# The Value of Financial Advisors in Private Acquisitions: New Evidence from Chinese M&As[*]

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## Abstract

Using a comprehensive sample of *private* acquisitions conducted by Chinese listed firms, we provide fresh evidence that financial advisors generate substantial value for acquiring shareholders, especially when acquirers do not have political connections and when financial advisors have a high reputation. The value creation is higher for more complex deals, such as large deals and deals not fully financed by cash, supporting the transaction costs hypothesis. Further analyses show that financial advisors help shorten the deal completion time, reduce the bid premium, and are associated with higher acquirer future profitability for large deals.



*JEL Classification*: G24, G34

*Keywords*: Mergers and acquisitions; Private acquisitions; Financial advisors; In-house team; Investment banking

*"The value of the middleman has been arbitraged away by the market participants," said Keith Pogson, head of Asia Financial Services at EY. "There are a number of players out there who have been staffing up. It is going to be more and more the norm to run your own deals."*

Financial Times (February 11, 2015).

## 1. Introduction

Mergers and acquisitions (M&As) represent a large portion of firm investment worldwide. Financial advisors, such as investment banks, are commonly hired by acquiring firms and are believed to fulfill important functions in the acquisition process. However, the value creation role of financial advisors on M&A deals has received mixed evidence. On one hand, several studies suggest that the decision to hire financial advisors and the reputation of the chosen advisors do not create value for acquiring firms. Servaes and Zenner (1996) find that the announcement returns of acquiring firms hiring investment banks as financial advisors are indistinguishable from those of firms using in-house investment banking services. Rau (2000) and Bao and Edmans (2011) show that advisor reputation is negatively associated with acquirer announcement abnormal returns. On the other hand, several studies, such as Kale, Kini, and Ryan (2003) and Golubov, Petmezas, and Travlos (2012), find that advisor reputation is positively related to the wealth gain of acquiring firms. But such a positive relation only exists in *public* acquisitions and is missing in *private* acquisitions.[1]

This controversial evidence casts doubt on the value of hiring financial advisors. Despite the growing popularity of "running your own team," our understanding of the value-creating role of financial advisors in M&A transactions remains limited. The missing evidence of a positive relation between financial advisors and acquisition performance in *private* acquisitions is even more troubling. Extensive studies have shown that on average, *public* acquisitions destroy value, but *private* acquisitions create value for the shareholders of acquiring firms.[2] The important question is: can financial advisors add value for acquiring firms in value-creating *private* acquisitions or are they only able to prevent value loss in value-destroying *public* acquisitions?

[1] Public acquisitions refer to acquisitions in which target firms are listed firms and private acquisitions refer to acquisitions in which target firms are private firms.

[2] See, for example, Hansen and Lott (1996), Chang (1998), Fuller, Netter, and Stegemoller (2002), and Moeller, Schlingemann, and Stulz (2004) for U.S. evidence, and Faccio, McConnell, and Stolin (2006) for international evidence.

Chinese enterprises widely use mergers and acquisitions to achieve optimal asset allocation, expand business scale, and conduct strategic transformations. The data from the Chinese securities regulator, the China Securities Regulatory Commission (CSRC), show that Chinese M&A deals account for 12% of global M&A deal value in 2014, a significant increase from 2.4% in 2005. China has now become the world's second largest M&A market, just behind the U.S.

The Chinese domestic M&A market provides a unique market environment to examine the value creation role of external financial advisors in *private* acquisitions. First, it is widely recognized that the private sector drives most of China's fast economic growth (e.g., Allen, Qian, and Qian (2005), and Song, Storesletten, and Zilibotti (2011)). Due to the underdeveloped capital market and restrictive government regulations on acquiring public companies, private acquisitions are an important form of corporate investment through which domestic companies achieve fast growth and strategic expansion. It is thus crucial to understand the factors that determine the outcomes of private acquisitions in China. The full disclosure of the M&A activities of Chinese listed firms provides a special channel to uncover the value of financial advisors in *private* acquisitions.

Second, unlike the US and many other developed markets, the success of every Chinese listed firm's acquisition not only depends on picking the "right" target but also crucially relies on complying with government rules and gaining approval from Chinese regulators. As a result, the Chinese M&A market offers an opportunity to examine the distinct role of financial intermediaries in an underdeveloped and highly-regulated financial environment. Investment banking services in the Chinese domestic M&A market are mainly provided by state-owned security firms. Whether and how state-controlled financial intermediate institutions help Chinese firms achieve fast growth and expansion through M&As has attracted significant attention from both academic researchers and government regulators.

Third, flushed with rich cash reserves (Bi and Boateng (2014)), Chinese acquirers have the flexibility to retain their own deal teams to carry out M&A transactions because they do not necessarily rely on external equity financing.[3] We show that more than 60% of domestic M&A transactions conducted by public acquirers in China are carried out by in-house investment banking services. The popularity of "running your own deal team" in the Chinese domestic M&A market

[3] Acquirers are required by the China Securities Regulatory Commission (CSRC) to retain a financial advisor in an M&A transaction if the deal needs to be financed by new equity issuance.

makes the question "what is the advantage of hiring a financial advisor?" particularly interesting and relevant.

Using a comprehensive dataset of Chinese M&A transactions conducted by Chinese listed firms, we provide fresh evidence that financial advisors create substantial value for acquiring firms in *private* acquisitions. The average seven-day announcement cumulative abnormal return is significantly positive at 4.94% for acquiring firms hiring financial advisors, but is only 0.56% for acquiring firms using their own in-house investment banking teams. Consistent with the transaction costs hypothesis, financial advisors create more value for more complex deals, such as large deals and deals not fully financed by cash. We do not find evidence for the asymmetric information hypothesis and the monitoring hypothesis. Finally, we find that financial advisors create more value for the shareholders of acquiring firms when the firms do not have political connections and when financial advisors have a high reputation. Our results suggest the importance of political and reputational capital associated with financial intermediations in Chinese M&A markets.

Next, we investigate the channels through which financial advisors add value to Chinese M&A deals. We show that financial advisors help shorten the deal completion time, reduce the bid premium, and are associated with higher acquirer future profitability, especially for large deals. Our results suggest that in a highly regulated financial market like China, financial intermediaries play important roles and add value to large corporate operations such as M&As by facilitating the transaction process, lowering bid costs, and better identifying valuable target firms.

We take several approaches to address endogeneity concerns of acquirer-advisor matching that arise from the choice of hiring advisors being correlated with certain unobserved acquirer- and deal-specific characteristics. First, we apply the two-stage Heckman procedure to control for self-selection bias. Using the extent to which the acquiring firm used the services of financial advisors across various capital market transactions in the past as an identification restriction, we show that our results are robust to the inclusion of the selection term. Second, we identify the pure effect of hiring financial advisors by extending the Heckman procedure to a switching regression model with endogenous switching. The what-if analysis based on the model suggests that the announcement cumulative abnormal returns of deals advised by financial advisors would have been worse off by 3.525% on average if an in-house team had been used. In contrast, the announcement cumulative abnormal returns of deals advised by in-house teams would have been

better off by 2.649% on average if a financial advisor had been hired. Finally, we explore a possible source of exogenous variation in firms' decisions to hire a financial advisor, which relies on the distance between firms' headquarters and the location of most security companies. We show that in the instrumental variable regression, the effect of financial advisors on M&A outcomes remains robust.

This study makes several contributions to the M&A and financial intermediary literature. First, we provide new evidence on the value creation role of financial advisors in M&As. Previous studies suggest that financial advisors and their reputations only matter in *public* acquisitions. We provide the first evidence that financial advisors and their reputations add significant value to the shareholders of acquiring firms in *private* acquisitions. We further show that the political connections of acquiring firms affect the value created by financial intermediaries in M&As, which supports previous findings that political connections play a crucial role in Chinese corporate activities (for example, Calomiris, Fisman and Wang (2010), Liu, Tang, and Tian (2013), Piotroski and Zhang (2014), and Feng, Johansson, and Zhang (2015)).

Second, we identify the underlying mechanisms and specific channels through which financial advisors add value to acquiring firms. Supporting the transaction costs hypothesis proposed by Servaes and Zenner (1996), we find that the wealth gain is more significant for complex deals. We further show that compared to in-house investment banking teams, financial advisors shorten the deal completion time, reduce bidding costs, and lead to higher acquirer future profitability for large deals. Our results echo the findings in Kale, Kini, and Ryan (2003) and Golubov, Petmezas, and Travlos (2012) that financial advisors generate wealth gains in *public* acquisitions by facilitating the M&A process and creating more synergy.

Third, our findings improve our understanding of acquiring firms' choices in hiring financial advisors in private M&A deals. Firms are more likely to hire financial advisors for complex deals, further supporting the transaction costs hypothesis. In addition, for large deals in which M&A expertise is more important, acquiring firms are less likely to hire financial advisors if their managerial team has investment banking experience. We do not find evidence that acquiring firms' decisions to hire financial advisors are related to asymmetric information or agency costs.

## 2. Literature Review and Institutional Background

### 2.1. Literature review

Previous studies on the relation between the decision to hire financial advisors and M&A performance generate mixed evidence. McLaughlin (1990), Servaes and Zenner (1996), Rau (2000), Hunter and Jagtiani (2003), and Bao and Edmans (2011) find that financial advisors do not create shareholder value for acquiring firms and advisor reputation is not associated with wealth gain. In contrast, Kale, Kini, and Ryan (2003) and Golubov, Petmezas, and Travlos (2012) show that reputable advisors create value for shareholders of acquiring firms but only in *public* target deals and not in *private* target deals. The sources of the wealth gain come mainly from the shorter deal completion time and higher synergy.

Servaes and Zenner (1996) find support for three hypotheses regarding the determinants of an acquirer's decision to employ a financial advisor. Aquiring firms are more likely to use an investment bank (i) when the deal is more complex and when they lack prior acquisition experience (i.e., the transaction costs hypothesis), (ii) when the target firm operates in muiltiple industries (i.e., the asymetric information hypothesis), and (iii) when they purchase listed firms and when they have lower insider ownership (i.e., the monitoring hypothesis). Kale, Kini, and Ryan (2003) analyze 324 takeovers of public firms and find that bidders are more likely to hire an advisor when the bidder is more diversified and has less prior takeover experience and when the target is larger and hostile. Rau (2000) and Bao and Edmans (2011) find that when choosing advisors, acquirers are not sensitive to whether financial advisors created value for their clients in previous deals. In contrast, using a large sample of M&A deals between 1979 and 2011, Sibilkov and McConnell (2014) find that acquirers do consider advisors' prior performance when choosing an advisor and that market forces align advisors' and clients' interests in the acquisition market.

Our study is also related to the broad literature on firms' choices of financial advisors and the effect of financial advisors on various corporate actions. For example, Yasuda (2005) examines the effect of banking relationships on underwriter choices in the corporate bond market. Schenone (2004), Hoberg (2007), and Chuluun (2015) report that pre-IPO banking relationships with underwriters, persistent underwriter-specific components, and underwriter peer networks affect IPO performance, respectively. An extensive body of literature examines advisor quality and the outcome of corporate decisions. For example, Carter and Manaster (1990), Beatty and Welch (1996), Carter, Dark, and Singh (1998), and Chua (2014) find that advisors' reputations are significantly related to IPO firms' first-day returns. Su and Brookfield (2013) compare the underwriting process for Chinese firms between pre- and post-2011 IPO system reform periods

and demonstrate that reputation is crucial to the Chinese IPO process. The sources of value gain from appointing a high reputation underwriter in the IPO process may be lower information asymmetry, better long-term performance, and increased analyst coverage.[4]

### 2.2. Institutional background

M&As in western countries are market-driven activities. The outcomes of acquisitions mainly depend on the buyer's and seller's shareholders and managerial teams. Unlike developed capital markets, the Chinese financial market is still heavily regulated by the government or market regulators (i.e., CSRC). The success of an acquisition crucially depends on the approval of the Chinese regulators.

A typical M&A approval process in China is as follows. When a firm plans to carry out an M&A deal, the firm is required to submit the detailed plans to the CSRC within 3 working days once the acquisition plan has been approved by shareholders. Then, the M&A committee of the CSRC decides whether it can approve this specific M&A deal based on the documents submitted by the company. The main responsibility of the M&A committee at the CSRC is to protect minority shareholder interests and judge the M&A application based on its potential to create value for shareholders. The M&A committee of the CSRC mainly focuses on the accounting and legal side of each application. It normally takes 20 working days to approve the application if the proposed M&A deal does not potentially destroy shareholder value. One of the main reasons that the M&A committee of the CSRC declines an M&A application is an unrealistic forecast of cash flows or revenues of the potential target firm. Correctly understanding the requirements of the CSRC and properly responding to inquiries from the regulator are important for obtaining approval from the CSRC.

Another difference between Chinese and western M&A markets is the listing status of target firms. Although public acquisition is popular in the U.S. and other developed countries, very few deals in China involve listed companies as targets due to restrictive government regulations. When the target firm is a listed company, an independent financial advisor is required by the Chinese regulators to protect minority shareholders' interests. Since most acquisitions in China involve unlisted companies as targets, acquirers have the flexibility to choose between running their own in-house deal teams and retaining financial advisors.

[4] See, for example, Booth and Smith (1986), Loughran and Ritter (2004), and Dong, Michel, and Pandes (2011) .

Chinese listed firms planning to carry out a potential M&A deal can seek financial advice from securities companies, which play the role of investment bankers in western countries. Financial advisors in China are expected to help acquiring firms search for potential targets, provide valuation services, design the transaction details, and secure external funding if required. In addition to these traditional services from an investment banker, financial advisors also help firms prepare necessary documents to seek regulators' approval and respond to inquiries from regulators. By offering the above consulting services to acquirers, financial advisors typically charge a fixed percentage fee based on the deal transaction value, and this fee is negotiable depending on the size of the deal. The fee is paid once the deal is completed and is not contingent on whether the financial advisor creates value to shareholders of the acquiring firm. With the fast growth of the Chinese M&A market, security companies' consultation service revenue increased more than 54% between 2013 and 2014.

## 3. Data Description

In this section, we describe our sample selection process, variable construction, and summary statistics of acquirer and deal characteristics. We also present results from univariate tests to compare the characteristics of acquirers that hire financial advisors with those that run their own deal teams.

### 3.1. The sample construction

Our sample of Chinese domestic M&A deals is selected from the GTA Corporate Merger, Acquisition, and Restructuring Research database from 2004 to 2014. Public companies in China are required by the CSRC to fully disclose their M&A activities. The GTA M&A database includes detailed information on all M&A transactions in which public companies participate. We obtain stock return data and firm-level financial and accounting data for listed companies from the CSMAR database. Information on the financial advisor of each deal is manually collected from each company's M&A deal announcement published by the CSRC. We collect additional information on financial advisors from the websites of security firms and CSRC. We obtain information on target firms from the National Enterprise Credit Information Publicity System organized by the State Administration for Industry and Commerce.

