

# Wealth Transfers among and between Bond Issues in Mergers and Acquisitions: Evidence from Bond Tender Offers

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**Abstract:** We explore the wealth effects of mergers and acquisitions to bondholders at the bond issue level using a sample of mergers and acquisitions that involve a tender offer for one or more of the target or acquiring firms' bond issues. Over the period 2000-2008 such tender offers occur in 32% of the mergers and acquisitions involving targets and acquirers with outstanding rated bonds. We find these tender offers influence not only the associated bond's wealth, but also the wealth of shareholders and sibling and other bond issues that remain outstanding.

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Mergers and acquisitions (M&A) are one of the most value relevant actions a firm can undertake. Numerous studies document that the wealth effect to a particular class of securities depends on the overall synergistic gain, the relative bargaining power of the target and acquirer, and on wealth transfers between shareholders and debtholders. Bradley, Desai and Kim (1988) report that merger announcements result in a 7.43% increase in the combined value of target and acquirer shares. However these gains are far from evenly split. Target shareholder wealth increases by 31.77% while acquirer shareholders gain little or even lose value depending on the time period examined. Prior studies document mixed evidence on the wealth effects for target and acquirer bondholders. Kim and McConnell (1997), Asquith and Kim (1982), Dennis and McConnell (1986) and Maquieira, Megginson, and Nail (1998) find insignificant wealth effects for bondholders. In contrast, Eger (1983) and Billett, King, and Mauer (2004) report significant target bondholder gains, consistent with co-insurance effects.

Much of the mixed evidence on the wealth effects of bondholders is due to the changing landscape for corporate bonds. First, in the 1980s corporate bonds often suffered losses in leveraged buyouts and other forms of takeovers that were able to expropriate bondholder wealth (Warga and Welch (1991)). In response, corporate bondholders began demanding event risk covenants designed to protect bondholder wealth in these cases. Looking at target bondholder wealth effects in the 1990s, when such protections became relatively common, Billett, King, and Mauer (2004) document significantly positive wealth effects for target bondholders. Second, the increased popularity of event risk covenants such as change-in-control (CIC) covenants introduces new dimensions to the heterogeneity among bonds, even within the same firm.<sup>1</sup> For example, in assessing the influence of CIC covenants on Motorola's takeover risk and the potential wealth effects to bondholders, the rating agency Fitch discusses the differences across Motorola's issues:

In terms of change of control provisions, while the indentures related to the \$400 million 7.5% debentures and \$400 million 6.5% debentures enable bondholders to

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<sup>1</sup> See Appendix for descriptions of typical change-in-control covenants.

put the bonds to company upon a 50% change in ownership, the bond indentures related to the \$1.2 billion 4.6% senior notes and approximately \$530 million 7.625% senior notes lack any change of control provision (See “Fitch: Limited Debt Covenant Protection for Motorola Bondholders,” *Business Wire*, January 18, 2007)

This suggests that studies of the wealth impact on bondholders as a class of securities in mergers and acquisition may be ignoring the heterogeneous bond properties that allow some bonds to benefit from the co-insurance effects while leaving others with wealth expropriation. In fact, it is possible that some bond issues benefit at the expense of others. Reading S3 and S4 proxy filings for bond issues reveals the following: Change in control, from the standpoint of a CIC covenant, varies from bond issue to bond issue; it is not always in the bondholder’s interest to execute the CIC covenant; conflicts of interest between indentures of different bond issues exist (see Appendix for detailed examples). These facts suggest the wealth effects among bondholders in mergers and acquisitions may vary quite a bit across bond issues of the same firm, and that the wealth effects of one issue can be influenced by the treatment and wealth effects of other bond issues.

We examine bondholder and stockholder wealth effects from mergers and acquisitions with two innovations. First, we focus on takeovers where at least one bond issue of the merging firms receives a tender offer. While virtually nonexistent in the 1980s, bond tender offers have become commonplace in recent times and have a pronounced effect on the wealth redistribution in M&A activity. Second, while prior studies examine bondholder wealth effects as a class, we focus on individual bond issues. By looking at multiple bond issues from the same firm we see not only how individual bond characteristics influence its wealth effects, but also how one bond issue influences other bond issues.<sup>2</sup> We find that bond issues in the same firm can have dramatically different wealth effects, and that the wealth effect of one bond issue depends on the characteristics and treatment of its sibling bond issues and the bonds issued by its merging counterpart.

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<sup>2</sup> Our investigation at the individual bond level is similar in spirits to Rauh and Sufi (2010). They demonstrate that firms use substantial capital structure variation to mitigate incentive conflicts by examining multiple debt types.

For example, the relative maturity of sibling bond issues has a pronounced influence on wealth effects. A target bond issue receiving a tender offer experiences an excess return of 6.55% return on average. However, this average increases to 12.87% in cases where the targeted issue has a longer time to maturity than a bond issue(s) not receiving tender offers. Absent this sort of “priority jump”, the bond issue receiving the tender offer experiences an average excess return of 2.70%. For the sibling bonds not receiving the tender offer the effects go in the opposite direction. Sibling bonds experience an average wealth effect of 4.76% when no such priority jump exists and 1.15% (insignificantly different from zero) when such a priority jump occurs. These and other findings suggest that, in addition to shareholder-debtholder wealth transfers, mergers and acquisitions can lead to transfers between individual bond issues.

Our analysis focuses on M&A transactions that have an associated bond tender offer. These M&A related bond tender offers have become quite common. During 2000-2008 there were 395 deals reported by SDC between US public acquirers and public targets where both entities have rated public bonds outstanding. We find that 32% of these deals include a bond tender offer. In contrast, only 4% of such deals had an associated bond tender offer from 1985 to 1990. Why the dramatic rise in bond tender offer activity? One possible reason is that bond tender offers can be an effective mechanism for shareholders to influence the wealth effects and wealth transfers between shareholders and bondholders.<sup>3</sup>

Numerous studies document the influence these wealth transfers have on both the spilt of takeover gains as well as on whether a deal occurs in the first place. Billett, King, and Mauer (2004) find target bonds rated below investment grade earn a significant mean excess return of 4.30% over the two-month period around mergers and acquisitions announcements. Billett (1996) finds that the probability of being acquired declines in the co-insurance potential of the firm’s debt, lending support to the theoretical prediction by Israel (1991). Presumably the bondholder gains in these cases stem from co-insurance resulting from combining the target and

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<sup>3</sup> This rise in bond tender offers is consistent with, and partly driven by, the rise in CIC covenants. However, as shown below, many of the bond tender offers do not involve bonds with CIC covenants.

acquirer firms.<sup>4</sup> Given this bondholder gain likely came at the expense of other claimants, a natural question to ask is whether shareholders take steps to limit co-insurance. In the absence of bondholders' bargaining power, shareholders may neutralize the co-insurance effect by retiring the existing bonds at their pre-merger price (Higgins and Schall, 1975). However, the lack of call features and the increased use of CIC covenants make such transactions less likely (Crabbe, 1991 and Cook and Easterwood, 1994). Kim and McConnell (1977) argue that a simple way to neutralize the co-insurance effect is to increase the post-merger use of financial leverage.<sup>5</sup> Lending support to this argument, Gosh and Jain (2000) find merged firms increase the use of financial leverage as an outcome of increased debt capacity.

The existing literature, however, overlooks one direct way to renegotiate with bondholders in connection with the wealth transfer between shareholders and bondholders of the merging firms, bond tender offers.<sup>6</sup> A successful tender offer may cap bondholder gains at the tender price, eliminate restrictive bond covenants, and increase the chance shareholders will find the deal appealing. Moreover, these bond tender offers are for specific bond issues and often leave other issues outstanding. This means that bond tender offers may influence not only shareholder wealth, but also the wealth of bond issues that remain outstanding.

To see how such tender offers influence wealth effects we hand-collect a sample of 251 merger related bond tender offers announced between 1985 and 2008. Looking at this unique sample we can determine why individual bond issues are tendered for while others are not. Moreover, given the differential treatment of the bonds (i.e. some receive tender offers while

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<sup>4</sup> Bondholder wealth expropriation can have the opposite effect. Warga and Welch (1993) find that bondholders experience a 7% loss around the announcement of an LBO document. Billett, Lie, and Jiang (2010) find that LBOs probability increase in leverage and interpret this as consistent with greater potential for expropriation.

<sup>5</sup> For an extensive discussion on co-insurance effect, see Lewellen (1971), Higgins and Schall (1975), Kim and McConnell (1977), Cook and Martin (1991), Shastri (1990), and Israel (1991).

<sup>6</sup> Prior studies examine bond tender offers in general but not specifically as to their use in M&As. Most extant studies of bond tender offers focus on tax effects or the coercive nature of the transaction (Wingler and Jud, 1990, Kahan and Tuckman, 1993, and Chatterjee et al., 1995). Mann and Powers (2007) study the determinants of tender premium and the percentage tendered in a comprehensive sample of bond tender offers. They highlight the ubiquity of bond tender offers by showing that \$153 billion of bonds are repurchased via 943 bond tender offers from 1997 to 2003. While the authors point out that bond tender offers are often part of larger capital structure decisions and suggest the importance of understanding the transaction accordingly, they acknowledge the difficulty in implementing such empirical tests.

others do not) we can better see how the wealth effects of one issue are influenced by their sibling bond issues. The value of one bond may depend on the treatment and characteristics of the other bond issues. For example, a bond with five years to maturity may suffer losses if the firm uses resources to retire another bond issue that has 10 years remaining. In particular, we explore how bond issues from the same firm can significantly differ and may be indicative of inter-bond wealth transfers.

