

Dual Ownership, Returns, and Voting in Mergers*

Andriy Bodnaruk* Marco Rossi**

Abstract

We document that in M&As a significant proportion of targets' equity is owned by financial institutions that simultaneously own targets' bonds ("dual holders"). Targets with larger equity ownership by dual holders have lower M&A equity premia and larger abnormal bond returns, particularly when dual holders stand to benefit more from appreciation of their bond stakes, e.g., when their bond ownership in the target is large and the target credit rating is non-investment grade. Dual holders are more likely to vote in favor of the merger proposal. Our results suggest the presence of coordination of decisions within dual holding financial conglomerates in M&A targets.

JEL Classification: G23, G32, G34

Keywords: dual holders, shareholders, bondholders, M&As, abnormal return, financial conglomerates

* We would like to thank Robert Battalio, Matt Billett, Jean Helwege, Lukas Roth, Gregor Matvos, Anya Mkrtyan, Michael Ostrovsky, Paul Schultz, and seminar participants at Notre Dame for their helpful comments and suggestions.

* Mendoza College of Business, University of Notre Dame.

** Mendoza College of Business, University of Notre Dame. Please address all correspondence to Andriy Bodnaruk, 238 Mendoza College of Business, University of Notre Dame, Notre Dame, IN, 46556, +1-574-631-4597, email: abodnaru@nd.edu.

Introduction

An extensive body of literature investigates the determinants of target equity and bond returns in M&As (e.g., Asquith and Kim, 1982, Denis and McConnell, 1986). When analyzing security returns, prior studies implicitly assume that each investor holds only one class of assets. If that was the case, target shareholders, for example, would seek the largest possible premium for tendering their shares.

However, financial markets are dominated by diversified financial conglomerates whose affiliates hold positions in multiple securities issued by the same company. In particular, a significant percentage of the equity of many U.S.-listed corporations is owned by financial institutions that are also major company bondholders.¹

When a company becomes a takeover target, both its equity and debt, on average, appreciate in value because, in general, a less risky bidder assumes the liabilities of a more risky target (Billett, King, and Mauer, 2004). If each mutual fund belonging to the same financial group optimizes its own risk-adjusted performance, the group's aggregate exposure to the target's debt and equity should have no bearing on the fund's behavior and, consequently, on returns of target securities. As Tufano and Sevick (1997) point out, a mutual fund is legally charged with protecting the interests of its investors, and therefore, must make decisions to maximize the value of their investments.

Conglomerate affiliation, however, may distort the incentives of fund managers, possibly inducing them to forego interests of fund's investors if it benefits the conglomerate group as a whole (Gaspar, Massa, and Matos, 2006). Hence, if affiliated fund managers coordinate their actions around M&As, financial conglomerates with dual ownership of target equity and debt – “dual holders” – have an incentive to accept a lower premium on their equity because they would be also benefiting from

¹ We estimate that in a sample of Compustat companies covered by the Lipper eMAXX bond ownership database, financial institutions with exposure to both company debt and equity (“dual holders”) on average (median) hold 10.24% (6.01%) of shares outstanding or 15.49% (10.06%) of institutional equity ownership. On average (median) bond holdings represent about 35.56 % (27.09%) of dual holders' overall exposure to the company. For more descriptive statistics on dual holder ownership, see Section 3.

appreciation of their bond positions.² In essence, a financial group as a whole should be indifferent about how it is compensated for parting with its voting rights in the target, i.e., whether it happens directly through appreciation of its equity positions or indirectly via increase in value of its other claims on the company, as long as the overall compensation package is deemed satisfactory.³ This does not imply that dual holders will not aim to maximize the compensation for tendering their shares, but rather that they might be willing to accept offers that pure shareholders would not.

Moreover, coordination within dual holding financial groups in M&As has three additional implications. First, since dual holders derive gains from both equity and bond, they have stronger incentives – compared to pure shareholders – to facilitate the completion of the deal. The most direct way to achieve this goal is to vote in favor of the merger proposal. Second, dual holders are in effect bondholders with (some) voting rights in the company; this makes them better protected than pure bondholders in takeovers. Hence, we would expect abnormal bond returns in M&As to be larger in the presence of dual holders. Third, if dual holders take into account the effect that a merger has on the value of their bond holdings in the target when evaluating the terms of the offer for the target’s equity, we should observe a negative correlation between abnormal bond returns and equity premia around bid announcements.

In this paper, we investigate how financial groups’ dual ownership of target equity and debt affects abnormal equity and bond returns, and voting in M&As. We start by showing that dual ownership of target equity and debt by financial institutions is a widespread phenomenon. In a sample of 536 U.S. M&As between 1999 and 2009 for which we have bond holdings coverage in the Lipper eMAXX dataset, the average (median) equity ownership by dual holders is 9.92% (5.82%) of targets’ shares outstanding (or 15.78% (9.96%) of target institutional ownership); the value of their bond positions represented on

² We follow Jiang, Li, and Shao (2010), who used the term “dual holders” to describe non-commercial banking institutions with simultaneous holding of both equity and debt of the same company.

³ In leveraged buyouts (LBOs) where target bonds are not protected by change of control covenants, dual holders’ incentives are reversed: since target debt typically drops in value, dual holders should demand a larger equity premium than pure shareholders do. Unfortunately, the sample of LBOs with unprotected debt and available data on dual ownership is too small (less than 20 observations) to investigate this conjecture.

average (median) 56.63% (63.12%) of their overall exposure to the target. Moreover, dual holders are often among the largest target shareholders. In targets with the above median dual holder equity ownership, on average (median) 3.86 (4.00) of the top 10 shareholders also have sizable bond stakes.

We then present considerable evidence consistent with coordination of decisions within financial groups holding both target equity and debt around M&As. We show that takeover equity premia are lower for deals with larger target dual holder equity ownership. A one-standard-deviation larger dual ownership is related to a 4.91% lower target abnormal return around an M&A announcement. This effect is particularly pronounced when dual equity owners stand to gain more from appreciation of their debt stake, i.e., when their bond ownership in the target is large relative to the size of their equity positions and the target bond rating is below investment grade.

When we explore the relation between target dual holder equity ownership and abnormal bond returns around M&As, we find that target bonds appreciate more, the larger is the presence of dual holders. A one-standard-deviation larger equity ownership by dual holders is related to a 3.75% higher abnormal bond return. As before, equity ownership by dual holders has a stronger impact on bond prices in deals with larger bond ownership by dual holders and low target credit ratings, but also when bondholders are not protected by restrictive covenants, e.g., a poison put provision.

When we investigate the relation between abnormal bond returns and equity premium in takeovers, we find that unconditionally they are positively correlated. However, this relationship turns negative in deals with a large presence of dual holders. This supports our argument that dual holders are willing to accept a lower equity premium when their debt stake appreciates more.

The fact that dual holders stand to benefit from appreciation of both their equity and debt stakes in the target, while pure shareholders gain only from increase in value of their equity positions, creates different incentives to approve merger proposals. Investigation of mutual fund voting in M&A deals reveals that equity mutual funds affiliated with dual holding conglomerates are more likely to vote in favor of the merger proposal. A one-standard-deviation larger equity ownership by a financial conglomerate that also holds target bonds is related to a 4.31% higher likelihood of an affiliated equity mutual fund voting in

support of the merger. To put this result into perspective, only 9.22% of mutual fund votes in our sample were not supportive of the deal. The results are strongest when dual owners have large debt stakes in the target and when target bonds have a below-investment-grade rating.

In addition to providing direct evidence of coordination of decisions within dual holding financial conglomerates, the results of our analysis of mutual fund voting in M&As address the concerns over the potential endogeneity of our findings on stock and bond returns. While dual ownership could be driven by unobserved company characteristics, it is highly unlikely that these could induce equity funds to be more supportive of a merger in the presence of a larger debt ownership by affiliated bond funds.

Our findings suggest that the conventional approach to M&As of focusing solely on returns to securities as representing total returns to securityholders does not fully account for the complexity of investors' objectives. A portfolio-based approach that considers all investor's holdings in the same company can capture shareholder incentives better.

Jensen and Meckling (1976) were the first to advance the idea that it might be desirable for some investors to hold multiple classes of securities issued by the same company. They argue that rewarding managers with debt and equity in proportions that mimic the firm's overall capital structure should "eliminate a large part (perhaps all) of the agency cost of debt."⁴ Jensen (1987) expands this idea further by proposing that conflict of interest between securityholders in general could be mitigated if different risky securities are held by the same parties ("strip financing"). Since "every security holder . . . has the same claim on the firm, there are no conflicts among senior and junior claimants over reorganization of the claims." Merton (1987) suggests that current shareholders, being better informed about the company, could be primary providers of new external financing. Our results demonstrate that dual ownership also has a negative externality: in M&As with a large presence of dual holders, pure shareholders receive a lower equity premium.

We contribute to several strands of literature. First, we add to the literature on target shareholder incentives in M&As. Recent studies have documented that there are factors besides bid characteristics

⁴ This hypothesis has recently been formalized in Edmans and Liu (2011).

that affect the attractiveness of the proposed acquisition for target shareholders. Ayers, Lefanowicz, and Robinson (2003) show that capital gains taxes significantly increase the cost of taxable acquisitions. Easterbrook and Fischel (1982), Hansen and Lott (1996), and Matvos and Ostrovsky (2008) argue that investors with equity positions in both the target and the acquirer focus on the total return to their portfolio rather than performance of their individual components. We show that shareholders of acquired companies may be willing to tolerate lower equity premia if they are compensated through appreciation of their holdings of other securities issued by the target.

