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The Role of Investment Bankers in M&As: New Evidence on Acquirers' Financial Conditions*

By GUO JIE, LI YICHEN, WANG CHANGYUN and XING XIAOFEI*

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Abstract

This paper investigates whether top-tier M&A (mergers and acquisitions) investment bankers (financial advisors) create value for acquirers with different financial conditions in both the short- and long-term by analyzing 3,420 US deals during 1990-2012. In this paper, deals are divided into three groups based on acquirer financial constraints – acquisitions by constrained, neutral and unconstrained firms. We find that the effects of top-tier bankers are dependent on acquirer financial conditions. Specifically, top-tier advisors improve performance for constrained acquirers rather than neutral and unconstrained acquirers. Our results show that top-tier investment bankers improve constrained acquirers' short- (five days) and long-term (36 months) performance by 1.45% and 24.27% respectively, after controlling for firm, deal and market characteristics. For deals with investment banker involvement, constrained acquirers advised by top-tier advisors have the lowest deal completion rate, and pay the lowest bid premiums; while unconstrained acquirers that retain top-tier investment bankers have the highest deal completion rate, and pay relatively high bid premiums. Our findings imply that constrained acquirers tend to retain top-tier investment bankers to gain superior synergy, while unconstrained acquirers appear to retain top-tier investment bankers to ensure deal completion.

JEL Classification: G14; G34

Keywords: Mergers and acquisitions; Investment banker; Financial constraint; Acquirer performance

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1. Introduction

In this paper, we investigate whether the effects of investment banker reputation on acquirer performance vary according to acquirer financial conditions. Mergers and acquisitions (M&As) are one of the most influential investment projects for companies; the majority of acquirers and targets will retain investment bankers as their financial advisors. For acquisitions with advisors' involvement, about 50% of the deals are advised by top-tier investment bankers.¹ The effects of bank reputation on acquirer performance have been highlighted by an increasing number of researchers.

Top-tier investment bankers charge much higher advisory fees and are supposed to provide their clients with superior service (Golubov et al., 2012); however, the empirical evidence on this reputation–quality mechanism remains inconclusive. Some studies find that acquirers advised by top-tier advisors do not outperform those advised by non-top-tier advisors and may even obtain negative abnormal returns (e.g. Hunter and Jagtiani, 2003; Ismail, 2010; Michel et al., 1991; Rau, 2000; Servaes and Zenner, 1996).

For example, Michel et al. (1991) find that Drexel Burnham Lambert, a less prestigious bank, helps its clients earn the highest announcement abnormal returns, while First Boston, Bulge Bracket, achieves the poorest performance. In other words, bank reputation does not relate to better takeover performance. Servaes and Zenner (1996) show that acquirer announcement returns do not differ across in-house deals and deals advised by investment banks. The differences in announcement returns between acquirers advised by top-tier and non-top-tier advisors are also insignificant. Rau (2000) finds that acquirers advised by top-tier investment banks obtain higher announcement abnormal returns in tender offers but lower announcement abnormal returns in mergers compared to acquirers advised by lower-tier investment banks. Furthermore, in both mergers and tender offers advised by top-tier investment banks, the completion rate of value-increasing transactions measured by announcement cumulative abnormal returns (CARs) is not significantly higher than that of value-decreasing transactions. In contrast, compared to the proportion of tender offers with negative announcement CARs, second-tier banks help acquirers complete a significantly higher proportion of tender offers with positive announcement CARs. Hunter and Jagtiani (2003) use a unique method, employing the difference between the transaction values at the announcement date and the effective date as a proxy for acquisition gains, and find that acquisition gains are inversely associated with the retention of top-tier investment bankers. Furthermore, Ismail (2010) reports that acquirers advised by first-tier banks obtain negative announcement returns, whereas second-tier banks help their clients gain positive returns around announcements.

In contrast, several researchers argue that top-tier advisors have superior abilities to identify synergistic targets and secure a larger proportion of synergy for their clients. Therefore, top-tier advisors are capable of improving acquirer performance (Golubov et al., 2012). Additionally, a higher reputation is associated with a higher market share. To maintain this market share, top-tier advisors must therefore maintain their reputation, which is achieved by providing superior service.

Specifically, Boone and Mulherin (2008) find that acquirer announcement returns are positively related to top-tier advisors retained by acquirers but negatively related to top-tier advisors retained by targets. Therefore, top-tier advisors help their acquirer clients improve acquisition performance, and help their target clients gain high-

¹ Source: Thomson One Banker.

premium offers. In other words, the retention of top-tier advisors is in the interest of employers. In addition, Golubov et al. (2012) argue that acquirers advised by top-tier advisors outperform acquirers advised by non-top-tier advisors in public acquisitions. They find that the retention of top-tier advisors led to \$65.83 million shareholder gains for acquirers, on average, in public acquisitions during 1996-2009. More importantly, their results suggest that the improvement in performance can be attributed to top-tier advisors' skills in identifying synergistic targets and negotiating higher shares of synergies for acquirers.

The previous literature examines the effects of investment bankers' reputation on acquirer performance. However, a firm's decision to conduct acquisitions and to retain top-tier advisors can be influenced by firm characteristics, such as firms' financial conditions. Acquirers with sufficient internal funds are more likely to conduct mergers, while they tend to forgo them if they are financially constrained (Harford, 1999; Jensen, 1986). At the same time, cash-rich acquirers are more likely to retain top-tier advisors (Golubov et al., 2012).

Jensen (1986) introduces the free cash flow hypothesis and argues that firms with excess cash reserves tend to make value-decreasing takeover deals. Similarly, Smith and Kim (1994) investigate the influence of free cash flow and financial slack on announcement abnormal returns. Their study shows that acquirers with high free cash flow obtain significantly negative announcement abnormal returns, whereas slack-poor acquirers gain significantly positive announcement abnormal returns. The returns to acquirers are highest in the acquisition of high free cash flow targets by slack-poor acquirers. In addition, Harford (1999) examines whether excess cash holdings stimulate top management to conduct takeover transactions and whether such deals (made by cash-rich acquirers) tend to destroy value. Harford finds that cash richness is positively related to the probability of being an acquirer, but negatively related to acquirer announcement returns. Additionally, the post-merger long-term abnormal operating performance of both cash-rich and cash-poor acquirers is significantly negative and insignificant, respectively. In other words, cash-rich companies tend to conduct value-destroying takeovers. Furthermore, Malmendier and Tate (2005, 2008) find that financially unconstrained firms are more likely to exhibit overconfidence and overconfident CEOs tend to conduct value-destroying acquisitions, while firms with financial constraints are reluctant to raise external capital and forgo mergers if external finance is required.

The above-mentioned studies suggest that acquirers with different financial conditions exhibit different behaviors, which may help to explain the inconclusive evidence on the role of top-tier investment bankers in M&A deals. Specifically, acquirers with abundant cash flows tend to overestimate their ability to generate excess returns (Crocchi et al., 2010; Doukas and Petmezas, 2007; Malmendier and Tate, 2008; Roll, 1986). Thus, it is highly possible that they do not rely on investment bankers to identify synergistic targets, and employ top-tier advisors solely to complete their intended M&A deals. In contrast, acquirers with financial constraints do not have sufficient internal funds to finance M&A deals, and high financing costs force constrained firms to make acquisition decisions rationally and carefully. Consequently, constrained acquirers are likely to retain top-tier advisors to obtain acquisition synergy. However, there is no empirical research that has directly examined if the effects of top-tier investment bankers differ across acquirers with different financial conditions. This paper, therefore, aims to fill this void in the literature. Specifically, we examine acquirer short- and long-term performance and,

more importantly, investigate whether the effects of top-tier advisors are dependent on acquirer financial conditions.

Therefore, we analyze a large sample of US M&As over the 1990-2012 period, and divide the deals into three groups – acquisitions by constrained, neutral, and unconstrained acquirers. Specifically, we use KZ (Kaplan-Zingales) index to classify acquirer financial constraints. The lowest (highest) one third of acquirers ranked by their KZ Index are defined as unconstrained (constrained) acquirers. The middle one third of acquirers are classified as neutral acquirers.² We use a market share-based league table to measure investment banker reputation. Specifically, top-10 investment banks in the league table are defined as top-tier advisors, while others are defined as non-top-tier advisors.³ We show that top-tier investment bankers help financially constrained acquirers improve performance in both the short- and long-term. In contrast, the effects of top-tier investment bankers are insignificant for unconstrained and neutral acquirers, which is consistent with most of the previous literature.⁴ For deals with investment banker involvement, constrained acquirers advised by top-tier advisors gain the highest short- and long-term abnormal returns, and pay the lowest bid premiums, while unconstrained acquirers advised by top-tier advisors have the highest deal completion rate. These results suggest that constrained acquirers retain top-tier advisors to improve takeover performance and bargaining power, while unconstrained acquirers advised by top-tier advisors give priority to deal completion. In other words, the effects of top-tier advisors are dependent on acquirer financial conditions.

This research contributes to the M&A literature in the following two aspects. First, this paper sheds new light on puzzling empirical evidence on the effects of top-tier investment bankers. We highlight that the effects of top-tier advisors are sensitive to acquirer financial conditions. By examining abnormal returns to acquirers in different advisor–constrai groups, we provide novel evidence on the impact of top-tier advisors on acquirer performance. In particular, we find that top-tier advisors create value for their clients, but only if their clients are financially constrained acquirers.

Second, this paper emphasizes the importance of the long-term effects of financial advisors. Most studies⁵ only focus on investment bankers' effects on acquirer performance in the short-term; however, financial advisors engage not only in deal negotiation but also post-deal integration. If the synergies identified and secured by top-tier advisors exist, then it will take time to transfer them into improved performance through post-deal integration and to demonstrate them to the market. To fill this void in the research, this paper investigates the effects of advisors on acquirer performance in both the short- and long-term.

Our findings also have important strategic implications for practitioners. Prestigious investment bankers have superior abilities to improve their clients' bargaining power and takeover performance. They also have stronger skills in deal completion. However, our research asks whether top-tier bankers can fulfill their potential is determined by clients' aims. We emphasize that the positive effects of top-

² We also use the SA Index to measure acquirer financial constraint as a robustness check. Acquirers with a higher SA Index are more constrained. Robustness tests are discussed in Section 4.

³ Investment bank league tables are acquired from Thomson One Banker. We also use other classifications to define top-tier advisors. Robustness tests are discussed in Section 4.

⁴ See Hunter and Jagtiani (2003); Ismail (2010); Michel et al. (1991); Rau (2000); Servaes and Zenner (1996).

⁵ See Bao and Edmans (2011); Bowers and Miller (1990); da Silva Rosa et al. (2004); Golubov et al. (2012); Ismail (2010); Kale et al. (2003); McLaughlin (1992); Michel et al. (1991); Schiereck et al. (2009); Servaes and Zenner (1996); Walter et al. (2008).

tier investment bankers can be offset by acquirers' overconfidence. Stock markets reward acquirers who make acquisition decisions rationally and elaborately.

