

# **Organized Labor and Debt Contracting: Firm-Level Evidence from Collective Bargaining**

(Job Market Paper)

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## **Abstract**

This paper employs a novel, firm-level collective bargaining dataset, which is extracted directly from 10-K filings, to investigate the effect of labor, as an important stakeholder of a firm, on debt contracting. I find that employees' collective bargaining power is positively associated with loan spreads despite the possible alignment of interests between employees and debt holders. Prior literature suggests that unionized firms have higher information asymmetry. I provide evidence that firms with strong organized labor are able to attenuate the cost of information asymmetry by providing banks with information that was deliberately withheld from the public markets. Further, I show that organized labor influences the structure of syndicated loans because higher information asymmetry induces lead lenders to form more concentrated syndicates. Finally, I find that the positive relationship between collective bargaining power and financial leverage that is documented in prior research is driven by firms' incentives to withhold information from labor unions. Overall, this study demonstrates that firms' incentives to maintain information asymmetry with organized labor have significant influence on firms' debt contracting decisions and outcomes and that firm-level collective bargaining data is superior to industry-level data in explaining firm-specific contractual outcomes.

**JEL Classifications:** M41; G32; D82; J50

**Keywords:** Collective Bargaining; Debt Contracts; Information Asymmetry; Labor Unions; Private Debt.

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# **Organized Labor and Debt Contracting: Firm-Level Evidence from Collective Bargaining**

## **1. Introduction**

Debt financing is the primary source of new external capital for publicly traded firms in the U.S. (Bharath, Sunder, and Sunder 2008; Johnston, Markov, and Ramnath 2009). Within the agency framework of Jensen and Meckling (1976), the existing literature focuses on the impact of shareholders and managers on the outcomes of debt contracting and the effect of various governance mechanisms that heighten or attenuate the agency conflicts between shareholders and debt holders and between managers and debt holders (e.g., Ashbaugh-Skaife, Collins, and LaFond 2006). However, other economically significant stakeholders could also impact a firm's debt contracting decisions and outcomes because a firm can be viewed as a set of contractual relations where conflicting objectives of stakeholders are brought into equilibrium (Jensen and Meckling 1976). This study attempts to further our understanding on this issue by investigating the impact of labor, as an important stakeholder of a firm, on debt contracting.

Prior studies examine the relationship between organized labor and firms' leverage. For example, Bronars and Deere (1991) argue that, to reduce the rent that can be extracted by labor unions, firms strategically take on more debt to increase the demands on their cash flow.<sup>1</sup> However, the impact of organized labor on other aspects of debt contracting is not well understood in the literature. The very limited availability of firm-level data on organized labor contributes to the sparse empirical evidence in this

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<sup>1</sup> There is conflicting empirical evidence on this issue. See Section 2.1 for review of literature in detail.

area. Most existing studies use industry-level unionization data from *Union Membership and Coverage Database* maintained by Hirsch and Macpherson (2003).<sup>2</sup> Some studies transform industry-level data to firm-level data but high measurement error associated with this transformation makes the inferences regarding the impact of organized labor on firm-specific debt contracting outcomes tenuous. To overcome this constraint, in this study I collect a novel firm-level collective bargaining dataset directly from firms' 10-K filings for the 1999-2009 sample period. I conjecture that the incentives to withhold financial information from organized labor have important consequences for firms' debt contracting decisions and outcomes. Prior research suggests that reducing information asymmetry with organized labor would be damaging to the firm.<sup>3</sup> For example, Kleiner and Bouillon (1988) show that information sharing enables unions to bargain more effectively and obtain more resources.<sup>4</sup> Moreover, during collective bargaining, labor unions have to rely largely on employers' publicly available financial information.<sup>5</sup> Therefore, to increase their bargaining power with unions, firms have strong incentives to withhold public disclosures and maintain information asymmetry with organized labor. Consistent with this idea, Hilary (2006) finds that unionized firms have higher bid-ask spreads, higher probability of informed trading, lower trading volume and lower analyst coverage. Focusing on organized labor's influence on firms' information environments,

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<sup>2</sup> A common proxy for collective bargaining power is unionization rate at industry level. Matsa (2010) is a recent study that employs some firm-level data but the data are limited to three discontinuous years: 1977, 1987, and 1999.

<sup>3</sup> Strong labor creates uncertainty about the firm's objectives. This uncertainty gives the firm a valuable option to convincingly manipulate reporting. Reduction in information asymmetry is costly because it reduces the value of this option. See Section 2.3 for more discussion.

<sup>4</sup> See Section 2.3 for additional studies that support this conjecture.

<sup>5</sup> In general, labor unions do not have access to employers' production, financial, and personnel information (Leap 1991). During labor negotiations, unions can request additional financial information but, in general, employers are under no obligation to furnish such information (Carrell and Heavrin 2003). In addition, union representation on corporate boards, i.e. codetermination, is virtually nonexistent in the United States (e.g., Summers 1982).

this paper conducts a comprehensive investigation of how organized labor affects the different aspects of firms' debt contracting decisions and outcomes.

I first investigate the impact of organized labor on the pricing of bank loans. On the one hand, the cost of adverse selection is higher for firms with strong organized labor because of their opaque information environments. In addition, banks could charge a higher price for firms with organized labor because disruptive labor behaviors increase default risk. On the other hand, moral hazard problems could be less severe for firms with strong organized labor because of the alignment of interests between workers and debt holders. Like creditors, workers primarily hold a fixed claim on a firm's cash flow, and there is empirical evidence suggesting that workers could benefit debt holders by discouraging firm's risk-taking behavior (e.g. Faleye, Mehrotra, and Morck 2009). I find that strong organized labor is positively associated with the cost of bank loans. This result suggests that any benefit generated from alignment of interests between workers and debt holders is less meaningful in the private debt market where lenders' monitoring is effective.

As suggested by Hilary (2006), firms' incentives to maintain information asymmetry with labor unions increase firms' adverse selection costs of public financing. I hypothesize that firms with strong organized labor have strong incentives to access the private debt market because firms can communicate with banks privately to reduce the cost of adverse selection while preserving the information asymmetry with labor unions. Consistent with this prediction, I find evidence that firms with strong labor forces are able to attenuate the cost of information asymmetry by accessing the private debt market and disclosing information privately to lenders.

In addition, I also conjecture that, through its effect on borrowers' information environments, organized labor influences the structure of syndicated loans. I predict that lead lenders would retain a higher proportion of the loans when borrowers have strong organized labor. Withholding information from organized labor increases the information asymmetry between borrowers and banks. Moreover, the information asymmetry between lead lenders and participating lenders is exacerbated when borrowers with strong organized labor communicate with lead lenders privately while withholding public disclosures. Consistent with this prediction, I find that lead lenders retain higher percentages of loans when the borrowers have strong organized labor.

Finally, I examine the impact of organized labor on the use of debt. The existing literature provides conflicting evidence on whether firms with organized labor take on more debt.<sup>6</sup> In this paper I show that both market and book leverage increase with collective bargaining power. As to the interpretation of this empirical finding, extant literature stresses that firms with strong organized labor strategically take on more debt to increase the demand on their cash flow. Focusing on organized labor's influence on firms' information environments, I find evidence that firms with strong organized labor take on more debt because of their incentives to maintain opaque information environments. This alternative explanation is consistent with prior studies' conjecture that, compared to equity, debt is less information sensitive (e.g., Myers and Majluf 1984).

I use two firm-level measures to proxy for the influence of organized labor. The first measure is the actual percentage of employees that are covered by collective

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<sup>6</sup> Bronars and Deere (1991) and Matsa (2010) show that leverage increases with greater exposure to union bargaining power. On the contrary, Simintzi, Vig, and Volpin (2010) find that firms reduce their use of debt following increases in bargaining power of workers. In addition, both Lee and Mas (2009) and Chen, Kacperczyk, and Ortiz-Molina (2011) find that union power does not affect firms' financial leverage.

bargaining agreements. To account for the influence of organized labor that is not captured by the current collective bargaining coverage, I also construct the second firm-level measure which incorporates the information in risk factor disclosures about organized labor. I argue and find evidence that, compared to industry-level data, firm-level data is more suitable to address my research questions because firm-level data has lower measurement error than industry-level data, and more importantly, contracting decisions and outcomes are largely firm-specific. Moreover, using firm-level data allows me to identify a non-unionized control group which is absent in prior literature.<sup>7</sup>

This paper makes several contributions to the literature. First, this paper is the first study to conduct a comprehensive examination of the influence of labor on firms' debt financing decisions and outcomes. Within Jensen and Meckling (1976)'s agency framework, the existing debt contracting literature focuses on the impact of shareholders and managers on debt contracting outcomes. The influence of other stakeholders such as employees, suppliers, customers and competitors on debt contracting has received little attention in the literature. This study highlights the significant influence of organized labor, as an important stakeholder of a firm, on financial contracting. Second, this study is the first empirical study to use firm-level data from a large sample of *both* unionized and non-unionized firms, which overcomes many shortcomings of industry-level data employed in prior research. Most prior research ignores the group of non-unionized firms, while other studies use random samples from Compustat assuming the firms in the random sample are not covered by collective bargaining agreements (Matsa 2010). Further, in this paper I demonstrate that there is significant within-industry variation in collective bargaining coverage across all industries. I also provide evidence that firm-

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<sup>7</sup> These firms explicitly state that they are not covered by any collective bargaining agreements.

level data is superior to industry-level data in explaining the impact of organized labor on firm-specific contractual decisions and outcomes. Third, this study extends the literature that examines the effect of organized labor on corporate financial policy. Consistent with the argument of Watts and Zimmerman (1979 and 1986), prior studies find that firms with strong organized labor have a higher propensity to manage earnings (e.g., DeAngelo and DeAngelo 1991) and are more likely to choose income-decreasing accounting methods (e.g., D'Souza, Jacob, and Ramesh 2001). In particular, prior literature suggests that the potential bargaining from organized labor is a form of proprietary costs of disclosure (Verrecchia 1983). This study extends this line of literature by showing that the incentives to withhold financial information from organized labor have important implications for firms' external financing. Finally, this paper contributes to the current debate on whether and why firms with strong organized labor have higher financial leverage.

The remainder of the paper is organized as follows. In Section 2, I review the literature. I develop the hypotheses in Section 3. In Section 4, I provide details of the sample. The research design is outlined in Section 5. I present the results in Section 6. Section 7 concludes the paper.

## **2. Prior Literature**

### *2.1 Organized Labor and Corporate Decisions*

Employees are important stakeholders of a firm. To increase their bargaining power, labor unions are formed to represent individual employees. Prior research indicates that unionized labor has significant influence on corporate strategic decisions and shareholders' value. For example, Ruback and Zimmerman (1984) find that

unionization is associated with a reduction in equity value. Connolly, Hirsch, and Hirschey (1986) show that unionization causes firms to invest less in R&D to avoid labor unions' rent seeking. Further, Faleye, Mehrotra, and Morck (2009) find that firms with strong labor representation deviate more from value maximization by investing less in long-term assets and taking fewer risks. Gomez and Tzioumis (2011) provide evidence that strong organized labor influences both the level and the mix of executive compensation.

Given the importance of debt financing to a firm, it is surprising that the literature pays little attention to the relation between organized labor and debt financing. Existing literature that examines the influence of organized labor on debt financing exclusively focuses on the effect of labor unions on leverage. The argument is that, by taking on more debt and thereby increasing the demands on cash flow, firms can take a tougher stand when negotiating with workers. However, the empirical evidence on this issue is inconclusive. Bronars and Deere (1991) and Matsa (2010) show that leverage increases with greater exposure to union bargaining power. On the contrary, Simintzi, Vig, and Volpin (2010) find that firms reduce their use of debt following an increase in bargaining power of workers. In addition, Lee and Mas (2009) find that union power does not affect firms' financial leverage.

Overall, the impact of organized labor on other aspects of debt contracting has been largely ignored in the literature. One exception is Chen, Kacperczyk, and Ortiz-Molina (2011) who examine the effect of organized labor on the pricing of public bonds at the industry level. They argue that bondholders view labor unions favorably because



labor unions protect bondholders' wealth.<sup>8</sup> This study is different from Chen, Kacperczyk, and Ortiz-Molina (2011) in several ways. First, I conduct firm-level analyses in the private loan market where contractual terms are negotiated and, therefore, firm-specific. Using firm-level collective bargaining data allows me to pinpoint the effect of organized labor on negotiated contractual outcomes. Second, in this paper I focus on a negative aspect of organized labor, i.e. the adverse effect of a strong labor force on a firm's information environment. I argue that labor unions' protection of debt holders' wealth is less important in the private debt market where moral hazard problems are mitigated by the direct and effective monitoring from lenders. Finally, in addition to pricing, this study provides a thorough investigation of labor unions' impact on many other aspects of debt contracting.