We use the following criteria to select our final M&A sample: (1) the transaction type is a merger, acquisition, or tender offer; (2) both the acquirer and target are Chinese domestic firms;

the acquirer is a listed firm and the target is a private firm;[5] (3) the deal value is at least 1% of the acquirer's market capitalization; (4) related-party transactions and the financial and utility sectors are excluded due to different financial reporting methods; (5) deals financed by issuing new equity are required by the CSRC to appoint a financial advisor for the transaction and therefore are dropped from the sample;[6] and (6) multiple deals announced by the same acquiring firm on the same day are excluded. Our final sample includes 1,441 Chinese domestic M&A transactions conducted by 894 public firms. The detailed sample selection process is reported in Appendix A.

Table 1 presents the sample distribution by year and industry for the 1,441 acquisition observations. Panel A reports the number and value of acquisition deals by year. The number (value) of acquisitions increases from 49 deals (3.43 billion yuan) in 2004 to 320 deals (79.30 billion yuan) in 2014. Acquisition activities drop during 2008-2009 due to the global financial crisis. Panel A also reports the number of deals completed with financial advisors and their percentage of total deals by year. In the early years from 2004 to 2009, only a very small fraction of M&A deals are completed with financial advisors. The percentage increases significantly starting in 2010 and reaches nearly 30% in the most recent years. On average, 23.9% M&A deals involve financial advisors.

Panel B of Table 1 shows the number and value of acquisitions by the acquirer's CSRC industry.[7] The manufacturing industry has the highest number and value of deals (60.93% and 49.40%), followed by real estate (9.72% and 15.54%) and IT (7.84% and 9.48%). The industry distribution of our sample is similar to that reported by Deng, Kang, and Low (2013) in the U.S. market, in which 57.19% of U.S. acquirers are in the manufacturing sector.

### 3.2. Summary statistics of acquirer and deal characteristics

Our main variable of interest is a dummy variable ($FinAdvisor$) that equals one if a specific acquirer hires a financial advisor in the M&A transaction and zero otherwise. Our main performance measure is the announcement cumulative abnormal return ($CAR$). We report CARs adjusted by the market return ($CAR_{mktadj}$), CARs based on the market model ($CAR_{mkt}$), and

[5] Only less than 0.5% of total deals involve public firms as targets. The transaction type of all private acquisitions in our sample is the acquisition of major assets (we do not observe mergers or tender offers).

[6] Due to restrictive government regulations on new equity issuance, stock financing is unpopular in China. Only around 6% of total deals in our initial sample are financed by stocks.

[7] We use the CSRC 19 industry classification. Since we exclude financial and utility firms, we have only 17 industries in Panel B of Table 1.

CARs based on the Fama and French three-factor model ($CAR_{ff3}$).[8] We report CARs on three event windows: (-1,1), (-3,3), and (-5,5). The event date is designated as the announcement date of the acquisition deal.

Table 2 presents summary statistics of acquirer and deal-specific characteristics. Detailed definitions of the variables are provided in Appendix B. All of the continuous variables are winsorized at the 1% and 99% levels to reduce the influence of outliers. Panel A presents acquiring firms' CARs over (-1,1), (-3,3), and (-5,5) event windows. Average CARs for acquirers are significantly positive for all event windows, ranging from 0.9% to 2.4%. The results suggest that on average, M&As in our sample create value for shareholders of acquiring firms. Our results are consistent with previous findings that on average bidder shareholders gain when buying a private firm.

Panel B of Table 2 shows that acquirers have an average total asset of 3.31 billion *yuan* and an average leverage ratio of 0.36.[9] The average cash holdings of acquirers is 21% of total assets, which supports the Bi and Boateng (2014) finding that most Chinese acquiring firms are cash-rich. The average Tobin's Q is 1.91, the average book-to-market equity ratio is 0.38, and the average price run-up (measured by the pre-event 12-month buy-and-hold size-adjusted return) is 9.1%. In terms of operating performance, the acquiring firms have an average return-on-assets (ROA) of 3.9%. Compared to U.S. acquirers as reported by Schmidt (2015), acquirers in our sample have a similar average Tobin's Q but a higher average leverage ratio.

### 3.3. Univariate analysis

Table 3 presents the univariate analysis of acquirer and deal characteristics by the presence of financial advisors in M&A deals. Panel A shows that acquirers hiring financial advisors experience significantly higher CARs than acquirers running their own deal teams. For example, the Fama-French three-factor CAR ($CAR_{ff3}$) is significantly positive with a value of 4.94% during the (-3,3) event window for acquirers hiring financial advisors, but only 0.56% for acquirers running their own deal terms. The difference in $CAR_{ff3}$ between the two samples is 4.37% with a $p$-value of 0.000.

[8] A 250-day pre-event window is used to estimate the market model and Fama and French three-factor model coefficients and we require available return data for at least 30 days. A 30-day gap between the pre-event estimation period and the event window is used to avoid any microstructure effects and mechanical results.
[9] One U.S. dollar is equivalent to 6.49 *yuan* at the end of 2015.

We observe that firms in the two sub-groups differ in certain characteristics. For example, Panel B of Table 3 shows that acquiring firms hiring financial advisors have smaller size, lower leverage ratio, and higher cash holding than firms using their own deal teams. M&A deals that use financial advisors are larger and are less likely to be paid fully in cash than M&A deals without financial advisors.

Fig. 1 shows the striking pattern of stock returns during M&A announcements for firms hiring financial advisors versus those running their own deal teams. The red solid line represents the average $CAR_{mktadj}$ from event day -20 to day 20 for firms hiring financial advisors. The black dashed line represents firms running their own deal teams. It is evident that before the M&A announcement date, both types of firms have similar $CAR_{mktadj}$. However, starting from one day before the announcement date, firms retaining financial advisors experience substantially higher $CAR_{mktadj}$ than do firms running their own deals teams. The return difference reaches more than 4% three days after the announcement date and remains stable afterward within 20 days. The figure provides clear evidence that the market reacts more positively to M&A announcements for firms hiring financial advisors than those running their own deal teams.

## 4. Empirical Analysis

### 4.1. Financial advisors and M&A announcement effects

The univariate analysis in Table 3 and Fig. 1 clearly shows that M&A deals that completed with financial advisors experience significantly higher returns during M&A announcements than deals conducted by in-house investment teams. However, univariate analysis does not control for other factors that can also affect M&A announcement returns. In this section, we examine the relation between acquiring firms' announcement CARs and the presence of financial advisors by performing the following multivariate regression:

$$CAR_{i,t} = \beta_0 + \beta_1 FinAdvisor_{i,t} + \gamma_1 FControl_{i,t} + \gamma_2 DControl_{i,t} + \varepsilon_{i,t}, \quad (1)$$

where the dependent variable $CAR_{i,t}$ is the cumulative abnormal return calculated from the market model ($CAR_{mkt}$) or the Fama and French three-factor model ($CAR_{ff3}$) during the (-3,3) event window for firm $i$ in event time $t$.[10] Our main variable of interest is $FinAdvisor_{i,t}$, a dummy variable that equals one if acquirer $i$ hires a financial advisor for the transaction, and zero otherwise.

[10] Our results remain qualitatively the same when we use CARs adjusted by the market return.

Firm-level control variables, $FControl$, include common control variables in the M&A literature (e.g., Huang, Jiang, Lie, and Yang (2014)), such as acquirer size, leverage, cash holdings, Tobin's Q, book-to-market equity ratio, price run-up, return-on-assets, and pre- and post-holdings of the target firm.

We also include commonly used corporate governance variables in China, including managerial holdings and the ratio of independent directors on the board. [11] Our deal-level control variables, $DControl$, include deal relative size (deal transaction value scaled by acquirer total assets) and the full-cash dummy (a dummy variable that equals one if the transaction is fully financed by cash and zero otherwise). We also control for industry and year fixed effects. All the accounting variables are based on the available information at the most recent year end before M&A announcements.[12]

The results are reported in Table 4.[13] The dependent variable is $CAR_{mkt}$ in Columns 1-3. Column 1 presents the estimate of the coefficient on $FinAdvisor$ without any control variables. The coefficient is 4.298 with a *p*-value of 0.000. The result suggests that acquiring firms hiring financial advisors experience an average CAR that is 4.298% higher than those firms using their own deal teams, confirming the univariate analysis result. After controlling for acquirer characteristics (Column 2), the coefficient on $FinAdvisor$ decreases slightly to 4.039 and remains statistically significant at the 1% level. The coefficient reduces further to 2.589 with a *p*-value of 0.006 after we control for deal characteristics (Column 3). Columns 4-6 report the results for the dependent variable $CAR_{ff3}$. The results are qualitatively similar to those for $CAR_{mkt}$.

The announcement CAR is also significantly related to certain acquirer- and deal-specific characteristics. Consistent with previous findings (e.g., Faccio, McConnell, and Stolin (2006)), there is a significantly negative relation between the acquirer CAR and acquirer size. The acquirer CAR is also negatively related to corporate cash holdings and positively related to acquirer book-

[11] In unreported results, we control for alternative corporate governance measures, including CEO duality, share concentration ratio, and the Z-index, and the results remain unchanged. CEO duality is defined as a dummy variable that equals one if the CEO and Chairman are the same person and zero otherwise. Share concentration ratio is defined as the share ratio of the acquiring firm held by the top three shareholders. Z-index is defined as the shares held by the largest shareholder divided by shares held by the second largest shareholder.

[12] For variables from the balance sheet, including leverage, cash holdings, Tobin's Q, and book-to-market equity ratio, we use the most recent accounting information semiannually. The results hold the same if we use the accounting information at the recent year end.

[13] We begin with 1,441 observations. Due to the lack of return data during the (-3,3) announcement window, we are left with 1,371 observations for the seven-day CAR regression. After controlling for various acquirer characteristics, the sample is further reduced to 1,125 observations.

to-market equity ratio. In addition, the acquirer CAR is positively related to the relative size of the deal and negatively related to the all-cash payment.

4.2. When are financial advisors most valuable?

Our previous results suggest that financial advisors create value for shareholders. The next question is: how do financial advisors create value? One potential explanation is the transaction costs hypothesis proposed by Servaes and Zenner (1996) that financial advisors can analyze acquisitions at a lower cost than a firm's own deal team can. This hypothesis is particularly relevant in the context of the Chinese M&A market, which is highly regulated. Financial advisors in China are usually affiliated with large security companies. They have the necessary resources and rich experience to help acquirers identify and value target firms, design the transaction structure, and more importantly comply with government regulations and secure approval from the CSRC. The transaction costs hypothesis therefore predicts that financial advisors are more valuable for deals that are likely to entail higher transaction costs, for example, more complex deals.

To test this hypothesis, we use two measures to proxy for deal complexity. The first one is a large deal dummy ($LargeDeal$), which equals one if relative deal size is higher than the median and zero otherwise. Large deals require a significant amount of financing, have a significant effect on corporate organizational structure, and attract more government inspection. Financial advisors' expertise thus becomes especially important for large M&A deals to successfully go through. Our second measure is the all-cash dummy ($All\text{-}cash$). Payment methods for an M&A deal in China come in three major forms: cash, assets, and assumption of debt.[14] If a deal needs to be financed by assets or assumption of debt rather than cash, the transaction structure and process become more complicated and additional knowledge is needed to evaluate the value of the acquirer's assets or the target's debt. More information needs to be disclosed and additional documentation need to be prepared to comply with government regulations. In such cases, financial advisors' experience is particularly valuable.

We perform the CAR regression as in equation (1) by interacting the financial advisor dummy with the large deal dummy and the all-cash dummy. Table 5 reports the results. We find that the coefficient on the interaction term between the financial advisor dummy and the large deal dummy is significantly positive, suggesting that financial advisors generate higher value for shareholders

[14] Our sample excludes deals financed by stocks since these deals are required by the CSRC to involve a financial advisor.

of acquiring firms when deals are larger. The coefficient on $FinAdvisor \times LargeDeal$ is 3.048 after controlling for firm and deal characteristics. This means that hiring a financial advisor generates 3.048% more CAR during the seven-day M&A announcement window for large deals than for small deals.

Further, we find that the coefficient on the interaction term between the financial advisor dummy and the all-cash dummy is significantly negative, suggesting that financial advisors create more wealth gain for shareholders of acquiring firms when deals are not fully paid in cash but financed by other methods, such as assets or assumption of debt. The coefficient on $FinAdvisor \times All\text{-}cash$ is – 10.072 after controlling for firm and deal characteristics. This means that hiring a financial advisor generates 10.072% more CAR during the seven-day M&A announcement window for deals that involve other payment methods than for deals that are fully paid in cash.

Taken together, our results support the transaction costs hypothesis by showing that financial advisors create more values for shareholders when deals are more complex and thus financial advisors' expertise becomes more valuable.

4.3. Alternative hypotheses: Asymmetric information and monitoring

Financial advisors may also add value to acquiring firms because of asymmetric information or agency costs. The asymmetric information hypothesis suggests that financial advisors help reduce the information asymmetry between the acquirer and the target. Therefore, financial advisors are more valuable when the information asymmetry between the acquirer and the target is larger. We use two proxies to measure the degree of information asymmetry. One is the *SameIndustry* dummy variable, which equals one if the acquiring and target firms are in the same industry and zero otherwise. The information asymmetry should be less severe when acquiring and target firms are in the same industry. The other is the acquirer's holdings of the target firm before the acquisition announcement (*Pre-holdings*). The greater the acquirer ownership of the target firm before the acquisition, the more inside information the acquirer has about the target firm and thus the smaller the information asymmetry is.

We perform the regression of acquirers' CARs on the financial advisor dummy and its interactions with *SameIndustry* or *Pre-holdings*. Table 6 reports the results. According to the asymmetric information hypothesis, the coefficients on *FinAdvisor* × *SameIndustry* and *FinAdvisor* × *Pre-holdings* should both be negative. However, we do not find significant

coefficients on both *FinAdvisor* × *SameIndustry* and *FinAdvisor* × *Pre-holdings*. Our results thus do not support the information asymmetry hypothesis in explaining the value creation role of financial advisors in Chinese M&A deals.

