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The role of investment banks on the impact of firm performance in mergers and acquisitions: evidence from the Asia-Pacific market

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Abstract   This study uses a comprehensive sample of 5271 bidders during the period of 1995–2011 to examine the role of financial advisors on the outcomes of mergers and acquisitions in the Asia Pacific market. The results indicate that bidders take more time to complete deals when hiring tier-3 advisors. In addition, the empirical evidence indicates that bidders obtain higher announcement returns when hiring low reputation financial advisors. The results are robust when controlling for year effects, country effects and self-selection bias. In addition, the regression analysis also reveals that bidders obtain lower post-announcement returns when hiring tier-1 advisors in domestic deals. Thus, the empirical findings illustrate the importance of the quality of financial advisors on firm performance in mergers and acquisitions in the Asia Pacific market.

Keywords   Mergers and acquisitions · Investment banks · Announcement returns

JEL Classification   G21 · G34

1 Introduction

Mergers and acquisitions (M&As) can be one of the major corporate strategies for firms. Successful corporate strategies can reallocate substantial resources within an economy (Golubov et al. 2012). Bao and Edmans (2011) also argue that misguided acquisitions can damage the potential of firms due to misallocation of companies to bidding firms. To reduce the probability of engaging in bad acquisitions, firms may hire investment banks as financial advisors in M&As. Financial advisors offer their expertise to evaluate synergies and accelerate the transaction process (Servaes and Zenner 1996; Schiereck et al. 2009; Wang and Whyte 2010). Chemmanur and Fulghieri (1994) and Golubov et al. (2012) argue

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that top-tier investment banks with a good reputation can serve as experts in M&As. These investment banks provide superior services to their clients in return for considerable advisory fees. In addition, the use of financial advisors can assist targets to negotiate favorable terms to their shareholders.[1]

A number of existing literatures have examined the role of financial advisors on deal outcomes in M&As (e.g., McLaughlin 1992; Servaes and Zenner 1996; Hunter and Jagtiani 2003; Golubov et al. 2012; Song et al. 2013). These studies report conflicting results. For example, studies, such as McLaughlin (1992), Servaes and Zenner (1996), Rau (2000) and Hunter and Jagtiani (2003), report that bidders obtain lower announcement returns when hiring first-tier investment banks. Similarly, Lowinski et al. (2004) also report that bidders advised by a leading investment bank do not obtain higher announcement returns. Instead, Golubov et al. (2012) find that bidders advised by top-tier advisors obtain higher announcement returns when acquiring public targets.

As there are a large number of relatively small firms with high growth potential in the Asia Pacific market, mergers and acquisitions can be a way to allow these firms to enlarge their business operation and achieve their corporate objectives. Thus, these firms lead to a more competitive takeover market. In addition, Rossi and Volpin (2004) and Skouratova and Wald (2013) argue that takeover markets are more active in countries with stronger corporate governance regimes. However, studies, such as Claessens and Fan (2002), Acemoglu and Johnson (2005) and Shu et al. (2013), argue that legal protections for minority shareholders are limited for most emerging countries. While the legal requirement in terms of investor protection in each nation in the Asia Pacific market can vary, this increases the complexity of transactions in cross border deals. The more complex the deals, the greater the need for financial advisors. Thus, the presence of high reputation financial advisors can have more ability to provide superior advisory skills to their clients due to their past experience in M&As.

While prior studies report mixed findings, the empirical results cannot fully support the view that top-tier financial advisors can create higher value to their clients. In addition, none of prior studies focuses on the Asia Pacific market to explore the role of financial advisors on deal outcomes in M&As. Due to the lack of empirical evidence in the Asia Pacific market, it remains a puzzle as to whether financial advisors with high reputation can help their clients outperform those with lower reputation. Hence, the Asia Pacific market provides an excellent opportunity to examine the performance of financial advisors on deal outcomes for bidding firms in M&As. As a result, this study revisits this issue to explore whether the level of financial advisors can influence deal outcomes for bidding firms in M&As. This allows us to ascertain as to whether the empirical evidence from the Asia Pacific market in this study differs from prior evidence from the US market. Thus, this study firstly explores the determinants that can affect the choice of financial advisors for bidding firms in M&As. This study then investigates the relationship between the quality of financial advisors and completion time in M&As. In addition, this study further explores the relationship between the quality of financial advisors and firm performance in M&As, where firm performance is measured as the announcement returns around merger and acquisition announcements. While cross border deals involve different legal regions and may be more complex to complete relative to domestic deals, the sample is further split to examine the quality of financial advisors on deal outcomes in M&As. This can shed lights on the importance of financial advisors on the influence of M&A outcomes for bidding firms in domestic and cross border deals in the Asia Pacific market.

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[1] Investment banks and financial advisors are interchangeable in this study.

This study differs from prior studies in several dimensions. First, this study focuses on the Asia Pacific market to examine the relationship between the quality of financial advisors and the outcomes of M&As for bidding firms. While the Asia Pacific market contains several emerging countries, this study controls for the dummy of the country to address country effects. Secondly, as La Porta et al. (1998) argue that English-origin countries have the strongest legal protections to investors, the regression analysis also controls for the dummy of English-origin countries to take into account the difference in legal requirements in order to better understand the quality of financial advisors on the influence of firm performance in M&As. Thirdly, the empirical analysis also examines whether the quality of financial advisors can have an impact on firm performance in domestic and cross border deals. Furthermore, this study looks at not only short term announcement returns, but also long run post-announcement returns for bidding firms. This can provide additional insights to reveal the role of financial advisors on the influence of firm performance during the post-announcement period.

Using the standard event study methodology with a comprehensive sample of 5271 bidders, this study finds that bidders are less likely to hire financial advisors when bidders use cash payment, bidders engage in friendly deals and bidders acquire private targets. In addition, the evidence shows that bidders spend more time completing the deals when hiring tier-3 advisors. More importantly, the evidence indicates that bidders earn positive returns surrounding the announcement date, but negative returns during the post-announcement period. The results also show that bidders with the use of financial advisors on average obtain higher announcement returns relative to those without using financial advisors. A further analysis indicates that bidders with the use of tier-3 advisors obtain higher returns relative to those with tier-1 and tier-2 advisors regardless of the event window selected. The difference of bidder announcement returns among three tier advisors is statistically significant for 5-day ($-2,+2$) and 270-day ($+1,+270$) event window only.

In the regression analysis, the results show that there is a positive relationship between bidder announcement returns and tier-2 and tier-3 advisors. The results are robust when additionally controlling for year and country effects and using the Heckman's (1979) two stage procedure to control for the self-selection bias. The results indicate that bidders advised by less prestigious financial advisors in terms of tier-2 and tier-3 advisors obtain higher announcement returns. In addition, the evidence also reveals that bidders advised by tier-2 advisors obtain higher announcement returns in cross border deals. Looking at 270-day ($+1,+270$) post-announcement period, the results indicate that bidders in domestic deals obtain lower returns when hiring tier-1 advisors.

This study makes contributions in several dimensions. First, the current study provides new evidence to reveal the role of financial advisors on deal outcomes for bidding firms in the Asia Pacific market. This study is the first to use a comprehensive sample in the Asia Pacific market to explore the role of financial advisors on M&As. Secondly, the analysis in this study also controls for the differences in legal requirements to address the performance of investment banks on mergers and acquisitions. More importantly, this study further controls for the issue of self-selection bias in the analysis. The empirical evidence indicates the importance of financial advisors to bidding firms. In addition, this study also provides implications to relevant users. Managers and investors can realize whether the use of different levels of financial advisors can create value to their firms and enhance shareholder wealth in M&As. The empirical findings also allow policymakers to understand whether firms advised by different levels of financial advisors can create value to their shareholders in M&As. Thus, the empirical results in this study enhance our understanding and

knowledge to address the importance of financial advisors on deal outcomes in the Asia Pacific market.

