Financial advisors, financial crisis, and shareholder wealth in bank mergers

K. S. Chuang [a,*], J. Danbolt [b] and K. Opong [b]

[a] Department of Finance, Tunghai University, 118, Sec.3, Taichung-Kan Rd., Taichuang, Taiwan

[b] The Business School, University of Glasgow, Main Building, Glasgow, G12 8QQ, Scotland, United Kingdom

*Corresponding author. E-mail: kschuang@thu.edu.tw

Abstract

This study investigates whether the quality of investment banks impacts shareholder wealth in bank mergers. Focusing on a US sample of 415 targets and 1,066 bidders from 1995 to 2010, we find that the quality of financial advisors appears to have a significant impact on shareholder wealth for bidding firms, but not for target firms. Our results find that bidders experience higher losses when hiring tier-1 advisors. Interestingly, further analysis shows that this finding holds during 'normal' periods, but not during the crisis (1997-1999 and 2007-2009) periods. With a significant negative relationship between tier-1 advisors and bidder announcement returns in the regression analysis, our results suggest that more prestigious financial advisors lead to larger losses for bidders in bank mergers. The results suggest overpayment by bidders when hiring more prestigious financial advisors in bank mergers. Our results also indicate the importance of financial advisors to bidder shareholder wealth.

I. Introduction

Merger and acquisition activities have significantly increased over the last decade. Andrade *et al*. (2001) argue that several factors, such as economic, regulatory and industrial shocks, may result in merger waves. Merger waves take place not only for industrial firms but also for financial firms. Banks may engage in mergers and acquisitions triggered by deregulation and globalization. On the other hand, banks may intend to combine with other financial firms in order to respond to economic shocks, such as financial crises. In this stream, banks may attempt to look for potentially suitable firms and enlarge their market shares through mergers and acquisitions. Some banks may hire investment banks to facilitate the transactions.[1]

Due to information asymmetry, the target or bidder may not have sufficient information to evaluate its merger partners. The merger participants may require an intermediary to gather information relevant to the firm and negotiate the transaction. Hence, investment banks play an important role for their clients in the process of mergers and acquisitions (McLaughlin, 1990; Kale *et al*., 2003; Schiereck *et al*., 2009). Schiereck *et al*. (2009) argue that investment banks assist their clients to identify potential bidders and targets. The use of investment banks can also facilitate deal completion where financial advisors

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[1] We use investment banks and financial advisors interchangeably in this study.

provide their knowledge and expertise in evaluating the deals (Servaes and Zenner, 1996; Schiereck *et al*., 2009; Wang and Whyte, 2010). In more complex transactions, investment banks offer valuable functions in reducing asymmetric information (Hunter and Jagtiani, 2003).

Additionally, investment banks also provide M&A advice in bidding strategy (Kale *et al*., 2003; Schiereck *et al*., 2009). The use of investment banks in mergers and acquisitions may enable bidding firms to uncover the true value of targets. In contrast, target firms may have more bargaining power when investment banks are hired. Accordingly, the reputation of financial advisors can be expected to influence the gains created by the transactions. Hence, the level of synergies from mergers and acquisitions may depend on the quality of financial advisors. To measure the quality of financial advisors, Rau (2000) classifies investment banks into three tiers of banks.[2] The author argues that this measure yields a stable ranking during the sampling period.

A growing body of literature has examined the effects of financial advisors in mergers and acquisitions (e.g., Servaes and Zenner, 1996; Hunter and Jagtiani, 2003; Ismail, 2009; Schiereck *et al*., 2009; Wang and Whyte, 2010; Golubov *et al*., 2011). For

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[2] Rau (2000) classifies the top five banks in any signal year as first-tier banks. The next 15 banks are grouped as second-tier banks. The remaining banks are categorized as third-tier banks.

example, Wang and Whyte (2010) report that bidders that use investment banks in mergers and acquisitions on average obtain lower gains than those that do not use investment banks. However, Golubov *et al.* (2011) report that bidders obtain higher gains in public acquisitions when hiring top-tier advisors, and Ismail (2009) reports the same findings when analyzing the internet bubble period. On the other hand, Ismail (2009) reports that targets earn higher gains when targets are advised by tier-1 investment banks.

However, prior empirical studies mainly focus on industrial firms. As financial firms, such as banks, operate in a highly regulated industry, the deals would draw much attention from the public and the government. On the other hand, given the complexity of financial firms and the need to comply with regulations, financial advisors can be expected to play a larger role in bank mergers than in mergers between non-financial firms. While prior empirical studies report mixed results on the influence of advisors on shareholder wealth in mergers and acquisitions, prior empirical evidence may not be applicable to financial firms. Thus, whether the quality of financial advisors impacts shareholder wealth in bank mergers remains an open question, which we address in this study.

