Advisor Lending to the Advised Acquirer during M&A:

Conflict of Interest or Last Resort Financing?

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Abstract

Previous research has shown that acquirers' M&A announcement effects, on average, become significantly positive if loan financing is involved. We find that when advisors lend to their advised acquirers during M&A deals, the syndicated loan spreads are unusually high, and the advisor-lender dual role significantly reduces the acquirers' announcement effect. This appears to reflect conflicts of interest, undermining the information production/certification role of loan financing. However, evidence that high need for external finance justifies the expensive advisor lending supports a last-resort-financing explanation instead—investment banks act as a last resort through the advisor-lender dual role in M&A.

Keywords: M&A, Investment Banking, Advisor Lending, Conflict of Interest, Last Resort Financing

JEL classification: G14; G23; G24; G34

1. Introduction

One of the most important businesses of investment banks is intermediating between corporate acquirers (or bidders) and potential sellers (targets) in mergers and acquisitions (M&A). Large M&A deals typically require the entire complement of advisory, underwriting and financing services. However, the Glass-Steagall Act of 1933 separated commercial banks (loan financing) and investment banks (advisory and underwriting), due to concerns of conflict of interest. In view of viable universal banking elsewhere in the globalized capital markets, the Gramm-Leach-Bliley Act of 1999 enabled both commercial and investment banks in the U.S. to enter each other's businesses. As a result, while professional barriers for financing can be much lower than those for advisory, the "bulge bracket" investment banks have often played a dual role in providing both advisory and financing services in the same deals, and enjoyed the lucrative business of lending. This advisor-lender dual role can facilitate complex megadeals. But without rigorous examination, concerns about conflict of interest related to the financial industry have always been an issue (Kroszner and Strahan, 2001; Mehran and Stulz, 2007).

This paper investigates advisor lending to the advised acquirers during M&A deals. Advisor lending has recently been a pronounced phenomenon, especially in large deals. The literature has shown that the bidders' average announcement effect of M&A deals that involve loan financing are significantly positive (Bharadwaj and Shivdasani. 2003). This evidence is consistent with the information production literature of loan financing in general (Diamond, 1984; James, 1987; Lummer and McConnell, 1989). The issue here is not loan financing in general but the advisor lending, which Allen and Peristiani (2007) suggests is expensive. The literature, however, has been silent about whether expensive advisor lending is indicative of conflict of interest, or something else.

In this paper, we test two hypotheses. One is a conflict of interest hypothesis. Rajan (1992) argues that banks' informational advantage can have a dark side: banks can extract rent from their captive client firms by charging high interest rates in relationship lending. Empirical evidence from the US (Houston and James, 1996) and Japan (Wu, Sercu and Yao, 2009) find an adverse effect of bank financing on firm growth, supporting Rajan's (1992) holdup hypothesis. The asymmetric-information-based rent extraction motive can even lead to bank-led over-investment, for example, in Japan (Weinstein and Yafeh, 1998; Wu and Xu, 2005; Wu and Yao, 2012). This is different from Jensen's (1986) agency problem of free cash flows but similar in consequences, hence casting doubt on Japan's much envied main bank system before the 1990s (Kang and Stulz, 2000). Japan's experience is relevant because powerful Japanese main banks have long practiced universal banking. If the advisor lending abets acquisition-led overinvestment, so that the advisors benefit from rent sharing in corporate empire building, then there will be an undeniable conflict of interest in such relationship lending. Evidence of excessively high costs of advisor lending, adverse M&A announcement effect, and post-deal underperformance of the acquirers, would jointly support the conflict of interest hypothesis.

The competing hypothesis we propose is last resort financing. Large M&A deals require heavy financing, likely giving rise to last resort financing which refers to the source of financing at the margin. Large firms tend to obey Myers' (1984) pecking order in which the firms use internal funds first, then risky debt, and as a last resort, new equity, due to the adverse selection effect under asymmetric information on assets-in-place (Myers and Majluf, 1984). If the advised acquirer has already used up much of the capacity of new equity financing, the advisor lending in complex megadeals can be last resort financing. In a recent study, Lim, Minton and Weisbach (2014) find that high syndicated loan spreads indicate last resort financing in more general cases.

They show that the more costly source of financing has to do with financial constraints measured, for example, by the SA index of Hadlock and Pierce (2010). Hence in explaining high syndicated loan spreads, evidence for advisor lending to interact positively with the acquirer's financial constraints, or high need for extra external finance to complete the M&A deal, would support the last resort financing hypothesis.

The evidence presented in this paper is not consistent with the conflict of interest hypothesis, but support the last resort financing hypothesis. To test the two competing hypotheses, we collect a sample of 473 completed M&A deals that involve bank loan financing for the U.S. non-financial acquirers during the period of 1990-2012.

These 473 deals involve 822 syndicated loan facilities in total, and are not 100% internally cash-financed or 100% equity-financed deals. Among the 473 deals, we are able to identify 222 dual role M&A deals in which the advisors lend to their advised acquirers (we call these deals "dual-role deals" thereafter). 69% of nondual-role deals and 96% of dual-role deals occur after 2001 in our sample, suggesting that an aggressive inroad into the syndicated loan business for financing M&A deals, especially by the bidder advisors, is a recent phenomenon. To show its significance, the average dual role deal value is $3,161 million, compared with a much smaller value of $1,218 million for all advised M&A deals during the period of 1996-2009 as reported in Golubov, Petmezas and Travlos (2012).

We obtain detailed deal and takeover loan characteristics in related transactions as well as firm characteristics in SDC, Dealscan and Compustat/CRSP databases. Using a host of deal and firm characteristics in Probit regressions to explain the dual role choice in our sample of M&A deals, we find that an advisory-lender dual role is likely to occur for larger acquirers and in larger deals. Interestingly, the dual role is more likely to occur for acquirers with higher pre-deal cash

holdings relative to total assets, AcquirerCash/Asset, but less likely for those with higher pre-deal cash relative to deal value, AcquirerCash/DealV. High pre-deal cash holdings of a bidder may not indicate abundant financial slack but can mirror low pre-deal slack capacity in financing. An acquisition-ambitious bidder can reach pre-event full capacity of financing already, only to find a high need for extra external finance to complete a big-ticket deal. A bidder's pre-deal cash relative to deal value, AcquirerCash/DealV, can specifically reflect, in reverse value, such a need for extra external finance. A high need for expensive external financing can be interpreted as a sign of financial constraint (e.g., Hennessy and Whited, 2007).

We then examine the syndicated loan all-in-drawn spreads for M&A loan financing which are 224 bps on average. In our regressions to explain the loan spreads, the dual role dummy is significantly positive, controlling for a host of loan and firm characteristics which are similar to those used in Graham, Li and Qiu (2008), and for deal characteristics as well as year, industry and loan type fixed effects. For example, consistent with the literature, the loan spreads are negatively related to loan size, acquirer firm size and AcquirerZscore, and positively related to loan maturity, secured loan dummy and acquirer leverage. The main message here is that the advisor lending is significantly more expensive in M&A loan financing.

To make sure that there is convincing evidence for expensive advisor lending. We do two additional tests. We use the Heckman two-stage procedure to correct a potential selection bias due to the dual role choice. As a result, the selection bias is evident but after the correction the dual role dummy to explain the loan spreads remains significant. In the second test, we are able to show that advisor lending is unusually expensive, compared with loans that the same acquirers use for other purposes at other times during the whole sample period.

How does the market react to the unusually expensive advisory lending? We show that the acquirers' announcement effects of M&A, for example, measured by CAR[-1,1] (cumulative abnormal return for three event days), on average, are 1.4% with dual role and 3.7% without dual role in our sample, both significantly positive, consistent with the positive information production/certification literature of loan financing in M&A (Bharadwaj and Shivdasani, 2003). However, the dual and nondual role difference in the announcement effect is also significant, pointing to a relatively adverse effect of the advisor-lender dual role. In effect, we observe significantly more cases of negative CAR[-1,1]'s for the dual role bidders, 47.6%, than those for the nondual role bidders, 37.4%, making the dual role dummy significantly negative, even after controlling for a host of deal and firm characteristics in our event studies. The significant discount on a positive information production/certification role of loan financing in M&A deals seem to reflect the stock market's concern on the unusually expensive advisor lending.

The results of long-run effects of the advisor lending, however, are surprising. We examine post-deal performance of the acquirers. Within post-M&A 500 days, BHARs (buy-and-hold abnormal returns) for the dual role acquirers on average turn out to be positive, and significant in the first 250 days. Compared with the nondual role acquirers which show insignificant BHARs, the dual role acquirers show a significantly higher average BHAR by 6.1% in the first 250 days. Following a quasi-experiment design in Seru (2014) and Bena and Li (2014) by comparing with industry, size, and book-to-market-ratio matched bidders with failed advised M&A deals, the dual role acquirers always have a significantly higher average BHAR, by 19.9%, in 500 days. The failed advised M&A deals always show a significantly negative average BHAR. This sharp contrast indicates that there would be a huge loss of value-added

opportunities if the dual role bidders failed to complete their M&A deals. In short, there is even evidence for significantly positive post-deal performance of the dual role acquirers.

Long-term underperformance of acquirers has often been a focus in the literature (see the review of Betton, Eckbo and Thorburn, 2008). We use an accounting performance measure of ROA (return to assets) for a robustness check and there is also no sign of long-term underperformance of the dual role acquirers. Taken together, the results here help dispel the concerns on acquisition-led overinvestment that can be pronounced in large M&A deals (Moeller, Schlingemann and Stulz, 2005; Fu, Lin and Officer, 2013).

Finally, we show that expensive advisor lending is actually consistent with last resort financing. If the advisor lending arises as a last resort, expensive advisor lending should be pronounced mainly in financially constrained acquirers. We let the advisor-lender dual role interact with financial constraints in explaining high syndicated loan spreads. First, following Lim, Minton and Weisbach (2014), we use Hadlock and Pierce's (2010) size-and-age (SA) index as a proxy for financial constraints. It turns out that controlling for other loan spread determinants we have used, the slope estimate for the interaction of dual role dummy and the SA index is significantly positive. This result indicates that the expensive advisor lending occurs when acquirers are more financially constrained. Second, using AcquirerCash/DealV, as a context-specific variable, to replace the SA index, the conclusion remains the same. The slope estimate for the interaction between dual role dummy and AcquirerCash/DealV (which reflects, in reverse value, the deal financing deficit) is significantly negative. This suggests that expensive advisor lending occurs when bidders have high need for extra finance to complete the M&A deals, consistent with the last-resort-financing hypothesis for the expensive advisor lending.

This paper is related to the literature about the effects of dual roles played by financial institutions and professional investors. For example, Jiang, Li and Shao (2010) demonstrate that non-commercial institutional holding of both equity and debt of the same firms gives rise to better incentive alignment.

It is also related to the reputation literature regarding M&A investment banking, for example, Golubov, Petmezas, Travlos (2012) which shows top-tier investment banks do live up to better reputation for their premium services in M&As. Investment banks are active financial intermediaries especially in large M&A. Early research focuses on the deal contract structure and how investment banks are chosen to facilitate deals. For example, McLaughlin (1990, 1992) shows that contracts in M&A are structured to partially solve conflicts of interest for investment banks. Servaes and Zenner (1996) find that acquirers are more likely to rely on investment banks in more complex deals for lowering transaction costs and, to some extent, costs associated with agency conflicts and asymmetric information.

It is closely related to the literature about the importance of sources of financing around M&A events. But unlike Bharadwaj and Shivadasani (2003), which focuses on 115 loan-financed tender offers in the 1990s without loan spread analysis, we explain why advisor lending (which is concentrated after 2001) is unusually expensive. Unlike Schlingemann (2004) which examines pre-deal financing, and Allen and Peristiani (2007) which explains why advisor post-deal financing is cheaper, we focus on both loan cost and valuation effect of the advisor-lender dual role played explicitly in M&A deals. To our knowledge, this paper is the first to examine the effect of investment banks' cross-selling services in terms of advisory and lending on deal outcomes and loan contracting in M&A.

This paper also contributes to the expanding literature on specific financial institutions as a last resort. Hedge funds can, for example, through private placement of equity (Brophy, Ouimet and Sialm, 2009) and through participation in loan syndication (Lim, Minton and Weisbach, 2014), provide financing as a last resort. Our analysis of advisor dual role lending sheds new light on how financing mitigates financial constraints due to market imperfections.

The remainder of the paper proceeds as follows. Section 2 describes the data. Section 3 shows evidence for expensive advisor lending and the stock market's significantly discount, due to the dual role presence, on acquirers' positive announcement effects of M&A deals that involve bank loan financing. Section 4 provides test results to support the last resort of financing hypothesis rather than the conflict of interest hypothesis. Section 5 concludes.

