

Bond-Blockholders and Corporate Acquisitions

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Abstract

We examine whether bond-blockholders provide additional, distinct monitoring roles beyond those of equity-blockholders in M&A processes. Using a sample of 4,309 M&A deals announced from 2001 to 2010, we find that the presence of bond-blockholders (or a change in bond-blockholders' position) is positively related to acquiring firms' abnormal return announcements. We determine that bond-blockholders' are stronger monitors of 1) overconfident CEOs engaging in M&As, 2) CEOs who exhibit risk-taking behaviors while conducting M&As, and 3) entrenched managers participating in M&As. Further analysis suggests that a potential mechanism for the positive relationship between bond-blockholdings and acquirers' announcement returns is through lenders who react to the reduced agency cost of debt and financial distress by lowering the loan spreads of the acquiring firms. Overall, our findings shed new light on the monitoring spillover effects of bondholders to shareholders in the context of M&As.

JEL classification:

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1. Introduction

Mergers and acquisitions (M&As) are vital corporate investments with far-reaching consequences for firms' ongoing and future operations. The traditional argument for firms to engage in M&As is to generate synergistic gains that raise the value of the combined firm (Bradley et al., 1988). Large shareholders (hereafter referred to as "equity-blockholders," defined as institutional shareholders who own over 5% of the common stocks in a firm) play significant roles in major corporate events as effective monitors who produce corporate gains (Shleifer and Vishny, 1986; Chang, 1998; Maug, 1998; Chen et al., 2007). While equity-blockholders may be incentivized to increase monitoring and disciplining efforts on entrenched management for the benefit of shareholders and bondholders, large equity stakes may also enable equity-blockholders to control managers to act in solely shareholders' interests to the detriment of bondholders. In the agency framework of shareholder-debtholder conflicts, debtholders with fixed claims are vulnerable to borrowers' opportunistic behaviors because shareholders, as residual claimants, have incentives to encourage managers to invest in risky projects (Jensen and Meckling, 1976; Jensen, 1986). As such, a complicated interplay may arise between various contracting parties (i.e., shareholders, bondholders, and corporate managers), depending on the relative intensity of the conflicts between shareholders and managers, bondholders and managers, and shareholders and bondholders (Amiri-Moghadam et al., 2021).

Although prior research highlights the prevalence of equity-blockholders in US firms (Dlugosz et al., 2006; Holderness, 2009) and their corporate governance role as effective monitors in M&As, little is known about the monitoring roles of bond-blockholders in M&A processes and the resulting impact on shareholder wealth. This study aims to fill this gap in the literature by shedding new light on the monitoring spillover effects of bondholders to shareholders around M&A announcements. We focus on M&As among other major corporate events because M&As reorganize ownership and control rights and therefore the conflicts of interests may be particularly acute in M&A processes, providing a unique empirical setting to clearly show the role of bondholders.

In this paper, we examine whether bond-blockholders (institutional investors who hold over 5% of outstanding bonds in a firm) provide additional, distinct monitoring roles beyond those of equity-blockholders in M&As processes. Specifically, we analyze the monitoring spillover effects from bond-blockholders to shareholders, using a sample of 4,309 M&A deals announced from 2001 to 2010. We argue that the presence of bond-blockholders makes it difficult for equity-blockholders to exert power over corporate executives and boards of directors to extract personal benefit. Bond-blockholders also enhance corporate governance through effective monitoring by preventing managers from excessive risk-taking and value-destroying M&As. Our findings show that the presence of bond-blockholders (or a change in bond-blockholders' position) is positively related to the acquiring firms' three-day cumulative abnormal returns (CAR), which supports the monitoring spillover effects from bondholders to shareholders in M&A processes. Also, our subsample analyses indicate that bond-blockholders' are stronger monitors of 1) overconfident CEOs engaging in M&As, 2) CEOs who exhibit risk-taking behavior while conducting M&As, and 3) entrenched managers participating in M&As.

Chen et al. (2007) show that only large equity holdings by independent long-term institutional investors are positively related to post-merger performance. We also posit that large bond holdings by bond-blockholders are positively associated with the abnormal returns of acquiring firms. First, the larger the bond holdings, the more effective the threat of exit is

via a large bond sell-off, which may lead to an increase in a firm's cost of debt (Hasan et al., 2013). Thus, the large bond holdings are likely to make the bond-blockholders to become effectiveness monitors. In this case, the bond-blockholders would behave similarly to the passive institutional investors who follow the "Wall Street Walk" rule. Second, because large bond holdings are usually rolled over, bond-blockholders who satisfy with a firm's current management would just reinvest their bonds at maturity and thus hold them for a longer time horizon (Ye et al., 2021). Since these long-term bond-blockholders clearly benefit from their efforts as monitors, they are more likely to monitor investee firms. Finally, bondholders with larger bond holdings can write more favorable covenants which can be used to increase their bargaining power. Therefore, bond-blockholders with more favorable covenants can easily increase monitoring and disciplining efforts on entrenched management.

To better understand the monitoring effects of bond-blockholders on M&As' outcomes, we examine whether a bond-blockholder will focus monitoring efforts on the holdings with the most significant weight in their portfolios. Like Fich et al. (2015), we define "monitoring" bond-blockholders as those whose holding value of a firm's bond is in the top 10% of their bond portfolio. We find that ownership changes in "monitoring" bond-blockholders from the previous quarter are positively associated with the acquiring firms' three-day CAR. We expect that the "monitoring" bond-blockholders who invested in the most recent quarter may be the long-term bond-blockholders. Hasan et al. (2013) argue that bondholders are not homogeneous and have different investment horizons. They classify bond-blockholders into long-term and short-term bond-blockholders based on the portfolio turnover ratio. While long-term bondholders tend to have positive impacts on firms they invested, short-term bondholders tend to be transient and thus may have negative impacts.