This study addresses the following research questions: (1) Whether the use of financial advisors by target (bidding) firms has an effect on shareholder wealth; (2) Whether target (bidding) firms advised by investment banks with higher reputation obtain higher gains than those advised by investment banks with lower reputation; and (3) Whether target (bidding) firms that hire more reputable investment banks perform better during the crisis (1997-1999/2007-2009) periods relative to the normal period.[3] If investment banks play an important role in advising their clients, they can be expected to offer superior ability in advising their clients during a crisis period.

Using a sample of 415 US targets and 1,066 US bidders during the period of 1995-2010, we find that there is no significant difference in target announcement returns between those using and those not using financial advisors. The evidence further shows that targets advised by tier-3 advisors on average earn significantly higher announcement returns than those using tier-1 and tier-2 advisors. Splitting the sample into normal and crisis periods, the results show that targets obtain higher announcement returns during the normal period. The results suggest that targets in the presence of target financial advisors have higher bargaining power during the normal period. The results also

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[3] Cornett *et al*. (2011, p. 299) argue that "the financial crisis of 2007-2009 is the biggest shock to the US". Similarly, the financial crisis in 1997 also impacted the global financial market. To be consistent, we define the years of the financial crisis (crisis) as the period of 1997-1999 and 2007-2009. The rest of the years are classified as "normal" for the periods of 1995-1996, 2000-2006 and 2010.

indicate that targets advised by tier-3 advisors obtain significantly higher announcement returns both in the normal and crisis periods.

In addition, the evidence reveals that targets gain more when M&As take place during the 2007-2009 financial crisis period relative to the 1997-1999 financial crisis period. Our results indicate that more reputable financial advisors cannot create higher gains for target firms. However, financial advisors appears to have played an important role and created higher value for US targets during the 2007-2009 financial crisis period. When controlling for deal- and firm-specific characteristics in the regression analysis, we do not find any significant relationship between the quality of financial advisors and target announcement returns.

With regard to the empirical evidence for bidders, the results show that bidders obtain lower announcement returns when hiring financial advisors. Given the existence of financial advisors, we find that bidders advised by tier-1 advisors experience higher losses relative to those with tier-2 and tier-3 advisors. Partitioning the sample into normal and crisis periods, the results show that bidders generally experience higher losses during the crisis period. Interestingly, our results reveal that bidders advised by highly reputable financial advisors tend to have poor performance during the normal

period, but not in the crisis period. This suggests that financial advisors may have more ability to offer superior advisory service to their clients when M&As take place in the crisis period.

We also find that bidders obtain lower announcement returns during the 1997-1999 financial crisis period compared to the 2007-2009 financial crisis period. Controlling for deal- and firm-specific characteristics in the regression analysis, the results also indicate that more prestigious financial advisors are associated with lower bidder announcement returns. This finding is consistent with our previous results.

Overall, our results reveal the importance of the quality of financial advisors on the impact of shareholder wealth in bank mergers. The empirical evidence suggests that the quality of financial advisors plays an important role for bidding firms, but not necessarily for target firms. Bidder managers with the assistance of high-quality financial advisors may suffer from overconfidence when evaluating synergies for the deals.

This study makes several important contributions. First, we provide new evidence regarding the importance of the quality of financial advisors on the impact of

shareholder wealth in bank mergers. Our findings indicate that the quality of financial advisors can be an important determinant affecting shareholder wealth not only for industrial firms, but also for financial firms. More importantly, our study also makes a comparison to address shareholder wealth of the firm during the two financial crisis periods, taking into account the presence of financial advisors. While we find that the use of prestigious advisors generally to have a *negative* impact on bidding company performance, our findings indicate that financial advisors can provide superior advisory service when the market experiences a significant shock of financial crisis.

This paper is organized as follows. Related literature is reviewed in Section Two, while the hypotheses are developed in Section Three. The sample and methodology are presented in Section Four, followed by the empirical results in Section Five. The conclusions are provided in Section Six.

II. Review of related literature

The effects of financial advisors on shareholder wealth have been examined in prior empirical studies. However, prior empirical studies on mergers and acquisitions mainly look at industrial firms and pay less attention to financial firms. In addition, these studies report mixed results.

Looking at the evidence of acquiring firms, Bowers and Miller (1990) find that higher total wealth gains are created when either bidders or targets choose first-tier investment bankers. Servaes and Zenner (1996) examine bidder returns and find that the use of investment banks has no impact on the shareholder wealth of bidders, while Wang and Whyte (2010) report that bidders using investment banks experience wealth losses when bidding firms have strong management. However, wealth losses can be alleviated when more reputable financial advisors are hired.

Several prior studies extend to examine the impact of the quality of investment banks on abnormal returns. Bowers and Miller (1990) report that bidder returns are lower when first-tier investment banks are used. Similar findings have also been documented in the studies of McLaughlin (1992), Servaes and Zenner (1996), Rau (2000), Rau and Rodgers (2002), Hunter and Jagtiani (2003) and Allen *et al*. (2004). McLaughlin (1992) argues that financial advisors with high reputation tend to be involved in difficult transactions and thus require higher premia. This can reduce the benefits to bidding firms. Walter *et al*. (2008) also report similar results. However, Rau (2000) reports conflicting results, with bidders obtaining higher gains when employing first-tier investment banks in tender offers. Golubov *et al*. (2011) similarly find that bidders gain

more in public acquisitions when hiring top-tier advisors.