The remainder of this paper is organized as follows. Section 2 presents the data selection procedure and methodology. Section 3 discusses the empirical results. Robustness tests are carried out in Section 4. Section 5 concludes this paper.

2. Data and methodology

2.1. Sample selection

This paper analyzes a sample of US domestic M&As announced from 1st January 1990 – 31st December 2012. Initially, we acquire a sample of 28,220 deals from Thomson One Banker.⁶ Since this paper focuses on the effects of investment bankers, acquirers are required to have their advisor information recorded by Thomson One Banker, yielding 6,782 deals. To control for deal characteristics, observations are required to report transaction value and payment method information to Thomson One Banker, which leaves a sample of 5,910 deals. To calculate short- and long-term abnormal returns, acquirers are also required to file sufficient stock price data with the Center for Research in Security Prices (CRSP) database, which leaves a sample of 5,505 deals.⁷ To measure financial constraints and other firm characteristics, acquirers are further required to have sufficient accounting data in the Compustat database, yielding a final sample of 3,420 deals.⁸ In the final sample, 3,323 transactions are advised by investment banks, and 97 transactions are in-house deals.

2.2. Methodology

2.2.1 Measure of advisor reputation

Following the method of Golubov et al. (2012), this research uses a binary classification to distinguish between top-tier and non-top-tier advisors. Specifically, the top 10 banks measured by transaction value are classified as top-tier advisors and the others are classified as non-top-tier advisors.⁹ Since the eighth and tenth advisors are very similar in transaction values and market shares, this paper uses the top 10 as the cut-off point, unlike the top-8 classification of Golubov et al. (2012).

To prevent misclassification, this paper also pays attention to takeovers among investment banks. For instance, Lehman Brothers declared bankruptcy in 2008 and was acquired by Barclays Capital the same year. Therefore, deals advised by Barclays Capital before the acquisition of Lehman Brothers (top-tier) are classified as being advised by a non-top-tier investment bank, whereas deals advised by Barclays Capital after the acquisition are classified as advised by a top-tier bank. Similarly, First Boston (top-tier) was acquired by Credit Suisse in 1990. Travelers Group acquired

⁶ The original sample includes 203,415 deals. Acquirers are required to be public and targets are required to be public, private, or subsidiaries. Using these criteria yields a sample of 105,565 deals. Takeover transaction values are required to be greater than or equal to \$1 million, yielding a sample of 58,742 deals. Regulated industries such as financial and utility firms (Standard Industrial Classification codes 6000–6999 and 4900–4999, respectively) are excluded, yielding a sample of 41,396 deals. Bankruptcy acquisitions, going-private transactions, leveraged buyouts, liquidations, repurchases, restructurings, reverse takeovers, and privatizations are excluded from the sample, leaving a sample of 28,220 observations.

⁷ Calculating size-adjusted BHARs also requires data on the book value of equity from the Compustat database.

⁸ This paper uses the KZ index to measure financial constraints. To calculate the KZ index, Compustat items 1, 6, 8, 9, 14, 18, 19, 21, 24, 25, 34, 60, 74, and 216 are required.

⁹ Appendix 1 shows the top 25 investment banks ranked by transaction value. Financial advisor league tables were downloaded from Thomson One Banker.

Salomon Brothers (top-tier) in 1998 and subsequently merged with Citicorp the same year, establishing Citigroup.

2.2.2 Measure of financial constraint

This paper uses the Kaplan-Zingales (KZ) index to measure acquirer financial constraints. Using a sample of 49 low-dividend firms from 1970 to 1984, Kaplan and Zingales (1997) investigate the proper measure of firms' financial constraints. Specifically, they identify constrained and unconstrained firms by analyzing annual reports and management discussions. Subsequently, they consider firm characteristics (ratio of cash flow to capital, Tobin's Q, leverage, ratio of dividends to capital, and ratio of cash to capital) that relate to financing constraints, to estimate an ordered logit regression. The parameters of the regression are used to formulate the KZ index, thereby measuring a firm's level of financial constraint (Lamont et al., 2001). A higher KZ index indicates a higher level of financial constraint. The KZ index is widely used in research to measure firm financial constraints (e.g. Baker et al., 2003; Guariglia and Yang, 2016; Li, 2011; Malmendier and Tate, 2005, 2008).

Following the aforementioned research, we calculate the KZ index using the following formula:

$$KZ_{it} = -1.001909 \times \frac{CF_{it}}{K_{it-1}} + 0.2826389 \times Q_{it} + 3.139193 \times Leverage_{it} \\ - 39.3678 \times \frac{Dividend_{it}}{K_{it-1}} - 1.314759 \times \frac{C_{it}}{K_{it-1}}$$

where CF_{it}/K_{it-1} is cash flow (Compustat item IB+DP) over lagged capital (Compustat item PPENT), Q_{it} is Tobin's Q ratio (Compustat item (AT+PRCC×CSHO-CEQ-TXDB)/AT), $Leverage_{it}$ is the leverage ratio (Compustat item (DLTT+DLC)/(DLTT+DLC+SEQ)); $Dividend_{it}/K_{it-1}$ is dividends (Compustat item DVC+DVP) over lagged capital (Compustat item PPENT), and C_{it}/K_{it-1} is cash (Compustat item CHE) over lagged capital (Compustat item PPENT).

We divide acquirers into three groups based on their KZ index. Specifically, the lowest (highest) third of acquirers ranked by KZ index is defined as unconstrained (constrained). The middle third of acquirers is classified as the neutral group.¹⁰

2.2.3 Short-term performance

Bouwman et al. (2009) argue that the presence of serial bidders implies that multiple takeovers may be announced during the estimation period for the market model, and therefore the parameter estimates will be biased. In line with these authors, this paper uses market-adjusted CARs to measure acquirer short-term performance. Market-adjusted abnormal returns are defined as

$$AR_{it} = R_{it} - R_{mt}$$

where R_{it} is the daily stock return for firm i on date t and R_{mt} is the daily return for the value-weighted CRSP index on date t .

Subsequently, market-adjusted CARs are calculated over a [-2, 2] window around announcements (CAR [-2, 2]), as follows:

$$CAR_{i,T_1,T_2} = \sum_{t=T_1}^{T_2} AR_{it}$$

2.2.4 Long-term performance

¹⁰ Additional results obtained using an alternative methodology of constrained acquirers are discussed in Section 4.

This paper uses buy-and-hold abnormal returns to measure acquirer long-term performance in completed deals. Test statistics of long-term market-adjusted abnormal returns are misspecified due to rebalancing bias, new-listing bias, and skewness bias (Barber and Lyon, 1997; Lyon et al., 1999). To address these problems, Lyon et al. (1999) and Bouwman et al. (2009) use size-adjusted buy-and-hold abnormal returns (BHARs) to measure long-term stock performance. Therefore, this paper calculates post-merger 36-month size-adjusted BHARs (BHAR36). Specifically, size-adjusted BHARs are calculated as follows:

$$BHAR_{i,T_1,T_2} = \prod_{t=T_1}^{T_2} (1 + R_{it}) - \prod_{t=T_1}^{T_2} (1 + R_{pt})$$

where R_{it} is the monthly stock return for firm i in month t and R_{pt} is the monthly return for reference portfolio in month t , calculated as

$$R_{pt} = \frac{1}{N} \sum_{j=1}^N R_{jt}$$

where R_{jt} is the monthly stock return for firm j in month t and N the number of firms. In each year, we construct 50 reference portfolios based on size and market-to-book. The reference portfolios are created in two stages, following Bouwman et al. (2009). First, from 1990 to 2009, all NYSE firms are sorted into deciles on the basis of their market value, calculated as the stock price multiplied by the number of common shares outstanding in June of year t . Second, within each size decile, firms are sorted into quintiles based on their market-to-book ratios, calculated as the market value of equity in June of year t divided by the book value of equity in fiscal year $t - 1$. After all NYSE firms have been categorized into 50 groups, AMEX and NASDAQ firms are placed in their appropriate reference portfolios based on market value and market-to-book ratios. Additionally, firms that conducted acquisitions in year t are excluded from the reference portfolios.

2.2.5 Multivariate analysis

The variation in acquirer abnormal returns can be explained by multiple variables. Multivariate regressions are conducted to examine the effects of top-tier investment banks.¹¹ The following equation is employed to examine the relation between acquirer performance and the retention of top-tier investment banks:

$$\begin{aligned} Performance_i &= \alpha_0 + \alpha_1 TopTier_i + \alpha_2 TopTier_i \times Constrained_i + \alpha_3 TopTier_i \\ &\times Unconstrained_i + \alpha_4 Constrained_i + \alpha_5 Unconstrained_i \\ &+ \alpha_6 Firm_i + \alpha_7 Deal_i + \alpha_8 Market_i + f_t + f_{ind}. \\ &+ \varepsilon_i \end{aligned} \quad (1)$$

where $Performance_i$ is the performance of acquirer i , and it can be either short-term or long-term. $TopTier_i$ is the key explanatory variable in this research and equals one if acquirer i retains a top-tier advisor for the deal. $Constrained_i$ ($Unconstrained_i$) is a dummy that equals one if acquirer i is financially constrained (unconstrained). $TopTier_i \times Constrained_i$ ($TopTier_i \times Unconstrained_i$) is the interaction variable that interacts the $TopTier_i$ dummy and $Constrained_i$ ($Unconstrained_i$) dummy. $Firm_i$ represents the firm characteristics of acquirer i at the end of the fiscal year prior to the announcement, including size ($LN(MV)$), market-to-book ratio (M/B), leverage ($Leverage$), cash flows-to-equity ratio ($Cash\ flows/Equity$), pre-deal stock

¹¹ All the control variables mentioned in this section are described in Appendix 2.

performance (*RUNUP*), risk of stock (*Sigma*), acquirer takeover experience (*Experienced Bidder*), and whether the acquirer is a serial bidder (*Serial Bidder*). $Deal_i$ represents the deal characteristics for acquirer i , including relative transaction values (*Relative Size*), target public status (*Public*), payment method (*Cash/Stock*), deal attitude (*Hostile*), bid competition (*Competing Bid*), tender offers (*Tender Offer*), and diversifying deals (*Diversification*). $Market_i$ represents market characteristics for acquirer i , including M&A market heat (*M&A Heat Degree*) and stock market valuation (*High/Low Valuation Market*).

Equations (1) and (2) also control for year fixed effects (f_i) and industry fixed effects (f_{ind}). To minimize the influence of outliers, all quantitative variables are winsorized at 1% and 99%.¹²

2.3 Summary statistics

Table 1 exhibits summary statistics for the entire sample.¹³ In our sample, 48.16% and 49.01% of deals are advised by top-tier and non-top-tier advisors, respectively. In-house deals account for only 2.84% of the sample.

¹² Results hold when the variables are winsorized at different levels, such as 2% and 98%, 3% and 97%, and 5% and 95%.

¹³ All the variables mentioned in this section are described in Appendix 2, where Panels A to D present acquirer short- and long-term abnormal returns, acquirer firm characteristics, deal characteristics, and market characteristics, respectively.