Second, there is a growing literature on dual ownership of company equity and debt by different types of institutional investors or company management. The presence of equity ownership by non-commercial banking institutions that are also part of a loan syndicate reduces loan spreads (Jiang, Li, and Shao, 2010). Investment banks, which have prior underwriting experience with a company and hold both its equity and debt, mitigate wealth transfer in share repurchases (Bodnaruk et al., 2012). Mutual funds use the inside information available to the affiliated banks that are lending to firms to accumulate equity positions (Massa and Rehman, 2008). Debt ownership by company CEOs is related to higher bond and lower equity prices and lower volatility of both securities (Wei and Yermack, 2011); lower loan spreads (Wang, Xie, and Xin, 2010); fewer bond covenants (Chava, Kumar, and Warga, 2010); lower debt default rates (Sundaram and Yermack, 2007); and in general, lower overall riskiness of firms and as a result better performance during the crisis (Tung and Wang, 2011).

Our paper is different from existing work in this area in a number of important ways. To start, we do not consider any particular group of investors, e.g., banks, but focus on the overall presence of investors with holdings of both debt (bonds) and equity. As a result, we are able to provide a broader perspective on dual ownership.

Indeed, average shareholdings by investors which hold both company debt and equity reported in the literature are fairly small. Jiang et al. (2010) found that average ownership by non-commercial bank dual holders is about 0.7% of shares outstanding. Santos and Wilson (2007) documented that on average, banks control only 0.5% of borrower's voting rights; Bodnaruk et al. (2012) reported equity positions of

0.5% for investment banks with prior bond underwriting experience with the firm (and frequently retaining bond positions after the issuance). We estimate that aggregate equity ownership by shareholders, who also hold company bonds, is about 15 times as much, indicating that dual holder ownership is a considerably more economically important phenomenon than could be inferred from prior studies.

Additionally, our unique matching mechanism allows us to link bond and equity positions held by the affiliates of financial conglomerates. Growing evidence of coordinated behavior within financial groups (Acharya and Johnson, 2007; Ritter and Zhang, 2007; Massa and Rehman, 2008; Bodnaruk, Massa, and Simonov, 2009; Ivashina and Sun, 2011) suggests that this approach is better at capturing the complexity of investors' exposure to a company.

We would like to stress that our approach does not assume that financial institutions continuously monitor all their affiliates' holdings of company securities, but rather that they evaluate their overall exposure to the company at the time of significant corporate events such as mergers and acquisitions.

Third, we contribute to the literature on cross-subsidization within financial conglomerates. Gaspar et al. (2006) find that mutual fund families strategically transfer performance across member equity funds to favor those more likely to increase overall family profits. Cici, Gibson, and Moussawi (2010) show that performance of mutual funds managed by firms that simultaneously manage hedge funds is lower than that of similar mutual funds not affiliated with hedge funds. We demonstrate that value transfers within financial conglomerates are not limited to funds operating in the same asset class category (e.g., equity), but could occur across affiliates holding different types of securities.

In this regard, our results also have significant normative implications. Though the aggregate effect of coordination within financial groups is likely to be positive, bond funds' investors benefit at the expense of equity funds' investors, which potentially constitutes a breach of fiduciary duties by fund managers.

Fourth, our work is related to the literature on optimal capital structure. Israel (1991) and Billett (1996) argue that firms strategically choose high levels of financial leverage to attract only high-synergy acquirers, which increases the expected value of targets in mergers. Our results suggest that this effect could be partially undone if target equity and bonds are held by the same investors.

Fifth, we add to the literature on firms' (equity) ownership structure. Conflict of interest between majority or block owners, and minority shareholders has been studied extensively (Shleifer and Vishny, 1986; Stulz, 1988; Burkart, Gromb, and Panunzi, 1998; Laeven and Levine, 2008). We demonstrate that shareholders may have diverging objectives even if their equity exposure to the company is the same.

Sixth, we contribute to the literature on minority shareholder coordination. Kandel, Massa, and Simonov (2011) argue that if small shareholders share some common characteristics, it may lead to unintentional coordination of their actions. We show that a group of minority shareholders with holdings of company bonds can collectively drive the M&A equity premium down if they benefit from the increase in the value of their bond stakes.

Finally, our work complements the literature on shareholder governance and its effect on the prices of other securities issued by the firm. Cremers, Nair, and Wei (2007) demonstrate that shareholder control, as proxied by the existence of large institutional blockholders, is associated with higher yields if the firm is exposed to takeovers. They further argue that, without bond covenants, shareholder governance and bondholder interests diverge. Our results suggest that a potential remedy for this agency problem could be joint ownership of company equity and debt by large investors.

The rest of the paper is organized as follows: Section 2 develops testable hypotheses. Section 3 presents our data sources and construction of dual holder bond and equity stakes in the company. Section 4 presents empirical findings. A brief conclusion follows.

2. Testable Hypotheses

The main premise of our paper is that while financial conglomerates – via their affiliates – may hold positions in multiple types of securities issued by the same company, i.e., straight bonds, convertible securities, equity, etc., only equity has voting rights attached to it.

We consider two hypotheses: a coordination hypothesis and an independence hypothesis. We first formulate our predictions under the coordination hypothesis and then describe what we expect to observe for the independence hypothesis.

If affiliated fund managers coordinate their actions around M&As, a financial conglomerate with dual ownership of target equity and debt would aim to optimize the value of its total exposure to the target. An outside bidder has to provide a value transfer to an investor for parting with its voting rights; however, it is unimportant to the financial group whether it is compensated directly through appreciation of its equity stakes or indirectly via increase in value of its bond stakes, as long as the aggregate value of the compensation is deemed sufficient. Put differently, when evaluating the terms of the offer, dual holders also take into account how much their bond holdings in the target will appreciate with the merger. Larger presence of dual holders among target shareholders increases the likelihood that they would be marginal investors in the deal. Hence, in the case of coordination within dual holding groups, we should observe lower equity premia for targets with larger equity ownership by dual holders.

Coordination Hypothesis 1: Larger equity ownership by dual holders is related to lower target equity premia.

Another way to look at dual holders is to consider them as creditors who have voting rights in the company. Though the amount of these voting rights is not proportional to the bond stake of each dual holder, but is determined by its equity position, if coordination takes place, dual holders are better positioned than other creditors to protect their interests, particularly when the change of control takes place. Therefore, we expect that a larger proportion of voting rights pertaining to dual holders should result in larger abnormal bond returns around M&As.

Coordination Hypothesis 2: Larger equity ownership by dual holders is related to larger target abnormal bond returns around M&As.

If dual holders do take into account the effect that a merger has on the value of their bond holdings in the company when evaluating the terms of the offer for the target's equity, they would implicitly trade off the appreciation on one target security versus appreciation on another. Hence, we should observe a (more)

negative correlation between abnormal bond returns and equity premia around bid announcements when dual holders compose a larger fraction of target shareholders.

Coordination Hypothesis 3: In targets with larger equity ownership by dual holders, there should be a more negative correlation between equity and abnormal bond returns.

Finally, since dual holders benefit from appreciation of both their equity and debt positions in the target, they have stronger incentives to see the deal go through. We therefore expect to observe that dual holders are more willing to cast votes in support of merger proposals at shareholder meetings. This allows us to formulate our fourth hypothesis:

Coordination Hypothesis 4: Dual holders are more likely to vote in favor of M&A proposals.

If each affiliate of the financial conglomerate acts independently, then the group's aggregate exposure to the target's debt and equity is irrelevant to the individual fund's behavior and, therefore, should not affect returns of target securities or how affiliated funds vote. Therefore, each of the above (coordination) hypotheses is contrasted against the null (independence) of no relation between dual holder equity ownership and returns on target stocks and bonds, correlation between stock and bond returns, and voting decisions in M&As.

3. Sources of Data and Matching Procedure

3.1. Data and Sample of Firms

We use data from four sources. Data on M&As comes from SDC. Equity ownership comes from the Spectrum 13F database, which consists of the quarterly 13F filings of qualified money managers to the SEC. Institutional bond holdings come from the Lipper eMAXX dataset. Accounting variables and stock returns come from the CRSP-Compustat Merged Industrial Database.

The time period of our study ranges from January 1999 to June 2009; the choice of the period is motivated by the availability of bond ownership data. Likewise, our M&A sample is limited to target companies whose bond ownership is covered in the Lipper eMAXX dataset.

We do not consider a broader sample of M&As (by assigning zero dual holder equity ownership to the remaining firms) for several reasons. First, eMAXX contains bond ownership records for insurance companies, mutual and pension funds, but is missing some other important institutional investors, e.g., hedge funds and banks. As a result, if company bonds were owned by the latter investors, we would be unable to identify this, introducing an error in our data. Second, many mid-sized and smaller companies raise debt through private placements rather than public issuance (Carey, Prowse, Rea, and Udell, 1993). Shareholders who also own privately placed bonds are dual holders, but since we do not have data that would match private debt ownership to equity ownership, we are unable to identify them. For these reasons, we deliberately focus on companies with more complete data on dual ownership.

3.2. The Matching Procedure and Identification of Dual Holders

To identify dual holders, we proceed in several steps.⁵ First, we assign each institutional investor that enters Spectrum 13F or eMAXX datasets to a financial group with which it is affiliated. Given that different divisions of a financial conglomerate (banks, insurance firms, mutual fund families etc.) appear in 13F filings and eMAXX as separate entities lacking common identifiers, we had to construct a database of financial conglomerates grouping different divisions of individual financial groups under single umbrellas, which we call “brands.” This database was manually assembled using information from various public sources and performing a name-by-name analysis.⁶ We assigned each financial conglomerate a brand name and created a set of identifiers for firms (“names” from Spectrum and eMAXX) affiliated with each brand.

⁵ Since Lipper’s dataset covers only public traded bonds we able to construct measures of dual holder ownership for companies which 1) report some long-term debt; 2) have at least \$100 million in book value; 3) their bonds are covered by the Lipper eMAXX dataset. We do not believe that this affects our results in any significant way.