We further examine whether cash-financed deals are higher in value when bond-blockholders increase their bond holdings in acquiring firms. In the literature on payment methods in M&As, the stock payment is believed by investors as a signal for overvaluation of an acquiring firm. When the acquirer's managers believe their shares to be overvalued, they tend to offer stock exchanges for the deal. However, when the target's value is higher and the acquirer's share is undervalued, the acquiring firm tends to use cash as a method of payment. Under information asymmetry hypothesis, cash payment conveys a positive signal to the market and thus shareholders enjoy positive market reactions while shareholders in stock-financed M&As face adverse market reactions. We find that changes in bond-blockholdings in the previous quarter are positively related to a higher portion of cash-financed deals in which acquirers are approximately 73% more likely to make payments where more than half is in cash. This finding implies that bond-blockholders may help reduce information asymmetry and the agency cost of debt by using cash as a payment method.

A potential mechanism for the positive relationship between bond-blockholdings and acquirers' announcement returns is the expectation that lenders will react to the reduced information asymmetry and agency cost of debt by lowering loan spreads charged to acquiring firms. We thus examine whether changes in bond-blockholdings influence information asymmetry and the agency cost of debt using acquirers' loan spreads. We find that increases in bond-blockholdings are negatively related to the loan spread of acquirers. This finding suggests that monitoring spillover effects from bond-blockholders to shareholders may come from lenders' positive reaction to the decrease in the information asymmetry and agency problem.

This study contributes to the literature in several ways. First, we add to the

literature by suggesting a new role of bond-blockholders in M&A processes. While the monitoring effects of equity-blockholders have been widely studied in the M&A literature, those of bond-blockholders have been largely ignored. By examining the role of bond-blockholders in M&A processes, we document the different monitoring role of bond-blockholders from that of equity-blockholders. Second, we extend the understanding on bond-blockholders by providing empirical evidence that bond-blockholders positively affect shareholders' wealth. This study suggests that the additional, distinct monitoring of bond-blockholders can provide spillover benefits to shareholders. Finally, our findings suggest that bondholders can have long-term perspective beyond the limited time horizon of bond maturity and have positive effects in M&A processes. Thus, this study has important implications for managers and practitioners interested in which investors have positive effects on M&As.

The remainder of this paper is organized as follows. In Section 2, we develop hypotheses. In Section 3, we discuss the data. In Section 4, we present and interpret the results. In Section 5, we conclude.

2. Hypotheses development

Shareholders play a critical role in corporate governance by monitoring a firm's managers to ensure that firm value is maximized. Although shareholder groups may have different incentives, and there may be several factors influencing the effectiveness of their monitoring roles, extant literature suggests that monitoring institutions with large equity stakes have more motivation and greater ability to influence the major corporate decisions (such as M&As) of executives and boards of directors. Carleton, Nelson, and Weisbach (1998) show that institutions with large ownership positions often have access to board members and senior managers. Chang (1998) documents that firms acquiring privately held targets through common stock exchanges tend to create outside blockholders who increase firm value by effectively monitoring managerial performance. Chen et al. (2007) find that the concentrated holdings of independent long-term institutions are related to post-M&A performance, and equity-blockholders in these situations support the withdrawal of bad bids by dissuading value-destroying M&As rather than selling their shares after the announcement. As such, the literature generally suggests that the larger the equity stakes of an institution, the more influence it will have on management, producing greater financial benefits for the institution.

Like equity-blockholders, bond-blockholders may find it beneficial to become specialized monitors. Blockholders engage in monitoring more than many other types of owners (Holderness and Sheehan, 1988) because their sizable stake incentivizes them to bear the cost of monitoring managers. Bond-blockholders are likely to have similar incentives to equity-blockholders, but different governance styles result in additional, distinct monitoring effects on acquiring firms' management, which may benefit various stakeholders' profits. According to the debt-monitoring hypothesis, debt reduces the cash flow available for spending at managers' discretion and thus decreases the agency costs of free cash flow (Jensen, 1986). Managers are more likely to make managerial decisions that increase their wealth or the wealth of shareholders rather than that of creditors if they have cash at their disposal (Triantis, 1994). However, debt imposes fixed claims on a firm and removes free cash flow from the easy reach of managers, which could prevent firms from wasting resources on low-return projects, thereby reducing agency costs. Creditors can also use their control rights to prevent investments expected to destroy firm value (Becher et al., 2018). Using a sample of more than 7,000

acquisitions announced between 1997 and 2015, combined with hand-collected covenant violation data, Becher et al. (2018) show that creditors use their bargaining power and contractual authority to limit M&A activity when firms violate a financial covenant. Although the primary purpose of such creditor interventions is to protect and maximize creditor wealth, these actions likely have positive spillover effects on shareholder wealth (Becher et al., 2018).

In the agency framework of shareholder-debtholder conflicts, shareholders, as residual claimants, have incentives to encourage managers to invest in risky projects, such as M&As, to increase payouts and to raise leverage, increasing the probability of financial distress to expropriate wealth from debtholders (Low et al., 2007). Therefore, equity-blockholders may pursue objectives other than firm value maximization and extract personal benefits using their large equity position (Edmans, 2014). Indeed, Ashbaugh-Skaife et al. (2006) document that equity-blockholdings have the strongest adverse impact on creditors. However, the presence of bond-blockholders makes it difficult for equity-blockholders to exert their power to extract personal benefits since concentrated bond holdings also enhance bond-blockholders' relative power. Moreover, it is easier for a large debtholder to directly influence a firm's board of directors than for a large shareholder (Parlour and Winton, 2013). Thus, the presence of bond-blockholders can prevent managers from taking excessive risks, benefiting bondholders by mitigating the agency cost of debt and reducing the probability of financial distress.

In this paper, we argue that bond-blockholders provide additional, distinct monitoring effects which can decrease agency costs, creating positive market reactions to M&A proposals. If equity-blockholders already play critical roles as external monitors, we expect to observe no additional, distinct monitoring effects from bond-blockholders. Therefore, after controlling for the presence of equity-blockholders, we expect to observe a positive relationship between acquiring firms' abnormal return announcements and the presence of bond-blockholders (or a change in bond-blockholders' position).

H1. Bondholders' blockholdings (or a change in bondholders' blockholdings) are positively related to the abnormal returns of acquiring firms.

