CEO\_Equity\_Incentives_{i,t} + \gamma_3 Loan\text{-}specific\_Control_{j,t} + \gamma_4 Economy\text{-}wide\_Control_t + Loan\_Type\_Indicators + Loan\_Purpose\_Indicators + Industry\_Indicators + \varepsilon_{i,j,t},$$

where *Loan_Spread* is the natural logarithm of loan spread, which is the drawn all-in spread charged by the bank over the LIBOR for the drawn portion of the loan facility. See Appendix A for the measurement of other variables. For the loan-specific control variables, in additional to loan maturity and loan amount, we add four more variables: the total number of all covenants (*Number of Covenants*), an indicator for performance pricing provisions (*Performance_Pricing*), an indicator for secured loans (*Secured_Loan*), and an indicator for loans without loan security information (*Secured_Missing*). In Column (1), we report the OLS regression results of the above equation. In Column (2), we replace *CEO_Protection* with its predicted value estimated from the *CEO_Protection* determinant model and report the OLS regression results. In Column (3), we add to the OLS regression model the Inverse Mills Ratio estimated from the *CEO_Protection* determinant model. The sample includes 6,470 loans issued by S&P 1500 firms over the period 1995-2008. The sample size is smaller for columns (2) and (3) due to the additional data requirement for the estimation of the *CEO_Protection* determinant model. The p-values are based on standard errors adjusted for firm clustering. The p-values are one-sided for *CEO_Protection* and two-sided otherwise.

TABLE 5 (Cont'd)

	(1) Using the raw value of CEO contractual protection		(2) Using the predicted value of CEO protection		(3) Using the Heckman approach	
	Coef.	P-value	Coef.	P-value	Coef.	P-value
CEO_Protection	**0.078**	**0.005**	**0.099**	**0.013**	**0.115**	**0.005**
Size	-0.118	0.000	-0.113	0.000	-0.112	0.000
Market-to-Book	-0.099	0.000	-0.106	0.000	-0.103	0.000
Leverage	0.808	0.000	0.784	0.000	0.788	0.000
Return on Assets	-1.152	0.000	-1.052	0.000	-1.066	0.000
Tangibility	-0.084	0.346	-0.087	0.371	-0.075	0.443
Cash Flow Volatility	0.003	0.122	0.002	0.282	0.003	0.261
Z-score	-0.070	0.000	-0.088	0.000	-0.086	0.000
CEO Equity Compensation	0.069	0.055	0.051	0.180	0.053	0.168
CEO Equity Ownership	0.904	0.000	0.981	0.000	1.082	0.000
CEO Portfolio Sensitivity	-0.001	0.903	0.001	0.950	-0.001	0.942
Loan Maturity	-0.097	0.000	-0.101	0.000	-0.101	0.000
Loan Amount	-0.132	0.000	-0.141	0.000	-0.141	0.000
Number of Covenants	-0.084	0.000	-0.087	0.001	-0.088	0.000
Performance_Pricing	0.084	0.000	0.094	0.000	0.094	0.000
Secured_Loan	0.524	0.000	0.523	0.000	0.524	0.000
Secured_Missing	0.096	0.000	0.084	0.001	0.086	0.000
ΔGDP	-3.864	0.000	-4.008	0.000	-3.975	0.000
Time Trend	0.025	0.000	0.024	0.000	0.024	0.000
Inverse Mills Ratio					-0.030	0.330
Loan type fixed effects	YES		YES		YES	
Loan purpose fixed effects	YES		YES		YES	
Industry fixed effects	YES		YES		YES	
N	6,470		5,388		5,388	
Adj. R^2	0.675		0.685		0.517	

TABLE 6
CEO contractual protection and debt contracts –
The incremental effect of the monetary strength of CEO Protection