We begin our analysis by looking at the determinants of bond tender offers at the issue level. We find the probability of a tender offer for a target bond issue increases in the issue's maturity and coupon rate and is greater for junk bonds and bonds with CIC covenants. For acquiring bond issues the probability decreases in maturity, increases in the coupon rate, and is greater when the issue has a CIC covenant. We also see that a bond tender offer is more likely for both targets and acquirers when the co-insurance potential of their debt is high.

For those bonds receiving tender offers we find significantly positive excess returns to target bonds and insignificant excess returns to acquirer bonds. Moreover we find the target's sibling bonds not receiving a tender offer also experience positive excess returns, albeit smaller. When an acquirer bond issue receives a tender offer we see its sibling acquirer bonds react differently depending on the timing of bond tender offer announcement relative to the acquisition announcement and the target firm's bonds experience negative excess returns.

We explore how bond issue characteristics influence bond returns and find that target bond issues that receive a tender offer experience significantly lower excess returns when the bond issue has a CIC covenant or is rated investment grade. We also find when a target bond with longer time to maturity receives a tender offer, its sibling bonds experience significantly lower excess returns. For acquirer bonds we find similar results. Acquirer issues receiving a tender offer experience insignificant excess returns when the issue has a CIC covenant and significantly negative excess returns when the issue lacks a CIC covenant. When a target bond is tendered, acquirer bonds with CIC covenants or below investment grade rating experience significantly negative excess returns.

Overall our results suggest that bond tender offers play an important role in facilitating mergers and acquisitions. We document that not only are these bond tender offers frequent, they also play an important role in determining how individual bond issues fare in the takeover process. Our results also suggest that previously documented bondholder wealth effects in mergers and acquisitions might be largely driven by associated bond tender offers in an attempt to redistribute the otherwise wealth effects between shareholders and bondholders, and between individual bond issues. Our findings suggest more research looking at the detail of a firm's capital structure may be important in understanding the wealth effects to the various participants.

The remainder of the paper is as follows. We describe the data and sample collection procedures and present descriptive statistics in Section I. Section II presents results from analysis examining the determinants of M&A related bond tender offers. Section III explores the wealth effects, and section IV concludes.

## **I. Data**

### *A. Sample Construction*

We collect the sample of merger related bond tender offer announcements from news stories by searching on Factiva and Lexis Nexis Academic. We then use the Security Data Corporation's (SDC) Mergers and Acquisitions Database to identify the relevant mergers and acquisitions as follows. First, both the firm announcing and the firm receiving bond tender offers, which can be the same firm in a self bond tender offer, have to be either the acquiring firm or the target firm. Second, the bond tender offer announcement must take place within the period beginning 180 days prior to the merger announcement date and ending upon the merger completion (withdrawn) date. Third, if multiple mergers and acquisitions are identified as matches for one bond tender offer based on the aforementioned steps, we use the information from press releases to decide the appropriate match. Finally, we require the matched bond tender offer-acquisition pairs to meet the following criteria:

- 1) The bond tender offer is announced during 1985-2008.
- 2) The deal is categorized by SDC as “Merger”, “Acq. of Assets”, or “Acq. Maj. Int.”.
- 3) The acquisition completion (withdrawn) date has to be within 1000 days after the acquisition announcement date.

These criteria result in a sample of 251 bond tender offers-acquisition pairs announced from 1985 to 2008, which consists of 214 acquiring firms and 247 target firms.<sup>7</sup>

For this sample, we hand collect monthly bond price data from Moody’s/Mergent Bond Record, which also provides information on bonds’ rating, coupon rate, maturity date, issue date, yield to maturity, and the amount of par value outstanding. We also use Standard & Poor’s Bond Guide as complementary reference when necessary. In addition, we use Fixed Investment Securities Database (FISD) to collect bond covenant data. We further exclude medium-term notes and convertible bonds, which results in a sample of 275 subject bonds, 720 sibling bonds, and 562 other non-subject bonds with some information on the bond characteristics. These bonds correspond to 171 bond tender offers.

To compute the excess returns, we define the event window as the time period from the beginning of the bond tender offer/or acquisition announcement month, whichever happens first, to the end of the bond tender offer/or acquisition announcement month, whichever happens later. The event period excess bond return is computed as the difference between a bond’s total return over the event window and the total return on an index of bonds with similar rating and remaining maturity over the same time period. These bond indices are constructed by Lehman Brothers. When necessary, we use TRACE data as complementary reference to compute bond indices returns. There are 618 bonds with non-missing event period returns. The announcement period excess stock returns are calculated by subtracting the cumulative market return from the cumulative stock return over the event window. The market returns are measured by the CRSP value-weighted index returns.

For the firm level analysis of the bond characteristics and returns, we combine multiple bond issues of the same firm into a single observation by following Billett, King, and Mauer

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<sup>7</sup> There are four M&A deals associated with two separate bond tender offers for acquire bonds and target bonds respectively.



(2004). In particular, the firm level bond characteristics and excess returns equal to the weighted average of individual bond characteristics and excess returns, where the weights correspond to the amount outstanding of each bond one month prior to the event window.

### *B. Descriptive Statistics*

Table 1 displays the time distribution of the bond tender offer sample. There are 8 merger related bond tender offers announced from 1985 to 1990, 20 from 1991 to 1995, 112 from 1996 to 2000, 70 from 2001 to 2005, and 41 from 2006 to 2008. While the concentration in the number of merger related bond tender offers announced in the late 1990s coincides with the latest merger wave in U.S., both the relative frequency and the dollar value of the announced bond tender offers show increasing economic significance over time. For example, during 2000-2008 there were 395 deals reported by SDC between U.S. public acquirers and public targets where both entities have positive long-term debt and non-missing S&P long-term debt ratings. Combined with our in sample mergers and acquisitions, we find that 32% of these deals include a bond tender offer. Finally, 119 tender offers are made for acquirer bonds and 132 for target bonds, and the majority of the bond tender offers are announced after the merger announcements.

Table 2 reports the summary statistics of the issue level bond characteristics. Panel A and Panel B report the descriptive statistics of target and acquirer bond characteristics. For each firm, we further divide the bonds into subgroups by whether the issue receives tender offer. Subject bonds are the ones receiving tender offers. Sibling bonds are those issued by the same issuer of the subject bonds but do not receive tender offer. Mann and Powers (2007) document that a significant fraction of the bond tender offers in their sample are intended to minimize the cost of debt and maintain financial flexibility. Consistent with their findings, we find that the subject bonds carry higher coupon rate and the yield to maturity and have worse bond ratings than do the sibling bonds. We also find that the subject bonds are more likely to have the CIC covenant, which is consistent with merging firms' intent to moderate the co-insurance effects. Note that

23% of the target sibling bonds and 32% of the acquirer sibling bonds have CIC covenant but do not receive tender offers suggesting the merger related bond tender offers examined in our analysis are not mechanically triggered by the CIC covenants. Rather they are strategic decisions by the merging firms to optimize the wealth redistribution through renegotiating the contractual relationship between shareholders and bondholders.<sup>8</sup> Finally, the comparison of target and acquirer bonds within each subgroup shows that target subject bonds offer higher coupon rate and yield to maturity, have worse bond ratings, and are more likely to have the CIC covenant. While the merging firms' motivation to reduce debt financing costs and to reduce the co-insurance effects are not mutually exclusive, a better understanding of the determinants of the merger related bond tender offers requires multivariate analysis controlling for other factors. We do so in the next section.

In addition to the bond issue level characteristics, we also report the firm level summary statistics. Panel A and Panel B of Table 3 report the target firm and acquiring firm characteristics grouped by the bond tender offer forms, respectively. The median market capitalization of the target firm in our sample is over 800 million dollars suggesting that the M&A deals included in our sample are economically significant. Panel A shows that target firms are more likely to receive bond tender offers when they have less free cash flow, higher book leverage ratio, and worse bond ratings. Similarly, Panel B shows that the acquirer firms are more likely to tender offer for their own bonds when they have weaker financial health. Panel C and Panel D of Table 3 report the descriptive statistics of the firm level bond characteristics. Similar to the issue level statistics, bonds receiving tender offers carry higher coupon rate and yield to maturity, have worse bond ratings, and are more likely to have CIC covenant.

## **II. Determinants of merger related bond tender offers**

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<sup>8</sup> We focus our analysis on CIC covenants given the preponderance of attention given to them in financial documents describing their role in mergers and acquisitions. See appendix A for more detail on the influence of CIC covenants, including how CIC covenants vary in terms of when they are triggered, and instances where bondholder may not want to exercise their right to sell the bonds back following a triggering event.

The decision to make a tender offer for bonds, like many other tradeoff generating capital structure decisions, involves balancing the costs and benefits of renegotiating the contractual relationship between shareholders and bondholders. The costs are relatively straight forward and consist primarily of the premium over current market value necessary to entice the bondholders to tender. Turning to the benefits, we explore a number of ways shareholder may benefit from retiring the bond issue.