2. Data

2.1 Sample Selection

We collect a sample of U.S. M&A deals that involve bank loan financing. The sample selection is in three steps. The first step is based on Securities Data Company (SDC) M&A database for deal announcement year from 1990 through 2012. We start with the M&A sample that requires: in SDC, (1) a deal's announcement day is between January 1, 1990 and December 31, 2012, (2) the acquirer is not a financial firm (SIC 6000-6999), (3) the acquiring firm's nationality is "United States", (4) the acquirer's status is "Public", (5) the deal's status is "Completed", (6) the deal is not in the form of "Repurchase", "Recapitalization", "Spinoff", "Self-tender" or "Privatization", (7) following Rau (2000), we require the deal value to be greater than one million dollars, and (8) the acquirer owns less than 50% of the target before the deal and seeks to control more than 50% after the transaction. We further exclude transactions that use 100% of

"Corporate Funds" or 100% of "Stock" as source of fund, as reported in SDC, to ensure that deals in our sample involve bank financing. The SDC database is well linked to the Compustat/CRSP databases which report firms' financial statement and stock return information, which will be used later.

The second step is based on Thomson Reuters Dealscan which reports more detailed information on syndicated loans involved in financing M&A deals. The Compustat-Dealscan linking file provided by Wharton Research Data Services (WRDS) based on Chava and Roberts (2008) enables our sample to include this detailed information on takeover loans. The M&A or takeover loans in our sample are loan facilities whose primary purpose is "Takeover", "Acquisition Line" or "Merger", as reported in Dealscan, from January 1989 to December 2013. Dealscan reports both the names of the bidder and the target firm to which the bidder borrows from its advisor(s) or others for the purpose to pay to the target. As a result, we are able to locate 3,550 loan facilities extended to 1,466 bidders to acquire 1,700 target firms (private and public).

In the third step, after selecting in the first step (a) M&A deals that involve bank financing from SDC which also reports names and, to some extent, roles of each deal's financial advisors, and identifying in the second step (b) detailed M&A loan information in Dealscan, we merge the two datasets (a) and (b). The merged sample meet these criteria: (1) the loan starting date is in the same week for the deal announcement date by the earliest and one year after the deal announcement by the latest, as majority of loans to finance M&A starts after the deal announcement, (2) the acquirer is the borrower of the M&A loan, as explicitly shown in the Compustat-Dealscan Liking file, and (3) the target's name in SDC is the same as the name of the firm to which the M&A loan is used as reported in Dealscan. To double check the matching in

(2) and (3), we read through the company names documented in SDC and Dealscan and take into consideration of nonessential differences in name formats across the two databases. Finally, we are able to locate 473 deals, which involve totally 822 loan facilities for the bidders to finance these deals. Among the 473 deals, 386 deals are advised M&A deals where bidders employ at least one financial advisor in each deal and the remaining 87 transactions are in-house M&A deals where bidders do not hire advisors.

The sample of 473 M&A deals that involve loan financing by bidders is the baseline sample of this paper. In these deals, there are investment banks that serve as both lenders and advisors to the acquirers, and we call a deal in which there is at least one advisor-lender match as a dual role deal, flagged with dummy variable, *dualrole,* equal to 1; for other cases, *dualrole* equals to 0.

The dual role identification process is a critical part of our sample selection. An advisor's lender status can be directly available from SDC which contains the Advisor Assignment Table that shows the advisor's assignment as "provided/arranged financing" as well as "financial advisors" and "fairness opinions providers", etc. Relying on SDC, we can directly identify around 100 dual role deals. But the information on the advisor's lender status in SDC seems far from complete. Fortunately, we can obtain more dual role information from Dealscan which provides the name(s) of the deal-related syndicated loan lender(s). Cross checking with the SDC Assignment Table, we manually compare the name(s) of deal advisor(s) from SDC with the name(s) of the lender(s) in Dealscan for each of the 473 deals. We end up with identifying 222

M&A deals with the dual role and the remaining 251 deals that simply involve loan financing but no dual role.[1] Below are two examples to help understand a dual role deal.

Example 1: On December 17, 2007, a company named "Ingersoll-Rand Co Ltd" (Ticker: IR) acquired "Trane Inc.". In the takeover announcement, IR employed three investment banks as its advisors: Credit Suisse, Goldman Sachs & Co., and J.P. Morgan Chase Bank. The three advisors happen to be the three lenders that arrange and provide the funding, Credit Suisse Securities LLC, Goldman Sachs Credit Partners LP, and J.P. Morgan Chase Bank NA, though their names are slightly different in format/expression in Dealscan. In the syndicated loan, J.P. Morgan is the administrative agent. First batch of the loan started in June 5, 2008.

Example 2: On March 9, 2009, Merck & Co Inc. (Ticker: MRK) acquired Schering-Plough Corp with a large transaction of $38,615 million. This announced deal is so huge that MRK employed J.P. Morgan as its advisor and at the same time attracted more than 30 banks to participate in a syndicated loan for the deal. More important, within the three large loan facilities that MRK initiated, J.P. Morgan always served as the administrative agent. First batch of the loan started on May 6, 2009, as reported in Dealscan.

2.2 Sample Description

[1] Dealscan reports a bank role as administrative agent, syndication agent, documentation agent, agent, co-agent, managing agent, lead arranger, book runner, or simply participant. Gatev and Strahan (2009) consider banks with an active role in syndicated loan as lead banks which are classified as ones not explicitly with a "participant' role. Among our 222 dual role deals, there are only two deals in which dual role banks are in the "participant' role.

Table 1 shows the sample size, mean and standard deviation (std.) for important deal, firm, and loan characteristics in our analysis that follows. The average transaction value of our full sample of 473 deals is $1,970 million. For a comparison, the average deal value of all M&A deals during the period of 1996-2009 as reported in Golubov, Petmezas and Travlos (2012) is much smaller, $1,218 million, and the number during the period of 1990-2003 as reported in Masulis, Wang and Xie (2007) is even smaller, $626 million. In effect, the average deal value is significantly larger for the 222 dual role deals (A), $3,162 million, than for the 251 deals without the dual role (B), $915 million—a significant difference. Hence megadeals are more likely to involve a dual role.

As shown in Panel A of Figure 1, the 473 deals with loan financing occur mostly after 2001. More precisely, 96% of dual-role deals and 69% of non-dual-role deals occur after 2001 in our sample. As shown in Panel B, there is a similar pattern for the annual number of loan facilities involved. All this suggests that the syndicated loan business for financing M&A deals, especially by a bidder's advisors, has largely been a recent phenomenon.

For other deal characteristics, as shown in Table 1, for example, hostile deals account for less than 3% and competing deals for less than 5%. Both do not show a significant difference in subsamples (A) and (B). All-cash deals in terms of payment method, in which part of cash must be from loan financing in our sample, account for 37% of the dual role deals (A) and 41% of the nondual role deals (B), insignificantly different. Likewise, the difference in Tender offer, Cross Industry dummies and Toehold, respectively, between dual role (A) and nondual role deals (B) is also statistically insignificant. Public deals account for 56% of the dual role deals (A), indicating that more than half their targets are public firms, significantly more than 37% of the deals without the dual role (B). Thus megadeals are more likely to involve public targets.

For firm characteristics, as shown also in Table 1, the acquirer size, measured in market value of equity in the previous fiscal year end prior to the deal announcement date, for dual role deals (A) is on average $6,120 million, which is significantly larger than the average acquirer size of $3,313 million for deals without the dual role (B). Incorporating information of average deal values, the calculated average relative deal size for acquirers in the dual role and nondual deals are 0.52 (=3,161/6,120) and 0.28 (=915/3,313), respectively. This means that the dual role is likely to help ambitious bidders to compete megadeals.

As shown in Table 1, bidders are significantly different mainly in firm characteristics that reflect demand for extra external financing, but not in many usual firm characteristics. For example, in dual role deals (A), on average, the acquirer's Q (firm market to book ratio) is 1.86, ROA (return on assets) is 0.05, Tangibility is 0.26, Cash/Asset is 0.12, and Zscore is 1.73, all statistically indifferent from those numbers, respectively, in nondual role deals (B). But the acquirer's pre-deal leverage ratio (0.28 vs. 0.24) and cash to deal value ratio, Cash/DealV (0.23 vs. 0.45) is significantly different between bidders in dual role (A) and nondual role deals (B). In this comparison, the fact that bidders in dual role deals have similar pre-deal cash holdings but show significantly higher pre-deal leverage and lower cash to deal value ratio reflects a significantly higher need for extra external finance to complete their larger M&A deals.

As shown in Table 1, due to limitation of target data availability, the number of deals with target firm information drops to 173, where 101 deals are for dual role (A) and 72 for nondual role (B), respectively. The target firm size, on average, is $3,674 million for dual role deals (A), significantly larger than $2,814 million for deals without the dual role (B). This is consistent with the dual and nondual role difference pattern for deal values shown earlier. These target firms are likely to be large firms because their firm sizes, on average, are larger than the average

deal value of the full sample of 473 deals. In this limited sample of 173, also significantly different is the target firm's Q, 1.94 vs. 1.60, and leverage ratio, 0.28 vs. 0.21, respectively, higher for dual role (A) than nondual role deals (B). The target's ROA, however, does not show a statistical difference between dual role and nondual role deals.

Deals need financing. Table 1 also shows sample size, mean and standard deviations of price and non-price terms for loan facilities. There are 817 loans with data available for a list of loan characteristics. The first variable we are interested in is the cost of loan. We use the loan spread, common in the literature, measured by the all-in-drawn spread documented in Dealscan, namely, the amount of the borrower pays in basis points (bps) over LIBOR or LIBOR equivalent for each dollar drawn down, as a proxy for the cost of loan. The average loan spread of our sample of 817 loans is 224 bps with a standard deviation of 117 bps. To finance dual role deals (A), the average loan spread is 232 bps, significantly larger than the loan spread of 215 bps to finance nondual role deals (B) by 17 bps. As prima facie evidence, this implies that advisor lending is significantly more expensive in completing M&A deals. A possible counterfactual is that without the dual role, these dual role deals may have not been completed.

As shown in Table 1, the average loan size is $691 million for the 817 loans, in which the 444 dual role loans (A) have an average size of $872 million, which is significantly larger than the size of $477 million for the 373 nondual role loans (B). The average loan maturity of dual role loans (A) is 53 months, insignificantly different from the loan maturity of 51 months for nondual role loans (B). As a comparison, the average maturity of our loan sample is longer than the maturity of 47 months for a much larger sample of all kinds of loans reported by Lim, Minton and Weisbach (2014); for another comparison, the maturity in the sample used in Graham, Li and Qiu (2008) is 41 months.

Table 2 shows a list of 12 types of our loan facilities. The dominant loan type is revolver line with a maturity of more than one year, accounting for 74% (=607/817) of the 817 loan facilities. The revolver lines account for 76% of the 444 dual role loans and 72% of the 373 nondual role loans. Revolver lines with longer maturity are expected to stand as a last resort for client firms.

Back to Table 1, secured loans or loans with collaterals account for 76% of the dual role loans (A), or 0.76 for the Secured dummy, significantly higher than 69% of the nondual role loans (B). Loans with performance pricing account for 60% of the dual role loans (A) and 57% of the nondual role loans (B), insignificantly different. The counts for total covenants are significantly different between (A) and (B), 8 vs. 7. General covenants and financial covenants add up to total covenants, but it is general covenants that make a significant difference, 6 vs. 5.

In sum, the sample summary shows that M&A deals with the dual role, on average, have a larger deal value and relative size, both bigger acquirer and target firm sizes, and a higher need for extra external finance, than do the deals without the dual role. The dual role deals also charge higher interest rates with larger loan sizes, tighter covenants and collateral requirements than do the deals without the dual role. With all this contrast, it is important to clarify whether higher costs of loan associated with a dual role likely in megadeals—a situation prone to rent extraction from captive clients or rent sharing in abetting acquisition-driven overinvestment by bidders—reflect heightened conflict of interest in favor of investment banks as advisers who have information advantage in their advised deals. We turn to controlled regression analysis in the next section.

3. Evidence for Expensive Advisor Lending and Adverse M&A Announcement Effect

We first explain dual role determination and then examine dual role effects on price and non-price terms of loan facilities used to finance M&A deals (Section 3.1). To correct for the dual

role choice induced endogeneity bias and provide more convincing evidence, we reevaluate dual role effects on loan costs (Section 3.2). We also address the concerns on deal transaction fees not explicitly reflected by reported loan spreads (Section 3.3). Finally, we analyze how advisor dual role lending influences the acquirers' announcement effects of M&A deals that involve loan financing (Section 3.4).