Table 1: Summary Statistics

This table presents summary statistics for the full sample of M&A Deals, stratified by the retention of financial advisors. The top-tier, non-top-tier and in-house subsamples contain deals advised by top-tier advisors, deals advised by non-top-tier advisors and in-house deals, respectively. Panels A, B, C and D report acquirer short- and long-term abnormal returns, acquirer firm characteristics, deal characteristics, and market characteristics, respectively. All variables are defined in Section 3.2 and Appendix B. Bid Premiums are winsorized if values are beyond the range of [0, 2]. Other quantitative variables are winsorized at the 1% and 99% levels. T-test and the Wilcoxon rank-sum test are used to test the difference in mean and median, respectively.

	All (A)			Top-Tier (T)			Non-Top-Tier (N)			In-House (I)			Difference (T) – (N)	
	Mean	Standard Deviation	N	Mean	Median	N	Mean	Median	N	Mean	Median	N	P-Value Mean	P-Value Median
Panel A: Acquirer Short- and Long-Term Abnormal Returns														
CAR [-2, 2]	1.08%	0.10	3,420	0.57%	0.48%	1647	1.51%	0.99%	1676	2.42%	0.68%	97	0.003	0.019
BHAR36	-37.25%	0.84	3,216	-29.68%	-35.69%	1572	-44.86%	-54.79%	1551	-38.46%	-45.98%	93	0.000	0.000
Panel B: Acquirer Firm Characteristics														
KZ Index	-14.61	52.37	3,420	-11.67	-2.25	1647	-18.12	-2.75	1676	-3.83	-1.28	97	0.000	0.010
MV (\$ mil)	8239.88	23159.14	3,420	12944.36	2496.40	1647	2425.14	388.54	1676	28829.64	1602.12	97	0.000	0.000
M/B	4.84	6.80	3,420	4.86	3.02	1647	4.64	2.76	1676	7.97	5.00	97	0.181	0.004
Leverage	0.28	0.26	3,420	0.31	0.30	1647	0.24	0.15	1676	0.25	0.24	97	0.000	0.000
Cash Flows/Equity	0.04	0.13	3,420	0.06	0.06	1647	0.03	0.05	1676	0.04	0.05	97	0.000	0.000
RUNUP	0.17	0.49	3,420	0.15	0.10	1647	0.20	0.11	1676	0.15	0.12	97	0.005	0.093
Sigma	0.03	0.02	3,420	0.03	0.02	1647	0.04	0.03	1676	0.03	0.03	97	0.000	0.000
Past Experience	6.94	8.53	3,420	8.57	6.00	1647	4.90	3.00	1676	14.67	8.00	97	0.000	0.000
Serial Bidder	28.74%	0.45	3,420	37.40%	–	1647	18.79%	–	1676	53.61%	–	97	0.000	–

	All (A)			Top-Tier (T)			Non-Top-Tier (N)			In-House (I)			Difference (T) – (N)	
	Mean	Standard Deviation	N	Mean	Median	N	Mean	Median	N	Mean	Median	N	P-Value Mean	P-Value Median
Panel C: Deal Characteristics														
Transaction Value (\$ mil.)	728.25	1823.83	3,420	1207.49	365.35	1647	275.16	69.69	1676	419.63	101.13	97	0.000	0.000
Relative Size	0.34	0.45	3,420	0.33	0.17	1647	0.36	0.19	1676	0.10	0.05	97	0.037	0.001
Public	46.20%	0.50	3,420	53.79%	–	1647	36.63%	–	1676	82.47%	–	97	0.000	–
All Stock Deals	25.50%	0.44	3,420	20.40%	–	1647	29.18%	–	1676	48.45%	–	97	0.000	–
All Cash Deals	37.08%	0.48	3,420	42.38%	–	1647	32.10%	–	1676	32.99%	–	97	0.000	–
Mixed Deals	37.43%	0.48	3,420	37.22%	–	1647	38.72%	–	1676	18.56%	–	97	0.186	–
Hostile	2.63%	0.16	3,420	3.89%	–	1647	1.55%	–	1676	0.00%	–	97	0.000	–
Competing Bid	3.19%	0.18	3,420	4.31%	–	1647	2.15%	–	1676	2.06%	–	97	0.000	–
Tender Offer	16.20%	0.37	3,420	19.73%	–	1647	12.47%	–	1676	20.62%	–	97	0.000	–
Diversification	34.82%	0.48	3,420	34.43%	–	1647	34.90%	–	1676	40.21%	–	97	0.386	–
Completed Deals	92.98%	0.26	3,420	92.53%	–	1647	93.38%	–	1676	93.81%	–	97	0.171	–
Time to Resolution	86.02	78.92	3,386	95.23	73.00	1635	75.51	54.00	1658	111.39	98.00	93	0.000	0.000
Bid Premiums	42.61%	0.38	1,456	40.62%	33.33%	839	43.84%	35.04%	546	56.76%	45.45%	71	0.061	0.295
Advisory Fees (\$ mil)	3.89	6.45	537	6.21	3.23	256	1.77	0.75	281	–	–	–	0.000	0.000
Relative Advisory Fees	0.85%	0.85%	537	0.69%	0.51%	256	0.99%	0.75%	281	–	–	–	0.000	0.000
Panel D: Market Characteristics														
Heat Degree	1.45	0.34	3,420	1.40	1.36	1647	1.47	1.44	1676	1.82	1.85	97	0.000	0.000
High Valuation Market	44.06%	0.50	3,420	39.28%	–	1647	46.00%	–	1676	91.75%	–	97	0.000	–
Neutral Valuation Market	38.77%	0.49	3,420	41.23%	–	1647	38.37%	–	1676	4.12%	–	97	0.046	–
Low Valuation Market	17.16%	0.38	3,420	19.49%	–	1647	15.63%	–	1676	4.12%	–	97	0.002	–

Panel A of Table 1 shows both short- and long-term abnormal returns for acquirers. For the full sample, acquirers' CAR [-2, 2] and BHAR36 average 1.08% and -37.25%, respectively. Deals advised by top-tier advisors generate significantly lower short-term returns but significantly higher long-term returns for acquirers than deals advised by non-top-tier advisors.

Panel B of Table 1 presents statistics for firm characteristics. The KZ index for acquirers averages -14.61 over the sample period (1990-2012). Additionally, acquirers that retain top-tier advisors have a higher KZ index than acquirers that retain non-top-tier advisors (-11.67 versus -18.12), indicating that relatively more constrained acquirers tend to choose top-tier advisors.

Furthermore, compared to acquirers advised by non-top-tier advisors, acquirers that retain top-tier advisors tend to be larger firms, glamour firms, firms with higher leverage, firms with higher cash flows-to-equity ratio, firms with lower stock performance and lower risk, firms with more takeover experienced, and serial bidders.

Panel C shows the deal characteristics. Top-tier advisors are more likely to be retained in acquisitions with a higher transaction value but lower relative size, public acquisitions, all-cash deals, hostile deals, competing bids, and tender offers. In addition, top-tier advisors take more time to complete deals and help their clients pay lower bid premiums. Top-tier advisors charge higher advisory fees; however, when the deal value is taken into consideration, acquirers pay lower relative advisory fees in deals advised by top-tier advisors.

Panel D presents the market characteristics. M&A Heat Degree is significantly negatively related to the retention of top-tier advisors, indicating that acquirers in a relatively cold M&A market tend to choose top-tier advisors. In addition, acquirers are more likely to choose top-tier advisors when stock market valuations are low or neutral.

The correlation matrix of variables used in regression analyses is shown in Table 2. The results show relatively low correlation between most independent variables. In particular, the correlation between *TopTier* dummy and other variables, and the correlations between *KZ Index* and other variables are low, suggesting that these are unlikely to cause any concern regarding multicollinearity in regression analyses.

Table 2: Correlation Matrix

This table presents pairwise correlations of the variables. Variables are abbreviated as follows: CAR – CAR [-2, 2]; BHAR – BHAR36; Top – Top-Tier Advisor; KZ – KZ Index; MV – Market Value; MB – M/B; LEV – Leverage; CFE – Cash Flows/Equity; RUN – RUNUP; SIG – Sigma; PE – Past Experience; SB – Serial Bidder; RS – Relative Size; PUB – Public; STO – Stock; CAS – Cash; HOS – Hostile; CB – Competing Bid; TO – Tender Offer; DIV – Diversification; HD – Heat Degree; HVM – High Valuation Market; LVM – Low Valuation Market. All variables are defined in Section 3.2 and Appendix B. Bid Premiums are winsorized if values are beyond the range of [0, 2]. Other quantitative variables are winsorized at the 1% and 99% levels.

	CAR	BHAR	TOP	KZ	MV	MB	LEV	CFE	RUN	SIG	PE	SB	RS	PUB	STO	CAS	HOS	CB	TO	DIV	HD	HVM	LVM	
CAR	1.00																							
BHAR	-0.01	1.00																						
TOP	-0.05	0.09	1.00																					
KZ	0.01	0.06	0.05	1.00																				
MV	-0.07	0.01	0.19	0.04	1.00																			
MB	-0.03	-0.16	0.00	-0.18	0.18	1.00																		
LEV	0.05	0.09	0.13	0.19	0.03	-0.06	1.00																	
CFE	0.07	0.11	0.11	0.20	0.03	-0.11	0.16	1.00																
RUN	-0.02	-0.13	-0.04	-0.07	0.01	0.46	-0.08	-0.04	1.00															
SIG	0.00	-0.15	-0.28	-0.29	-0.22	0.24	-0.19	-0.35	0.32	1.00														
PE	-0.07	0.03	0.18	0.11	0.56	0.01	0.13	0.07	-0.06	-0.25	1.00													
SB	-0.05	0.03	0.18	0.11	0.33	-0.02	0.11	0.08	-0.08	-0.27	0.67	1.00												
RS	0.07	0.08	-0.02	0.04	-0.18	-0.14	0.19	0.05	-0.06	0.11	-0.15	-0.15	1.00											
PUB	-0.14	0.03	0.14	0.07	0.17	-0.02	0.06	0.02	-0.04	-0.13	0.17	0.14	0.08	1.00										
STO	-0.09	-0.14	-0.12	-0.09	0.00	0.27	-0.13	-0.18	0.22	0.32	-0.02	-0.04	-0.05	0.14	1.00									
CAS	0.09	0.10	0.10	0.07	0.08	-0.15	0.03	0.15	-0.16	-0.30	0.12	0.13	-0.18	0.02	-0.44	1.00								
HOS	-0.06	0.04	0.08	0.03	0.03	-0.02	0.07	0.05	-0.01	-0.06	0.07	0.05	0.12	0.16	-0.05	0.01	1.00							
CB	-0.07	0.02	0.06	0.01	0.03	-0.02	0.04	0.04	-0.03	-0.06	0.02	0.04	0.12	0.16	-0.04	0.00	0.31	1.00						
TO	0.05	0.05	0.10	0.06	0.05	-0.10	0.04	0.08	-0.11	-0.14	0.09	0.09	-0.04	0.46	-0.20	0.33	0.16	0.14	1.00					
DIV	-0.03	-0.04	-0.01	-0.01	0.10	0.01	0.03	0.02	0.00	-0.06	0.10	0.07	-0.09	-0.06	0.01	-0.01	0.00	-0.04	-0.06	1.00				
HD	0.02	-0.09	-0.12	-0.01	-0.03	0.14	0.04	0.05	0.01	0.07	0.04	0.03	0.06	0.10	0.25	-0.17	0.01	0.02	0.05	0.04	1.00			
HVM	0.03	-0.10	-0.09	-0.05	0.00	0.17	0.01	0.02	0.11	0.22	0.04	0.02	0.04	0.04	0.23	-0.17	-0.01	0.00	0.02	0.04	0.60	1.00		
LVM	-0.03	0.09	0.06	0.02	0.03	-0.09	0.05	0.01	-0.10	-0.19	0.01	0.02	-0.04	-0.03	-0.13	0.12	0.01	-0.02	-0.01	-0.01	-0.29	-0.40	1.00	

3. Empirical results

3.1 Univariate analysis

3.1.1 Short-term performance

Table 3 reports the short-term performance (CAR [-2, 2]) for different advisor-constraint groups and their univariate comparison.