The rest of the paper is organized as follows. Section 2 reviews the existing literatures. Section 3 presents the development of hypotheses. Section 4 describes sample selection and methodology. Section 5 presents the empirical findings. Conclusion is presented in Sect. 6.

2 Literature review

A number of prior studies have examined the role of financial advisors on deal outcomes. However, prior studies report mixed results. Servaes and Zenner (1996) argue that bidders are more likely to use an advisor in M&As when they have less prior experience and the transaction is more complex. Chang et al. (2010) argue that a bank is likely to be chosen as an advisor when a bank has a strong prior bank-firm relationship, good industry expertise and large bank market share. Song et al. (2013) find that bidders are more likely to hire boutique advisors in hostile deals as hostile deals are more difficult to complete relative to friendly deals. Their results suggest that boutique advisors offer more valuable advisory skills to their clients when the transactions become more complex.

In addition, several studies explore the relationship between the quality of financial advisors and completion time in M&As. Hunter and Jagtiani (2003) and Walter et al. (2008) report that firms with the use of high quality advisors should complete the deals faster as these advisors have more experience and expertise to deal with the transactions. In a recent paper, Song et al. (2013) find that boutique advisors tend to take longer time to complete deals in that these advisors are more likely to be included in complex deals.

Furthermore, a growing body of literatures has investigated the quality of financial advisors on firm performance in M&As. Prior empirical evidence reports mixed results. Studies, such as Bowers and Miller (1990), Servaes and Zenner (1996), Rau (2000), Hunter and Jagtiani (2003), Allen et al. (2004) and Walter et al. (2008), report that bidders obtain lower returns when hiring first-tier investment banks. Lowinski et al. (2004) also report that bidders advised by a leading investment bank do not obtain higher announcement returns. In a recent paper, Ismail (2010) finds that bidders advised by highly reputable advisors destroy value to their shareholders. As high quality financial advisors are incline to be engaged in large and complex transactions, these advisors would require higher premia that result in lower gains to bidders. However, Golubov et al. (2012) report conflict findings. They report that bidders obtain higher gains in public acquisitions when top-tier advisors are used. Song et al. (2013) find that bidders pay lower premiums to targets when bidders hire boutique advisors in M&As.

In sum, a number of prior studies have examined the role of financial advisors on deal outcomes. However, prior studies report mixed results and none of prior studies focuses on the Asia Pacific market to explore this issue. As there are a large number of relatively small firms with high growth potential in the Asia Pacific market, this offers a great opportunity to look into the role of financial advisors in M&As. In addition, prior studies, such as Claessens and Fan (2002), Acemoglu and Johnson (2005) and Shu et al. (2013), argue that the legal protections for minority shareholders are limited in most emerging countries. While the legal requirement in the Asia Pacific market can vary, the degree of legal requirements among nations would increase the complexity of the deals. It is of great valuable to further examine the role of financial advisors for bidding firms in domestic and

cross border deals. Due to the lack of empirical evidence, it is not clear as to whether the presence of financial advisors can have an influence on deal outcomes in the Asia Pacific market. Thus, this study revisits this issue to explore the quality of financial advisors on deal outcomes for bidding firms in the Asia Pacific market.

3 Hypothesis

Top-tier financial advisors may have more ability to offer better skills to evaluate transactions due to their past experience and expertise in M&As. Golubov et al. (2012) argue that top-tier financial advisors are able to better identify potential targets to match bidder business portfolio. Studies, such as Kale et al. (2003), Ismail (2010), Schiereck et al. (2009), also report similar views. Wang and Whyte (2010) argue that firms are inclined to hire investment banks when transactions are more complex. Song et al. (2013) also argue that firms involved in complex deals are more likely to hire boutique advisors as these advisors have more skills and expertise in M&A advisory services. Thus, top-tier financial advisors with better skills and more experience can be expected to create higher synergies to their clients. In addition, highly reputable financial advisors can be predicted to take longer time to complete the transactions in order to maintain their reputational capital.

Alternatively, financial advisors may only relate to the speed of completing deals rather than the ability to offer better skills in M&As. Studies, such as Rau (2000), Walter et al. (2008) and Ismail (2010), document that investment banks have strong incentives to complete transactions in return for advisory service fees. While top-tier advisors may require higher fees to compensate for their superior services in M&As, the quality of financial advisors can thus be expected to have no relationship with firm performance in M&As. This study also predicts that high quality financial advisors may desire to complete transactions faster in order to secure their advisory fees.

4 Sample selection and methodology

4.1 Sample selection

The sample of mergers and acquisitions is collected from Thomson Financial SDC One Banker database. The sample is collected from 1995 to 2011. The sample includes transactions categorized as merger, acquisition, acquisition of majority interest and exchange offer. Both targets and bidders are in the Asia Pacific market. Either targets or bidders are listed on the stock exchange and the transactions are complete. The sample further requires that bidders own target shares over 50 % after the transactions in order to focus on the change of control. Imposing these criteria, this study initially obtains 22,443 transactions.

Share price and financial data for the firm were gathered from Datastream database. Financial data is collected from the calendar year end prior to the announcement date. The benchmark of the market is collected from Datastream database using Total return index for each market. This study removes the transactions if share price is missing. Finally, the final sample contains 14 countries, Australia, China, Hong Kong, India, Indonesia, Malaysia, New Zealand, Pakistan, Philippines, Singapore, South Korea, Sri Lanka, Taiwan and Thailand, including 5271 bidders.

4.2 The measurement of the reputation of investment banks

Following prior studies, this study uses league tables from Thomson SDC One banker database to examine the quality of investment banks (e.g., Walter et al. 2008; Wang and Whyte 2010; Golubov et al. 2012). Wang and Whyte (2010) document that the market share of advisory services in the league table is the most widely used to measure the reputation of financial advisors. Studies, such as McLaughlin (1992), Rau (2000), Hunter and Jagtiani (2003) and Walter et al. (2008), argue that prior studies commonly use a static ranking system to determine the reputation of financial advisors. For example, Rau (2000) uses the average yearly ranking from the entire sample period to measure the level of reputation. However, Walter et al. (2008) use the dynamic measurement with a 3-year rolling window to measure the rank of financial advisors.

While the building of the reputation for financial advisors is a long term process, the level of the reputation for financial advisors in a period can reflect their permanent success in advisory services in the past. Hence, this study measures the rank of financial advisors in the previous year during the sampling period. This measurement can better to match its performance for a year and also allow us to better know the change of the reputation for financial advisors within the sampling period. Thus, this study uses market share in a year prior to the announcement date to measure the reputation of financial advisors. Following the study of Rau (2000) and Walter et al. (2008), this study classifies investment banks into three tiers, where the top five investment banks are classified as first-tier advisors; the following 15 investment banks as second-tier advisors; the remaining investment banks as third-tier advisors. If firms hire multiple financial advisors in M&A transactions, this study uses the highest rank of financial advisors to measure the quality of financial advisors.

4.3 Control variable

Prior studies have examined the role of financial advisors on deal outcomes (e.g., Hunter and Jagtiani 2003; Walter et al. 2008; Wang and Whyte 2010; Golubov et al. 2012; Song et al. 2013). Song et al. (2013) have documented the factors that can affect the choice of boutique advisors. Song et al. (2013) argue that bidders are more likely to choose boutique advisors when engaging in hostile deals. When involved in cross industry deals, bidders are more likely to hire financial advisors. In addition, their results also show that bidders are more likely to choose boutique advisors when target have lower market to book ratios.