This table reports results from the following regression:

$$Loan\_Feature_{i,j,t} = \alpha + \beta_1 CEO\_Protection_{i,t} + \beta_2 CEO\_Protection_{i,t} \times Strength_{i,t} + \gamma_1 Borrower\text{-}specific\_Control_{i,t} + \gamma_2 CEO\_Equity\_Incentives_{i,t} + \gamma_3 Loan\text{-}specific\_Control_{j,t} + \gamma_4 Economy\text{-}wide\_Control_t + Loan\_Type\_Indicators + Loan\_Purpose\_Indicators + Industry\_Indicators + \varepsilon_{i,j,t},$$

where the dependent variable, *Loan_Feature*, is one of the three loan contract variables: (1) the number of performance covenants (*Performance Covenants*); (2) an indicator for the loan contracts that include performance pricing provisions (*Performance_Pricing*); and (3) the natural logarithm of loan spread (*Loan_Spread*), which is measured as the drawn all-in spread charged by the bank over the LIBOR for the drawn portion of the loan facility. The Poisson regression, Logit regression, and OLS regression methods are used for the three dependent variables, respectively. *Strength* is an ordinal variable for the strength of CEO contractual protection; it equals 2 (1, 0) if the severance pay multiple—how many times the severance pay is relative to the base salary—is above three (between two and three, below two). *CEO_Protection* and *Strength* are set as zero for CEOs without contractual protection. Firm-years with CEO contractual protection but not the information on severance pay are excluded from the analyses. See Appendix A for the measurement of other variables. We add to the regressions the inverse Mills ratio estimated from the *CEO_Protection* determinant model to control for the endogeneity of CEO contractual protection. The p-values are based on standard errors adjusted for firm clustering. The sample includes 5,267 loans issued by S&P 1500 firms that have detailed information on the strength of the CEO protection over the 1995-2008 period. The p-values are one-sided for *CEO_Protection* and *CEO_Protection* × *Strength*, and two-sided otherwise.

TABLE 6 (Cont'd)

	(1) Dep. Var = *Performance Covenants*		(2) Dep. Var = *Performance_Pricing*		(3) Dep. Var = *Loan_Spread*	
	Coef.	P-value	Coef.	P-value	Coef.	P-value
CEO_Protection	**0.105**	**0.135**	**0.313**	**0.054**	**0.057**	**0.135**
CEO_Protection × Strength	**0.048**	**0.051**	**0.178**	**0.004**	**0.038**	**0.014**
Size	-0.351	0.000	-0.416	0.000	-0.112	<.0001
Market-to-Book	-0.101	0.005	-0.185	0.008	-0.103	<.0001
Leverage	0.823	0.000	-0.067	0.867	0.773	<.0001
Return on Assets	0.293	0.565	1.148	0.259	-1.050	0.000
Tangibility	-0.473	0.007	-0.106	0.777	-0.082	0.406
Cash Flow Volatility	0.005	0.113	-0.006	0.464	0.002	0.275
Z-score	-0.023	0.468	0.053	0.495	-0.086	<.0001
CEO Equity Compensation	-0.108	0.154	0.147	0.348	0.056	0.158
CEO Equity Ownership	0.563	0.255	2.052	0.100	1.060	<.0001
CEO Portfolio Sensitivity	0.033	0.100	0.005	0.900	-0.003	0.796
Loan Maturity	0.047	0.283	0.172	0.091	-0.099	0.000
Loan Amount	0.144	0.000	0.441	0.000	-0.142	<.0001
Number of Covenants					-0.084	0.001
Performance_Pricing					0.093	<.0001
Secured_Loan					0.539	<.0001
Secured_Missing					0.093	0.000
Δ*GDP*	0.789	0.556	-3.434	0.200	-3.938	<.0001
Time Trend	0.040	0.000	0.025	0.132	0.023	<.0001
Inverse Mills Ratio	-0.062	0.253	-0.237	0.044	-0.027	0.384
Loan type fixed effects	YES		YES		YES	
Loan purpose fixed effects	YES		YES		YES	
Industry fixed effects	YES		YES		YES	
N	5,267		5,267		5,267	
Pseudo R^2 (Adj. R^2)	0.158		0.156		0.685	

TABLE 7
CEO contractual protection and debt contracts –
Cross-sectional analyses – CEO age and tenure

This table reports results from the following regression:

$$Loan\_Feature_{i,j,t} = \alpha + \beta_1 CEO\_Protection_{i,t} + \beta_2 Conditional\_Var_{i,t} + \beta_3 CEO\_Protection_{i,t} \times Conditional\_Var_{i,t} + \gamma_1 Borrowerspecific\_Control_{i,t} + \gamma_2 CEO\_Equity\_Incentives_{i,t} + \gamma_3 Loan\text{-}specific\_Control_{j,t} + \gamma_4 Economy\text{-}wide\_Control_t + Loan\_Type\_Indicators + Loan\_Purpose\_Indicators + Industry\_Indicators + \varepsilon_{i,j,t},$$