It is reasonable that if bond-blockholders have monitoring effects on acquiring firms' management, managers' risk-taking and value-destroying behaviors would be constrained by the presence of bond-blockholders. Thus, we further present the following hypotheses. First, we hypothesize that bond-blockholders' monitoring roles will be stronger for M&As by overconfident CEOs by deterring value-destroying deals. Malmendier and Tate (2008) find that overconfident CEOs' serial acquisitions correlate with lower announcement returns. Similarly, most research on CEO overconfidence identifies a negative effect on deal performance (Fuller et al., 2002; Antoniou et al., 2007; Doukas and Petmezas, 2007; Billett and Qian, 2008). Bond-blockholders' monitoring will discipline overconfident CEOs and thus we expect a positive relationship between bondholders' blockholdings and the abnormal returns of the bidders with overconfident CEOs.

H1a. Bondholders' blockholdings (or a change in bondholders' blockholdings) are positively associated with the abnormal returns of acquiring firms with overconfidence CEOs.

Second, we hypothesize that bond-blockholders' monitoring roles will be stronger for M&As from CEOs who exhibit risk-taking behavior. To proxy for CEOs' risk-taking behavior, we use *Vega*, measured by the change in the dollar value of a CEO's wealth by the change in the annualized standard deviation of a firm's stock returns (Coles et al., 2006). A company's stock return volatility increases managers' payoffs from option compensation, potentially encouraging managers to undertake M&As that increase a firm's equity risk (Datta et al., 2001).

However, bond-blockholders may prevent CEOs to take risky behaviors and thus we expect positive abnormal returns for firms with high *Vega*.

H1b. Bondholders' blockholdings (or a change in bondholders' blockholdings) are positively related to the abnormal returns of acquiring firms with high *Vega*.

Third, we expect that bond-blockholders' monitoring effects will be stronger for firms with entrenched managers. Entrenched managers are less subject to market discipline and, therefore, more likely to engage in empire-building acquisitions that destroy firm value (Masulis et al., 2007). Following Bebchuk et al. (2009), we use an E-index to measure a firm's managerial entrenchment level. Bebchuk et al. (2009) construct an E-index based on the six most important features of the twenty-four governance provisions on the Gompers, Ishii, and Metrick (2003) index. These six features include staggered boards, limits on shareholder bylaw amendments, supermajority requirements for mergers, supermajority requirements for charter amendments, poison pills, and golden parachutes. We hypothesize that bond-blockholders have positive effects on acquiring firms' abnormal returns by deterring managerial entrenchment.

H1c. Bondholders' blockholdings (or a change in bondholders' blockholdings) are positively associated with the abnormal returns of acquiring firms with high E-index.

We focus on concentrated bond holdings because blockholders engage in monitoring more than many other types of owners (Holderness and Sheehan, 1988). We argue that bond-blockholders' sizable stake makes them to become effective monitors for the following reasons. First, a large bond sell-off, which may lead to an increase in a firm's cost of debt, could put pressure on a firm (Ye et al., 2021). If a bond-blockholder sells their bonds, it may suppress the prices of the current issues. Low bond prices may raise current yields in the secondary market and future yields in the primary market. This may result in an increase in the company's cost of debt. Because of the fears of rising cost of debt, the bargaining power of bond-blockholders against managers will be strengthened, resulting in an increase in the monitoring effectiveness. The lack of liquidity in the bond market compared to the stock market (Bao et al., 2021) makes the threat of exit more compelling.

Second, large bond holdings might be rolled over rather than repaid at maturity (Hasan et al., 2013). When large bonds mature, repayments can significantly change the capital structure of a firm. If bond-blockholders satisfy with the firm's management and has a long-term investment horizon for a reasonable return, they would take the buy-and-hold strategy (Ye et al., 2021). In this case, bond-blockholders act like long-term institutional investors who take active monitoring roles in corporate governance. Furthermore, the bond-blockholders would have information advantage from long-term relationship with management, resulting in more effective monitoring (Ye et al., 2021).

Third, restrictive covenants in large bond contracts can be effective tools for bond-blockholders to influence management. Bondholders can discipline management by structuring bond contracts (Becher et al., 2018). Especially, bond-blockholders with concentrated bond holdings are likely to have more bargaining power when designing bond contracts because their sizeable contracts make the terms of the contracts more favorable for them. Thus, bondholders with concentrated bond holdings can be more effective monitor than those with smaller bond holdings.

We argue that a bondholder will likely focus their monitoring efforts on the largest holdings in their portfolio. Institutions may be encouraged to monitor certain positions over others because these positions may represent a large part of the institutions' total bond

portfolio. Fich et al. (2015) show that institutions allocate monitoring efforts to a firm based on the relative importance of the firm's stock within their portfolios. Like Fich et al. (2015), we define “monitoring” bond-blockholders as institutions whose holding value of a firm's bond is in the top 10% of their bond portfolio. Thus, we expect changes in the “monitoring” bond-blockholders' positions to be positively related to the bidders' three-day CAR.

H2. Bond holdings by monitoring bond-blockholders (or a change in bond holdings by monitoring bond-blockholders) are positively related to the abnormal returns of acquiring firms.

3. Data

We compile our data from several sources. We obtain the institutional bond holding data from Lipper's eMAXX fixed income database. Lipper contains detailed corporate and securitized bond holdings for nearly 20,000 U.S. and European insurance companies-managed funds, U.S., Canadian, and European mutual funds, and U.S. pension funds. Lipper reports the quarterly holdings based on regulatory disclosures to the National Association of Insurance Commissioners (NAIC) for insurance companies and to the Securities and Exchange Commission (SEC) for mutual funds. This disclosure is voluntary for major pension funds. We collect the institutional bondholding data from Lipper for the period from the first quarter of 2000 to the first quarter of 2010.