3.1. Dual Role Determination and Dual Role Effects on M&A Loan Costs and Terms

To start, we use a Probit model with a host of deal and firm characteristics to explain the likelihood of the dual role to occur in M&A deals. We include the deal and acquirer characteristics in the explanatory variable list in specification (1) and then we add the target characteristics in specification (2), both with year fixed effects and industry fixed effects where we use the Fama-French 12 industry classification. All the firm characteristics are measured in the previous fiscal year end prior to the deal announcement.

As shown in Table 3, the slope estimate for Relative size is 0.412 (t-stat of 4.06) in regression (1) and 1.152 (t-stat of 3.52) in regression (2). These estimates are notably different due to different sample sizes for different lists of variables. When we add target characteristics in regression (2), the number of deals with data available for all the explanatory variables drops drastically from 439 to 137, due to data availability for the target firms. Nevertheless, the slope estimates for Relative size in both specifications are significantly positive, with a t-value greater than 3.5. The results suggest that investment banks are more likely to play a dual role in deals with a larger deal value relative to bidder market value of equity.

As shown in Table 3, other deal characteristics are insignificant except the hostile deal dummy in regression (2), where the slope estimate is -2.09 (t-value=-2.23), significant. Since regression (2) involves only public targets as private targets seldom have firm data available, the

result suggests that hostile public deals are more likely to decrease the likelihood of dual role. But the insignificant result in regression (1) means that this hostile effect is inconclusive in deals with both public and private targets.

The likelihood for investment banks to play the dual role is significantly associated with several acquirer characteristics such as Acquirer size, Q, Tangibility, Cash/Asset, and Cash/DealV, all significant in both regressions. As shown in Table 3, for example in regression (1), the slope estimate is 0.406 (t-value=6.18) for Acquirer Ln(size), -0.215 (t-value=-2.05) for Q, 3.660 (t-value=4.49) for Cash/Asset, and -1.448 (t-value=-5.23) for Cash/DealV. The slope estimates for all target characteristics except target size, as shown in regression (2), are insignificant. The significant results altogether suggest that investment banks are more likely to play the dual role for acquirers with a bigger firm size in terms of market capitalization and lower Q. At the same time, the acquirers have higher cash holdings relative to total assets but less cash holdings relative to deal value. In other words, while higher pre-deal cash holdings to assets are likely to indicate being closer to a full capacity of external finance, the bidder's lack of fund to complete the forthcoming deal increases the odds for investment banks to play the dual role in which banks not only advise but also extend loans to the advisee.

Will investment banks with this dual role charge high interest rates on the financing hungry acquirers? The answer from our regression tests is a resounding yes. Standard in the literature, all-in-spread, defined as the amount of the borrower pays in basis points over LIBOR or LIBOR equivalent for each dollar drawn, is used as a proxy for the borrower's total cost of loan. Following the literature (e.g., Graham, Li and Qiu (2008; Lin, Ma, Malatesta and Xuan, 2011; Hertzel and Officer, 2012; Lin, Officer, Wang and Zou, 2013), we use natural logarithm of all-in-spread, Ln(loan spread), as the regression dependent variable. We control for year,

industry and loan type fixed effects in regressions for the dual role (dummy variable), along with a host of control variables such as loan, acquirer and deal characteristics, to explain loan spread.

As shown in Table 4, the slopes for the dual role dummy, *Dualrole*, are significantly positive in all three different regression specifications. For example, the slope estimate in regression (1) is 0.186 (t-stat of 3.58). This means that controlling for loan characteristics such as loan size, maturity and type, there is about 18.6% difference (log difference) in loan spread in deals with and without the dual role, indicating that investment banks with a dual role charge significantly higher interest rates to the acquirers.

As shown in Table 4, many loan characteristic control variables, which are also used, for example, in Graham, Li and Qiu (2008) and Lim, Minton and Weisbach (2014), are significant. The results for loan size, performance pricing indicator and secured loan dummy are significant in all three regression specifications. For example, the slope for Ln(loan size) is -0.071 (t-stat=-2.73). The negative slope for loan size captures economies scale of bank lending, consistent with the results in Allen and Peristiani (2007), Graham, Li and Qiu (2008) and Lim, Minton and Weisbach (2014). Competing deals are rare, less than 5% in our sample as shown earlier in Table 1. The negative slope for Competing deal dummy is consistent with the result in Lim, Minton and Weisbach (2014) which has a much larger simple size for all kinds of loans. The negative slope for secured loan dummy, Secured, is consistent with the literature, as Lim, Minton and Weisbach (2014) point out that secured loans tend to be more risky. The slope estimates for Ln(loan maturity) are significantly positive in regressions (1) and (3) only. This is different, for example, from Lim, Minton and Weisbach (2014). But the insignificant results for covenant counts, Covenants, are consistent with theirs.

As shown in Table 4, most firm and deal characteristics are not significant in all regression specifications. The slope for bidder size, AcquirerLn(size), is negative, insignificant in regression (2) and significant in regression (3). A larger firm is expected to have lower loan costs, as well known in the literature (e.g., Fama, 1985; Diamond, 1991). The negative slope result of bidder pre-deal cash relative to deal value, AcquirerCash/DealV is significant in regression (2). This means loan costs tend to increase for bidders with a larger gap between pre-deal cash holdings and deal value. The slope estimates for AcquirerZscore, however, are consistently significant, as also shown in Graham, Li and Qiu (2008). Firms with a lower Zscore have higher default risk, explaining a negative slope estimate of -0.070 (t=-2.16), for example, in regression (2). The fact that most firm characteristics are not consistently significant is perhaps because the dual role effect tends to dominate in this sample.

Actually, all deal characteristics except tender offer dummy are insignificant, as shown in Table 4. The slope estimate for Tender offer is -0.137 (t=-1.78), significantly negative at 10% confidence interval. Tender offers account for some 12% of our sample, as shown earlier in Table 1. Our results here suggest tender offers tend to incur lower loan costs.

It is worth noting that in Table 4 the slope estimate for *Dualrole* does not change much from regression (1) to regression (2) when firm characteristics are added, but does drop notably from 0.186 in regression (2) to 0.130 in regression (3) when deal characteristics are further added. Nevertheless, while almost all deal characteristics are insignificant, *Dualrole* as a deal characteristic remains resoundingly significant. This means the dual role is the most important deal characteristic in explaining loan costs in our sample.

The dual role can also significantly affect important non-price terms of loan contracts. As shown in Table 5, the slope estimate for *Dualrole* is significantly positive in explaining loan

maturity, Ln(maturity), (0.070 with t-stat of 2.16), Secured (0.384 with t-stat of 2.47), Total Covenants (0.082 with t-stat of 2.44), and General Covenants (0.090 with t-stat of 2.26), respectively. All this is consistent with the univariate results as shown earlier in Table 1, except loan maturity which, without control, is indifferent between M&A loans with and without the dual role. The results here suggest that compared with deals without the dual role, loans in the dual role deals have longer maturity, are likely to demand for collateral, and impose more number of covenants, especially general covenants instead of financial covenants. All this points to more strings attached to loans in dual role deals, which need quite long time to be completed.

As shown in Table 5, similar to what appears in Table 7 in Graham, Li and Qiu (2008), some control variables are also significant. For example, loans for borrowing firms with larger firm size and higher Z-score are significantly less likely to be secured, and loans for borrowing firms with higher leverage ratios have more covenants in total and general counts.

As shown in Table 5, like in explaining loan spreads in Table 4, most deal characteristics are insignificant in explaining non-price terms as well. The dual role effects again tend to dominate despite the presence of standard deal characteristics.

As shown in Table 5, there are significant results that can tell more about M&A financing. Loans for bidders with more pre-deal cash holdings, AcquirerCash/Asset, are more likely to be secured and have more total and general covenants. So high cash holdings per se may not indicate financial slack as we have argued. In such M&A events, we need to bring deal size in the picture. It turns out that like with higher Relative size, loans for bidders with more pre-deal cash relative to deal value, AcquirerCash/DealV (which in reverse value implies deal financing deficit) have significantly less total and general covenants. The effect of AcquirerCsh/DealV is likely to be attenuated by Relative size in explaining the likelihood of using secured loans. But

Relative size is insignificant in explaining loan maturity, whereas AcquirerCash/DealV is significant, indicating that loans for bidders with lower pre-deal cash holdings relative to deal size, or higher demand for extra fund, enjoy longer loan maturity in competing M&A deals.

The consistently significant results for *Dualrole* highlight the importance of the dual role effects on both price and non-price terms of M&A loan contracts. The main conclusion here is expensive advisor lending goes with longer maturity and more strings attached. The dual role choice, however, may introduce an endogeneity bias in regressions we have used especially in explaining the cost of loan. We address this issue in the next section.

3.2. Correcting Selection Bias in the Dual Role Effect on M&A Loan Cost

We focus on explaining loan costs. First, we use Heckman selection bias correction in loan cost regressions. To show that advisor lending is unusually high, we then use within-firm regressions to compare loan costs between the advisor dual role lending and other loans offered at other times.

The endogeneity bias concern arises because the advisor-lender dual role as an explanatory variable in regressions to explain loan spread may induce a Heckman's (1979) selection bias. One would argue that it is the high interest rates that induce the dual role to occur. To correct for such a selection bias, we follow the literature to use the two-stage Heckman correction procedure (see Li and Prabhala, 2007). In the spirit of Fang (2005) and Golubov, Petmezas, Travlos (2012), we construct a variable, Scope, as an instrument in the first stage choice equation. Scope in our case takes values of 0, 1 and 2. More precisely, for each investment bank involved in the M&A deal in our sample, during the 5-year period prior to the deal announcement date, Scope takes a value of zero if the bank in this deal never (i) arranged, or participated in, a loan syndication, or (ii) did an advisory job, for the acquirer; it takes a value of

one if the bank did either (i) or (ii) for the acquirer; it takes a value of two if the bank did both (i) and (ii) at least once for the acquirer. We believe that Scope measures the intensity of past relationship between the investment bank and the current acquirer. Scope can predict the likelihood of the advisor-lender dual role and this pre-deal long term relationship measure is likely to be exogenous to the cost of loan in the later M&A deal we focus—the cost of loan that especially appears unusual.

As shown in Table 6, the slope estimate for Scope to predict the dual role in the Probit regression (1) is 0.853 (t-stat of 4.74), significantly positive. Confirming our expectation, banks that had stronger past relationship with the current acquirers are more likely to join in a current dual role deal.

The Probit regression in this first stage is run on the M&A deal sample, controlling for both year and industry fixed effects. As shown in Table 6, four explanatory variables, acquirer size, AcquirerLn(size), pre-deal cash holdings, Cash/Asset, pre-deal cash relative to deal value, Cash/DealV, and Relative size remain significant. So they contain information beyond pre-deal banking relationship which is captured by Scope. Deal characteristics except information related to deal size, however, are mostly insignificant, similar to the results in Table 3.

Deal size is important information in determining the dual role. As shown in Table 6, Relative size positively predicts the dual role likelihood. More related to financing, Cash/DealV negatively predicts the likelihood of dual role. A low pre-deal cash relative to the current transaction value means high demand for external finance to fill the deficit in completing the huge deal, and hence the negative slope for Cash/DealV can be consistent with the view that the advisor-lender dual role is more likely to occur as a last resort when other external finance become more costly.

In the second-stage outcome regression, which is run on the sample of loan facilities to explain the loan cost, we include the inverse Mills ratio as an additional explanatory variable to correct a possible selection bias in estimation. The inverse Mills ratio is obtained from the first-stage Probit regression described above. As shown in Table 6, the slope estimates for Inverse-Mills ratio are 0.155 (t-stat of 2.73) in regression (2) and 0.138 (t-stat of 2.05) in regression (3), respectively, both significantly positive. With this selection bias correction and controls for year, industry and loan type fixed effects, the slope estimates for the dual role dummy are 0.147 (t-stat of 3.17) and 0.145 (t-stat of 3.06), respectively, still significantly positive. All this means that the dual role choice bias in loan cost regressions in Table 4 has no qualitative impact on the results of a significantly positive dual role effect on the costs of loan financing in M&A.

As shown in Table 6, the results for other variables are also largely similar to those without a selection bias correction shown in Table 4. It is worth mentioning that consistently both AcquirerCash/Asset and Cash/DdealV are significant here. The slope estimates for AcquirerCash/Asset to explain Loan spread are 0.783 (t-stat of 3.76) in regression (2) and 0.717 (t-stat of 2.95) in regression (3), both significantly positive. The slope estimates for AcquirerCash/DealV are -0.265 (t-stat of -3.22) in regression (2) and -0.238 (t-stat of -2.43), both significantly negative. One explanation is when the acquirer is closer to its capital raising capacity (a sign from higher pre-deal Cash/Asset) and the current deal needs more external finance (a sign from lower pre-deal Cash/DealV), substantial extra fund in this situation is likely to carry extra cost. The extra cost of loan in terms of loan spreads is significantly higher in an advisor-lender dual role deal, as the robust results shown in Table 6.