⁶ We used the directory of investment advisers maintained by the SEC (www.adviserinfo.sec.gov), Morningstar’s directory of mutual fund family websites (www.advisor.morningstar.com), and the websites of financial groups and mutual fund families. The completion dates of M&A transactions come from SDC. All affiliations and corporate control transaction dates are double-checked using extensive web querying.

Let us consider, for example, the “AXA” brand. “AXA” corresponds to the AXA Financial conglomerate, which as of December 31, 2005, had approximately \$643.3 billion in assets under management. AXA Financial includes the investment advisors AXA Advisors and Sanford C. Bernstein, the insurance firm AXA Equitable Life Insurance, the investment and mutual fund management firm AllianceBernstein, and the MONY group of firms (as of July 8, 2004). All these firms are assigned identifiers that uniquely match them to the “AXA” brand.

We also account for the evolution of brand affiliation. For example, “Morgan Keegan” is reported as an independent brand until March 30, 2001, when Regions Financial acquired it. Up to that date, “Morgan Keegan” was the unique brand of Morgan Keegan, but also included T.J. Raney, Scharff & Jones, Cumberland Securities and J. Lee Peeler, all of which had been acquired by Morgan Keegan between 1989 and 1994. Effective March 30, 2001, the “Morgan Keegan” brand was retired, and all firms affiliated with it became the “Regions Financial” brand. For a more detailed description of brand construction, see Bodnaruk et al. (2009).

M&A activity, bankruptcy, and other corporate events also complicate the match between debt and equity of the same firm. At any point in time, bonds issued by one company might be backed by another company. Therefore a naive match by six-digit CUSIP (which changes over time) would result in a major loss of data. Consider merging the bonds issued by Compaq Computers Corp. with the relevant equity. Until 2002, a match by six-digit CUSIP would correctly match debt and equity, but after 2002 (when HP and Compaq merged) there is no longer a Compaq stock to be matched. The phenomenon just described is widespread, especially in the telecommunications industry where companies have very tangled family trees. To make sure debt and equity data are properly matched, we follow Rossi (2012) and implement the following three-step procedure:

1. match stocks and bonds by six-digit CUSIP or by name;
2. if the match is active until maturity, or until the end of the sample period, the match is full and the procedure is over; otherwise:
 - a. if the stock is delisted, verify why the stock is delisted;

- b. if the stock is delisted because of M&A activity, obtain the acquiring firm permno and use the new company's stock data;
 - c. if the company is liquidated, then stop;
 - d. if the company is being reorganized (Chapter 11), then stop, but re-activate the link once the company re-emerges from bankruptcy;
3. repeat step 2 as needed.

We then assign a dual holder status to a financial conglomerate if its affiliates hold both company equity and debt and the par value of its bond positions represents at least 5%, but does not exceed 95% of a group's overall exposure – debt and equity – to the company.⁷ Equity and bond positions of affiliates are then aggregated at the level of conglomerate.

There are several important caveats to our identification of dual holders. First, since the data on equity ownership and debt ownership covers only institutional investors, we are able to identify only institutional dual holders. It is plausible that in some companies, e.g., those with smaller institutional ownership, there are wealthy private investors that hold significant stakes in equity and debt. Second, we only have information about company public debt ownership, but not private debt or bank loans. Third, the eMAXX bond ownership database does not cover hedge funds. All of these factors are likely to lead to underestimation of the number of dual holders and the magnitude of their equity ownership in the firm. Our estimates, therefore, provide a lower bound for the presence of dual holders in U.S. corporations.

3.3. Equity and Bond Ownership by Dual Holders

We consider two measures of equity ownership by dual holders. The first one is the fraction of company total shares outstanding held by dual holders, Dual Equity Ownership (DEO). The second one is the fraction of shares outstanding held by dual holders scaled down by the total institutional equity ownership, Dual Equity Ownership Adjusted (DEO-Adj).

⁷ We also used different cut-offs, e.g., debt exposure between 10% and 90% of overall exposure; the results are not affected.

In Table 1 we report descriptive statistics on the distribution of dual ownership across all firms and the sample of M&A targets as well as descriptive statistics on control variables. On average (median) dual holders own 10.24% (6.01%) of company equity. Dual holders' equity ownership is also a significant fraction of the firm's institutional equity ownership. On average (median) their equity positions represent 15.49% (10.06%) of total institutional ownership.

We also compute the relative exposure of dual holders to company debt and equity. We define the variable Bond-to-Total Investment as the ratio of the par value of bonds held by dual owners to the sum of par value of bonds and market value of equity that they own.⁸ On average (median) bond holdings represent about 35.56 % (27.09%) of dual holders' overall investment in the company.

Target companies on average have slightly lower dual equity ownership both in terms of number of shares outstanding and relative to the firm's institutional ownership. This is probably due to the fact that targets are on average significantly smaller and more growth oriented. Additionally, dual holders' investment in the company is more tilted towards bonds: the mean (median) Bond-to-Total Investment is 56.63% (63.12%).

Dual holders' equity ownership has been steadily rising over time. We observe this for the full sample of firms as well as for the sample of targets. In Table 2, we can see that the average (median) DEO has increased from 6.95% (3.64%) in 1999 to 12.68% (9.51%) in 2009 for all firms and 6.05% (4.68%) to 12.57% (8.63%) for targets.⁹

Harford, Jenter, and Li (2011) argue that cross-owners, i.e. shareholders with equity holdings in both the target and the acquirer, are too small to affect M&A outcomes. In Table 3, we find that dual ownership is a trait of larger investors. On average, 1.78 of top 10 largest shareholders in a full sample of firms and 1.80 shareholders in the sample of targets also hold company-issued bonds. These numbers, however, hide the fact that in some companies, dual holder equity ownership is fairly low. Once we set a

⁸ We use par value of bonds instead of their market value since for a large fraction of bonds in the eMAXX dataset, we do not have reliable data on bond prices.

⁹ One potential caveat to this result could be in the quality of coverage of bond ownership by eMAXX which was also improving over time. The use of time-fixed effects should partially alleviate this concern in our regression analyses.

condition that dual holder ownership must be above sample median, on average 3.77 of top 10 shareholders in the full sample and 3.86 shareholders in the group of target companies are dual holders. This suggests that dual holders are large enough to matter in acquisitions.

It is plausible that bond investors acquire equity stakes in the targets in anticipation of takeover bid to better protect themselves in takeovers. We explored the dynamics of dual holder ownership both before the bid and before the shareholder meetings related to M&A voting. In unreported findings, we observe neither economic nor statistically significant changes in dual holder equity ownership in the targets, both unconditionally and relative to similar non-targets. Additionally, we do not observe (unreported) that dual holder equity ownership is related to the likelihood of bid initiation.

4. Empirical Findings

4.1. Dual Holders' Equity Ownership and Target Equity Premia

We start with the target equity premium, which we define as an abnormal return on the company stock relative to a four-factor model over the $(-63; \min(+42, \text{resolution date}))$ trading days window around an M&A bid announcement (Schwert, 2000). Our sample consists of 536 M&A bids between January 1999 and July 2009; the binding constraint on the size of our sample is the availability of bond ownership data in the Lipper eMAXX dataset.

From Hypothesis 1, if affiliates of dual holding financial conglomerates coordinate their actions, we expect to find a negative relationship between dual holder equity ownership and takeover premium. To test this hypothesis, we regress the equity premium on measures of dual holder equity ownership and a set of control variables that are standard in the literature. To ensure that the measurement date for dual holder equity ownership does not overlap with the equity premium estimation window, we use the dual holder ownership at the end of the last quarter that is at least two months before the bid announcement date.

Our control variables include institutional equity ownership, market capitalization, book-to-market, cash holdings, leverage, dividend yield, return on equity, growth of sales, past year return and idiosyncratic volatility, liquidity, and industry concentration. Additionally, we control for deal

characteristics by including a merger dummy, a cash deal dummy, and a hostile bid dummy. All control variables are measured at the end of the previous year. All our regressions also account for time and industry fixed effects; standard errors are clustered at the industry (SIC2) and time level. The detailed description of all variables is provided in the Appendix.

The results, reported in Table 4, indicate a strong and negative relationship between dual holder equity ownership and target equity premium. The results are also robust across different measures of dual holder ownership and sets of controls. One-standard-deviation larger dual holder equity ownership (approximately 11.32% of shares outstanding) is related to a lower equity premium by 4.91% for DEO and 4.30% for DEO-Adj. These results suggest that the larger the fraction of company shares that is owned by investors with bond ownership, the lower the equity premium they are willing to accept, which provides first support for the hypothesis that affiliates of dual holding financial conglomerates coordinate their actions in M&As.

When would we expect dual holders to be most inclined to sacrifice the appreciation of their equity position? It should happen when they stand to benefit more from the increase in value of their bond stakes. To explore this conjecture, we proceed along two avenues. First, we separate the cases when the dual holders' bond exposure is relatively large compared to their equity exposure from the cases when it is relatively low. Second, since non-investment-grade bonds appreciate more in M&As (Billett et al., 2004), we investigate the relation between dual holder equity ownership and equity premium conditional on the bond rating of the company.

We create two sets of dummy variables and interact them with measures of dual holder ownership. The High Bond Exposure, HBE (Low Bond Exposure, LBE) dummy takes the value of one if the bond-to-total investment ratio of dual holders in the company is above (below) the sample median and zero otherwise. The Investment Grade (Junk) dummy takes the value of one if a long-term company S&P bond rating is BBB- or above (below BBB- or missing).