In addition, several studies have explored the quality of financial advisors on the influence of completion time in M&As. Hunter and Jagtiani (2003) find that transactions involved in hostile deals would take more time to complete. This view is supported by Walter et al. (2008). In addition, Walter et al. (2008) also report that transactions will take longer time to complete when targets and bidders are in the same primary industry. Walter et al. (2008) and Song et al. (2013) find that transactions take longer time to complete when payment is stock. In addition, bidders need to spend more time completing deals when acquiring listed targets.

Furthermore, a number of prior studies have reported that deal and firm characteristics are important determinants to influence announcement returns in M&As. Morck et al. (1990) document that the market reacts negatively to diversifying acquisitions. Servaes (1991) finds that bidders obtain lower returns when transactions involve in hostile deals. Moeller and Schlingemann (2005) find that bidder announcement returns are positively associated with their market to book ratio. Hunter and Jagtiani (2003) find that bidders

obtain higher post-merger gains when bidders engage in hostile deals and bidder size is large.

To explore the relationship between the role of financial advisors and deal outcomes for bidding firms precisely, this study controls for deal and firm specific characteristics in the regression analysis. The variables include cash, relatedness,[2] friendly deals, private targets, market to book ratio, ROA and firm size. Dummy variables equal to one if payment is cash, transactions involve in diversifying acquisitions and friendly deals, targets are private firms; 0 otherwise. The market to book ratio is measured as the market value of the equity to book value of the equity. ROA is measured as net income to total assets. Firm size is measured as the log of total assets.

4.4 Methodology

To explore the relationship between the quality of investment banks and firm performance in M&As, this study follows Brown and Warner's (1985) study and uses the standard event study methodology with the market model to measure abnormal returns. The market model parameters are estimated from day -270 to day -61, where day 0 is the announcement date. The Datastream total return index is used as a benchmark for the market. The abnormal returns are calculated by subtracting expected returns from actual returns.

$$AR_{it} = R_{it} - (\alpha + \beta R_{mt})$$

The cumulative abnormal returns are calculated by aggregating the abnormal returns over a certain period in order to capture the drift of market reaction within the selected event window. This study selects three event windows $(-1,+1)$, $(-2,+2)$ and $(-5,+5)$ surrounding the announcement date to capture the short term announcement returns for bidding firms. Additionally, this study also examines four event windows $(+1,+30)$, $(+1,+180)$, $(+1,+270)$ and $(+1,+360)$ to measure the long term post-announcement returns for bidding firms. This can enable the current study to capture the long run post-announcement effects of financial advisors on firm performance for bidding firms. In addition, cross-sectional t-statistic is employed to test the significance level for the hypothesis, H_0: mean abnormal returns are equal to 0.

While prior studies have reported the importance of deal and firm specific characteristics on firm performance, this study further runs cross-sectional regression analysis with controlling for these characteristics. The variables include cash, relatedness, friendly deals, private targets, market to book ratio, ROA and firm size. The regression analysis allows this study to examine the relationship between the quality of financial advisors and bidder announcement returns precisely. This also enables the current study to explore the determinants that can affect the announcement returns for bidding firms in M&As. Hence, the regression model is specified as follows.

$$
\begin{aligned}
CAR_i = {} & \alpha_0 + \beta_1(\text{tier dummy}) + \beta_2(\text{cash}) + \beta_3(\text{relatedness}) + \beta_4(\text{friendly}) \\
& + \beta_5(\text{private targets}) + \beta_6(\text{market to book}) + \beta_7(\text{roa}) + \beta_8(\ln(\text{total assets})) + \varepsilon_i
\end{aligned}
$$

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[2] This study uses a 2-dig SIC code to determine whether the transactions are diversifying or focusing deals. If the target and bidder share the same 2-dig SIC code, the transactions are classified as focusing deals; diversifying deals otherwise.

Table 1 The summary of descriptive statistics

Year	N	Without advisor	With advisor
Panel A			
1995	127	104	23
1996	188	151	37
1997	159	135	24
1998	172	146	26
1999	243	197	46
2000	267	190	77
2001	305	236	69
2002	320	248	72
2003	455	354	101
2004	443	331	112
2005	486	389	97
2006	481	409	72
2007	443	368	75
2008	398	326	72
2009	342	266	76
2010	341	280	61
2011	101	70	31
Total	5271	4200	1071

	N	Mean	Q1	Median	Q3
Panel B					
Market to book					
Without IB	4200	2.56	0.76	1.35	2.41
Tier-1	127	2.24	1.09	1.86	2.64
Tier-2	227	2.27	1.00	1.60	2.80
Tier-3	717	2.76	0.82	1.43	2.62
ROA					
Without IB	4200	−0.05	0.00	0.03	0.07
Tier-1	127	0.05	0.01	0.05	0.10
Tier-2	227	0.04	0.01	0.05	0.08
Tier-3	717	−0.05	0.01	0.03	0.07
Size					
Without IB	4200	14.34	12.24	13.96	16.16
Tier-1	127	16.91	14.56	16.68	18.85
Tier-2	227	15.45	13.19	14.91	17.10
Tier-3	717	14.26	12.21	13.90	15.80

Summary of descriptive statistics for bidding firms. The sample includes 5271 bidders during the period of 1995–2011. The sample in the Asia Pacific market contains 14 countries, including Australia, China, Hong Kong, India, Indonesia, Malaysia, New Zealand, Pakistan, Philippines, Singapore, South Korea, Sri Lanka, Thailand and Taiwan. Panel A presents the distribution of the sample based on each year in the investigation period. If the firms do not hire financial advisors or no financial advisors are retained, the sample is classified as "Without advisor". If the firms hire financial advisors, the sample is categorized as "With advisor". Panel B presents the summary of firm characteristics taking into account the quality of financial advisors. Without IB indicates without advisors. The top five investment banks in any previous year are classified as tier-1 financial advisors; the top 6–20 investment banks as tier-2 financial advisors; below 20 as tier-3 financial advisors. The market to book ratio is measured as the market value of the equity to book value of the equity. ROA is measured as net income to total assets. Firm size is measured as the log of total assets. The financial characteristics are collected from the year end prior to the announcement in the Datastream database

5 Empirical results

5.1 Descriptive statistics

This section presents the distribution of the sample. As shows in Table 1, the figure in panel A shows that there is an upward trend in M&A transactions prior to the year of 2006

Table 2 The choice of financial advisors for bidders

	Full		Domestic		Cross border	
	(1)	(2)	(3)	(4)	(5)	(6)
Cash	−0.251***	−0.247***	−0.275***	−0.271***	−0.171	−0.172
	(0.047)	(0.047)	(0.052)	(0.052)	(0.109)	(0.109)
Relatedness	0.041	0.044	0.031	0.033	0.069	0.079
	(0.045)	(0.045)	(0.049)	(0.049)	(0.107)	(0.107)
Friendly	−0.602***	−0.604***	−0.632***	−0.634***	−0.460**	−0.456**
	(0.078)	(0.078)	(0.085)	(0.085)	(0.191)	(0.192)
Private target	−1.033***	−1.033***	−1.022***	−1.024***	−1.107***	−1.104***
	(0.046)	(0.046)	(0.051)	(0.051)	(0.110)	(0.111)
Bidder financial industry		0.090*		0.093*		0.114
		(0.051)		(0.056)		(0.129)
Market to book	−0.001	−0.001	−0.001	−0.001	0.008	0.008
	(0.002)	(0.002)	(0.002)	(0.002)	(0.014)	(0.014)
ROA	−0.005	−0.005	−0.009	−0.009	0.786**	0.808**
	(0.029)	(0.029)	(0.027)	(0.027)	(0.364)	(0.368)
Ln (total assets)	0.011*	0.010	0.011	0.010	0.000	−0.002
	(0.007)	(0.007)	(0.008)	(0.008)	(0.016)	(0.017)
Constant	0.130	0.128	0.147	0.146	0.195	0.197
	(0.129)	(0.129)	(0.144)	(0.144)	(0.303)	(0.305)
N	4776	4776	3990	3990	786	786
Pseudo R square	0.1281	0.1288	0.1272	0.1278	0.1432	0.1441