## *2.2 Organized Labor and Accounting Choices*

Prior literature also examines the impact of organized labor on earnings management and accounting choices. The evidence on earnings management is mixed. Liberty and Zimmerman (1986) do not find evidence that employers manipulate earnings in responding to labor negotiations while DeAngelo and DeAngelo (1991) document that firms in the steel industry report larger losses in years when labor negotiations occur.<sup>9</sup> There is relatively consistent evidence on accounting choices. For example, Cullinan and Knoblett (1994) find that organized labor influences firms' choices of inventory policy. Bowen, DuCharme, and Shores (1995) report that unionized firms are more likely to

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<sup>8</sup> This argument is reasonable given the fact that lenders' monitoring in the public debt market is weak and ineffective (e.g. Beatty, Liao and Weber 2011). However, one weakness of industry level analyses is that the results are influenced by confounding industry effects.

<sup>9</sup> This finding highlights that the firm's reporting objective in any given period is not obvious to outsiders. Given that the steel industry was experiencing declining stock prices during difficult economic times, firms could have strong incentives to manage earnings upward. Strong labor creates uncertainty about firms' objectives to manipulate reporting.

adopt income-decreasing accounting methods for inventory valuation and assets depreciation. Further, D'Souza, Jacob, and Ramesh (2001) find that unionized firms are more likely to immediately recognize the accumulated postretirement benefit obligation when adopting SFAS 106.

More recent studies examine the relation between labor unions and accounting conservatism but the evidence is inconclusive. Leung, Li, and Rui (2009) hypothesize that labor unions demand conservatism. They find that higher levels of unionization are associated with higher levels of accounting conservatism. Farber et al. (2010), however, find a complementary relation between unions and conservatism, i.e. lower level of union strength is associated with higher levels of conservatism. This study complements research on the relationship between labor unions and accounting choices.

### *2.3 Organized Labor as a Disincentive of Financial Disclosure*

This study is closely related to the literature on disincentives for financial disclosure. Theory suggests that, in the absence of costs or uncertainty about the existence of information, firms should follow a policy of full disclosure (Dye 1985; Verrecchia 2001). Prior literature emphasizes the role of public disclosure in mitigating the adverse selection costs of external financing. For example, Botosan (1997) and Sengupta (1998) find expanded public disclosure leads to lower cost of equity and debt financing respectively. Despite the benefits of voluntary disclosure, in practice, firms do not disclose all relevant information. Verrecchia (1983) suggests that proprietary costs enable the discretionary disclosure because investors are uncertain whether information is withheld because the news is bad or to avoid incurring proprietary costs. The proprietary costs literature has focused on firms withholding information to avoid revealing strategic

information to its competitors (e.g., Botosan and Stanford 2005; Dedman and Lennox 2009; Verrecchia and Weber 2006). Verrecchia (1983) also points out that potential bargaining from organized labor is another form of proprietary costs of disclosure.

Hilary (2006) argues that, in the presence of economically significant stakeholders, like organized labor, the firm must consider the potentially conflicting goals of different parties. However, the relative importance of these conflicting goals in any given period is not obvious to outsiders. Thus, strong labor creates uncertainty about the firm's objectives, which gives a valuable option to the firm to convincingly manipulate reporting, both for financial markets and for labor negotiations.<sup>10</sup> Since additional revelation of information by the firm would reduce the value of the option, the firm has an interest in avoiding the revelation of information and in behaving strategically to maintain the information advantage.<sup>11</sup> The extant studies support the notion that firms have strong incentives to maintain information asymmetry with labor and that reducing information asymmetry enables organized labor to gain more resources. For example, Scott (1994) finds that Canadian firms facing a higher likelihood of strikes reduce the amount of information disclosed on pension plans. As pointed out by Reynolds, Masters, and Moser (1998), an important feature of labor negotiation is an effort to conceal and even misrepresent one's true position. Frost (2000) also suggests that accessing information is one of the key factors for local unions to secure favorable results. Supporting this view, Kleiner and Bouillon (1988) show that disclosing information about the firm's financial statements, forecasted sales and production costs, relative

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<sup>10</sup> Fisher and Verrecchia (2000) indicate the *ex ante* net benefit of biasing the report is positive if there is sufficient uncertainty about managerial objectives.

<sup>11</sup> Given that revealing information irreversibly damages the possibility of manipulating information in the future, the influence of organized labor on the disclosure policy should be stable over time and should not be affected by temporary shocks, such as temporary weak economic performance.

wages, future strategies and capital investments, and productivity leads to significantly higher levels of wages and benefits for production employees. Finally, Hilary (2006) finds that strong organized labor is associated with higher information asymmetry. This study extends this line of research on disincentives for financial disclosures. I provide evidence indicating that the incentives to withhold financial information from organized labor have important implications for firms' financial contracting decisions and outcomes.

#### *2.4 Proprietary Costs, Information Environment and Debt Financing*

Theory suggests that disclosure-related costs influence firms' financing decisions. For example, Campbell (1979) shows that managers are less likely to access public securities markets if the disclosure of inside information will impair the value of the firm. Further, Yosha (1995) demonstrates that high-quality firms may prefer bilateral to multilateral financing arrangements, in order to avoid disclosure of private information. Prior studies also examine the impact of firms' information environments on firms' financial contracting decisions and the design of debt contracts. The existing literature concludes that private lenders have an advantage in accessing nonpublic proprietary information and enjoy economies of scale in evaluating borrowers with information problems. Diamond (1984) views private lenders as delegated monitors who facilitate information collection and monitoring. Consistent with this notion, Bharath, Sunder, and Sunder (2008) find that firms with poor accounting quality are more likely to rely on private debt. They argue that it is advantageous for poor accounting quality firms to raise funds in the private debt market because of lower adverse selection costs. In a similar vein, Dhaliwal, Khurana, and Pereira (2011) find that firms with poor disclosure are more

likely to issue private debt compared to public debt. Sufi (2007) provides evidence on how information asymmetry influences syndicate structure. He finds that information asymmetry forces the lead arranger to take a larger stake in the loan and form a more concentrated syndicate. In addition, Ball, Bushman, and Vasvari (2008) hypothesize and find that when a borrower's accounting information possesses higher debt contracting value, information asymmetry between the lead arranger and other syndicate participants is lower, allowing lead arrangers to hold a smaller proportion of new syndicated loans. This study relies on this line of research to argue that organized labor affects debt financing decisions and debt contract design through its impact on a firm's information environment.

### **3. Hypotheses**

#### *3.1 Cost of Debt*

Strong organized labor could lead to higher debt costs for two reasons. First, a strong labor force could lead to a higher probability of disruptive labor behaviors (e.g., boycotts and strikes) which increase default risk. Therefore, lenders could charge a risk premium. Second, the adverse selection cost is higher for firms with strong labor power because of their opaque disclosure policies and poor information environments. However, employees, like creditors, primarily hold a fixed claim on the firm's cash flow. Like creditors, organized labor might strive for policies that discourage risky investment (Faleye, Mehrotra, and Morck 2009). In addition, organized labor might also oppose takeovers that shift wealth from workers and debt holders to shareholders. The alignment of interests between creditors and labor unions suggest that moral hazard problems could be less severe for firms with strong organized labor. However, I argue that for private

lenders, the alignment of interests might be less meaningful when borrowers' actions are closely monitored, for example, through tight covenants. Therefore, I expect the cost of bank loans to be increasing in the strength of organized labor. I state the first hypothesis in the alternative form.

*H1: The cost of bank loans is positively associated with borrowers' organized labor force's collective bargaining power.*

### *3.2 The Benefit of Accessing Bank Loans*

Firms with unionized labor have incentives to maintain opaque information environments to gain favorable bargaining power in labor negotiations. Consistent with this conjecture, firms with strong organized labor have been shown to have higher information asymmetry (Hilary 2006).<sup>12</sup> Opaque information environments will lead to a higher cost of external financing. However, I hypothesize that firms with strong organized labor could reduce the cost of information asymmetry by accessing bank loans. First, banks have an advantage in accessing nonpublic proprietary information and enjoy economies of scale in evaluating borrowers with information problems. Second, firms can disclose sensitive information such as prospects of potentially profitable projects privately to banks without fearing such information will weaken their bargaining positions with labor unions. The above argument suggests that, for firms with strong labor forces, disclosure of private information would attenuate the cost of information asymmetry. I formulate this hypothesis as follows:

*H2a: Banks' pricing of information asymmetry is attenuated when firms with organized labor communicate with banks privately.*

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<sup>12</sup> In addition, it is important to notice that managers also have incentives to make the information environment opaque because their compensation level might be threatened if unions are informed (Gomez and Tzioumis 2011).

In the presence of strong labor, firms have an incentive to manage earnings. Despite the existence of conflicting incentives such as the concern of financial covenant violations and negative equity market reactions, prior studies suggest that firms with strong organized labor have higher propensity to manage earnings downward and choose income-decreasing accounting methods. It is likely that such earnings manipulation will reduce firms' accounting quality which is priced by lenders (Bharath, Sunder, and Sunder 2008). However, I argue that private communication with banks allows firms with strong organized labor to undo such bias in their financial reports and reduce banks' reliance on firms' public signals. Therefore, I expect that private communication also reduces banks' pricing of firms' accounting quality.

*H2b: Banks' pricing of accounting quality is attenuated when firms with organized labor communicate with banks privately.*

### *3.3 The Structure of Syndicated Loans*

The third hypothesis focuses on the effect of organized labor on the structure of syndicated loans. It is likely that organized labor not only influences the pricing but also the structure of private loans. As I discussed in hypothesis 2, the presence of organized labor gives firms an incentive to disclose information privately to private debt lenders. In the syndicated loan market, lead arrangers establish a relationship with the borrowing firm, negotiate contractual terms, and organize a syndicate of participant lenders who each fund part of the loan. For a firm with a strong labor force, information asymmetry is higher between the firm and lenders as well as among the lenders themselves. In particular, the information asymmetry between the lead lender and participant lenders could be severe when firms withhold public disclosures but communicate privately with the lead lender. This will induce the lead arranger of a syndicated loan to retain a larger

share of the loan and form a more concentrated syndicate (Sufi 2007). The above discussion leads to my third hypothesis.

*H3: The lead arrangers' shares of syndicated loans are positively associated with the strength of borrower's organized labor force.*

### *3.4 Debt Usage*

I conjecture that incentives to withhold information from organized labor will also have a bearing on firms' capital structures. First, Myers and Majluf (1984) show that asymmetric information results in a pecking order for external financing. Firms with higher information asymmetry first issue debt securities because, compared to equity, debt is less affected by information. This argument suggests that firms with strong organized labor would take on more debt because of their opaque information environments. Second, I argue that firms with strong organized labor face greater demand for public disclosure when they finance through public capital markets. Thus, the incentives of withholding public disclosures could also discourage firms with strong labor forces from seeking equity financing. This argument is consistent with the evidence and intuition provided by extant theoretical studies (Campbell 1979; Yosha 1995).<sup>13</sup> Therefore, I hypothesize that firms with strong organized labor will have higher financial leverage because of their incentives to maintain opaque information environments. I state my fourth hypothesis below.

*H4a: Firms' financial leverage is positively associated with the strength of their organized labor forces.*

*H4b: The positive relation between financial leverage and the strength of organized labor is mediated by firms' information opacity.*

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<sup>13</sup> For example, Campbell (1979) shows that managers are less likely to access public securities markets if the disclosure of inside information will impair the value of the firm. Further, Yosha (1995) demonstrates that high-quality firms may prefer bilateral to multilateral financing arrangements, in order to avoid disclosure of private information.



#### **4. Sample Selection**

In this study I extract the firm-level collective bargaining data directly from Item 1 (Business) and Item 1A (Risk Factors) disclosures in 10-K filings. Below, I provide a detailed description of data collection procedures for each item.

##### *4.1 Firm-level Collective Bargaining Coverage (Item 1)*

I use information in Item 1 (Business) to determine the existence of collective bargaining coverage (*Cover\_Dummy*) as well as the percentage of employees that are covered by collective bargaining agreements (*Cover\_Percent*). First, I identify all 10-K filings from 1999 to 2009 that contain one or more of the following key words: collective bargaining, collective-bargaining, labo(u)r union(s), labo(u)r agreement(s), labo(u)r contract(s), labo(u)r organization(s), union agreement(s), union contract(s), union organization(s), or union(s). This procedure generates 71,749 10-K filings. Next, I use a Perl script to read Item 1 of each 10-K filing to identify whether the company's employees are covered by collective bargaining agreements. Such information is normally reported in the 'Employees' section of Item 1. In Appendix B I provide examples of disclosure of collective bargaining coverage. The script also records the sentences that describe the collective bargaining coverage or non-coverage. I develop regular expressions that identify these sentences by reading 200 random 10-K filings after the initial filtering. In addition, when possible, I retain the number or percentage of employees that are covered by collective bargaining agreements. The above procedure identifies 17,796 filings that are not covered by collective bargaining agreements and 4,526 filings that are covered by collective bargaining agreements. A notable advantage of this data collection procedure is that it also clearly identifies the companies that *do not*

have any collective bargaining coverage, which I use as the control group for this study.<sup>14</sup> Finally, I manually verify the collective bargaining coverage by going through all the filings that indicate the presence of collective bargaining.