One may argue that closer firm-bank relationship, measured by Scope, can predetermine high cost of loan financing in the first place and the endogeneity issue would still exist to distort

the loan spread regressions. Indeed, the holdup argument of Rajan (1992) points out ex post rent extraction by banks on captive client firms. If this were true, high loan costs would be a phenomenon of long-term banking relationship and have little to do with advisor lending per se.

To address this issue, we next show that the cost of the dual role loans is unusually high, compared to loans that the acquirers use at other times when long-term banking relationship is also at work. We run loan spread regressions on a sample of loan facilities that acquirers in dual role deals use also at other times during the period of 1990-2012. We impose firm and year fixed effects and regress Ln(loan spread) on *Dualrole* dummy along with a host of firm and loan characteristics in three different specifications.

As shown in Table 7, the slope estimate for Dualrole to explain loan spreads in regression (1) with loan characteristics on the control variable list is 0.251 (t-stat of 7.25), significantly positive. When we control for acquirer characteristics along with loan characteristics in regression (2), the slope estimate is 0.290 (t-stat of 7.60). After further controlling for loan type, the slope estimate for Dualrole is 0.206 (t-stat of 5.19), still significantly positive. With the firm and year fixed effects being controlled, a regression slope measures an average within-acquirer variation in the explanatory variable and hence the slope for *Dualrole* picks up an average loan spread differential for a dual role deal and other loans at other times by acquirers in the sample. The results suggest that loans for the dual role deal have an unusually higher interest rate premium.

3.3 Considering Deal Transaction Fees not Explicitly Reflected by Loan Spreads

One may argue that there might be a substitution effect between different items of charges, namely, the higher loan spreads for the dual role can be much offset by possibly lower transaction fees not explicitly reflected by the reported all-in-spread drawn we have used so far

by following majority of previous studies in the literature. These deal transaction fees, often not publically disclosed, are advisory and loan fees. A significant dual role concession on these deal transaction fees would undermine our conclusions based on the all-in-spread drawn as a proxy for genuine loan costs.

We first examine advisory fees which account for a major part of revenues from M&A deals for investment banks (see Golubov, Petmezas and Travlos, 2012). With limited data availability on advisor fees—limited data in the sense relative to their large sample of M&A deals—Golubov, Petmezas and Travlos (2012) show that the top-tier and non-top tier advisors charge advisory fees, on average, at 0.55% and 0.72% of the deal value, respectively. Of course, other factors such as the transaction size can contribute to this difference. Relying on results from controlled tests, Golubov, Petmezas and Travlos (2012) conclude, however, reputable advisors charge premium advisory fees for premium services.

We are able to collect data in SDC on advisory fees for 62 deals in our sample. The advisory fees are, on average, 0.62% of the deal value for 40 dual role deals and 0.74% of the deal value for 22 nondual role deals, respectively. In regressions to replace the loan spread (like in Table 4, unreported but available on request), the dual role effect on advisor fees is not significant at all. The fact of no dual role concession on advisory fees in our sample, controlling for other factors, is not surprising at all if the dual role advisors exert effort to help the acquirers to complete big-ticket deals and advisory fees commensurate with effort are independently rewarded. This helps better isolate the advisor duel role lending effect.

We need to address the substitution issue on loan fees as well. There are three important types of loan fees, the “commitment fees”, “upfront fee” and “annual fee” (also called “facility fee”, as also mentioned in Graham, Li and Qiu, 2008). Berg, Saunders, and Steffen (2016) argue

these fees act as option premiums as described in Thakor, Hong and Greenbaum (1981) and should not be ignored in considering the total cost of loan. However, relative to all-in-spread drawn, sample sizes for these fees are much smaller because of the limitation of data availability. Nevertheless, among our 822 bank loans, we are able to collect data on commitment fees for 325 loan, upfront fees for 218 loans and annual fees for 92 loans. The commitment fees are, on average, 44.79 bps for 167 dual role deals, slightly significantly higher than 41.13 bps for 158 nondual role deals. The upfront fees are, on average, 108.60 bps for 131 dual role deals, higher (but statistically not significantly) than 90.71 bps for 87 nondual role deals. The annual fees are, on average, 16.28 bps for 40 dual role deals and 16.62 bps for 50 nondual role deals, respectively; however, the difference is not statistically different. Again, there is no obvious dual role advantage for the acquirers in these loan fees.

Our average loan fees for the samples of 325, 218 and 92 loans above are 43.01, 101.47, and 16.47 bps, respectively, and can be compared directly with those in most recent literature: Berg, Saunders, and Steffen (2016) report that in their sample of U.S. syndicated loans in general, the commitment, upfront and facility fees are, on average, 38, 61, and 17, respectively (as shown in their Figure 1). Except for the annual/facility fees that are almost similar, the commitment and upfront fees for our M&A loans are apparently higher than normal loans. Additionally, in regressions to replace the loan spread (like in Table 4, unreported but available on request), except for even a significantly positive effect on upfront fees, the dual role effects on commitment and facility fees are not significant. In short, there is no evidence for the dual role concession on these transaction fees.

3.4 Bidder Announcement Effects of M&A Deals that Involve Loan Financing

It is well documented in the literature that the M&A announcement effect for acquirers on average is close to zero (see the survey paper by Betton, Eckbo and Thorburn, 2008). With a sample of 115 cash tender offers in M&A deals that involve bank loan financing, Bharadwaj and Shivdasani (2003) show that the average announcement effect for acquirers, however, is significantly positive, consistent with the literature on information production/certification of bank financing.

With the event time t=0 as the announcement day of an M&A deal, we calculate each acquirer's CAR (-1,1) and CAR(-2,2), respectively, for 3-day and 5-day event time windows. The market model estimation used to gauge CARs is based on daily returns over the event trading day -200 to -41. Despite lack of sufficient daily return data for calculating CARs for some acquirers, we manage to obtain CARs for 468 events in our full sample of M&A deals.

As shown in Table 8, CAR(-1,1) is 0.026 or 2.6% and CAR(-2,2) is 0.029 or 2.9%, both significantly positive, for the 468 deals. Confirming Bharadwaj and Sivdasani (2003), our findings with a much larger sample size suggest a significantly positive average announcement effect for acquirers in M&A deals that involve loan financing.

Loan allows acquirers to pay the M&A deal with cash. The literature shows that acquirers with cash-financed M&A deals on average enjoy a significantly positive announcement effect (Betton, Eckbo and Thorburn, 2008). But acquirers with large internal cash holdings typically have a significantly negative M&A announcement effect (Harford, 1999). That is why the finding of Bharadwaj and Sivdasani (2003) that emphasizes sources of financing is important.

As shown in Table 8, separating the full sample into deals with and without the dual role, CAR(-1,1) and CAR(-2,2) drop to 0.014 and 0.016, yet significantly positive, for acquirers in dual role deals (A), and increase to 0.037 and 0.040, significantly positive, for acquirers in M&A

deals without the dual role (B). The announcement effect differential between acquirers with (A) and without the dual role (B) is significant. The CAR(-1,1) differential is -0.023 or -2.3% (t-stat of -2.43), and the CAR(-2,2) differential is similar, equal to -0.024, or -2.4% (t-stat of -2.40). In other words, for example during a 3-day event window, while acquirers in deals without the dual role (B) enjoy a positive average announcement effect to the tune of 3.7%, acquirers with the dual role (A) only manage to achieve an effect of 1.4%, significantly and notably less than the former by 2.3%. It seems that the stock market interprets the advisor-lender dual role as a significantly negative factor in undermining the full effect of information production/certification of loan financing.

Table 9 shows detailed event study results, where we control for other factors to better isolate the dual role effect. We run a cross-sectional regression of CARs for acquirers on the dual role dummy and a host of deal and acquirer characteristics, controlling for year and industry fixed effects. To correct a dual role choice induced selection bias, we also include in the explanatory variable list the inverse Mills ratio obtained from the first-stage Probit regression as reported in Table 4.

As shown in Table 9, the slope estimate for the dual role to explain CARs is significantly negative. For example, in regression (1), the slope estimate for the dual role to explain CAR(-1,1) is -0.025 or -2.5% (t-stat of -2.15). In regression (2), the slope estimate for dual role remains significantly negative and become slightly larger in magnitude for CAR(-2,2), being -0.028, or -2.8% (t-stat of 2.13). Thus the advisor-lender dual role significantly weakens the bidders' announcement effects for M&A deals that involve loan financing. These controlled results are consistent with the univariate results in Table 8.

In this event study, most control variables are insignificant. Unlike in loan spread regressions reported in Table 6, the slope estimate for Inverse-Mills ratio is insignificant everywhere in Table 9. This means the dual role choice selection bias, if any, has little impact on CAR regression estimation (see Li and Prabhala, 2007, for detailed discussion).

There are a couple of significant explanatory variables in Table 9 that are consistent with the results in the literature. For example, the slope estimates for Public deal are significantly negative. This indicates that bidder announcement effects are significantly worse with public targets than with private targets, consistent with, for example, Fuller, Netter, and Stegemoller (2002) with a much larger sample.

Another significant explanatory variable is the Top-tier advisor dummy, a proxy for investment bank reputation in the literature. As shown in Table 9, the slope estimates for Top-tier advisor tend to be significantly positive. In regression (1), the Top-tier slope estimate to explain CAR(-1,1) is 0.027 or 2.7% (t-stat of 1.95). In regression (2), the Top-tier slope estimate to explain CAR(-2,2) is 0.027 or 2.7% (t-stat of 1.75). Golubov, Petmezas and Travlos (2012) also show a significantly positive M&A announcement effect for bidders with top-tier advisors in a large sample of M&A deals. Incorporating evidence that top-tier advisors charge high advisory fees, they interpret the positive Top-tier effect as evidence for the view of high advisory reputation with premium advisory services to the bidder's benefits, supporting a reputation capital mechanism in the theory of Chemmanur and Fulghieri (1994). Golubov, Petmezas and Travlos (2012) find that this advisory reputation effect in M&A is only limited in public deals. Thus our result with loan-financed M&A deals that include both private and public targets further enriches the literature of investment bank reputation (see also Bao and Edmans, 2011, for persistently distinct performance of investment banks to reflect importance of reputation).

Put together, the results of Table 9 show that the dual role is one of important M&A deal characteristics in affecting bidder announcement returns. If advisor reputation works to advised bidders' benefit, the advisor-lender dual role that produces a negative effect on the bidders' returns seems puzzling.

After all, the dual role deals are more likely to be megadeals as shown in Table 1. The literature shows that acquirers with the empire-building motive due to Jensen's (1986) free cash flow tend to produce a significantly negative M&A announcement effect (Morck, Shleifer and Vishny, 1990). The huge loss in equity value of some megadeals during the period of 1998-2001 as documented in Moeller, Schlingemann and Stulz (2005) can also keep reminding stockholders. As shown in Table 9, the firm size effect, through AcquirerLn(size), on CARs is indeed significantly negative, consistent with the literature. While AcquirerQ is insignificant in Table 9, recall that Table 1 does show a high average bidder Q to the tune of 1.86. A high market valuation of bidders can signal good M&A deals (Servaes, 1991), but can also give rise to the concern of overvaluation which can promote overinvestment (Shleifer and Vishny, 2003). In short, expensive advisor lending may abet an acquisition-led overinvestment by managers and the high loan cost may reflect rent sharing of investment banks with empire-building motivated managers. In the next session, we will address what exactly the expensive advisor lending suggests.

4. Conflict of Interest or Last Resort Financing?

To test the two competing hypotheses, we first show that the bidders in dual role M&A deals actually do not underperform in the long run. This helps dispel concerns on the expensive advisor lending in abetting ill-motivated big-ticket deals (Subsection 4.1). We then show that the advisor-lender dual role significantly interacts with bidders' financial constraints or deal

financing deficit in determining the loan spreads in financing M&A. This evidence for high loan spreads supports the last resort financing hypothesis (Subsection 4.2).

4.1 Post-deal Performance: Dual Role vs. Nondual Role and Matched Failed Bidders

As shown in Panel A of Table 10, we measure post-deal performance using the buy-and-hold return, BHAR, for 100 days to 500 days. BHAR is based on the market model with the CRSP value weighted market index. We have 218 dual role bidders (A) that have sufficient return data to calculate BHARs. Their average 100-day BHAR, BHAR[6,100], is significantly positive, delivering 0.052 or 5.2% (t-stat of 3.29). The average 250-day BHAR tends to be positively significant too, being 0.042 (t-stat of 1.83). The average 500-day BHAR is not significantly different from zero, though. Thus bidders in the dual role M&A deals do not show post-deal underperformance.