Corporate acquisition information is obtained from the Securities Data Company (SDC) M&A database. Our sample includes complete and domestic M&A deals where an acquirer owns less than 50% of a target's shares before the merger announcement but holds 100% of the shares after the transaction. If a deal's transaction value is less than USD 1 million, the M&A is considered a limited partnership or a special purpose acquisition vehicle and therefore is excluded from our sample, along with deals associated with a recapitalization or restructuring plans. Firm characteristics are obtained from the CRSP and COMPUSTAT databases, and institutional ownership data is from Thomson Financial, which obtains data on quarterly institutional holdings from Form 13F filings. Under Section 13F of the Securities Exchange Act of 1934, institutional investors with \$100 million or more under management must report equity positions greater than 10,000 shares, or \$200,000, to the SEC at the end of each quarter. Managerial characteristics are obtained and measured based on Execucomp. Following the literature, we exclude financial firms (SIC codes between 6000 and 6999) and utility firms (between 4900 and 4999) from the sample. The final sample contains 4,309 M&A deals from 2001 to 2010. All continuous firm- and deal-level variables in the main regression are winsorized at the 1st and the 99th percentile.

Not all bondholders have the same motivation to monitor or intervene with corporate management. Following the literature, we use 5% as a cutoff point to identify motivated bondholders; if an institutional investor holds more than 5% of a firm's outstanding bonds, we define the investor as a bond-blockholder. In addition, a monitoring institution is defined as an institution where the value of institutional blockholders' ownership of firm j accounts for more than 10% of their total portfolio value (Fich et al., 2015). In particular, *BondBlock* refers to institutional bond-blockholders holding more than 5% of a firm's outstanding bonds at quarter q . $BondBlock^{Monitor}$ (or $BondBlock^{Non-Monitor}$) is ownership held by monitoring (or non-monitoring) bond-blockholders. *EquityBlock* is ownership held by institutional equity-blockholders who hold more than 5% of a firm's outstanding stocks. $\Delta BondBlock$, $\Delta BondBlock^{Monitor}$, $\Delta BondBlock^{Non-Monitor}$, and $\Delta EquityBlock$ represent ownership changes from quarter $q-1$ to quarter q for *BondBlock*, $BondBlock^{Monitor}$, $BondBlock^{Non-Monitor}$, and *EquityBlock*, respectively.

Our main dependent variable, $ACAR(-1,+1)$, is the three-day market-adjusted cumulative

abnormal returns of acquiring firms. Following the literature, we also include the following control variables. $Ln(AcqMkCap)$ is the market value of acquirers' equities 28 days prior to the M&A announcement date. $Ret(-210, -11)$ is the acquirer's buy-and-hold abnormal returns for 210 to 11 days prior to the M&A announcement date. $Vol(-210, -11)$ is the acquirer's return volatility for 210 to 11 days prior to the M&A announcement date. $Tangibility$ is the acquirer's property, plant, and equipment divided by total assets. $Leverage$ is the ratio of long-term debt to total assets. $FreeCash$ is a firm's free cash flow multiplied by low Tobin's Q. A firm's free cash flow is calculated as the operating income before depreciation minus the interest expense, taxes, and total dividends (Lang et al., 1991). Low Tobin's Q is a dummy variable equal to one if the value of Tobin's Q is less than one and zero otherwise. $Ln(AcqAge)$ is the year count since a firm's inclusion in Compustat. ROA is net income divided by assets. $TargPub$ is a dummy variable that takes a value of one if the target firm is public and zero otherwise. $Relsize$ is the ratio of the transaction value to the acquirer's market value of equity 28 days prior to the M&A announcement date. $PureStock$ ($PureCash$) is a dummy variable that takes a value of one if the acquirer uses only stock (cash) as a payment method and zero otherwise. $Focus$ is a dummy variable that takes a value of one if both the acquirer and target are in the same industry, based on the first two digits of the SIC code, and zero otherwise. $Tender$ is a dummy variable equal to one for tender offers and zero otherwise.

Table 1 provides the descriptive statistics of 4,309 M&A transactions announced between 2001 and 2010. The mean of $BondBlock$ indicates that bond-blockholders in our sample own 5.4% of a firm's outstanding bonds. $BondBlock^{Monitor}$ and $BondBlock^{Non-Monitor}$ indicate that "monitoring" bond-blockholders, on average, hold 4.6% of a firm's outstanding bonds while non-monitoring bond-blockholders, on average, own only 0.8%. The mean of $EquityBlock$ indicates that equity-blockholders in our sample own 17.7% of a firm's outstanding shares on average. Bond-blockholders in our sample change their positions in a firm's outstanding bonds by 0.1% each quarter on average, whereas equity-blockholders change their equity positions by 0.4% each quarter. $ACAR(-1, +1)$ shows that the three-day market-adjusted cumulative abnormal returns of acquiring firms are, on average, 1.5%. Most prior studies show that the announcements of returns to the acquirer's shareholders are either close to zero or indistinguishable from zero (Netter et al., 2011).

4. Empirical Results

4.1 Multivariate Regression Analyses

We empirically test our hypotheses using a multivariate ordinary least square (OLS) regression analysis. All regressions include year and industry indicators with heteroscedasticity-corrected standard errors. Table 2 shows that the presence of bond-blockholders is positively associated with the three-day CAR for acquiring firms. Model (1) shows that the coefficient of $BondBlock_{t-1}$ is 0.015 and statistically significant at the 10% level even after we control for the presence of equity-blockholders. Equity-blockholders are considered effective monitoring institutions (Mehran, 1995; Chen et al., 2007; Cronqvist and Fahlenbrach, 2008; Kim, 2010) as they can influence management through their voting rights or informed trading of their shares (Edmans, 2014). Our finding implies that the presence of bond-blockholders provides additional, distinct monitoring effects, thus creating positive market reactions to M&A proposals.