In addition, Ismail (2009) analyzes the performance of financial advisors in relation to the market condition. The author reports that financial advisors with high reputation create more gains to bidders during the bubble period between 1995 and 2000 than those with low reputation. However, bidders obtain lower gains outside the bubble period when hiring more reputable financial advisors. Moreover, bidders experience higher losses during the bear market period between 2000 and 2002 when tier-one advisors are hired.

Turning to the evidence for targets, McLaughlin (1992) finds no significant relationship between the quality of investment banks and target premia. Chahine and Ismail (2009) lend support to this point in their study. In addition, several studies explore the link between abnormal returns and the reputation of investment banks. Water *et al*. (2008) report that targets earn lower abnormal returns when more reputable advisors are selected. Schiereck *et al*. (2009) find similar results and document that their findings do not support higher target gains in association with the choice of first-tier banks relative to other banks.

However, such findings are not supported by all studies. For example, Bowers and Miller (1990) report that targets gain more if either the target or bidder is advised by a first-tier advisor, and Allen *et al*. (2004) find that targets obtain higher gains when targets employ its own banks as financial advisors.

In sum, several studies have examined the role of investment banks on the influence of shareholder wealth. However, the prior studies report mixed results, and the studies do not provide a clear picture of the effects of financial advisors in M&As. Furthermore, prior studies mainly focus on industrial firms, not financial firms. As banks are highly regulated, results from prior studies may not hold for financial firms. This suggests a need for further research. As a result, this study extends prior empirical studies to explore whether the quality of financial advisors impacts shareholder wealth in bank mergers.

III. Hypotheses development

To examine the importance of the role of investment banks on the influence of wealth gains in mergers and acquisitions, the hypotheses are developed as follows. According to the superior deal hypothesis, investment banks with higher reputation can offer their experience and expertise in evaluating transactions. These investment banks have more

ability to identify good candidates and get better merger proposals (Kale *et al*., 2003; Ismail, 2009; Schiereck *et al*., 2009). Wang and Whyte (2010) argue that investment banks tend to be employed when deals are more complex. Rau (2000) and Schiereck *et al*. (2009) also argue that the existence of investment banks is an important determinant of the bank's market share that can affect the performance of the bidding firm. Thus, the choice of more reputable investment banks can be expected to offer higher bargaining power to the firm and deals can be negotiated on more favorable terms to them. From this, it can be expected that the use of investment banks or more reputable investment banks will lead to higher gains to the firm in bank mergers. While the financial crisis had a significant impact on the banking industry, and possibly made acquisitions more risky and complex, more reputable financial advisors may have a greater ability to look for firms valuable to their clients. Thus, it can be further predicted that investment banks can create higher synergies to the firm during the period of the financial crisis.

In addition, the deal completion hypothesis argues that investment banks have strong incentives to complete transactions due to their contingent fees (Rau, 2000; Walter *et al*., 2008; Ismail, 2009; Chahine and Ismail, 2009). While investment banks are concerned about their fee income, they do not intend to increase acquisition prices to a level that may damage their reputation capital (McLaughlin, 1990; Golubov *et al*., 2011). Walter *et*

al. (2008) similarly argue that advisors are only interested in completing transactions faster. They argue that the reputation of investment banks only relates to the completion of deals. If this is the case, the gains earned by their clients can be expected to have no relationship to the quality of their advisor. Thus, this hypothesis predicts that there is no relationship between gains to the firm and the use of investment banks or more reputable investment banks. Furthermore, it can be predicted that investment banks have no impact on the gains for the firm during the period of the financial crisis. We test these alternative hypotheses in Section Five.

IV. Sample and methodology

Sample selection

The sample of mergers and acquisitions in the US is obtained from Thomson Financial SDC One Banker database. The investigation period covers the years from 1995 to 2010. To be included in the sample, each transaction is required to meet the following criteria. We require the bidding firm to be a bank and the target firm to be a financial firm. This criterion enables the current study to further control for the factor of diversifying or focusing deals.[4] This criterion leads to an initial sample of 19,024 transactions in the

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[4] We use SIC code to classify a bank or a financial firm, where the firm with a 2-digit SIC code 60XX is classified as a bank and the firm with a 1-digit SIC code 6XXX is categorized as a financial firm. Similarly, SIC code is also used to determine whether the transaction is a diversifying or focusing deal. The deal is classified as focusing if the target and bidder share the same 2-digit (60XX) SIC code; otherwise, diversifying if the target and bidder share the same 1-digit (6XXX) SIC code.

US.