#### *4.2 Risk Factor Disclosures (Item 1A)*

It is important to notice that the percentage of employees that are covered by collective bargaining agreements only measures one aspect of the overall exposure to organized labor. For example, a firm could have zero or very low collective bargaining coverage but the possibility of the labor force being unionized in the future could be significant. Even when the current coverage is low, heightened risk of active unionization effort may have important implications for both borrowers and lenders. For example, firms may prefer hiding information from their labor force or adopting income-decreasing accounting methods when current coverage is low but unionization activities are high. From the lender's perspective, the bank may charge a higher interest rate at the loan initiation in expectation of possible unionization due to a higher probability of disruptive labor behaviors. To account for the pressure from organized labor that is not captured by the current collective bargaining coverage, I use a separate Perl program to examine Item 1A (Risk Factors) of each company's 10-K report from 2005 to 2009.<sup>15</sup> The Perl program generates a dummy variable (*Risk\_Dummy*) if a company discloses the threat of union activities as a risk factor in Item 1A. I focus on Item 1A because recent studies show that risk factor disclosures are informative (Campbell et al. 2011; Kravet and Muslu 2011). Interestingly, some companies do mention collective bargaining as a

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<sup>14</sup> Most prior research ignores this group of non-unionized firms while other studies use random samples from Compustat assuming the firms in the random sample are not covered by collective bargaining agreements (Matsa 2010).

<sup>15</sup> The SEC mandates Item 1A disclosure effective December 1, 2005. See the SEC Final Rules 33-8591 (Securities Offering Reform) for details.

risk factor when the current coverage is very low and even zero. See Appendix C for examples of risk factor disclosures.

### *4.3 Debt Data*

I collect the bank loan data from DealScan, and other accounting variables are collected from Compustat. Ultimately, matching 10-K filings with bank loan data yield 8,093 bank loans issued during the sample period.<sup>16</sup> I exclude debt issues from firms in the financial service industry (SIC code between 6000 and 6999) and utility industry (SIC code between 4900 and 4999) because these firms are highly regulated and their debt financing policy is systematically different from that of other firms (Smith 1986). The final sample consists of 6,751 bank loans.<sup>17</sup> See Table 1 for a summary of sample selection procedures.

### *4.4 Cross- and Within-Industry Variations*

Table 2 shows the industry means of collective bargaining dummy variable (*Cover\_Dummy*; Column 1) and collective bargaining percentage (*CB\_Percent*; Column 3) calculated from firm-level data for 50 industries by 2-digit SIC codes. Industry *Cover\_Dummy* (Column 1) is on average 42% which supports the argument that labor bargaining is still an important force in the United States although private sector unionization declined after the 1950s (e.g. Hirsch 2004). There is significant cross-industry variation in collective bargaining coverage. High coverage industries include Paper and Allied Products (94.96%), Railroad Transportation (93.33%), and Automotive Repair, Services, and Parking (92.50%). Low coverage industries include Eating and

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<sup>16</sup> I use DealScan-Compustat linking table which is made available by Michael Roberts. For details on the construction of the linking file, see Chava and Roberts (2008).

<sup>17</sup> The number of observations varies across different analyses depending on the availabilities of different variables.

Drinking Places (6.74%), Business Services (6.91%) and Instruments and Related Products (10.72%).<sup>18</sup> Furthermore, Table 2 shows a comparison of industry means of collective bargaining percentage between my sample (*CB\_Percent*; Column 3) and the *Union Membership and Coverage Database (CB\_IND*; Column 4) compiled from Current Population Survey (CPS).<sup>19</sup> Overall, my industry means match well to the CPS industry means except for Nonmetallic Minerals (except fuels), Food Stores, Hotels, Rooming Houses, Camps, and Other Lodging Places and Educational Services. Despite the similarity in industry means, my firm-level data shows significant within-industry variations (Column 2). This is true for both high and low coverage industries. For example, for Transportation by Air industry, collective bargaining coverage varies from 0% to 87%. For Furniture, Home Furnishings and Equipment Stores, it varies from 0% to 67%. Significant variation within each industry indicates that there might be significant measurement issues associated with the use of industry-level data for firm-level analyses.

## **5. Research Design**

### *5.1 Measuring the Strength of Organized Labor*

I use two measures to capture the influence of organized labor at the firm level. The primary measure is the percentage of employees that are covered by collective bargaining agreements (*CB\_Percent*). In addition to *CB\_Percent*, firms' risk factor disclosures are informative of labor unions' influence. Further, it is also possible that the

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<sup>18</sup> Non-depository Credit Institutions and Insurance Agents, Brokers, and Service are the only two industries that do not have any collective bargaining coverage but, as discussed above, financial service industry is excluded from the sample.

<sup>19</sup> Current Population Survey (CPS) uses the Census Industry Classification (CIC) code. CIC code corresponds to the Standard Industry Classification (SIC) code prior to 2003, and to the North American Industry Classification System (NAICS) thereafter.

existence of collective bargaining agreements (*Cover\_Dummy*) matters rather than the percentage of coverage. Therefore, the second and more comprehensive measure of the influence of collective bargaining (*CB\_FPC*) is the first principal component of the following three variables: percentage of collective bargaining coverage (*CB\_Percent*), coverage dummy (*Cover\_Dummy*) and risk disclosure dummy (*Risk\_Dummy*). However, this measure is only available for a sub-sample period from 2005 to 2009 since the SEC mandates Item 1A disclosure effective December 1, 2005.<sup>20</sup>

## 5.2 Organized Labor and Cost of Debt

To examine the impact of collective bargaining power on the cost of bank debt, I conduct debt issue-level analyses using the following OLS regression.

$$\begin{aligned}
 Spread_{it} = & \alpha_0 + \alpha_1 CB_{it} + \alpha_2 Log\_Assets_{it-1} + \alpha_3 MTB_{it-1} + \alpha_4 Default\_Risk_{it-1} + \\
 & \alpha_5 Tangibility_{it-1} + \alpha_6 Leverage_{it-1} + \alpha_7 Current\_Ratio_{it-1} + \\
 & \alpha_8 Log\_Amount_{it} + \alpha_9 Log\_Maturity_{it} + \alpha_{10} Secured_{it} + \\
 & \alpha_{11} Acc\_Quality_{it-1} + \alpha_{12} Leverage_{it-1} * CB_{it} + \varepsilon_{it} \quad (1)
 \end{aligned}$$

The dependent variable *Spread* is the cost of debt. It is measured as spread over LIBOR. *CB* is the independent variable of interest and one of the two firm-level collective bargaining variables, *CB\_Percent* and *CB\_FPC*. In determining the interest rate, lenders should consider both firm-specific and issue-specific risks. I use *Log\_Assets*, *MTB*, *Default\_Risk*, *Tangibility*, *Leverage* and *Current\_Ratio* to capture firm-specific risk and *Log\_Amount*, *Log\_Maturity* and *Secured* to proxy for issue-specific risk. In addition, Bharath, Sunder, and Sunder (2008) find that lenders price borrowers' accounting quality. I use *Acc\_Quality* to capture borrowers' accounting quality, which is measured as the absolute value of residual term from Jones (1991) model as modified by Dechow, Sloan,

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<sup>20</sup> The SEC Final Rules 33-8591 (Securities Offering Reform).

and Sweeney (1995) multiplied by negative one. *CB* is also interacted with *Leverage* because prior research suggests that firms with strong organized labor use more debt.

To examine whether firm-level collective bargaining data make a difference in explaining the cost of debt, I substitute firm-level variables with *CB\_IND* which is the industry-level variable from CPS.<sup>21</sup> Finally, I control for year and industry fixed effects, and standard errors are corrected by firm clustering.

### 5.3 Attenuation Effect on Information Asymmetry

To test hypothesis 2 that private communication would attenuate the cost of information asymmetry in the private debt market, I use Model (2).

$$\begin{aligned} Spread_{it} = & \beta_0 + \beta_1 CB_{it} + \beta_2 Log\_Assets_{it-1} + \beta_3 MTB_{it-1} + \beta_4 Default\_Risk_{it-1} + \\ & \beta_5 Tangibility_{it-1} + \beta_6 Leverage_{it-1} + \beta_7 Current\_Ratio_{it-1} + \\ & \beta_8 Log\_Amount_{it} + \beta_9 Log\_Maturity_{it} + \beta_{10} Secured_{it} + \\ & \beta_{11} Acc\_Quality_{it-1} + \beta_{12} BA\_Spread_{it} + \beta_{13} Leverage_{it-1} * CB_{it} + \\ & \beta_{14} Acc\_Quality_{it-1} * CB_{it} + \beta_{15} BA\_Spread_{it} * CB_{it} + \varepsilon_{it} \quad (2) \end{aligned}$$

I use *BA\_Spread* to capture overall information asymmetry, which is measured as the median of monthly bid-ask spreads deflated by price.<sup>22</sup> *CB* is interacted with *BA\_Spread* to capture the attenuation effect on information asymmetry. If  $\beta_{15} < 0$  as predicted in hypothesis 2a, it would suggest that firms with strong organized labor are able to reduce banks' pricing of information asymmetry by privately providing information that was deliberately withheld from the public markets. As I predicted in hypothesis 2b, the pricing of accounting quality should also be attenuated if firms communicate with banks privately. Therefore, I expect  $\beta_{14} > 0$ .

<sup>21</sup> Industry-level data are matched to each firm-year by 4-digit SIC codes.

<sup>22</sup> Monthly median bid-ask spreads are first calculated from daily spreads. The median of monthly spreads is then calculated over the year for each firm. The median of monthly spread captures the information asymmetry at the steady state, which mitigates the effects of outliers and special events (Hilary 2006).

#### 5.4 Organized Labor and Lead Lender Share

Following Sufi (2007) and Ball, Bushman, and Vasvari (2008), I examine the impact of organized labor force on the concentration of syndicated loans. I estimate OLS regression of *Synd* on *CB* as well as an extensive set of control variables.

$$\begin{aligned} \text{Synd}_{it} = & \gamma_0 + \gamma_1 \text{CB}_{it} + \gamma_2 \text{Rating}_{it} + \gamma_3 \text{No\_Lead\_Prior}_{it} + \gamma_4 \text{Lead\_Reputation}_{it} + \\ & \gamma_5 \text{Log\_Amount}_{it} + \gamma_6 \text{Spread}_{it} + \gamma_7 \text{Log\_Maturity}_{it} + \gamma_8 \text{Secured}_{it} + \\ & \gamma_9 \text{Log\_Previous}_{it} + \gamma_{10} \text{Log\_Assets}_{it} + \gamma_{11} \text{Leverage}_{it} + \gamma_{12} \text{DCV}_{it} + \\ & \gamma_{13} \text{Spread}_{it} * \text{CB}_{it} + \gamma_{14} \text{Leverage}_{it} * \text{CB}_{it} + \gamma_{15} \text{DCV}_{it} * \text{CB}_{it} + \varepsilon_{it} \end{aligned} \quad (3)$$

*Synd* is either lead lender share of syndicated loans or Herfindahl index which is measured as the sum of the squared individual shares in the loan to proxy for loan concentration. *Rating* is an indicator variable equal to one if the firm has S&P credit rating and equal to zero otherwise. Sufi (2007) shows that lead lenders hold more shares for unrated firms because they are more opaque. *No\_Lead\_Prior* is an indicator variable equal to one when the current lead lender is not a lead lender for the same borrower in a previous deal. Sufi (2007) shows that, when there is no previous relationship between the borrower and lead lender, lead lender holds a larger share which induces additional monitoring effort. To proxy for lead lender reputation, I use *Lead\_Reputation* which is an indicator variable set equal to 1 if the lead lender is classified as top 25 lead lenders in term of market share in prior year (Ball, Bushman, and Vasvari 2008). *Log\_Previous* is the log of one plus the number of previous loans which approximate for the information on the borrower held by potential participant banks. Ball, Bushman, and Vasvari (2008) find that lead lenders hold a smaller proportion of syndicated loans when borrowers' debt contracting value (DCV) is higher. Therefore, I control for *DCV* which is measured as the Somers' D statistic obtained from 2-digit SIC industry probit regressions that predict

credit rating downgrades.<sup>23</sup> The downgrade predictors are the seasonally adjusted changes in quarterly earnings over the prior four quarters. I further control for other loan-specific and firm-specific variables: *Log\_Amount*, *Spread*, *Log\_Maturity*, *Secured*, *Log\_Assets* and *Leverage*. In addition *Spread* and *DCV* are also interacted with *CB* because of the potential impact of organized labor on loan pricing and debt contracting value of borrowers' accounting information.<sup>24</sup>