To measure the impacts of bond-blockholders' changes in positions in the previous quarter on the three-day CAR for acquiring firms, we include $\Delta BondBlock_{t-1}$ in Model (2). We also

include changes in equity-blockholders' ownership, $\Delta EquityBlock_{t-1}$, to control for the monitoring effects of equity-blockholders' on acquirers' performance. We find that changes in bond-blockholders' positions in the previous quarter are more strongly and positively related to acquiring firms' three-day CAR than bond-blockholders' one-quarter lagged positions. The estimated coefficient of $\Delta BondBlock_{t-1}$ is approximately five times greater than that of $BondBlock_{t-1}$. This finding may suggest that monitoring institutions with significant increases in their most recent bond holdings have more incentives to encourage value-enhancing M&As and dissuade portfolio firms from value-destroying deals. In Model (3), we include additional two- and three-quarter lagged changes in bond-blockholders' positions as well as those of equity-blockholders. However, we find that only the most recent change in bond-blockholdings in the previous quarter, $\Delta BondBlock_{t-1}$, is positively associated with acquiring firms' three-day CAR. This may imply that the monitoring spillover effects from bond-blockholders to shareholders mainly come from bond-blockholders who increased their holding positions right before M&A events.

[Insert Table 2 Here]

In Table 3, we perform subsample analyses to examine whether bond-blockholders' monitoring prevents managers from taking risky and value-destroying M&As. In these analyses, we introduce three more variables: *OverconfidentCEO*, *Vega*, and *E-index*. *OverconfidentCEO* is a dummy variable that takes a value of one if a CEO holds their options until the last year, despite at least 40% of the options being in-the-money position (Malmendier and Tate, 2008). *Vega* is the change in the dollar value of a CEO's wealth based on a change in the annualized standard deviation of a firm's stock returns (Coles et al., 2006). *E-index* is an entrenchment index comprised of six governance provisions (Bebchuk et al., 2009).

In Models (1) and (2), we divide our sample into two groups using the level of CEO overconfidence, defined by the CEOs' timing of exercising vested stock options. Doukas and Petmezas (2007) and Malmendier and Tate (2008) argue that CEOs who engage in multiple M&As over a short period of time may be overconfident and tend to overestimate their ability to identify profitable deals that create synergy gains. Indeed, Malmendier and Tate (2008) find that serial acquisitions by overconfident CEOs are associated with lower announcement returns. We expect that bond-blockholders will more carefully monitor overconfident CEOs engaging in M&As to deter value-destroying deals. Consistent with this expectation, our findings in Models (1) and (2) show that bond-blockholders' position change in the previous quarter is only positively related to bidders' announcement of abnormal returns for the subsample with overconfident CEOs.

[Insert Table 3 Here]

In Models (3) and (4), we divide our sample into two groups using CEOs' *Vega*, which measures the change in the dollar value of CEO wealth by the change in the annualized standard deviation of a firm's stock returns (Coles et al., 2006). Increasing the convexity of the relationship between managers' wealth and firm performance using options might encourage managers to undertake M&As that increase a firm's equity risk (Datta et al., 2001). This is because option-based compensation creates convex payoffs for managers, and managers' payoffs from option compensation increase with the volatility of the company's stock returns. Therefore,

we hypothesize that bond-blockholders' monitoring roles would be stronger for M&As from CEOs who exhibit more risk-taking behavior, as captured by *Vega*. Our findings in Models (3) and (4) suggest that bond-blockholders' monitoring roles are indeed stronger for the subsample with a high *Vega* for CEOs.

In Models (5) and (6), we divide our sample into two groups using an E-index. Masulis et al. (2007) find that acquirers with more antitakeover provisions are associated with lower abnormal return announcements. An interpretation of this finding is that entrenched managers are less subject to market discipline and, therefore, more likely to engage in empire-building acquisitions that destroy firm value. We expect that bond-blockholders' monitoring effects will be stronger for firms with entrenched managers. Consistent with this expectation, the estimated coefficient of $\Delta BondBlock_{t-1}$ is positive and only statistically significant in Model (5), implying that bond-blockholders' monitoring effects are stronger for firms with entrenched managers.

Although a bond-blockholder owns more than 5% of a given firm's bonds, that ownership may represent a small portion of the institution's total bond portfolio. Fich et al. (2015) suggest that institutions allocate monitoring efforts to a firm based on the relative importance of the firm's stock in their portfolios. We argue that a bondholder will likely focus its monitoring efforts on its largest holdings that account for a significant weight in their portfolio. Therefore, we hypothesize that changes in "monitoring" bond-blockholders' positions are positively related to the bidders' three-day CAR. Consistent with our expectation, Model (2) in Table (4) indicates that changes in monitoring bond-blockholders' positions in the previous quarter are positively associated with the acquiring firms' announcement of abnormal returns. This suggests that the positive impact on the acquirer's abnormal returns can be attributed to bondholders who significantly increased their holdings right before M&As. These bondholders may be bond-blockholders who have a long-term perspective. While classic agency theory posits that bondholders are homogeneous, bondholders can be heterogeneous based on their investment horizons. Long-term bond-blockholders have the buy-and-hold strategy, which positively influences corporate decisions such as R&D and innovation (Hasan et al., 2013; Ye et al., 2021).

[Insert Table 4 Here]

4.2. Additional Analyses

A vast amount of M&A literature documents that cash deals result in higher announcement returns for both the acquirer and the target than equity bids (Loughran and Vijh, 1997; Bhagat et al., 2005; Savor and Lu, 2009). The common explanation for this finding is that equity-financed deals imply to the market that the acquiring firm's stock is overvalued (Mitchell and Stafford, 2000). Fu et al. (2013) find that overvalued acquirers using stock as a payment method substantially overpay for their targets, and these deals result in much lower announcement returns and long-run operating performance from acquirers. Mortal and Schill (2015) find that firms using stocks as a means of payment tend to be poorly monitored with higher asset growth rates.

Therefore, we expect the portion of cash-financed deals to be higher when bond-blockholders increase their bond holdings in acquiring firms. To test this hypothesis, we include in the regressions a dummy variable, *Cash50*, which takes a value of one if the acquirer

uses more than 50% cash as a payment method and zero otherwise. Results in Table 5 are consistent with the expectation. Large controlling shareholders, such as equity-blockholders, may discourage stock financing because of dilution of control (Faccio and Masulis, 2005). Thus, we control for the presence of equity-blockholders and the most recent change in their quarterly equity positions in Table 5. The estimated coefficient of $\Delta BondBlock$ in Column (1) shows that changes in bond-blockholdings in the previous quarter are positively related to a higher portion of cash-financed deals. The marginal effects presented in Column (2) suggest that a one standard deviation increase in $\Delta BondBlock$ is associated with deals in which acquirers are approximately 73% more likely to use more than 50% cash as means of payment. Our finding in Table 5 implies that the positive relationship between the presence of bond-blockholders (or the changes in bond-blockholdings) and the acquirers' announcement of abnormal returns may be due to a decrease in information asymmetry from more cash-financed deals in the presence of bond-blockholders.