Requiring either the target or bidding firm to be listed reduces the sample to 13,169

transactions. The sample is further restricted to deals classified as acquisition of majority

interest, merger or exchange offer. The transaction must be complete and the transaction

value is restricted to be at least 10 million US dollars so as to reduce any bias induced by

small deals. This reduces the sample to 2,581 deals. We further require that the bidding

firm owns more than 50% of the target shares after the transaction in order to focus on

the change of control. Accordingly, a further 30 transactions are eliminated from the

sample, leaving 2,551 deals. As hostile takeovers are rare among banking firms, we

further remove three hostile deals.

Share prices and financial data were collected from Datastream. If share price is missing,

the transaction is removed from the sample. Financial characteristics are gathered from

the calendar year end prior to the announcement date. To avoid any bias resulting from

confounding events, we also control for a 3-day (-1,+1) event window without any

announcement of other corporate events. The SEC filings database is employed to

control for this issue. The final sample contains 415 targets and 1,066 bidders.

The measurement of the reputation of the financial advisor

Investment banks usually offer their expertise and experience in the process of mergers and acquisitions. An investment bank's reputation largely depends on its past performance (Chemmanur and Fulghieri, 1994; Walter *et al*., 2008). Prior studies usually use a static ranking system to measure the quality of financial advisors (McLaughlin, 1992; Rau, 2000). Rau (2000) argues that this measurement can obtain a stable ranking to measure the quality of financial advisors. However, Da Silva Rosa *et al*. (2004) and Walter *et al*. (2008) argue that this ranking procedure does not take into account the dynamics of the M&A advisor market that may alter the level of financial advisor quality. Therefore, Walter *et al*. (2008) use a three-year rolling window to measure the rank of financial advisors.

However, the dynamic measurement may be biased when the M&A advisor market experiences a major shock in relation to the market condition. For example, when the financial crisis took place in 1997, a three-year rolling window would also cover the years 1995 and 1996 in determining the quality of financial advisors. It can be argued that Walter *et al*.'s (2008) dynamic measurement of financial advisor quality cannot truly reflect the quality of financial advisors in a year of financial crisis. Thus, Walter *et al*.'s (2008) dynamic measurement may potentially overestimate the quality of financial

advisors in a year of financial crisis when analyzing financial advisors on the impact of

the firm in mergers and acquisitions. Thus, we measure the rank of financial advisors in

the previous year during the sampling period from the league table in the SDC database.

For bank mergers taking place in 1995, the quality of investment banks is measured

from the year of 1994, etc. This allows the measure of financial advisor quality to better

match the market condition in this study.

In addition, prior studies usually classify financial advisors into two or three tiers on the

basis of their market share in the takeover market (McLaughlin, 1992; Rau, 2000;

Saunders and Srinivasan, 2001; Chahine and Ismail, 2009; Ismail, 2009). Chahine and

Ismail (2009) argue that the reputation of financial advisors is built on the basis of their

permanent success in providing quality service to their clients. Walter *et al*. (2008) argue

that league table rankings are commonly used to measure the quality of financial

advisors. Following Rau's (2000) study, the quality of financial advisors is measured by

the market share as a fraction of the total value of transactions advised by investment

banks in the previous year. Similarly, we classify the top five banks in the previous year

as first-tier investment banks. The next 15 banks, ranked 6-20, are grouped as

second-tier investment banks, with the remaining banks categorized as third-tier

investment banks.[5]

Control variables

Several prior studies have demonstrated the importance of deal and firm characteristics on abnormal returns in M&As. Controlling for these characteristics enables the current study to more precisely examine the relationship between the quality of financial advisors and the abnormal returns of the firm. Thus, this study controls for the effects of relatedness, the payment method, performance, growth potential, capital ratio and firm size.

DeLong (2001) argues that focusing deals may create value to the firm. Managers may have more ability to manage similar risks. However, diversifying transactions may result in risk reduction (Beitel *et al*., 2004). Several studies report that focused activities create more value than diversifying transactions (Cybo-Ottone and Murgia, 2000; DeLong, 2001, 2003; Beiel *et al*., 2004). Following Campa and Hernando (2004) and Hagendorff *et al*. (2008), we control for the variable of relatedness for focusing and diversifying deals. The deals are classified as focusing if the target and bidder share the same 2-digit (60XX) SIC code; diversifying with the same 1-digit (6XXX) SIC code. Relatedness is a

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[5] If targets or bidders are advised by more than one financial advisor, we use the highest ranking financial advisor to measure the quality of their advisors.

dummy variable taking the value 1 if the deals are diversifying transactions and 0 if focused.

According to the tax implication hypothesis (Hansen, 1987), target shareholders may be liable to pay tax immediately when payment is cash. Furthermore, according to the information asymmetry hypothesis, bidders may have superior information about their firms. Managers may offer stock payment when their stock is overvalued (Myers and Majluf, 1984; Houston and Ryngaert, 1994). DeLong (2003) and Ismail and Davidson (2005) find that targets receiving cash payment earn higher announcement returns. Hagendorff *et al*. (2008) find that bidder announcement returns are positively associated with cash payment. Following Hagendorff *et al*. (2008), method of payment is controlled for by a dummy variable taking the value 1 where there is full cash payment and 0 where there is stock or mixed payment.