On the other hand, as also shown in Panel A of Table 10, we have 246 nondual role bidders (B). Their BHARs up to 500 days are all insignificantly different from zero. Thus all bidders in M&A deals that involve loan financing do not suffer post-deal underperformance as well in our sample. The dual role bidders (A) even outperform the nondual role bidders (B) in 100 days, with the difference in BHARs between (A) and (B) being 0.061 or 6.1% (t-stat=2.63).

One may question the reliability of BHAR for gauging post-event performance. How to measure post-deal performance can affect results, and the methodological issues on long-term event studies have been intensively discussed in the literature (Barber and Lyon, 1997; Fama, 1998; Andrade, Mitchell and Stafford, 2001; among others). Benchmark controls are important. Rau and Vermaelen (1998) show that glamour acquirers, namely, those with small size and low equity book to market ratio or B/M ratio, produce a significantly negative average BHAR; conversely, value acquirers, namely, those with big size and high B/M ratio, experience a

significantly positive average BHAR. The literature later tends to match both size and B/M ratio with firms that do not experience the event in gauging post-event long-run performance (see the review in Betton, Eckbo and Thorburn, 2008).

The post-deal performance helps evaluate whether there are synergy gains in mergers at all. Harford (2005) finds evidence of relatively poor post-merger performance for larger bidders in merger waves, but argue that the performance should be gauged against the situation when the same bidders would have performed without the merger. Trying to address all the concerns in the literature, in the spirit of a quasi-experiment design of Seru (2014), Bena and Li (2014) employ an industry-, size, and B/M matched sample of failed bidders as a benchmark control in their M&A study.

In the spirit of Bena and Li (2014), for each bidder in our sample in event year t, we match an acquirer that has a failed deal in the same calendar year. More precisely, we obtain the propensity scores estimated based on firm size and B/M ratio in event year t-1 using data on both our completed bidders and a simple of 1,673 failed deals reported in SDC during our sample period of 1990-2012. Within the same 2-digit SIC industry, we pick a failed bidder that has the closest propensity score to that of a bidder of ours in the same calendar year.

As shown in Panel A of Table 10, these matched failed bidders underperform significantly. For example, the average 500-day BHAR for these failed bidders (C) is significantly negative, producing -0.160 or -16.0% (t-stat of -3.70) for the whole period. The average difference in BHAR between our bidders in the dual role deals (A) and the failed bidders (C) is significant all the way to 500 days, reaching 0.199 or 19.9% (t-stat=3.42). This means that our dual role bidders would be worse off by 19.9% in 500 days if the dual role deals did not go through.

As a robustness check, we use instead return on assets, ROA, an accounting number which many believe has more fundamental information content than what noisy stock returns can indicate, to measure post-deal performance. As shown in Panel B of Table 10, both bidders with and without the dual role, on average, have a significantly positive ROA in two years. For example, like the nondual role bidders (B), the dual role bidders (A) have an average ROA of 0.032 (t-stat of 7.97) in one year and a ROA of 0.012 (t-stat=1.95) in two years. While the significantly positive results do not show up in three years, no significantly negative average ROA occurs. In any case, the average ROA difference between (A) and (B) is insignificant. Again there is no evidence that the dual role bidders underperform.

As shown in Panel B of Table 10, the failed bidders show an average negative ROA, but insignificant. However, although there is no significant difference in three years, the dual role bidders (A) do outperform the matched failed bidders (C) within two years. For example, the average ROA difference between (A) and (C) is 0.033 (t-stat of 2.09). In short, the dual role bidders simply do not underperform. In effect, there is significant evidence that the dual role bidders on average show better post-deal performance for at least two years.

It is worth mentioning the fact that all bidders in M&A deals that involve loan financing do not show post-deal underperformance, as shown in Table 10, is new in the literature, consistent with their positive announcement effects. While the results in Table 10 go against the conflict of interest hypothesis for the expensive advisor-lender dual role in abetting ill-motivated acquisitions, our further analysis next will shed light on the puzzling finding, namely, the

significant dual role discount in the M&A announcement effects as highlighted in Table 8 and 9 earlier.[2]

4.2 Evidence for Expensive Advisor Lending as a Last Resort Financing

We investigate whether expensive advisor lending has to do with bidders' financial constraints or high need for external finance in completing M&A deals. Lim, Minton and Weisbach (2014) let their nonbank investor dummy interact with the size-age (SA) index of Hadlock and Pierce (2010) in explaining the nonbank premium in syndicated loan contracts. The larger the SA index, the more financially constrained a firm is. Lim, Minton and Weisbach (2014) find that the interaction term is significant in loan spread regressions, suggesting the nonbank premium has to do with financial constraints. In the same spirit, we also let our *dualrole* dummy interact with the acquirer's financial constraints in our loan spread regressions.

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[2] An adverse announcement effect can occur in new equity financing as a last resort according to Myers' (1984) pecking order theory. Fama and French (2002, 2005) find that new equity issues can defy the pecking order and often do not seem to be a last resort. Wu and Wang (2005) show if asymmetric information about growth instead of assets in place dominates, new equity is not necessarily a last resort—a situation for high growth firms with a lot of growth uncertainty (See also Wu and Au Yeung, 2012, for documenting persistently distinct leverage ratios and financing behaviors, based mainly on the asymmetric information types regarding assets in place versus growth). Myers (2003) also points out that the pecking order theory works best when asymmetric information on assets-in-place dominates—as emphasized in Myers and Majluf (1984)—a situation for mature firms with a lot of assets-in-place in an asymmetric information world. The acquirers in our M&A sample tend to be large with a lot of assets-in-place and hence a relatively adverse announcement effect can bear on a last resort financing especially if extra new equity instead would be forced to be issued.

In the first specification, we simply add the bidder's SA index to the previous list of explanatory variables we have employed in explaining loan spreads. As shown in Table 11, in regression (1), the slope estimate for AcquirerSA-indx is insignificant, and results for the *dualrole* dummy and other explanatory variables remain similar to those in Table 4.

We then let the *Dualrole* dummy interact with AcquirerSA-index. As shown in Table 11, in regression (2), the slope estimate for the interaction term is 0.064 (t-stat of 2.72), significantly positive. While the standalone AcquirerSA-index remains insignificant, the standalone *Dualrole* dummy becomes insignificant and the results for other control variables do not change qualitatively. This significantly positive slope for the interaction term, Dualrole*AcquirerSA-index means that the dual role effect on loan spread, or expensive advisor lending, occurs when bidders are highly financial-constrained.

Financial constraints in the literature are expected to apply to firms in general cases. However, Farre-Mensa and Ljungqvist (2015) have recently shown that popular measures for financial constraints in the literature, such as the SA index, may indicate something other than financial constraints. For example, Wu and Au Yeung (2016) show that the investment-cash flow sensitivity, ICFS, reflects firm growth type that predetermines how firms persistently invest and vigorously fund firm growth, as described in Wu and Au Yeung (2012), rather than the degree of financial constraints. Investigating how valid or reliable the measures for financial constraints in the literature, however, is beyond the score of this paper (See the earlier debate between Kaplan and Zingales, 1997, 2000, and Fazzari, Hubbard and Petersen, 2000).

To address the concerns on the measures for financial constraints usually for firms in general, we try to find a reasonably convincing way in the context of M&A. We do have a specific measure for financial constraint or high need for extra external finance especially in

completing a huge M&A deal. As we argued before, AcquiererCash/DealV directly measures, in reverse order, the deal financing deficit. The lower the pre-deal cash at hand, the bigger the gap between the pre-deal cash and deal value for an ambitious-acquisition-motivated bidder becomes. [3] Unlike the SA index which contains relative information about other firms, AcquiererCash/DealV is purely firm specific.

As shown in Table 11, in regression (3), we let the *dualrole* dummy interact with AcquirerCash/DealV instead. The slope estimate for this interaction term, Dualrole*AcquirerCash/DealV is -0.306 (t-stat of -3.50), significantly negative. This means that the dual role effect on loan spread, or expensive advisor lending, occurs when bidders have a higher deal financing deficit, indicating a high need for extra external finance. It suggests that investment banks play a role as a last resort in financing through the advisor lending.

As shown in Table 11, in regression (3), the results for other explanatory variables do not change qualitatively. It is worth mentioning that the slope estimate for AcquirerCash/Asset remains significantly positive, being 0.508 (t-stat of 4.07), consistent with previous results, also shown in Table 4 and 6 earlier.[4] If AcquirerCash/Asset measured financial slack, the cost of loan financing, as external finance, for internal-fund-richer firms would be lower in general. Note we have already ruled out the free cash flow or empire-building type of agency problems. Thus

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[3] In this context, pre-deal cash holdings relative to total assets, AcquirerCash/Asset, do not necessarily reflect the traditional internal financial slack but can mirror pre-deal slack capacity in financing because pre-deal financing efforts may have already exhausted all funding possibilities in normal circumstances.

[4] In an unreported test, we also include inverse Mills ratio, as used in Table 6, in regression (3) in Table 11. It turns out that the inverse Mills ratio becomes insignificant and the main results in Table 11 do not change qualitatively (results available on request).

consistent with what we have argued, the seemingly contradictory evidence suggests that pre-deal cash in our M&A context mirrors slack capacity in financing rather than reflecting internal financial slack.

In a nutshell, the findings of no post-deal underperformance and the dual role interaction with financial constraints or high need for extra external finance do not support the conflict of interest hypothesis for expensive advisor lending in abetting rent-extraction-driven acquisitions, but the same results are consistent with the view of investment banks as a last resort to justify expensive advisor dual role lending. In Myer's (1984) classic pecking order in financing, new equity is a last resort and the announcement effect of new equity is typically negative (Myers and Majluf, 1984). Thus the advisor-lender dual role discount in the bidders' average announcement effect as shown in the previous section can be also consistent with the last-resort-in-financing hypothesis.

5. Conclusion

This paper examines the advisor-lender dual role in M&A deals. Advisor lending in M&A deals has been a notable phenomenon in the US since the beginning of the new millennium. This paper shows that advisors are more likely to play the advisor-lender dual role in deals where both acquirers and targets are large. While this implies that the dual role facilitates big-ticket deals, we find that the syndicated loan spreads are unusually high for loans financing the dual-role involved deals. In addition, the acquirers' announcement effects of the dual role deals are significantly lower, compared with the nondual role deals that are also loan financed. The results are robust to an endogeneity bias correction. The expensive advisor lending and the relatively adverse average announcement effect appear to point to conflicts of interest between the advisors and the acquirers' shareholders.

Further analysis, however, supports a last resort financing explanation rather than a conflict of interest explanation for advisor lending. We show that there is no evidence for long-run underperformance of the dual role M&A deals. Acquirers in the dual role deals would have experienced notable post-deal underperformance if the deals failed. This quasi-experimental evidence dispels the concern that the expensive advisor lending abets acquisition-led overinvestment so that the advisors benefit from rent sharing in corporate empire building, which, as well documented in the literature, tends to be pronounced in large M&A deals.

To explain why advisor lending is expensive, we explicitly show that costs of advisor lending are significantly higher when the acquirers are financially constrained. We measure financial constraints, respectively, by the SA-index, popular in the literature, and the pre-deal cash-holding relative to the deal size, which indicates, in reverse order, the deal financing deficit. This last-resort financing evidence can also explain the relatively adverse announcement effect of the advisor lending. An adverse announcement effect often occurs in new equity financing, according to the classic pecking order theory in which new equity comes as a last resort. Thus the advisor lending with an implication of last resort financing tends to reduce the positive production/certification effect role of loan financing that has no implication of last resort financing.

In conclusion, this paper contributes to the literature with evidence that investment banks provide last resort financing through the advisor-lender dual role in M&A deals, one of the most important areas in investment banking. Expensive advisor lending can best be understood as a premium charge for last resort financing in investment banking.