### 5.5 Organized Labor and Debt Usage

To test whether firms with strong organized labor use more debt, I develop Model (4) by extending the baseline model in Matsa (2010) and conduct firm-year level analyses.

$$LEV_{it} = \delta_0 + \delta_1 CB_{it} + \delta_2 Profit\_Var_{it} + \delta_3 CB * Profit\_Var_{it} + \delta_4 Tangibility_{it} + \delta_5 MTB_{it} + \delta_6 Log\_Sales_{it} + \delta_7 Z\_Score_{it} + \delta_8 ROA_{it} + \delta_9 Acc\_Quality_{it} + \delta_{10} DCV_{it} + \delta_{11} BA\_Spread_{it} + \delta_{12} Acc\_Quality_{it} * CB_{it} + \delta_{13} DCV_{it} * CB_{it} + \delta_{14} BA\_Spread_{it} * CB_{it} + \varepsilon_{it} \quad (4)$$

The dependent variable *LEV* is total long-term debt divided by either total market value or total assets of the firm. *Profit\_Var* is the standard deviation of the change in earnings before depreciation and amortization calculated over the previous seven years, divided by lagged total assets. Matsa (2010) shows that the strength of the relation between unionization and debt is greater for firms with greater profit variability.<sup>25</sup> *Log\_Sales* is used to proxy for firm size. *ROA* is earnings before depreciation and amortization divided by lagged total assets. To examine whether the higher debt usage is

<sup>23</sup> *DCV* measures the ability of changes in quarterly earnings to predict credit quality deteriorations in a timely manner. Somers' D, a goodness-of-fit statistics, measures the extent of concordance between the model-predicted downgrades and the actual downgrades. The higher the Somers' D, the higher the downgrade predictability of earnings changes.

<sup>24</sup> Although inconclusive, the existing literature suggests that organized labor influences firm's accounting conservatism (e.g. Leung, Li, and Rui 2009; Farber et al. 2010).

<sup>25</sup> The intuition is that union's claim on excess liquidity can be thought of as a real option. Greater underlying variability increases the value of the option. Thus, it is more advantageous for firms with high profit variability to take on more debt to reduce unions' claim on excess liquidity.



attributable to firms' opaque information environments, I include *Acc\_Quality*, *DCV* and *BA\_Spread* assuming these variables capture firms' information opacity. Hypothesis 4b predicts a positive relation between *LEV* and information opacity.

## 6. Empirical Results

### 6.1 Univariate Analyses

Panel A of Table 3 reports firm characteristics of unionized versus non-unionized bank loan borrowers. A comparison of *CB\_Percent* (firm-level variable) and *CB\_IND* (industry-level variable) suggests that there are significant discrepancies between firm-level and industry-level measures. On the one hand, for the unionized group, the mean of *CB\_IND* (14.9%) is much lower than that of *CB\_Percent* (25.4%). On the other hand, for the non-unionized group, *CB\_IND* has a mean of 6.6% although firms in this group do not have any collective bargaining coverage. I find that 45.3% of unionized firms disclose risk factors that are related to organized labor while 7.5% of the non-unionized firms make such disclosures. Consistent with the idea that firms with strong organized labor take on more debt, unionized firms have significantly higher leverage compared to non-unionized firms. *BA\_Spread* (*Acc\_Quality*) is significantly lower (higher) for unionized borrowers. In addition, unionized firms are larger and more profitable and have lower *Default\_Risk* and *MTB* ratio. Panel C of Table 3 compares loan characteristics of unionized versus non-unionized borrowers. Loans of unionized firms have lower spreads, larger amounts, longer maturities, and are less likely to be secured. However, there is no significant difference in loan concentration. Further, the debt contracting value (*DCV*) is lower for unionized firms, and lead lenders of unionized borrowers are more reputable. Panel B and D of Table 3 show the pairwise correlations of firm and

loan characteristics respectively. Collective bargaining strength is negatively related to *Spread* and two measures of loan concentration. I will next examine my hypotheses in a multivariate setting.

## 6.2 *The Pricing of Bank Loans*

The results of bank loans pricing are reported in Table 4. Consistent with hypothesis 1, *CB\_Percent* and *CB\_FPC*, the two firm-level variables, are positively and significantly associated with bank debt pricing in both full- and sub-sample periods. One standard deviation increase in *CB\_Percent* increases the interest of private loan by 9.44 basis point which translates to about \$255,000 in additional interest expense for the average private loan. However, the coefficient on the industry-level variable, *CB\_IND*, is insignificant. This result could be attributable to the high measurement error of *CB\_IND*. Other control variables also have predicted signs that are consistent with prior literature. For example, *Default\_Risk*, *Leverage* and *Secured* dummy (*Current\_Ratio*, *Log\_Amount* and *Acc\_Quality*) are positively (negatively) related to *Spread*.

Overall, the results in Table 4 suggest that firms with strong organized labor pay higher costs for bank loans and that firm-level data is superior to industry-level data in explaining the effect of organized labor on loan pricing. Prior literature argues that there is an alignment of interests between organized labor and debt holders. However, the results in Table 4 suggest that the higher costs of having strong organized labor (including adverse selection and other risks) outweigh any benefit generated from interest alignment, which, I argue, is minimal in the private debt market where lenders' monitoring is strong.

### 6.3 The Attenuation Effect of Private Information

Table 5 reports the results of testing hypothesis 2. Consistent with the prediction of hypothesis 2a, the coefficient on the interaction term,  $BA\_Spread*CB\_Percent$ , is negatively and significantly associated with  $Spread$ . This indicates that firms with organized labor are able to reduce the cost of information asymmetry by providing banks with private information. Moreover, as predicted in hypothesis 2b, the coefficient on  $Acc\_Quality*CB\_Percent$  is significant and positive at the 10% level, which provides further support for the notion that private communication reduce banks' reliance on borrowers' public signals. Again, I fail to find any attenuation effect using the industry-level variable,  $CB\_IND$ . In summary, the results shown in Table 5 indicate that private communications attenuate the pricing of information asymmetry and accounting quality for firms with strong organized labor.

### 6.4 Organized Labor and Syndicated Loan Structures

Table 6 shows the results of the effect of organized labor on the structure of syndicated loans. Consistent with hypothesis 3, I find that the strength of organized labor is positively and significantly associated with both measures of syndicated loan concentration in the full- and sub-sample periods. Specifically, with one standard deviation increase in  $CB\_Percent$ , lead lenders retain 6.0% more shares in syndicated loans. Again, the coefficients on  $CB\_IND$  are insignificant in both panels. Overall, the results reported in Table 6 suggest that the disincentive for disclosure and opaque information environments of firms with strong labor forces influence the structure of syndicated loans.

### 6.5 Organized Labor and Debt Usage

Table 7 presents the results of testing hypothesis 4 and examining the relation between organized labor and debt levels. I find that collective bargaining power is positively associated with both market leverage and book leverage in the full- and sub-sample periods. However, after controlling for measures of firms' information opacity, the relation between *CB* and *LEV* is no longer significant. Furthermore, consistent with the idea that debt is less information sensitive than equity, I find the coefficients on *BA\_Spread* (*DCV*) are positive (negative) and significant. In summary, the evidence in Table 7 provides some support to the conjecture that firms with strong organized labor take on more debt. Yet, this relationship is driven by firms' incentives to withhold information from labor unions.

### 6.6 Robustness Checks

It is very unlikely that the findings in this study are the results of reverse causality. In addition, using firm-level data also reduces the possibility that my findings are attributable to an omitted industry characteristic rather than unions per se. Nevertheless, I conduct additional tests to mitigate the concern that unionized firms are inherently different from non-unionized firms and that some firm characteristics and collective bargaining coverage could be endogenously determined. Specifically, I employ propensity score matching on observable firm characteristics in Panel A of Table 3. Each unionized firm-year observation is matched to a counterfactual, i.e. a non-unionized firm-year observation similar along all observable dimensions. The (untabulated) results of using propensity score matching are consistent with the main results.

In addition, I show that there is significant within-industry variation in collective bargaining coverage across all industries. I argue that, in order to examine the proposed research questions, firm-level collective bargaining data is superior to industry-level data because debt contracting terms are firm-specific. Consistent with this expectation, I find evidence that firm-level data makes a difference in explaining firms' contractual decisions and outcomes. To ensure this result is not limited to my sample, I start with all available Compustat firms during 1999-2009 and repeat the analyses using industry-level data. I find that using industry-level data still does not explain firms' debt contracting decision and outcomes. Also, in this study industry-level data is matched to each firm-year by 4-digit SIC codes but the results are robust when using 2-digit SIC codes.

## **7. Conclusion**

Employing a novel firm-level collective bargaining dataset collected directly from companies' 10-K filings, this study investigates the influence of organized labor on firms' debt contracting decisions and outcomes. I demonstrate that there is significant within-industry variation in collective bargaining coverage across all industries. I argue and find evidence that firm-level data is superior to industry-level data in explaining the impact of organized labor on firm-specific contractual decisions and outcomes. More specifically, I find that banks charge higher interest rates for firms with strong labor forces although prior literature argues that the interests of labor and debt holders are aligned. This finding suggests that any benefit generated from such interest alignment is not significant in the private debt setting where lenders' monitoring is strong and effective. Further, I provide evidence that firms with strong labor forces are able to reduce the adverse selection costs by providing banks with private information that was

deliberately withheld from the public markets. In addition, I show that organized labor affects the structure of syndicated loans by inducing lead lenders to retain higher percentages of the loans and form more concentrated syndicates. Finally, I find evidence that firms with strong organized labor take on more debt because of their incentives to withhold information from labor unions. This finding sheds light on the current debate of the relationship between union threats and financial leverage. Highlighting the important influence of organized labor on debt contracting decisions and outcomes, this study improves our understanding of the interactions between capital and labor markets, the two primary input markets for a firm.

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## Appendix A: Variable Definitions

Variable	Definition
<i>Acc_Quality</i>	The absolute value of residual term from Jones (1991) model as modified by Dechow, Sloan, and Sweeney (1995) multiplied by negative one.
<i>BA_Spread</i>	The median of monthly bid-ask spreads deflated by price. Monthly bid-ask spreads are the monthly median spreads calculated from daily spreads.
<i>CB</i>	One of the four variables: <i>CB_Percent</i> , <i>Cover_Dummy</i> , <i>Risk_Dummy</i> , or <i>CB_FPC</i> .
<i>CB_IND</i>	Industry-level collective bargaining data from Current Population Survey (CPS) by 4-digit SIC codes.
<i>CB_FPC</i>	First principal component of three variables: <i>CB_Percent</i> , <i>Cover_Dummy</i> and <i>Risk_Dummy</i> .
<i>CB_Percent</i>	Percentage of employees that are covered by collective bargaining agreements.
<i>Cover_Dummy</i>	An indicator variable equal to 1 when employees are covered by collective bargaining agreements, and 0 otherwise.
<i>Current_Ratio</i>	Current assets divided by current liabilities.
<i>Default_Risk</i>	First principal component of three variables: <i>Inv_rating</i> , <i>Rating</i> and <i>Z-Score</i> multiplied by negative one.
<i>DCV</i>	The Somers' D statistic obtained from 2-digit SIC industry probit regressions that predict credit rating downgrades over the period 1980-2009. The downgrade predictors are the seasonally adjusted changes in quarterly earnings over the prior four quarters.
<i>Inv_Rating</i>	An indicator variable set equal to 1 if the S&P credit rating is investment grade (i.e. BBB and higher), and 0 otherwise.
<i>Lead_Herf</i>	A syndicate ownership Herfindahl Index defined as the sum of the squared percentage ownership of each lender in the loan syndicate.
<i>Lead_Reputation</i>	An indicator variable set equal to 1 if the lead lender is classified as top 25 lead lenders in term of market share in prior year.
<i>Lead_Share</i>	The percentage of the loan owned by the lead arranger.
<i>LEV</i>	One of the two variables: <i>Leverage</i> and <i>Lev_Market</i> .
<i>Leverage</i>	Long-Term debt divided by total assets.
<i>Lev_Market</i>	Long-Term debt divided by total market value of the firm.
<i>Log_Amount</i>	Log of the loan (bond) amount.
<i>Log_Assets</i>	Log of total assets.