Probit regression analysis for bidders. The dependent variable is a dummy that equals one if bidders hire financial advisors; 0 otherwise. The independent variable includes cash, relatedness, friendly deals, private targets, bidder financial industry, market to book ratio, ROA and ln (total assets). The dummy equals 1 if the payment method is cash, the deal is classified as diversification acquisition, the transaction is a friendly deal, the target is a private firm and the bidder is a financial firm. Market to book ratio is measured as market value of the equity to book value of the equity. ROA is measured as net income to total assets. Ln (total assets) is calculated as the log of total assets. The financial data is collected from the year end prior to the announcement date in the Datastream database. White's (1980) heteroskedasticity is used to compute the p value. Standard errors are reported in parentheses

* Significance at the 0.1 level

** Significance at the 0.05 level

*** Significance at the 0.01 level

although the volume of M&A transactions slightly reduces after 2007. In particular, the number of M&A transactions slightly increases during the period of 2003–2007. While the economic situation seems to perform well during the period of 2003–2007 in the Asia Pacific market, this results in higher number of M&A transactions. This also lends support to the view of Alexandrou and Sudarsanam (2001) and Shams et al. (2013), indicating that merger and acquisition activities peak during the period of economic boom. Panel A also reveals that a large number of bidders prefer not to hire financial advisors, showing the figure at 4200 and 1071 without and with using financial advisors, respectively.

Panel B presents the summary of firm-specific characteristics for bidding firms taking into account the quality of financial advisors. The figure shows that bidders without using financial advisors appear to have higher market to book ratio with the mean value at 2.56 in

comparison with those with tier-1 and tier-2 advisors at 2.24 and 2.27, respectively. The figure also indicates that bidders that hire tier-3 advisors seem to have higher market to book ratio at 2.76 among three tire advisors. The figure also reveals that bidders advised by tier-1 advisors on average have slightly better prior performance, with the mean value of ROA at 0.05. With regard to firm size, the figure shows that first tier financial advisors tend to involve in large bidding firms, with the mean value at 16.91. However, there is no significant difference in firm size between with and without using financial advisors for bidding firms.

5.2 Empirical results for bidders

5.2.1 The choice of financial advisors

This section presents probit regression to explore the determinants that can affect the choice of financial advisors for bidding firms. This allows the current study to identify the determinants that can affect the choice of financial advisors for bidding firms. Dependent variable equals 1 if bidders hire financial advisors in M&As; 0 otherwise. As shows in Table 2, the results in model specification (1) show that bidders are less likely to hire financial advisors when payment is cash and targets are private firms. While this study finds that bidders in friendly deals are less likely to hire financial advisors, the results are consistent with the study of Song et al. (2013). When further controlling for bidders as financial firms, the sign and significance level remain the same. The results also indicate that bidders are more likely to hire financial advisors when bidders are financial firms.

This paper further partitions the sample into domestic and cross border deals. This allows this study to investigate what factors can affect the choice of financial advisors for bidding firms in domestic and cross border deals. Interestingly, this study finds consistent results. The results show that bidders in both domestic and cross border deals are less likely to hire financial advisors in association with friendly deals and private target firms. In addition, the results reveal that cash payment is an important determinant to influence the choice of financial advisors for domestic deals. The results indicate that bidders are less likely to hire financial advisors in domestic deals when payment is cash. In addition, bidders are more likely to hire financial advisors in cross border deals when bidders have better prior performance.

5.2.2 Completion time

This section examines the relationship between the quality of financial advisors and completion time for bidding firms. Dependent variable is completion time measured as the time between the announcement date and the effectiveness date. If high quality financial advisors have better skills to advise bidding firms in M&As, it can be expected that the transactions would complete faster. While cross-border deals involve in different legal regions, the transactions can be more complex. If high reputation financial advisors have better skills, they can complete cross border deals faster. Thus, the sample is further split into domestic and cross border deals to examine the relationship between the quality of financial advisors and completion time. Key variables are the variables of tier-1, tier-2 and tier-3 financial advisors, where firms without using financial advisors are set as the baseline. As shows in Table 3, the results in model specification (1) show that bidders take more time to complete the deals when hiring tier-3 advisors. The coefficient is 0.494. The results remain significant when additionally controlling for bidders as financial firms in

Table 3 Duration for bidders

	Full		Domestic		Cross border	
	(1)	(2)	(3)	(4)	(5)	(6)
Tier-1	0.142	0.154	0.022	0.051	0.786**	0.804**
	(0.158)	(0.158)	(0.176)	(0.176)	(0.383)	(0.384)
Tier-2	−0.101	−0.097	−0.133	−0.136	0.262	0.190
	(0.104)	(0.104)	(0.122)	(0.122)	(0.190)	(0.203)
Tier-3	0.494***	0.496***	0.464***	0.468***	0.717***	0.731***
	(0.102)	(0.102)	(0.112)	(0.112)	(0.231)	(0.230)
Cash	0.349***	0.342***	0.423***	0.409***	0.046	0.060
	(0.082)	(0.083)	(0.096)	(0.096)	(0.136)	(0.136)
Relatedness	0.046	0.043	0.082	0.078	−0.134	−0.107
	(0.074)	(0.073)	(0.086)	(0.085)	(0.128)	(0.120)
Friendly	−0.306**	−0.307**	−0.311*	−0.311*	−0.278	−0.261
	(0.153)	(0.153)	(0.164)	(0.164)	(0.413)	(0.406)
Private target	−0.843***	−0.843***	−0.928***	−0.926***	−0.358***	−0.347**
	(0.082)	(0.082)	(0.093)	(0.093)	(0.142)	(0.142)
Bidder financial industry		−0.115		−0.217***		0.454*
		(0.081)		(0.086)		(0.241)
Market to book	0.010	0.010	0.010	0.009	0.008	0.008
	(0.008)	(0.008)	(0.008)	(0.008)	(0.017)	(0.017)
ROA	0.004	0.004	0.005	0.006	0.025	0.035
	(0.015)	(0.015)	(0.015)	(0.015)	(0.100)	(0.097)
Ln (total assets)	−0.045***	−0.044***	−0.051***	−0.049***	−0.010	−0.018
	(0.009)	(0.009)	(0.010)	(0.010)	(0.020)	(0.019)
Constant	2.310***	2.320***	2.458***	2.477***	1.411***	1.391***
	(0.189)	(0.189)	(0.205)	(0.206)	(0.468)	(0.460)
N	4773	4773	3989	3989	784	784
Adjusted R square	0.0490	0.0493	0.0533	0.0546	0.0417	0.0506

OLS regression analysis for bidders. The dependent variable is completion time measured as the time between the announcement date and the effectiveness date. The independent variables include tier-1 advisors, tier-2 advisors, tier-3 advisors, cash, relatedness, friendly deals, private targets, bidder financial industry, market to book ratio, ROA and ln (total assets). The dummy equals 1 if the payment method is cash, the deal is classified as diversification acquisition, the transaction is a friendly deal, the target is a private firm and the bidder is a financial firm. Market to book ratio is measured as market value of the equity to book value of the equity. ROA is measured as net income to total assets. Ln (total assets) is calculated as the log of total assets. The financial data is collected from the year end prior to the announcement date in the Datastream database. White's (1980) heteroskedasticity is used to compute the p value. Standard errors are reported in parentheses

* Significance at the 0.1 level

** Significance at the 0.05 level

*** Significance at the 0.01 level

model specification (2). The evidence also indicates that bidders would spend more time completing the transactions when payment is cash. In contrast, when bidders involve in friendly deals, targets are private firms and bidder size is small, the transactions can complete faster.