First, a bond tender offer may allow a firm to eliminate bond issues that hamper the firm's financial flexibility. Covenant restrictions or excess leverage may prohibit the firm from taking otherwise desirable actions. For example, if the firm's interest coverage ratio or free cash flow position is of concern, the firm has an incentive to retire high coupon rate bonds to reduce interest expense. Mann and Powers (2007) examine the relationship between bond tender premium and the bond characteristics in a broad sample of bond tender offers irrespective of mergers and acquisitions. They conclude that bond tender offers are extensively used by firms who actively manage liabilities.

Second, bond tender offers may alter the distribution of wealth effects among shareholders and bondholders that would occur as a result of a takeover. Numerous studies show that takeovers result in wealth transfers between the debt and equity claims of both the target and acquiring firms (see Shastri (1990), Israel (1991), Billett (1996), and Billett, King and Mauer (2004)). Bonds may gain if co-insurance occurs. Debtholders gain from co-insurance when the merger reduces credit risk, as the two firms with less-than-perfectly correlated earning streams combine. In a non-synergistic merger, the co-insurance gains by debt holders amount to a net wealth transfer from target and acquirer shareholders. In a synergistic merger, the increased value resulting from synergies further benefits debtholders. The larger the portion of synergy gains accruing to debtholders, the smaller the portion left for the shareholders (Kim and McConnell, 1977). As a result, the co-insurance effect reduces a firm's likelihood of being acquired (Israel (1991) and Billett (1996)). However, if the size of the co-insurance effect poisons the deal, debtholders lose the expected co-insurance gains. Therefore, debtholders have

an incentive to renegotiate their claims with shareholders in this case, which, in turn, provides incentive for shareholders to pursue the takeover. Bond tender offers then serve as a mechanism for shareholders and bondholders to renegotiate. In this case we expect to see the probability of a bond tender offer increases with bond characteristics that associate with greater co-insurance potential. Among bond issues with varying degrees of co-insurance potential, we would expect relative bond characteristics to matter. To the extent that bond tender offers may alter the otherwise wealth distribution between shareholders and bondholders, merging firms may selectively tender offer for bonds issued by the same firm. For example, related to the merger between IMC Global Inc. and Freeport-McMoRan Inc., Freeport-McMoRan tender offered its 8  $\frac{3}{4}$ % junk rated Senior Subordinated Notes at the request of IMC Global while leaving its 7.00% investment grade notes outstanding.

We explore the determinants of bond tender offers at the bond issue level, which allows us to examine which bond characteristics influence the choice to make a tender offer between multiple issues.

We present the bond tender offer determinants analysis in Table 4. The left hand side variable in the logit analysis equals one in the case a bond issue receives a tender offer and zero otherwise. We conjecture that the probability of a bond issue receiving a tender increases in the degree to which the bond may benefit from the merger (co-insurance), to remove restrictive covenants, and/or to optimize capital structure over the combined entity. To see whether such effects bear out in the data we include a number of control variables that may capture these effects. Shastri (1991) demonstrates the potential gains to a bond from a merger increase in the bonds risk and maturity. To capture co-insurance potential we include *Junk*, a dummy variable for whether the bond has a below investment grade ratings as well as its maturity. While numerous covenants may preclude a merger, CIC covenants in particular have been shown to decrease the probability of an acquisition (see Billett, Jiang and Lie (2010)). Thus, we include a dummy variable *CIC* which equals one when the bond issue has a CIC covenant and equals zero otherwise. Last we include the bonds coupon rate which may affect its co-insurance potential

given that, *ceteris paribus*, higher coupon rates associate with higher risk. Firms may wish to retire high coupon rate bonds if they have concerns about maintaining certain debt covenants, like interest coverage requirements.

In specifications (1) through (3) the sample consists of all bond issues of the target and acquirer. This allows the bonds with the tender offer to be compared to both its own sibling bond issues as well as with the bonds of the other merging firm. In specifications (4) through (6) the sample is reduced to include only those bonds of the firm receiving the tender offer, limiting the comparison to be between the tender offer bond issue and its sibling issues. The reason we examine both samples (all bonds of target and acquirer versus only the bonds from the firm with the bond issue receiving the tender offer) is because it is not clear whether the firm is adjusting capital structure at the firm level or at the post-merger combined level. It turns out the analysis is similar for both samples.

In specification (1) of Table 4 we see the probability a bond issue receives a tender offer is increasing in the coupon rate, is higher for junk bonds, and is more likely for bonds with change in control covenants. In specification (2) we reduce the sample to target bonds, whether or not receiving tender offers. We see similar results as in specification (1) with the exception that the coefficient on the maturity variable is now significantly positive, consistent with the co-insurance effect. Specification (3) repeats the analysis of column (2) but by contrasting acquirer bond issues. Like specifications (1) and (2), acquirer bonds are more likely to receive a tender offer when the coupon rate is high and when it has a CIC covenant. However, unlike target bonds, acquirer bond tender offers are negatively related to the bond's maturity and are unrelated to its junk status. In specifications (4)-(6), where we limit the comparison to the subject and sibling bonds, we find similar results. Overall the findings support the notion that firms target specific bond issues in mergers and acquisitions, and that they remove bond issues with covenants that may impede the takeover and bond issues that likely will experience large gains from the takeover. To sum up, we find evidence consistent with bond tender offers being used to

remove restrictive covenants, to improve financial flexibility, and to mitigate bondholder gains from potential co-insurance effects.

### **III. Bond and stock wealth effects**

We examine the wealth effects to bonds and stocks in this section. We begin with an analysis of the bond excess returns around the bond tender offer announcement and the merger announcement. We then explore the wealth effects among and between bond issues in univariate and multivariate settings. Finally we examine firm level excess returns to both acquirers and target stocks and bonds.

#### *A. Bond Excess Returns*

We begin by examining the wealth effects to bond issues categorized by whether the bond issue (1) receives a tender offer (Subject bonds), (2) did not receive a tender offer but an issue by the same firm received a tender offer (Sibling bonds), and (3) did not receive a tender offer but a bond issue of the other firm involved in the merger (Other bonds) received a tender offer. An interesting question is whether bond issues of the same firm react differently to the announcements. Panel A of Table 6 reports bond excess returns of bonds over the entire event window defined as the time period from the beginning of the bond tender offer/or acquisition announcement month, whichever happens first, to the end of the bond tender offer/or acquisition announcement month, whichever happens later.<sup>9</sup>

Panel A of Table 5 reports the excess returns to all bonds. For the 170 subject bonds receiving a tender offer, we see positive excess returns of 3.19%, significant at the one percent level. Moreover this is concentrated in the tender offers occurring on or after the merger announcement. Sibling bonds also experience positive excess returns that average 1.41% while *Other* bonds experience -2.02% on average. Consistent with Higgins and Schall (1975), we find

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<sup>9</sup> Note, when we examine the wealth effects of a subject, sibling, or other bond we do not require that the data be sufficient to calculate the returns for all the bonds. For example, we may have excess returns available for subject bonds and not for its siblings (and vice versa). Thus, the sample sizes in Table 6 and 7 will vary from case to case.

some evidence that merging firms take strategic attempt to neutralize the co-insurance effect prior to the takeover announcement. In such cases, the bonds of merging firms experience a significant mean excess return of -2.22% over the event window.

We restrict subject bonds to just target bonds (and thus sibling bonds are target bond issues and other bonds are target issues when the acquire bond issues receive tender offer) in Panel B, and we restrict subject bonds to just acquirer bonds (and thus sibling bonds are acquirer bond issues and other bonds are acquirer issues when the target bond issues receive tender offer) in Panel C. We see the positive effects among subject bonds and sibling bond, shown in panel A, are driven by target bond issues while the negative effects are concentrated in the acquirer issues. Specifically, target subject (sibling) bonds experience an average excess return of 6.55% (2.99%). When the other bonds are target bonds (i.e. when acquirer bonds receives tender offer as reported in Panel B) we see negative wealth effects averaging -4.53%. When the bond tender offer is announced no earlier than the takeover announcement, we find target bonds experience a positive mean excess return of 4.61%, comparable to the wealth effects documented in Billett, King and Mauer (2004). In Panel C we see acquirer subject and sibling bonds experience insignificant wealth effects, other bonds (in this case target bonds receives tender offers) earn insignificant average excess returns (although the median is negative and significant). When we break down the acquirer bonds sample by the timing of the bond tender offer announcement, however, we find acquirer bonds experience negative wealth effect when the bond tender offer is announced prior to the takeover announcement. Overall these results suggest that target subject bonds gain the most, followed by target sibling bonds, and target bonds suffer losses when an acquirer bond issue receives a tender offer. In Panels D, E, and F we report the differences between the wealth effects of sibling, subject, and other bonds. We see target subject bonds earn 3.56% larger excess returns than sibling bonds, significant at the 10% level. We also find that target bonds issues, on average, fare better when a target issue receive tender offer than they do when their acquirer counterparts receive tender offers. Overall, these results support the notion that target subject bonds directly gain from renegotiation via the tender offer, and their sibling

bonds benefit from co-insurance. But target bonds suffer significant losses when the acquirer bonds receive a tender offer, especially when such tender offers are prior to the takeover announcement. Acquirer bonds on the other hand tend to benefit little and actually suffer losses when target bonds receive tender offers.