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Appendix: Definition of Variable

Variable	Definitions
Dummy Variable or Indicator for Investment Banks (from SDC and Dealscan)	
Dualrole (1/0)	1 for M&A deals in which the acquirer's advisor(s) is also the arranger/participant(s) of the current takeover-related loan lender(s); 0 otherwise.
Top-tier Advisor (1/0)	1 for the acquirer's advisor(s) who is among the top-10 financial advisors according to the investment bank league table provided by SDC, based on the dollar value of a bank's advised deals during the sample period of 1990-2012; 0 for other cases.
Scope (2/1/0)	Within five years prior to the current deal's announcement date, this variable takes a value of two if the financial advisor(s) employed in the current M&A deal also helped the same bidder arrange syndicated loans AND advise on at least one takeover deal; it takes a value of one if the advisor(s) helped with loan financing OR advisory businesses; it takes a value of zero if the advisor(s) had no loan financing nor advisory business with the current bidder.
Variable for Firm Characteristics (from Compustat and CRSP)	
Ln(size)	Natural logarithm of market value of equity (data25 × data199)
Tobin's Q	Market value of total assets over book value of total assets or (data6 – data60 + data25 × data199)/data6
Leverage	Sum of firm current liabilities (data 34) and long term debt (data 9) over book value of total assets (data6).
ROA	Adjusted net income (data258) scaled by total assets (data6)
Cash/Asset	Cash and cash equivalent (data1) scaled by total assets (data6)
Tangibility	Net property, plant and equipment (data8)/total assets.
Z-score	Modified Altman's (1968) Z-score = (1.2working capital + 1.4 retained earnings + 3.3EBIT + 0.999sales)/total assets = (1.2 data179+1.4 data36+3.3 data170+0.999data12)/data6.
CAR[-n, n]	Cumulative abnormal return for stock of the firm from event day – n to event day n where event day 0 is the deal announcement day. The returns are calculated using the market model estimated over the period starting 200 days and ending 41 days prior to the deal announcement day. The CRSP value-weighted index return is the proxy for the market return.
Run-up	The acquirer's stock return from 205 days to 6 days before the deal announcement day.
Volatility	Standard deviation of the bidder's market-adjusted daily stock returns over the period beginning 205 days and ending 6 days before the deal announcement.
Variable for M&A deal characteristics (from SDC)	
Deal value	Transaction value in millions of dollars.
Relative size	Transaction value scaled by the acquirer's market value of equity (equity (data25 × data199, from Compustat)
Cash/DealV	Cash and cash equivalent (data1 from Compustat) scaled by deal value

All-cash deal (1/0)	1 for deals that are purely cash-financed; 0 otherwise.
Tender offer (1/0)	1 for tender offers; 0 otherwise.
Hostile bid (1/0)	1 for hostile bids; 0 otherwise.
Competing deal (1/0)	1 for deals with competing bidders; 0 otherwise.
Cross industry (1/0)	1 for the acquirer and the target that are from different industries measured by 2-digit SIC code; 0 otherwise.
Public deal (1/0)	1 for the target that is a public company; 0 otherwise.
Toehold (%)	Percent of shares owned by the acquirer before the transaction.
Variable for Loan characteristics (from Dealscan)	
Ln(loan size)	Natural logarithm of the loan amount in millions of dollars.
Ln(loan maturity)	Natural logarithm of the loan maturity in in months.
Ln(loan spread)	Natural Logarithm of the all-in-drawn spread, defined as the amount of the borrower pays in basis points over LIBOR or LIBOR equivalent for each dollar drawn down.
Performance pricing (1/0)	1 for the loan facility that uses performance pricing; 0 otherwise.
Secured (1/0)	1 for the loan facility secured by collateral; 0 otherwise.
Loan Type Indicator	Term Loan A, Term Loan B, Bridge Loan, 364-day facility, etc.
Loan Purpose Indicator	Corporate purposes, debt repayment, working capital, takeover, etc.

Table 1: Sample Statistic Summary

This table reports mean and standard deviations of deal and firm characteristics of a sample of M&A deals that involve loan financing. It also shows mean and standard deviations of loan characteristics of a sample of loan facilities in financing M&A. Samples are split into the dual role M&A deals, Dual Role, and other deals, Non Dual Role. A dual role is an advisor-lender dual role, namely, a financial advisor lends to its advised acquirer in the current acquisition deal. Multiple advisor-lenders in the same deal are not double counted. N is the number of M&A deals or the number of loan facilities depending on samples. The sample period is 1990-2012 for M&A deals and 1989-2013 for loan facilities. All variables are defined in Appendix. All continuous variables are winsorized at 1st and 99th percentiles in the full sample. ***, **, and * stand for statistical significance at the 1%, 5%, and 10% confidence level, respectively.

Table 1 Cont'd

	Full Sample			*Dual Role (A)*			*Non Dual Role (B)*			*Difference (A)-(B)*	
	N	**Mean**	**Std.**	**N**	**Mean**	**Std.**	**N**	**Mean**	**Std.**	**Mean**	***t*-stat**
Deal Characteristic											
Deal value ($mil)	473	1,969	5,185	222	3,161	6,738	251	915	2,871	2246***	4.81
Hostile (1/0)	473	0.02	0.15	222	0.02	0.13	251	0.03	0.16	-0.01	-0.71
Competing deal (1/0)	473	0.04	0.20	222	0.05	0.22	251	0.04	0.19	0.01	0.75
All-cash deal (1/0)	473	0.40	0.49	222	0.37	0.48	251	0.41	0.49	-0.04	-0.90
Tender offer (1/0)	473	0.12	0.33	222	0.11	0.31	251	0.14	0.34	-0.03	-0.90
Toehold (%)	473	0.21	1.66	222	0.13	1.38	251	0.29	1.88	-0.15	-1.01
Cross Industry (1/0)	473	0.34	0.48	222	0.32	0.47	251	0.37	0.48	-0.05	-1.17
Public deal (1/0)	473	0.46	0.50	222	0.56	0.50	251	0.37	0.48	0.19***	4.17
Firm Characteristic											
Acquirer_Size ($mil)	473	4,630	12,908	222	6,120	14,577	251	3,313	11,091	2807**	2.37
Acquirer Q	473	1.83	0.94	222	1.86	0.94	251	1.80	0.95	0.06	0.65
Acquirer Leverage	473	0.26	0.21	222	0.28	0.21	251	0.24	0.20	0.04**	2.22
Acquirer ROA	473	0.05	0.08	222	0.05	0.08	251	0.05	0.08	0.00	1.32
Acquirer Tangibility	473	0.26	0.23	222	0.26	0.24	251	0.25	0.23	0.01	0.11
Acquirer Cash/Asset	473	0.13	0.15	222	0.12	0.15	251	0.13	0.15	-0.01	-0.08
Acquirer Cash/DealValue	473	0.35	0.81	222	0.23	0.28	251	0.45	1.06	-0.23***	-3.09
Acquirer Zscore	445	1.78	1.14	209	1.73	1.20	236	1.83	1.08	-0.10	-0.97
Target Size ($mil)	173	2,665	5,684	101	3,674	6,890	72	1,250	2,814	2424***	2.82
Target Q	173	1.80	1.07	101	1.94	1.15	72	1.60	0.92	0.34**	2.07
Target Leverage	173	0.25	0.21	101	0.28	0.21	72	0.21	0.21	0.06**	1.98
Target ROA	173	0.06	0.08	101	0.06	0.08	72	0.05	0.08	0.01	1.15
Loan Characteristic											
Loan spread (basis points)	817	223.87	117	444	231.72	112	373	214.53	122	17.19***	4.51
Loan size ($mil)	817	691.27	1,948	444	871.58	2,357	373	476.64	1,273	394.94***	2.90
Loan maturity (months)	817	52.00	19.45	444	52.57	19.07	373	51.33	19.89	1.24	0.91
Secured (1/0)	817	0.73	0.44	444	0.76	0.43	373	0.69	0.46	0.06**	2.07
Performance pricing (1/0)	817	0.59	0.49	444	0.60	0.49	373	0.57	0.50	0.03	0.73
No. of Total Covenants	817	7.67	4.58	444	8.10	4.36	373	7.17	4.79	0.93***	2.91
No. of General Covenants	817	5.54	3.42	444	5.93	3.33	373	5.09	3.48	0.85***	3.52
No. of Financial Covenants	817	2.13	1.45	444	2.17	1.32	373	2.08	1.59	0.09	0.92

Table 2: Type of Loan Facilities to Finance the M&A Deals

This table reports type distribution of loan facilities to finance the M&A deals in our sample. The loan type information is from Dealscan. The sample of 817 loan facilities has data on loan spreads as shown in Table 1 in Dealscan. The sample period is 1989-2013.

Loan Type	Dual Role	Non Dual Role	Total
364-Day Facility	25	23	48
Bridge Loan	33	15	48
Delay Draw Term Loan	2	0	2
Multi-Option Facility	0	1	1
NIF-Note Issuance	2	0	2
Revolver/Line < 1 Yr	0	2	2
Revolver/Line >= 1 Yr	337	270	607
Rovolver/Term Loan	0	2	2
Term Loan	19	28	47
Term Loan A	12	10	22
Term Loan B	13	19	32
Term Loan C	1	3	4
Total	444	373	817

Table 3: Probit Regression to Explain the Advisor-Lender Dual Role

This table reports results of the dual role determination in the full sample of M&A deals that involve loan financing. The dependent variable is the dummy variable *Dualrole*, which equals 1 for an advisor-lender dual role, namely, a financial advisor lends to its advised acquirer in the current acquisition deal, or 0 if there is no such a dual role in a M&A deal. The explanatory variables are defined in Appendix. Firm level explanatory variables are measured at the fiscal year end before the year in which the deal is announced. All continuous variables are winsorized at 1st and 99th percentiles. The regression fixed effects based on calendar year and Fama-French 12 industries are imposed. Standard errors are clustered at the bidding firm level. ***, **, and * stand for statistical significance at the 1%, 5%, and 10% confidence level, respectively. N is the number of observations or M&A deals.

Y=Dualrole (1/0)		(1)		(2)
	Coeff.	z-stat	Coeff.	z-stat
Relative size	0.412***	(4.06)	1.152***	(3.52)
Hostile (1/0)	0.140	(0.25)	-2.090**	(-2.23)
Competing deal (1/0)	-0.402	(-1.14)	0.468	(0.69)
All-cash (1/0)	0.079	(0.53)	0.447	(1.26)
Tender offer (1/0)	0.010	(0.04)	0.454	(0.98)
Toehold (%)	-0.032	(-0.84)	0.000	(.)
Cross Industry (1/0)	0.037	(0.22)	-0.044	(-0.12)
Public deal (1/0)	0.256	(1.46)	0.000	(.)
AcquirerLn(size)	0.406***	(6.18)	0.548***	(3.76)
AcquirerQ	-0.215**	(-2.05)	-0.783***	(-2.58)
AcquirerLeverage	0.762	(1.64)	2.084	(1.63)
AcquirerROA	1.244	(0.99)	6.615*	(1.85)
AcquirerTangibility	0.777*	(1.70)	1.681*	(1.74)
AcquirerCash/Asset	3.660***	(4.49)	6.283***	(3.29)
AcquirerCash/DealV	-1.448***	(-5.23)	-2.431***	(-2.69)
TargetLn(size)			1.200***	(3.08)
TargetQ			0.192	(1.09)
TargetROA			-3.068	(-1.30)
TargetLeverage			-0.419	(-0.43)
Intercept	-2.075***	(-2.97)	-4.566***	(-3.50)
Year Fixed Effect		Y		Y
Industry Fixed Effect		Y		Y
N		439		137
pseudo R^2		0.303		0.442

Table 4: Effect of the Advisor-lender Dual Role on the Cost of Loans to Finance M&A Deals

The table reports regression results of the loan cost determination in the sample of loan facilities to finance M&A deals. The dependent variable, Ln(loan spread), is the natural logarithm of the all-in-drawn spread. The main explanatory variable is *Dualrole*, which equals 1 for an advisor-lender dual role, namely, a financial advisor lends to its advised acquirer in the current acquisition deal, or 0 if there is no such a dual role in a M&A deal. Other explanatory variables are defined in Appendix. All continuous variables are winsorized at 1st and 99th percentiles. The regression fixed effects based on calendar year, Fama-French 12 industries, and loan type are imposed. ***, **, and * stand for statistical significance at the 1%, 5%, and 10% level, respectively. Standard errors are clustered at the bidding firm level. N is the number of observations or loan facilities.