This study further partitions the sample into domestic and cross border deals to explore the relationship between the quality of financial advisors and completion time. The results show interesting findings. The evidence in model specification (3) and (4) consistently shows that bidders will take more time to complete domestic deals when bidders hire tier-3 advisors, with the coefficients are 0.464 and 0.468, respectively. Consistently, the results also show that bidders will take longer time to complete cross border deals when hiring tier-3 advisors.

Comparing domestic and cross border deals, this paper finds that the magnitude of the coefficients for tier-3 advisors in cross border deals appears to be large at 0.717 and 0.731 in model specification (5) and (6), respectively. This suggests that tier-3 advisors will spend more time completing cross border deals relative to domestic deals. As cross border deals can be more complex, it is not surprising that tier-3 advisors would spend more time completing cross border transactions. In addition, the results also show that bidders would take longer time to complete cross border deals when hiring tier-1 advisors, the coefficients at 0.786 and 0.804 in model specification (5) and (6) respectively. However, it can be observed that the coefficients of tier-1 advisors in cross border deals are higher than those of tier-3 advisors. The results indicate that bidders that hire tier-1 advisors in cross border deals would spend more time completing the deals relative to those with tier-3 advisors. As first tier advisors tend to engage in large deals and cross border deals may also be more complex, a possible explanation can attribute to the fact that higher reputation advisors may want to protect their reputation capital, leading to longer time to complete the deals.

5.2.3 Bidder announcement returns

This section presents the empirical results for bidder announcement returns in relation to the quality of financial advisors. This provides an insight to address the impact of the quality of financial advisors on firm performance in M&As. As shows in Table 4, the results show that bidders obtain gains surrounding the announcement date, but suffer losses during the post-announcement period. For example, the results reveal that bidders obtain 1.59 % cumulative abnormal returns over a 3-day (−1,+1) event window. Looking at the post-announcement period, the evidence indicates that bidder shareholders lose their wealth up to −18.41 % cumulative abnormal returns over a 360-day (+1,+360) event window.

In addition, the empirical findings reveal that bidders with the use of financial advisors on average obtain higher announcement returns both around the announcement date and during the post-announcement period relative to those without using financial advisors. The results show that bidders obtain 2.72 and 1.30 % cumulative abnormal returns over a 3-day (−1,+1) event window for those with and without using financial advisors, respectively. The difference in announcement returns between with and without using financial advisors is statistically significant at the 0.01 level. Similarly, the evidence indicates that bidders advised by financial advisors obtain higher returns at −9.64 % relative to −14.46 % for those without using financial advisors over a 270-day (+1,+270) post-announcement period. The difference is statistically significant at the 0.1 level.

Taking into account the quality of financial advisors, this paper finds interesting findings showing that bidders that hire tier-3 advisors on average obtain higher gains relative to those with tier-1 and tier-2 advisors. The results indicate that bidders with hiring tier-3 advisors obtain cumulative abnormal returns at 3.10 % over a 3-day (−1,+1) event window higher than 1.10 and 2.53 % for those with tier-1 and tier-2 advisors, respectively. While tier-3 financial advisors generally have a relatively small market share of advisory services, these advisors may be likely to advise small firms and also be involved in small

Table 4 Bidder announcement returns

	All	With advisor	Tier-1	Tier-2	Tier-3	Kruskal–Wallis	Without advisor	Difference
(−1,+1)	**0.0159**	**0.0272**	0.0110	**0.0253**	**0.0310**	3.53	**0.0130**	**0.0142**
p-value	0.0000	0.0000	0.1490	0.0000	0.0000	0.1710	0.0000	0.0000
(−2,+2)	**0.0187**	**0.0361**	0.0084	**0.0319**	**0.0423**	**7.23**	**0.0143**	**0.0218**
p-value	0.0000	0.0000	0.2980	0.0000	0.0000	0.0270	0.0000	0.0000
(−5,+5)	**0.0208**	**0.0385**	0.0154	**0.0368**	**0.0432**	2.12	**0.0163**	**0.0223**
p-value	0.0000	0.0000	0.1140	0.0000	0.0000	0.3470	0.0000	0.0000
(+1,+30)	**−0.0140**	−0.0017	0.0051	−0.0095	−0.0005	4.82	**−0.0172**	**0.0154**
p-value	0.0000	0.7720	0.7380	0.3930	0.9530	0.1850	0.0000	0.0230
(+1,+180)	**−0.0839**	**−0.0589**	−0.0691	**−0.0681**	**−0.0541**	1.78	**−0.0902**	0.0314
p-value	0.0000	0.0010	0.1280	0.0280	0.0160	0.4110	0.0000	0.1190
(+1,+270)	**−0.1348**	**−0.0964**	**−0.1012**	**−0.1504**	**−0.0785**	**4.77**	**−0.1446**	**0.0482**
p-value	0.0000	0.0000	0.0880	0.0000	0.0120	0.0920	0.0000	0.0830
(+1,+360)	**−0.1841**	**−0.1463**	**−0.1499**	**−0.2255**	**−0.1206**	3.92	**−0.1938**	0.0474
p-value	0.0000	0.0000	0.0420	0.0000	0.0020	0.1410	0.0000	0.1800
N	5271	1071	127	227	717		4200	

Empirical results for bidders with/without using financial advisors and the quality of financial advisors. If the firm does not hire financial advisors or no financial advisors are retained, the sample is categorized as "Without advisor". The top five investment banks in any previous year are classified as tier-1 financial advisors; the top 6–20 investment banks as tier-2 financial advisors; below 20 as tier-3 financial advisors. "Difference" captures the difference in abnormal returns for bidders between with and without financial advisors. The event study methodology with the market model is used to calculate the abnormal returns. The model parameters are estimated from day −270 to day −61, where day 0 is the announcement date. Student t-statistic is used to test the significance level, assuming cross-sectional independence of the sample. 2-sample t-statistic is used to test the difference in announcement returns. The Kruskal–Wallis H test is employed to test the difference in abnormal returns among three tiers of financial advisors

Bold values indicate statistically significant

M&A transactions. As small firms may have less M&A experience, tier-3 advisors can assist their clients to structure better deals. In addition, tier-3 advisors may require lower advisory fees in comparison to their counterparts with high reputation. Hence, bidders with the use of tier-3 advisors can earn higher announcement returns. The results are also consistent with the study of Bowers and Miller (1990), Servaes and Zenner (1996), Rau (2000), Hunter and Jagtiani (2003), Allen et al. (2004) and Walter et al. (2008), indicating that bidders obtain lower returns when hiring first-tier financial advisors. While the results reveal negative returns to bidders during the (+1,+360) post-announcement period, bidders advised by tier-3 advisors on average earn higher returns at −12.06 % than those with tier-1 and tier-2 advisors at −14.99 and −22.55 %, respectively. The results suggest that high reputation financial advisors cannot create higher value to bidders during the post-announcement period in accordance with their superior advisory services.[3]

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[3] To measure whether the results are sensitive due to the classification of the rank of financial advisors, this study also uses different categories to classify the quality of financial advisors. For example, the top 10 investment banks are classified as tier-1 advisors; top 11–30 investment banks as tier-2 advisors; the remaining banks as tier-3 advisors. The results are robust and consistently show that bidders advised by tier-3 advisors obtain higher announcement returns both around the announcement date and during the post-announcement period.