We partition the wealth effects by subgroups to further see how the wealth effects of bonds depend on the characteristics of the bond issues and on the characteristics of the other bond issues of the merging firms. Table 6 reports the wealth effects to subject, sibling, and other bonds based on whether the subject bond has a longer maturity than its sibling bonds and other bonds not receiving tender offers. This is to see whether the wealth effects between sibling bond issues depend on whether the subject bond effectively “priority jumps”. In Panel A of Table 7 we see the subject bonds where a priority jump occurs results in an 8.43% average excess return for the subject bonds while the sibling bonds and other bonds experience insignificant excess returns. However, when the subject bond does not priority jump the average excess returns fall to 1.00%, insignificantly different from zero, and the sibling bond issues experience a statistically significant 2.80% average excess return. Turning to Panels B and C we see this is driven by the target bonds, in which case the differential wealth effects are even more pronounced. These results suggest that there may be wealth transfers occurring between bond issues, and that such transfers are pronounced when a relatively long maturity bond is tendered and the relatively shorter bond issue remains outstanding. Interestingly the implied transfer does not lead the target sibling bonds to suffer a loss, but rather is consistent with the preponderance of any co-insurance benefits accruing to the priority jumping bond issue.

We also explore the wealth effects stratified by whether the bond issue contains a CIC covenant, and by whether it is below investment grade (two determinants found significant in the logit analysis). We find little evidence that the subject bond’s wealth effect depends on the existence of a CIC covenant. In contrast, we find the wealth effects seem to be entirely driven by the investment grade status. We see target subject bonds earn insignificant returns when they are investment grade and 6.88%, significant at the 1% level, when they are junk bonds. While the



investment grade status matters for subject bonds, the sibling bonds show no such dependence, where target sibling bonds earn average excess returns of 3.63% and 2.07% in the case they are junk and investment grade rated, respectively. Billett, King, and Mauer (2004) show target junk bonds gain more in mergers. The results of Table 6 extend those findings to show that the dependence on rating seems to be driven by those bonds receiving tender offers.<sup>10</sup> Lending support to the wealth expropriation effects, we find investment grade target bonds experience a significant mean excess return of -3.35% when their acquirer counterparts receive tender offers.<sup>11</sup> In the case of acquiring bonds, we see little variation in the wealth effects based on the priority jump, CIC covenant existence, or junk rating groupings. One interesting finding is that the acquirer bonds experience average negative returns in the cases when they do not receive tender offer but has a CIC covenant or a junk rating.

To further examine bond issue wealth effects we conduct multivariate regression analysis and report the results in Table 7. We regress the bond's excess return on its characteristics and on whether the subject bond effectively priority jumps. In view of the potential correlation in the estimation residuals among the bonds issued by the same firm, we use clustered standard errors in reporting the t-statistics of the estimated regression coefficients. In the case of target subject bonds we see the excess returns are increasing in the bonds coupon rate, time to maturity, and junk status. All of these characteristics are consistent with these bonds having greater co-insurance potential, and thus, perhaps, a greater need to renegotiate with these bondholders. Interestingly, we find a negative coefficient on the CIC dummy suggesting that target bonds with

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<sup>10</sup> Billett, King, and Mauer (2004) take a weighted average of the bond issues to get a single firm-level bondholder reaction.

<sup>11</sup> According to the wealth expropriation hypothesis, we would expect merging firms to selectively tender offer for bonds with greater co-insurance potential while leaving bonds susceptible to wealth expropriation outstanding. The bidder may structure the offer to reduce the value of target debt by financing the merger with debt. For example, U.S. Steel's acquisition of Marathon oil was financed with \$2.88 billion of new debt. Standard and Poor's responded by lowering the credit rating of only Marathon Oil's debt using the following rationale: "For U.S. For U.S. Steel, the reduced liquidity and substantially increased debt load resulting from the purchase of Marathon's common stock is offset by the greatly increased long term earnings, potential and asset protection afforded by the acquisition. However, the potential call upon Marathon's cash flow and assets to service the acquisition debt, as well as the general cash needs of the combined entity negatively impacts the ability of Marathon to maintain financial flexibility on a par with previous levels." Standard and Poor's Creditweek, January 4, 1982. p. 1885.

a CIC covenant fare much worse when they receive a tender offer. One possible explanation is that the bonds would fare much better under the triggering of the CIC covenant than in the tender offer; however, this result disappears in the median regressions (reported and discussed below) suggesting it may depend on a few outlier observations. Interestingly we see the wealth effects for target sibling bonds is also positively related to its maturity (consistent with co-insurance), negatively related to its coupon rate, and unrelated to its junk status.

Last, we see a positive and significant coefficient on the priority jump indicator in the target subject bond regression, suggesting those subject bonds that effectively step ahead of sibling and other bonds fare much better than when they do not. When you combine this with the fact that sibling bonds earn -2.97% lower returns (see coefficient in sibling bond regression) when they are effectively priority jumped, it appears that bond tender offers and mergers can be combined to transfer wealth among and between existing bond issues.

For acquirer bonds we find subject bonds wealth effects decrease in the coupon rate, increase in maturity, and are larger for bonds with CIC covenants. These results suggest that the factors influencing target bond tender offers may be quite different from those for acquirer bond tender offers. One possibility is that acquirer bond tender offers are used more for covenant removal and flexibility than for mitigating co-insurance.

Table 8 repeats the regressions in Table 7 but using medians regressions to diminish the influence of outliers. We see the results in Table 7 are robust and not driven by outliers. Overall we document a rich set of wealth effects for acquirer and target bonds. Perhaps the most intriguing finding is that wealth effects of one bond issue appear to depend on the characteristics of sibling and other issues.

### *B. Firm-Level Bond and Stock excess Returns*

Finally, Table 9 reports the statistics of excess bond and stock returns on the firm level. We aggregate bond issues at the firm level by taking an amount outstanding weighted average. We see that at the firm level Target subject bonds earn 5.69% while target sibling bonds earn

2.19% and target bonds experience negative mean excess return of 3.02%, although statistically insignificant. Target stockholders in these deals experience 19.71% excess returns. In untabulated results we find that target stocks react positively to bond tender offers when the bond has higher co-insurance potential. Specifically, we find that the target stocks experience a 7.08% mean excess return over the three days window around the bond tender offer announcement towards the target bonds with longer time to maturity compared to the other bonds of the merging firms. Together with the results presented in Table 4, these results lend support to the conjecture that firms use bond tender offers to achieve the tradeoff between mitigating the co-insurance effects and facilitating the takeover.

For the acquirer, we see in Panel B that none of the acquirer average wealth effects are statistically different from zero. Interestingly, we find in untabulated tests that when the acquirer bonds receive a tender offer, the acquirer stock excess announcement returns are significantly negatively correlated with the bond excess returns. This suggests a wealth redistribution between equityholders and debtholders. Overall these results are consistent with the findings of prior studies (see for example, Billett, King, and Mauer (2004) ) and suggests the wealth effects we document at the bond issue level provides an enriched view of how bonds fare in mergers and acquisitions.

#### **IV. Conclusion**

Numerous papers explore the wealth effects of bondholders in mergers and acquisitions. However, this is the first paper to document and explore the frequent use of bond tender offers in the merger and acquisition process, and the influence they have on the wealth effects to both bondholders and stockholders. We find that in recent times, over 30% of deals where the target and acquirer have outstanding bonds involve a bond tender offer. We find bond tender offers may be used to facilitate financial flexibility, remove undesirable covenants, and to affect the wealth redistribution among the various stakeholders. Importantly, we find the wealth effects of

one bond issue depend on the characteristics and treatment of other bonds issues, and that the stockholder returns are also related to the bondholder returns.

Our results have important complementarities to the existing literature. First, while Billett, King, and Mauer (2004) document a rich set of bondholder wealth effects at the firm level, we show that the individual bond issue wealth effects depend not only on firm characteristics, but also on the characteristics and treatment of sibling bond issues. In fact, we show that in cases where a bond tender offer results in an effective priority jump over another issue, the tendered bond's wealth effects are even larger and the remaining bonds are lower. Thus not only are there potential wealth transfers between stocks and bonds, there are also potential wealth transfers between bond issues. Our results also suggest that much of the previously documented wealth effects to bondholders around mergers and acquisitions may be driven by bond tender offers.

## Appendix

In this appendix, we present a sample of excerpts from the prospectus or the bond registration statements filed with the Securities and Exchange Commission under the Securities Act of 1933 (S-3 form or S-4 form). This sample shows how various definitions of the Change of Control (CIC) covenants enriches the heterogeneity among bonds, even within the same firm. Furthermore, it shows the potential conflict of interests between indentures of different bonds.

### **The definition of “Change of Control” covenants subjects to interpretation**

*Example*                      *Nine West Inc.:*

“One of the events that constitutes a Change of Control under each Indenture is the disposition of "all or substantially all" of the Company's assets. This term has not been interpreted under New York law (which is the governing law of the Indentures) to represent a specific quantitative test. As a consequence, in the event holders of the Notes elect to require the Company to purchase the Exchange Notes and the Company elects to contest such election, there can be no assurance as to how a court interpreting New York law would interpret the phrase.