<i>Log_Maturity</i>	Log of the maturity period (in months) of the bank loan (public bond).
<i>Log_Previous</i>	Log of one plus the number of previous loans taken by the borrower.
<i>Log_Sales</i>	Log of total sales.
<i>MTB</i>	Market-to-book ratio.
<i>No_Lead_Prior</i>	An indicator variable set equal to 1 if the current lead lender was not a lead lender for the same borrower in a previous deal, and 0 otherwise.
<i>Profit_Var</i>	The standard deviation of the change in earnings before depreciation and amortization calculated over the previous seven years, divided by lagged total assets.
<i>Rating</i>	An indicator variable set equal to 1 if the firm has S&P credit rating, and 0 otherwise.
<i>Risk_Dummy</i>	An indicator variable set equal to 1 when firm discloses in Item 1A of the 10-K filing indicating collective bargaining or union activities as a risk factor, and 0 otherwise.
<i>ROA</i>	Earnings before depreciation and amortization divided by lagged total assets.
<i>Secured</i>	An indicator variable set equal to 1 if loan (bond) is secured with collateral, and 0 otherwise.
<i>Spread</i>	Interest spread over LIBOR (Treasury bond of similar maturity) for private (public) debt.
<i>Synd</i>	One of the two variables: <i>Lead_Share</i> and <i>Lead_Herf</i>
<i>Tangibility</i>	Net PP&E divided by total assets.
<i>Z_Score</i>	Altman's Z-Score computed as $Z=1.2(\text{working capital}/\text{total assets}) + 1.4(\text{retained earnings}/\text{total assets}) + 3.3(\text{EBIT}/\text{total assets}) + 0.6(\text{market value of equity}/\text{book value of total liabilities}) + (\text{sales}/\text{total assets})$ .

## Appendix B: Examples of Collective Bargaining Disclosures in Item 1 of 10-K Filings

### 1. ALBERTSON'S, INC.

*FORM 10-K (For the fiscal year ended February 2, 2006)*

**Item 1. Business.**

*Associates*

*As of February 2, 2006, the Company employed approximately 234,000 associates, of which approximately 52% were covered by collective bargaining agreements, primarily with the United Food and Commercial Workers and International Brotherhood of Teamsters. Labor agreements covering approximately 7,000 associates will expire during 2006. Negotiations with respect to some of these contracts have commenced. There can be no assurances that the Company will be able to successfully renegotiate its union contracts without work stoppages or on acceptable terms. The Company considers its present relations with associates to be satisfactory. The Company values its associates and believes that associate loyalty, enthusiasm and commitment are key elements of its operating performance.*

### 2. SUPERIOR ENERGY SERVICES, INC.

*FORM 10-K (For the fiscal year ended December 31, 2007)*

**Item 1. Business**

*Employees*

*As of January 31, 2008, we had approximately 4,500 employees. None of our employees is represented by a union or covered by a collective bargaining agreement. We believe that our relationship with our employees is good.*

## Appendix C: Examples of Risk Factors Disclosure in Item 1A of 10-K Filings

### 1. ALBERTSON'S, INC.

**FORM 10-K (For the fiscal year ended February 2, 2006)**

**Item 1A. Risk Factors.**

***The Company could experience labor disputes that could disrupt its business.***

*As of February 2, 2006, approximately 52% of the Company's employees were represented by unions and covered by collective bargaining or similar agreements that are subject to periodic renegotiations. Although the Company believes that it will successfully negotiate new collective bargaining agreements as agreements expire, these negotiations:*

- may not prove successful;*
- may result in a significant increase in the cost of labor; or*
- may break down and result in the disruption of the Company's operations.*

*The Company cannot provide assurances that its labor negotiations will conclude successfully or that any work stoppage or labor disturbances will not occur. Any future work stoppages or labor disturbances may have a material adverse effect on the Company's financial condition and results of operations.*

***The Company is affected by increasing labor costs, which could adversely affect the Company's business and results of operations.***

*The Company's labor costs have increased in the past, partially due to increases in the contributions Albertsons is required to make under union-sponsored multiemployer pension plans and health and welfare plans. Contribution amounts are established under collective bargaining agreements, which are up for renewal at varying times over the next several years. If the pension plan and health and welfare plan provisions of certain of these collective bargaining agreements cannot be renegotiated in a manner that reduces the Company's prospective pension and health and welfare costs as the Company intends, selling, general and administrative expenses could increase, possibly significantly, in the future, which could have a material adverse effect on the Company's business and results of operation...*

### 2. SUPERIOR ENERGY SERVICES, INC.

**FORM 10-K (For the fiscal year ended December 31, 2007)**

**Item 1A. Risk Factors**

***We might be unable to employ a sufficient number of skilled workers.***

*The delivery of our products and services require personnel with specialized skills and experience. As a result, our ability to remain productive and profitable will depend upon our ability to employ and retain skilled workers. In addition, our ability to expand our operations depends in part on our ability to increase the size of our skilled labor force. The demand for skilled workers in our industry is high, and the supply is limited. In addition, although our employees are not covered by a collective bargaining agreement, the marine services industry has in the past been targeted by maritime labor unions in an effort to organize Gulf of Mexico employees. A significant increase in the wages paid by competing employers or the unionization of our Gulf of Mexico employees could result in a reduction of our skilled labor force, increases in the wage rates that we must pay or both. If either of these events were to occur, our capacity and profitability could be diminished and our growth potential could be impaired.*

**Table 1: Sample Selection Procedures**

Table 1 presents a summary of sample selection procedures with detailed description of each data step and the number of observations and firms remained after each step.

<b>Steps</b>	<b>Descriptions</b>	<b>Number of Observations</b>	<b>Number of Firms</b>
Filtering all 10-K filings from 1999 to 2009 using key words	Number of 10-K filings after initial key words filtering	71,749 10-K Filings	N/A
Use a Perl script to identify 10-K filings that are covered or not covered by collective bargaining agreements	Number of 10-K filings that are covered by collective bargaining agreements	4,526 10-K Filings	954 Firms
	Number of 10-K filings that are not covered by collective bargaining agreements	17,796 10-K Filings	3,446 Firms
Matching private debt issues to 10-K filings	Number of bank loans	8,093 Loans	1,929 Firms
After deleting financial firms (SIC 6000-6999) and utility firms (SIC 4900-4999)	Number of bank loans	6,751 Loans	1,651 Firms

**Table 2: Collective Bargaining Converge by 2-Digit SIC Codes**

Table 2 presents the firm-level industry means of *Cover\_Dummy* (Column 1), firm-level within-industry variation of *CB\_Percent* (Column 2), firm-level industry means of *CB\_Percent* (Column 3) and industry-level data *CB\_IND* (Column 4) from 1999 to 2009 for 50 industries by 2-digit SIC codes. *CB\_Percent* is the firm-level percentage of employees that are covered by collective bargaining agreements. *Cover\_Dummy* is an indicator variable set equal to 1 when employees are covered by collective bargaining agreements, and 0 otherwise. *CB\_IND* is the industry-level collective bargaining data from Current Population Survey (CPS).

2-Digit SIC	Industry Name	N	(1) <i>Cover_Dummy</i> Means (1999-2009)	(2) <i>CB_Percent</i> Within-Ind. Variation (1999-2009)	(3) <i>CB_Percent</i> Means (1999-2009)	(4) <i>CB_IND</i> Means (1999-2009)
10	Metal mining	69	46.15%	0-73.00%	26.72%	28.80%
12	Coal mining	59	37.93%	0-61.00%	19.53%	22.62
13	Oil and gas extraction	446	10.61%	0-43.98%	3.59%	4.50%
14	Nonmetallic minerals, except fuels	55	68.00%	0-70.00%	25.30%	15.74%
16	Heavy construction contractors	56	57.69%	0-100.00%	20.80%	17.75%
17	Special trade contractors	87	70.18%	0-78.00%	21.90%	17.64%
20	Food and kindred products	327	58.41%	0-85.99%	19.90%	18.36%
21	Tobacco manufactures	32	50.00%	0-46.00%	19.35%	23.47%
22	Textile mill products	85	49.09%	0-42.00%	6.09%	5.35%
23	Apparel and other textile products	139	34.53%	0-61.76%	6.46%	7.05%
24	Lumber and wood products	76	43.48%	0-24.00%	5.29%	7.62%
25	Furniture and fixtures	113	42.48%	0-71.00%	11.93%	7.81%
26	Paper and allied products	139	94.96%	0-85.48%	26.19%	21.04%
27	Printing and publishing	198	58.08%	0-75.47%	9.71%	6.05%
28	Chemicals and allied products	2,308	12.18%	0-85.00%	8.84%	10.06%
29	Petroleum and coal products	62	65.63%	0-59.00%	18.88%	18.52%
30	Rubber and miscellaneous plastics products	208	50.96%	0-86.94%	13.42%	11.24%
31	Leather and leather products	108	30.56%	0-23.24%	6.36%	9.16%
32	Stone, clay, glass, and concrete products	104	51.92%	0-96.00%	20.25%	16.70%
33	Primary metal industries	196	78.06%	0-92.00%	30.94%	26.04%
34	Fabricated metal products	190	54.74%	0-72.27%	13.79%	14.57%
35	Industrial machinery and equipment	1,079	26.41%	0-82.81%	10.90%	11.42%
36	Electrical and electronic equipment	1,829	13.56%	0-82.74%	8.30%	11.14%
37	Transportation equipment	370	60.00%	0-84.00%	22.12%	22.12%
38	Instruments and related products	1,516	10.72%	0-49.19%	4.28%	6.41%
39	Miscellaneous manufacturing industries	219	24.66%	0-81.72%	6.88%	7.95%



**Table 2 (continued)**

<b>2-Digit SIC</b>	<b>Industry Name</b>	<b>N</b>	<b>(1) Cover_Dummy Means (1999-2009)</b>	<b>(2) CB_Percent Within-Ind. Variation (1999-2009)</b>	<b>(3) CB_Percent Means (1999-2009)</b>	<b>(4) CB_IND Means (1999-2009)</b>
40	Railroad transportation	30	93.33%	0-87.00%	69.32%	62.25%
42	Motor freight transportation and warehousing	160	25.63%	0-77.00%	12.07%	14.45%
44	Water transportation	54	37.04%	0-100.00%	19.18%	22.28%
45	Transportation by air	98	80.61%	0-87.00%	39.22%	32.47%
46	Pipelines, except natural gas	35	85.71%	0-38.66%	10.22%	14.25%
47	Transportation services	122	18.70%	0-51.00%	8.30%	9.92%
48	Communications	754	30.77%	0-91.00%	9.97%	13.51%
49	Electric, gas, and sanitary services	781	75.16%	0-81.70%	30.42%	28.89%
50	Wholesale trade--durable goods	435	25.52%	0-64.75%	4.55%	3.44%
51	Wholesale trade--nondurable goods	220	45.00%	0-66.67%	8.40%	5.23%
53	General merchandise stores	127	18.25%	0-15.84%	2.09%	4.26%
54	Food stores	101	52.48%	0-92.00%	29.69%	6.22%
55	Automotive dealers and gasoline service stations	117	26.50%	0-15.48%	1.65%	2.24%
56	Apparel and accessory stores	241	24.90%	0-39.29%	1.76%	1.94%
57	Furniture, home furnishings and equipment stores	106	13.21%	0-67.11%	1.90%	2.57%
58	Eating and drinking places	481	6.74%	0-23.38%	1.28%	3.44%
59	Miscellaneous retail	451	11.09%	0-67.27%	2.02%	2.74%
70	Hotels, rooming houses, camps, and other lodging places	97	70.15%	0-51.62%	13.01%	3.68%
72	Personal services	105	25.33%	0-80.00%	5.96%	4.44%
73	Business services	3,297	6.91%	0-70.00%	3.61%	4.61%
75	Automotive repair, services, and parking	70	92.50%	0-41.51%	7.09%	4.99%
79	Amusement and recreational services	211	30.33%	0-78.92%	9.44%	9.21%
80	Health services	435	20.23%	0-64.11%	5.38%	7.75%
82	Educational services	91	11.48%	0-19.88%	0.48%	18.07%
87	Engineering and management services	464	14.22%	0-69.26%	2.03%	3.46%

**Table 3 Panel A: Firm Characteristics of Unionized vs. Non-Unionized Issuers**

Panel A presents the descriptive statistics of key firm characteristics of unionized and non-unionized bank loan issuers. \*\*\*, \*\*, \* represent 1%, 5% and 10% significance, respectively. *CB\_Percent* is the firm-level percentage of employees that are covered by collective bargaining agreements. *Cover\_Dummy* is an indicator variable set equal to 1 when employees are covered by collective bargaining agreements, and 0 otherwise. *Risk\_Dummy* is an indicator variable set equal to 1 when firm discloses in Item 1A of the 10-K filing indicating collective bargaining or union activities as a risk factor, and 0 otherwise. *CB\_IND* is the industry-level collective bargaining data from Current Population Survey (CPS) by 4-digit SIC codes. See Appendix A for other variable definitions.