5.2.4 Cross-sectional regression analysis

This section conducts cross-sectional regression analysis to explore the relationship between the quality of financial advisors and bidder announcement returns in M&As. While prior studies have reported the importance of deal and firm specific characteristics on firm performance, this study further controls for these characteristics in the regression analysis. This also allows the current study to explore the determinants that can influence bidder announcement returns. Prior studies, such as Golubov et al. (2012), argue that the choice of financial advisors may endogenously relate to deal and firm specific characteristics. This may cause the problem of endogeneity to determine the relationship between the quality of financial advisors and bidder announcement returns. Thus, this study uses Heckman's (1979) two stage procedure to take into account the issue of self-selection bias. This study runs probit regression in the first stage with controlling for deal and firm specific characteristics and the log of transaction value in order to obtain inverse mill's ratios for tier-1, tier-2 and tier-3 advisors separately.

While more reputable financial advisors are more likely to involve in large deals, controlling for the log of transaction value can also contend identification restriction. This study obtains three variables of inverse mill's ratio in terms of tier-1, tier-2 and tier-3 financial advisors from the first stage regression separately. This study further runs OLS regression and additionally control for year effects, country effects and inverse mill's ratios for tier-1, tier-2 and tier-3 advisors in the second stage regression. As La Porta et al. (1998) argue that investors have better protection in the English-origin countries, the regression analysis also controls for the difference of the legal region in terms of English-origin country. This can reveal a clear picture to address the relationship between the quality of financial advisors and bidder announcement returns in M&As.

As cross border deals may be more complex relative to domestic deals due to involving in different legal regions, the use of highly reputable financial advisors can increase the synergies to the firms. Accordingly, this study further splits the sample based on domestic and cross border deals to investigate the relationship between the quality of financial advisors and bidder announcement returns. This also enables the current study to explore the determinants that can affect bidder announcement returns in domestic and cross border deals separately. If more prestigious financial advisors have better skills and more experience in advising their clients in M&As, bidders can be expected to earn higher gains. Dependent variable is 3-day $(-1,+1)$ bidder cumulative abnormal returns. Key independent variables are the dummy of tier-1, tier-2 and tier-3 advisors, where without hiring financial advisors (without advisors) is set as the base.

Table 5 presents the results for the first stage of Heckman (1979) two stage procedure. Similar to the procedure reported by Ma et al.'s (2010) study, the following probit regression model is used in the first stage:

$$\text{Prob}(\text{tier dummy}_i = 1) = \Phi(\text{cash, relatedness, friendly, private targets, market to book,}$$
$$\text{roa, ln(total assets), ln(deal value))}$$

where subscript i is for firm i, Φ is the normal cumulative distribution function, and tier dummy is a binary variable that indicates whether the firm hires tier-1, tier-2 or tier-3 advisors in M&As separately. As can be seen in Table 5, the results in model specification (1) reveal that bidders are less likely to hire tier-1 advisors when payment is cash and bidders acquire private targets. When bidder size is large, bidders are more likely to hire tier-1 advisors. Similarly, this study finds consistent results for tier-2 advisors in model

Table 5 Probit model: the first stage of Heckman (1979) two stage procedure

	Full			Domestic			Cross border		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Cash	−0.342***	−0.250***	−0.067	−0.305***	−0.278***	−0.064	−0.636***	−0.138	−0.112
	(0.112)	(0.089)	(0.061)	(0.115)	(0.102)	(0.068)	(0.243)	(0.197)	(0.147)
Relatedness	0.112	0.291***	−0.116*	0.145	0.388***	−0.151**	0.067	−0.078	0.042
	(0.107)	(0.086)	(0.062)	(0.117)	(0.099)	(0.069)	(0.272)	(0.191)	(0.146)
Friendly	−0.297*	−0.039	−0.064***	−0.276	0.041	−0.661***	−0.567*	−0.223	−0.340
	(0.176)	(0.166)	(0.099)	(0.191)	(0.201)	(0.109)	(0.336)	(0.316)	(0.241)
Private target	−0.833***	−0.886***	−0.785***	−0.964***	−0.765***	−0.802***	−0.251	−1.533***	−0.723***
	(0.131)	(0.102)	(0.062)	(0.155)	(0.110)	(0.068)	(0.270)	(0.361)	(0.152)
Market to book	−0.005	−0.013	0.002	−0.007	−0.022**	0.002	0.005	0.018	0.013
	(0.012)	(0.008)	(0.002)	(0.005)	(0.011)	(0.002)	(0.026)	(0.023)	(0.025)
ROA	0.067	0.048**	−0.014	0.072***	0.044**	−0.017	0.411	0.017	0.861*
	(0.079)	(0.021)	(0.023)	(0.023)	(0.021)	(0.022)	(0.592)	(0.317)	(0.451)
Ln (total assets)	0.096***	0.029**	−0.027***	0.105***	0.027*	−0.025**	0.064*	0.041*	−0.053**
	(0.015)	(0.013)	(0.009)	(0.014)	(0.015)	(0.010)	(0.034)	(0.025)	(0.023)
Ln (deal value)	0.051**	−0.017	0.011	0.049**	−0.006	0.015	0.080*	−0.050	−0.012
	(0.022)	(0.017)	(0.012)	(0.025)	(0.020)	(0.013)	(0.046)	(0.032)	(0.029)
Constant	−2.904***	−1.747***	0.256	−3.036***	−1.926***	0.273	−2.476***	−1.350***	0.336
	(0.309)	(0.254)	(0.178)	(0.326)	(0.309)	(0.199)	(0.595)	(0.502)	(0.429)
N	3050	3050	3050	2552	2552	2552	498	498	498

Table 5 continued

	Full			Domestic			Cross border		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Pseudo R square	0.1586	0.1133	0.0852	0.1787	0.1056	0.0915	0.1214	0.1830	0.0743

Probit model for the first stage of Heckman (1979) two stage procedure. The dependent variables in model specification (1)–(3) are the dummy of tier-1, tier-2 and tier-3 advisors respectively that equal to one if bidders hire tier-1, tier-2 or tier-3 advisors. The independent variable includes the dummy cash, relatedness, friendly deals, private targets, market to book ratio, ROA, ln (total assets) and ln (deal value). The dummy equals 1 if the payment method is cash, the deal is classified as diversification acquisition, the transaction is a friendly deal and the target is a private firm. Market to book ratio is measured as the market value of the equity to book value of the equity. ROA is measured as net income to total assets. Ln (total assets) is calculated as the log of total assets. Ln (deal value) is measured as the log of transaction value. Similar procedure is applied to the analysis of domestic and cross border deals. The financial data is collected from the year end prior to the announcement date in the Datastream database. White's (1980) heteroskedasticity is used to compute the p value. Standard errors are reported in parentheses

* Significance at the 0.1 level

** Significance at the 0.05 level

*** Significance at the 0.01 level

Table 6 Cross-sectional regression analysis for bidder 3-day (−1,+1) announcement returns