The monitoring hypothesis suggests that financial advisors reduce the agency costs in the acquiring firm by certifying the value of the acquisition. Therefore, financial advisors should be more valuable when the corporate governance of the acquiring firm is weaker and the need for monitoring is more urgent. Following Servaes and Zenner (1996), we use two proxies to measure the acquirer's need for monitoring. The first variable is managerial ownership of the acquiring firm (*Managerial holdings*). If managers own a large proportion of the firm, they are less likely to conduct value-destroying acquisitions and thus require less monitoring. The second variable is the percentage of independent outside directors on the board of directors (*Independent directors*). Outside directors monitor the actions of managers and prevent value-reducing corporate decisions. Acquiring firms need less external monitoring when there are more independent directors on the board.

We perform the regression of acquirers' CARs on the financial advisor dummy and its interactions with *Managerial Holdings* or *Independent Directors*. Table 6 reports the results. According to the monitoring hypothesis, the coefficient on *FinAdvisor* × *Managerial holdings* or *FinAdvisor* × *Independent directors* should be negative. However, we find that none of the interaction terms has a significant coefficient, suggesting that the value created by financial advisors for Chinese M&As cannot be explained the monitoring hypothesis.

4.4. Sources of the value gain

*4.4.1. Financial advisors and the deal completion time*

We further explore potential sources through which financial advisors create value for acquirers' shareholders. One important role that financial advisors play in Chinese M&A deals is facilitating the transaction process by preparing necessary documentation to meet CSRC standards, dealing with inquiries from market regulators and various stakeholders, and securing approval from the CSRC. We therefore conjecture that financial advisors are better able to help acquiring firms shorten the deal completion time, especially for large deals that usually require more effort and time to complete. We investigate the effect of hiring a financial advisor on deal completion time by running the following multivariate regression:

$$CompleteTime_{i,t} = \beta_0 + \beta_1 FinAdvisor_{i,t} + \beta_2 FinAdvisor_{i,t} \times LargeDeal_{i,t}$$

$$+\beta_3 LargeDeal_{i,t} + \gamma_1 FControl_{i,t} + \gamma_2 DControl_{i,t} + \varepsilon_{i,t}, \quad (2)$$

where the dependent variable $CompleteTime$ is (the natural logarithm of) the number of days to complete the deal. We add an interaction term between the financial advisor dummy and the large deal dummy, $FinAdvisor_{i,t} \times LargeDeal_{i,t}$, in the regression analysis to identify the effect of financial advisors on large deals.

Results are reported in Columns 1-2 of Table 7.[15] The coefficient on the financial advisor dummy alone is negative but insignificant. The coefficient on the large deal dummy is significantly positive, suggesting that large deals in general take longer to complete. More importantly, the coefficient on the interaction term, $FinAdvisor_{i,t} \times LargeDeal_{i,t}$ , is significantly negative with p-value of 0.053 as shown in Column 2. The coefficient is -0.485, suggesting that for large deals, the deal completion time is shortened by almost 38% ($1 - e^{-0.485} = 0.38$) when deals are completed with financial advisors compared to when deals are executed by firms' own in-house deal teams.

Among all 1,441 M&A deals in our sample, the majority of deals (1,394 deals) are successfully completed. Only 47 deals, about 3% of the total, fail at the end. Nonetheless, we study the relation between deal completion rate and the use of financial advisors. In unreported results, we show that hiring a financial advisor can significantly increase the deal completion rate. The odds of completing a deal are three times higher for deals using a financial advisor than deals using in-house teams.

*4.4.2. Financial advisors and the bid premium*

If acquiring firms benefit from the expertise of financial advisors in valuing the target firms, they are less likely to overpay. We therefore conjecture that acquirers hiring financial advisors pay a lower acquisition premium, especially for large deals in which the pecuniary benefit is more substantial. We investigate the effect of hiring financial advisors on the bid premium by running the following multivariate regression:

$$BidPremium_{i,t} = \beta_0 + \beta_1 FinAdvisor_{i,t} + \beta_2 FinAdvisor_{i,t} \times LargeDeal_{i,t} + \beta_3 LargeDeal_{i,t} + \gamma_1 FControl_{i,t} + \gamma_2 DControl_{i,t} + \varepsilon_{i,t}, \quad (3)$$

where the dependent variable $BidPremium$ is defined as (the natural logarithm of) the buyer offer price scaled by the target book value. The interaction term between the financial advisor dummy

[15] Due to data availability on deal completion time, our sample is significantly reduced to 358 deals for the analysis on the relation between deal completion time and the role of financial advisors.

and the large deal dummy, $FinAdvisor_{i,t} \times LargeDeal_{i,t}$, captures the effect of financial advisors on large deals.

The results are presented in Columns 3-4 of Table 7.[16] The coefficient on the financial advisor dummy alone has an insignificant coefficient. The coefficient on the large deal dummy is significantly positive, suggesting that large deals demand a higher bid premium. More importantly, the coefficient on the interaction term, $FinAdvisor_{i,t} \times LargeDeal_{i,t}$, is significantly negative with a p-value of 0.015 as shown in Column 4. The coefficient is -0.473, suggesting that for large deals, the bid premium is reduced by 38% ($1 - e^{-0.473} = 0.38$) for deals completed with financial advisors compared to deals executed by firms' own in-house deal teams.

*4.4.3. Financial advisors and future operating performance*

We have shown that financial advisors add value to acquiring firms by facilitating the transaction process and reducing bid costs. Another potential source of wealth gain is financial advisors' ability to identify valuable targets that can enhance acquiring firms' future profitability. We test this conjecture by running the following regression:

$$\Delta ROA_{i,(t,t+1)} = \beta_0 + \beta_1 FinAdvisor_{i,t} + +\beta_2 FinAdvisor_{i,t} \times LargeDeal_{i,t} + \beta_3 LargeDeal_{i,t} + \gamma_1 FControl_{i,t} + \gamma_2 DControl_{i,t} + \varepsilon_{i,t}, \quad (4)$$

where $\Delta ROA_{i,(t,t+1)} = ROA_{i,(t+1)} - ROA_{i,(t)}$ is the change in ROA one year after the acquisition.[17] The results are reported in Table 8.[18] As reported by Columns 1 and 2, the coefficient on the financial advisor dummy is insignificant. However, the coefficient on the interaction term, $FinAdvisor_{i,t} \times LargeDeal_{i,t}$ , is significantly positive (Column 3 and 4). The coefficient is 0.009 as reported in Column 4, suggesting that for large deals, the change in acquirer profitability one year after the acquisition is 0.009 higher for deals hiring financial advisors than for deals executed by firm own in-house teams. Given that the average acquirer ROA is 0.039 before the M&A transaction, the increase in ROA associated with hiring financial advisors is both economically and statistically significant.

Taken together, we find evidence that financial advisors help acquiring firms reduce the deal completion time and the bid premium, especially for large deals that in general require a longer

[16] Due to data availability on the bid premium, our sample is significantly reduced to 637 deals for the analysis on the relation between the bid premium and the role of financial advisors.
[17] Due to the persistence of ROA, we use the change in ROA rather than the level of ROA one year after the acquisition.
[18] Our sample is reduced from 1,441 to 1,440 observations due to the lack of ROA data. After controlling for various (change in) acquirer and deal characteristics, the sample is further reduced to 920 observations.

completion time and a higher takeover premium than small deals. Acquirers who hire a financial advisor also experience higher future profitability following the M&A transactions than acquirers who use their own in-house deal teams for large deals. Our results suggest that financial advisors add value to the shareholders of acquiring firms by facilitating the transaction process, reducing bid costs, and identifying valuable target firms.

4.5. Why are financial advisors valuable? The role of political connections

The M&A market in China is heavily regulated: companies cannot complete an M&A transaction until the deal application is approved by the CSRC. Given that the government M&A screening process is essential for M&A approval, political connections are important for acquirers. Political resources not only enable acquirers to better communicate with the authorities and comply with regulatory rules but also help them gain favorable support and treatment for their deal negotiation and business operations.

Acquirers may obtain political connections through the personal networks of their own executives, such as politically connected top managers or board members. For firms without their own political connections, they may gain access to political resources by hiring financial intermediaries who have tight connections with the government. Financial advisors in M&A transactions are generally state-owned security firms, who not only have extensive experience in interpreting and complying with government regulations but also have close relationships with government authorities. Therefore, the advantage of hiring financial advisors should be more valuable for firms that do not have political connections on their own.

To test this hypothesis, we perform the CAR regression as in equation (1) by interacting the financial advisor dummy with the acquirer political connection dummy (*PC*). PC equals one if the acquirer is politically connected and zero otherwise. Following previous literature (for example, Fan, Wong, and Zhang (2007), Peng, Wei, and Yang, (2011), and Liu, Tang, and Tian (2013)), we define an acquirer as politically connected if the CEO or a board member of the acquirer is a former government official,[19] a current or former member of the Provincial People's Congress, or a current or former member of the People's Political Consultative Conference.

The results are reported in Table 9. We find that the coefficient on the interaction term is significantly negative, suggesting that financial advisors generate higher value for acquiring firms that do not have political connections. In column (1), the coefficient on *FinAdvisor×PC* is -2.497

[19] Government offices include central or local governments and military.

with a *p*-value of 0.074 after controlling for various firm and deal characteristics. This means that hiring a financial advisor generates 2.497% more CAR during the seven-day M&A announcement window for acquirers without political connections than for acquirers with political connections. In column (2), we further control for the interactive effect between financial advisors and state ownership. The effect of political connection remains qualitatively the same.

4.6. Financial advisor reputation and the M&A announcement effect

Previous studies provide mixed evidence on the relation between financial advisor reputation and acquiring firm value creation. Kale, Kini, and Ryan (2003) and Golubov, Petmezas, and Travlos (2012) suggest a *positive* relation between financial advisor reputation and acquirer announcement returns in *public* acquisitions. In contrast, Rau (2000) and Bao and Edmans (2011) find a *negative* relation in their samples, of which most are *private* acquisitions. In this section, we investigate the relation between financial advisor reputation and acquirer value creation in our sample of Chinese M&As, all of which are *private* acquisitions.

We define a financial advisor as a top-tier advisor if the total value of deals it conducted during our full sample period from 2004 to 2014 is ranked in the top 10 of all financial advisors.[20] Our sample involves M&A deals advised by 82 financial advisors in total. The market share of security firms in the M&A market is highly concentrated. The top 10 security firms represent more than 50% of total market transactions.

We perform the regression of acquirer CARs on the top-tier dummy, the non-top-tier dummy, and other acquirer and deal-specific characteristics. The results are reported in Table 10. Column 1 includes only the top-tier and non-top tier dummies as independent variables. Although both dummy variables have positive and significant coefficients, the magnitude of the coefficient on the top-tier dummy is twice as large as that on the non-top-tier dummy. Furthermore, after controlling for firm characteristics (column 2) and deal characteristics (column 3), only the coefficient on the top-tier dummy remains significantly positive. In column 3, the coefficient on the top-tier dummy is 3.407 with a *p*-value of 0.004, which suggests that acquirers hiring top-tier financial advisors experience 3.407% higher seven-day CARs than acquirers running their own deal teams.

[20] For a reasonable range of cutoffs for the definition of top-tier advisors, for example, from the top 10 to the top 30 of all financial advisors, our results remain qualitatively similar.

Our results suggest that financial advisor reputation, as measured by market shares, does have a significant effect on acquirer performance for Chinese *private* acquisitions. After controlling for various firm and deal characteristics, only acquirers hiring reputable (top-tier) financial advisors experience significantly higher M&A announcement returns compared to acquirers running their own deal teams. In contrast, acquirers hiring less reputable (non-top-tier) financial advisors do not experience abnormally high announcement returns. Our results provide the first evidence that the reputation of financial advisors creates value for the shareholders of acquiring firms in *private* acquisitions.

4.7. The likelihood of hiring financial advisors

If financial advisors create value for shareholders of certain acquiring firms, do firms realize the gain and rationally choose between hiring financial advisors and running their own in-house teams? In this section, we further investigate the determinants of acquiring firms' decisions to hire a financial advisor. We perform the following logit regression:

$$Prob(FinAdvisor)_{i,t} = \beta_0 + \gamma_1 FControl_{i,t} + \gamma_2 DControl_{i,t} + \varepsilon_{i,t}, \quad (6)$$

where the dependent variable $Prob(FinAdvisor)$ is a dummy variable that equals one if the acquiring firm hires a financial advisor and zero otherwise. We include various firm ($FControl$) and deal ($DControl$) characteristics as explanatory variables.

Table 11 presents the results. Columns 1-2 report the logit regression without fixed effects, Columns 3-4 present the logit regression with year and industry fixed effects.[21] Our main variables of interest are the large deal dummy and the all-cash dummy. According to the transaction costs hypothesis, acquiring firms are more likely to hire financial advisors for complex deals. Our results confirm this prediction. The coefficient on the large deal dummy is significantly positive, suggesting that acquirers are more likely to hire a financial advisor when deals are large. The coefficient on the all-cash dummy is significantly negative, suggesting that acquirers are less likely to hire a financial advisor when deals are paid fully in cash.

Several studies suggest that acquirers' previous M&A experience affects their decision to hire financial advisors (e.g., Servaes and Zenner (1996); Kale, Kini, and Ryan (2003); Golubov, Petmezas, and Travlos (2012)). According to the transaction costs hypothesis, acquirers with

[21] After controlling for various acquirer and deal characteristics, the sample size is reduced from the initial 1,441 to 1,160 observations as in Columns 1-2. The sample size is further reduced to 1,091 observations in Columns 3-4 when fixed effects are included because the fixed effect logit model drops all observations without within-group variance of the dependent variable.

previous M&A experience or investment banking experience can run their own deal teams at a lower cost and are less likely to hire a financial advisor. To test this prediction, we add *IB experience*, which is a dummy variable that equals one if the managerial team of the acquiring firm has previous investment banking experience and zero otherwise, to the regression. We find that the coefficient on *IB experience* is negative but insignificant. However, the coefficient on the interaction term between *IB experience* and the *LargeDeal* dummy is significantly negative. This result suggests that for large deals in which investment banking experience tends to be more important, the expertise of the managerial team in investment banking lowers the costs to the acquiring firm of running its own in-house deal team and therefore significantly decreases the probability of hiring a financial advisor.

The decision to hire a financial advisor may also be affected by asymmetric information and agency costs as suggested by Servaes and Zenner (1996). The asymmetric information hypothesis suggests that financial advisors can reduce the information asymmetry between the acquirer and the target. Therefore, firms should be more likely to hire financial advisors when the information asymmetry is larger. As discussed in the previous section, we use *SameIndustry* and *Pre-holdings* to measure information asymmetry. The asymmetric information hypothesis suggests that the coefficient on *SameIndustry* and *Pre-holdings* should be negative. The result in Table 11 shows that the coefficients on both *SameIndustry* and *Pre-holdings* are insignificant, suggesting that asymmetric information is not a major determinant of the acquirer decision to hire a financial advisor.