Variable	Unionized				Non-unionized				Difference in Means
	Obs	Mean	Median	Std. Dev.	Obs	Mean	Median	Std. Dev.	t-value
<i>CB_Percent</i>	1,477	0.254	0.200	0.217	2,214	0.000	0.000	0.000	N/A
<i>Cover_Dummy</i>	1,480	1.000	1.000	0.000	2,214	0.000	0.000	0.000	N/A
<i>Risk_Dummy</i>	716	0.453	0.000	0.498	932	0.075	0.000	0.264	18.419***
<i>CB_IND</i>	894	0.149	0.105	0.131	1,688	0.066	0.048	0.060	17.972***
<i>Log_Assets</i>	1,190	7.351	7.337	1.451	1,771	5.813	5.769	1.479	28.059***
<i>MTB</i>	1,188	2.720	1.916	3.323	1,769	3.425	2.141	4.519	-4.884***
<i>Z_Score</i>	1,134	3.163	2.736	2.235	1,650	4.661	3.468	4.551	-11.504***
<i>Tangibility</i>	1,190	0.312	0.265	0.200	1,763	0.281	0.179	0.261	3.647***
<i>Leverage</i>	1,189	0.266	0.252	0.166	1,768	0.170	0.118	0.178	14.975***
<i>Current_Ratio</i>	1,156	1.821	1.617	1.097	1,676	2.340	1.845	1.879	-9.251***
<i>Default_Risk</i>	1,089	-0.792	-0.696	1.162	1,490	0.099	0.544	0.843	-21.504***
<i>Acc_Quality</i>	1,183	-0.123	-0.074	0.157	1,736	-0.152	-0.093	0.176	4.665***
<i>BA_Spread</i>	1,173	0.011	0.003	0.018	1,745	0.014	0.005	0.022	-5.619***
<i>Log_Sales</i>	1,188	7.385	7.340	1.382	1,762	5.760	5.747	1.564	29.689***
<i>ROA</i>	1,187	0.076	0.075	0.068	1,768	0.060	0.084	0.141	4.112***

**Table 3 Panel B: Pairwise Correlations of Firm Characteristics**

Panel B presents the pairwise correlations of key firm characteristics. *P-values* are in italics. *CB\_Percent* is the firm-level percentage of employees that are covered by collective bargaining agreements. *Cover\_Dummy* is an indicator variable set equal to 1 when employees are covered by collective bargaining agreements, and 0 otherwise. *Risk\_Dummy* is an indicator variable set equal to 1 when firm discloses in Item 1A of the 10-K filing indicating collective bargaining or union activities as a risk factor, and 0 otherwise. See Appendix A for other variable definitions.

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]
<i>CB_Percent</i> [1]	1													
<i>Cover_Dummy</i> [2]	0.673 <i>&lt;.0001</i>	1												
<i>Risk_Dummy</i> [3]	0.527 <i>&lt;.0001</i>	0.439 <i>&lt;.0001</i>	1											
<i>Log_Assets</i> [4]	0.333 <i>&lt;.0001</i>	0.457 <i>&lt;.0001</i>	0.151 <i>&lt;.0001</i>	1										
<i>MTB</i> [5]	-0.070 <i>0.000</i>	-0.084 <i>&lt;.0001</i>	-0.060 <i>0.029</i>	-0.060 <i>0.001</i>	1									
<i>Z_Score</i> [6]	-0.169 <i>&lt;.0001</i>	-0.191 <i>&lt;.0001</i>	-0.102 <i>0.000</i>	-0.155 <i>&lt;.0001</i>	0.231 <i>&lt;.0001</i>	1								
<i>Tangibility</i> [7]	0.130 <i>&lt;.0001</i>	0.064 <i>0.001</i>	0.104 <i>0.000</i>	0.133 <i>&lt;.0001</i>	-0.072 <i>0.000</i>	-0.174 <i>&lt;.0001</i>	1							
<i>Leverage</i> [8]	0.177 <i>&lt;.0001</i>	0.262 <i>&lt;.0001</i>	0.152 <i>&lt;.0001</i>	0.308 <i>&lt;.0001</i>	0.049 <i>0.008</i>	-0.438 <i>&lt;.0001</i>	0.286 <i>&lt;.0001</i>	1						
<i>Current_Ratio</i> [9]	-0.126 <i>&lt;.0001</i>	-0.157 <i>&lt;.0001</i>	-0.057 <i>0.041</i>	-0.229 <i>&lt;.0001</i>	0.029 <i>0.122</i>	0.496 <i>&lt;.0001</i>	-0.290 <i>&lt;.0001</i>	-0.183 <i>&lt;.0001</i>	1					
<i>Default_Risk</i> [10]	-0.311 <i>&lt;.0001</i>	-0.407 <i>&lt;.0001</i>	-0.139 <i>&lt;.0001</i>	-0.699 <i>&lt;.0001</i>	-0.047 <i>0.016</i>	0.145 <i>&lt;.0001</i>	-0.088 <i>&lt;.0001</i>	-0.258 <i>&lt;.0001</i>	0.199 <i>&lt;.0001</i>	1				
<i>Acc_Quality</i> [11]	0.057 <i>0.002</i>	0.084 <i>&lt;.0001</i>	-0.018 <i>0.514</i>	0.163 <i>&lt;.0001</i>	-0.093 <i>&lt;.0001</i>	-0.067 <i>0.000</i>	0.098 <i>&lt;.0001</i>	0.082 <i>&lt;.0001</i>	-0.017 <i>0.366</i>	0.091 <i>&lt;.0001</i>	1			
<i>BA_Spread</i> [12]	-0.064 <i>0.001</i>	-0.099 <i>&lt;.0001</i>	-0.061 <i>0.027</i>	-0.408 <i>&lt;.0001</i>	-0.152 <i>&lt;.0001</i>	-0.179 <i>&lt;.0001</i>	0.002 <i>0.922</i>	0.039 <i>0.038</i>	-0.021 <i>0.268</i>	-0.207 <i>&lt;.0001</i>	0.037 <i>0.046</i>	1		
<i>Log_Sales</i> [13]	0.340 <i>&lt;.0001</i>	0.471 <i>&lt;.0001</i>	0.196 <i>&lt;.0001</i>	0.903 <i>&lt;.0001</i>	-0.077 <i>&lt;.0001</i>	-0.097 <i>&lt;.0001</i>	0.037 <i>0.045</i>	0.191 <i>&lt;.0001</i>	-0.301 <i>&lt;.0001</i>	0.666 <i>&lt;.0001</i>	-0.131 <i>&lt;.0001</i>	-0.346 <i>&lt;.0001</i>	1	
<i>ROA</i> [14]	0.038 <i>0.037</i>	0.066 <i>0.000</i>	0.033 <i>0.222</i>	0.177 <i>&lt;.0001</i>	0.032 <i>0.085</i>	0.277 <i>&lt;.0001</i>	0.227 <i>&lt;.0001</i>	-0.006 <i>0.743</i>	-0.109 <i>&lt;.0001</i>	0.120 <i>&lt;.0001</i>	-0.154 <i>&lt;.0001</i>	-0.182 <i>&lt;.0001</i>	0.247 <i>&lt;.0001</i>	1

**Table 3 Panel C: Loan Characteristics of Unionized vs. Non-Unionized Issuers**

Panel C presents the descriptive statistics of key loan characteristics of unionized and non-unionized issuers. \*\*\*, \*\*, \* represent 1%, 5% and 10% significance, respectively. *CB\_Percent* is the firm-level percentage of employees that are covered by collective bargaining agreements. *Cover\_Dummy* is an indicator variable set equal to 1 when employees are covered by collective bargaining agreements, and 0 otherwise. *Risk\_Dummy* is an indicator variable set equal to 1 when firm discloses in Item 1A of the 10-K filing indicating collective bargaining or union activities as a risk factor, and 0 otherwise. *CB\_IND* is the industry-level collective bargaining data from Current Population Survey (CPS) by 4-digit SIC codes. See Appendix A for other variable definitions.

Variable	Unionized				Non-unionized				Difference in Means
	Obs	Mean	Median	Std. Dev.	Obs	Mean	Median	Std. Dev.	t-value
<i>CB_Percent</i>	2,903	0.262	0.200	0.222	3,848	0.000	0.000	0.000	N/A
<i>Cover_Dummy</i>	2,903	1.000	1.000	0.000	3,848	0.000	0.000	0.000	N/A
<i>Risk_Dummy</i>	1,407	0.457	0.000	0.498	1,584	0.078	0.000	0.268	25.459***
<i>CB_IND</i>	1,818	0.153	0.104	0.139	2,906	0.067	0.049	0.060	24.965***
<i>Spread</i>	2,585	221.504	200.000	153.756	3,399	237.245	225.000	147.048	-3.997***
<i>Log_Amount</i>	2,871	11.987	12.101	1.389	3,824	10.818	11.002	1.679	31.141***
<i>Log_Maturity</i>	2,758	3.732	4.094	0.687	3,630	3.623	3.807	0.688	6.277***
<i>Secured</i>	2,043	0.518	1.000	0.422	2,976	0.555	1.000	0.352	-3.260***
<i>Lead_Share</i>	662	26.819	18.387	23.435	844	28.417	21.575	25.255	-1.269
<i>Lead_Herf</i>	682	0.232	0.142	0.239	915	0.252	0.163	0.260	-1.593
<i>No_Lead_Prior</i>	518	0.722	1.000	0.448	550	0.693	1.000	0.462	1.041
<i>Lead_Reputation</i>	637	0.507	1.000	0.496	796	0.440	0.000	0.497	2.538**
<i>Log_Previous</i>	2,871	1.206	1.092	0.836	3,825	1.157	1.009	0.814	2.401**
<i>DCV</i>	2,775	0.175	0.158	0.103	3,795	0.191	0.175	0.104	-6.194***

**Table 3 Panel D: Pairwise Correlations of Loan Characteristics**

Panel D presents the pairwise correlations of key loan characteristics. *P-values* are in italics. *CB\_Percent* is the firm-level percentage of employees that are covered by collective bargaining agreements. *Cover\_Dummy* is an indicator variable set equal to 1 when employees are covered by collective bargaining agreements, and 0 otherwise. *Risk\_Dummy* is an indicator variable set equal to 1 when firm discloses in Item 1A of the 10-K filing indicating collective bargaining or union activities as a risk factor, and 0 otherwise. See Appendix A for other variable definitions.