where the dependent variable, *Loan_Feature*, is one of the three loan contract variables: (1) the number of performance covenants (*Performance Covenants*); (2) an indicator for the loan contracts that include performance pricing provisions (*Performance_Pricing*); and (3) the natural logarithm of loan spread (*Loan_Spread*), which is measured as the drawn all-in spread charged by the bank over the LIBOR for the drawn portion of the loan facility. The Poisson regression, Logit regression, and OLS regression methods are used for the three dependent variables, respectively. *Conditional_Var* is *Old_CEO* in Panel A and *Long_Tenure* in Panel B. *Old_CEO* equals 1 if the CEO's age is 64 or higher, and 0 otherwise. *Long_Tenure* equals 1 if the CEO's tenure is four years or more, and 0 otherwise. See Appendix A for the measurement of other variables. We add to the regressions the inverse Mills ratio estimated from the *CEO_Protection* determinant model to control for the endogeneity of CEO contractual protection. The sample includes 5,388 (5,329) loans issued by S&P 1500 firms over the period 1995-2008 in Panel A (B). The p-values are based on standard errors adjusted for firm clustering. The p-values are one-sided for *CEO_Protection* and the interaction term, and two-sided otherwise.

TABLE 7 (Cont'd)

Panel A: Cross-sectional analysis – CEO age

	(1) Dep. Var = *Performance Covenants*		(2) Dep. Var = *Performance_Pricing*		(3) Dep. Var = *Loan_Spread*	
	Coef.	P-value	Coef.	P-value	Coef.	P-value
CEO_Protection	**0.196**	**0.016**	**0.534**	**0.001**	**0.143**	**0.001**
CEO_Protection × Old_CEO	**-0.347**	**0.013**	**0.223**	**0.239**	**-0.167**	**0.039**
Old_CEO	0.072	0.532	-0.099	0.681	0.152	0.039
Size	-0.346	0.000	-0.394	0.000	-0.112	0.000
Market-to-Book	-0.103	0.003	-0.187	0.006	-0.103	0.000
Leverage	0.801	0.000	0.018	0.964	0.781	0.000
Return on Assets	0.332	0.493	1.519	0.132	-1.045	0.000
Tangibility	-0.449	0.010	-0.142	0.703	-0.066	0.503
Cash Flow Volatility	0.005	0.127	-0.005	0.537	0.003	0.257
Z-score	-0.019	0.544	0.056	0.457	-0.087	0.000
CEO Equity Compensation	-0.119	0.105	0.135	0.382	0.057	0.141
CEO Equity Ownership	0.518	0.290	2.075	0.090	0.976	0.000
CEO Portfolio Sensitivity	0.039	0.047	-0.001	0.976	0.000	0.984
Loan Maturity	0.058	0.187	0.178	0.075	-0.102	0.000
Loan Amount	0.143	0.000	0.437	0.000	-0.141	0.000
Number of Covenants					-0.086	0.001
Performance_Pricing					0.094	0.000
Secured_Loan					0.526	0.000
Secured_Missing					0.088	0.000
Δ*GDP*	0.799	0.543	-2.236	0.396	-3.945	0.000
Time Trend	0.039	0.000	0.027	0.089	0.024	0.000
Inverse Mills Ratio	-0.057	0.288	-0.235	0.046	-0.032	0.295
Loan type fixed effects	YES		YES		YES	
Loan purpose fixed effects	YES		YES		YES	
Industry fixed effects	YES		YES		YES	
N	5,388		5,388		5,388	
Pseudo R^2 (Adj. R^2)	0.157		0.153		0.686	

TABLE 7 (Cont'd)