The monitoring hypothesis suggests that financial advisors reduce the agency costs in the acquiring firm by certifying the value of the acquisition. We therefore expect that acquiring firms are more likely to hire a financial advisor when managerial ownership and the percentage of outside directors are low. We use *Managerial Holdings* and *Independent Directors* to measure an acquirer's need for monitoring. The monitoring hypothesis suggests that the coefficient on both *Managerial Holdings* and *Independent Directors* should be negative. The results in Table 11 do not support these predictions. The coefficient on managerial holdings is significantly positive, which is the opposite of what is predicted by the monitoring hypothesis. The coefficient on the percentage of outside directors is insignificant. Taken together, we do not find evidence that supports the monitoring hypothesis in explaining the acquirer choice on hiring financial advisors.

4.8. Why don't all firms choose the most reputable financial advisors?

Given the value created by financial advisors, a question naturally arises: why don't all firms choose financial advisors, particularly the most reputable financial advisors, for their M&A transactions? The answer lies in the fact that past M&A performance is not the only determinant of the acquirer's choice of financial advisors. Sibilkov and McConnell (2014) perform simulation analysis and show that when past client performance is the only factor considered by acquirers in choosing their financial advisors, the market will be quickly monopolized by a single "best" advisor. However, when other factors enter into the choice model, the equilibrium outcome of the advisory market is that several top advisors control a large share of the market, and each of all other financial advisors has a small market share.

## 5. Addressing Endogeneity Concerns

### 5.1. Correction for self-selection bias

Our analysis thus far assumes that the choice of hiring a financial advisor is exogenously determined. However, the decision to hire a financial advisor may be endogenous. In fact, we do observe significant differences in certain acquirer- and deal-specific characteristics between firms hiring financial advisors and those using in-house teams. The matching between an acquirer and a financial advisor is potentially non-random and self-selection bias may emerge as shown by Heckman (1979), which would lead to unreliable estimates.

To correct for potential self-selection bias, we implement the two-step procedure as suggested by Heckman (1979).[22] In the first stage, the choice between a financial advisor and an in-house investment team is modeled by a probit regression. In the second stage, the self-selection is corrected by incorporating a transformation of the predicted probability (known as the inverse Mills ratio) as an additional explanatory variable. The identification in the Heckman two-stage procedure comes from two sources. First, the nonlinearity of the inverse Mills ratio by itself serves as an identification restriction of the model. Second, it is recommended to have a variable present in the first stage regression but not in the second. This variable should satisfy the exclusion restriction, which requires that this variable influences the choice of hiring a financial advisor but not the M&A outcome directly. Although the exclusion restriction is not crucial in the Heckman two-stage model, we nonetheless incorporate it in our model. Our results remain qualitatively unchanged without such a restriction.

[22] The detailed procedures used in this analysis are described in Appendix C.

In the spirit of Fang (2005) and Golubov, Petmezas, and Travos (2012), we construct a dummy variable, *Scope*, to serve as the exclusion restriction of the model. *Scope* equals one if the acquiring firm has hired financial advisors to issue equity or debt in the past and zero otherwise. The *Scope* variable is intended to measure the extent to which the acquiring firm used the services of financial advisors across various capital market transactions in the past.

Table 12 reports the results from the Heckman two-stage regressions for acquirers' CARs around M&A announcements. In the first-stage selection equation, the *Scope* variable is a significant determinant of the choice between hiring a financial advisor and using an in-house investment team in M&A deals. The coefficient on *Scope* is negative, which means that firms that have used the services of financial advisors in the past are more likely to run their own deals.[23]

We then construct the inverse Mills ratio from the first-stage regression and add it as an additional explanatory variable in the second-stage equation. The coefficient on the inverse Mills ratio is insignificant at conventional levels, suggesting that our coefficient estimates are reliable and previous analyses on acquirers' CARs around M&A announcements are robust to selection bias. In other words, unobserved characteristics that affect the likelihood of hiring a financial advisor do not have a significant effect on M&A outcomes regarding acquirers' CARs around M&A announcements.

Following Fang (2005) and Golubov, Petmezas, and Travos (2012), we further investigate the pure effect of financial advisors by applying an augmented Heckman two-stage regression—a switching regression model with endogenous switching. We are interested in the following "what-if" question: for a deal that uses a financial advisor, what would the alternative outcome be had it been run by an in-house investment team? This question can be empirically answered by the switching regression model, which specifies two second-stage equations—one for deals using financial advisors and one for deals using in-house investment teams.

Table 13 presents the analysis based on the switching regression model. Panel A reports the coefficient estimates for the first-stage selection equation (which is identical to the one shown in column 1 of Table 12) and the two second-stage regression equations. The coefficients on the

[23] Fang (2005) and Golubov, Petmezas, and Travos (2012) use a similar setup to study the choice between top-tier advisors and non-top-tier advisors and find that firms that have used top-tier advisors are more likely to use top-tier advisors in the future. Our study differs from theirs by focusing on the choice of whether to hire a financial advisor, which is negatively related to *Scope*, a measure of firms' past use of financial advisors. One potential explanation for this negative relationship is that firms learn investment-banking experience from their past interaction with experts and are more likely to run their own in-house teams in the future.

inverse Mills ratio are insignificant for both types of deals, which confirm our previous finding in Table 12 that our results are robust to selection bias. Panel B reports the what-if analysis, which compares the actual and hypothetical CARs for both types of deals. The average actual CAR for the deals involving a financial advisor is 2.821%, and the average hypothetical CAR is -0.703%. The results imply that the deals advised by financial advisors would have been worse off by 3.525% on average if an in-house team had been used. Similarly, the average actual CAR for the deals using in-house teams is 0.450%, and the average hypothetical CAR is 3.098%. The findings suggest that the deals advised by in-house teams would have been better off by 2.649% on average if a financial advisor had been hired.

These results, taken together, suggest that our previous estimation of the value creation by financial advisors in M&A transactions is robust to selection bias. The switching regression model further identifies the pure effect of hiring a financial advisor and provides consistent estimates. The results reinforce our previous conclusions that in-house teams would have delivered a lower CAR, whereas financial advisors would have provided better outcomes.

5.2. Instrumental variable approach

In this section, we take a different approach to address endogeneity concerns in general. We explore a possible source of exogenous variation in firms' decisions to hire a financial advisor that relies on the distance between firms' headquarters and the location of the majority of security companies. Fig. 2 presents the province map of China. China has 34 provincial-level administrative units, including 23 provinces, 4 municipalities, 5 autonomous regions, and 2 special administrative regions.[24] In China, most security companies are located in southeast areas, such as Shanghai and Guangdong province, which are the locations of two major Chinese stock exchanges (labeled in red).[25] Although security companies may open branches outside their headquarters, it is evident that they open fewer branches in distant areas, such as the most northern and western provinces.

We define a $DistantArea$ dummy that equals one if firms headquarter in the most distant provinces including Tibet, Xinjiang, Qinghai, Gansu, Ningxia, Inner Mongolia, and Heilongjiang

[24] Refer to Fig. 2 for the details of these 34 provincial-level administrative units.

[25] Among the 96 security companies rated by the CSRC, more than one third headquarter in Shanghai and Guangdong province and close to half are located in the southeast coastal provinces.

(labeled in blue), and zero otherwise.[26] We use the $DistantArea$ dummy as an instrument for a firm's decision to hire financial advisors. Firms headquartered in distant areas are far away from the majority of security companies and are less likely to hire financial advisors potentially due to lack of contact or high communication costs.

The exclusion restriction required by our instrumental variable (IV) regression is that, conditional on the control variables included in the regression, the $DistantArea$ dummy only affects M&A announcement returns through its effect on a firm's decision to hire a financial advisor. One potential concern with this exclusion restriction is that the distance from the southeast areas may be correlated with economic development or financial development, which may have a direct effect on M&A outcomes. To alleviate this concern, we explicitly control for measures of economic development and financial development in the IV regression.

Table 14 reports the results of two-stage least-squares estimates of the following regression:

$$CAR_{ff3(-3,3),i,t} = \beta_0 + \beta_1 FinAdvisor_{i,t} + \gamma_1 FControl_{i,t} + \gamma_2 DControl_{i,t} + \gamma_3 EconomicDevelopment_{i,t} + \gamma_4 FinancialDevelopment_{i,t} + \varepsilon_{i,t}. \quad (7)$$

The decision to hire a financial advisor, $FinAdvisor$, is treated as endogenous and modeled as follows in the first stage:

$$FinAdvisor_{i,t} = \beta_0 + \beta_1 DistantArea_{i,t} + \gamma_1 FControl_{i,t} + \gamma_2 DControl_{i,t} + \gamma_3 EconomicDevelopment_{i,t} + \gamma_4 FinancialDevelopment_{i,t} + \varepsilon_{i,t}. \quad (8)$$

We use log(GDP) and log(GDP per capita) at the provincial level to measure the degree of economic development. To measure financial development, we use the ratio of total loans to GDP (loans-to-GDP) and total deposits to GDP (deposits-to-GDP) at the provincial level to capture the overall depth and size of financial intermediaries.

Panel A of Table 14 reports the 2SLS estimates of the coefficient on $FinAdvisor$, $\beta_1$, from equation (7) and Panel B gives the corresponding first-stage estimates. In Column (1) of Panel A, the 2SLS estimate of the coefficient on $FinAdvisor$ is 2.545 in our baseline regression without any control variables. This estimate is significantly positive with a *p*-value of 0.045 and the magnitude of the estimate is comparable to the OLS estimate reported in Table 4. The Kleibergen and Paap (2006) test rejects the null of weak instruments. Column (1) in Panel B confirms that

[26] We do not directly use the distance between firm headquarters and stock exchanges/security companies as the instrumental variable because there exist two stock exchanges and multiple security companies. We identify the distant areas as the provinces that are apparently far away from both stock exchanges and most of the security companies.

there is a strong and negative relation between $FinAdvisor$ and $DistantArea$. Columns (2) of Table 14 show that the results do not change after adding acquirer- and deal-specific variables. Columns (3) further controls for year and industry fixed effects. In Column (4), we add measures of economic development and financial developments. Our results remain qualitatively the same. The coefficient on $FinAdvisor$ in the 2SLS specification is statistically and economically positive. Overall, the IV regression results show a robust positive effect of $FinAdvisor$ on acquirer M&A announcement CARs.

## 6. Additional Tests and Discussions

### 6.1. Financial advisors and acquirers' future stock performance

Thus far our evidence suggests that financial advisors are associated with higher M&A announcement returns for acquiring firms. An additional question to ask is: is this wealth gain permanent? We address this question by investigating the future stock performance of acquirers over the one-year period after the M&A announcement. We run the following regression:

$$BHAR_{(6,250),i,t} = \beta_0 + \beta_1 FinAdvisor_{i,t} + \gamma_1 FControl_{i,t} + \gamma_2 DControl_{i,t} + \varepsilon_{i,t}, \qquad (9)$$

where the dependent variable $BHAR_{(6,250),i,t}$ is the buy-and-hold abnormal return from day 6 to day 250 after the M&A announcement. Because long-term abnormal returns can be substantially affected by the estimation model, we report results for BHAR adjusted by the market return ($BHAR_{mktadj}$), BHAR adjusted by the market model ($BHAR_{mkt}$), and BHAR adjusted by the Fama and French three-factor model ($BHAR_{ff3}$).

In unreported results, we find that the coefficient on $FinAdvisor_{i,t}$ is insignificant for all measures of BHAR in all specifications. The results suggest that the one-year post-event stock performance of acquiring firms hiring financial advisors are not significantly different from acquiring firms using their own in-house deal teams. In other words, the wealth gains associated with financial advisors are permanent and not reversed back in the year following the M&A transactions.

### 6.2. Financial advisors and pre-announcement stock price run-up

If financial advisors have private information about forthcoming acquisitions, they might trade beforehand to earn abnormal profits. Because all of the target firms in our M&A transactions sample are *private* firms, we focus on the pre-announcement stock price run-up of the acquiring firms to detect potential insider trading patterns associated with financial advisors.

We perform the following regression of acquirers' stock price run-up on the financial advisor dummy and other acquirer and deal-specific characteristics:

$$Run\text{-}up_{i,t} = \beta_0 + \beta_1 FinAdvisor_{i,t} + \gamma_1 FControl_{i,t} + \gamma_2 DControl_{i,t} + \varepsilon_{i,t}, \quad (10)$$

where stock price run-up, $Run\text{-}up$, is defined as the acquirer's 12-month buy-and-hold abnormal return prior to the acquisition announcement. In unreported results, we find that the coefficient on the financial advisor dummy is always insignificant with or without controlling for acquirer and deal-specific characteristics. These results show that there is no significant relation between acquiring firm stock price run-up before acquisition announcements and the existence of financial advisors. Therefore, we do not find evidence that financial advisors trade on acquiring firms based on inside information about forthcoming acquisitions.

## 7. Conclusion

Chinese M&A markets have seen explosive growth in the past decade. Chinese corporations are acquiring a substantial number of companies in both domestic and international markets. An important question is: How do financial intermediaries help Chinese firms successfully achieve their goal of expansion through mergers and acquisitions?

In this paper, we identify the value-creation role of financial advisors using a comprehensive dataset of all domestic M&A transactions performed by Chinese public firms from 2004 to 2014. In contrast to previous findings in the US that financial advisors only create value in *public* acquisitions, we provide the first evidence that financial advisors generate substantial wealth gains in *private* acquisitions, through which Chinese firms achieve fast growth and strategic expansion. We show that compared with in-house deal teams, financial advisors increase acquiring firms' announcement CARs by more than 2% on average after controlling for a comprehensive set of acquirer and deal characteristics. The value gain is even larger for complex deals, such as large deals and deals not fully paid in cash. Our results support the transaction costs hypothesis, which posits that financial advisors can execute M&A deals at lower costs than in-house deal teams.

We further investigate the sources of the value gain created by financial advisors. We find that for large deals, financial advisors substantially reduce deal completion time and the takeover premium. And acquiring firms hiring financial advisors experience significantly higher future operating profitability. Our results suggest that financial advisors add value to shareholders of

acquiring firms by facilitating the transaction process, reducing bid costs, and identifying valuable targets that enhance the future operating profitability of acquiring firms.

In addition, we find that financial advisors add more value when acquiring firms do not have political connections and when financial advisors have a high reputation. Our results suggest the importance of political capital and reputational capital provided by financial intermediate institutions to their clients in Chinese M&A markets.