With regard to firm characteristics, Akhigbe *et al*. (2004) find that target announcement returns are positively related to return on assets measured as net income to total assets, while Ismail and Davidson (2007) find that target announcement returns are positively associated with target profitability measured as return on average assets. However, Beitel *et al*. (2004) report inconsistent results. In addition, Hagendorff *et al*. (2008) find

that bidders obtain higher returns when bids are made by profitable banks. Following

Akhigbe *et al*. (2004), profitability (ROA) is measured as net income to total assets.

A higher level of capital ratio can serve as a cushion against unexpected losses for the

bank (Akhigbe*et al*., 2004; Valkanov and Kleimeier, 2007). Akhigbe *et al*. (2004) find

that target announcement returns are positively associated with the capital ratio.

Baradwaj *et al*. (1991) and Grullon *et al*. (1997) similarly find that bidder cumulative

abnormal returns are positively related to the capital ratio. However, Cornett *et al*. (2003)

report a negative relationship between bidder cumulative abnormal returns and the

capital ratio. Following Cornett *et al*. (2003), the capital ratio is measured as total capital

to total assets.

A firm with high growth potential is arguably more attractive. Such a firm may also

appear to be more expensive. Akhigbe *et al*. (2004) and Goergen and Renneboog (2004)

find that target announcement returns are positively related to the market to book ratio.

Moeller and Schlingemann (2005) report that bidder announcement returns are

positively correlated to their market to book ratio. Growth potential is proxied by the

market to book ratio, where the ratio is defined as the market value of equity to the book

value of equity.

Taking into account firm size, Valkanov and Kleimeier (2007) find that target announcement returns are negatively related to target size. Subrahmanyam *et al*. (1997) and Fields *et al*. (2007) also find that bidder cumulative abnormal returns are negatively associated with bidder size. Thus, we control for firm size, measured as ln(total assets).

Methodology

To examine the quality of financial advisors on the effects of bank merger and acquisition announcements for the firms, we follow Brown and Warner's (1985) study and use the standard event study methodology. The market model is applied to calculate the abnormal returns. The market model parameters are estimated from day -286 to day -31, where day 0 is the announcement date. The Datastream market index for the US market is selected as the benchmark for the market (TOTMKUS). The abnormal returns are calculated by subtracting expected returns from actual returns.[6]

$$\mathrm{AR}_{it} = R_{it} - (\alpha + \beta R_{mt})$$

Where:

AR_{it} $\quad = \quad$ the abnormal return for stock i on day t,

R_{it} $\quad = \quad$ the return on stock i on day t,

R_{mt} $\quad = \quad$ the return for the market on day t,

α, β $\quad = \quad$ the market model parameters

The cumulative abnormal returns are calculated by aggregating the abnormal returns over a certain period of the event window. While the price tends to have a significant impact in the time surrounding the announcement date, focusing on short term event windows, such as (-1,+1) and (-2,+2), can be expected to better capture the effects of financial advisors on shareholder wealth.[7] In addition, cross-sectional t-statistic is used to test the significance level for the hypothesis, H_0: mean abnormal returns are equal to 0.

To better understand the impact of the quality of investment banks on shareholder wealth in bank mergers, we apply cross-sectional regression analysis, controlling for relatedness, cash payment, performance, growth potential, capital ratio, and firm size. This also enables the current study to explore the determinants that can affect the announcement returns in bank mergers. The regression model is specified as follows:

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[7] To capture the effects from the pre/post-announcement period, we also use an 11-day (-5,+5) event window in this study. As the results are qualitatively the same, we only report our findings based on 3-day (-1,+1) and 5-day (-2,+2) event windows.

$$\text{CAR}_i = \alpha_0 + \beta_1 \text{Tier-1} + \beta_2 \text{Crisis} + \beta_3 \text{Interactive} + \beta_4 \text{Relatedness} + \beta_5 \text{Cash} +$$

$$\beta_6 \text{ROA} + \beta_7 \text{Growth Potential} + \beta_8 \text{Capital Ratio} + \beta_9 \text{Ln(Total Assets)} + \varepsilon_i$$

Tier-1 is a dummy taking the value 1 if tier-1 financial advisors are hired. Crisis is a dummy taking the value 1 if bank mergers take place during the crisis (1997-1999 and 2007-2009) periods. Interactive indicates an interactive term, calculated by the quality of financial advisors multiplied by the crisis period dummy variable, thus taking the value 1 if tier-1 financial advisors are hired during the crisis period. Relatedness is a dummy, taking the value 1 if the deals are classified as diversifying. Cash is a dummy, taking the value 1 if the deal is paid in cash. ROA is measured as net income to total assets. Growth potential is proxied by the market to book ratio of equity. The capital ratio is calculated as total capital to total assets, while size is measured as the natural log of total assets.