Table 3: Acquirer Short-Term Performance

This table reports acquirer short-term 5-day market-adjusted CARs around the announcement for the full sample. The variable is defined in Section 3.2 and Appendix B. Acquirers are divided into three groups based on the KZ Index. Specifically, the lowest (highest) one third of acquirers ranked by their KZ Index are defined as unconstrained (constrained) acquirers. The middle one third of acquirers are classified as neutral acquirers. Panel A relates to all deals in the sample. Panel B relates to deals advised by top-tier advisors. Panel C relates to deals advised by non-top-tier advisors. Panel D relates to in-house deals. Panel E relates to the difference in acquirer performance between deals advised by top-tier and non-top-tier advisors. The variable (CAR [-2, 2]) is winsorized at the 1% and 99% levels. T-test is used to test the significance of the mean, and the difference in the means. Wilcoxon signed-rank test and Wilcoxon rank-sum test are used to test the significance of median and the difference in medians, respectively. P-Values are shown in parentheses. Statistical significance at the 1% level, 5% level and 10% levels are denoted as ***, ** and * respectively.

	All (A)	Constrained (C)	Neutral (N)	Unconstrained (U)	Difference (C) – (U)
Panel A: All					
Mean	1.08% ^{***} (0.000)	1.94% ^{***} (0.000)	0.90% ^{***} (0.001)	0.41% (0.196)	1.53% ^{***} (0.000)
Median	0.64% ^{***} (0.000)	1.41% ^{***} (0.000)	0.54% ^{***} (0.003)	0.17% (0.310)	1.24% ^{***} (0.000)
N	3,420	1,140	1,140	1,140	
Panel B: Top-Tier					
Mean	0.57% ^{***} (0.008)	2.31% ^{***} (0.000)	0.18% (0.549)	-0.88% ^{**} (0.042)	3.19% ^{***} (0.000)
Median	0.48% ^{***} (0.003)	1.82% ^{***} (0.000)	0.21% (0.529)	-0.24% ^{**} (0.049)	2.06% ^{***} (0.000)
N	1,647	545	603	499	
Panel C: Non-Top-Tier					
Mean	1.51% ^{***} (0.000)	1.49% ^{***} (0.001)	1.61% ^{***} (0.000)	1.45% ^{***} (0.002)	0.04% (0.474)
Median	0.99% ^{***} (0.000)	1.28% ^{***} (0.001)	0.91% ^{***} (0.002)	0.69% ^{***} (0.003)	0.59% (0.830)
N	1,676	553	505	618	
Panel D: In-House					
Mean	2.42% ^{***} (0.003)	3.08% ^{**} (0.039)	2.98% ^{**} (0.012)	0.45% (0.748)	2.63% [*] (0.096)
Median	0.68% ^{**} (0.033)	-0.05% (0.167)	2.34% ^{**} (0.014)	-0.45% (0.670)	0.40% (0.476)
N	97	42	32	23	
Panel E: Difference (Panel B – Panel C)					
Mean	-0.94% ^{***} (0.003)	0.83% [*] (0.073)	-1.43% ^{***} (0.004)	-2.33% ^{***} (0.000)	
Median	-0.51% ^{**}	0.54%	-0.70% ^{**}	-0.93% ^{***}	

(0.019)

(0.125)

(0.029)

(0.000)

Panel A of Table 2 shows the announcement abnormal returns for the full sample. On average, constrained acquirers significantly outperform unconstrained acquirers by 1.53% ($p = 0.000$). This result is consistent with the free cash flow hypothesis that cash-rich acquirers tend to conduct value-destroying takeovers.

Panel B of Table 2 shows that deals advised by top-tier advisors generate significantly positive announcement abnormal returns for constrained acquirers, but significantly negative abnormal returns for unconstrained acquirers. For deals advised by top-tier advisors, constrained acquirers significantly outperform unconstrained acquirers by 3.19% ($p = 0.000$) on average, while median constrained acquirers outperform median unconstrained acquirers by 2.06% ($p = 0.000$).

Panel C of Table 2 represents the announcement abnormal returns for acquirers advised by non-top-tier advisors. The results suggest there is no significant difference in abnormal returns between constrained and unconstrained acquirers. These results indicate that constrained acquirers do not outperform unconstrained acquirers without the services of top-tier advisors. In other words, if the free cash flow hypothesis can explain all the variation in acquirer short-term performance, constrained acquirers should also outperform unconstrained acquirers in deals advised by non-top-tier advisors. Our results suggest that top-tier advisors play a pivotal role in helping constrained acquirers gain superior performance.

Panel D of Table 2 represents the announcement abnormal returns for acquirers in in-house deals. The results show a marginally significant difference in mean return, but an insignificant difference in median return, between constrained and unconstrained acquirers. The small sample size of in-house deals leads to inconsistent results.

Panel E shows the differences in acquirer announcement abnormal returns between deals advised by top-tier and non-top-tier advisors. For the full sample, acquirers advised by top-tier advisors underperform non-top-tier advisors by 0.94% ($p = 0.003$) on average. This result is attributed to unconstrained and neutral acquirers. On average, unconstrained acquirers advised by top-tier advisors significantly underperform unconstrained acquirers advised by non-top-tier advisors by 2.33% ($p = 0.000$), while neutral acquirers advised by top-tier advisors significantly underperform neutral acquirers advised by non-top-tier advisors by 1.43% ($p = 0.004$). In contrast, constrained acquirers advised by top-tier advisors significantly outperform constrained acquirers advised by non-top-tier advisors by 0.83% ($p = 0.073$). For deals advised by investment banks, constrained acquirers advised by top-tier advisors gain the highest short-term abnormal returns (2.31%, $p = 0.000$), whereas unconstrained acquirers advised by top-tier advisors gain the lowest abnormal returns (-0.88%, $p = 0.042$). These results suggest that constrained acquirers retain top-tier advisors to chase performance, whereas unconstrained acquirers that retain top-tier advisors do not give priority to takeover gains.

3.1.2 Long-term performance

Table 4 reports the long-term performance (BHAR36) for different constraint–advisor groups and their univariate comparison.¹⁴ Long-term abnormal returns are significantly negative for each constraint–advisor group (except for the neutral in-house group, where mean BHAR36 is insignificantly negative), which is consistent

¹⁴ This paper only measures acquirer long-term performance for completed deals.

with previous research (Bouwman et al., 2009). However, Shleifer and Vishny (2003) suggest overvalued acquirers gain profits through the acquisition of undervalued targets, although long-term abnormal returns are negative, since acquirers will gain more negative returns without acquisitions.

Table 4: Acquirer Long-Term Performance

This table reports the acquirer long-term 36-month size-adjusted buy-and-hold abnormal returns from the announcement for the sample of completed deals. The variable is defined in Section 3.2 and Appendix B. Acquirers are divided into three groups based on the KZ Index. Specifically, the lowest (highest) one third of acquirers ranked by their KZ Index are defined as unconstrained (constrained) acquirers. The middle one third of acquirers are classified as neutral acquirers. Panel A relates to all deals in the sample. Panel B relates to deals advised by top-tier advisors. Panel C relates to deals advised by non-top-tier advisors. Panel D relates to in-house deals. Panel E relates to the difference in acquirer performance between deals advised by top-tier and non-top-tier advisors. The variable (BHAR36) is winsorized at the 1% and 99% levels. The bootstrapped skewness-adjusted t-statistic is used to test the significance of the mean. T-test is used to test the significance of the difference in the means. Wilcoxon signed-rank test and Wilcoxon rank-sum test are used to test the significance of median and the difference in medians, respectively. P-Values are shown in parentheses. Statistical significance at the 1% level, 5% level and 10% levels are denoted as ***, ** and * respectively.

	All (A)	Constrained (C)	Neutral (N)	Unconstrained (U)	Difference (C) - (U)
Panel A: All					
Mean	-37.11% ^{***} (0.000)	-30.02% ^{***} (0.000)	-38.37% ^{***} (0.000)	-42.69% ^{***} (0.000)	12.67% ^{***} (0.001)
Median	-44.80% ^{***} (0.000)	-39.96% ^{***} (0.000)	-41.87% ^{***} (0.000)	-53.07% ^{***} (0.000)	13.10% ^{***} (0.000)
N	3,007	978	1,012	1,017	
Panel B: Top-Tier					
Mean	-29.35% ^{***} (0.000)	-16.69% ^{***} (0.000)	-36.31% ^{***} (0.000)	-33.82% ^{***} (0.000)	17.12% ^{***} (0.001)
Median	-35.69% ^{***} (0.000)	-29.65% ^{***} (0.000)	-34.75% ^{***} (0.000)	-45.84% ^{***} (0.000)	16.19% ^{***} (0.001)
N	1,464	461	543	460	
Panel C: Non-Top-Tier					
Mean	-45.08% ^{***} (0.000)	-42.75% ^{***} (0.000)	-41.91% ^{***} (0.000)	-49.77% ^{***} (0.000)	7.02% (0.106)
Median	-55.00% ^{***} (0.000)	-55.29% ^{***} (0.000)	-49.42% ^{***} (0.000)	-60.19% ^{***} (0.000)	4.91% [*] (0.064)
N	1,456	479	440	537	
Panel D: In-House					
Mean	-34.33% ^{***} (0.002)	-31.19% ^{**} (0.039)	-23.14% (0.272)	-56.51% ^{**} (0.013)	25.32% (0.119)
Median	-41.35% ^{***} (0.000)	-48.20% ^{**} (0.011)	-30.26% [*] (0.074)	-61.67% ^{***} (0.004)	13.47% (0.556)
N	87	38	29	20	
Panel E: Difference (Panel B – Panel C)					
Mean	15.73% ^{***} (0.000)	26.05% ^{***} (0.000)	5.60% (0.127)	15.95% ^{***} (0.002)	
Median	19.31% ^{***} (0.000)	25.63% ^{***} (0.000)	14.67% ^{***} (0.006)	14.35% ^{***} (0.000)	

Panels A to D represent acquirer long-term size-adjusted BHARs for the full sample, deals advised by top-tier advisors, deals advised by non-top-tier advisors, and in-house deals, respectively. For the full sample, constrained acquirers significantly outperform unconstrained acquirers by 12.67% ($p = 0.001$) on average. Similarly, for deals advised by top-tier advisors, constrained acquirers significantly outperform unconstrained acquirers by 17.12% ($p = 0.001$) on average. For deals advised by non-top-tier advisors, median constrained acquirers outperform median unconstrained acquirers by 4.91% ($p = 0.064$). The results concur with the free cash flow hypothesis. However, for in-house deals, the performance differences between constrained and unconstrained acquirers are insignificant.