## Appendix A. Sample selection

The original database includes all transactions related to (1) asset transfer, (2) merger, (3) asset replacement, (4) debt renegotiation, (5) tender offer, and (6) equity transfer.

| Filter | Observations |
|---|---|
| Total observations from the database during 2004 and 2014 | 56,304 |
| Mergers, acquisitions, and tender offers | 12,271 |
| Domestic M&A deals | 11,421 |
| Acquirers are listed firms | 9,335 |
| Targets are private firms | 9,294 |
| Relative Transaction value > 0.01 | 4,237 |
| No related party transaction | 2,050 |
| Excluding financial and utility sectors | 1,983 |
| No new equity issue | 1,687 |
| Excluding multiple deals on the same announcement date | 1,441 |

**Appendix B. Variable Definition**

| Variables | Definitions |
|---|---|
| $CAR_{mktadj}(-1,1)$ (in %) | Cumulative abnormal return adjusted by the market return during the event window (-1,1) |
| $CAR_{mktadj}(-3,3)$ (in %) | Cumulative abnormal return adjusted by the market return during the event window (-3,3) |
| $CAR_{mktadj}(-5,5)$ (in %) | Cumulative abnormal return adjusted by the market return during the event window (-5,5) |
| $CAR_{mkt}(-1,1)$ (in %) | Cumulative abnormal return calculated from the market model during the event window (-1,1) |
| $CAR_{mkt}(-3,3)$ (in %) | Cumulative abnormal return calculated from the market model during the event window (-3,3) |
| $CAR_{mkt}(-5,5)$ (in %) | Cumulative abnormal return calculated from the market model during the event window (-5,5) |
| $CAR_{ff3}(-1,1)$ (in %) | Cumulative abnormal return calculated from the Fama and French three-factor model during the event window (-1,1) |
| $CAR_{ff3}(-3,3)$ (in %) | Cumulative abnormal return calculated from the Fama and French three-factor model during the event window (-3,3) |
| $CAR_{ff3}(-5,5)$ (in %) | Cumulative abnormal return calculated from the Fama and French three-factor model during the event window (-5,5) |
| (Ln)Size (in yuan) | (Natural logarithm of) acquirer total asset |
| Lev | Acquirer leverage ratio, defined as total liability scaled by total assets |
| Cash holdings | Acquirer cash-to-asset ratio, defined as cash and cash equivalents scaled by total assets |
| Tobin's Q | Acquirer Tobin's Q, defined as the sum of market value of equity and book value of debt divided by total asset |
| BM | Acquirer book-to-market equity ratio, defined as book value of equity divided by market value of equity |
| Run-up | Acquirer 12-month buy and hold size-adjusted return prior to acquisition announcements |
| ROA | Acquirer return-to-assets, defined as net income scaled by total assets |
| Pre-holdings | Share ratio of the target firm held by acquirers before acquisitions |
| Post-holdings | Share ratio of the target firm held by acquirer after acquisitions |
| Managerial holdings | Share ratio of the acquirer held by the managerial team of acquirers |
| Independent directors | Ratio of independent directors on the board of directors |
| SOE | A dummy variable that equals one if an acquirer is a state-owned enterprise and zero otherwise |

| | |
|---|---|
| IB experience | A dummy variable that equals one when an acquirer's managerial team has investment banking experience and zero otherwise |
| Relative size | Deal transaction value scaled by acquirer total assets |
| All-cash | A dummy variable that equals one when payment is 100% cash and zero otherwise |
| SameIndustry | A dummy variable that equals one when the acquirer and targets firms are in the same industry and zero otherwise. |
| PC | Political connection, a dummy variable that equals one if a board member or CEO of the acquirer is a former government official, a current or former member of the Provincial People's Congress, or a current or former member of the People's Political Consultative Conference and zero otherwise |
| LargeDeal | A dummy variable that equals one if the relative size of a deal is above the median relative size and zero otherwise |
| Top tier | A dummy variable that equals one if the financial advisor is ranked as the top 10 financial advisors based on the value of deals executed in our M&A during 2004 and 2014 |

**Appendix C. Correction for Self-Selection Bias**

We are interested in the following OLS regression:

$$y_i = X_i'\beta + \delta I_i + u_i, \quad \text{(A1)}$$

where $y_i$ is the M&A outcome (the *CAR* in our case), $X_i'$ is a vector of acquirer- and deal-specific characteristics, $I_i$ is a dummy for hiring a financial advisor, and $u_i \sim N(0, \sigma_u)$ is the error term. When $I_i$ is non-randomly selected, the OLS estimates of equation (A1) can be inconsistent and the inference can be erroneous.

Heckman (1979) suggests a two-step procedure to correct for self-selection bias. The first step estimates a binary selection equation that reflects the choice between a financial advisor and an in-house investment team using a probit model:

$$I_i^* = Z_i'\gamma + \varepsilon_i, \quad \text{(A2)}$$

where $Z_i'$ is a vector of characteristics that affect the choice between a financial advisor and an in-house investment team, and $\varepsilon_i \sim N(0,1)$ is the error term of the selection equation. To reflect binary outcomes, $I_i^*$ is discretized as follows:

$$I_i = 1 \text{ iff } I_i^* > 0, \text{ and } I_i = 1 \text{ iff } I_i^* \leq 0. \quad \text{(A3)}$$

In other words, $I_i$ equals one if and only if an M&A deal hires a financial advisor.

When $u_i$ and $\varepsilon_i$ are correlated, OLS estimates in equation (A1) are biased. As suggested by Heckman (1979), the self-selection bias in equation (A1) can be corrected by incorporating a transformation of the predicted probability of hiring a financial advisor in equation (A2):

$$y_i = X_i'\beta + \rho\sigma_u \frac{\varphi(Z_i'\gamma)}{\Phi(Z_i'\gamma)} I_i + \rho\sigma_u \frac{-\varphi(Z_i'\gamma)}{1-\Phi(Z_i'\gamma)}(1 - I_i) + u_i, \quad \text{(A4)}$$

where $\varphi(Z_i'\gamma)$ and $\Phi(Z_i'\gamma)$ are the density function and cumulative distribution function of a standard normal distribution, respectively. $\frac{\varphi(Z_i'\gamma)}{\Phi(Z_i'\gamma)}$ and $\frac{-\varphi(Z_i'\gamma)}{1-\Phi(Z_i'\gamma)}$ are the inverse Mills ratios evaluated at $Z_i'\gamma$ for $I_i = 1$ and $I_i = 0$, respectively. $\rho$ is the correlation between the unobserved determinants of the propensity to hire financial advisors, $\varepsilon_i$, and the unobserved determinants of the M&A outcome, $u_i$. Equation (A4) reflects the insight of Heckman (1979) that the sample selection can be viewed as a form of omitted variable bias. Conditioning on $X_i'$ and the inverse Mills ratio, the sample can be viewed as randomly selected. After controlling for the inverse Mills ratio, the OLS estimates become consistent. Since $\sigma_u > 0$, the coefficient on the inverse Mills ratio can only be zero if $\rho = 0$. Therefore, testing the null hypothesis that the coefficient on the inverse

Mills ratio is zero is equivalent to testing for sample selectivity. See Puri (1996), Gande, Puri, Saunders, and Walter (1997), and Gande, Puri, and Saunders (1999) for similar applications of this model.

The above model can be further extended to allow for any differences in the effect of acquirer- and deal-specific characteristics on the outcome variables between financial advisors and in-house investment teams. This model is known as a switching regression model with endogenous switching, which replaces equation (A1) with two regression equations on the variable of interest:

$$y_{1i} = X_i'\beta_1 + u_{1i}, \tag{A5}$$

$$y_{2i} = X_i'\beta_2 + u_{2i}. \tag{A6}$$

Equation (A5) is the outcome equation for financial advisors and equation (A6) is that for in-house investment teams *for the same deal*. Of course, for each deal, we only observe either $y_{1i}$ or $y_{2i}$ depending on the outcome of $I_i$:

$$y_i = y_{1i}, \text{ iff } I_i = 1 \text{ , and } y_i = y_{2i}, \text{ iff } I_i = 0. \tag{A7}$$

When the correlation between the residuals of the selection equation ($\varepsilon_i$) and the outcome equations ($u_{1i}$ and $u_{2i}$) are nonzero, endogeneity arises and the OLS estimates in equation (A5) and (A6) are inconsistent. This implies that the following covariance matrix is nondiagonal:

$$\text{cov}(u_{1i}, u_{2i}, \varepsilon_i) = \begin{bmatrix} \sigma_{11} & \sigma_{12} & \sigma_{1\varepsilon} \\ \sigma_{21} & \sigma_{22} & \sigma_{2\varepsilon} \\ \sigma_{1\varepsilon} & \sigma_{2\varepsilon} & 1 \end{bmatrix}. \tag{A8}$$

Since equation (A5) or (A6) is realized depending on the outcome of $I_i^*$, the observed outcome is a conditional variable, and it can be easily shown that the error terms in equation (A5) and (A6) have nonzero means. This selection bias again can be corrected if we augment equation (A5) or (A6) with an additional variable (the inverse Mills ratio) $\frac{\varphi(Z_i'\gamma)}{\Phi(Z_i'\gamma)}$ or $\frac{-\varphi(Z_i'\gamma)}{1-\Phi(Z_i'\gamma)}$. This setup is a generalization of the classical Heckman (1979) two-stage procedure. See Lee (1978) and Dunbar (1995) for the application of the model.

To correctly measure the effect of financial advisors, we need to address the following "what-if" type of question: what would be the outcome for the same deal, had the decision to hire a financial advisor been altered? The answer to this question is to hold the deal constant and to separate out the effect due to the choice of financial advisors. We compare the following difference:

$$E[y_{2i}|I_i^* > 0] - y_{1i}. \tag{A9}$$

The first term in equation (A9) is the hypothetical outcome that would be obtained when the deal is conducted by an in-house investment team, and the second term in equation (A9) is the actual outcome for the same deal conducted by a financial advisor. If the difference is negative, it means that an in-house investment team leads to a worse outcome for the deal. To compute the outcome improvement, we observe that

$$E[y_{2i}|I_i^* > 0] = E[X_i'\beta_2 + u_{2i}|Z_i'\gamma + \varepsilon_i > 0] = X_i'\beta_2 + \sigma_{2\varepsilon}\frac{\varphi(Z_i'\gamma)}{\Phi(Z_i'\gamma)}. \quad \text{(A10)}$$

Similarly, we compute the difference between the hypothetical outcome that would be obtained when the deal is conducted by a financial advisor and the actual outcome for the same deal conducted by an in-house investment team:

$$E[y_{1i}|I_i^* \leq 0] - y_{2i}. \quad \text{(A11)}$$

If the difference is positive, it means that a financial advisor leads to better outcome for the deal. To compute the outcome improvement, we observe that

$$E[y_{1i}|I_i^* \leq 0] = E[X_i'\beta_1 + u_{1i}|Z_i'\gamma + \varepsilon_i \leq 0] = X_i'\beta_1 + \sigma_{1\varepsilon}\frac{\varphi(Z_i'\gamma)}{\Phi(Z_i'\gamma)}. \quad \text{(A12)}$$

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**Table 1.** Distribution of M&A transactions by year and acquirer industry
This table reports the distribution of M&A transactions by year (Panel A) and acquirer industry (Panel B). Panel A reports the number of deals, the number of deals as a percentage of total deals (number%), the deal value (in billion *yuan*), the deal value as a percentage of total deal value (value%), number of deals that use financial advisors, and the number of deals that use financial advisors as a percentage of all deals in the same year. Panel B reports the number and value of acquisitions by the acquirer's CSRC industry. The sample consists of 1,441 M&A deals during the period of 2004 - 2014.

*Panel A: Distribution by year*

| Year | Number | Number% | Value | Value% | FA deal | FA deal% |
|---|---|---|---|---|---|---|
| 2004 | 49 | 3.40% | 3.43 | 1.37% | 1 | 2.04% |
| 2005 | 30 | 2.08% | 3.20 | 1.27% | 0 | 0.00% |
| 2006 | 41 | 2.85% | 3.71 | 1.48% | 0 | 0.00% |
| 2007 | 85 | 5.90% | 14.80 | 5.90% | 7 | 8.24% |
| 2008 | 87 | 6.04% | 12.80 | 5.10% | 5 | 5.75% |
| 2009 | 67 | 4.65% | 7.64 | 3.04% | 2 | 2.99% |
| 2010 | 138 | 9.58% | 24.40 | 9.72% | 21 | 15.22% |
| 2011 | 169 | 11.73% | 19.60 | 7.81% | 63 | 37.28% |
| 2012 | 210 | 14.57% | 31.30 | 12.47% | 70 | 33.33% |
| 2013 | 245 | 17.00% | 50.40 | 20.08% | 90 | 36.73% |
| 2014 | 320 | 22.21% | 79.30 | 31.59% | 85 | 26.56% |
| Total | 1,441 | 100.00% | 251.00 | 100.00% | 344 | 23.87% |

*Panel B: Distribution by acquirer industry*

| CSRC Industry Classification | Number | Number | Value | Value % |
|---|---|---|---|---|
| Manufacturing | 878 | 60.93% | 124.00 | 49.40% |
| Real estate | 140 | 9.72% | 39.00 | 15.54% |
| Information technology | 113 | 7.84% | 23.80 | 9.48% |
| Wholesale and retail trade | 92 | 6.38% | 19.80 | 7.89% |
| Mining | 53 | 3.68% | 15.10 | 6.02% |
| Transportation and storage | 36 | 2.50% | 7.18 | 2.86% |
| Leasing and other business service | 21 | 1.46% | 5.53 | 2.20% |
| Agriculture, forestry, livestock farming, and fishery | 20 | 1.39% | 4.52 | 1.80% |
| Construction | 19 | 1.32% | 3.53 | 1.41% |
| Other communication and cultural industries | 19 | 1.32% | 2.83 | 1.13% |
| Public facilities service | 17 | 1.18% | 1.56 | 0.62% |
| Professional, scientific research service | 15 | 1.04% | 1.46 | 0.58% |
| Catering and Hotels | 8 | 0.56% | 1.12 | 0.45% |
| Comprehensive | 7 | 0.49% | 0.96 | 0.38% |
| Hygiene, health care, nursing service and other social | 3 | 0.21% | 0.07 | 0.03% |
| Education | 0 | 0.00% | 0.00 | 0.00% |
| Social services | 0 | 0.00% | 0.00 | 0.00% |
| Total | 1,441 | 100.00% | 251.00 | 100.00% |