	Full			Domestic			Cross border		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Tier-1	0.005	0.009	0.009	0.009	0.014	0.014	−0.016	0.005	0.003
	(0.008)	(0.008)	(0.008)	(0.009)	(0.009)	(0.009)	(0.014)	(0.016)	(0.016)
Tier-2	0.017***	0.023***	0.022***	0.019***	0.021**	0.021**	0.001	0.027*	0.028*
	(0.006)	(0.008)	(0.008)	(0.007)	(0.010)	(0.010)	(0.012)	(0.015)	(0.015)
Tier-3	0.020***	0.021***	0.021***	0.023***	0.021***	0.021***	0.006	0.020	0.019
	(0.006)	(0.005)	(0.005)	(0.006)	(0.006)	(0.006)	(0.009)	(0.013)	(0.013)
Cash	−0.006*	−0.105	−0.104	−0.006*	−0.217	−0.217	−0.001	0.212	0.210
	(0.003)	(0.129)	(0.129)	(0.004)	(0.157)	(0.157)	(0.006)	(0.147)	(0.146)
Relatedness	0.000	0.084	0.084	0.001	0.257	0.257	−0.003	0.005	0.003
	(0.003)	(0.099)	(0.098)	(0.003)	(0.178)	(0.179)	(0.006)	(0.014)	(0.014)
Friendly	0.000	−0.045	−0.042	−0.001	−0.029	−0.029	0.004	0.305*	0.306*
	(0.005)	(0.168)	(0.167)	(0.006)	(0.136)	(0.136)	(0.008)	(0.179)	(0.178)
Private target	−0.000*	−0.299	−0.295	0.002	−0.600	−0.600	−0.010	0.760	0.757
	(0.003)	(0.533)	(0.531)	(0.003)	(0.552)	(0.553)	(0.007)	(0.475)	(0.473)
Bidder financial industry		−0.005	−0.005			−0.002			−0.017**
		(0.004)	(0.004)			(0.004)			(0.008)
Market to book	−0.001	−0.005	−0.005	−0.001**	−0.017	−0.017	−0.000	−0.012*	−0.012*
	(0.001)	(0.006)	(0.005)	(0.001)	(0.012)	(0.012)	(0.001)	(0.007)	(0.007)
ROA	−0.001***	0.021	0.021	−0.000	0.037***	0.037*	−0.010	−0.406	−0.421*
	(0.003)	(0.023)	(0.023)	(0.003)	(0.023)	(0.023)	(0.017)	(0.259)	(0.256)
Ln (total assets)	−0.004	0.010	0.010	−0.004***	0.016	0.016	−0.002	−0.012	−0.010
	(0.001)	(0.017)	(0.017)	(0.001)	(0.014)	(0.014)	(0.001)	(0.022)	(0.022)
English-original country	−0.025***	−0.017**	−0.016**	−0.027***	−0.029**	−0.029**	−0.010	−0.011	−0.007
	(0.004)	(0.007)	(0.007)	(0.004)	(0.015)	(0.015)	(0.009)	(0.016)	(0.011)

Table 6 continued

	Full			Domestic			Cross border		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Year		Yes	Yes		Yes	Yes		Yes	Yes
Country		Yes	Yes		Yes	Yes		Yes	Yes
Inverse mill's ratio (tier-1)		0.097	0.098		0.069	0.069		−0.249	−0.243
		(0.104)	(0.104)		(0.064)	(0.064)		(0.187)	(0.186)
Inverse mill's ratio (tier-2)		0.290	0.289		0.752	0.753		−0.348	−0.338
		(0.417)	(0.415)		(0.595)	(0.597)		(0.294)	(0.293)
Inverse mill's ratio (tier-3)		0.010	0.003		0.058	0.057		−0.390	−0.410
		(0.311)	(0.310)		(0.311)	(0.310)		(0.276)	(0.272)
Constant	0.092***	−0.838	−0.837	0.098***	−1.842	−1.846	0.057**	1.519	1.848
	(0.013)	(1.294)	(1.290)	(0.015)	(1.490)	(1.494)	(0.026)	(1.078)	(1.074)
N	4776	3050	3050	3990	2552	2552	786	498	498
Adjusted R square	0.0258	0.0641	0.0646	0.0299	0.0791	0.0791	0.0120	0.1065	0.1123

OLS regression analysis for bidders. The dependent variable is bidder 3-day (−1,+1) cumulative abnormal returns. The independent variable includes the dummy of tier-1 advisors, tier-2 advisors, tier-3 advisors, cash, relatedness, friendly deals, private targets, bidder financial industry, market to book ratio, ROA and ln (total assets). The dummy equals 1 if the payment method is cash, the deal is classified as diversification acquisition, the transaction is a friendly deal, the target is a private firm and the bidder is a financial firm. Market to book ratio is measured as market value of the equity to book value of the equity. ROA is measured as net income to total assets. Ln (total assets) is calculated as the log of total assets. English-origin country controls for the difference of the legal region for bidders from La Porta et al.'s (1998) study. Inverse mill's ratio is obtained by using two-stage Heckman (1979) procedure with controlling for deal and firm characteristics. The financial data is collected from the year end prior to the announcement date in the Datastream database. White's (1980) heteroskedasticity is used to compute the *p* value. Standard errors are reported in parentheses

* Significance at the 0.1 level

** Significance at the 0.05 level

*** Significance at the 0.01 level

specification (2). When analyzing tier-3 advisors in model specification (3), the results indicate that bidders are less likely to hire tier-3 advisors in relation to diversifying acquisitions, friendly deals, private targets and small bidders.

In the second stage, this study further controls for inverse mill's ratios in the OLS regression analysis. This enables the current study to determine as to whether the empirical results can be affected by the issue of the potential self-selection bias. As shows in Table 6, the results indicate that bidders obtain higher announcement returns when bidders hire tier-2 and tier-3 advisors. The coefficient is 0.017 and 0.020 in model specification (1). In addition, the evidence also shows an insignificant coefficient for tier-1 advisors at 0.005. Comparing with the coefficients among three tiers of financial advisors, low reputation financial advisors in terms of tier-2 and tier-3 advisors lead to higher announcement returns to bidders relative to those of tier-1 advisors. While bidders advised by low reputable financial advisors do not need to pay higher advisory fees, this can result in higher gains to bidders. When additionally controlling for year effects, country effects, financial bidding firms and inverse mill's ratios for tier-1, tier-2 and tier-3 advisors, the results remain significant for tier-2 and tier-3 advisors. The results also indicate that bidders advised by tier-2 advisors appear to obtain slightly higher announcement returns in comparison to those with tier-3 advisors.

With regard to control variables, the evidence reveals that there is a negative relationship between bidder announcement returns and the difference of the legal region in terms of English-origin country. The results suggest that bidders obtain higher announcement returns when bidders are in a country with poor investor protection.[4]

This study further splits the sample based on domestic and cross border deals to examine the relationship between the quality of financial advisors and bidder announcement returns. This can provide an additional insight to address the importance of the quality of financial advisors on the influence of bidder announcement returns in domestic and cross border deals. Interestingly, this study finds consistent results for the analysis of domestic deals. The results in model specification (4) reveal that bidders obtain higher announcement returns in domestic deals when hiring tier-2 and tier-3 advisors, the coefficient is 0.019 and 0.023 respectively. The results remain significant when additionally controlling for year effects, country effects and inverse mill's ratios. However, it can be observed that the magnitude of the coefficients for tier-2 and tier-3 advisors does not show any significant difference. In addition, the results consistently show that bidders obtain higher announcement returns when bidders are in a country with poor investor protection.

When analyzing cross border deals, the findings indicate that bidders obtain higher announcement returns when bidders hire tier-2 advisors. The coefficients are 0.027 and 0.028 in model specification (8) and (9) respectively. While cross border deals involve in different legal regimes and cross border deals may also have cultural integration issues, these increase the complexity of cross border deals. As high reputable financial advisors in terms of tier-2 advisors can have more ability to advise their clients in more complex cross border deals relative to low reputable financial advisors in terms of tier-3 advisors, bidders advised by tier-2 advisors obtain higher announcement returns in cross-border deals.