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]
<i>CB_Percent</i> [1]	1												
<i>Cover_Dummy</i> [2]	0.665 <i>&lt;.0001</i>	1											
<i>Risk_Dummy</i> [3]	0.528 <i>&lt;.0001</i>	0.434 <i>&lt;.0001</i>	1										
<i>Spread</i> [4]	-0.025 <i>0.053</i>	-0.085 <i>&lt;.0001</i>	0.044 <i>0.025</i>	1									
<i>Log_Amount</i> [5]	0.223 <i>&lt;.0001</i>	0.348 <i>&lt;.0001</i>	0.092 <i>&lt;.0001</i>	-0.311 <i>&lt;.0001</i>	1								
<i>Log_Maturity</i> [6]	0.052 <i>&lt;.0001</i>	0.078 <i>&lt;.0001</i>	0.055 <i>0.003</i>	-0.016 <i>0.227</i>	0.208 <i>&lt;.0001</i>	1							
<i>Secured</i> [7]	-0.043 <i>0.002</i>	-0.111 <i>&lt;.0001</i>	0.096 <i>&lt;.0001</i>	0.422 <i>&lt;.0001</i>	-0.263 <i>&lt;.0001</i>	0.122 <i>&lt;.0001</i>	1						
<i>Lead_Share</i> [8]	-0.035 <i>&lt;.0001</i>	-0.012 <i>&lt;.0001</i>	-0.031 <i>0.446</i>	0.389 <i>&lt;.0001</i>	-0.622 <i>&lt;.0001</i>	-0.083 <i>0.001</i>	0.327 <i>&lt;.0001</i>	1					
<i>Lead_Herf</i> [9]	-0.016 <i>&lt;.0001</i>	-0.076 <i>&lt;.0001</i>	-0.005 <i>0.907</i>	0.399 <i>&lt;.0001</i>	-0.665 <i>&lt;.0001</i>	-0.150 <i>&lt;.0001</i>	0.347 <i>&lt;.0001</i>	0.981 <i>&lt;.0001</i>	1				
<i>No_Lead_Prior</i> [10]	0.025 <i>0.419</i>	0.032 <i>0.294</i>	-0.066 <i>0.152</i>	0.096 <i>0.002</i>	-0.036 <i>0.241</i>	0.026 <i>0.403</i>	0.088 <i>0.007</i>	0.036 <i>0.258</i>	0.061 <i>0.050</i>	1			
<i>Lead_Reputation</i> [11]	0.088 <i>0.001</i>	0.126 <i>&lt;.0001</i>	-0.029 <i>0.484</i>	-0.230 <i>&lt;.0001</i>	0.289 <i>&lt;.0001</i>	-0.030 <i>0.262</i>	-0.216 <i>&lt;.0001</i>	-0.273 <i>&lt;.0001</i>	-0.276 <i>&lt;.0001</i>	-0.110 <i>0.001</i>	1		
<i>Log_Previous</i> [12]	0.162 <i>&lt;.0001</i>	0.235 <i>&lt;.0001</i>	0.120 <i>&lt;.0001</i>	-0.112 <i>&lt;.0001</i>	0.409 <i>&lt;.0001</i>	0.056 <i>&lt;.0001</i>	-0.099 <i>&lt;.0001</i>	-0.269 <i>&lt;.0001</i>	-0.307 <i>&lt;.0001</i>	0.040 <i>0.195</i>	0.089 <i>0.001</i>	1	
<i>DCV</i> [13]	-0.142 <i>&lt;.0001</i>	-0.081 <i>&lt;.0001</i>	-0.051 <i>0.006</i>	-0.044 <i>0.001</i>	0.001 <i>0.912</i>	-0.020 <i>0.117</i>	-0.027 <i>0.060</i>	-0.014 <i>0.004</i>	-0.037 <i>0.003</i>	0.041 <i>0.193</i>	0.026 <i>0.330</i>	0.029 <i>0.020</i>	1

**Table 4: Cost of Bank Loans**

Table 4 presents the results of OLS regressions of loan pricing model (1) for the full-sample (1999-2009) and sub-sample periods (2005-2009). Dependent variable is *Spread*, i.e. interest spread over LIBOR. *CB* is the independent variable of interest and one of the following three variables: *CB\_Percent* (Column 1 and 3), *CB\_IND* (Column 2), *CB\_FPC* (Column 4). *CB\_Percent* is the firm-level percentage of employees that are covered by collective bargaining agreements. *CB\_IND* is the industry-level collective bargaining data from Current Population Survey (CPS) by 4-digit SIC codes. *CB\_FPC* is the firm-level measure of collective bargaining strength and defined as the first principal component of three variables: *CB\_Percent*, *Cover\_Dummy* and *Risk\_Dummy*. *Cover\_Dummy* is an indicator variable set equal to 1 when employees are covered by collective bargaining agreements, and 0 otherwise. *Risk\_Dummy* is an indicator variable set equal to 1 when firm discloses in Item 1A of the 10-K filing indicating collective bargaining or union activities as a risk factor, and 0 otherwise. Standard errors are corrected by firm clustering and reported in parentheses. \*\*\*, \*\*, \* represent 1%, 5% and 10% significance, respectively. See Appendix A for other variable definitions.

Variables	Predicted Sign	<i>Spread</i> (1999-2009)		<i>Spread</i> (2005-2009)	
		<i>CB_Percent</i> (1)	<i>CB_IND</i> (2)	<i>CB_Percent</i> (3)	<i>CB_FPC</i> (4)
		Estimate (standard errors)	Estimate (standard errors)	Estimate (standard errors)	Estimate (standard errors)
<b><i>CB</i></b>	<b>+</b>	<b>43.521**</b> <b>(20.581)</b>	<b>10.057</b> <b>(45.788)</b>	<b>55.369**</b> <b>(24.941)</b>	<b>8.996**</b> <b>(4.150)</b>
<i>Log_Assets</i>	-	-6.453*** (2.602)	-7.426*** (3.058)	-4.371 (4.187)	-2.895 (4.320)
<i>MTB</i>	-	-0.097*** (0.040)	-0.052*** (0.021)	-0.425*** (0.127)	-0.446*** (0.132)
<i>Default_Risk</i>	+	9.153*** (2.661)	5.489* (3.359)	10.443*** (3.337)	10.692*** (3.339)
<i>Tangibility</i>	-	-14.891* (10.269)	-26.741** (13.555)	-7.539 (16.277)	-8.260 (16.376)
<i>Leverage</i>	+	111.730*** (15.270)	119.191*** (23.240)	64.785*** (24.208)	63.137*** (21.800)
<i>Current_Ratio</i>	-	-5.084*** (1.368)	-5.866*** (1.643)	-7.954*** (2.417)	-7.736*** (2.468)
<i>Log_Amount</i>	-	-16.318*** (2.332)	-17.792*** (2.993)	-12.041*** (3.654)	-13.557*** (3.745)
<i>Log_Maturity</i>	+	-4.124 (4.409)	-2.130 (5.795)	-3.870 (8.460)	-4.083 (8.573)
<i>Secured</i>	+	105.057*** (4.809)	103.753*** (6.124)	101.351*** (7.904)	100.923*** (7.880)
<i>Acc_Quality</i>	-	-17.805*** (6.637)	-19.445*** (6.897)	-67.866*** (23.274)	-70.309*** (23.569)
<i>Leverage*CB</i>	+/-	37.605 (59.862)	47.222 (110.936)	-46.973 (80.989)	-3.721 (18.994)
Year-fixed-effect		Yes	Yes	Yes	Yes
Industry-fixed-effect		Yes	Yes	Yes	Yes
N		3,087	2,183	1,510	1,497
R <sup>2</sup>		0.363	0.340	0.292	0.294

**Table 5: Attenuating Effect of Private Information**

Table 5 presents the results of OLS regressions of loan pricing model (2) for the full-sample period from 1999-2009. Dependent variable is *Spread*, i.e. interest spread over LIBOR. The interaction term, *BA\_Spread\*CB* and *Acc\_Quality\*CB* are the independent variables of interest. *BA\_Spread* is the median of monthly bid-ask spreads deflated by price. Monthly bid-ask spreads are the monthly median spreads calculated from daily spreads. *Acc\_Quality* is the absolute value of residual term from Jones (1991) model as modified by Dechow, Sloan, and Sweeney (1995) multiplied by negative one. *CB* is either *CB\_Percent* (Column 1 and 2) or *CB\_IND* (Column 3 and 4). *CB\_Percent* is the firm-level percentage of employees that are covered by collective bargaining agreements. *CB\_IND* is the industry-level collective bargaining data from Current Population Survey (CPS) by 4-digit SIC codes. Standard errors are corrected by firm clustering and reported in parentheses. \*\*\*, \*\*, \* represent 1%, 5% and 10% significance, respectively. See Appendix A for other variable definitions.

Variables	Predicted Sign	<i>Spread</i> (1999-2009)		<i>Spread</i> (1999-2009)	
		<i>CB_Percent</i> (1)	<i>CB_Percent</i> (2)	<i>CB_IND</i> (3)	<i>CB_IND</i> (4)
		Estimate (standard errors)	Estimate (standard errors)	Estimate (standard errors)	Estimate (standard errors)
<i>CB</i>	+	41.103** (20.916)	58.947*** (22.574)	8.849 (45.867)	49.060 (50.097)
<i>Log_Assets</i>	-	-3.343 (2.683)	-3.139 (2.652)	-4.568* (3.192)	-4.367* (3.153)
<i>MTB</i>	-	-0.091*** (0.035)	-0.093*** (0.035)	-0.047** (0.023)	-0.051** (0.023)
<i>Default_Risk</i>	+	9.936*** (2.669)	9.853*** (2.661)	6.318** (3.365)	6.359** (3.365)
<i>Tangibility</i>	-	-12.262 (10.237)	-11.151 (10.237)	-24.086** (13.635)	-22.948** (13.591)
<i>Leverage</i>	+	106.719*** (15.554)	107.810*** (15.603)	111.496*** (23.705)	114.435*** (23.783)
<i>Current_Ratio</i>	-	-4.503*** (1.405)	-4.480*** (1.395)	-5.319*** (1.705)	-5.209*** (1.684)
<i>Log_Amount</i>	-	-16.480*** (2.360)	-16.470*** (2.361)	-18.336*** (3.044)	-18.125*** (3.047)
<i>Log_Maturity</i>	+	-4.672 (4.448)	-4.434 (4.464)	-2.859 (5.860)	-2.849 (5.863)
<i>Secured</i>	+	105.940*** (4.780)	105.477*** (4.801)	104.615*** (6.098)	103.769*** (6.185)
<i>Acc_Quality</i>	-	-17.812*** (6.682)	-36.800*** (11.430)	-19.248*** (6.887)	-49.710*** (15.395)
<i>BA_Spread</i>	+	324.808*** (97.189)	330.569*** (97.407)	236.434** (110.729)	254.931** (110.859)
<i>Leverage*CB</i>	+/-	25.065 (59.237)	8.371 (59.095)	59.565 (113.376)	17.935 (114.726)
<i>Acc_Quality *CB</i>	+		<b>24.924*</b> <b>(16.379)</b>		<b>-63.143</b> <b>(73.806)</b>
<i>BA_Spread*CB</i>	-		<b>-105.116**</b> <b>(50.116)</b>		<b>-162.688</b> <b>(192.139)</b>
Year-fixed-effect		Yes	Yes	Yes	Yes
Industry-fixed-effect		Yes	Yes	Yes	Yes
N		3,047	3,047	2,151	2,151
R <sup>2</sup>		0.364	0.365	0.341	0.342

**Table 6 Panel A: Concentration of Syndicated Loans (*Lead\_Share*)**

Panel A presents the results of OLS regressions of loan concentration model (3) for the full-sample (1999-2009) and sub-sample periods (2005-2009). Dependent variable is *Lead\_Share*, i.e. the percentage of the loan owned by the lead lender. *CB* is the independent variable of interest and one of the following three variables: *CB\_Percent* (Column 1 and 3), *CB\_IND* (Column 2), *CB\_FPC* (Column 4). *CB\_Percent* is the firm-level percentage of employees that are covered by collective bargaining agreements. *CB\_IND* is the industry-level collective bargaining data from Current Population Survey (CPS) by 4-digit SIC codes. *CB\_FPC* is the firm-level measure of collective bargaining strength and defined as the first principal component of three variables: *CB\_Percent*, *Cover\_Dummy* and *Risk\_Dummy*. *Cover\_Dummy* is an indicator variable set equal to 1 when employees are covered by collective bargaining agreements, and 0 otherwise. *Risk\_Dummy* is an indicator variable set equal to 1 when firm discloses in Item 1A of the 10-K filing indicating collective bargaining or union activities as a risk factor, and 0 otherwise. Standard errors are corrected by firm clustering and reported in parentheses. \*\*\*, \*\*, \* represent 1%, 5% and 10% significance, respectively. See Appendix A for other variable definitions.