**Table 2.** Acquirer and deal characteristics

This table reports the mean, standard deviation, minimum, 25th percentile, median, 75th percentile, and maximum of acquirer and deal characteristics. See Appendix B for the detailed definition of the variables. The sample consists of 1,441 M&A deals during the period of 2004 - 2014.

| Variable | Mean | Std Dev | Min | P25 | P50 | P75 | Max |
|---|---|---|---|---|---|---|---|
| *Panel A: Acquirer cumulative abnormal returns* (%) | | | | | | | |
| $CAR_{mktadj}(-1,1)$ | 1.637 | 6.601 | -17.354 | -2.313 | 0.769 | 4.524 | 21.923 |
| $CAR_{mktadj}(-3,3)$ | 2.171 | 9.717 | -21.883 | -3.257 | 0.948 | 5.640 | 39.912 |
| $CAR_{mktadj}(-5,5)$ | 2.417 | 11.164 | -24.815 | -3.871 | 1.064 | 7.165 | 55.823 |
| $CAR_{mkt}(-1,1)$ | 1.216 | 6.720 | -19.048 | -2.641 | 0.524 | 4.168 | 21.478 |
| $CAR_{mkt}(-3,3)$ | 1.208 | 10.033 | -25.411 | -4.239 | 0.352 | 5.111 | 39.817 |
| $CAR_{mkt}(-5,5)$ | 0.908 | 11.823 | -32.359 | -5.478 | 0.343 | 6.194 | 55.153 |
| $CAR_{ff3}(-1,1)$ | 1.410 | 6.513 | -17.719 | -2.124 | 0.393 | 4.013 | 22.921 |
| $CAR_{ff3}(-3,3)$ | 1.619 | 9.648 | -22.795 | -3.725 | 0.244 | 4.902 | 39.609 |
| $CAR_{ff3}(-5,5)$ | 1.497 | 11.022 | -24.820 | -4.487 | 0.460 | 5.797 | 52.901 |
| *Panel B: Acquirer and deal characteristics* | | | | | | | |
| Size (in billions) | 3.310 | 5.280 | 0.226 | 0.995 | 1.750 | 3.300 | 42.600 |
| Lev | 0.361 | 0.219 | 0.018 | 0.172 | 0.340 | 0.520 | 1.196 |
| Cash holdings | 0.210 | 0.182 | 0.000 | 0.076 | 0.155 | 0.300 | 0.755 |
| Tobin's Q | 1.914 | 1.054 | 0.944 | 1.282 | 1.574 | 2.126 | 7.599 |
| BM | 0.378 | 0.221 | 0.022 | 0.217 | 0.337 | 0.480 | 1.177 |
| Run-up | 0.091 | 0.521 | -1.061 | -0.195 | -0.004 | 0.276 | 2.401 |
| ROA | 0.039 | 0.040 | -0.100 | 0.015 | 0.033 | 0.056 | 0.185 |
| Pre-holdings | 0.140 | 0.259 | 0.000 | 0.000 | 0.000 | 0.100 | 0.924 |
| Post-holdings | 0.694 | 0.296 | 0.047 | 0.510 | 0.750 | 1.000 | 1.000 |
| Managerial holdings | 0.137 | 0.213 | 0.000 | 0.000 | 0.000 | 0.276 | 0.703 |
| Independent directors | 0.366 | 0.049 | 0.300 | 0.333 | 0.333 | 0.400 | 0.571 |
| SOE | 0.301 | 0.459 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 |
| IB experience | 0.105 | 0.307 | 0.000 | 0.000 | 0.000 | 0.000 | 1.000 |
| PC | 0.481 | 0.500 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 |
| Relative size | 0.076 | 0.151 | 0.010 | 0.019 | 0.034 | 0.072 | 1.731 |
| All-cash | 0.942 | 0.233 | 0.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| SameIndustry | 0.439 | 0.496 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 |

**Table 3**. Univariate tests of differences in acquirer and deal characteristics between the financial advisor sample and the in-house team sample

This table reports the average acquirer and deal characteristics for the financial advisor sample, the in-house team sample, and the differences (Diff) between the two samples. See Appendix B for the detailed definition of variables. The sample consists of 1,441 M&A deals during the period of 2004 - 2014.

| Variable | Financial advisor (1) | | In-house team (2) | | (1) – (2) | |
|---|---|---|---|---|---|---|
| | Mean | *p*-value | Mean | *p*-value | Diff | *p*-value |
| *Panel A: Acquirer cumulative abnormal returns* (%) | | | | | | |
| $CAR_{mktadj}(-1,1)$ | 3.850 | 0.000 | 0.930 | 0.000 | 2.920 | 0.000 |
| $CAR_{mktadj}(-3,3)$ | 5.400 | 0.000 | 1.140 | 0.000 | 4.260 | 0.000 |
| $CAR_{mktadj}(-5,5)$ | 5.920 | 0.000 | 1.300 | 0.000 | 4.630 | 0.000 |
| $CAR_{mkt}(-1,1)$ | 3.340 | 0.000 | 0.540 | 0.003 | 2.800 | 0.000 |
| $CAR_{mkt}(-3,3)$ | 4.470 | 0.000 | 0.170 | 0.509 | 4.300 | 0.000 |
| $CAR_{mkt}(-5,5)$ | 4.400 | 0.000 | -0.210 | 0.512 | 4.600 | 0.000 |
| $CAR_{ff3}(-1,1)$ | 3.790 | 0.000 | 0.650 | 0.000 | 3.140 | 0.000 |
| $CAR_{ff3}(-3,3)$ | 4.940 | 0.000 | 0.560 | 0.024 | 4.370 | 0.000 |
| $CAR_{ff3}(-5,5)$ | 4.900 | 0.000 | 0.410 | 0.151 | 4.480 | 0.000 |
| *Panel B: Acquirer and deal characteristics* | | | | | | |
| Size (in billion yuan) | 1.881 | 0.000 | 3.787 | 0.000 | -1.906 | 0.000 |
| Lev | 0.225 | 0.000 | 0.404 | 0.000 | -0.179 | 0.000 |
| Cash holdings | 0.327 | 0.000 | 0.173 | 0.000 | 0.154 | 0.000 |
| Tobin's Q | 1.895 | 0.000 | 1.920 | 0.000 | -0.025 | 0.712 |
| BM | 0.347 | 0.000 | 0.387 | 0.000 | -0.039 | 0.005 |
| Run-up | 0.130 | 0.000 | 0.079 | 0.000 | 0.051 | 0.122 |
| ROA | 0.045 | 0.000 | 0.037 | 0.000 | 0.008 | 0.001 |
| Pre-holdings | 8.380 | 0.000 | 15.800 | 0.000 | -7.421 | 0.000 |
| Post-holding | 72.601 | 0.000 | 68.318 | 0.000 | 4.284 | 0.025 |
| Managerial holdings | 0.276 | 0.000 | 0.095 | 0.000 | 0.181 | 0.000 |
| Independent directors | 0.371 | 0.000 | 0.365 | 0.000 | 0.007 | 0.026 |
| SOE | 0.108 | 0.000 | 0.362 | 0.000 | -0.254 | 0.000 |
| IB experience | 0.073 | 0.000 | 0.116 | 0.000 | -0.043 | 0.023 |
| Relative size | 0.144 | 0.000 | 0.055 | 0.000 | 0.088 | 0.000 |
| All-cash | 0.794 | 0.000 | 0.989 | 0.000 | -0.196 | 0.000 |
| SameIndustry | 0.474 | 0.000 | 0.428 | 0.000 | 0.046 | 0.131 |

**Table 4.** Financial advisors and M&A announcement effects

This table presents results from the regression of acquirer announcement CARs on the financial advisor dummy and other acquirer- and deal-specific characteristics for the sample of Chinese private M&As announced between 2004 and 2014. The dependent variable is the acquirer CAR during M&A announcements calculated from the market model ($CAR_{mkt}$(-3,3)) and Fama-French three factor model ($CAR_{ff3}$(-3,3)). See Appendix B for the detailed definition of variables. All regressions control for year and industry fixed effects. The *p*-values reported in parentheses are based on standard errors adjusted for heteroscedasticity. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

| | $CAR_{mkt}$(-3,3) | | | $CAR_{ff3}$(-3,3) | | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| FinAdvisor | 4.298*** | 4.039*** | 2.589*** | 4.292*** | 3.825*** | 2.396*** |
| | (0.000) | (0.000) | (0.006) | (0.000) | (0.000) | (0.006) |
| Ln(Size) | | -1.246*** | -0.944** | | -1.035** | -0.747* |
| | | (0.005) | (0.032) | | (0.013) | (0.070) |
| Lev | | 1.488 | 1.308 | | 1.732 | 1.551 |
| | | (0.453) | (0.507) | | (0.339) | (0.395) |
| Cash holdings | | -4.593* | -5.378** | | -3.363 | -4.098* |
| | | (0.085) | (0.027) | | (0.190) | (0.079) |
| Tobin's Q | | 0.148 | 0.075 | | 0.154 | 0.083 |
| | | (0.691) | (0.839) | | (0.649) | (0.805) |
| BM | | 4.459** | 4.141** | | 3.804** | 3.501** |
| | | (0.015) | (0.021) | | (0.024) | (0.033) |
| Run-up | | -0.248 | -0.357 | | -0.445 | -0.552 |
| | | (0.691) | (0.489) | | (0.404) | (0.211) |
| ROA | | -0.003 | -0.014 | | -0.083 | -0.097 |
| | | (0.999) | (0.996) | | (0.977) | (0.973) |
| Pre-holdings | | -2.697** | -0.971 | | -2.449** | -0.779 |
| | | (0.023) | (0.398) | | (0.021) | (0.451) |
| Post-holdings | | 2.044* | 0.223 | | 1.757* | -0.015 |
| | | (0.065) | (0.833) | | (0.094) | (0.988) |
| Managerial | | -2.438 | -1.909 | | -2.810* | -2.311 |
| | | (0.170) | (0.247) | | (0.100) | (0.141) |
| Independent | | -1.867 | -4.680 | | -1.058 | -3.735 |
| | | (0.776) | (0.427) | | (0.858) | (0.471) |
| SOE | | -0.582 | -0.684 | | -1.192* | -1.286** |
| | | (0.406) | (0.320) | | (0.068) | (0.045) |
| Relative size | | | 12.481*** | | | 11.887*** |
| | | | (0.000) | | | (0.000) |
| All-cash | | | -4.004* | | | -4.093* |
| | | | (0.080) | | | (0.061) |
| Fixed effects | | | Year, Industry | | | |
| Observations | 1,371 | 1,125 | 1,125 | 1,371 | 1,125 | 1,125 |
| Adjusted $R^2$ | 0.036 | 0.033 | 0.086 | 0.044 | 0.035 | 0.091 |

**Table 5.** Financial advisors, deal complexity, and M&A announcement effects

This table presents results from the regression of acquirer announcement CARs on the financial advisor dummy, its interaction with measures of deal complexity, including the large deal dummy and All-cash dummy, and other acquirer- and deal-specific characteristics. The dependent variable is acquirer $CAR_{ff3}$(-3,3) during M&A announcements. See Appendix B for the detailed definition of variables. All regressions control for year and industry fixed effects. The *p*-values reported in parentheses are based on standard errors adjusted for heteroscedasticity. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

| Dep. Var. = $CAR_{ff3}$(-3,3) | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| FinAdvisor | 1.637** | 1.764* | 16.309*** | 11.997*** |
| | (0.038) | (0.065) | (0.000) | (0.000) |
| FinAdvisor × LargeDeal | 5.281*** | 3.048* | | |
| | (0.000) | (0.054) | | |
| LargeDeal | 0.076 | -1.301* | | |
| | (0.902) | (0.068) | | |
| FinAdvisor × All-cash | | | -14.524*** | -10.072*** |
| | | | (0.000) | (0.002) |
| All-cash | | | 2.733* | 3.472* |
| | | | (0.097) | (0.066) |
| Acquirer controls | N | Y | N | Y |
| Deal controls | N | Y | N | Y |
| Fixed effects | | Year, Industry | | |
| Observations | 1,371 | 1,125 | 1,371 | 1,125 |
| Adjusted $R^2$ | 0.061 | 0.087 | 0.101 | 0.099 |

**Table 6.** Financial advisors and M&A announcement effects: Alternative explanations

This table presents results from the regression of acquirer announcement CARs on the financial advisor dummy, its interaction with the SameIndustry dummy, pre-holdings, managerial holdings, and independent directors, and other acquirer- and deal-specific characteristics. The dependent variable is acquirer $CAR_{ff3}(-3,3)$. See Appendix B for the detailed definition of variables. All regressions control for year and industry fixed effects. The *p*-values reported in parentheses are based on standard errors adjusted for heteroscedasticity. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

| Dep. Var. = $CAR_{ff3}(-3,3)$ | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| FinAdvisor | 3.635*** | 2.133** | 3.129** | 6.881 |
| | (0.003) | (0.026) | (0.015) | (0.140) |
| FinAdvisor × SameIndustry | -1.357 | | | |
| | (0.384) | | | |
| SameIndustry | 0.729 | | | |
| | (0.184) | | | |
| FinAdvisor × Pre-holdings | | 1.330 | | |
| | | (0.691) | | |
| Pre-holdings | | -0.959 | | |
| | | (0.344) | | |
| FinAdvisor × Managerial holdings | | | -3.108 | |
| | | | (0.336) | |
| Managerial holdings | | | -1.096 | |
| | | | (0.511) | |
| FinAdvisor × Independent directors | | | | -12.567 |
| | | | | (0.308) |
| Independent directors | | | | -0.920 |
| | | | | (0.872) |
| Acquirer controls | Y | Y | Y | Y |
| Deal controls | Y | Y | Y | Y |
| Fixed effects | | Year, Industry | | |
| Observations | 1,125 | 1,125 | 1,125 | 1,125 |
| Adjusted $R^2$ | 0.084 | 0.089 | 0.092 | 0.090 |