Y=Ln(loan spread)		(1)		(2)		(3)
	Coeff.	t-stat	Coeff.	t-stat	Coeff.	t-stat
Dualrole	0.189***	(3.58)	0.186***	(3.20)	0.130***	(2.79)
Ln(loan size)	-0.141***	(-6.2)	-0.088**	(-2.39)	-0.071***	(-2.73)
Ln(loan maturity)	0.108*	(1.66)	0.084	(1.33)	0.132**	(2.14)
Performance pricing	-0.212***	(-4.99)	-0.197***	(-4.73)	-0.083**	(-2.56)
Secured	0.516***	(5.29)	0.439***	(4.17)	0.333***	(4.53)
Covenants	0.029	(0.29)	0.051	(0.53)	0.037	(0.54)
AcquirerLn(size)			-0.052	(-1.38)	-0.136***	(-3.99)
AcquirerQ			-0.053	(-1.49)	0.000	(0.01)
AcquirerLeverage			-0.006	(-0.04)	0.236**	(2.06)
AcquirerROA			0.087	(0.22)	0.520**	(2.08)
AcquirerTangibility			-0.152	(-1.19)	-0.079	(-0.66)
AcquirerCash/Asset			0.255	(1.19)	0.338**	(2.06)
AcquirerCash/DealV			-0.055*	(-1.86)	-0.060	(-1.24)
AcquirerZscore			-0.070**	(-2.16)	-0.073***	(-3.33)
Relative size					-0.028	(-1.16)
Hostile					-0.066	(-0.50)
Competing deal					0.072	(0.63)
All cash					-0.050	(-1.34)
Tender offer					-0.137*	(-1.78)
Toehold					-0.000	(-0.00)
Cross Industry					-0.025	(-0.60)
Public deal					-0.034	
Intercept	5.204***	(18.93)	5.652***	(18.67)	5.096***	(13.99)
Year Fixed Effect		Y		Y		Y
Industry Fixed Effect		Y		Y		Y
Loan Type Fixed Eff.		Y		Y		Y
N		817		771		771
Adj. R^2		0.436		0.439		0.739

Table 5: Dual Role Effect on Non-price Terms of Loan Contract

This table shows regression results for the relations between the advisor-lender dual role and non-price terms of loan contract. The dependent variables, respectively, are the natural logarithm of debt maturity measured in months, Ln(maturity), loan security (equal to 1 if the loan is secured by collateral and 0 otherwise), Secured, total number of covenants, Total covenants, which can be split into General covenants and Financial covenants. Model (1) is an OLS regression, model (2) uses the Probit regression, and model (3)-(5) are the Poisson regressions (see Graham, Li and Qiu, 2008). Other variable definitions are in Appendix. All continuous variables are winsorized at 1st and 99th percentiles. The regression fixed effects based on calendar year, Fama-French 12 industries, and loan type are imposed. ***, **, and * stand for statistical significance at the 1%, 5%, and 10% level, respectively. Standard errors are clustered at firm level. N is the number of observations.

Table 5 Cont'd

	(1)		(2)		(3)		(4)		(5)
Y=	Ln(Maturity)	t-stat	Secured (1/0)	z-stat	Total Covenants	z-stat	General Covenants	z-stat	Financial Covenants	z-stat
Dualrole	0.070**	(2.16)	0.384**	(2.47)	0.082**	(2.44)	0.090**	(2.26)	0.059	(0.94)
Acquirer_Ln(size)	-0.057***	(-2.79)	-0.195**	(-1.97)	-0.007	(-0.31)	0.005	(0.18)	-0.039	(-0.88)
Acquirer_Q	0.022	(1.29)	-0.140	(-1.54)	-0.038**	(-2.07)	-0.043*	(-1.96)	-0.030	(-0.84)
Acquirer_ROA	-0.001	(-0.01)	0.725	(1.50)	0.046	(0.48)	0.039	(0.34)	0.076	(0.41)
Acquirer_Leverage	-0.148	(-0.65)	-0.224	(-0.16)	0.653***	(2.82)	0.900***	(3.27)	0.043	(0.10)
Acquirer_Tangibility	0.022	(0.25)	-0.256	(-0.60)	0.008	(0.08)	-0.022	(-0.20)	0.077	(0.43)
Acquirer_Zscore	-0.030*	(-1.68)	-0.181*	(-1.96)	-0.019	(-1.03)	-0.036*	(-1.66)	0.026	(0.75)
Acquirer_Cash/Asset	0.096	(0.77)	2.403***	(3.57)	0.408***	(3.17)	0.430***	(2.83)	0.383	(1.57)
Acquirer_Cash/DealV	-0.052**	(-2.21)	0.027	(0.30)	-0.051*	(-1.75)	-0.073*	(-1.92)	-0.015	(-0.32)
Relative size	-0.023	(-1.35)	0.600***	(3.46)	-0.076***	(-3.56)	-0.079***	(-3.16)	-0.068	(-1.64)
Hostile	0.012	(0.12)	-0.685	(-1.63)	0.106**	(2.18)	0.086	(1.51)	0.153	(1.62)
Competing deal	0.020	(0.30)	-0.546*	(-1.67)	0.305***	(9.55)	0.315***	(8.39)	0.275***	(4.53)
All-cash	-0.026	(-0.89)	0.011	(0.08)	0.007	(0.37)	0.001	(0.03)	0.018	(0.54)
Tender Offer	-0.105**	(-2.00)	0.035	(0.15)	-0.250**	(-1.97)	-0.112	(-0.78)	-0.675**	(-2.43)
Toehold	-0.007	(-0.80)	0.065	(1.48)	0.043	(0.61)	0.047	(0.58)	0.031	(0.22)
Cross Industry	-0.036	(-1.16)	0.133	(0.90)	-0.029	(-0.97)	-0.050	(-1.42)	0.028	(0.49)
Public deal	0.028	(0.81)	0.060	(0.36)	0.012	(0.21)	0.039	(0.60)	-0.069	(-0.63)
Ln(loan size)	0.039**	(2.00)	-0.195**	(-1.96)	-0.014	(-1.38)	-0.026**	(-2.05)	0.012	(0.73)
Ln(loan maturity)			0.432***	(2.85)	-0.026	(-0.78)	-0.045	(-1.17)	0.025	(0.41)
Performance pricing	0.011	(0.37)	0.221	(1.59)	-0.074**	(-2.08)	-0.078*	(-1.88)	-0.059	(-0.88)
Intercept	4.686***	(9.01)	1.047	(1.16)	1.834***	(6.10)	1.588***	(4.45)	0.351	(0.62)
Year Fixed Effects		Y		Y		Y		Y		Y
Industry Fixed Effects		Y		Y		Y		Y		Y
Loan Type Fixed Eff.		Y		Y		Y		Y		Y
N		805		791		805		805		805
Adj. R^2 [Pseudo R^2]		0.718		[0.426]		[0.299]		[0.262]		[0.198]

Table 6: Heckman Two-Stage Procedure for the Dual Role Effect on the Loan Cost

The table presents results of the bidder loan spread analysis using the Heckman two-stage procedure. In the first-stage Probit regression (1), the *Scope* variable is an indicator of 0, 1 and 2 to measure the pre-deal advisory and/or lending relationship, see the definition in Appendix. In the second-stage equation, regressions (2) and (3), where the dependent variable is a bidder's loan spread, measured in Ln(loan spread), the Inverse Mills ratio obtained from the first stage regression (1) is added as an explanatory variable. The regression fixed effects based on calendar year, Fama-French 12 industries, and loan type are imposed in explaining bidder loan spreads. All continuous variables are winsorized at 1st and 99th percentiles. Standard errors are clustered at the bidding firm level. N is the number of observations.

Y=	(1)		(2)		(3)	
	Dualrole (1/0)		Ln(loan spread)		Ln(loan spread)	
	Coeff.	z-stat	Coeff.	t-stat	Coeff.	t-stat
Scope	0.853***	(4.74)				
Dualrole			0.147***	(3.17)	0.145***	(3.06)
Log(loan size)			-0.082***	(-3.52)	-0.070***	(-2.72)
Log(loan maturity)			0.127**	(2.00)	0.120*	(1.96)
Performance pricing			-0.085***	(-2.65)	-0.085**	(-2.58)
Secured			0.341***	(4.39)	0.330***	(4.24)
Covenants			0.041	(0.60)	0.041	(0.60)
Acquirer_Log(size)	0.332***	(4.40)	-0.096***	(-3.46)	-0.109***	(-2.81)
Acquirer_Q	-0.143	(-1.27)	-0.038	(-1.39)	-0.029	(-1.01)
Acquirer_Leverage	0.535	(1.05)	0.359***	(3.01)	0.318**	(2.57)
Acquirer_ROA	0.927	(0.72)	0.510*	(1.93)	0.576**	(2.22)
Acquirer_Tangibility	0.620	(1.27)	-0.023	(-0.20)	-0.075	(-0.60)
Acquirer_Cash/Asset	3.886***	(4.35)	0.783***	(3.76)	0.717***	(2.95)
Acquirer_Cash/DealV	-1.409***	(-4.19)	-0.265***	(-3.22)	-0.238**	(-2.43)
Acquirer_Zscore			-0.063***	(-2.90)	-0.069***	(-3.09)
Relative size	0.444***	(3.99)			-0.005	(-0.17)
Hostile	-0.484	(-0.73)			-0.113	(-0.74)
Competing deal	0.049	(0.13)			0.054	(0.48)
All-cash	0.009	(0.06)			-0.032	(-0.85)
Tender Offer	-0.147	(-0.55)			-0.127	(-1.62)
Toehold	-0.018	(-0.42)			-0.001	(-0.06)
Cross Industry	0.038	(0.22)			-0.023	(-0.52)
Public deal	0.266	(1.38)			-0.010	(-0.22)
Inverse-Mills ratio			0.155***	(2.73)	0.138**	(2.05)
Intercept	-2.457***	(-3.48)	4.269***	(12.84)	4.291***	(10.91)
Year Fixed Effect		Y		Y		Y
Industry Fixed Effect		Y		Y		Y
Loan Type Fixed Eff.		N		Y		Y
N		439		734		734
Adj. R^2 [Pseudo-R^2]		[0.34]		0.744		0.746

Table 7: Within-firm Regression Tests of Loan Costs for Dual Role Acquirers

This table reports regression results for within-firm variations in loan costs for the dual role loans and other loans such as for working capital, corporate finance and debt repayment purposes at other times, documented in Dealscan during the period of 1989-2013, for the acquirers with a dual role M&A deal. The dependent variable is the natural logarithm of all-in-drawn spread reported in Dealscan, Ln(loan spread). *Dualrole* is equal to 1 for the dual role loans or 0 for the other loans. Firm and year fixed effects are in place in all the three regression specifications, and loan type fixed effect is imposed in specification (3). Other variables are defined in Appendix. All continuous variables are winsorized at 1st and 99th percentiles. ***, **, and * stand for statistical significance at the 1%, 5%, and 10% level, respectively. Standard errors are clustered at bidding firm level. N is the number of observations or loan contrasts.

	(1)		(2)		(3)	
Y=Ln(loan spread)	Coef.	t-stat	Coef.	t-stat	Coef.	t-stat
Dualrole	0.251***	(7.25)	0.290***	(7.60)	0.206***	(5.19)
Ln(loan size)	-0.040**	(-2.34)	-0.016	(-1.04)	-0.047***	(-3.08)
Ln(loan maturity)	0.036	(1.53)	0.022	(0.87)	-0.008	(-0.17)
Performance pricing	-0.084*	(-1.94)	-0.052	(-1.17)	0.020	(0.45)
Secured	0.233***	(4.38)	0.212***	(4.23)	0.230***	(5.08)
Covenants	0.035	(0.63)	0.020	(0.35)	-0.014	(-0.29)
AcquirerLn(size)			-0.152***	(-4.69)	-0.124***	(-4.29)
AcquirerQ			-0.047	(-1.49)	-0.048*	(-1.68)
AcquirerROA			0.397	(1.19)	0.303	(0.98)
AcquirerLeverage			0.008	(0.06)	-0.033	(-0.27)
AcquirerTangibility			-0.632**	(-2.02)	-0.536*	(-1.91)
AcquirerZscore			-0.076*	(-1.84)	-0.078**	(-2.04)
AcquirerCash/Asset			-0.052	(-0.19)	-0.050	(-0.19)
Intercept	5.590***	(41.78)	5.685***	(18.60)	6.524***	(19.40)
Firm Fixed Effects		Y		Y		Y
Year Fixed Effects		Y		Y		Y
Loan Type Fixed Effects		N		N		Y
Number of observations		1,895		1,772		1,732
Adj. R^2		0.744		0.759		0.778

Table 8: The Acquirer's Announcement Effects of M&As with Loan Financing: Dual Role vs. Non Dual Role

This table presents the mean and t-stat for 3-day and 5-day acquirer cumulative abnormal returns, respectively, CAR[-1,1] and CAR[-2,2], centered on the event day 0, the deal announcement day. Daily abnormal returns are based on the market model estimated using daily returns over the period of -200 trading days to -41 trading days relative to the event day. The market model uses with the CRSP value-weight market index. Definitions of other variables are in Appendix. CARs are all winsorized at 1st and 99th percentiles. ***, **, and * stand for statistical significance at the 1%, 5%, and 10% level, respectively. N is the number of observations or in the full sample of M&A deals/events.