Panel B: Cross-sectional analysis –CEO tenure

	(1) Dep. Var = *Performance Covenants*		(2) Dep. Var = *Performance_Pricing*		(3) Dep. Var = *Loan_Spread*	
	Coef.	P-value	Coef.	P-value	Coef.	P-value
CEO_Protection	**0.269**	**0.004**	**0.767**	**0.000**	**0.116**	**0.016**
CEO_Protection × Long_Tenure	**-0.405**	**0.000**	**-0.403**	**0.026**	**-0.078**	**0.087**
Long_Tenure	0.014	0.873	0.229	0.211	-0.062	0.214
Size	-0.341	0.000	-0.389	0.000	-0.116	0.000
Market-to-Book	-0.095	0.004	-0.188	0.006	-0.105	0.000
Leverage	0.759	0.000	0.000	0.999	0.789	0.000
Return on Assets	0.346	0.443	1.473	0.145	-1.055	0.000
Tangibility	-0.487	0.005	-0.129	0.729	-0.075	0.441
Cash Flow Volatility	0.005	0.142	-0.005	0.508	0.002	0.385
Z-score	-0.011	0.712	0.064	0.402	-0.085	0.000
CEO Equity Compensation	-0.126	0.074	0.142	0.365	0.033	0.390
CEO Equity Ownership	0.601	0.199	1.873	0.142	1.196	0.000
CEO Portfolio Sensitivity	0.052	0.011	0.009	0.815	0.006	0.583
Loan Maturity	0.064	0.127	0.177	0.080	-0.099	0.000
Loan Amount	0.147	0.000	0.435	0.000	-0.142	0.000
Number of Covenants					-0.082	0.001
Performance_Pricing					0.085	0.000
Secured_Loan					0.495	0.000
Secured_Missing					0.082	0.001
Δ*GDP*	0.840	0.506	-2.098	0.428	-3.889	0.000
Time Trend	0.040	0.000	0.026	0.110	0.024	0.000
Inverse Mills Ratio	-0.033	0.556	-0.232	0.051	-0.017	0.589
Loan type fixed effects	YES		YES		YES	
Loan purpose fixed effects	YES		YES		YES	
Industry fixed effects	YES		YES		YES	
N	5,329		5,329		5,329	
Pseudo R^2 (Adj. R^2)	0.164		0.153		0.691	

TABLE 8
CEO contractual protection and debt contracts – Firm life-cycle stage

This table reports results from the following regression:

$$Loan\_Feature_{i,j,t} = \alpha + \beta_1 CEO\_Protection_{i,t} + \beta_2 Growth\_Stage_{i,t} + \beta_3 CEO\_Protection_{i,t} \times Growth\_Stage_{i,t} + \gamma_1 Borrowerspecific\_Control_{i,t} + \gamma_2 CEO\_Equity\_Incentives_{i,t} + \gamma_3 Loan\text{-}specific\_Control_{j,t} + \gamma_4 Economy\text{-}wide\_Control_t + Loan\_Type\_Indicators + Loan\_Purpose\_Indicators + Industry\_Indicators + \varepsilon_{i,j,t},$$

where the dependent variable, *Loan_Feature*, is one of the three loan contract variables: (1) the number of performance covenants (*Performance Covenants*); (2) an indicator for the loan contracts that include performance pricing provisions (*Performance_Pricing*); and (3) the natural logarithm of loan spread (*Loan_Spread*), which is measured as the drawn all-in spread charged by the bank over the LIBOR for the drawn portion of the loan facility. The Poisson regression, Logit regression, and OLS regression methods are used for the three dependent variables, respectively. *Growth_Stage* equals 1 if the firm-year is in the growth life-cycle stage, and 0 otherwise. Following Hribar and Yehuda (2015), we create a life-cycle-stage score by summing the standardized values of (1) sales growth, (2) capital expenditures, (3) net-capital transactions, and (4) (inverse ranking of) firm age. Firm-years ranked in the top quintile based on this summary score are classified into the growth life-cycle stage. See Appendix A for the measurement of other variables. We add to the regressions the inverse Mills ratio estimated from the *CEO_Protection* determinant model to control for the endogeneity of CEO contractual protection. The sample includes 5,340 loans issued S&P 1500 firms over the period 1995-2008. The p-values are based on standard errors adjusted for firm clustering. The p-values are one-sided for *CEO_Protection* and the interaction term, and two-sided otherwise.

TABLE 8 (Cont'd)