V. Empirical results

Descriptive statistics

Table 1 presents summary descriptive statistics for the sample of bank mergers. Panel A in Table 1 shows that tier-1 advisors that are hired by targets tend to engage in large transactions, with these deals having a mean transaction value of 9,269 million US

dollars. The same finding can be observed for bidding firms. Bidders advised by tier-1 advisors undertake transactions with a mean value of 3,576 million US dollars.

[Insert Table 1 here]

In panel B, we present the summary of the firm-specific characteristics of the sample. The figure shows that bidders tend to have higher growth potential, with the mean value of the market to book ratio at 2.08 relative to that of targets at 1.65. In addition, targets on average appear to hold higher capital ratio than bidders, with the capital ratio at 0.20 and 0.15 for targets and bidders, respectively. This suggests that target managers may manage their capital inefficiently. Although bidders tend to be larger than targets, the performance of targets and bidders appears to be the same.

Empirical findings for targets

Target abnormal returns based on the quality of financial advisors

This section presents empirical findings for targets with/without financial advisors and also with different quality of financial advisors. The results in Table 2 show that targets earn positive announcement returns regardless of whether they use financial advisors. The results are all statistically significant. However, the results show that targets that do

not hire financial advisors on average obtain slightly higher gains relative to those hiring

financial advisors. These findings suggest that the use of financial advisors can reduce

gains for targets. A possible explanation is that targets with financial advisors need to

pay advisory fees, thus reducing the gains to target firms. However, the difference in

abnormal returns between target banks with investment bank advisors and those without

is small and not statistically significant.

[Insert Table 2 here]

While taking into account the quality of financial advisors, the results reveal that targets

advised by tier-3 advisors on average earn higher announcement returns than those

advised by tier-1 and tier-2 advisors. For example, targets advised by tier-3 advisors on

average earn 19% cumulative abnormal returns, substantially higher than the

approximately 12% cumulative abnormal returns for those with tier-1 and tier-2 advisors

over a 3-day (-1,+1) event window. The results are all statistically significant.[8] While

more reputable financial advisors may require higher advisory fees in accordance with

their advisory service, our findings suggest that the use of more prestigious advisors

reduce the gains to targets as a result of lower announcement returns. Thus, our findings

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[8] We also use the nonparametric statistics in terms of Kruskal-Wallis test to examine whether target gains are different on the basis of the three tiers of financial advisors. The results are statistically significant.

do not support the superior deal hypothesis. Our results are consistent with the studies of

Walter *et al*. (2008) and Schiereck *et al*. (2009), but contradict Ismail's (2009) findings,

where Ismail (2009) reports that targets advised by tier-1 investment banks on average

gain more relative to those advised by tier-2 advisors.

Target announcement returns during crisis and normal periods

This section presents the empirical evidence for target firms, taking into account the

periods of normal and crisis years and the quality of financial advisors.[9] If high quality

of financial advisors plays an important role in mergers and acquisitions, they can be

expected to better negotiate deals with favorable terms for target firms in a crisis periods.

As Table 3 shows, targets on average obtain marginally higher announcement returns

during normal years, averaging 17.58% over a 3-day (-1,+1) event window, compared to

16.14% in the crisis period. While the levels of abnormal returns are statistically

significant, the differences in abnormal returns between the normal and crisis periods are

not.

[Insert Table 3 here]

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[9] Cornett *et al*. (2011, p. 299) argue that "the financial crisis of 2007-2009 is the biggest shock to the US.". Similarly, the financial crisis in 1997 also impacted the global financial market. To be consistent, we define the years of the financial crisis (crisis) as the periods of 1997-1999 and 2007-2009. The rest of the years are classified as "normal", comprising the periods of 1995-1996, 2000-2006, and 2010.

We further partition the sample based on the quality of financial advisors during the periods of the normal and crisis years.[10] Consistent with our previous findings in Table 2, we find that targets advised by tier-3 advisors obtain higher gains than those advised by tier-1/2 advisors regardless of the time period. The difference is statistically significant at the 0.01 level in the normal period only.

Taking into account the period of the crisis years, we also split the sample on the basis of the different periods of 1997-1999 and 2007-2009. This allows the current study to compare the effect of the quality of financial advisors on shareholder wealth during these two financial crisis periods. The results show that financial advisors tend to create higher gains to targets in the period of 2007-2009 than in the period of 1997-1999. Our findings show that targets obtain cumulative abnormal returns at around 21% during the 2007-2009 crisis period relative to some 14% during the 1997-1999 crisis period. However, while the levels of cumulative abnormal returns are significant, the differences are not statistically significant.

Cross-sectional regression analysis for targets

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[10] Due to a small sample, and due to the similarity of results for the two groups, as displayed in Table 2, we aggregate tier-1 and tier-2 advisors in one group and compare these to tier-3 advisors.