The results, presented in Table 5, strongly support our intuition. The negative relation between dual holder ownership and equity premium is driven by deals with larger bond exposure by dual holders and

lower target credit ratings. In contrast, when the bond exposure of dual holders is relatively low, and when target bonds have little room for increase in value, dual holder ownership is unrelated to equity premium.

4.2. Dual Holders' Equity Ownership and Target Abnormal Bond Return

We now turn our attention to target abnormal bond returns. From Coordination Hypothesis 2, we anticipate that dual holder equity ownership should be positively related to target bond returns around M&As.

We compute abnormal bond-level returns for every target company with publicly traded bonds; the data on bond prices comes from TRACE. The calculation of bond abnormal performance closely follows Bessembinder, Maxwell, and Xu (2009). For each bond, we compute daily bond log returns for the days covered by the event window as follows:

$$Bond\ Return_t = \frac{\log(P_t + AI_t + C)}{\log(P_{t-1} + AI_{t-1})}$$

where AI is accrued interest, P is the clean price of the bond, and C is equal to the coupon payment if it falls within the period considered. If a bond does not trade on a given day, we use stale prices. This approach does not introduce significant measurement error since the computation of cumulative returns only requires that bonds trade sufficiently close to the boundaries of the event window, which is a condition that we impose.

We obtain daily abnormal bond returns by subtracting average bond returns on a portfolio of bonds with similar bond ratings. To ensure that we compute normal returns using a sufficiently large number of bonds, we constructed four rating categories: AAA–A, BBB, BB, and B–D. Specifically, we formed size-weighted (by par value outstanding) index returns by aggregating daily bond returns in each category. Notice that for the construction of normal index returns, we used only bond returns computed with prices occurring on adjacent trading days.

We use the same event window for the computation of an M&A bond premium as the one used for calculation of an M&A equity premium, i.e., $(-63; \min(+42, \text{resolution date}))$. We choose this event

window to be able to relate bond premia to equity premia in the subsequent analysis. It is also consistent with prior studies (e.g., Billet et al., 2004), which use the month before an M&A announcement and the month of announcement to account for potential leakage of information prior to the bid. We computed cumulative abnormal bond returns (CAR) as the sum of daily abnormal bond returns over the event window.

We are able to construct abnormal returns for 501 bonds in 123 target companies. The average (median) number of bonds per deal is 4.1 (2.0). From Table 6, Panel A, the average (median) abnormal bond return is 0.36% (0.38%) which is comparable with the estimates reported by Billett et al. (2004). It is worth pointing out that there is significant variation in the reaction of target bonds to M&A bids – the standard deviation of abnormal returns is 10.01%. We have a similar number of investment-grade and non-investment-grade targets; on average, the bonds of the former show a slight abnormal decrease in value around M&A announcements, while the prices of the latter abnormally increase.

In Table 6, Panel B, we relate target bond premia to measures of dual holder equity ownership. Additionally we control for both company (institutional ownership, market capitalization, book-to-market ratio) and bond characteristics (coupon, redeemable dummy, puttable dummy, Poison Put dummy, time to maturity, liquidity); bond rating category, time, and industry fixed effects are also included. All variables are described in the Appendix. In order to mitigate the impact of small bond issues, we also present results of regressions with observations weighted by par amount outstanding.

The results show a strong positive relation between measures of dual holder equity ownership and target abnormal bond returns around M&As. A one-standard-deviation larger DEO (DEO-Adj) is related to 3.75% (3.15%) larger bond premia for equally weighted regression analysis and 5.24% (3.90%) for issue-size-weighted analysis.

As before, we expect that the relationship between dual holder ownership and bond premia should be stronger when dual holders have more to gain from appreciation of their bond stakes. In Table 7, we interact dual holder ownership with High Bond Exposure and Low Bond Exposure dummies (Panel A) and Investment Grade and Junk dummies (Panel B).

We find that bond returns are most strongly related to dual holder equity ownership when dual holders' bond stakes constitute a large proportion of their overall exposure to the firm. Additionally, dual holder ownership positively affects bond premia only for non-investment-grade bonds. Since investment-grade bonds are barely appreciating in value and, in fact, are often likely to abnormally decline in price following an M&A bid, the relation between dual holder ownership and bond premia for these bonds is negative, though statistically insignificant.

The positive relationship between dual holder equity ownership and abnormal bond returns around M&As suggests equity ownership is helpful for protecting bondholder interests just as a covenant would do. In Table 7, Panel C, we consider one such covenant – a poison put provision. A poison put protects bondholders by allowing them to demand an early repayment should a change in control take place. We would therefore expect that dual holder ownership should matter most when the bond is not protected by a poison put provision.

We find that dual holder ownership has a large positive effect on abnormal bond returns when bonds are not protected by poison puts. A one-standard-deviation larger DEO (DEO-Adj) is related to 3.71% (3.19%) larger bond premia for equally weighted regression analysis and 5.20% (3.96%) for issue-size-weighted analysis. In contrast, when a poison put provision is in place, this relationship is neither statistically significant nor economically important.

Overall, the results on the relationship between dual holder equity ownership and abnormal stock and bond returns in M&As are consistent with the idea that affiliates of financial conglomerates do not act independently, but rather take into account the group's overall exposure to the target when making their decisions.

4.3. Relation between Target Equity Premia and Abnormal Bond Returns Conditional on Dual Holder Ownership

If dual holders' affiliates coordinate their actions and are willing to accept a lower equity premium when their debt stake appreciates more, we should observe a negative correlation between abnormal bond

and equity returns in deals with a large presence of dual holders. Note that although prior results demonstrate that larger dual holder equity ownership is related to lower equity premia and larger abnormal bond returns, this does not necessarily imply a negative relationship between the two, but rather that this correlation becomes less positive. We now explore this conjecture directly.

In Table 8 we present the results of regressions of M&A equity premium on abnormal bond return. Additionally, we control for company size, book-to-market, and leverage augmented with time and industry fixed effects. Since our main focus is on the relationship between equity premium and abnormal bond return, we use a limited number of control variables; the inclusion of additional company or bond characteristics does not affect our results.

We find that, unconditionally, abnormal bond and equity returns around M&As are positively correlated, though this relationship is not significant at the conventional levels.

The results, however, are drastically different once we condition on the degree of dual holder equity ownership. In deals with above-average dual holder equity ownership, bond returns are negatively related to equity premia: a one-percentage point larger abnormal bond return is associated with a 0.56 percentage point lower equity premium. The opposite is true for deals with below-average dual holder ownership: here, bond and equity returns are strongly positively related. A one-percentage point larger abnormal bond return is related to a 0.97 larger equity abnormal return. The results are also statistically significant.

These findings suggest that abnormal bond and equity returns in M&As should not be considered in isolation. Instead, shareholder incentives jointly determine the changes in value of different securities issued by the target company.

4.4. Mutual Fund Voting in M&As

Prior results suggest that while pure shareholders in the target companies are interested in receiving the highest possible premium on their investment, institutional shareholders with bond ownership may be willing to sacrifice part of this equity premium if their bond stake appreciates more. This suggests a potential conflict of interest between those shareholders who hold only shares in the target and dual

holders. The former may want to strike down some mergers, while the latter might like such mergers if they benefit enough from the appreciation of their bond positions. We explore this conjecture by investigating mutual fund voting in M&A deals.

Similar to Matvos and Ostrovsky (2008), our data was collected from the N-PX and N-PX/A disclosure forms that mutual funds have been required to file with the Securities and Exchange Commission since the beginning of 2003. The forms contain records of individual mutual fund votes in shareholder meetings; our particular interest is in their voting on merger proposals.¹⁰

We downloaded all N-PX and N-PX/A filings between April 2004 and December 2009 and parsed the documents to identify mentions of target companies in conjunction with merger proposals. For each mutual fund, we collected the vote cast in the proposal. Each mutual fund was then matched to a corresponding financial conglomerate and its aggregate ownership of target bonds and equity. Henceforth, we define dual ownership at the conglomerate level. We also restrict our analysis to pure equity funds; this allows us to cleanly separate conglomerate's equity ownership in the target from its bond ownership.

The resulting sample consists of 2,625 mutual fund votes cast in 234 M&A proposals; the votes are cast by 895 mutual funds, which belong to 34 financial conglomerates.

In executing our analysis of mutual fund voting, we follow Matvos and Ostrovsky (2008). The descriptive statistics for the mutual fund voting data are presented in Table 9, Panel A. Similar to Matvos and Ostrovsky (2008), we find that mutual funds overwhelmingly support merger proposals: the average percentage of votes cast in favor of the deal is 90.78%.

However, when we split mutual funds into those affiliated with dual holding conglomerates and those which are not, we see significant differences in their voting patterns. In particular, dual holders are much more likely to be supportive of the mergers (95.80%) than non-dual holders (87.04%). Moreover, dual holders with larger (above sample median) stakes are even more likely to go along with the proposals.

¹⁰ There is also a commercially available data on mutual fund votes provided by ISS Voting Analytics. We compared ISS data to our hand-collected data and found that we would not be able to improve on the size of our sample or its quality by using ISS data instead.

This supports our intuition that, since dual holders stand to benefit from appreciation of both their equity and debt stakes in the target, they are more eager to support the deal.

We further explore this idea in the subsequent panels of Table 9. We present results of linear probability models (Panels B and C) and probit regressions (Panels D and E) relating mutual fund voting to dual holder equity ownership. We consider two measures of dual holder equity ownership defined at the conglomerate level. The first one is a Dual Holder dummy which takes the value of one if a mutual fund belongs to a dual holding financial group and zero otherwise. The second one is DH Ownership which is equal to conglomerate's aggregate equity ownership (in terms of the fraction of shares outstanding) in the target if a mutual fund belongs to a dual holding financial group and zero otherwise.