The existence of a holder's right to require the Company to purchase such holder's Notes upon a Change of Control may deter a third party from acquiring the Company in a transaction that constitutes a Change of Control. The definition of "Change of Control" in the Indentures is limited in scope. The provisions of the Indentures may not afford holders of Notes the right to require the Company to purchase such Notes in the event of a highly leveraged transaction or certain transactions with the Company's management or its affiliates, including a reorganization, restructuring, merger or similar transaction involving the Company (including, in certain circumstances, an acquisition of the Company by management or its affiliates) that may adversely affect holders of the Notes, if such transaction is not a transaction defined as a Change of Control. See "--Certain Definitions" for the definition of "Change of Control." A transaction involving the Company's management or its affiliates, or a transaction involving a recapitalization of the Company, would result in a Change of Control if it is the type of transaction specified by such definition.” (excerpt from the S-4 form filed by Nine West Group Inc. on August 21, 1997. p. 32)

### **It is not always in the bondholders’ interest to execute the CIC trigger**

*Example*                      *Sprint Nextel Corp. & Alamosa Inc.:*

“Future debt of Alamosa may contain prohibitions of certain events that would constitute a Change of Control or require such debt to be repurchased upon a Change of Control. Moreover, the exercise by holders of 12%, 11% and 8 1/2% Notes of their right to require Alamosa to repurchase the 12%, 11% and 8 1/2% Notes could cause a default under existing or future debt of Alamosa, even if the Change of Control itself does not, due to the financial effect of the repurchase on Alamosa. Finally, Alamosa’s ability to pay cash to holders of 12%, 11% and 8 1/2% Notes upon a repurchase may be limited by Alamosa’s then existing financial resources. There can be no assurance that sufficient funds will be available when necessary to make any required repurchases. Alamosa’s failure to repurchase any 12%, 11% or 8 1/2% Notes in

connection with a Change of Control would result in a default under the 12%, 11% or 8 1/2% Indenture, as applicable. Such a default would, in turn, constitute a default under existing debt of Alamosa and may constitute a default under future debt as well. Since the Subsidiary Guarantees are subordinate in right of payment to the lenders under the Designated Senior Debt, the Subsidiary Guarantors would first be obligated to pay any such Designated Senior Debt in full before repurchasing any of the 12%, 11% or 8 1/2% Notes. Alamosa's obligation to make an offer to repurchase the 12%, 11% and 8 1/2% Notes as a result of the completion of a transaction constituting a Change of Control may be waived or modified at any time prior to the completion of such Change of Control transaction with respect to the applicable indenture by the written consent of the holders of at least a majority in aggregate principal amount of the applicable notes. See "— Amendments and Waivers" below." (excerpt from the Prospectus by Sprint Nextel Corp. filed on August 8, 2006. p. 33)

### **Conflicts of interest between indentures of different bonds exist**

#### *Example Prime Hospitality Corp.:*

"A Change of Control (as defined in the indenture) could require us to refinance substantial amounts of indebtedness. Upon the occurrence of a Change of Control, the holders of the notes would be entitled to require us to purchase the notes at a purchase price equal to 101% of the principal amount of such notes, plus accrued and unpaid interest, if any, to the date of purchase. The Change of Control may also constitute a change of control or event of default under our other indebtedness, including our senior credit facility and the indenture with respect to our first mortgage notes. However, our senior credit facility prohibits the purchase of the notes and our first mortgage notes by us in the event of a Change of Control, unless and until such time as the indebtedness under our senior credit facility is repaid in full. Our failure to purchase the notes would result in a default under the indenture, our senior credit facility and our first mortgage notes indenture. The failure to repay the indebtedness under our senior credit facility and our first mortgage notes indenture, if accelerated, would also constitute an event of default under the indenture, which could have adverse consequences to us and the holders of the notes. In the event of a Change of Control, there can be no assurance that we would have sufficient assets to satisfy all of our obligations under our senior credit facility, the notes and our first mortgage notes. See "Description of the Notes." (excerpt from S-4 form filed by Prime Hospitality Corp. on June 25, 2002. p. 19)

### **Example of "Change of Control" description**

#### *Mark IV Industries Inc.:*

#### **"CHANGE OF CONTROL**

Upon the occurrence of a Change of Control (as defined below), each Holder will have the right to require the repurchase of all or any part of such Holder's Notes pursuant to the offer described below (the "Change of Control Offer") at a purchase price equal to 101% of

the aggregate principal amount of the Notes to be repurchased plus accrued and unpaid interest and Liquidated Damages, if any, thereon through the date of purchase.

Immediately following any Change of Control, the Company is required to mail a notice to the Trustee and to each Holder stating: (i) that the Change of Control Offer is being made pursuant to the Repurchase Upon Change of Control covenant of the Indenture and that all Notes tendered will be accepted for payment; (ii) the purchase price and the purchase date (the "Change of Control Payment Date"), which may not be earlier than 30 days or later than 60 days from the date the notice is mailed; (iii) that any Note not tendered will continue to accrue interest; (iv) that, unless the Company defaults in the payment therefor, all Notes accepted for payment pursuant to the Change of Control Offer will cease to accrue interest and Liquidated Damages, if any, on and after the Change of Control Payment Date; (v) that holders electing to have any Notes purchased pursuant to a Change of Control Offer will be required to surrender those Notes to the Paying Agent at the address specified in the notice prior to the close of business on the third business day preceding the Change of Control Payment Date; (vi) that Holders will be entitled to withdraw Notes they have tendered on the terms and conditions set forth in such notice; and (vii) that holders whose Notes are being purchased only in part will be issued new Notes equal in principal amount to the unpurchased portion of the Notes surrendered; provided that the portion of each Note purchased and each such new Note issued must be in a principal amount of \$1,000 and integral multiples thereof.

On the Change of Control Payment Date, the Company will (i) accept for payment all Notes or portions thereof tendered pursuant to the Change of Control Offer and not withdrawn, (ii) deposit with the Paying Agent money sufficient to pay the purchase price of all Notes or portions thereof so tendered and not withdrawn, and (iii) deliver or cause to be delivered to the Trustee all Notes so tendered and not withdrawn together with an officer's certificate specifying the Notes or portions thereof tendered to the Company. The Paying Agent will promptly mail to each Holder of Notes so tendered and not withdrawn payment in an amount equal to the purchase price for such Notes, and the Trustee will promptly authenticate and mail to such Holder a new Note equal in principal amount to any unpurchased portion of the Notes surrendered. The Company will publicly announce the results of the Change of Control Offer on or as soon as practicable after the Change of Control Payment Date.

The Company will comply with the requirements of Rule 14e-1 under the Exchange Act and any other securities laws and regulations thereunder to the extent such laws and regulations are applicable in connection with the repurchase of Notes triggered by a Change of Control.

A "Change of Control" will be deemed to have occurred at such time as either of the following events occurs:

(i) there is consummated any consolidation or merger of the Company (A) in which the Company is not the continuing or surviving corporation or (B) pursuant to which the Common Stock of the Company would be converted into cash, securities or other property, in each case other than a consolidation or merger of the Company in which the holders of

the Common Stock outstanding immediately prior to the consolidation or merger hold, directly or indirectly, at least a majority of the common stock of the continuing or surviving corporation immediately after such consolidation or merger or the majority of the members of the board of directors of the surviving entity immediately after such consolidation or merger are Continuing Directors; or

(ii) there is filed a report on Schedule 13D or 14D-1 (or any successor schedule, form or report) pursuant to the Exchange Act, disclosing that any person (defined, solely for the purposes of the Change of Control provision, as the term "person" is used in Section 13(d)(3) or Section 14(d)(2) of the Exchange Act or any successor provision to either of the foregoing) has become the beneficial owner (as the term "beneficial owner" is defined under Rule 13d-3 or any successor rule or regulation promulgated under the Exchange Act) of 50% or more of the combined voting power of all the Company's then outstanding securities entitled to vote generally for the election of directors; provided, however, that a person shall not be deemed to be the beneficial owner of, or to own beneficially, (A) any securities tendered pursuant to a tender or exchange offer made by or on behalf of such person or any of such person's Affiliates or associates until such tendered securities are accepted for purchase or exchange thereunder, or (B) any securities if such beneficial ownership (1) arises solely as a result of a revocable proxy delivered in response to a proxy or consent solicitation made pursuant to the applicable rules and regulations under the Exchange Act, and (2) is not also then reportable on Schedule 13D (or any successor schedule) under the Exchange Act.

Notwithstanding the foregoing, a Change of Control shall not be deemed to have occurred under clause (ii) of the immediately preceding paragraph solely by virtue of the Company, any such Subsidiary thereof, any employee stock ownership plan or any other employee benefit plan of the Company or any such Subsidiary or any other person holding securities of the Company for or pursuant to the terms of any such employee benefit plan, filing or becoming obligated to file a report under or in response to Schedule 13D or Schedule 14D-1 (or any successor schedule, form or report) under the Exchange Act, disclosing beneficial ownership by it of securities of the Company, whether in excess of 50% of the combined voting power of all the Company's then outstanding securities entitled to vote generally for the election of directors or otherwise.

The Change of Control purchase feature of the Notes may in certain circumstances make more difficult or discourage a takeover of the Company and, thus, the removal of incumbent management. The Change of Control purchase feature, however, is not the result of management's knowledge of any specific effort to accumulate shares of Common Stock or to obtain control of the Company by means of a merger, tender offer, solicitation or otherwise, or part of a plan by management to adopt a series of anti-takeover provisions. Instead, the Change of Control purchase feature is a standard term contained in other similar debt offerings and the terms of such feature result from negotiations between the Company and the Initial Purchaser.