	Total			*Dual Role (A)*			*Non Dual Role (B)*			*Difference (A)-(B)*	
	N	mean	t-stat	N	mean	t-stat	N	mean	t-stat	mean	t-stat
CAR(-1,1)	468	0.026***	5.58	221	0.014**	2.19	247	0.037***	5.53	-0.023**	-2.43
CAR(-2,2)	468	0.029***	5.74	221	0.016**	2.33	247	0.040***	5.61	-0.024**	-2.40

Table 9: Explaining Bidder Announcement Effects of M&As that Involve Loan Financing

This table reports Heckman two-stage regression results for explaining the acquirer's CARs at the announcement of M&As that involve loan financing. The main explanatory variable is *Dualrole*. Controls for other determinants, the inverse Mill ratio, year and Fama-French 12 industry fixed effects are in place. The Inverse Mill ratio is estimated from the first stage Probit regression as reported in Table 4 (but not repeated here). All other explanatory variables are defined in Appendix. All continuous variables are winsorized at 1st and 99th percentiles. ***, **, and * stand for statistical significance at the 1%, 5%, and 10% level, respectively. Standard errors are clustered at bidding firm level.

Y=CAR[-n,n]	Regression (1): CAR [-1, 1]		Regression (2): CAR [-2, 2]	
	Coeff.	t-stat	Coeff.	t-stat
Dualrole	-0.025**	(-2.15)	-0.028**	(-2.13)
Relative size	0.008	(0.84)	0.008	(0.80)
Hostile	-0.001	(-0.05)	0.014	(0.47)
Competing deal	-0.019	(-0.97)	-0.020	(-1.02)
All-cash	0.010	(0.97)	0.011	(0.97)
Tender offer	0.003	(0.19)	0.008	(0.51)
Toehold	0.004	(0.90)	0.005	(1.30)
Cross Industry	-0.019*	(-1.83)	-0.014	(-1.28)
Public deal	-0.032***	(-2.82)	-0.039***	(-3.18)
Acquirer_Log(size)	-0.012*	(-1.81)	-0.014*	(-1.95)
Acquirer_Q	0.009	(1.14)	0.009	(1.15)
Acquirer_Leverage	-0.001	(-0.03)	-0.009	(-0.26)
Acquirer_ROA	0.034	(0.38)	0.028	(0.33)
Acquirer_Tangbility	-0.002	(-0.05)	0.022	(0.69)
Acquirer_Cash/Asset	0.008	(0.13)	-0.002	(-0.03)
Acquirer_Cash/DealV	0.013	(0.56)	0.023	(0.92)
Run-up	0.002	(0.13)	-0.006	(-0.32)
Volatility	1.180	(1.28)	0.738	(0.74)
Top-tier advisor	0.027*	(1.95)	0.027*	(1.75)
Inverse-Mills ratio	-0.018	(-0.74)	-0.028	(-1.08)
Intercept	0.185*	(1.77)	0.235*	(2.11)
Year Fixed Effects		Y		Y
Industry Fixed Effects		Y		Y
N		432		432
Adj. R^2		0.119		0.097

Table 10: Acquirers' Post-M&A Performance

This table presents the mean and t-stat of post-M&&A performance of acquirers, comparing dual role with nondual role or matched failed acquirers (announced but withdrawn). To obtain the matched acquirers, for each dual role acquirer in its dual role M&A event year t, we match an acquirer that has a failed M&A deal in the same year among a simple of 1,673 failed deals reported in SDC during our sample period of 1990-2012. In the spirit of Bena and Li (2014), we obtain the propensity scores estimated based on Ln(size) and B/M ratio in year t-1 for our bidders with completed deals in the full sample and the failed bidders. Within the 2-digit SIC industry, we can pick a failed bidder that has the closest propensity score to that of a bidder of ours. Panel A is for post-deal performance measured by post-deal buy-and-hold abnormal returns (BHAR), estimated using a market model, for post-deal days [t1, t2] starting at t1=6 and ending at t2 up to 500 days. Panel B is for post-deal performance measured by returns on assets (ROA) for up to three years after the deal year. Mean differences between samples are reported along with related t-stats. Significance at the 10%, 5% and 1% confidence level are denoted by *, **, and ***, respectively. N is the number of acquirers in a sample. The sample period extends over 2012 to accommodate post-deal years.

	Panel A: Buy-and-Hold Abnormal Return (BHAR): Dual Role Bidders vs. Non Dual Role or Matched Failed Bidders											
	Dual Role (A)			*Non Dual Role (B)*			*Matched Failed (C)*			*Difference (A)-(B)*		*Difference (A)-(C)*	
Performance	N	mean	t-stat	N	mean	t-stat	N	Mean	t-stat	Mean	t-stat	Mean	t-stat
BHAR[6,100]	218	0.052***	3.29	246	-0.009	-0.54	218	-0.063***	-3.57	0.061***	2.63	0.115***	4.86
BHAR[6,250]	218	0.042	1.83	246	-0.012	-0.45	218	-0.109***	-3.42	0.054	1.50	0.151***	3.85
BHAR[6,500]	218	0.039	1.01	246	-0.005	-0.43	218	-0.160***	-3.70	0.044	0.76	0.199***	3.42
	Panel B: Return on Assets (ROA): Dual Role Bidders vs. Non Dual Role or Matched Failed Bidders											
	Dual Role (A)			*Non Dual Role (B)*			*Matched Failed (C)*			*Difference (A)-(B)*		*Difference (A)-(C)*	
Performance	N	mean	t-stat	N	mean	t-stat	N	mean	t-stat	Mean	t-stat	Mean	t-stat
ROA-Post 1Y	213	0.032***	7.97	249	0.030***	6.63	213	-0.072	-1.26	0.002	0.46	0.105*	1.86
ROA-Post 2Y	201	0.012*	1.95	242	0.013**	1.99	201	-0.021	-1.43	-0.001	0.20	0.033**	2.09
ROA-Post 3Y	184	0.009	1.22	225	0.014	1.49	184	-0.007	-0.39	-0.005	0.37	0.016	0.85

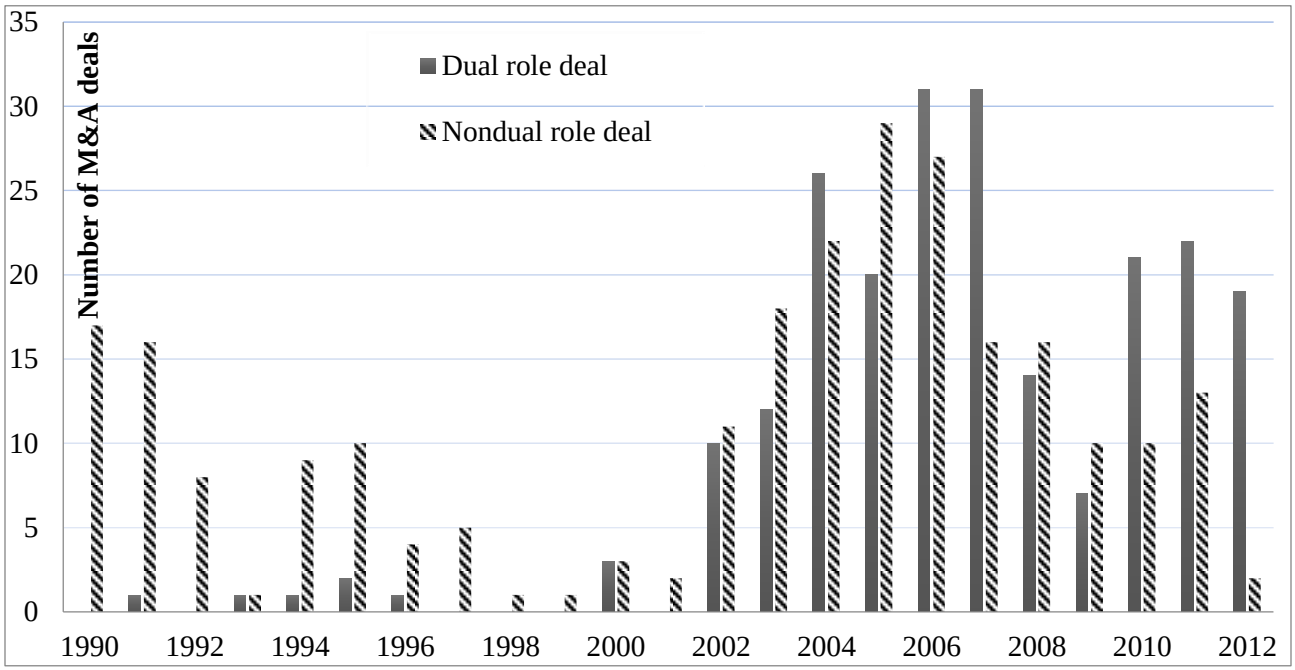
Table 11: Dual Role Effect on Loan Costs Interacted with Financial Constraints

The table reports regression results of the loan cost determination in the sample of loan facilities to finance M&A deals. The dependent variable, Ln(loan spread), is the natural logarithm of the all-in-drawn spread. The main explanatory variable is *Dualrole*, which equals 1 for an advisor-lender dual role, namely, a financial advisor lends to its advised acquirer in the current acquisition deal, or 0 if there is no such a dual role in a M&A deal. We let Dualrole interact with the size-age (SA) index of Hadlock and Pierce (2010), AcquirerSA-index, a proxy for financial constraints in specification (2), and with the bidder's pre-deal cash holdings divided by deal value, AcquirerCash/DealV, as a need for extra external finance in competing the deal in specification (3). Other explanatory variables are defined in Appendix. ***, **, and * stand for statistical significance at the 1%, 5%, and 10% level, respectively. Standard errors are clustered at the bidding firm level. N is the number of observations or loan facilities.

Y=Ln(loan spread)	(1)		(2)		(3)	
	Coeff.	*t*-stat	Coeff.	*t*-stat	Coeff.	*t*-stat
Dualrole	0.129***	(4.28)	-0.017	(-0.27)	0.199***	(5.57)
AcquirerSA-index	0.006	(0.22)	-0.030	(-1.00)		
Dualrole *AcquirerSA-index			0.064***	(2.72)		
Dualrole *AcquirerCash/DealV					-0.306***	(-3.50)
Ln(loan size)	-0.071***	(-3.86)	-0.072***	(-3.92)	-0.079***	(-4.30)
Ln(loan maturity)	0.132***	(3.53)	0.141***	(3.80)	0.138***	(3.73)
Performance pricing	-0.083***	(-2.72)	-0.088***	(-2.89)	-0.084***	(-2.78)
Secured	0.332***	(8.58)	0.338***	(8.75)	0.320***	(8.30)
Covenants	0.036	(0.82)	0.036	(0.82)	0.032	(0.73)
AcquirerLn(size)	-0.140***	(-5.14)	-0.133***	(-4.90)	-0.131***	(-6.73)
AcquirerQ	0.002	(0.13)	0.002	(0.10)	-0.014	(-0.84)
AcquirerLeverage	0.229**	(2.44)	0.203**	(2.17)	0.236***	(2.72)
AcquirerROA	0.516**	(2.32)	0.515**	(2.32)	0.545**	(2.47)
AcquirerTangibility	-0.080	(-0.96)	-0.081	(-0.99)	-0.087	(-1.06)
AcquirerCash/Asset	0.338***	(2.91)	0.327***	(2.83)	0.508***	(4.07)
AcquirerCash/DealV	-0.060***	(-2.74)	-0.052**	(-2.37)	-0.054**	(-2.50)
AcquirerZscore	-0.073***	(-4.36)	-0.075***	(-4.51)	-0.074***	(-4.46)
Relative size	-0.028*	(-1.75)	-0.027*	(-1.71)	-0.035**	(-2.21)
Hostile	-0.066	(-0.72)	-0.067	(-0.72)	-0.047	(-0.51)
Competing deal	0.071	(1.13)	0.065	(1.02)	0.045	(0.71)
All-cash	-0.050*	(-1.86)	-0.047*	(-1.76)	-0.043	(-1.63)
Tender offer	-0.138***	(-2.86)	-0.135***	(-2.80)	-0.115**	(-2.41)
Toehold	0.000	(0.02)	-0.000	(-0.02)	-0.001	(-0.16)
Cross Industry	-0.025	(-0.87)	-0.016	(-0.57)	-0.038	(-1.35)
Public deal	-0.034	(-1.06)	-0.040	(-1.25)	-0.037	(-1.15)
Intercept	5.108***	(10.71)	5.838***	(11.48)	5.201***	(11.05)
Year Fixed Effect		Y		Y		Y
Industry Fixed Effect		Y		Y		Y
Loan Type Fixed Effect		Y		Y		Y
N		771		771		771
Adj. R^2		0.740		0.742		0.744

Figure 1: Annual numbers of M&A deals and related loan facilities

Panel A: M&A deals with loan financing



Panel B: Loan facilities to finance M&A deals and annual credit spread