We use different combination of target and financial conglomerate fixed effects across specifications. Our analysis is executed at the mutual fund level rather than the financial conglomerate level as in 28.40% of the cases when several mutual funds belonging to the same conglomerate did not uniformly support the merger proposal, they cast diverging votes, i.e., some of them voted in favor of the proposal and some voted against it or abstained. This suggests that even though the voting decisions of funds within the same group are highly correlated, there is still some discretion at the level of individual funds.

To account for the correlation of decisions among related mutual funds, in some specifications we cluster standard errors at the conglomerate level (as well as the target firm level). Panels B and D equally weigh mutual fund votes. In Panels C and E, we weigh observations by the inverse by the number of mutual funds that belong to the same conglomerate.

We find that dual holders are considerably less likely to vote against the merger: for example, from specification (1) in Panel D (Panel E) we observe that the probability of voting "Yes" is 6.23% (4.29%) higher for dual holders than for pure shareholders. To put this into perspective, the unconditional probability that a vote supports a merger agreement is 90.78%.

When we turn our attention to the size of equity ownership, we observe that dual holder equity ownership is economically and statistically strongly related to the likelihood that a fund will vote in favor of the deal. From the last specification in Panel D, a one-standard-deviation larger equity ownership by a

dual holding financial conglomerate is related to a 4.31% higher likelihood of an affiliated mutual voting in support of the merger.

We then explore whether dual holders are more inclined to support merger proposals when their bond ownership in the target is large and the target's credit rating is low. In Table 10 we interact equity ownership by dual holder with High Bond Exposure and Low Bond Exposure dummies (Panel A) and the Investment Grade and Junk dummies (Panel B) and relate them to mutual fund voting.

As before, the results are most pronounced when dual owners have large debt stakes in the target. Additionally, the positive association between dual holder equity ownership and voting in favor of the deal is driven by deals with non-investment-grade targets. Importantly, when target bonds are of investment grade quality, groups' dual holder ownership is unrelated to how individual equity funds vote. This result is consistent with the findings of Billett et al. (2004) that investment-grade bonds' abnormal returns are close to zero. Hence, as dual holders derive no additional gains on the debt side they have no additional incentive to support a merger.

The results of mutual fund voting provide direct evidence of coordination within dual holding financial conglomerates in M&As. Indeed, if equity funds made their decisions independently, the fact that affiliated entities also hold target debt would have no bearing on funds' willingness to approve the merger proposal. Instead, we observe that equity funds of dual holding financial conglomerates cast their votes based on how much the conglomerate as a whole would benefit from target debt appreciation.

Additionally, these results help to alleviate concerns over the potential endogeneity of our findings on stock and bond returns. Indeed, it is highly unlikely that any unobservable firm or investor characteristic could induce equity holding mutual funds to be more or less supportive of a merger conditional on the degree of appreciation of bond stake held by affiliated bond funds.

4.5. Dual Holders' Extra Return from Holdings Target Bonds

In M&As, an acquirer has to provide target shareholders a premium for their voting rights in the company to incentivize them to relinquish control. If target shareholders also hold other securities issued

by the target, any abnormal appreciation of their holdings of these securities could be seen as an indirect compensation for tendering their shares. We therefore estimate the additional gain or loss that dual holders derive from holding target's bonds, per unit of voting rights that they tender in M&As.

Bond Derived Compensation (BDC) is defined as the abnormal dollar value appreciation of a dual holder's bond stake in the target around the bid announcement scaled by the value of its equity position in the target before the announcement. In particular, BDC is calculated as follows:

$$BDC = \frac{VBond\ Stake_{-63} \times Abnormal\ Bond\ Return_{(-63;+42)}}{VEquity\ Stake_{-63}}$$

where abnormal bond return is the value-weighted abnormal bond return across all available target bonds. BDC approximates the indirect compensation to dual holders (via appreciation of their bond stake) for tendering their voting rights in the merger.

We present the descriptive statistics of BDC in Table 11. We report the average BDC both at the investor (dual holder) and at the company level. In the latter case, BDC is value-weighted by the size of the equity position of each dual holder in the target. To mitigate the effect of small shareholders, we include only investors with at least \$100,000 equity position in the target. There are 4,315 dual holder observations in 180 available target companies; the sample size is constrained by bond return data availability.

We find that dual holders gain an average 1.66% extra return per unit of voting rights from their holdings of target debt. When we aggregate BDC at the firm level, the extra return goes up to 8.51%; the large increase comes from the mitigation of impact of dual holders with smaller equity stakes. These estimates suggest that extra gains from appreciation of bond stakes are economically relevant.

Additionally, we split the samples by the size of the target equity premium and the bond-to-total investment ratio of dual holders. We anticipate that BDC should be larger when the equity premium is lower and when dual holders' exposure to the target's debt is relatively large. Indeed, we find that when equity premium is above the sample median, dual holders on average derive 2.12% lower BDC than when equity premium is below the median for BDC calculated at the investor level (6.89% lower when BDC is

aggregated at firm level). Likewise, when dual holders' bond-to-total investment in the target ratio is large, the indirect compensation for holding target bonds is 3.30% (16.86%) larger than when this ratio is low.

These results demonstrate that dual holding financial conglomerates derive significant economic gains from coordinating their decisions across their affiliates in M&As. Moreover, our results provide evidence that wealth is redistributed from investors in dual holders' equity funds to investors in dual holders' bond funds.

5. Conclusion

The joint holding of debt and equity of target companies by the same financial institutions has profound implications for the behavior of target shareholders around M&A events. Since dual holders benefit from appreciation of both their equity and debt positions, they are willing to accept a lower equity premium and cast their votes in support of the deal. The presence of dual holders as creditors with voting rights in the target company also protects the interests of bondholders and results in a larger price increase of target bonds.

Our research has several corporate finance implications. First, the conflict between shareholders and debt holders might not be as acute as previously thought. In a large number of publicly listed companies, many investors hold positions in both types of securities. Second, conflicts among shareholders can arise along dimensions other than size of their equity stake. Lastly, returns to investors in corporate events cannot be determined by considering returns on individual securities, but requires a portfolio approach where the holdings of investors across different securities are taken into account.

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Appendix

Variable	Description of Variable and Source of Data
Dual Ownership	A dummy that takes the value of one if a financial institution is a dual holder and zero otherwise; a financial conglomerate is a dual holder if it simultaneously holds – via its affiliates – both company equity and debt (bonds) and the par value of its bond position represents between 5% and 95% of its aggregate (debt plus equity) position in the company.
DEO	Fraction of company total shares outstanding held by dual holders. Estimated from Spectrum 13F.
DEO-Adj	Fraction of company total shares outstanding held by dual holders scaled down by a firm's total institutional ownership. Source: Spectrum 13F.
Bond-to-Total	The ratio of par value of company bonds held by dual holders divided by their total investment in the company (i.e., sum of par value of bonds and market value of equity held by dual holders). Sources: Spectrum 13F and Lipper eMAXX.
Investment Grade (IG)	A dummy which takes the value of one if a long-term company S&P bond rating is BBB- or above and zero otherwise. The Junk dummy takes the value of one if the bond rating is below BBB- or missing.
Institutional Ownership (IO)	Year-end fraction of shares outstanding owned by institutional fund managers. Source: Spectrum 13F.
Equity Premium	Four-factor adjusted abnormal return on a company stock over a (-63; +42) day window around an M&A announcement. Source: CRSP.
Abnormal Bond Return	The return on a target bond net of return on a portfolio of bonds with similar bond ratings over a (-63;+42) day window around an M&A announcement. Source: TRACE.
Market Capitalization (MarketCap)	Year-end market value of company equity. Source: CRSP.
Book-to-Market (B/M)	The ratio of book value of equity to its market value. Source: Compustat.
Sales Growth	The percentage growth in sales from the past year. Source: Compustat.
Leverage	The ratio of long-term debt to the total assets of the firm. Source: Compustat.
Cash	The ratio of cash holdings to total assets. Source: Compustat.
Dividend Yield	The ratio of cash dividend to total assets. Source: Compustat.
ROE	The ratio of earnings to average equity for the prior fiscal year. Source: Compustat.
Leverage	Ratio of long-term debt to the total assets of the firm. Source: Compustat.
Past Year Return	A return on a company stock over the previous calendar year. Source: CRSP.
Residual Volatility	A standard deviation of daily residual returns from the four-factor adjusted model estimated over the prior calendar year. Source: CRSP.
Liquidity	Sum of the monthly share volume over the previous year divided by the number of shares outstanding at the end of the year. Source: CRSP.

Table 1. Descriptive Statistics

We present descriptive statistics on the sample of Compustat firms covered in the Lipper eMAXX bond ownership database (full sample) and the subsample of M&A targets with available bond ownership data. The data covers the period between January, 1999 and March, 2009. Key variables of interest are Dual Equity Ownership (DEO), the fraction of company total shares outstanding held by dual holders, and Dual Equity Ownership Adjusted (DEO-Adj), the fraction of shares outstanding held by dual holders scaled down by the total institutional equity ownership. Bond-to-Total is the ratio of par value of company bonds held by dual holders divided by their total investment in the company (i.e., the sum of the par value of the bonds and the market value of equity held by dual holders). All variables are described in the Appendix. There are 6,399 firm-year observations in a full sample; the sample of M&A targets consists of 536 observations.