Panel E shows the differences in long-term performance between deals advised by top-tier and non-top-tier advisors. For the full sample, acquirers advised by top-tier advisors outperform acquirers advised by non-top-tier advisors by 15.73% ($p = 0.000$) on average, while median acquirers advised by top-tier advisors outperform median acquirers advised by no-top-tier advisors by 19.31% ($p = 0.000$). In addition, the outperformance of acquirers advised by top-tier advisors is also shown in constrained, neutral, and unconstrained acquirer subsamples. The results suggest that top-tier advisors can help their clients improve performance in the long-term, regardless of the acquirer's financial condition. However, constrained acquirers advised by top-tier advisors have the best long-term performance.

3.1.3 Deal completion rate, time to resolution, bid premiums, and advisory fees

Table 5 reports the deal completion rate for different constraint–advisor groups and their univariate comparison. Regardless of financial conditions and advisor retention status, deal completion rates are above 90%. For the full sample, the deal completion rate for constrained acquirers is 4.65% ($p = 0.000$), lower than that for unconstrained acquirers. Similarly, for deals advised by top-tier and non-top-tier advisors, constrained acquirers have significantly lower deal completion rates, compared to unconstrained acquirers. However, for in-house deals, there is no significant difference in deal completion rate between constrained and unconstrained acquirers. In addition, the results suggest top-tier advisors do not help acquirers to improve the deal completion rate. For constrained and neutral acquirers, deals advised by top-tier advisors even have lower deal completion rates, although the results are insignificant. If top-tier advisors have superior skills, they should have a stronger ability to complete deals; however, acquirers advised by top-tier advisors do not have higher completion rates. One possible explanation is that top-tier advisors pay more attention to deal quality rather than deal completion, and therefore deter value-destroying deals. For deals with investment banks' advisory service, constrained acquirers advised by top-tier advisors have the lowest deal completion rate, whereas unconstrained acquirers advised by non-top-tier advisors have the highest deal completion rate. These results suggest unconstrained acquirers retain top-tier advisors to pursue deal completion.

Table 5: Deal Completion Rate

This table reports the deal completion rate for the full sample. The variable is defined in Section 3.2 and Appendix B. Acquirers are divided into three groups based on the KZ Index. Specifically, the lowest (highest) one third of acquirers ranked by their KZ Index are defined as unconstrained (constrained) acquirers. The middle one third of acquirers are classified as neutral acquirers. Panel A relates to all deals in the sample. Panel B relates to deals advised by top-tier advisors. Panel C relates to deals advised by non-top-tier advisors. Panel D relates to in-house deals. Panel E relates to the difference in acquirer performance between deals

advised by top-tier and non-top-tier advisors. T-test is used to test the significance of the mean, and the difference in the means. P-Values are shown in parentheses. Statistical significance at the 1% level, 5% level and 10% levels are denoted as ***, ** and * respectively.

	All (A)	Constrained (C)	Neutral (N)	Unconstrained (U)	Difference (C) - (U)
Panel A: All					
Mean	92.98%	90.53%	93.25%	95.18%	-4.65%*** (0.000)
N	3,420	1,140	1,140	1,140	
Panel B: Top-Tier					
Mean	92.53%	90.09%	92.54%	95.19%	-5.10%*** (0.001)
N	1,647	545	603	499	
Panel C: Non-Top-Tier					
Mean	93.38%	90.60%	94.26%	95.15%	-4.55%*** (0.001)
N	1,676	553	505	618	
Panel D: In-House					
Mean	93.81%	95.24%	90.63%	95.65%	-0.41% (0.470)
N	97	42	32	23	
Panel E: Difference (Panel B – Panel C)					
Mean	-0.85% (0.171)	-0.51% (0.389)	-1.72% (0.124)	0.04% (0.486)	

Table 6 reports the time to resolution for different constraint–advisor groups and their univariate comparison. Time to resolution is measured as the number of days between the announcement and effective dates. Compared to unconstrained acquirers, constrained acquirers use 30.84 ($p = 0.000$) more days to complete deals on average. In addition, in deals advised by top-tier advisors and deals advised by non-top-tier advisors, the time to resolution is significantly longer for constrained acquirers than unconstrained acquirers. These results suggest that constrained acquirers are more careful in conducting takeovers. However, for in-house deals, the differences between constrained and unconstrained acquirers are insignificant. It is not surprising that in-house acquirers without professional advisors’ help use the longest time to negotiate an agreement for deals. Furthermore, acquirers advised by top-tier advisors take 19.72 ($p = 0.000$) more days to complete deals than acquirers advised by non-top-tier advisors. For all three different constraint groups, time to resolution is significantly higher for acquirers advised by top-tier advisors. If top-tier advisors have superior skills, they can take less time to complete deals. On the one hand, it is possible that top-tier advisors are retained in more complex deals, and therefore they take a longer time to complete deals. On the other hand, the results may suggest top-tier advisors work diligently.

Table 6: Time to Resolution

This table reports time to resolution for the full sample. The variable is defined in Section 3.2 and Appendix B. Acquirers are divided into three groups based on the KZ Index. Specifically, the lowest (highest) one third of acquirers ranked by their KZ Index are defined as unconstrained (constrained) acquirers. The middle one third of acquirers are classified as neutral acquirers. Panel A relates to all deals in the sample. Panel B relates to deals advised by top-tier advisors. Panel C relates to deals advised by non-top-tier advisors. Panel D relates

to in-house deals. Panel E relates to the difference in acquirer performance between deals advised by top-tier and non-top-tier advisors. The variable (Time to Resolution) is winsorized at the 1% and 99% levels. T-test is used to test the significance of the mean, and the difference in the means. Wilcoxon signed-rank test and Wilcoxon rank-sum test are used to test the significance of median and the difference in medians, respectively. P-Values are shown in parentheses. Statistical significance at the 1% level, 5% level and 10% levels are denoted as ***, ** and * respectively.

	All (A)	Constrained (C)	Neutral (N)	Unconstrained (U)	Difference (C) - (U)
Panel A: All					
Mean	86.02	101.68	85.60	70.84	30.84*** (0.000)
Median	66.00	79.00	64.00	52.00	27.00*** (0.000)
N	3,386	1,125	1,132	1,129	
Panel B: Top-Tier					
Mean	95.23	108.08	95.95	80.43	27.65*** (0.000)
Median	73.00	83.00	73.00	63.00	20.00*** (0.000)
N	1,635	538	601	496	
Panel C: Non-Top-Tier					
Mean	75.51	94.12	72.55	61.29	32.83*** (0.000)
Median	54.00	73.00	49.00	42.00	31.00*** (0.000)
N	1,658	546	502	610	
Panel D: In-House					
Mean	111.39	118.37	96.97	117.13	1.24 (0.477)
Median	98.00	102.00	79.00	97.00	5.00 (0.585)
N	93	41	29	23	
Panel E: Difference (Panel B – Panel C)					
Mean	19.72*** (0.000)	13.96*** (0.003)	23.40*** (0.000)	19.14*** (0.000)	
Median	19.00*** (0.000)	10.00*** (0.003)	24.00*** (0.000)	21.00*** (0.000)	

Table 7 shows the bid premiums for different constraint–advisor groups and their univariate comparison. Bid premiums, obtained from Thomson One Banker, are calculated as the difference between the deal price and the target’s stock price four weeks prior to the announcement divided by the latter term. Following Golubov et al. (2012) and Officer (2003), we winsorize the variable if values are beyond the range of [0, 2]. If acquirers have a higher bargaining power, they will pay lower bid premiums. For the full sample, constrained acquirers pay significantly lower premiums than unconstrained acquirers, indicating that constrained acquirers care more about takeover performance than unconstrained acquirers do. Without a professional advisory service, in-house acquirers pay the highest bid premiums, compared to acquirers advised by top-tier and non-top-tier advisors. On average, acquirers advised by top-tier advisors pay significantly lower bid premiums than acquirers advised by non-top-tier advisors do, which suggests that top-tier advisors help their clients to gain stronger bargaining power in the negotiation process and therefore secure more

shares of synergy. On average, constrained acquirers advised by top-tier advisors pay the lowest bid premium (38.21%).

Table 7: Bid Premium

This table reports the bid premium for the public deals. The variable is defined in Section 3.2 and Appendix B. Acquirers are divided into three groups based on the KZ Index. Specifically, the lowest (highest) one third of acquirers ranked by their KZ Index are defined as unconstrained (constrained) acquirers. The middle one third of acquirers are classified as neutral acquirers. Panel A relates to all deals in the sample. Panel B relates to deals advised by top-tier advisors. Panel C relates to deals advised by non-top-tier advisors. Panel D relates to in-house deals. Panel E relates to the difference in acquirer performance between deals advised by top-tier and non-top-tier advisors. The variable (Bid Premium) is winsorized if values are beyond the range of [0, 2]. T-test is used to test the significance of the mean, and the difference in the means. Wilcoxon signed-rank test and Wilcoxon rank-sum test are used to test the significance of median and the difference in medians, respectively. P-Values are shown in parentheses. Statistical significance at the 1% level, 5% level and 10% levels are denoted as ***, ** and * respectively.

	All (A)	Constrained (C)	Neutral (N)	Unconstrained (U)	Difference (C) - (U)
Panel A: All					
Mean	42.61%	40.34%	42.29%	46.03%	-5.69% ^{**} (0.013)
Median	34.31%	33.50%	33.33%	37.26%	-3.76% [*] (0.064)
N	1,456	529	524	403	
Panel B: Top-Tier					
Mean	40.62%	38.21%	38.46%	46.58%	-8.37% ^{***} (0.005)
Median	33.33%	32.40%	31.29%	38.10%	-5.70% ^{**} (0.018)
N	839	283	324	232	
Panel C: Non-Top-Tier					
Mean	43.84%	41.54%	46.76%	43.71%	-2.17% (0.299)
Median	35.05%	35.28%	35.42%	34.45%	0.83% (0.961)
N	546	216	177	153	
Panel D: In-House					
Mean	56.76%	51.81%	61.75%	58.65%	-6.84% (0.318)
Median	45.45%	39.40%	47.40%	46.49%	-7.09% (0.624)
N	71	30	23	18	
Panel E: Difference (Panel B – Panel C)					
Mean	-3.22% [*] (0.061)	-3.33% (0.141)	-8.31% ^{**} (0.012)	2.87% (0.249)	
Median	-1.72% (0.295)	-2.88% (0.359)	-4.13% [*] (0.065)	3.65% (0.282)	

Table 8 shows the acquirer relative advisory fees for different constraint–advisor groups and their univariate comparison. Relative advisory fees are measured as acquirer total advisory fees divided by takeover transaction value. It has been shown in the summary statistics that top-tier advisors charge premium advisory fees.