If a Change of Control were to occur, there can be no assurance that the Company would have sufficient funds to pay the Change of Control purchase price for all Notes tendered by the holders thereof. In addition, the Company's ability to make such payment



may be limited by the terms of its then-existing borrowing and other agreements. Certain of the agreements relating to the Company's Senior Indebtedness, including the Credit Agreement, have similar change of control provisions that may have the effect of further limiting the Company's ability to pay the Change of Control purchase price for Notes tendered by the holders thereof. The failure of the Company to make such payment to holders of Notes, if continued for 45 days after receipt of written notice of Default from the Trustee or the holders of at least 25% of the aggregate principal amount of the Notes then outstanding, specifying such Default and requiring that it be remedied, would constitute an Event of Default under the terms of the Indenture. See "--Events of Default and Remedies."" (excerpt from S-4 form filed by Mark IV Industries Inc. on April 2, 1996. p. 42-43)

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Table 1 Sample distribution

The sample of bond tender offers includes all bond tender offers announced by the merging firms at any time from 180 days before the acquisition announcement date to the acquisition completion (withdrawn) date. Using Securities Data Corporation's (SDC) Mergers and Acquisitions Database, we include acquisitions that meet the following criteria: 1. The acquisition is announced during 1985-2008. 2. The transaction form is categorized as "Merger", "Acq. of Assets", or "Acq. Maj. Int.". 3. The acquisition completion (withdrawn) date has to be within 1000 days of the acquisition announcement date. The number of bond tender offers included in our sample is reported in the second column. Amount outstanding is the total par value outstanding of the bonds receiving tender offers. The value is inflation adjusted to 2008 dollar value. Tender offer forms are categorized into two groups: the tender offer for the acquirer's bonds and the tender offer for the target's bonds. Tender offer timing is determined by the bond tender offer date relative to the associated acquisition announcement date.

Year	N	Amount outstanding (\$Million)	Tender Offer Form		Tender Offer Announcement Timing	
			Tender offer for acquirer bonds	Tender offer for target bonds	Before merger announcement	At or After merger announcement
1985-1990	8	4,028	0	8	1	7
1991-1995	20	11,341	8	12	9	11
1996-2000	112	25,604	51	61	26	86
2001-2005	70	35,010	40	30	23	47
2006-2008	41	25,263	20	21	12	29
Total	251	101,246	119	132	71	180

Table 2 Summary statistics — Issue level bond characteristics

The sample of bond tender offers is described in Table 1. We include all the bond issues with non-missing data and do not require any data availability on Compustat, CRSP, or SDC. Subject bonds are the ones receiving tender offers, and the sibling bonds are those issued by the same issuer of the subject bonds but do not receive tender offers. Coupon rate is the bond's promised coupon payment as a percent of the par value. Yield to maturity is measured as of the end of the month ending before the bond tender offer announcement. Time to maturity at offering is the number of years to maturity at issue. Time to maturity remaining is the number of years to maturity at the time of the tender offer announcement. Bond rating is converted into numbers (AAA+=1...D=25). The junk dummy equals to one, if the bond is rated below Baa3 or BBB- (i.e. numerical rating above 10) and zero otherwise. Issue proceeds are the total par values outstanding at the time of issuance. The value is inflation adjusted to 2008 dollar value. Change in control covenant (hereafter, CIC) dummy equals to one, if the bond issue has the CIC provision, and zero otherwise.

	Subject Bonds			Sibling Bonds		
	N	Mean	Median	N	Mean	Median
<i>Panel A: Target Bonds</i>						
Coupon Rate	151	9.57	9.63	263	8.24	8.50
Yield to Maturity	120	9.22	9.00	201	8.49	8.38
Yield Spread	81	1.33	0.00	185	1.90	1.08
Time to Maturity at Offering	148	10.47	10.00	263	13.87	10.00
Time to Maturity Remaining	151	6.98	6.62	263	7.89	5.65
Bond Rating	142	14.65	15.00	250	12.17	12.00
Issue Proceeds (\$Mill)	148	363.85	217.83	263	410.03	220.38
Issue Proceeds/total assets	96	0.18	0.13	213	0.12	0.05
Junk Dummy	142	0.92	1.00	250	0.65	1.00
CIC Dummy	134	0.67	1.00	258	0.23	0.00
<i>Panel B: Acquirer Bonds</i>						
Coupon Rate	124	9.06	9.25	457	7.62	8.00
Yield to Maturity	93	8.00	8.14	369	7.87	7.75
Yield Spread	59	1.08	0.85	315	1.79	1.30
Time to Maturity at Offering	118	8.99	10.00	457	13.68	10.00
Time to Maturity Remaining	124	5.59	5.54	457	9.75	6.67
Bond Rating	115	11.50	12.00	445	10.60	10.00
Issue proceeds (\$Mill)	118	401.66	265.46	457	479.35	292.39
Issue proceeds/total assets	101	0.08	0.05	359	0.06	0.03
Junk Dummy	115	0.64	1.00	445	0.50	0.00
CIC Dummy	104	0.61	1.00	453	0.32	0.00

Table 3 Summary statistics — Firm level characteristics

The sample of acquisitions and bond tender offers are described in Table 1. Total assets are extracted from Compustat annual file. Market value of equity equals the number of outstanding shares multiplied by the share price. Free cash flow is defined as the sum of income before extraordinary items and the Depreciation and Amortization scaled by total assets. Book leverage equals to the sum of long-term debt and debt in current liabilities normalized by total assets. Junk dummy in Panel A and Panel B takes the value of one, if a firm has an S&P long-term debt rating above 11, and zero otherwise. All the variables are measured as of the last fiscal year ending before the bond tender offer announcement year, and all dollar variables are adjusted for inflation and stated in 2008 dollars. Variables in Panel C and Panel D are as defined in Table 2. We calculate the firm-level bond characteristics by taking the value weighted average of the individual bond issues, where the weight is the amount outstanding of each bond issue.

	Tender offer for Target Bonds			Tender offer for Acquirer Bonds		
	N	Mean	Median	N	Mean	Median
Panel A: Target firm characteristics						
Total Assets	91	3,972.86	1,221.18	38	4,920.72	1,096.60
Market Equity	90	3,026.51	835.44	37	2,627.98	827.18
Free cash flow	90	0.08	0.07	38	0.12	0.09
Book leverage	91	0.44	0.45	38	0.25	0.23
Junk dummy	87	0.87	1.00	22	0.73	1.00
Panel B: Acquirer firm characteristics						
Total Assets	75	25,943.43	4,144.52	93	29,272.08	3,439.86
Market Equity	73	14,853.90	4,547.67	91	13,433.19	2,674.03
Free cash flow	74	0.11	0.09	91	0.08	0.07
Book leverage	75	0.31	0.30	93	0.37	0.35
Junk dummy	59	0.37	0.00	98	0.72	1.00
	Subject Bonds			Sibling Bonds		
	N	Mean	Median	N	Mean	Median
Panel C: Target Bonds						
Coupon Rate	92	9.69	9.67	64	8.98	9.06
Yield To Maturity	79	9.10	8.90	62	8.84	8.95
Time to Maturity at offering	52	1.41	0.00	58	2.73	2.84
Time to maturity remaining	92	9.99	10.00	64	11.03	10.00
Bond rating	89	14.40	15.00	62	13.70	14.60
Issue proceeds/total assets	65	0.22	0.18	48	0.16	0.13
Junk dummy	89	0.92	1.00	62	0.83	1.00
CIC dummy	86	0.73	1.00	64	0.26	0.00
Panel D: Acquirer Bonds						
Coupon Rate	75	9.59	10.00	56	9.19	8.76
Yield To Maturity	56	8.76	8.96	53	8.85	9.12
Time to Maturity at offering	75	9.44	10.00	56	10.80	10.00
Time to maturity remaining	75	6.00	5.74	56	7.43	7.01
Bond rating	73	12.81	13.00	56	13.22	13.99
Issue proceeds/total assets	59	0.12	0.07	45	0.11	0.08
Junk dummy	73	0.78	1.00	56	0.76	1.00
CIC dummy	69	0.69	1.00	56	0.30	0.07

Table 4 Determinants of receiving a tender offer — Issue level analysis

This table reports non-linear regression results of bond issue level analyses of the likelihood of receiving the bond tender offer. Regressions (1)-(3) use the sample of all outstanding bonds of the merging firms included in the sample of acquisitions associated with the bond tender offers described in Table 1 (i.e. subject bonds, sibling bonds, and other bonds). Regressions (4)-(6) use a reduced sample that only includes the outstanding bond issues of the merging firms that receive bond tender offers (i.e. subject bonds and sibling bonds). The dependent variable is a binary variable which takes value one if a bond receives the tender offer, and zero otherwise. All the other variables are as defined in Table 2. t-statistics are reported in parentheses. \*, \*\*, and \*\*\* denote statistical significance at the 10%, 5%, and 1% levels, respectively.