	<u>Full Sample</u>			<u>M&A Targets</u>		
	mean	median	stdev	mean	median	stdev
Target Equity Premium				0.161	0.168	0.424
DEO	0.102	0.060	0.115	0.099	0.058	0.113
DEO-Adj	0.155	0.101	0.163	0.158	0.100	0.165
Bond-to-Total	0.356	0.271	0.304	0.566	0.631	0.316
Investment Grade	0.333	0.000	0.471	0.225	0.000	0.418
Institutional Ownership	0.649	0.696	0.193	0.627	0.687	0.211
Market Capitalization (millions)	11,349.120	2,005.160	32,527.570	6,078.490	1,469.850	11,700.400
B/M	0.606	0.483	0.465	0.669	0.523	0.535
Cash	0.106	0.056	0.133	0.095	0.052	0.118
Leverage	0.248	0.231	0.164	0.283	0.256	0.175
Dividend Yield	0.009	0.000	0.018	0.006	0.000	0.017
ROE	0.058	0.090	0.494	0.057	0.075	0.708
Sales Growth	0.115	0.089	0.263	0.132	0.096	0.262
Past Year Return	0.106	0.099	0.435	0.035	0.053	0.450
Residual Volatility	0.004	0.003	0.004	0.005	0.003	0.004
Stock Liquidity	1.788	1.284	1.551	1.852	1.315	1.669
Industry Concentration	0.082	0.053	0.080	0.081	0.047	0.081

Table 2. Dual Holder Equity Ownership over Time

We present descriptive statistics of dual holder equity ownership over time. The data covers the period between January 1999 and March 2009. Dual Equity Ownership (DEO) is the fraction of total company shares outstanding held by dual holders. Dual Equity Ownership Adjusted (DEO-Adj) is the fraction of shares outstanding held by dual holders scaled down by the total institutional equity ownership. Yearly averages are constructed from quarterly holdings.

	<u>Full Sample</u>				<u>M&A Targets</u>			
	<u>DEO</u>		<u>DEO-Adj</u>		<u>DEO</u>		<u>DEO-Adj</u>	
	mean	median	mean	median	mean	median	mean	median
1999	0.069	0.036	0.122	0.071	0.060	0.047	0.118	0.073
2000	0.078	0.039	0.134	0.075	0.097	0.042	0.163	0.088
2001	0.097	0.053	0.159	0.104	0.087	0.062	0.162	0.111
2002	0.108	0.069	0.171	0.121	0.097	0.091	0.183	0.158
2003	0.108	0.066	0.164	0.106	0.114	0.115	0.161	0.173
2004	0.113	0.071	0.158	0.103	0.096	0.064	0.173	0.090
2005	0.108	0.063	0.148	0.091	0.106	0.059	0.142	0.100
2006	0.107	0.063	0.143	0.090	0.135	0.074	0.186	0.116
2007	0.112	0.072	0.143	0.096	0.112	0.062	0.161	0.093
2008	0.123	0.091	0.158	0.121	0.125	0.096	0.172	0.169
2009	0.127	0.095	0.172	0.133	0.126	0.086	0.177	0.160

Table 3. Dual Holders among Top Shareholders

We present the data the presence of dual holders among top shareholders in the full sample of Compustat firms covered in the Lipper eMAXX bond ownership database and in a subsample of M&A targets. The data covers the period between January 1999 and March 2009. Dual Equity Ownership (DEO) is the fraction of total company shares outstanding held by dual holders. Median values of DEO are estimated on quarterly basis for the full sample and on yearly basis for the sample of M&A targets.

	Full Sample		M&A Targets	
	mean	median	mean	median
<u>Top 5 Shareholders</u>				
all	1.012	1.000	1.017	1.000
below median DEO	0.362	0.000	0.384	0.000
above median DEO	2.235	2.000	2.271	2.000
<u>Top 10 Shareholders</u>				
all	1.788	1.000	1.797	1.000
below median DEO	0.727	0.000	0.754	0.000
above median DEO	3.773	3.000	3.864	4.000

Table 4. Dual Holder Equity Ownership and M&A Equity Premium

We report the results of multivariate regressions of the relationship between dual holder equity ownership and M&A equity premium. The equity premium is calculated as an abnormal return on the company stock relative to a four-factor model over a $(-63; \min(+42, \text{resolution date}))$ trading day window around an M&A bid announcement (Schwert, 2000). Dual Equity Ownership (DEO) is the fraction of company total shares outstanding held by dual holders. Dual Equity Ownership Adjusted (DEO-Adj) is the fraction of shares outstanding held by dual holders scaled down by the total institutional equity ownership. To ensure that the measurement date for dual holder equity ownership does not overlap with the equity premium estimation window, we use dual holder ownership at the end of the last quarter that is at least two months before the bid announcement date. Deal characteristics include a merger dummy, a cash deal dummy, and a hostile bid dummy. All variables are described in the Appendix. Standard errors are clustered at the industry and time level. There are 536 M&A bids in our sample.

	estimate	t-stat	estimate	t-stat	estimate	t-stat	estimate	t-stat
DEO	-0.419	(-2.49)	-0.408	(-2.42)				
DEO-Adj					-0.242	(-1.95)	-0.242	(-1.90)
IO	0.340	(3.73)	0.337	(3.67)	0.274	(2.91)	0.272	(2.91)
log(MarketCap)	-0.031	(-1.65)	-0.027	(-1.38)	-0.032	(-1.64)	-0.028	(-1.43)
log(B/M)	0.037	(0.99)	0.036	(0.98)	0.036	(0.97)	0.036	(0.96)
Cash	-0.016	(-0.07)	-0.039	(-0.17)	-0.007	(-0.03)	-0.032	(-0.14)
Leverage	0.112	(0.83)	0.109	(0.81)	0.110	(0.81)	0.107	(0.79)
Dividend Yield	1.735	(1.45)	1.946	(1.64)	1.699	(1.42)	1.916	(1.61)
ROE	-0.056	(-2.31)	-0.059	(-2.38)	-0.054	(-2.26)	-0.057	(-2.34)
Sales Growth	-0.014	(-0.14)	-0.024	(-0.24)	-0.012	(-0.12)	-0.021	(-0.22)
Past Year Return	-0.164	(-2.92)	-0.166	(-2.98)	-0.164	(-2.94)	-0.167	(-3.00)
IdVol	-0.957	(-0.10)	-1.136	(-0.11)	-1.245	(-0.12)	-1.377	(-0.14)
Liquidity	-0.008	(-0.51)	-0.005	(-0.34)	-0.008	(-0.50)	-0.005	(-0.33)
Ind. Concentration	-0.092	(-0.43)	-0.048	(-0.22)	-0.122	(-0.57)	-0.075	(-0.34)
Deal Characteristics	No		Yes		No		Yes	
Industry Dummies	Yes		Yes		Yes		Yes	
Time Dummies	Yes		Yes		Yes		Yes	
Adj R ²	0.101		0.100		0.099		0.098	

Table 5. M&A Equity Premium: Conditioning on Dual Holder Bond Ownership and Target Bond Rating

We report the results of multivariate regressions of the relationship between dual holder equity ownership and M&A equity premium conditioning on dual holder bond ownership (Panel A) and target bond rating (Panel B). The equity premium is calculated as an abnormal return on the company stock relative to a four-factor model over a $(-63; \min(+42, \text{resolution date}))$ trading day window around an M&A bid announcement (Schwert, 2000). Dual Equity Ownership (DEO) is the fraction of company total shares outstanding held by dual holders. Dual Equity Ownership Adjusted (DEO-Adj) is the fraction of shares outstanding held by dual holders scaled down by the total institutional equity ownership. To ensure that the measurement date for dual holder equity ownership does not overlap with the equity premium estimation window, we use dual holder ownership at the end of the last quarter that is at least two months before the bid announcement date. High Bond Exposure, HBE (Low Bond Exposure, LBE) dummy takes the value of one if bond-to-total investment ratio of dual holders in the company is above (below) sample average and zero otherwise. Investment Grade (Junk) dummy takes the value of one if a long-term company S&P bond rating is BBB- or above (below BBB- or missing). Deal characteristics include a merger dummy, a cash deal dummy, and a hostile bid dummy. All variables are described in the Appendix. Standard errors are clustered at the industry and time level. We also report the F-test for the difference in coefficients between Dual Ownership \times HBE and Dual Ownership \times LBE (Panel A) and Dual Ownership \times Junk and Dual Ownership \times Investment Grade (Panel B). There are 536 M&A bids in our sample.

Panel A: By Dual Holder Bond Ownership

	Estimate	t-stat	estimate	t-stat	estimate	t-stat	estimate	t-stat
DEO \times HBE	-0.520	(-2.73)	-0.504	(-2.62)				
DEO \times LBE	0.226	(0.39)	0.193	(0.33)				
DEO-Adj \times HBE					-0.320	(-2.60)	-0.318	(-2.58)
DEO-Adj \times LBE					-0.023	(-0.06)	-0.034	(-0.09)
HBE	0.051	(0.98)	0.050	(0.93)	0.042	(0.79)	0.042	(0.79)
Controls	Yes		Yes		Yes		Yes	
Deal Characteristics	No		Yes		No		Yes	
Industry Dummies	Yes		Yes		Yes		Yes	
Time Dummies	Yes		Yes		Yes		Yes	
Adj R ²	0.101		0.099		0.099		0.097	
F-test	3.32		3.26		2.89		2.92	
	(0.07)		(0.08)		(0.09)		(0.09)	

Panel B: By Target Bond Rating

	Estimate	t-stat	estimate	t-stat	estimate	t-stat	estimate	t-stat
DEO \times Junk	-0.479	(-2.93)	-0.471	(-2.85)				
DEO \times InvGrade	0.054	(0.34)	0.113	(0.40)				
DEO-Adj \times Junk					-0.286	(-2.35)	-0.288	(-2.29)
DEO-Adj \times InvGrade					0.018	(0.19)	0.049	(0.24)
Investment Grade	0.080	(1.49)	0.088	(1.58)	0.064	(1.17)	0.070	(1.24)
Controls	Yes		Yes		Yes		Yes	
Deal Characteristics	No		Yes		No		Yes	
Industry Dummies	Yes		Yes		Yes		Yes	
Time Dummies	Yes		Yes		Yes		Yes	
Adj R ²	0.102		0.101		0.102		0.101	
F-test	4.04		3.93		3.63		3.68	
	(0.05)		(0.06)		(0.06)		(0.06)	