**Table 7.** Financial advisors, deal completion time, and the bid premium

This table presents results from the regressions of the deal completion time and bid premium on the financial advisor dummy, its interaction with the large deal dummy, and other acquirer- and deal-specific characteristics. The dependent variable is the deal completion time (defined as the natural logarithm of the number of days to complete the deal) or the bid premium (defined as the natural logarithm of the buyer offer price-to-target book value ratio). See Appendix B for the detailed definition of variables. All regressions control for year and industry fixed effects. The *p*-values reported in parentheses are based on standard errors adjusted for heteroscedasticity. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

| | ln(Deal completion time) | | Bid premium | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| FinAdvisor | -0.002 | 0.311 | 0.057 | 0.216* |
| | (0.988) | (0.136) | (0.598) | (0.077) |
| FinAdvisor × LargeDeal | | -0.485* | | -0.473** |
| | | (0.053) | | (0.015) |
| LargeDeal | | 0.293* | | 0.477*** |
| | | (0.062) | | (0.001) |
| Ln(Size) | -0.035 | -0.030 | 0.274*** | 0.298*** |
| | (0.690) | (0.727) | (0.000) | (0.000) |
| Lev | 0.702 | 0.711 | -0.005 | 0.001 |
| | (0.149) | (0.136) | (0.984) | (0.996) |
| Cash holdings | -0.297 | -0.250 | 0.105 | 0.203 |
| | (0.449) | (0.524) | (0.712) | (0.471) |
| Tobin's Q | -0.117* | -0.125** | 0.006 | -0.011 |
| | (0.053) | (0.037) | (0.879) | (0.758) |
| BM | -0.289 | -0.358 | -0.609*** | -0.625*** |
| | (0.436) | (0.337) | (0.010) | (0.006) |
| Run-up | -0.113 | -0.142 | 0.033 | 0.030 |
| | (0.381) | (0.259) | (0.482) | (0.496) |
| ROA | 6.752*** | 6.797*** | -0.186 | -0.267 |
| | (0.006) | (0.004) | (0.482) | (0.345) |
| Pre-holdings | -0.245 | -0.221 | -0.187 | -0.070 |
| | (0.324) | (0.369) | (0.336) | (0.727) |
| Post-holdings | 0.074 | 0.075 | -0.030 | -0.091 |
| | (0.728) | (0.726) | (0.841) | (0.551) |
| Managerial holdings | -0.027 | -0.030 | 0.491** | 0.453** |
| | (0.926) | (0.914) | (0.030) | (0.049) |
| Independent directors | -0.555 | -0.622 | -0.156 | 0.070 |
| | (0.656) | (0.612) | (0.848) | (0.933) |
| SOE | 0.180 | 0.205 | -0.111 | -0.082 |
| | (0.325) | (0.265) | (0.271) | (0.397) |
| Relative size | 3.350*** | 2.871*** | 0.678* | 0.419 |
| | (0.000) | (0.009) | (0.059) | (0.239) |
| All-cash | -0.648*** | -0.771*** | -0.277 | -0.346 |
| | (0.002) | (0.001) | (0.249) | (0.151) |
| Fixed effects | | Year, Industry | | |
| Observations | 358 | 358 | 637 | 637 |
| Adjusted $R^2$ | 0.159 | 0.168 | 0.105 | 0.134 |

**Table 8.** Financial advisors and future operating performance

This table presents results from the regression of change in operating performance one year after the acquisition on the financial advisor dummy, its interaction with the large deal dummy, and other acquirer- and deal-specific characteristics. The dependent variable is the change in ROA one year after the acquisition ( Δ ROA(t+1) = ROA(t+1) - ROA(t)). See Appendix B for the detailed definition of variables. All regressions control for year and industry fixed effects. The *p*-values reported in parentheses are based on standard errors adjusted for heteroscedasticity. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

| Dep. var. = Δ ROA(t+1) | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| FinAdvisor | 0.002 | 0.000 | -0.000 | -0.003 |
| | (0.168) | (0.886) | (0.883) | (0.125) |
| FinAdvisor × LargeDeal | | | 0.006** | 0.009*** |
| | | | (0.019) | (0.005) |
| LargeDeal | | | -0.004*** | -0.005** |
| | | | (0.004) | (0.019) |
| Δ Ln(Size) | | 0.001 | | 0.001 |
| | | (0.736) | | (0.703) |
| Δ Lev | | -0.002 | | -0.002 |
| | | (0.789) | | (0.758) |
| Δ Tobin's Q | | 0.002* | | 0.002** |
| | | (0.055) | | (0.044) |
| Δ BM | | 0.006* | | 0.006 |
| | | (0.067) | | (0.107) |
| Δ Run-up | | -0.000* | | -0.001** |
| | | (0.059) | | (0.044) |
| Δ ROA | | -0.022*** | | -0.023*** |
| | | (0.000) | | (0.000) |
| Pre-holdings | | 0.001 | | 0.000 |
| | | (0.749) | | (0.964) |
| Post-holdings | | 0.003 | | 0.004 |
| | | (0.188) | | (0.159) |
| Δ Managerial holdings | | -0.017* | | -0.015 |
| | | (0.098) | | (0.128) |
| Δ Independent directors | | 0.003 | | -0.000 |
| | | (0.872) | | (0.991) |
| SOE | | 0.000 | | 0.000 |
| | | (0.754) | | (0.921) |
| Relative size | | -0.003 | | -0.001 |
| | | (0.439) | | (0.797) |
| All-cash | | 0.000 | | 0.003 |
| | | (0.907) | | (0.410) |
| Fixed effects | | Year, Industry | | |
| Observations | 1,440 | 920 | 1,440 | 920 |
| Adjusted $R^2$ | 0.014 | 0.041 | 0.019 | 0.050 |

**Table 9**. Financial advisors, acquirers' political connections, and M&A announcement effects

This table reports results from the regression of acquirer CARs on the financial advisor dummy, its interaction with acquirer political connection dummy (PC) and SOE dummy, and other acquirer- and deal-specific characteristics. The acquirer political connection dummy equals one if a board member or CEO of the acquirer is a former government official, a current or former member of the Provincial People's Congress, or a current or former member of the People's Political Consultative Conference, and zero otherwise. The dependent variable is acquirer $CAR_{ff3}(-3,3)$. See Appendix B for the detailed definition of variables. All regressions control for year and industry fixed effects. The *p*-values reported in parentheses are based on standard errors adjusted for heteroscedasticity. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

| Dep. Var. = $CAR_{ff3}(-3,3)$ | (1) | (2) |
|---|---|---|
| FinAdvisor | 3.049** | 2.680** |
| | (0.011) | (0.019) |
| FinAdvisor × PC | -2.497* | -2.480* |
| | (0.074) | (0.084) |
| PC | 0.244 | 0.201 |
| | (0.641) | (0.700) |
| FinAdvisor × SOE | | 2.349 |
| | | (0.352) |
| SOE | | -1.839*** |
| | | (0.002) |
| Acquirer controls | Y | Y |
| Deal controls | Y | Y |
| Fixed effects | Year, Industry | Year, Industry |
| Observations | 1,125 | 1,125 |
| Adjusted $R^2$ | 0.023 | 0.028 |

**Table 10**. Financial advisor reputation and M&A announcement effects

This table reports results from the regression of acquirer CARs on the top tier dummy, the non-top tier dummy, and other acquirer- and deal-specific characteristics. The dependent variable is acquirer $CAR_{ff3}$(-3,3). The top tier dummy equals one if the firm hires a financial advisor that is ranked as the top 10 of all financial advisors based on the value of deals executed in our M&A samples during 2004 and 2014 and zero otherwise. The non-top tier dummy equals one if the firm hires a financial advisor who is not ranked as the top 10 of all financial advisors and zero otherwise. See Appendix B for the detailed definition of variables. All regressions control for year and industry fixed effects. The *p*-values reported in parentheses are based on standard errors adjusted for heteroscedasticity. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

| Dep. Var. = $CAR_{ff3}$(-3,3) | (1) | (2) | (3) |
|---|---|---|---|
| Top tier | 5.789*** | 5.303*** | 3.407*** |
| | (0.000) | (0.000) | (0.004) |
| Non-top tier | 2.948*** | 2.410** | 1.546 |
| | (0.002) | (0.033) | (0.159) |
| Ln(Size) | | -1.011** | -0.729* |
| | | (0.015) | (0.074) |
| Lev | | 1.514 | 1.418 |
| | | (0.406) | (0.439) |
| Cash holdings | | -3.071 | -3.920* |
| | | (0.228) | (0.091) |
| Tobin's Q | | 0.152 | 0.084 |
| | | (0.654) | (0.804) |
| BM | | 3.728** | 3.452** |
| | | (0.027) | (0.036) |
| Run-up | | -0.471 | -0.565 |
| | | (0.374) | (0.201) |
| ROA | | -0.282 | -0.226 |
| | | (0.923) | (0.939) |
| Pre-holdings | | -2.408** | -0.789 |
| | | (0.023) | (0.444) |
| Post-holdings | | 1.863* | 0.102 |
| | | (0.075) | (0.919) |
| Managerial holdings | | -3.012* | -2.435 |
| | | (0.074) | (0.119) |
| Independent directors | | -0.620 | -3.447 |
| | | (0.917) | (0.506) |
| SOE | | -1.126* | -1.247* |
| | | (0.086) | (0.052) |
| Relative size | | | 11.844*** |
| | | | (0.000) |
| All-cash | | | -3.767* |
| | | | (0.083) |
| Fixed effects | Year, Industry | Year, Industry | Year, Industry |
| Observations | 1,371 | 1,125 | 1,125 |
| Adjusted $R^2$ | 0.049 | 0.039 | 0.092 |

**Table 11.** Likelihood of hiring financial advisors

This table presents results from the logit regression of the decision to hire a financial advisor on acquirer- and deal-specific characteristics. The dependent variable is a dummy variable that equals one if the acquiring firm hires a financial advisor and zero otherwise. See Appendix B for the detailed definition of variables. Columns (3) and (4) control for year and industry fixed effects. The *p*-values reported in parentheses are based on standard errors adjusted for heteroscedasticity. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

| Dep.var=Prof (FinAdvisor) | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| LargeDeal | 0.487*** | 0.643*** | 0.508*** | 0.655*** |
| | (0.010) | (0.001) | (0.010) | (0.002) |
| All-cash | -3.008*** | -3.028*** | -3.230*** | -3.233*** |
| | (0.000) | (0.000) | (0.000) | (0.000) |
| IB Experience | -0.030 | 0.722* | 0.144 | 0.812** |
| | (0.922) | (0.063) | (0.648) | (0.044) |
| LargeDeal × IB experience | | -1.565*** | | -1.462** |
| | | (0.010) | | (0.020) |
| SameIndustry | 0.066 | 0.070 | -0.060 | -0.049 |
| | (0.705) | (0.689) | (0.744) | (0.789) |
| Pre-holdings | -0.494 | -0.459 | -0.318 | -0.284 |
| | (0.234) | (0.270) | (0.461) | (0.511) |
| Managerial holdings | 1.724*** | 1.721*** | 0.996** | 0.993** |
| | (0.000) | (0.000) | (0.021) | (0.023) |
| Independent directors | 0.019 | 0.052 | -0.389 | -0.340 |
| | (0.991) | (0.976) | (0.834) | (0.856) |
| Ln(Size) | 0.128 | 0.138 | -0.151 | -0.150 |
| | (0.347) | (0.313) | (0.326) | (0.333) |
| Lev | -3.663*** | -3.691*** | -3.475*** | -3.518*** |
| | (0.000) | (0.000) | (0.000) | (0.000) |
| Cash holdings | 2.027*** | 2.066*** | 1.293** | 1.330** |
| | (0.000) | (0.000) | (0.043) | (0.039) |
| Tobin's Q | -0.343*** | -0.339*** | -0.499*** | -0.486*** |
| | (0.004) | (0.005) | (0.001) | (0.001) |
| BM | -1.162* | -1.222** | -1.376* | -1.424** |
| | (0.050) | (0.041) | (0.052) | (0.046) |
| Run-up | -0.168 | -0.189 | -0.222 | -0.243 |
| | (0.306) | (0.264) | (0.235) | (0.202) |
| ROA | -2.335 | -2.589* | -1.496 | -1.636 |
| | (0.103) | (0.082) | (0.337) | (0.306) |
| Post-holdings | -0.013 | -0.018 | -0.240 | -0.258 |
| | (0.969) | (0.954) | (0.477) | (0.446) |
| SOE | -0.537** | -0.548** | -0.130 | -0.129 |
| | (0.036) | (0.033) | (0.653) | (0.655) |
| Relative size | 0.407 | 0.410 | 0.593 | 0.564 |
| | (0.482) | (0.492) | (0.363) | (0.393) |
| Fixed effects | N | N | Year, Industry | |
| Observations | 1,160 | 1,160 | 1,091 | 1,091 |
| Adjusted $R^2$ | 0.294 | 0.299 | 0.330 | 0.335 |

**Table 12.** Addressing endogeneity: Heckman two-stage procedure for acquirer CARs

This table presents results of the Heckman two-stage procedure for acquirer CARs during M&A announcements. The first column reports the first-stage selection equation estimated by a probit regression, where the dependent variable is one if the acquiring firm hires a financial advisor and zero otherwise. The second column reports the second-stage regression, where the dependent variable is acquirer $CAR_{ff3}(-3,3)$ and the inverse Mills ratio is included in the regression to adjust for potential self-selection bias (nonzero mean of the error terms). Variables are defined in Appendix B and the Heckman model is detailed in Appendix C. The *Scope* variable equals one if the acquiring firm has hired financial advisors to issue equity or debt in the past and zero otherwise. The *p*-values reported in parentheses are based on standard errors adjusted for heteroscedasticity. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

| | (1) Selection | (2) Outcome (acquirer CAR) |
|---|---|---|
| Scope | -0.171** | |
| | (0.050) | |
| Ln(Size) | 0.111** | -0.420 |
| | (0.016) | (0.213) |
| Lev | -2.009*** | 0.287 |
| | (0.000) | (0.829) |
| Cash holdings | 1.230*** | -1.786 |
| | (0.001) | (0.112) |
| Tobin's Q | -0.185*** | 0.055 |
| | (0.002) | (0.787) |
| BM | -0.632*** | 2.491** |
| | (0.000) | (0.020) |
| Run-up | -0.110 | -0.014 |
| | (0.120) | (0.984) |
| ROA | -2.074*** | -2.777 |
| | (0.000) | (0.492) |
| Pre-holdings | -0.392** | -0.799 |
| | (0.021) | (0.237) |
| Post-holdings | 0.074 | -0.046 |
| | (0.326) | (0.919) |
| Managerial holdings | 1.087*** | -1.089 |
| | (0.000) | (0.277) |
| Independent directors | -0.853 | -0.888 |
| | (0.186) | (0.833) |
| SOE | -0.294*** | -1.440*** |
| | (0.007) | (0.007) |
| Relative size | 1.322** | 8.228*** |
| | (0.021) | (0.008) |
| All-cash | -1.678*** | -3.309*** |
| | (0.000) | (0.008) |
| Inverse Mills ratio | | 1.130 |
| | | (0.129) |
| Intercept | -0.407 | 12.832** |
| | (0.722) | (0.028) |
| Observations | 1,125 | 1,125 |
| Adjusted $R^2$ (Pseudo $R^2$) | 0.304 | 0.055 |