This section provides cross-sectional regression analysis for targets in order to examine

the level of investment banks on the influence of shareholder wealth. The regression

analysis also controls for the deal and firm characteristics.[11]

To investigate the impact of the quality of financial advisors on target shareholder

wealth, we use the dummy variable for target advisors. The dummy equals to 1 if target

advisors are classified as tier-1 advisors; 0 otherwise. We also control for the crisis

period dummy in order to examine how financial advisors perform towards target firms

in the crisis period compared to the normal period. The dummy equals to 1 if M&As

take place during the 1997-1999 and 2007-2009 crisis periods. In addition, we also

control for the interactive term between the dummy of tier-1 advisors and the crisis

period in the regression analysis to better understand whether more reputable financial

advisors create higher gains to target shareholders during the crisis period. For the deal

characteristics, we control for a relatedness dummy and a cash dummy. With regard to

firm characteristics, the regression analysis further controls for profitability (ROA),

growth potential (market to book ratio), capital ratio, and firm size (ln(total assets)).

The results in Table 4 show that there is an insignificant negative relationship between

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[11] We delete the top and bottom 1% target 3-day (-1,+1) cumulative abnormal returns in order to
control for outliers in the regression analysis.

tier-1 advisors and target announcement returns. With regard to control variables, the results indicate that higher gains to targets are associated with lower growth potential and smaller targets. As can be seen in Table 4, there is a significant increase in explanatory power in terms of adjusted R squared, from around 0 to 4% when additionally controlling for firm characteristics. This suggests the importance of controlling for firm characteristics in the regression analysis.

[Insert Table 4 here]

Empirical findings for bidders

Bidder abnormal returns based on the quality of financial advisors

This section reports the empirical results for bidders with/without financial advisors, and the quality of financial advisors. As shows in Table 5, the results reveal that bidders obtain negative announcement returns regardless of the presence of financial advisors. The empirical evidence shows that bidders who use financial advisors experience higher losses than those who do not hire financial advisors. For example, bidders that hired financial advisors obtain -1.61% cumulative abnormal returns over a 3-day (-1,+1) event window relative to -0.26% for those who did not hire financial advisors. The difference is statistically significant at the 0.01 level. The results suggest that financial advisors

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may concentrate on completing deals than on getting the best deal for their clients.

[Insert Table 5 here]

Given the use of financial advisors, we further analyze bidder announcement returns based on the quality of financial advisors in order to examine whether high-quality financial advisors outperform those of low quality. As can be seen in Table 5, bidders advised by tier-1 advisors on average experience higher losses than those advised by tier-2 and tier-3 advisors. These findings are consistent with prior studies, e.g., McLaughlin (1992), Servaes and Zenner (1996), Rau (2000), Rau and Rodgers (2002), Hunter and Jagtiani (2003), and Allen *et al*. (2004). However, the differences in returns between banks with different tiers of advisors are not statistically significant.

Bidder announcement returns in different periods

To better understand whether reputable financial advisors outperform those with poor reputation during the financial crisis periods, we further partition the sample based on normal and financial crisis periods. Given the presence of financial advisors, Table 6 shows that bidders on average experience slightly higher losses during the financial crisis period than those in the normal period, of -1.70% versus -1.55%. Both are

statistically significant at the 0.01 level, but not significantly different from each other.

[Insert Table 6 here]

However, the results show that bidders advised by tier-1/2 advisors on average experience higher losses during the normal period than those advised by tier-3 advisors, suggesting that the use of higher quality of financial advisors generally result in worse performance to bidding firms during the normal period.

Interestingly, however, we find conflicting results during the crisis period. The results show that more prestigious investment banks appear to have better performance in the crisis period than less reputable financial advisors. This finding indicates that more reputable financial advisors seem to offer their expertise in negotiating transactions during crisis periods. Our findings also illustrate the importance of financial advisors to bidders when M&As take place during crisis periods.

Additionally, we also examine the impact of bidder shareholder wealth during different crisis periods. This sheds light on whether there is any difference in bidder announcement returns during these two financial crisis periods. The evidence shows that

bidders on average experience higher losses during the 1997-1999 crisis period than the

2007-2009 crisis period. The difference between these two financial crisis periods is

statistically significant.

Cross-sectional regression analysis for bidders

To determine the impact of the quality of financial advisors on bidder shareholder wealth,

we also control for deal- and firm-specific characteristics. With regard to control

variables, the results show that bidders obtain higher gains when the payment method is

cash and when bidders have a higher capital ratio. However, more importantly, the

results show that announcement returns are lower for bidders using tier-1 advisors.

These results hold when we control for the crisis versus normal periods, with bidders

that use first-tier financial advisors obtaining lower announcement returns in bank

mergers.[12] The findings lend support to our previous results. The results are also

consistent with prior studies (e.g., Servaes and Zenner, 1996, Rau, 2000, Hunter and

Jagtiani, 2003, Allen *et al*., 2004, Walter *et al*., 2008).