Table 6. Dual Holder Equity Ownership and M&A Abnormal Bond Return

We report the results of multivariate regressions of the relationship between dual holder equity ownership and M&A abnormal bond return. We obtain daily abnormal bond returns by taking the difference between the M&A target bond return and the par-value outstanding weighted average bond returns on a portfolio of bonds with similar bond ratings. We construct four rating categories: AAA–A, BBB, BB, B–D, which ensures that we compute normal returns using a sufficiently large number of bonds. We use the same event window for the computation of the M&A bond premium as the one we use to calculate the M&A equity premium, i.e., (−63; min(+42, resolution date)). In Panel A, we present the descriptive statistics of abnormal bond returns. Panel B reports the results of multivariate regression analysis. We present the results of equally-weighted regressions (EW) as well as par-value outstanding weighted regressions (PAW); the latter mitigate the impact of low volume issues. Dual Equity Ownership (DEO) is the fraction of company total shares outstanding held by dual holders. Dual Equity Ownership Adjusted (DEO-Adj) is the fraction of shares outstanding held by dual holders scaled down by the total institutional equity ownership. All variables are described in the Appendix. Given that the TRACE dataset of bond transactions provides a limited coverage over our sample period, we were able to construct abnormal returns for 501 bonds of 123 target companies.

Panel A: Descriptive Statistics of Abnormal Bond Returns

	mean	median	stdev
Full sample (123 targets, 501 bonds)			
Abnormal Bond Return	0.004	0.004	0.100
Investment Grade Bonds (61 targets, 287 bonds)			
Abnormal Bond Return	-0.013	0.003	0.048
Junk Bonds (62 targets, 214 bonds)			
Abnormal Bond Return	0.006	0.005	0.142

Panel B: Regression Analysis

	EW		PAW		EW		PAW	
	estimate	t-stat	estimate	t-stat	estimate	t-stat	estimate	t-stat
DEO	0.273	(3.32)	0.411	(4.76)				
DEO-Adj					0.196	(3.29)	0.277	(4.59)
IO	0.164	(3.61)	0.182	(3.64)	0.244	(5.94)	0.312	(7.64)
log(MarketCap)	-0.033	(-3.82)	-0.034	(-3.78)	-0.032	(-3.75)	-0.030	(-3.45)
log(B/M)	0.026	(1.50)	0.047	(2.74)	0.028	(1.67)	0.055	(3.22)
Coupon	-0.001	(-0.23)	0.003	(0.75)	-0.001	(-0.29)	0.003	(0.68)
Redeemable	-0.003	(-0.25)	0.006	(0.45)	-0.003	(-0.24)	0.007	(0.51)
Puttable	-0.012	(-0.37)	-0.014	(-0.42)	-0.012	(-0.36)	-0.013	(-0.37)
PoisonPut	-0.003	(-0.22)	0.014	(1.09)	-0.001	(-0.11)	0.017	(1.32)
Time to Maturity	0.000	(-0.45)	0.000	(-0.05)	0.000	(-0.44)	0.000	(-0.01)
Liquidity	0.029	(0.96)	0.013	(0.45)	0.030	(1.00)	0.016	(0.55)
Rating Dummies	Yes		Yes		Yes		Yes	
Industry Dummies	Yes		Yes		Yes		Yes	
Time Dummies	Yes		Yes		Yes		Yes	
Adj R ²	0.339		0.393		0.339		0.399	

Table 7. M&A Abnormal Bond Return: Conditioning on Dual Holder Bond Ownership and Target Bond Rating

We report the results of multivariate regressions of the relationship between dual holder equity ownership and M&A abnormal bond return conditional on dual holder bond ownership (Panel A), target bond rating (Panel B), and the existence of a poison put provision (Panel C). We obtain daily abnormal bond returns by taking the difference between the M&A target bond return and the par-value outstanding weighed average bond returns on a portfolio of bonds with similar bond ratings. We construct four rating categories: AAA–A, BBB, BB, B–D, which ensures that the we compute normal returns using a sufficiently large number of bonds. We use the same event window for the computation of the M&A bond premium as the one used for calculation of the M&A equity premium, i.e., $(-63; \min(+42, \text{resolution date}))$. We present the results of equally-weighted regressions (EW) as well as par-value outstanding weighted regressions (PAW); the latter mitigates the impact of low volume issues. Dual Equity Ownership (DEO) is the fraction of company shares outstanding held by dual holders. Dual Equity Ownership Adjusted (DEO-Adj) is the fraction of shares outstanding held by dual holders scaled down by the total institutional equity ownership. The High Bond Exposure, HBE (Low Bond Exposure, LBE) dummy takes the value of one if bond-to-total investment ratio of dual holders in the company is above (below) sample average and zero otherwise. Investment Grade (Junk) dummy takes the value of one if a long-term company S&P bond rating is BBB- or above (below BBB- or missing. The Poison Put (No Poison Put) dummy takes the value of one if a bond has (does not have) a poison put covenant and zero otherwise. All variables are described in the Appendix. We also report the F-test for the difference in coefficients between Dual Ownership \times HBE and Dual Ownership \times LBE (Panel A), Dual Ownership \times Junk and Dual Ownership \times Investment Grade (Panel B), and Dual Ownership \times Poison Put and Dual Ownership \times No Poison Put (Panel C). There are 501 individual bonds for 123 M&A targets.

Panel A: By Dual Holder Bond Ownership

	<u>EW</u>		<u>PAW</u>		<u>EW</u>		<u>PAW</u>	
	estimate	t-stat	estimate	t-stat	estimate	t-stat	estimate	t-stat
DEO \times HBE	0.299	(3.33)	0.393	(4.22)				
DEO \times LBE	0.027	(0.18)	0.062	(0.25)				
DEO-Adj \times HBE					0.199	(3.35)	0.286	(4.78)
DEO-Adj \times LBE					0.114	(1.50)	0.119	(1.02)
HBE	-0.031	(-1.19)	-0.014	(-0.46)	-0.013	(-0.45)	0.004	(0.24)
Controls	Yes		Yes		Yes		Yes	
Rating Dummies	Yes		Yes		Yes		Yes	
Industry Dummies	Yes		Yes		Yes		Yes	
Time Dummies	Yes		Yes		Yes		Yes	
Adj R ²	0.341		0.406		0.342		0.400	
F-test	3.80		5.50		4.05		2.65	
	(0.06)		(0.02)		(0.05)		(0.10)	

Panel B: By Target Bond Rating

	<u>EW</u>		<u>PAW</u>		<u>EW</u>		<u>PAW</u>	
	estimate	t-stat	estimate	t-stat	estimate	t-stat	estimate	t-stat
DEO × Junk	0.453	(4.95)	0.744	(8.12)				
DEO × InvGrade	-0.031	(-0.28)	-0.152	(-1.40)				
DEO-Adj × Junk					0.286	(4.19)	0.478	(7.01)
DEO-Adj × InvGrade					-0.057	(-0.71)	-0.045	(-0.55)
Controls	Yes		Yes		Yes		Yes	
Rating Dummies	Yes		Yes		Yes		Yes	
Industry Dummies	Yes		Yes		Yes		Yes	
Time Dummies	Yes		Yes		Yes		Yes	
Adj R ²	0.362		0.464		0.347		0.431	
F-test	17.47		60.84		6.99		32.40	
	(0.01)		(0.01)		(0.01)		(0.01)	

Panel C: By Existence of Poison Put Provision

	<u>EW</u>		<u>PAW</u>		<u>EW</u>		<u>PAW</u>	
	estimate	t-stat	estimate	t-stat	estimate	t-stat	estimate	t-stat
DEO × No Poison Put	0.265	(2.07)	0.418	(4.44)				
DEO × Poison Put	0.110	(1.01)	0.063	(0.53)				
DEO-Adj × No Poison Put					0.189	(2.99)	0.293	(4.37)
DEO-Adj × Poison Put					0.071	(1.19)	0.043	(0.44)
Poison Put	0.018	(0.69)	0.097	(3.53)	0.005	(0.16)	0.081	(2.44)
Controls	Yes		Yes		Yes		Yes	
Rating Dummies	Yes		Yes		Yes		Yes	
Industry Dummies	Yes		Yes		Yes		Yes	
Time Dummies	Yes		Yes		Yes		Yes	
Adj R ²	0.363		0.465		0.349		0.433	
F-test	2.66		13.22		2.59		7.95	
	(0.10)		(0.01)		(0.01)		(0.01)	

Table 8. Dual Holder Ownership and the Relation between M&A Equity Premium and Abnormal Bond Return

We report the results of regressions relating M&A equity premium to abnormal bond return. The dependent variable is the M&A equity premium. The High DEO/High DEO-Adj (Low DEO / Low DEO-Adj) dummies take the value of one if DEO/DEO-Adj is above (below) the median for the M&A sample. Control variables include the logarithm of market capitalization, the logarithm of book-to-market value, institutional ownership, and leverage. We also control for time and industry fixed effects. Standard errors are clustered at time and industry level. We also report F-test statistics for the difference between Abnormal Bond Return \times High DEO and Abnormal Bond Return \times Low DEO. There are 501 observations.

	estimate	t-stat	estimate	t-stat	estimate	t-stat
Abnormal Bond Return	0.195	(0.69)				
\times High DEO			-0.564	(-2.30)		
\times Low DEO			0.970	(3.28)		
\times High DEO-Adj					-0.710	(-1.83)
\times Low DEO-Adj					0.623	(2.33)
High DEO			0.170	(2.13)		
High DEO-Adj					0.058	(0.62)
Controls	Yes		Yes		Yes	
Time, Industry FE	Yes		Yes		Yes	
Adj R ²	0.367		0.408		0.386	
F-test			10.07		6.53	
			(0.01)		(0.02)	

Table 9. Dual Holder Ownership and Mutual Fund Voting on Merger Proposals

We present the results of mutual fund voting on merger proposals. Mutual fund voting records are collected from N-PX and N-PX/A filings. Panel A presents descriptive statistics by the type of shareholder: dual equity owner or not. Panels B through E present the regression results. Panels B and C are linear probability regressions. Panels D and E are probits. Panels B and D equally weight mutual fund votes. In Panels C and E, we weigh observation by the inverse of the number of mutual funds that belong to the same conglomerate. Dual Holder dummy takes the value of one if a mutual fund belongs to a dual holding financial group and zero otherwise. DH Ownership is equal to conglomerate's aggregate equity ownership (in terms of the fraction of shares outstanding) in the target if a mutual fund belongs to a dual holding financial group and zero otherwise. Fixed effects (FE) and clustering are as reported in the tables. There are 2,625 mutual fund votes cast in 234 M&A proposals; they represent 895 mutual funds, which belong to 34 financial conglomerates.