Variables	Predicted Sign	<i>Lead_Share</i> (1999-2009)		<i>Lead_Share</i> (2005-2009)	
		<i>CB_Percent</i> (1)	<i>CB_IND</i> (2)	<i>CB_Percent</i> (3)	<i>CB_FPC</i> (4)
		Estimate (standard errors)	Estimate (standard errors)	Estimate (standard errors)	Estimate (standard errors)
<b><i>CB</i></b>	<b>+</b>	<b>6.075*** (2.420)</b>	<b>13.339 (33.142)</b>	<b>2.947** (1.424)</b>	<b>0.874** (0.399)</b>
<i>Rating</i>	-	-2.040** (1.085)	-2.072* (1.354)	-2.691** (1.574)	-2.569** (1.359)
<i>No_Lead_Prior</i>	+	2.955** (1.173)	3.074** (1.726)	5.277** (2.332)	5.302** (2.352)
<i>Lead_Reputation</i>	-	-1.540* (1.034)	-2.334* (1.646)	-0.595* (0.396)	-0.667* (0.445)
<i>Log_Amount</i>	-	-7.884*** (1.164)	-8.261*** (1.296)	-7.601*** (1.460)	-7.699*** (1.423)
<i>Spread</i>	+/-	0.030*** (0.011)	0.048*** (0.014)	0.037** (0.015)	0.038** (0.015)
<i>Log_Maturity</i>	+/-	-2.820** (1.281)	-2.086 (1.590)	-5.341** (2.156)	-5.420** (2.157)
<i>Secured</i>	+/-	1.757** (0.756)	2.626* (1.574)	1.288* (0.705)	1.179* (0.701)
<i>Log_Previous</i>	-	1.055 (1.211)	2.162 (1.348)	1.230 (1.938)	1.158 (2.008)
<i>Log_Assets</i>	-	-2.973*** (0.971)	-2.508** (1.138)	-3.413*** (1.362)	-3.401*** (1.344)
<i>Leverage</i>	+/-	-16.112** (6.887)	-18.346** (9.117)	-29.125*** (9.870)	-29.227*** (9.470)
<i>DCV</i>	-	-8.618** (4.288)	-24.310** (12.094)	-6.485** (3.770)	6.043** (3.357)
<i>Spread *CB</i>	+/-	0.007 (0.056)	-0.026 (0.164)	0.060 (0.066)	0.055 (0.066)
<i>Leverage*CB</i>	+/-	32.491 (35.021)	-37.940 (64.109)	52.914 (55.078)	69.772 (67.965)
<i>DCV *CB</i>	+/-	-31.402 (49.906)	13.152 (141.991)	-21.142 (59.053)	-34.404 (66.835)
Year-fixed-effect		Yes	Yes	Yes	Yes
Industry-fixed-effect		Yes	Yes	Yes	Yes
N		657	485	307	305
R <sup>2</sup>		0.478	0.507	0.557	0.556



**Table 6 Panel B: Concentration of Syndicated Loans (*Lead\_Herf*)**

Panel B presents the results of OLS regressions of loan concentration model (3) for the full-sample (1999-2009) and sub-sample periods (2005-2009). Dependent variable is *Lead\_Herf*, i.e. a syndicate ownership Herfindahl Index defined as the sum of the squared percentage ownership of each lender in the loan syndicate. *CB* is the independent variable of interest and one of the following three variables: *CB\_Percent* (Column 1 and 3), *CB\_IND* (Column 2), *CB\_FPC* (Column 4). *CB\_Percent* is the firm-level percentage of employees that are covered by collective bargaining agreements. *CB\_IND* is the industry-level collective bargaining data from Current Population Survey (CPS) by 4-digit SIC codes. *CB\_FPC* is the firm-level measure of collective bargaining strength and defined as the first principal component of three variables: *CB\_Percent*, *Cover\_Dummy* and *Risk\_Dummy*. *Cover\_Dummy* is an indicator variable set equal to 1 when employees are covered by collective bargaining agreements, and 0 otherwise. *Risk\_Dummy* is an indicator variable set equal to 1 when firm discloses in Item 1A of the 10-K filing indicating collective bargaining or union activities as a risk factor, and 0 otherwise. Standard errors are corrected by firm clustering and reported in parentheses. \*\*\*, \*\*, \* represent 1%, 5% and 10% significance, respectively. See Appendix A for other variable definitions.

Variables	Predicted Sign	<i>Lead_Herf</i> (1999-2009)		<i>Lead_Herf</i> (2005-2009)	
		<i>CB_Percent</i> (1)	<i>CB_IND</i> (2)	<i>CB_Percent</i> (3)	<i>CB_FPC</i> (4)
		Estimate (standard errors)	Estimate (standard errors)	Estimate (standard errors)	Estimate (standard errors)
<b><i>CB</i></b>	+	<b>0.058**</b> (0.025)	<b>0.156</b> (0.339)	<b>0.041**</b> (0.021)	<b>0.012**</b> (0.006)
<i>Rating</i>	-	-0.009** (0.005)	-0.026* (0.017)	-0.009** (0.005)	-0.007** (0.004)
<i>No_Lead_Prior</i>	+	0.014** (0.007)	0.022** (0.012)	0.045** (0.024)	0.045** (0.024)
<i>Lead_Reputation</i>	-	-0.014* (0.009)	-0.022* (0.017)	-0.009** (0.005)	0.010* (0.006)
<i>Log_Amount</i>	-	-0.083*** (0.012)	-0.088*** (0.013)	-0.077*** (0.015)	-0.078*** (0.015)
<i>Spread</i>	+/-	0.000*** (0.000)	0.000*** (0.000)	0.000** (0.000)	0.000** (0.000)
<i>Log_Maturity</i>	+/-	-0.031** (0.013)	-0.024 (0.017)	-0.051** (0.022)	-0.052** (0.022)
<i>Secured</i>	+/-	0.007** (0.003)	0.018* (0.010)	0.011* (0.006)	0.011* (0.006)
<i>Log_Previous</i>	-	0.011 (0.012)	0.028** (0.014)	0.001 (0.020)	0.001 (0.021)
<i>Log_Assets</i>	-	-0.024** (0.010)	-0.020* (0.012)	-0.029** (0.014)	-0.029** (0.014)
<i>Leverage</i>	+/-	-0.156** (0.073)	-0.213** (0.094)	-0.293*** (0.103)	-0.296*** (0.099)
<i>DCV</i>	-	-0.092*** (0.034)	-0.244** (0.128)	-0.060** (0.028)	-0.012** (0.006)
<i>Spread *CB</i>	+/-	0.007 (0.056)	-0.026 (0.164)	0.060 (0.066)	0.055 (0.066)
<i>Leverage *CB</i>	+/-	32.491 (35.021)	-37.940 (64.109)	52.914 (55.078)	69.772 (67.965)
<i>DCV *CB</i>	+/-	-31.402 (49.906)	13.152 (141.991)	-21.142 (59.053)	-34.404 (66.835)
Year-fixed-effect		Yes	Yes	Yes	Yes
Industry-fixed-effect		Yes	Yes	Yes	Yes
N		657	485	307	305
R <sup>2</sup>		0.454	0.483	0.529	0.529

**Table 7 Panel A: Debt Level (Market Leverage)**

Panel A presents the results of OLS regressions of debt level model (4) for the full-sample (1999-2009) and sub-sample periods (2005-2009). Dependent variable is *Lev\_Market*, i.e. long-term debt divided by total market value of the firm. *CB* is the independent variable of interest and one of the following two variables: *CB\_Percent* (Column 1 and 2) and *CB\_FPC* (Column 3 and 4). *CB\_Percent* is the firm-level percentage of employees that are covered by collective bargaining agreements. *CB\_FPC* is the firm-level measure of collective bargaining strength and defined as the first principal component of three variables: *CB\_Percent*, *Cover\_Dummy* and *Risk\_Dummy*. *Cover\_Dummy* is an indicator variable set equal to 1 when employees are covered by collective bargaining agreements, and 0 otherwise. *Risk\_Dummy* is an indicator variable set equal to 1 when firm discloses in Item 1A of the 10-K filing indicating collective bargaining or union activities as a risk factor, and 0 otherwise. Standard errors are corrected by firm clustering and reported in parentheses. \*\*\*, \*\*, \* represent 1%, 5% and 10% significance, respectively. See Appendix A for other variable definitions.

Variables	Predicted Sign	<i>Lev_Market</i> (1999-2009)		<i>Lev_Market</i> (2005-2009)	
		<i>CB_Percent</i> (1)	<i>CB_Percent</i> (2)	<i>CB_FPC</i> (3)	<i>CB_FPC</i> (4)
		Estimate (standard errors)	Estimate (standard errors)	Estimate (standard errors)	Estimate (standard errors)
<i>CB</i>	+	<b>0.061***</b> (0.013)	<b>0.026</b> (0.023)	<b>0.015***</b> (0.002)	<b>0.006</b> (0.005)
<i>Profit_Var</i>	+/-	-0.023*** (0.007)	-0.050*** (0.007)	-0.023*** (0.008)	-0.049*** (0.009)
<i>CB*Profit_Var</i>	+	0.158** (0.080)	0.104 (0.083)	0.088 (0.075)	0.069 (0.105)
<i>Tangibility</i>	+	0.197*** (0.010)	0.174*** (0.010)	0.212*** (0.013)	0.192*** (0.014)
<i>MTB</i>	+/-	-0.000*** (0.000)	-0.000* (0.000)	-0.000*** (0.000)	-0.000 (0.000)
<i>Log_Sales</i>	+	0.016*** (0.001)	0.019*** (0.001)	0.015*** (0.001)	0.017*** (0.001)
<i>Z_Score</i>	-	-0.002*** (0.001)	-0.003*** (0.000)	-0.002*** (0.000)	-0.004*** (0.000)
<i>ROA</i>	-	-0.055*** (0.011)	-0.058*** (0.011)	-0.057*** (0.013)	-0.076*** (0.013)
<i>Acc_Quality</i>	-		<b>0.006</b> (0.005)		<b>0.000</b> (0.004)
<i>DCV</i>	-		<b>-0.067***</b> (0.016)		<b>-0.042**</b> (0.022)
<i>BA_Spread</i>	+		<b>0.840***</b> (0.096)		<b>0.557***</b> (0.171)
<i>Acc_Quality*CB</i>	+/-		0.007 (0.006)		0.000 (0.001)
<i>DCV*CB</i>	+/-		-0.120 (0.129)		-0.036 (0.024)
<i>BA_Spread*CB</i>	+/-		-0.407 (0.472)		-0.105 (0.184)
Year-fixed-effect		Yes	Yes	Yes	Yes
Industry-fixed-effect		Yes	Yes	Yes	Yes
N		9,553	8,708	5,164	4,683
R <sup>2</sup>		0.260	0.292	0.290	0.304

**Table 7 Panel B: Debt Level (Book Leverage)**

Panel B presents the results of OLS regressions of debt level model (4) for the full-sample (1999-2009) and sub-sample periods (2005-2009). Dependent variable is *Leverage*, i.e. long-term debt divided by total assets. *CB* is the independent variable of interest and one of the following two variables: *CB\_Percent* (Column 1 and 2) and *CB\_FPC* (Column 3 and 4). *CB\_Percent* is the firm-level percentage of employees that are covered by collective bargaining agreements. *CB\_FPC* is the firm-level measure of collective bargaining strength and defined as the first principal component of three variables: *CB\_Percent*, *Cover\_Dummy* and *Risk\_Dummy*. *Cover\_Dummy* is an indicator variable set equal to 1 when employees are covered by collective bargaining agreements, and 0 otherwise. *Risk\_Dummy* is an indicator variable set equal to 1 when firm discloses in Item 1A of the 10-K filing indicating collective bargaining or union activities as a risk factor, and 0 otherwise. Standard errors are corrected by firm clustering and reported in parentheses. \*\*\*, \*\*, \* represent 1%, 5% and 10% significance, respectively. See Appendix A for other variable definitions.

Variables	Predicted Sign	<i>Leverage</i> (1999-2009)		<i>Leverage</i> (2005-2009)	
		<i>CB_Percent</i> (1)	<i>CB_Percent</i> (2)	<i>CB_FPC</i> (3)	<i>CB_FPC</i> (4)
		Estimate (standard errors)	Estimate (standard errors)	Estimate (standard errors)	Estimate (standard errors)
<i>CB</i>	+	<b>0.038***</b> (0.013)	<b>0.027</b> (0.027)	<b>0.008***</b> (0.003)	<b>0.005</b> (0.006)
<i>Profit_Var</i>	+/-	-0.028*** (0.009)	-0.070*** (0.009)	-0.016 (0.011)	-0.054*** (0.011)
<i>CB*Profit_Var</i>	+	0.138** (0.075)	0.089 (0.080)	0.040*** (0.014)	0.036*** (0.013)
<i>Tangibility</i>	+	0.223*** (0.011)	0.203*** (0.011)	0.244*** (0.014)	0.226*** (0.015)
<i>MTB</i>	+/-	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000*** (0.000)
<i>Log_Sales</i>	+	0.022*** (0.001)	0.022*** (0.001)	0.021*** (0.001)	0.020*** (0.001)
<i>Z_Score</i>	-	-0.002*** (0.001)	-0.004*** (0.001)	-0.003*** (0.001)	-0.005*** (0.001)
<i>ROA</i>	-	-0.073*** (0.013)	-0.068*** (0.015)	-0.077*** (0.012)	-0.074*** (0.016)
<i>Acc_Quality</i>	-		<b>0.006</b> (0.008)		<b>0.007</b> (0.008)
<i>DCV</i>	-		<b>-0.104***</b> (0.019)		<b>-0.072***</b> (0.025)
<i>BA_Spread</i>	+		<b>0.193***</b> (0.078)		<b>0.254**</b> (0.137)
<i>Acc_Quality*CB</i>	+/-		0.008 (0.010)		0.008 (0.008)
<i>DCV*CB</i>	+/-		0.046 (0.138)		-0.013 (0.026)
<i>BA_Spread*CB</i>	+/-		-0.051 (0.240)		-0.026 (0.117)
Year-fixed-effect		Yes	Yes	Yes	Yes
Industry-fixed-effect		Yes	Yes	Yes	Yes
N		9,553	8,708	5,164	4,683
R <sup>2</sup>		0.252	0.278	0.282	0.305