**Table 13.** Addressing endogeneity: Switching regression model for acquirer CARs

This table presents results from the switching regression model for acquirer CARs during M&A announcements. Panel A reports the coefficient estimates from different models. The first column reports the first-stage selection equation estimated by a probit regression, where the dependent variable is one if the acquiring firm hires a financial advisor and zero otherwise. Columns (2) and (3) report the second-stage regression for deals that hire financial advisors and that use in-house investment teams, respectively. The dependent variable is acquirer $CAR_{ff3}(-3,3)$ and the inverse Mills ratio is used to adjust for potential self-selection bias (nonzero mean of the error terms). Variables are defined in Appendix B and the switching regression model is detailed in Appendix C. The *Scope* variable equals one if the acquiring firm has hired financial advisors to issue equity or debt in the past and zero otherwise. Panel B presents the what-if analysis based on the switching regression model, which compares the actual acquire CARs with their hypothetical counterparts for M&A deals that hire financial advisors and deals that use in-house investment teams, respectively. The computation of these values is discussed in Appendix C. The *p*-values reported in parentheses are based on standard errors adjusted for heteroscedasticity. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

| Panel A: The results from different models | | | |
|---|---|---|---|
| | (1) Selection | (2) Financial advisor | (3) In-house team |
| Scope | -0.171** | | |
| | (0.050) | | |
| Ln(Size) | 0.111** | -0.385 | -0.543* |
| | (0.016) | (0.699) | (0.079) |
| Lev | -2.009*** | -1.516 | 2.036 |
| | (0.000) | (0.822) | (0.378) |
| Cash holdings | 1.230*** | -10.805** | 0.275 |
| | (0.001) | (0.040) | (0.919) |
| Tobin's Q | -0.185*** | 0.541 | -0.027 |
| | (0.002) | (0.591) | (0.933) |
| BM | -0.632*** | 8.423* | 2.075 |
| | (0.000) | (0.055) | (0.119) |
| Run-up | -0.110 | 2.477* | -0.338 |
| | (0.120) | (0.052) | (0.454) |
| ROA | -2.074*** | -1.173 | -0.736 |
| | (0.000) | (0.930) | (0.886) |
| Pre-holdings | -0.392** | 1.683 | -1.314 |
| | (0.021) | (0.547) | (0.184) |
| Post-holdings | 0.074 | -3.213 | 0.789 |
| | (0.326) | (0.116) | (0.348) |
| Managerial holdings | 1.087*** | -3.075 | -2.739 |
| | (0.000) | (0.442) | (0.229) |
| Independent directors | -0.853 | -0.687 | 0.526 |
| | (0.186) | (0.949) | (0.916) |
| SOE | -0.294*** | 1.399 | -1.467*** |
| | (0.007) | (0.443) | (0.007) |
| Relative size | 1.322** | 7.804 | 2.988 |

| | | | |
|---|---|---|---|
| | (0.021) | (0.246) | (0.401) |
| All-cash | -1.678*** | -0.794 | 3.803 |
| | (0.000) | (0.885) | (0.219) |
| Inverse Mills ratio | | 2.527 | -0.403 |
| | | (0.579) | (0.897) |
| Intercept | -0.407 | 10.974 | 6.757 |
| | (0.722) | (0.618) | (0.347) |
| Observations | 1,125 | 256 | 869 |
| Adjusted $R^2$ (Pseudo $R^2$) | 0.304 | 0.123 | 0.011 |

Panel B: What-if analysis

| | Financial advisor | In-house team |
|---|---|---|
| Actual CAR | 2.821*** | 0.450** |
| | (0.000) | (0.044) |
| Hypothetical CAR | -0.703*** | 3.098*** |
| | (0.000) | (0.000) |
| Improvement | 3.525*** | -2.649*** |
| | (0.000) | (0.000) |

**Table 14. Addressing Endogeneity: The IV Regression**

This table presents results from the instrumental variable (IV) regression of acquirer CARs on the financial advisor dummy. The dependent variable is acquirer $CAR_{ff3}(-3,3)$ during M&A announcements. Control variables include acquirer and deal characteristics (defined in Appendix B), province economic development (measured by log(GDP) and log(GDP per capita)), and province financial development (measured by loans-to-GDP ratio and deposits-to-GDP ratio). Panel A reports the second-stage least squares estimates, instrumenting for *FinAdvisor* with *DistantArea*. *DistantArea* is a dummy variable that equals one if the acquirer headquarters in distant West and North provinces in China, including Tibet, Xinjiang, Qinghai, Gansu, Ningxia, Inner Mongolia, and Heilongjiang, and zero otherwise. Panel B reports the corresponding first-stage estimates. The *p*-values reported in parentheses are based on standard errors adjusted for heteroscedasticity. ***, **, and * represent statistical significance at the 1%, 5%, and 10% levels, respectively.

| | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| Panel A. Results from the second-stage least squares regression | | | | |
| FinAdvisor | 2.545** | 4.429* | 4.164** | 2.590* |
| | (0.045) | (0.051) | (0.047) | (0.075) |
| Log(GDP) | | | | -0.101 |
| | | | | (0.768) |
| Log(GDP per capita) | | | | 0.790 |
| | | | | (0.392) |
| Loans-to-GDP | | | | -0.633 |
| | | | | (0.556) |
| Deposits-to-GDP | | | | 0.309 |
| | | | | (0.396) |
| Acquirer controls | N | Y | Y | Y |
| Deal controls | N | Y | Y | Y |
| Fixed effects | N | N | Year, Industry | Year, Industry |
| Observations | 1,125 | 1,125 | 1,125 | 1,125 |
| Adjusted $R^2$ | 0.018 | 0.037 | 0.034 | 0.051 |
| K-P Wald F-statistics | 35.90 | 35.99 | 42.12 | 19.12 |
| Panel B. Results from the first stage for FinAdvisor | | | | |
| DistantArea | -0.145*** | -0.073*** | -0.074*** | -0.067*** |
| | (0.000) | (0.000) | (0.000) | (0.001) |
| Log(GDP) | | | | -0.008 |
| | | | | (0.813) |
| Log(GDP per capita) | | | | 0.056 |
| | | | | (0.163) |
| Loans-to-GDP | | | | -0.050 |
| | | | | (0.324) |
| Deposits-to-GDP | | | | -0.002 |
| | | | | (0.957) |
| Acquirer controls | N | Y | Y | Y |
| Deal controls | N | Y | Y | Y |
| Fixed effects | N | N | Year, Industry | Year, Industry |
| Observations | 1,125 | 1,125 | 1,125 | 1,125 |
| Adjusted $R^2$ | 0.017 | 0.313 | 0.326 | 0.313 |

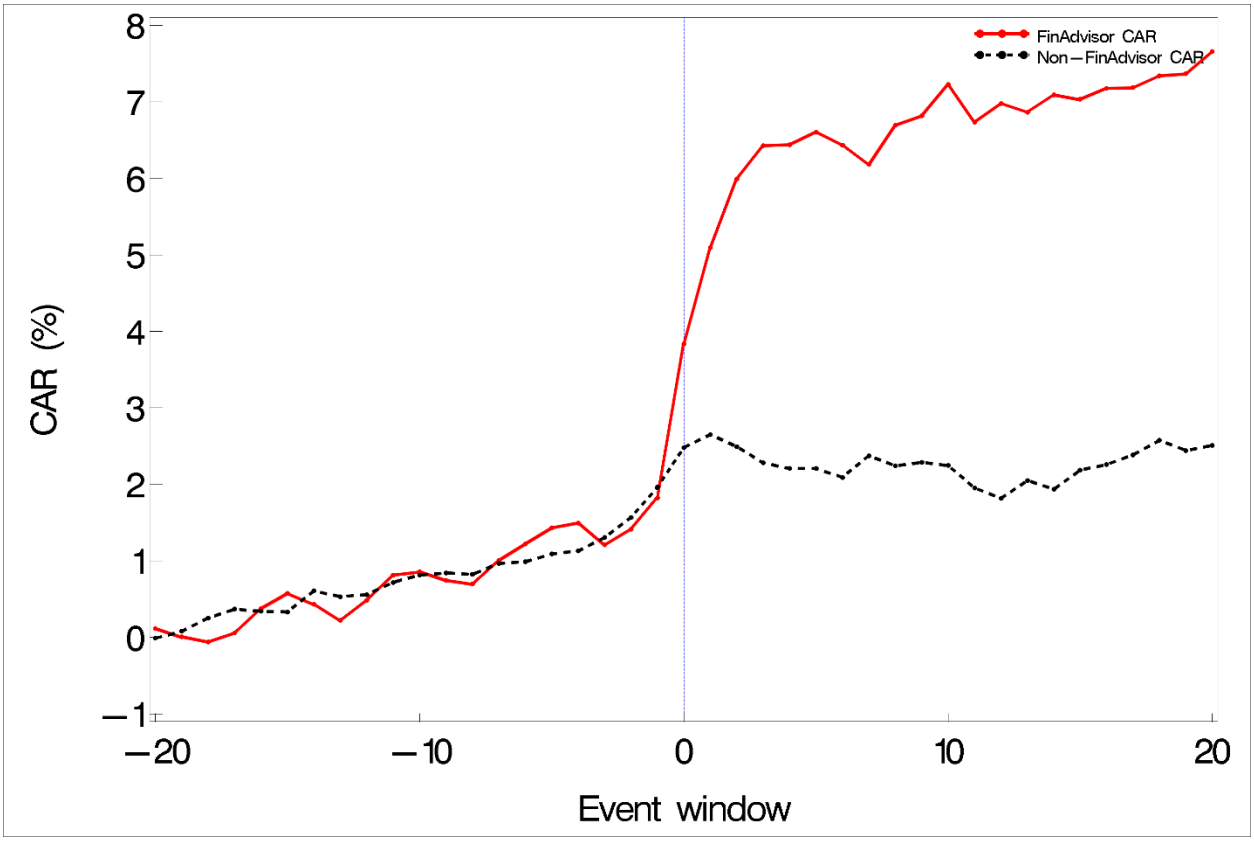


**Fig. 1. M&A Announcement Returns.**
This figure shows the average cumulative market-adjusted abnormal returns from event day -20 to 20 for firms that hire financial advisors (red solid line) and firms that run in-house deal teams (black dotted line).

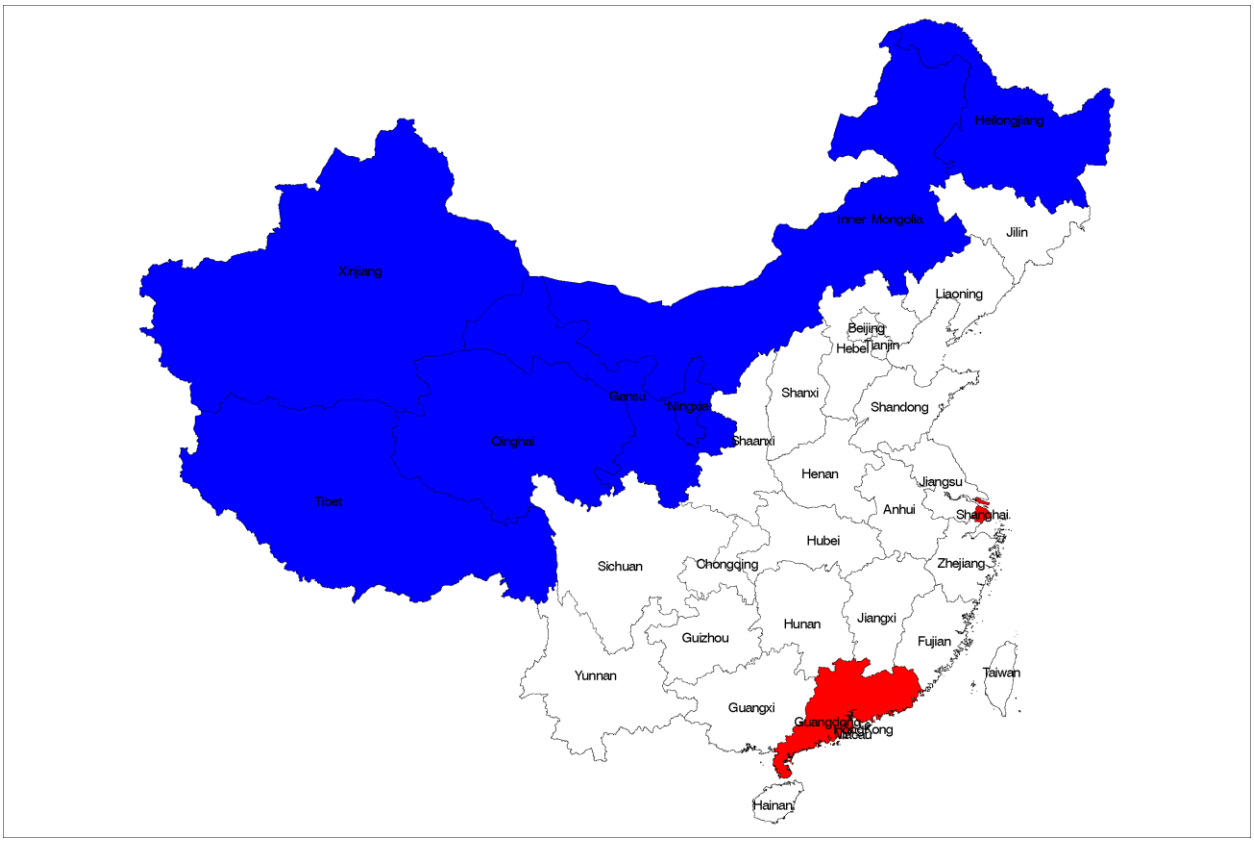


**Fig.2. Province Map of China.** This figure shows the China map at the provincial level. China has 34 provincial-level administrative units: 23 provinces (Hebei, Shanxi, Liaoning, Jilin, Heilongjiang, Jiangsu, Zhejiang, Anhui, Fujian, Jiangxi, Shandong, Henan, Hubei, Hunan, Guangdong, Hainan, Sichuan, Guizhou, Yunnan, Shaanxi, Gansu, Qinghai, and Taiwan), 4 municipalities (Beijing, Tianjin, Shanghai, and Chongqing), 5 autonomous regions (Guangxi, Inner Mongolia, Tibet, Ningxia, and Xinjiang), and 2 special administrative regions (Hong Kong and Macau). Shanghai and Guangdong provinces, which are the locations of two major Chinese stock exchanges, are labeled in red. Distant provinces including Tibet, Xinjiang, Qinghai, Gansu, Ningxia, Inner Mongolia, and Heilongjiang are labeled in blue.