To better understand the performance of financial advisors in M&As, this study also looks at post-announcement returns for bidding firms to explore the relationship with the quality of financial advisors. If high reputation financial advisors have more ability to

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[4] This study also uses La Porta et al.'s (1998) anti-director right index and Djankov et al.'s (2008) anti-self-dealing index to measure the difference of the legal requirements as a robustness check. The sign and significant level are qualitatively the same.

Table 7 Cross-sectional regression analysis for bidders during the post-announcement period

	(+1,+30)			(+1,+270)		
	Full (1)	Domestic (2)	Cross border (3)	Full (4)	Domestic (5)	Cross border (6)
Tier-1	0.006	0.003	0.011	−0.133	−0.200*	0.148
	(0.015)	(0.015)	(0.065)	(0.084)	(0.084)	(0.334)
Tier-2	−0.002	−0.001	−0.007	−0.088	−0.065	−0.188
	(0.015)	(0.017)	(0.032)	(0.058)	(0.069)	(0.120)
Tier-3	0.012	0.009	0.034	0.046	0.032	0.163
	(0.010)	(0.012)	(0.025)	(0.043)	(0.049)	(0.111)
Cash	−0.250	−0.397	0.268	−0.393	−1.038*	0.452
	(0.226)	(0.269)	(0.309)	(0.559)	(0.586)	(1.459)
Relatedness	0.235	0.466	−0.014	0.493	1.370*	0.032
	(0.180)	(0.314)	(0.032)	(0.472)	(0.713)	(0.135)
Friendly	0.028	−0.027	0.418	0.349	0.161	0.932
	(0.270)	(0.217)	(0.353)	(0.797)	(0.707)	(1.696)
Private target	−0.595	−1.114	1.006	−0.707	−2.795	1.937
	(0.898)	(0.920)	(0.986)	(2.253)	(2.054)	(4.639)
Bidder financial industry	−0.000	−0.000	0.006	0.013	−0.003	0.064
	(0.008)	(0.009)	(0.021)	(0.034)	(0.037)	(0.080)
Market to book	−0.012	−0.030	−0.016	−0.021	−0.081*	−0.041
	(0.010)	(0.021)	(0.013)	(0.022)	(0.045)	(0.063)
ROA	0.056	0.067*	−0.801*	0.112	0.191*	−1.492
	(0.042)	(0.041)	(0.440)	(0.109)	(0.099)	(2.056)
Ln (total assets)	0.052	0.047*	0.021	0.122	0.165**	0.041
	(0.031)	(0.027)	(0.048)	(0.092)	(0.082)	(0.220)
English-original country	−0.022	0.054	−0.009	−0.070	0.074	−0.183
	(0.019)	(0.054)	(0.034)	(0.076)	(0.184)	(0.128)
Year	Yes	Yes	Yes	Yes	Yes	Yes
Country	Yes	Yes	Yes	Yes	Yes	Yes
Inverse mill's ratio (tier-1)	0.331*	0.188	−0.279	0.652	0.489	−0.372
	(0.193)	(0.116)	(0.401)	(0.552)	(0.436)	(1.863)
Inverse mill's ratio (tier-2)	0.698	1.351	−0.262	1.131	3.696*	−0.554
	(0.725)	(1.016)	(0.634)	(1.794)	(2.207)	(2.954)
Inverse mill's ratio (tier-3)	−0.289	0.079	−0.980**	−1.125	−0.253	−2.005
	(0.506)	(0.500)	(0.469)	(1.645)	(1.587)	(2.155)
Constant	−2.428	−3.863	1.560	−4.734	−11.019**	2.129
	(2.264)	(2.573)	(2.311)	(5.649)	(5.675)	(10.724)
N	3050	2552	498	3050	2552	498

Table 7 continued

	(+1,+30)			(+1,+270)		
	Full (1)	Domestic (2)	Cross border (3)	Full (4)	Domestic (5)	Cross border (6)
Adjusted R square	0.0332	0.0387	0.1121	0.0815	0.0845	0.2018

OLS regression analysis for bidders during the post-announcement period. The dependent variable is bidder 30-day (+1,+30) and 270-day (+1,+270) post-announcement returns. The independent variable includes tier-1 advisors, tier-2 advisors, tier-3 advisors, cash, relatedness, friendly deals, private targets, bidder financial industry, market to book ratio, ROA and ln (total assets). The dummy equals 1 if the payment method is cash, the deal is classified as diversification acquisition, the transaction is a friendly deal, the target is a private firm and the bidder is a financial firm. Market to book ratio is measured as market value of the equity to book value of the equity. ROA is measured as net income to total assets. Ln (total assets) is calculated as the log of total assets. English-origin country controls for the difference of the legal region for bidders from La Porta et al.'s (1998) study. Inverse mill's ratio is obtained by using two-stage Heckman (1979) procedure with controlling for deal and firm characteristics. The financial data is collected from the year end prior to the announcement date in the Datastream database. White's (1980) heteroskedasticity is used to compute the p value. Standard errors are reported in parentheses

* Significance at the 0.1 level

** Significance at the 0.05 level

*** Significance at the 0.01 level

advise their clients, it is expected that bidders can obtain higher benefits over a long term period. As can be seen in Table 7, this study does not find any significant relationship between the quality of financial advisors and bidder 30-day (+1,+30) post-announcement returns. Looking at 270-day (+1,+270) post-announcement period, this study finds interesting results for domestic deals. The results in model specification (5) show that there is a negative relationship between bidder long run post-announcement returns and tier-1 advisors. The coefficient is −0.200, indicating that bidders obtain lower long run post-announcement returns when hiring tier-1 advisors. While tier-1 advisors may require higher advisory fees, this can reduce the gains to bidders during the long run post-announcement period. This can lead to lower long run post-announcement returns to bidders in domestic deals.

6 Conclusion

This study explores the role of financial advisors on deal outcomes for bidding firms in the Asia Pacific market from 1995 to 2011. Using a comprehensive sample of 5271 bidders with the standard event study methodology, the results reveal that the quality of financial advisors appears to have an influence on bidder completion time. The findings indicate that bidders take longer time to complete the deals when hiring tier-3 advisors.

Interestingly, the results show that bidders obtain gains surrounding the announcement date, but suffer losses during the post-announcement period. Bidders with the use of financial advisors obtain higher returns than those without using financial advisors. More importantly, the results indicate that bidders advised by tier-3 advisors consistently obtain higher returns both around the announcement date and during the post-announcement period.

In the regression analysis, the results show that bidders obtain higher announcement returns surrounding the announcement date when hiring tier-2 and tier-3 advisors. The

empirical findings are robust when additionally controlling for year effects, country effects, and inverse mill's ratios. This solid evidence is hold when analyzing domestic deals only. When analyzing cross border deals, the evidence reveals that bidders advised by tier-2 advisors obtain higher announcement returns. Looking at 270-day (+1,+270) post-announcement period, the results interestingly show that bidders in domestic deals obtain lower returns when hiring tier-1 advisors.

Overall, the empirical evidence in this study indicates that the presence of financial advisors is an important determinant to influence bidder announcement returns in M&As. When bidders hire low reputation financial advisors to advise the deals, bidders do not need to pay higher advisory fees leading to higher announcement returns. In addition, less reputable financial advisors may put more effort to carefully evaluate the transactions in order to maintain their competitive advantages in the takeover advisory market. This can then create higher synergies to their clients after the transactions. Thus, bidders advised by less prestigious financial advisors can create higher value to their shareholders leading to higher post-announcement returns during the post-announcement period. As a result, the empirical findings in this study address the importance of financial advisors on firm performance in the Asia Pacific market.

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