However, if top-tier advisors are retained in complex deals, it is reasonable that they charge higher advisory fees for deals with a higher transaction value. Therefore, it is necessary to examine relative advisory fees. The results suggest top-tier advisors charge significantly lower relative advisory fees than non-top-tier advisors, which is consistent with the univariate test results in Golubov et al. (2012). In other words, acquirers do not overpay top-tier advisors. In addition, it is not surprising that constrained acquirers pay significantly lower relative advisory fees than unconstrained acquirers do; however, the result is driven by the subsample of deals advised by top-tier advisors. For deals advised by non-top-tier advisors, there is no significant difference between constrained and unconstrained acquirers.

Table 8: Acquirer Relative Advisory Fees

This table reports the acquirer relative advisory fees for deals advised by investment banks. The variable is defined in Section 3.2 and Appendix B. Acquirers are divided into three groups based on the KZ Index. Specifically, the lowest (highest) one third of acquirers ranked by their KZ Index are defined as unconstrained (constrained) acquirers. The middle one third of acquirers are classified as neutral acquirers. Panel A relates to all deals in the sample. Panel B relates to deals advised by top-tier advisors. Panel C relates to deals advised by non-top-tier advisors. Panel D relates to the difference in acquirer performance between deals advised by top-tier and non-top-tier advisors. The variable (Acquirer Relative Advisory Fees) is winsorized at the 1% and 99% levels. T-test is used to test the significance of the mean, and the difference in the means. Wilcoxon signed-rank test and Wilcoxon rank-sum test are used to test the significance of median and the difference in medians, respectively. P-Values are shown in parentheses. Statistical significance at the 1% level, 5% level and 10% levels are denoted as ***, ** and * respectively.

	All (A)	Constrained (C)	Neutral (N)	Unconstrained (U)	Difference (C) - (U)
Panel A: All					
Mean	0.85%	0.77%	0.90%	0.91%	-0.14%* (0.068)
Median	0.61%	0.53%	0.69%	0.64%	-0.11%** (0.031)
N	537	224	180	133	
Panel B: Top-Tier					
Mean	0.69%	0.62%	0.72%	0.77%	-0.15%* (0.089)
Median	0.51%	0.43%	0.56%	0.54%	-0.12% (0.109)
N	256	104	95	57	
Panel C: Non-Top-Tier					
Mean	0.99%	0.89%	1.09%	1.01%	-0.12% (0.205)
Median	0.75%	0.63%	0.87%	0.70%	-0.06% (0.221)
N	281	120	85	76	
Panel D: Difference (Panel B – Panel C)					
Mean	-0.30%*** (0.000)	-0.28%*** (0.006)	-0.37%*** (0.002)	-0.24%* (0.051)	
Median	-0.23%*** (0.000)	-0.21%** (0.028)	-0.31%*** (0.001)	-0.15% (0.187)	

Overall, for deals using investment banks' advisory services, constrained acquirers advised by top-tier advisors gain highest short- and long-term performance, pay the lowest bid premiums and relative advisory fees, and have the lowest deal completion rate. In contrast, unconstrained acquirers advised by top-tier advisors have the highest deal completion rate, but gain the lowest announcement returns. They also gain lower long-term returns, and pay higher bid premiums and relative advisory fees. These results suggest constrained and unconstrained acquirers advised by top-tier advisors give priority to takeover performance and deal completion, respectively. In other words, constrained acquirers retain top-tier advisors to chase performance, whereas unconstrained acquirers retain top-tier advisors to complete their intended deals.

3.2 Multivariate analysis

We conduct multivariate regressions to further address the research question. Specifically, we conduct regressions of short- and long-term abnormal returns on top-tier advisors for deals advised by investment banks.

3.2.1 Short-term performance

Table 9 shows the results of the short-term multivariate analysis for deals advised by investment banks. Specifications 1 and 2 represent the regressions of CAR [-2, 2] on top-tier advisors for all acquirers. Specifications 3, 4, and 5 represent the regressions for constrained, neutral, and unconstrained acquirers, respectively.

Table 9: Regression of Short-Term Performance

This table presents the results of the OLS regression of short-term performance for the sample of completed deals advised by investment banks. In these models acquirer CAR [-2, 2] is regressed against a vector of explanatory variables. Acquirers are divided into three groups based on the KZ Index. Specifically, the lowest (highest) one third of acquirers ranked by their KZ Index are defined as unconstrained (constrained) acquirers. The middle one third of acquirers are classified as neutral acquirers. Specifications 1 and 2 report the results for all acquirers. Specifications 3, 4 and 5 report the results for constrained, neutral and unconstrained acquirers, respectively. All variables are defined in Section 3.2 and Appendix B. In all models, industry fixed effects and year fixed effects are controlled for. For brevity, their coefficients are not reported in the table. All quantitative variables are winsorized at the 1% and 99% levels. P-Values shown in parentheses are adjusted for heteroskedasticity and acquirer clustering. Statistical significance at the 1%, 5% and 10% levels are denoted as ***, ** and * respectively.

	(1) All	(2) All	(3) Constrained	(4) Neutral	(5) Unconstrained
TopTier	0.0004 (0.910)	-0.0033 (0.565)	0.0145** (0.024)	-0.0043 (0.464)	-0.0125 (0.118)
TopTier×Constrained		0.0180** (0.022)			
TopTier×Unconstrained		-0.0077 (0.369)			
Constrained		-0.0061 (0.325)			
Unconstrained		0.0032 (0.637)			
Ln(MV)	-0.0054*** (0.000)	-0.0051*** (0.001)	-0.0092*** (0.000)	-0.0035 (0.131)	-0.0048 (0.108)
M/B	0.0004 (0.385)	0.0004 (0.314)	-0.0004 (0.479)	0.0002 (0.829)	0.0011 (0.173)
Leverage	0.0050 (0.495)	0.0039 (0.619)	0.0067 (0.576)	-0.0046 (0.735)	0.0050 (0.753)
Cash Flows/Equity	0.0411** (0.013)	0.0390** (0.019)	0.0536** (0.015)	0.0043 (0.934)	0.0305 (0.301)
RUNUP	0.0015 (0.755)	0.0014 (0.762)	0.0015 (0.849)	0.0060 (0.528)	-0.0062 (0.447)
Sigma	0.0301 (0.870)	0.0303 (0.869)	-0.2624 (0.356)	-0.0720 (0.856)	0.0520 (0.873)
Past Experience	-0.0000 (0.962)	0.0000 (0.989)	-0.0002 (0.807)	-0.0003 (0.406)	0.0006 (0.282)
Serial Bidder	0.0015 (0.755)	0.0017 (0.732)	0.0018 (0.849)	-0.0003 (0.969)	0.0031 (0.727)
Relative Size	0.0110* (0.055)	0.0112* (0.052)	0.0094 (0.222)	0.0051 (0.647)	0.0180 (0.180)
Public	-0.0322*** (0.000)	-0.0322*** (0.000)	-0.0234*** (0.001)	-0.0306*** (0.000)	-0.0424*** (0.000)
Cash	0.0155*** (0.000)	0.0155*** (0.000)	0.0166*** (0.008)	0.0133** (0.042)	0.0156** (0.040)
Stock	-0.0031 (0.553)	-0.0028 (0.591)	-0.0059 (0.516)	0.0071 (0.399)	-0.0092 (0.355)
Hostile	-0.0211** (0.015)	-0.0232*** (0.008)	-0.0225* (0.089)	-0.0176 (0.234)	-0.0187 (0.209)
Competing Bid	-0.0293*** (0.001)	-0.0291*** (0.001)	-0.0419*** (0.005)	-0.0248** (0.026)	-0.0036 (0.802)
Tender Offer	0.0299*** (0.000)	0.0303*** (0.000)	0.0220*** (0.006)	0.0333*** (0.000)	0.0378*** (0.000)
Diversification	-0.0070* (0.056)	-0.0063* (0.084)	-0.0126* (0.069)	-0.0023 (0.662)	-0.0062 (0.395)
M&A Heat Degree	-0.0317 (0.349)	-0.0299 (0.375)	-0.0760 (0.203)	0.0181 (0.749)	-0.0392 (0.532)
High Valuation Market	-0.0001 (0.988)	-0.0003 (0.971)	0.0136 (0.322)	-0.0113 (0.291)	-0.0061 (0.712)
Low Valuation Market	-0.0113** (0.043)	-0.0111** (0.047)	-0.0173* (0.087)	-0.0064 (0.478)	-0.0089 (0.392)
Constant	0.0840** (0.028)	0.0803** (0.037)	0.1953*** (0.005)	0.0429 (0.500)	0.0581 (0.404)
N	3323	3323	1098	1108	1117
R ²	0.087	0.090	0.144	0.087	0.097
adj. R ²	0.072	0.074	0.101	0.042	0.053

The *TopTier* dummy, the key explanatory variable of this paper, is insignificant in specification 1, suggesting that top-tier advisors do not help acquirers to improve

announcement performance. However, the univariate tests in section 4.1 suggest the positive effects of top-tier advisors are only shown in the subsample of constrained acquirers, and the acquirers advised by top-tier advisors gain highest announcement returns. In other words, constrained acquirers retain top-tier advisors to chase performance. To examine this proposition, we add two dummy variables for constrained and unconstrained acquirers (*Constrained* dummy and *Unconstrained* dummy) and interact them with the *Top-Tier* dummy in Specification 2. As a consequence, we find that the interaction between *TopTier* dummy and *Constrained* dummy is significantly positive, whereas the coefficient on the interaction between *TopTier* dummy and *Unconstrained* is insignificant. The results suggest that the effects of top-tier advisors depend on acquirers' financial condition. More specifically, top-tier advisors improve their clients' announcement performance, but only for constrained acquirers. The coefficients on *Constrained* and *Unconstrained* dummies are insignificant in specification 2, suggesting financial constraint is not a determinant of acquirer announcement performance when firm, deal and market characteristics are controlled for. In addition, the coefficient on *TopTier* dummy is significantly positive in the regression of the constrained acquirer subsample (Specification 3), but insignificant in the regressions of neutral and unconstrained acquirer subsamples (Specifications 4 and 5), which is consistent with the results of specification 2. For constrained acquirers, top-tier advisors can help their clients improve announcement abnormal returns by 1.45%; however, for unconstrained and neutral acquirers, the retention of top-tier advisors does not enhance announcement performance.