[Insert Table 5 Here]

A cash offer generally requires debt financing because most bidders have limited cash and liquid assets (Faccio and Masulis, 2005). For example, banks are concentrated lenders and delegated monitors, thereby playing a key role in mitigating information asymmetries and agency problems (Diamond, 1991). Such monitoring role by major lenders can prevent managers from excessive risk-taking and benefit bondholders by mitigating the agency cost of debt and reducing the probability of financial distress. In this case, lenders will react to the reduced agency cost of debt and financial distress by lowering loan spreads. Thus, we further examine whether changes in bond-blockholdings influence information asymmetry and the agency cost of debt using acquirers' loan spread. We include the loan spread as our dependent variable in the regressions. Specifically, the loan spread is measured as the basis point spread over the London Interbank Offered Rate (LIBOR), inclusive of all fees based on the Dealscan database. We then take natural log of the loan spread to alleviate extreme values.

[Insert Table 6 Here]

Table 6 presents results from controlling for the determinants of loan spread commonly used in the literature. In Model (1), we examine the relationship between changes in bond-blockholdings and loan spread. We find that increases in bond-blockholdings are negatively related to the loan spread for all sample firms. In Model (2), we limit our sample firms to only firms involved in M&As deals to examine whether this negative relationship between changes in bond-blockholdings and loan spread holds for the M&A sample firms. Model (2) indicates that increases in bond-blockholdings are also negatively associated with acquirers' loan spread. It is worth noting that this negative relationship holds even after we control for year, firm, loan type, and loan purpose fixed effects. Overall, our findings in Table 6 suggest that a potential mechanism for the positive relationship between bond-blockholdings and acquirers' announcement returns is through lenders who react to the reduced agency cost of debt and financial distress by lowering acquirers' loan spreads.

5. Conclusion

Equity-blockholders have been long recognized as effective monitors in corporate finance literature. Despite the importance of debt as the primary source of funding for most firms, the benefits of debt for monitoring the efficiency of managers and their organizations have been largely overlooked in the existing literature. Thus, this study contributes by providing evidence on the additional and distinct monitoring roles of bond-blockholders beyond those of equity-blockholders in M&A processes and the impact of bond-blockholders on shareholders' wealth around M&A announcements. Using a sample of 4,309 M&A deals announced from 2001 to 2010, we shed new light on the monitoring spillover effects of bondholders to shareholders in the context of M&As.

Our findings show that the presence of bond-blockholders (or a change in bond-blockholders' position) is positively related to acquiring firms' abnormal return announcements, which supports the monitoring spillover effects from bondholders to shareholders in M&A processes. Our subsample analyses indicate that bond-blockholders' monitoring roles are stronger 1) for M&As from overconfident CEOs, 2) for M&As from CEOs who exhibit risk-taking behavior, and 3) for M&As from entrenched managers. We also find that changes in the "monitoring" bond-blockholders' positions in the previous quarter are positively associated with the acquiring firms' three-day CAR. Despite potential agency conflicts between shareholders and creditors, our findings suggest that the representation of bondholders' significant interests in firms' public debt positively influences changes in shareholder wealth around M&A announcements.

Our findings further indicate that acquirers are more likely to use cash as a means of payment when there is an increase in bond-blockholdings in the quarter before M&A announcements. This finding implies that bond-blockholders may help reduce information asymmetry and the agency cost of debt by using cash as a payment method. The evidence that increases in bond-blockholdings are negatively associated with acquirers' loan spread somewhat supports the argument that lenders will react to the reduced information asymmetry and agency cost of debt by lowering acquiring firms' loan spreads.

Although there are strong theoretical and empirical foundations for a potential conflict of interest between bondholders and shareholders, few studies have examined the notion that creditor monitoring can produce positive spillover effects on shareholders' wealth by deterring value-destroying investments. This study contributes to the existing literature by documenting the role of creditors as valuable corporate governance mechanisms that benefit shareholders in M&A processes. In future research, the value implications for shareholders from creditors can be extended beyond the context of M&As to a broad range of other firm investment and financial policies.

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Table 1
Descriptive Statistics

This table presents the descriptive statistics for the variables used in the empirical analysis of the 4,309 M&A transactions announced between 2001 and 2010.

	N	Mean	Median	Std Dev	Min.	Max.
<i>BondBlock</i>	4,309	0.054	0.000	0.176	0.000	1.000
<i>BondBlock</i> ^{Monitor}	4,309	0.046	0.000	0.155	0.000	1.000
<i>BondBlock</i> ^{Non-Monitor}	4,309	0.008	0.000	0.043	-0.100	0.819
<i>EquityBlock</i>	4,309	0.177	0.156	0.143	0.000	0.587
\triangle <i>BondBlock</i>	4,256	0.001	0.000	0.021	-0.121	0.127
\triangle <i>BondBlock</i> ^{Monitor}	4,256	0.001	0.000	0.023	-0.140	0.133
\triangle <i>BondBlock</i> ^{Non-Monitor}	4,256	0.000	0.000	0.013	-0.167	0.188
\triangle <i>EquityBlock</i>	4,256	0.004	0.000	0.058	-0.169	0.197
<i>ACAR</i> (-1, +1)	4,309	0.015	0.009	0.080	-0.223	0.298
<i>Ln</i> (<i>AcqMkCap</i>)	4,309	13.044	13.056	1.776	7.836	19.646
<i>Ret</i> (-210, -11)	4,309	0.151	0.041	0.580	-0.742	3.065
<i>Vol</i> (-210, -11)	4,309	0.035	0.029	0.019	0.009	0.110
<i>Tangibility</i>	4,309	0.218	0.129	0.229	0.002	0.894
<i>Leverage</i>	4,309	0.199	0.156	0.203	0.000	0.906
<i>FreeCash</i>	4,309	-0.008	0.000	0.069	-0.979	0.236
<i>Ln</i> (<i>AcqAge</i>)	4,309	2.557	2.485	0.730	1.099	3.892
<i>ROA</i>	4,309	0.034	0.076	0.180	-0.896	0.322
<i>TargPub</i>	4,309	0.167	0.000	0.373	0.000	1.000
<i>RelSize</i>	4,309	0.285	0.109	0.649	0.025	14.526
<i>PureStock</i>	4,309	0.087	0.000	0.282	0.000	1.000
<i>PureCash</i>	4,309	0.339	0.000	0.474	0.000	1.000
<i>Cash50</i>	4,309	0.532	1.000	0.499	0.000	1.000
<i>Focus</i>	4,309	0.641	1.000	0.480	0.000	1.000
<i>Tender</i>	4,309	0.032	0.000	0.177	0.000	1.000
<i>OverconfidentCEO</i>	1,952	0.546	1.000	0.498	0.000	1.000
<i>Vega</i>	1,816	163.962	63.944	444.709	0.000	9814.660
<i>E-index</i>	1,765	1.568	2.000	1.054	0.000	5.000
<i>Ln</i> (<i>LoanSpread</i>)	1,312	5.329	5.521	0.754	2.862	6.620