Panel A: Descriptive Statistics of Mutual Fund Votes

	N	Votes in Favor (%)
All	2,625	90.780
Non-Dual Holders	1,745	87.043
Dual Holders	880	95.795
High Equity Ownership	442	96.833
Low Equity Ownership	438	94.749

Panel B: Linear Probability (equally weighted)

	estimate	t-stat	estimate	t-stat	estimate	t-stat	estimate	t-stat
Dual Holder	0.019	(2.05)						
DH Ownership			2.201	(1.84)	2.166	(6.02)	1.732	(3.76)
Deal FE	Yes		Yes		No		Yes	
Family FE	Yes		No		Yes		Yes	
Clustering	Fund Family + Deal		Deal		Fund Family		Fund Family + Deal	
Adj R ²	0.410		0.446		0.030		0.449	
F-test			3.51		19.72		12.00	
			(0.07)		(0.01)		(0.01)	

Panel C: Linear Probability (observation weighted)

	estimate	t-stat	estimate	t-stat	estimate	t-stat	estimate	t-stat
Dual Holder	0.015	(1.72)						
DH Ownership			1.509	(1.71)	1.671	(4.15)	1.037	(2.26)
Deal FE	Yes		Yes		No		Yes	
Family FE	Yes		No		Yes		Yes	
Clustering	Fund Family + Deal		Deal		Fund Family		Fund Family + Deal	
Adj R ²	0.436		0.472		0.020		0.474	
F-test			3.97		13.72		5.05	
			(0.05)		(0.01)		(0.03)	

Panel D: Probit (equally weighted)

	estimate	t-stat	ME	estimate	t-stat	ME	estimate	t-stat	ME	estimate	t-stat	ME
Dual Holder	0.744	(3.53)	0.062									
DH Ownership				37.328	(3.05)	6.854	29.005	(3.79)	4.345	28.833	(3.13)	4.645
Deal FE		Yes			Yes			No			Yes	
Family FE		Yes			No			Yes			Yes	
Clustering		Fund Family + Deal			Deal		Fund Family			Fund Family + Deal		
Adj R ²		0.416			0.366		0.063			0.399		
F-test					11.15		17.61			6.95		
					(0.01)		(0.01)			(0.01)		

Panel E: Probit (observation weighted)

	estimate	t-stat	ME	estimate	t-stat	ME	estimate	t-stat	ME	estimate	t-stat	ME
Dual Holder	0.619	(2.82)	0.046									
DH Ownership				29.149	(2.40)	4.864	22.046	(2.88)	2.853	19.474	(2.08)	2.673
Deal FE		Yes			Yes			No			Yes	
Family FE		Yes			No			Yes			Yes	
Clustering		Fund Family + Deal			Deal		Fund Family			Fund Family + Deal		
Adj R ²		0.423			0.380		0.063			0.416		
F-test					7.15		12.96			3.24		
					(0.01)		(0.01)			(0.08)		

Table 10. Mutual Fund Voting on Merger Proposals Conditioning on Dual Holder Bond Ownership and Target Bond Rating

We present the results of mutual fund voting on merger proposals conditional on dual holder bond ownership (Panel A) and target bond rating (Panel B). Mutual fund voting records are collected from N-PX and N-PX/A filings. Specifications (1) and (2) are linear probability models (LP). Specifications (3) and (4) are probits. Specifications (1) and (3) equally weight (EW) mutual fund votes. Specifications (2) and (4) weight each vote by the inverse of the number of mutual funds belonging to the same financial conglomerate. DH Ownership is equal to conglomerate's aggregate equity ownership (in terms of the fraction of shares outstanding) in the target if a mutual fund belongs to a dual holding financial group and zero otherwise. The High Bond Exposure, HBE (Low Bond Exposure, LBE) dummy takes the value of one if the bond-to-total investment ratio of dual holders in the company is above (below) sample average and zero otherwise. Investment Grade (Junk) dummy takes the value of one if a long-term company S&P bond rating is BBB- or above (below BBB- or missing). Fixed effects (FE) and clustering are as reported in the tables. We also report the F-test for the difference in coefficients between Dual Ownership \times HBE and Dual Ownership \times LBE (Panel A) and Dual Ownership \times Junk and Dual Ownership \times Investment Grade (Panel B).

Panel A: By Dual Holder Bond Ownership

	<u>LP (EW)</u>		<u>LP (OW)</u>		<u>Probit (EW)</u>			<u>Probit (OW)</u>		
	estimate	t-stat	estimate	t-stat	estimate	t-stat	ME	estimate	t-stat	ME
DH Ownership \times HBE	3.074	(5.78)	2.570	(5.43)	80.656	(8.14)	12.550	82.716	(8.22)	12.591
DH Ownership \times LBE	1.552	(2.28)	0.780	(1.50)	9.495	(1.12)	2.071	10.669	(1.15)	2.133
HBE	-0.016	(-0.87)	-0.001	(-0.03)	-0.194	(-0.79)	-0.034	-0.073	(-0.32)	-0.010
Deal FE	Yes		Yes		Yes			Yes		
Family FE	Yes		Yes		Yes			Yes		
Clustering	Fund Family + Deal		Fund Family + Deal		Fund Family + Deal			Fund Family + Deal		
Adj R ²	0.450		0.474		0.401			0.416		
F-test	6.34		7.91		12.28			11.96		
	(0.02)		(0.01)		(0.01)			(0.01)		

Panel B: By Target Bond Rating

	<u>LP (EW)</u>		<u>LP (OW)</u>		<u>Probit (EW)</u>			<u>Probit (OW)</u>		
	estimate	t-stat	estimate	t-stat	estimate	t-stat	ME	estimate	t-stat	ME
DH Ownership \times Junk	2.998	(4.73)	1.860	(3.38)	39.296	(3.04)	6.430	28.365	(2.55)	3.938
DH Ownership \times InvGrade	-0.297	(-0.49)	-0.141	(-0.20)	6.516	(0.42)	1.066	4.517	(0.26)	0.627
Investment Grade	0.003	(0.24)	0.002	(0.12)	0.880	(2.14)	0.095	0.732	(1.60)	0.072
Deal FE	Yes		Yes		Yes			Yes		
Family FE	Yes		Yes		Yes			Yes		
Clustering	Fund Family + Deal		Fund Family + Deal		Fund Family + Deal			Fund Family + Deal		
Adj R ²	0.451		0.475		0.401			0.418		
F-test	14.58		5.31		3.02			2.85		
	(0.01)		(0.03)		(0.08)			(0.10)		

Table 11. Dual Holders' Extra Compensation from Holding Target Bonds

We estimate the additional gain or loss that dual holders derive from holding the target's bonds, measured per unit of voting rights that they tender in M&As. Bond Derived Compensation (BDC) is defined as the ratio of abnormal dollar value appreciation of dual holder's bond stake in the target around the bid announcement scaled by the value of its equity position in the target before the announcement.

$$BDC = \frac{VBond\ Stake_{-63} \times Abnormal\ Bond\ Return_{(-63;+42)}}{VEquity\ Stake_{-63}}$$

BDC approximates the indirect compensation to dual holders (via appreciation of their bond stake) for tendering their voting rights in the merger. We present the average BDC at investor (financial conglomerate) level as well as at the company level; in the latter case, BDC is value weighted by the size of equity position (EP) of each dual holder. We also split the sample by equity premium and bond-to-total investment ratio by dual holders; the breakpoints determined by corresponding sample median values. Abnormal bond return is the value-weighted abnormal bond return across all available target bonds. We include only investors with at least \$100,000 equity position in the target. There are 4,315 dual holder observations in 180 available target companies.

<u>Investor level</u>					<u>Company level</u>				
full sample			t-stat	p-value	full sample			t-stat	p-value
0.017			2.98	(0.01)	0.085			2.96	(0.01)
<u>By deal's equity premium</u>					<u>By deal's equity premium</u>				
Low EP	High EP	diff	t-stat	p-value	Low EP	High EP	diff	t-stat	p-value
0.027	0.006	0.021	-1.90	(0.06)	0.123	0.054	0.069	-1.71	(-0.10)
<u>By investor's bond-to-total ratio</u>					<u>By aggregate bond-to-total ratio of target's dual holders</u>				
Low Ratio	High Ratio	diff	t-stat	p-value	Low Ratio	High Ratio	diff	t-stat	p-value
0.000	0.033	-0.033	2.96	(0.01)	0.005	0.174	-0.169	3.00	(0.01)