Furthermore, the coefficient of $LN(MV)$ is significantly negative in specifications 1 to 3, suggesting that larger firms tend to gain lower announcement returns. The coefficient of *Cash Flows/Equity* is significantly positive in specifications 1 to 3, indicating that acquirers with higher cash flows-to-equity ratio have better short-term performance. The coefficient of *Experienced Bidder* dummy is significantly negative in specification 2, suggesting that the more experienced acquirers gain lower announcement returns. The coefficient of *Relative Size* is significantly positive in specifications 1 and 2, indicating that deals with larger relative size create more announcement returns for acquirers. The coefficient of *Public* dummy is significantly negative in all specifications, implying that acquirers underperform in public acquisitions. The coefficient of *Cash* dummy is significantly positive in all specifications, suggesting that cash deals have better announcement performance. The coefficient of *Competing Bid* dummy is significantly negative in specifications 1 to 4, indicating that takeover contests have a detrimental influence on acquirer announcement returns. The coefficient of *Tender Offer* dummy is significantly positive in all specifications, implying that acquirers gain higher announcement returns in tender offers. The coefficient of *Diversification* dummy is significantly negative in specifications 1 to 3, suggesting that diversifying deals destroy value for acquirers. The coefficient of *Low Valuation Market* dummy is significantly negative in specifications 1 to 3, indicating that acquirers underperform around announcement, when the deals are conducted during a bear market.

3.2.2 Long-term performance

Table 9 shows the results of the long-term multivariate analysis for deals using investment banks' advisory services. Specifications 1 and 2 represent the regressions of BHAR36 on top-tier advisors for all acquirers. Specifications 3, 4, and 5 represent the regressions for constrained, neutral, and unconstrained acquirers, respectively.

Table 10: Regression of Long-Term Performance

This table presents the results of the OLS regression of long-term performance for the sample of completed deals advised by investment banks. In these models acquirer BHAR36 is regressed against a vector of explanatory variables. Acquirers are divided into three groups based on the KZ Index. Specifically, the lowest (highest) one third of acquirers ranked by their KZ Index are defined as unconstrained (constrained) acquirers. The middle one third of acquirers are classified as neutral acquirers. Specifications 1 and 2 report the results for all acquirers. Specifications 3, 4 and 5 report the results for constrained, neutral and unconstrained acquirers, respectively. All variables are defined in Section 3.2 and Appendix B. In all models, industry fixed effects and year fixed effects are controlled for. For brevity, their coefficients are not reported in the table. All quantitative variables are winsorized at the 1% and 99% levels. P-Values shown in parentheses are adjusted for heteroskedasticity and acquirer clustering. Statistical significance at the 1%, 5% and 10% levels are denoted as ***, ** and * respectively.

	(1) All	(2) All	(3) Constrained	(4) Neutral	(5) Unconstrained
TopTier	0.1285*** (0.002)	0.0550 (0.327)	0.2427*** (0.001)	0.0476 (0.413)	0.0856 (0.258)
TopTier×Constrained		0.1434* (0.068)			
TopTier×Unconstrained		0.0773 (0.390)			
Constrained		-0.0385 (0.516)			
Unconstrained		-0.0075 (0.907)			
Ln(MV)	-0.0422*** (0.009)	-0.0410** (0.011)	-0.0730** (0.024)	-0.0387 (0.109)	-0.0138 (0.650)
M/B	-0.0089** (0.011)	-0.0089** (0.011)	-0.0134** (0.012)	-0.0131*** (0.008)	-0.0023 (0.690)
Leverage	0.1359* (0.097)	0.1314 (0.119)	0.2677** (0.050)	0.0239 (0.860)	0.1452 (0.310)
Cash Flows/Equity	0.3955** (0.018)	0.3828** (0.023)	0.2071 (0.367)	1.0459** (0.017)	0.1198 (0.712)
RUNUP	-0.0799* (0.090)	-0.0799* (0.093)	-0.1492* (0.069)	-0.1410* (0.074)	0.0269 (0.762)
Sigma	-3.2933* (0.087)	-3.3351* (0.083)	-4.5580 (0.176)	-3.9383 (0.223)	-0.2789 (0.945)
Past Experience	0.0048 (0.145)	0.0049 (0.140)	0.0011 (0.846)	0.0034 (0.390)	0.0067 (0.334)
Serial Bidder	-0.0168 (0.752)	-0.0128 (0.808)	-0.0891 (0.295)	0.0112 (0.874)	0.0877 (0.405)
Relative Size	0.0716 (0.170)	0.0698 (0.181)	-0.0512 (0.508)	0.0234 (0.788)	0.4169*** (0.001)
Public	0.0063 (0.871)	0.0074 (0.850)	0.0923 (0.205)	-0.0653 (0.259)	-0.0514 (0.454)
Cash	0.0551 (0.124)	0.0543 (0.132)	0.0430 (0.533)	-0.0434 (0.436)	0.1827*** (0.004)
Stock	-0.0512 (0.336)	-0.0527 (0.322)	-0.0763 (0.387)	-0.0763 (0.319)	-0.0497 (0.648)
Hostile	0.3791** (0.031)	0.3680** (0.034)	0.3799* (0.081)	0.1494 (0.618)	0.4690 (0.298)
Competing Bid	-0.0585 (0.587)	-0.0538 (0.621)	-0.0710 (0.746)	-0.0144 (0.932)	0.0256 (0.904)
Tender Offer	0.0139 (0.783)	0.0145 (0.774)	0.0410 (0.661)	0.0095 (0.901)	0.0111 (0.908)
Diversification	-0.0510 (0.165)	-0.0459 (0.214)	0.0086 (0.902)	-0.0279 (0.585)	-0.0751 (0.219)
M&A Heat Degree	0.0414 (0.889)	0.0506 (0.865)	-0.2902 (0.602)	0.0558 (0.917)	0.1705 (0.732)
High Valuation Market	-0.0388 (0.561)	-0.0358 (0.590)	0.0491 (0.663)	-0.0451 (0.660)	-0.1333 (0.340)
Low Valuation Market	0.0534 (0.313)	0.0547 (0.301)	0.0835 (0.478)	0.0362 (0.666)	0.0459 (0.533)
Constant	-0.1033 (0.772)	-0.1025 (0.775)	0.5316 (0.478)	-0.0316 (0.960)	-0.7544 (0.144)
N	2920	2920	940	983	997
R ²	0.091	0.093	0.146	0.139	0.133
adj. R ²	0.074	0.074	0.095	0.090	0.086

The coefficient of the *TopTier* dummy is positive for specification 1 (regression for the full sample). This result is driven by the constrained acquirer sub-sample. More

specifically, the *TopTier* dummy loses its significance in specification 2, when the interactions between top-tier status and financial constraint are added in the regression. In particular, the coefficient of *TopTier*×*Unconstrained* is insignificant, whereas that of *TopTier*×*Constrained* is significantly positive, suggesting that top-tier advisors improve their clients' long-term performance for constrained acquirers rather than unconstrained acquirers. In addition, the coefficients of *Constrained* and *Unconstrained* dummies are insignificant in specification 2, suggesting financial constraint has no significant influence on acquirer long-term performance when firm, deal and market characteristics are controlled for. Furthermore, the results of subsample regressions are consistent with specification 2. Specifically, the coefficient of *Top-Tier* dummy is significantly positive in specification 3 (constrained acquirers) but insignificant for specifications 4 (neutral acquirers) and 5 (unconstrained acquirers). In other words, top-tier advisors help constrained acquirers gain significantly higher long-term abnormal returns, but do not improve performance for unconstrained and neutral acquirers. For constrained firms, acquirers advised by top-tier advisors outperform acquirers advised by non-top-tier advisors by 24.27% in the long-term.

Additionally, the coefficient of *LN(MV)* is significantly negative in specifications 1 to 3, indicating that larger acquirers underperform in the long-term. The coefficient of *M/B* is significantly negative in specifications 1 to 4, suggesting that glamour acquirers underperform in the long-term. The coefficient of *Leverage* is significantly positive in specifications 1 and 3, implying that acquirers with a higher leverage ratio gain better long-term performance. The coefficient of *Cash Flows/Equity* is significantly positive in specifications 1, 2 and 4, indicating that acquirers who have a better operating performance before acquisitions tend to gain higher long-term returns. The coefficient of *RUNUP* is significantly negative in specifications 1 to 4, indicating that firms with better stock performance prior to announcements do not maintain their performance during the post-merger period. The coefficient of *Sigma* is significantly negative in specifications 1 and 2, suggesting that acquirers with higher risk of stocks underperform in the long-term. The coefficient of *Relative Size* is significantly positive in specification 5, suggesting that acquisitions of relatively larger targets generate higher long-term returns for acquirers. The coefficient of *Cash* dummy is significantly positive in specification 5, suggesting that acquirers outperform in cash deals. The coefficient of *Hostile* is significantly positive in specifications 1 to 3, indicating that acquirers gain higher long-term returns in hostile deals.

4. Robustness test

This section addresses the robustness of our results.¹⁵

4.1 Financial advisor classification

We first evaluate whether our results are sensitive to different financial advisor classifications. Specifically, we follow the method of Golubov et al. (2012), using the top-eight cut-off point. In addition, since the investment bank league table is market share-based, we also use different thresholds (e.g. 8% and 10%) of market share to define top-tier advisors. Furthermore, since the sample period of this research is longer than two decades, we also measure bank ranking separately over the 1990s and

¹⁵ For reasons of brevity, this paper does not tabulate the robustness results; however, they are available upon request.

post-2000 periods. To examine whether the league table is sensitive to the time intervals, we also examine the bank ranking over each three-year period. By using different definitions of top-tier advisors, our results are not qualitatively changed.

4.2 Measure of financial constraint

To examine whether our results are sensitive to the measure of financial constraint, we also use the SA index (Hadlock and Pierce, 2010) to classify the financial constraints of firms. Hadlock and Pierce (2010) argue that firm size and age are the reliable indicators of financial constraints and introduce the SA index; following Hadlock and Pierce (2010), we calculate the SA index using the following formula:

$$SA = (-0.737 \times \text{Size}) + (0.043 \times \text{Size}^2) - (0.040 \times \text{Age})$$

where Size is the natural logarithm of total assets (inflation adjusted to 2004), and Age is the number of years the firm is listed on Compustat. When the SA index is calculated, Size is winsorized at (the log of) \$4.5 billion, and Age is winsorized at 37 years.

Companies with a higher SA index, lower age, and larger size are more financially constrained. By using the SA index, age and size to measure financial constraint, our results are qualitatively similar.

4.3 Short-term performance

We use alternative event windows and valuation models to measure acquirer short-term performance. Specifically, we calculate CARs over the [-1, 1] and [-5, 5] windows. In addition, we apply the market model, the Fama-French three-factor model, and the Fama-French-momentum four-factor model to compute announcement abnormal returns. The results are not sensitive to these variations.