Independent Variables	Outstanding bonds of both merging firms			Outstanding bonds of firms receiving tender offers		
	All Bonds (1)	Target Bonds (2)	Acquirer Bonds (3)	All Bonds (4)	Target Bonds (5)	Acquirer Bonds (6)
Intercept	-4.81 (-8.55)***	-5.11 (-5.22)***	-4.95 (-6.36)***	-3.73 (-6.41)***	-5.37 (-4.82)***	-3.54 (-4.85)***
Log years to maturity	0.01 (0.11)	0.54 (3.50)**	-0.33 (2.86)***	-0.05 (-0.49)	0.53 (3.14)***	-0.37 (-3.07)***
Log issue proceeds	0.10 (1.34)	0.02 0.15	0.16 (1.52)	0.05 (0.67)	0.15 (1.04)	0.05 (0.59)
Coupon rate	0.18 (5.20)***	0.17 (3.51)***	0.22 (4.30)***	0.16 (4.51)***	0.15 (3.04)***	0.22 (3.99)***
Junk dummy	0.70 (3.39)***	0.88 (2.34)**	0.20 (0.74)	0.61 (2.88)***	1.01 (2.58)**	-0.02 (-0.06)
CIC dummy	1.30 (7.85)***	1.59 (6.38)***	1.31 (5.34)***	1.34 (7.80)***	1.85 (6.88)***	1.17 (4.71)***
Pseudo R <sup>2</sup>	0.16	0.17	0.14	0.14	0.22	0.12
No. of issues receiving tender offer	231	130	101	231	130	101
No. of issues	1,411	500	911	914	373	541

Table 5 Issue level bond excess returns — grouped by the timing of bond tender offer announcement

The sample of bond tender offers is described in Table 1. The event window is defined as the time period from the beginning of bond tender offer announcement / acquisition announcement month, whichever is earlier, to the end of the acquisition announcement / bond tender offer announcement month, whichever is later. Subject bonds are the ones receiving tender offers, and the sibling bonds are those issued by the same issuer of the subject bonds but do not receive tender offers. Other bonds are the merging firms' outstanding bonds that are neither subject nor sibling bonds. Excess bond returns (%) are computed as the bond's return over the event window minus the return on a similar risk and maturity bond index over the event window. The returns on bond indices start from December 1989, which restricts this analysis to bond tender offers announced during 1990-2008. Significance levels based on the t-test for mean and Wilcoxon signed-rank test for median. \*, \*\*, and \*\*\* denote significance at the 10%, 5%, and 1% levels.

	Subject Bonds			Sibling Bonds			Other Bonds			All Bonds		
	N	Mean	Median	N	Mean	Median	N	Mean	Median	N	Mean	Median
Panel A: All Bonds---Timing of bond tender offer announcement relative to acquisition announcement												
All	170	3.19***	0.47***	241	1.41**	0.25**	207	-2.02**	-0.75***	618	0.75*	-0.02
Before	47	-0.69	-1.70**	100	-0.45	-0.26	38	-8.75***	-1.69***	185	-2.22***	-0.72***
At or after	123	4.67***	1.65***	141	2.74***	0.98***	169	-0.51	-0.56***	433	2.02***	0.22***
Panel B: Target Bonds---Timing of bond tender offer announcement relative to acquisition announcement												
All	91	6.55***	2.14***	71	2.99***	1.85***	59	-4.53**	-0.12	221	2.45**	1.50***
Before	12	1.34	-1.17	20	2.87***	2.63***	18	-17.80***	-8.56***	50	-4.94*	0.69
At or after	79	7.35***	2.99***	51	3.04***	1.30***	41	1.30	0.17	171	4.61***	1.58***
Panel C: Acquirer Bonds---Timing of bond tender offer announcement relative to acquisition announcement												
All	79	-0.69	-0.65	170	0.75	0.04	148	-1.02	-0.92***	397	-0.20	-0.41***
Before	35	-1.39**	-1.78***	80	-1.28***	-0.68***	20	-0.61	-0.88	135	-1.21***	-0.88***
At or after	44	-0.14	-0.04	90	2.56**	0.97***	128	-1.09***	-0.93***	262	0.33	-0.16
Differences in bond excess returns												
	Subject vs. Sibling Bonds			Sibling vs. Other Bonds			Subject vs. Other Bonds					
	Mean		Median	Mean		Median	Mean		Median	Mean		Median
Panel D: All Bonds---Timing of bond tender offer announcement relative to acquisition announcement												
All			1.78			0.22			3.43***			1.00***
Before			-0.24			-1.44			8.30***			1.43**
At or after			1.93			0.67			3.25***			1.54***
Panel E: Target Bonds---Timing of bond tender offer announcement relative to acquisition announcement												
All			3.56*			0.29			7.52***			1.97***
Before			-1.53			-3.80			20.67***			11.19***
At or after			4.31			1.69			1.74*			1.13*
Panel F: Acquirer Bonds---Timing of bond tender offer announcement relative to acquisition announcement												
All			-1.44			-0.69			1.77**			0.96***
Before			-0.11			-1.10			-0.67			0.20
At or after			-2.70*			-1.01			3.65***			1.90***



Table 6 Issue level bond excess returns — across various groupings

The sample of bond tender offers is described in Table 1. The event window is defined as the time period from the beginning of bond tender offer announcement / acquisition announcement month, whichever is earlier, to the end of the acquisition announcement / bond tender offer announcement month, whichever is later. Subject bonds are the ones receiving tender offers, and the sibling bonds are those issued by the same issuer of the subject bonds but do not receive tender offers. Other bonds are the merging firms' outstanding bonds that are neither subject nor sibling bonds. Excess bond returns (%) are computed as the bond's return over the event window minus the return on a similar risk and maturity bond index over the event window. The returns on bond indices start from December 1989, which restricts this analysis to bond tender offers announced during 1990-2008. Subject bond priority jump dummy equals to one if the remaining time to maturity of the subject bond is longer than the value weighted average of the bond not receiving tender offer, and zero otherwise. CIC dummy equals to one if the bond issue has the CIC provision, and zero otherwise. The junk dummy equals to one, if the bond is rated below Baa3 or BBB- (i.e. numerical rating above 10) and zero otherwise. The significance levels are based on the t-test for mean and Wilcoxon signed-rank test for median. \*, \*\*, and \*\*\* denote significance at the 10%, 5%, and 1% levels, respectively.

	Subject Bonds			Sibling Bonds			Other Bonds		
	N	Mean	Median	N	Mean	Median	N	Mean	Median
Panel A: All Bonds									
Subject bond priority jump=1	56	8.43***	3.32***	77	0.03	0.04	83	-2.06	-0.85***
Subject bond priority jump=0	95	1.00	-0.17	136	2.80***	0.73***	100	-1.71*	-0.69**
Difference		7.43**	3.49***		-2.77***	-0.69**		-0.35	-0.17
CIC=1	108	2.54***	1.54***	98	1.98	0.00	55	-4.19**	-0.88***
CIC=0	47	5.88*	0.07	142	1.04	0.71***	138	-1.25	-0.65***
Difference		-3.34	1.47		0.94	-0.71		-2.94	-0.23
Junk dummy=1	131	4.59***	1.67***	95	1.29	0.09	67	-4.12**	-0.93**
Junk dummy=0	38	-0.39	-1.05**	146	1.49***	0.58***	138	-1.13	-0.80***
Difference		4.97***	2.72***		-0.20	-0.49		-2.99	-0.14
Panel B: Target Bonds									
Subject bond priority jump=1	36	12.87***	6.11***	28	1.15	0.31	21	-7.58*	-0.12
Subject bond priority jump=0	44	2.70*	1.94*	39	4.76***	3.26***	31	-2.61	0.08
Difference		10.17**	4.17**		-3.61***	-2.95***		-4.97	-0.20
CIC=1	68	3.68***	2.09***	18	3.25*	1.06*	26	-6.58*	0.51
CIC=0	18	18.71**	3.75***	52	2.98***	1.94***	25	-3.51	-0.25
Difference		-15.03*	-1.66		0.27	-0.88		-3.07	0.75
Junk dummy=1	86	6.88***	2.80***	42	3.63***	2.39***	34	-5.97	0.94
Junk dummy=0	5	0.94	0.30	29	2.07***	1.30***	23	-3.35***	-1.49***
Difference		5.94***	2.50		1.55	1.10		-2.62	2.44**
Panel C: Acquirer Bonds									
Subject bond priority jump=1	20	0.42	-0.03	49	-0.60	0.04	62	-0.19	-0.92***
Subject bond priority jump=0	51	-0.46	-0.94**	97	2.01**	0.15	69	-1.31***	-1.06***
Difference		0.88	0.61		-2.61***	-0.11		1.12	0.14
CIC=1	40	0.60	0.38	80	1.69	-0.36	29	-2.05***	-1.47***
CIC=0	29	-2.09	-1.26**	90	-0.08	0.18	113	-0.75	-0.66***
Difference		2.68	1.64*		1.77	-0.54		-1.30	-0.81
Junk dummy=1	45	0.21	0.07	53	-0.56	-0.99***	33	-2.20***	-2.00***
Junk dummy=0	33	-0.59	-1.26**	117	1.35***	0.34**	115	-0.68	-0.66***
Difference		0.80	1.32*		-1.90	-1.33***		-1.52	-1.34*

(Table 6 continued)