	(1) Dep. Var = *Performance Covenants*		(2) Dep. Var = *Performance_Pricing*		(3) Dep. Var = *Loan_Spread*	
	Coef.	P-value	Coef.	P-value	Coef.	P-value
CEO_Protection	**-0.056**	**0.320**	**0.134**	**0.299**	**0.041**	**0.256**
CEO_Protection × Growth_Stage	**0.288**	**0.004**	**0.520**	**0.016**	**0.092**	**0.080**
Growth_Stage	-0.045	0.634	-0.320	0.122	-0.143	0.018
Size	-0.355	0.000	-0.398	0.000	-0.106	0.000
Market-to-Book	-0.097	0.006	-0.181	0.009	-0.107	0.000
Leverage	0.784	0.000	-0.070	0.860	0.770	0.000
Return on Assets	0.396	0.414	1.730	0.092	-1.060	0.000
Tangibility	-0.467	0.008	-0.133	0.723	-0.068	0.492
Cash Flow Volatility	0.005	0.121	-0.004	0.618	0.002	0.346
Z-score	-0.024	0.450	0.041	0.598	-0.083	0.000
CEO Equity Compensation	-0.124	0.091	0.113	0.465	0.048	0.212
CEO Equity Ownership	0.567	0.236	1.680	0.183	0.962	0.000
CEO Portfolio Sensitivity	0.038	0.053	0.001	0.987	0.000	0.978
Loan Maturity	0.055	0.207	0.179	0.074	-0.100	0.000
Loan Amount	0.151	0.000	0.445	0.000	-0.140	0.000
Number of Covenants					-0.092	0.000
Performance_Pricing					0.095	0.000
Secured_Loan					0.533	0.000
Secured_Missing					0.088	0.000
ΔGDP	0.968	0.460	-1.879	0.478	-3.990	0.000
Time Trend	0.039	0.000	0.030	0.068	0.024	0.000
Inverse Mills Ratio	-0.053	0.321	-0.227	0.055	-0.021	0.487
Loan type fixed effects	YES		YES		YES	
Loan purpose fixed effects	YES		YES		YES	
Industry fixed effects	YES		YES		YES	
N	5,340		5,340		5,340	
Pseudo R^2 (Adj. R^2)	0.160		0.156		0.687	

TABLE 9
CEO contractual protection and bond yield spread

This table reports results from the following OLS regression of bond yield spread (*Bond_Yield*):

$$Bond\_Yield_{i,j,t} = \alpha + \beta CEO\_Protection_{i,t} + \gamma_1 Borrower\text{-}specific\_Control_{i,t} + \gamma_2 CEO\_Equity\_Incentives_{i,t} + \gamma_3 Loan\text{-}specific\_Control_{j,t} + \gamma_4 Economy\text{-}wide\_Control_t + Industry\_Indicators + \varepsilon_{i,j,t},$$

where *Bond_Yield* is measured as the offering yield of a bond minus the yield of treasures with similar maturity. See Appendix A for the measurement of other variables. In Column (1), we report the OLS regression results of the above equation. In Column (2), we replace *CEO_Protection* with its predicted value estimated from the *CEO_Protection* determinant model and report the OLS regression results. In Column (3), we add to the OLS regression model the Inverse Mills Ratio estimated from the *CEO_Protection* determinant model. The sample includes 2,201 bonds issued by S&P 1500 firms over the period 1995-2008. The sample size is smaller for columns (2) and (3) due to the additional data requirement for the estimation of the *CEO_Protection* determinant model. The p-values are based on standard errors adjusted for firm clustering. The p-values are one-sided for *CEO_Protection* and two-sided otherwise.

TABLE 9 (Cont'd)

	(1) Using the raw value of CEO contractual protection		(2) Using the predicted value of CEO protection		(3) Using the Heckman approach	
	Coef.	P-value	Coef.	P-value	Coef.	P-value
CEO_Protection	**0.206**	**0.053**	**0.336**	**0.027**	**0.369**	**0.018**
Size	0.124	0.048	0.144	0.033	0.149	0.030
Market-to-Book	-0.333	0.000	-0.318	0.000	-0.315	0.000
Leverage	2.856	0.000	2.622	0.000	2.641	0.000
Return on Assets	-0.909	0.378	-0.897	0.395	-0.921	0.382
Tangibility	0.940	0.031	0.972	0.024	0.973	0.024
Cash Flow Volatility	-0.006	0.157	-0.008	0.097	-0.008	0.103
Z-score	-0.028	0.798	-0.052	0.647	-0.049	0.670
CEO Equity Compensation	0.155	0.441	0.075	0.722	0.067	0.753
CEO Equity Ownership	-0.866	0.597	-0.382	0.865	-0.274	0.903
CEO Portfolio Sensitivity	-0.084	0.058	-0.070	0.143	-0.073	0.126
Loan Maturity	-0.465	0.000	-0.424	0.000	-0.425	0.000
Loan Amount	-0.170	0.082	-0.219	0.037	-0.215	0.039
ΔGDP	-26.108	0.000	-24.932	0.000	-24.953	0.000
Time Trend	0.009	0.593	0.008	0.612	0.007	0.670
Inverse Mills Ratio					-0.134	0.238
Industry fixed effects	YES		YES		YES	
N	2,201		1,961		1,961	
Adj. R^2	0.285		0.293		0.294	