Table 2
M&A Announcement Returns

This table presents estimates from the OLS regressions, where the dependent variable is $ACAR(-1, +1)$, the three-day market-adjusted cumulative abnormal returns of acquiring firms. $BondBlock$ represents the institutional bond-blockholders who hold more than 5% of a firm's outstanding bonds at quarter q . $EquityBlock$ represents the institutional equity-blockholders who hold more than 5% of a firm's outstanding stocks. $\Delta BondBlock$ and $\Delta EquityBlock$ represent ownership changes from quarter $q-1$ to quarter q for $BondBlock$ and $EquityBlock$, respectively. The numbers in parentheses indicate the t -statistics, which were computed using standard errors adjusted for heteroskedasticity. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)
	Dependent variable: $ACAR(-1, +1)$		
$\Delta BondBlock_{t-1}$		0.074*** (3.09)	0.071** (2.46)
$\Delta EquityBlock_{t-1}$		0.031 (1.50)	0.037* (1.83)
$BondBlock_{t-1}$	0.015* (1.92)	0.014** (2.21)	0.013** (2.08)
$EquityBlock_{t-1}$	0.026** (2.02)	0.022* (1.89)	0.018** (2.28)
$\Delta BondBlock_{t-2}$			-0.017 (-0.88)
$\Delta EquityBlock_{t-2}$			-0.014 (-1.09)
$\Delta BondBlock_{t-3}$			0.010 (0.55)
$\Delta EquityBlock_{t-3}$			-0.003 (-0.25)
$Ln(AcqMkCap)$	-0.004*** (-4.92)	-0.005*** (-4.95)	-0.005*** (-5.01)
$Ret(-210, -11)$	0.003 (1.07)	0.002 (0.94)	0.003 (0.97)
$Vol(-210, -11)$	0.202* (1.82)	0.217* (1.70)	0.200 (1.53)
$Tangibility$	0.008 (0.96)	0.007 (0.85)	0.008 (0.94)
$Leverage$	0.010 (1.49)	0.010 (1.46)	0.010 (1.30)
$FreeCash$	-0.058* (-1.78)	-0.060* (-1.70)	-0.049 (-1.29)
$Ln(AcqAge)$	0.003* (1.91)	0.004** (2.32)	0.006*** (2.83)
ROA	0.006 (0.48)	0.007 (0.63)	0.007 (0.55)
$TargPub$	-0.035*** (-8.43)	-0.035*** (-8.40)	-0.036*** (-8.41)
$RelSize$	0.012*** (4.57)	0.012*** (4.58)	0.013*** (4.47)
$PureCash$	0.007*** (2.61)	0.007*** (2.77)	0.006** (2.23)
$PureStock$	-0.008 (-1.29)	-0.009 (-1.38)	-0.008 (-1.32)
$Focus$	0.001 (0.26)	0.001 (0.37)	0.001 (0.41)
$Tender$	0.028*** (4.28)	0.029*** (4.34)	0.030*** (4.50)
Constant	0.057*** (4.13)	0.056*** (3.54)	0.054*** (3.35)
Year FE	YES	YES	YES
Industry FE	YES	YES	YES
Observations	4,309	4,256	4,104
Adj. R-squared	0.063	0.063	0.062

Table 3
Subsample Analyses

This table presents results from subsample analyses. *OverconfidentCEO* is a dummy variable that takes a value of one if a CEO holds their options until the last year despite at least 40% of the options being in-the-money position (Malmendier and Tate, 2008). *Vega* is the change in the dollar value of the CEO's wealth by the change in the annualized standard deviation of a firm's stock returns (Coles et al., 2006). *E-index* is an entrenchment index comprising six governance provisions (Bebchuk, Cohen, and Ferrell, 2009). The threshold for the high and low groups is based on the median value of *OverconfidentCEO*, *Vega*, and *E-index*. All regressions include year and industry dummies with their coefficients omitted. The numbers in parentheses indicate the *t*-statistics, which were computed using standard errors adjusted for heteroskedasticity. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
	Dependent variable: <i>ACAR</i> (-1,+1)					
	<i>OverconfidentCEO</i>		<i>Vega</i>		<i>E-index</i>	
	<u>Yes</u>	<u>No</u>	<u>High</u>	<u>Low</u>	<u>High</u>	<u>Low</u>
$\Delta BondBlock_{t-1}$	0.090** (2.09)	0.042 (0.61)	0.103** (2.12)	0.036 (0.57)	0.095* (1.80)	0.043 (0.67)
$\Delta EquityBlock_{t-1}$	0.060* (1.77)	-0.071 (-1.49)	-0.036 (-0.82)	-0.021 (-0.48)	-0.070* (-1.80)	-0.031 (-0.75)
<i>BondBlock</i> _{<i>t-1</i>}	-0.022 (-1.23)	-0.004 (-0.21)	0.005 (0.30)	-0.024 (-1.07)	-0.026 (-1.24)	0.015 (0.69)
<i>EquityBlock</i> _{<i>t-1</i>}	0.018** (2.32)	-0.000 (-0.02)	0.017* (1.93)	-0.004 (-0.38)	-0.001 (-0.14)	-0.013 (-1.48)
Controls & Intercept	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES	YES	YES
Observations	946	949	1,062	882	926	839
Adj. R-squared	0.081	0.056	0.070	0.048	0.042	0.080