	Differences in bond excess returns					
	Subject vs. Sibling Bonds		Sibling vs. Other Bonds		Subject vs. Other Bonds	
	Mean diff	Median diff	Mean diff	Median diff	Mean diff	Median diff
Panel D: All Bonds						
Subject bond priority jump=1	8.39 <sup>***</sup>	3.28 <sup>***</sup>	2.09	0.89 <sup>***</sup>	10.49 <sup>***</sup>	4.17 <sup>***</sup>
Subject bond priority jump=0	-1.80 <sup>*</sup>	-0.90 <sup>**</sup>	4.51 <sup>***</sup>	1.42 <sup>***</sup>	2.71 <sup>**</sup>	0.52 <sup>*</sup>
CIC=1	0.56	1.54 <sup>*</sup>	6.17 <sup>***</sup>	0.88 <sup>**</sup>	6.73 <sup>***</sup>	2.42 <sup>***</sup>
CIC=0	4.84	-0.64	2.29 <sup>**</sup>	1.36 <sup>***</sup>	7.13 <sup>*</sup>	0.72 <sup>**</sup>
Junk dummy=1	3.30 <sup>**</sup>	1.58 <sup>**</sup>	5.41 <sup>**</sup>	1.02 <sup>*</sup>	8.71 <sup>***</sup>	2.60 <sup>***</sup>
Junk dummy=0	-1.88 <sup>***</sup>	-1.63 <sup>***</sup>	2.62 <sup>***</sup>	1.38 <sup>***</sup>	0.74	-0.25
Panel E: Target Bonds						
Subject bond priority jump=1	11.72 <sup>***</sup>	5.80 <sup>***</sup>	8.73 <sup>*</sup>	0.43	20.45 <sup>***</sup>	6.23 <sup>***</sup>
Subject bond priority jump=0	-2.06	-1.32	7.37 <sup>**</sup>	3.18 <sup>***</sup>	5.31	1.86
CIC=1	0.43	1.03	9.83 <sup>**</sup>	0.55 <sup>*</sup>	10.26 <sup>**</sup>	1.58 <sup>***</sup>
CIC=0	15.73 <sup>*</sup>	1.81	6.49 <sup>*</sup>	2.19 <sup>**</sup>	22.22 <sup>**</sup>	4.00 <sup>***</sup>
Junk dummy=1	3.25	0.41	9.60 <sup>**</sup>	1.45 <sup>**</sup>	12.85 <sup>***</sup>	1.86 <sup>***</sup>
Junk dummy=0	-1.13	-1.00	5.42 <sup>***</sup>	2.79 <sup>***</sup>	4.29 <sup>**</sup>	1.79 <sup>**</sup>
Panel F: Acquirer Bonds						
Subject bond priority jump=1	1.02	-0.07	-0.41	0.96 <sup>**</sup>	0.61	0.89 <sup>*</sup>
Subject bond priority jump=0	-2.47 <sup>**</sup>	-1.09 <sup>**</sup>	3.32 <sup>***</sup>	1.21 <sup>***</sup>	0.85	0.12
CIC=1	-1.09	0.74	3.74 <sup>***</sup>	1.11 <sup>*</sup>	2.65 <sup>***</sup>	1.85 <sup>***</sup>
CIC=0	-2.01	-1.44 <sup>*</sup>	0.67	0.84 <sup>***</sup>	-1.34	-0.60
Junk dummy=1	0.77	1.06 <sup>**</sup>	1.64	1.01	2.41 <sup>***</sup>	2.07 <sup>***</sup>
Junk dummy=0	-1.94 <sup>***</sup>	-1.60 <sup>***</sup>	2.03 <sup>**</sup>	1.00 <sup>***</sup>	0.09	-0.60

Table 7 Wealth transfer between bond issues

The sample of bond tender offers is described in Table 1. The dependent variable is the excess bond return (%) computed as the bond's return over the event window minus the return on a similar risk and maturity bond index over the event window. The event window is defined as the time period from the beginning of bond tender offer announcement / acquisition announcement month, whichever is earlier, to the end of the acquisition announcement / bond tender offer announcement month, whichever is later. The returns on bond indices start from December 1989, which restricts this analysis to bond tender offers announced during 1990-2008. Subject bond, sibling bond, and other bond are as defined in Table 7. All other variables are as defined in Table 2. t-statistics based on issuer clustered standard errors are reported in parentheses. \*, \*\*, and \*\*\* denote significance at the 10%, 5%, and 1% levels, respectively.

	Target Bonds			Acquirer Bonds		
	Subject bonds	Sibling Bonds	Sibling & other bonds	Subject bonds	Sibling bonds	Sibling & other bonds
Intercept	-43.97 (-2.39)**	21.21 (2.04)*	35.22 (2.00)*	11.88 (2.34)**	-7.62 (-1.05)	0.16 (0.04)
Coupon Rate	2.13 (2.66)***	-1.68 (-2.10)**	-3.27 (-2.05)**	-1.21 (-4.22)***	0.39 (0.64)	0.11 (0.30)
Time to Maturity Remaining	1.75 (2.11)**	0.19 (1.81)*	0.24 (1.20)	0.64 (5.05)***	0.06 (0.79)	0.04 (0.56)
Log Issue proceeds	2.94 (1.37)	-1.36 (-1.33)	-1.63 (-1.66)	-1.01 (-1.30)	0.91 (1.41)	-0.06 (-0.12)
Junk dummy	8.56 (1.99)*	4.34 (1.54)	3.82 (0.97)	0.84 (0.95)	-1.68 (-0.57)	-2.51 (-1.00)
CIC dummy	-10.62 (-1.92)*	-1.37 (-0.70)	-1.05 (-0.36)	3.02 (3.34)***	1.05 (0.30)	1.43 (0.47)
Subject bond priority jump	6.79 (1.75)*	-2.97 (-2.13)**	-3.91 (-1.70)*	-1.75 (-1.31)	-1.39 (-1.54)	0.02 (0.02)
Other bond dummy			-8.55 (-1.47)			-1.62 (-1.38)
Adjusted R <sup>2</sup>	0.33	0.27	0.25	0.31	0.02	0.01
N	75	66	109	62	146	271

Table 8 Wealth transfer between bond issues — Median Regressions

The sample of bond tender offers is described in Table 1. The dependent variable is the excess bond return (%) computed as the bond's return over the event window minus the return on a similar risk and maturity bond index over the event window. The event window is defined as the time period from the beginning of bond tender offer announcement / acquisition announcement month, whichever is earlier, to the end of the acquisition announcement / bond tender offer announcement month, whichever is later. The returns on bond indices start from December 1989, which restricts this analysis to bond tender offers announced during 1990-2008. Subject bond, sibling bond, and other bond are as defined in Table 7. All other variables are as defined in Table 2. t-statistics are reported in parentheses. \*, \*\*, and \*\*\* denote significance at the 10%, 5%, and 1% levels.

	Target Bonds			Acquirer Bonds		
	Subject bonds	Sibling Bonds	Sibling & other bonds	Subject bonds	Sibling bonds	Sibling & other bonds
Intercept	-15.68 (-2.40)**	15.46 (4.78)***	13.11 (5.03)***	8.14 (2.07)**	-3.22 (-1.44)	-0.56 (-0.48)
Coupon Rate	0.30 (1.28)	-0.95 (-5.07)***	-0.99 (-3.90)**	-1.06 (-4.33)***	-0.13 (-1.12)	-0.20 (-2.12)**
Time to Maturity Remaining	0.43 (1.47)	0.10 (1.73)*	-0.01 (-0.19)	0.57 (5.77)***	0.08 (6.32)***	0.08 (6.21)***
Log Issue proceeds	1.71 (2.10)**	-1.05 (-2.43)**	-0.37 (-2.20)**	-0.55 (-1.04)	0.63 (2.24)**	0.24 (2.07)**
Junk dummy	5.81 (2.31)**	1.79 (2.40)**	1.53 (1.50)	1.08 (0.85)	-0.92 (-1.73)*	-1.21 (-2.41)**
CIC dummy	-2.82 (-1.64)	-1.72 (-2.04)**	-1.49 (-1.35)	2.48 (2.14)**	0.05 (0.09)	0.55 (1.17)
Subject bond priority jump	5.15 (3.92)***	-2.83 (-3.04)***	-3.14 (-2.75)***	-1.41 (-1.45)	-0.21 (-0.43)	0.44 (1.14)
Other bond dummy			-2.03 (-2.25)**			-1.33 (-3.70)***
Pseudo R <sup>2</sup>	0.09	0.15	0.08	0.26	0.07	0.06
N	75	66	109	62	146	271

Table 9 Deal level bond and stock excess returns

The sample of bond tender offers is described in Table 1. Bond excess bond returns (%) are computed as the individual bond's return over the event window minus the return on a similar risk and maturity bond index over the event window. The returns on bond indices start from December 1989, which restricts the analysis of bond excess returns to the sample period of 1990-2008. The stock excess return is the difference between the firm stock return and the market return over the even window. The event window is defined as the time period from the beginning of bond tender offer announcement / acquisition announcement month, whichever is earlier, to the end of the acquisition announcement / bond tender offer announcement month, whichever is later. \*, \*\*, and \*\*\* denote significance at the 10%, 5%, and 1% levels.

	N	Mean	Median
Panel A: Target bonds and stock			
Target bonds	93	3.71***	2.00***
<i>Subject</i> bonds	67	5.69***	2.10***
<i>Sibling</i> bonds	22	2.19*	1.06*
<i>Other</i> bonds	20	-3.02	0.03
Target Stock	138	19.71***	18.45***
Panel B: Acquirer bonds and stock			
Acquirer bonds	104	-0.93	-0.33
<i>Subject</i> bonds	45	-0.55	0.07
<i>Sibling</i> bonds	38	-0.63	-0.50
<i>Other</i> bonds	42	-1.30**	-0.66**
Acquirer Stock	156	2.41	1.46*