TABLE 10
CEO contractual protection and debt contracts – A difference-in-differences approach for switch firms

This table reports results from the following regression:

$$Loan\_Feature_{i,j,t} = \alpha + \beta_1 Switch_i + \beta_2 Switch_i \times Post_t + \gamma_1 Borrowerspecific\_Control_{i,t} + \gamma_2 CEO\_Equity\_Incentives_{i,t} + \gamma_3 Loan\text{-}specific\_Control_{j,t} + \gamma_4 Economy\text{-}wide\_Control_t + Loan\_Type\_Indicators + Loan\_Purpose\_Indicators + Industry\_Indicators + \varepsilon_{i,j,t},$$

where the dependent variable, *Loan_Feature*, is one of the three loan contract variables: (1) the number of performance covenants (*Performance Covenants*); (2) an indicator for the loan contracts that include performance pricing provisions (*Performance_Pricing*); and (3) the natural logarithm of loan spread (*Loan_Spread*), which is measured as the drawn all-in spread charged by the bank over the LIBOR for the drawn portion of the loan facility. The Poisson regression, Logit regression, and OLS regression methods are used for the three dependent variables, respectively. $Switch_i$ is an indicator variable for firms that do not have employment agreements or severance pay agreements with their CEOs in the earlier part of the sample period, but have such agreements in the later part of the sample period. $Post_t$ is an indicator variable for the years when switch firms have employment or severance pay agreements with their CEOs. Control firms are those without employment or severance pay agreements with their CEOs throughout the sample period; $Switch_i$ and $Post_t$ are set as zero for these firms. See Appendix A for the measurement of other variables. We add to the regressions the inverse Mills ratio estimated from the *CEO_Protection* determinant model to control for the endogeneity of CEO contractual protection. The sample includes 2,036 loans issued S&P 1500 firms over the period 1995-2008. The p-values are based on standard errors adjusted for firm clustering. The p-values are one-sided for the interaction term, and two-sided otherwise.

TABLE 10 (Cont'd)

	(1) Dep. Var = *Performance Covenants*		(2) Dep. Var = *Performance_Pricing*		(3) Dep. Var = *Loan_Spread*	
	Coef.	P-value	Coef.	P-value	Coef.	P-value
Switch	**0.081**	**0.459**	**0.117**	**0.633**	**0.091**	**0.128**
Switch × Post	**0.174**	**0.092**	**0.502**	**0.048**	**0.142**	**0.024**
Size	-0.468	0.000	-0.491	0.000	-0.140	0.000
Market-to-Book	-0.121	0.035	-0.244	0.020	-0.067	0.017
Leverage	1.125	0.000	0.632	0.369	0.961	0.000
Return on Assets	-0.041	0.958	2.934	0.095	-1.661	0.000
Tangibility	-0.584	0.095	-1.346	0.057	0.055	0.746
Cash Flow Volatility	0.007	0.221	-0.011	0.307	0.001	0.751
Z-score	-0.006	0.913	0.176	0.225	-0.038	0.269
CEO Equity Compensation	-0.074	0.554	-0.208	0.471	0.012	0.855
CEO Equity Ownership	0.104	0.880	1.802	0.319	0.902	0.012
CEO Portfolio Sensitivity	0.069	0.032	0.043	0.489	0.036	0.020
Loan Maturity	0.047	0.517	0.309	0.048	-0.094	0.040
Loan Amount	0.220	0.000	0.375	0.000	-0.147	0.000
Number of Covenants					-0.123	0.001
Performance_Pricing					0.111	0.000
Secured_Loan					0.462	0.000
Secured_Missing					0.044	0.245
ΔGDP	-0.456	0.835	-5.038	0.233	-5.050	0.000
Time Trend	0.044	0.001	0.040	0.173	0.011	0.093
Inverse Mills Ratio	-0.133	0.093	-0.007	0.971	-0.039	0.362
Loan type fixed effects	YES		YES		YES	
Loan purpose fixed effects	YES		YES		YES	
Industry fixed effects	YES		YES		YES	
N	2,036		2,036		2,036	
Pseudo R^2 (Adj. R^2)	0.202		0.200		0.718	