Table 4
Monitoring Bond-Blockholders

This table presents estimates from the OLS regressions, where the dependent variable is $ACAR(-1, +1)$, the three-day market-adjusted cumulative abnormal returns of acquiring firms. $BondBlock^{Monitor}$ (or $BondBlock^{Non-Monitor}$) is ownership held by monitoring (or non-monitoring) bond-blockholders. A monitoring institution is defined by the value of institutional blockholders' ownership for firm j accounting for more than 10% of their total portfolio value (Fich et al., 2015). $EquityBlock$ is institutional equity-blockholders who hold more than 5% of a firm's outstanding stocks. $\Delta BondBlock^{Monitor}$ and $\Delta BondBlock^{Non-Monitor}$ represent ownership changes from quarter $q-1$ to quarter q for $BondBlock^{Monitor}$ and $BondBlock^{Non-Monitor}$, respectively. All regressions include year and industry dummies with their coefficients omitted. The numbers in parentheses indicate the t -statistics, which were computed using standard errors adjusted for heteroskedasticity. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)
	$ACAR(-1, +1)$	
$\Delta BondBlock^{Monitor}$		0.086** (2.05)
$\Delta BondBlock^{Non-Monitor}$		0.032 (0.72)
$\Delta EquityBlock$		-0.031 (-1.50)
$BondBlock^{Monitor}$	-0.005 (-0.82)	-0.007 (-1.10)
$BondBlock^{Non-Monitor}$	-0.011 (-0.45)	-0.008 (-0.34)
$EquityBlock$	0.024*** (2.75)	-0.022** (2.45)
Controls & Intercept	YES	YES
Year FE	YES	YES
Industry FE	YES	YES
Observations	4,309	4,256
Adj. R-squared	0.062	0.063

Table 5
The Method of Payment

This table presents estimates from the logistic regression, where the dependent variable is *Cash50*, a dummy variable that takes a value of one if the acquirer uses more than 50% cash as a payment method and zero otherwise. The coefficients and t-statistics from logistic regression are reported in column (1). The marginal effect of corresponding coefficients is reported in column (2).

	(1)	(2)
	<i>Prob(Cash50=1)</i>	<u>Marginal</u> effect
$\Delta BondBlock$	2.946** (2.00)	0.733**
$\Delta EquityBlock$	0.412 (0.71)	0.103
<i>BondBlock</i>	-0.238 (-1.17)	-0.059
<i>EquityBlock</i>	0.149 (0.59)	0.037
<i>Ln(AcqMkCap)</i>	0.019 (0.74)	0.005
<i>Ret(-210, -11)</i>	-0.017 (-0.27)	-0.004
<i>Vol(-210, -11)</i>	-17.508*** (-5.90)	-4.358***
<i>Tangibility</i>	-0.362 (-1.56)	-0.090
<i>Leverage</i>	-0.294 (-1.50)	-0.073
<i>FreeCash</i>	-0.943 (-1.30)	-0.235
<i>Ln(AcqAge)</i>	-0.636*** (-6.30)	-0.157***
<i>ROA</i>	-0.201*** (-2.87)	-0.050***
<i>TargPub</i>	0.048 (0.90)	0.012
<i>RelSize</i>	1.717*** (5.85)	0.427***
<i>Focus</i>	0.037 (0.51)	0.009
<i>Tender</i>	1.793*** (6.99)	0.348***
Constant	0.906 (0.76)	
Year FE		YES
Industry FE		YES
Observations		4,256
Pseudo R-squared		0.092

Table 6
Bank Loan Spread

This table presents estimates from OLS regressions where the dependent variable is $\text{Ln}(\text{LoanSpread})$, which is the additional interest rate charged for the acquirer over LIBOR and log-transformed by adding one. The numbers in parentheses indicate the t -statistics, which were computed using standard errors clustered at the firm level. ***, **, and * denote the statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)
	$\text{Ln}(\text{LoanSpread})$	
$\Delta \text{BondBlock}$	-0.134** (-2.54)	-0.362* (-1.65)
$\Delta \text{EquityBlock}$	0.024 (0.20)	-1.028 (-1.60)
BondBlock	-0.193 (-1.24)	0.320 (0.49)
EquityBlock	0.079 (0.93)	0.555 (1.50)
$\text{Ln}(\text{Assets})$	-0.059** (-2.54)	-0.082 (-0.79)
MB	-0.000 (-0.10)	0.007 (0.32)
ROA	-0.851*** (-4.78)	0.224 (0.28)
Leverage	0.420*** (4.77)	0.385 (1.18)
Tangibility	-0.120 (-0.88)	0.015 (0.04)
$\text{Modified } Z$	-0.050*** (-2.92)	-0.097 (-1.34)
InvestGrade	-0.697*** (-4.50)	-1.145*** (-14.47)
PriorRelation	-0.013 (-0.90)	-0.027 (-0.43)
TermSpread	0.088*** (4.13)	0.160** (2.40)
CreditSpread	0.160*** (4.65)	0.044 (0.19)
$\text{Ln}(\text{DealSize})$	-0.056*** (-5.78)	-0.072** (-2.35)
$\text{Ln}(\text{Maturity})$	-0.008 (-0.53)	0.072* (1.71)
Constant	6.167*** (28.17)	6.467*** (8.77)
Year FE	YES	YES
Firm FE	YES	YES
Loan Type & Purpose FE	YES	YES
Firm Clustering	YES	YES
Observations	10,769	1,312
Adj. R-squared	0.819	0.869