4.4 Long-term performance

We also use alternative event windows and valuation models to measure acquirer long-term performance. Specifically, we calculate BHARs over 12-month and 24-month windows. In addition, we calculate market-adjusted BHARs. For size-adjusted BHARs, we also use the following alternative formula:

$$BHAR_{i,T_1,T_2} = \prod_{t=T_1}^{T_2} (1 + R_{it}) - 1 - R_{pt}$$

where R_{it} is the monthly stock return for firm i in month t and R_{pt} is the monthly buy-and-hold return for the reference portfolio in month t , calculated as

$$R_{pt} = \sum_{j=1}^n \frac{\prod_{t=T_1}^{T_2} (1 + R_{jt}) - 1}{n}$$

with R_{jt} the monthly stock return for firm j in month t and n the number of firms. The results are robust to these variations.

4.5 Other issues

To control for the influence of outliers, we also winsorize all the quantitative variables at different levels, such as 2% and 98%, 3% and 97%, and 5% and 95%. In addition, bid premium is measured as the difference between offer price and target price four weeks prior to the announcement divided by the latter term. To calculate bid premiums, we also measure target prices one week and one day before the announcement; however, the results are not sensitive to the above variations.

5. Conclusions

This paper examines whether top-tier investment bankers can help acquirers gain superior takeover performance in both the short- and long-term and, more importantly, whether the effects of top-tier advisors are dependent on acquirer financial constraints. In line with Malmendier and Tate (2008) that financially unconstrained acquirers tend to be overconfident and therefore make value-decreasing takeovers, this paper shows that the retention of top-tier advisors improves acquirer performance, but only for constrained acquirers. Specifically, in the short-term, retaining top-tier advisors can help constrained acquirers improve announcement abnormal returns by 1.45%, after controlling for firm, deal and market characteristics. However, the retention of top-tier advisors does not improve short-term performance for unconstrained and neutral acquirers. In the long-term, the retention of top-tier advisors is positively related to acquirer performance. The result is driven by the sub-sample of constrained acquirers. For constrained acquirers, the retention of top-tier advisors improves long-term performance by 24.27%, after firm, deal and market characteristics are controlled for. In contrast, the effects of top-tier advisors are insignificant for unconstrained and neutral acquirers. Therefore, the results indicate that the effects of top-tier advisors on acquirer performance differ across acquirers with different levels of financial constraints. The retention of top-tier advisors creates value for relatively constrained acquirers in both the short- and long-term.

Acquirers choose appropriate investment bankers to conduct M&A deals. Correspondingly, financial advisors also have rights and opportunities to determine whether they accept the offers. Since top-tier advisors tend to be in high demand, there is concern that they select their acquirer clients to maintain their reputation. In other words, it is possible that top-tier advisors cherry-pick acquirer clients with given characteristics to generate excess returns; however, empirical evidence suggests this concern is not necessary. Firstly, acquirer firm characteristics are not the only determinant to gain superior performance. To create synergy, it is essential to choose appropriate targets. Golubov et al. (2012) have highlighted the top-tier advisors' abilities to identify synergistic targets and to secure more shares of synergy for their clients. Secondly, our results suggest that financial constraint is not a significant determinant for acquirer performance, when firm, deal and market characteristics are controlled for. Acquirers advised by non-top-tier advisors are more constrained than acquirers advised by top-tier advisors. In other words, top-tier advisors tend to be retained by unconstrained acquirers. If top-tier advisors cherry-pick acquirer clients to gain superior performance and maintain their reputation, it cannot explain the fact that top-tier advisors improve performance for constrained acquirers, but not for unconstrained acquirers.

In addition, the results for deal completion rate, bid premiums, and acquirer relative advisory fees can help explain the variation in acquirer performance. In general, deal completion is independent of bank reputation. Top-tier advisors should have a stronger ability to complete deals. It is possible that top-tier advisors emphasize deal quality, and deter value-destroying deals for their clients. However, for deals with investment bank involvement, constrained acquirers advised by top-tier advisors have the lowest deal completion rate, whereas unconstrained acquirers with top-tier advisors have the highest completion rate. Furthermore, constrained acquirers advised by top-tier advisors also pay the lowest bid premiums and relative advisory fees. In contrast, unconstrained acquirers advised by top-tier advisors pay higher advisory fees. If unconstrained acquirers chase performance, they should expect to

gain higher bargaining power and therefore pay lower bid premiums; however, the highest advisory fees do not translate into greater bargaining power in the negotiation process. Unconstrained acquirers advised by top-tier advisors pay higher bid premiums. These results suggest that unconstrained acquirers care less about overpayment and takeover performance, and give priority to deal completion.

Overall, our results suggest that different acquirers have different aims. Constrained acquirers retain top-tier advisors to gain superior performance, while unconstrained acquirers retain top-tier advisors to complete their intended deals.

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Appendix 1: Top 25 U.S. Financial Advisor Ranking Based on Transaction Value

The table presents the ranking of the top-25 investment bankers based on the transaction value for acquisitions of U.S. targets over the period January 1990 to December 31, 2012 obtained from Thomson One Banker. Transaction value is shown in U.S. million dollars.

Rank	Financial Advisor	Deal Value (\$ Mil)	Market Share ¹⁶	Number of Deals
Top-Tier				
1	Goldman Sachs & Co	7,703,438.25	36.7	4,172
2	Morgan Stanley	5,939,139.94	28.3	3,328
3	Bank of America Merrill Lynch	5,606,400.70	26.7	4,967
4	JP Morgan	5,548,980.32	26.4	4,278
5	Citi/Salomon Smith Barney/Salomon Brothers	4,549,572.86	21.6	3,782
6	Credit Suisse/First Boston	4,178,196.93	19.9	4,454
7	Barclays/Lehman Brothers	3,509,500.37	16.7	2,418
8	UBS	2,266,358.97	10.8	2,424
9	Lazard	2,170,142.34	10.3	1,887
10	Deutsche Bank	1,697,296.66	8.1	1,927
Non-Top-Tier				
11	Evercore Partners	1,072,961.26	5.1	363
12	Commerzbank AG	595,289.46	2.8	503
13	Houlihan Lokey	579,540.88	2.8	2,289
14	PJT Partners LP	531,198.92	2.5	404
15	Wells Fargo & Co	530,559.69	2.5	935
16	Rothschild & Co	478,220.18	2.3	485
17	Greenhill & Co, LLC	461,694.01	2.2	240
18	Jefferies LLC	395,867.31	1.9	1,755
19	Stifel/KBW	371,546.54	1.8	1,535
20	Allen & Co Inc	306,787.79	1.5	158
21	Centerview Partners LLC	286,985.04	1.4	80
22	RBC Capital Markets	263,252.55	1.3	1,496
23	Moelis & Co	252,028.19	1.2	277
24	Gleacher & Co Inc	243,717.81	1.2	169
25	BNP Paribas SA	218,766.09	1.0	78

¹⁶ Sum of market share is higher than 100%, which is due to the allocation method used in the Thomson One M&A database. The default allocation method is full credit to each eligible advisor, meaning if multiple advisors work on a deal, all of them will receive league table credit for the given transaction.

Appendix 2: Definitions of Variables

This table describes variables in this paper. Panels A, B, C and D present acquirer performance, firm characteristics, deal characteristics and market characteristics, respectively.

Variable	Definition
Panel A: Acquirer Short- and Long-Term Abnormal Returns	
CAR [-2, 2]	5-day market-adjusted cumulative abnormal return around announcement.
BHAR36	Post-merger 36-month size-adjusted buy-and-hold abnormal return.
Panel B: Acquirer Firm Characteristics	
KZ Index	Kaplan–Zingales Index.
MV	Market value of equity measured 4 weeks before the announcement (CRSP item $PRC \times SHROUT$).
Ln(MV)	The logarithm of the market value of equity measured 4 weeks before the announcement.
M/B	Market-to-book ratio measured as market value of equity 4 weeks before the announcement (CRSP item $PRC \times SHROUT$) divided by book value of equity at the fiscal year end before the announcement (Compustat item CEQ).
Leverage	Total debt over total capital at the fiscal year end before the announcement (Compustat item $(DTLL+DLC)/(DLTT+DLC+SEQ)$).
Cash Flows/Equity	Cash flows-to-equity ratio measured as cash flows at the fiscal year end before the announcement (Compustat item $IB+DP-DVP-DVC$) divided by market value of equity 4 weeks before the announcement (CRSP item $PRC \times SHROUT$).
RUNUP	Acquirer market-adjusted CARs over the pre-announcement [-365, -28] window.
Sigma	Standard deviation of a firm’s market-adjusted daily abnormal returns over the pre-announcement [-365, -28] window.
Past Experience	Number of M&A deals made by an acquirer over the five-year period prior to the acquisition in question.
Serial Bidder	Dummy variable equals one if the acquirer has conducted 5 or more M&A deals over the three-year period before the acquisition in question.
Panel C: Deal Characteristics	
Transaction Value	Transaction value of the M&A deal (from Thomson One Banker).
Relative Size	Transaction value divided by the acquirer market value of equity 4 weeks before the announcement.
Public	Dummy variable equals one if the target is a publicly listed firm.
Stock	Dummy variable equals one if the deal is 100% paid by stock.
Cash	Dummy variable equals one if the deal is 100% paid by cash.
Mixed	Dummy variable equals one if the deals is
Hostile	Dummy variable equals one if the deal attitude is identified as hostile or unsolicited by Thomson One Banker.
Competing Bid	Dummy variable equals one if there is more than one bidding firm reported by Thomson One Banker.
Tender Offer	Dummy variable equals one if the deal is identified as a tender offer by Thomson One Banker.
Diversification	Dummy variable equals one if the acquirer and the target have different first two-digits of the primary SIC code.
Completed Deals	Dummy variable equals one if the deal is successfully completed.
Time to Resolution	Number of days between announcement date and resolution date (effective or withdrawn).
Bid Premiums	Difference between the offer price and the target stock price 4 weeks before the announcement divided by the latter (from Thomson One Banker).
Advisory Fees	Acquirer total advisory fees (from Thomson One Banker).
Relative Advisory Fees	Acquirer total advisory fees divided by the transaction value.
Panel D: Market Characteristics	
M&A Heat Degree	The moving average of the number of M&A deals in each quarter divided by the historical average of the number of M&A deals in all previous quarters going back to 1985.
High Valuation Market	Dummy equals one if a deal is conducted in a high valuation month. To measure stock market valuation, this paper follows the method of Bouwman et al. (2009).

Specifically, this paper initially detrends the monthly P/E ratios of the S&P 500 from 1985 to 2009. Subsequently, each month is classified as below or above average, based on whether the detrended P/E ratio of the month is lower or higher than the past five-year average. Finally, the lowest 50% of below average months is identified as “Low Valuation Market”, while the highest 50% of above average months is identified as “High Valuation Market”. Other months are defined as “Neutral Valuation Market”. The monthly P/E ratios of the S&P 500 are acquired from Datastream.

Neutral Valuation Market

Dummy equals one if a deal is conducted in a neutral valuation month.

Low Valuation Market

Dummy equals one if a deal is conducted in a low valuation month.