[Insert Table 7 here]

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[12] We also use a 5-day (-2,+2) event window as the dependent variable. The results qualitatively remain the same.

VI. Conclusion

This study investigates whether firms advised by investment banks with higher reputation obtain higher gains, and whether firms that hire financial advisors with high reputation have better performance during the period of financial crisis. Focusing on financial firms and using a sample of 415 US targets and 1,066 US bidders from 1995 to 2010, the results show that targets advised by tier-3 advisors on average earn higher announcement returns relative to those by tier-1 and tier-2 advisors, and tier-3 advisors on average create higher returns to targets during both normal and crisis period. However, the regression analysis cannot find any significant relationship between tier-1 advisors and target announcement returns.

In addition, the evidence reveals that bidders advised by tier-1 advisors generally obtain lower announcement returns than those advised by less prestigious advisors although bidders on average experience negative announcement returns. Interestingly, our results show that bidders advised by tier-1 advisors on average experience larger losses during the normal period, but not to the crisis period. The regression analysis lends support to the point that bidders advised by tier-1 advisors are associated with lower bidder announcement returns.

Overall, our findings suggest that financial advisors appear to play a good role for bidding firms, but not to target firms. Specifically, we find that tier-1 financial advisors tend to outperform during the crisis period, suggesting that tier-1 financial advisors can be expected to carefully evaluate the transactions during the crisis period for bidding firms. As bidders advised by more prestigious financial advisors experience larger losses in bank mergers, the results suggest that bidder managers advised by more prestigious financial advisors may be overconfident when evaluating synergies. However, more reputable financial advisors may be more valuable in acquisitions during crisis periods.

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Table 1. Summary descriptive statistics

Panel A

	Target			Bidder		
	Mean deal value	Total deal value	N	Mean deal value	Total deal value	N
Tier-1	9,269	583,972	63	3,576	300,368	84
Tier-2	1,110	42,194	38	1,069	40,628	38
Tier-3	390	108,528	278	475	175,865	270

Panel B

	Target				Bidder			
	Mean	SD	Max	Min	Mean	SD	Max	Min
ROA	0.01	0.02	0.21	-0.06	0.01	0.00	0.03	-0.04
Growth	1.65	0.68	4.67	0.15	2.08	0.91	5.99	0.04
Capital	0.20	0.12	1.05	0.05	0.15	0.06	0.54	0.06
Ln(Total assets)	14.09	1.82	20.74	10.76	15.25	1.72	21.26	11.14

Table 1 presents the summary of descriptive statistics for targets and bidders. The sample includes 415 targets and 1,066 bidders from 1995 to 2010. Panel A presents mean deal value and total deal value for targets and bidders based on the quality of financial advisors. The top five investment banks in any previous year are classified as tier-1 investment banks; the top 6-20 investment banks as tier-2 investment banks; below 20 as tier-3 investment banks. The value is measured as millions of dollars. Panel B presents summary descriptive statistics for firm characteristics. ROA is measured as net income to total assets. Growth (market to book ratio) is measured as market value of the equity to book value of the equity. Capital is measured as total capital to total assets. Ln(Total assets) 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.

Table 2. Target abnormal returns by quality of investment bank advisor

	With IB					Without IB	Difference
		tier-1	tier-2	tier-3	Kruskal-Wallis		
(-1,+1)	**0.1718**	**0.1230**	**0.1197**	**0.1900**	**4.8100**	**0.1744**	-0.0026
p-value	0.0000	0.0000	0.0900	0.0000	0.0900	0.0000	0.9420
(-2,+2)	**0.1750**	**0.1217**	0.1198	**0.1947**	**7.5500**	**0.1866**	-0.0116
p-value	0.0000	0.0000	0.1070	0.0000	0.0230	0.0000	0.7370
N	379	63	38	278		36	

Table 2 presents empirical results for targets with/without the use of financial advisors and the quality of financial advisors. If the firm does not hire investment banks or no investment banks are retained, the sample is categorized as "without IB". "Difference" captures the difference in abnormal returns between banks with and banks without investment bank advisors. The event study methodology with the market model is used to calculate the abnormal returns. The model parameters are estimated from day -286 to day -31, 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 for the three tiers of financial advisors.

Table 3. Target abnormal returns, quality of investment bank advisor and the effect of financial crises

	Normal				Crisis							Difference(1)
		tier-1/2	tier-3	Difference(2)		tier-1/2	tier-3	Difference(3)	1997-1999	2007-2009	Difference(4)	
(-1,+1)	**0.1758**	**0.1176**	**0.1933**	**0.0757**	**0.1614**	**0.1273**	**0.1827**	0.0625	**0.1371**	**0.2121**	-0.0749	0.0117
p-value	0.0000	0.0000	0.0000	0.0020	0.0000	0.0480	0.0000	0.3620	0.0000	0.0010	0.2410	0.6590
(-2,+2)	**0.1812**	**0.1217**	**0.1990**	**0.0773**	**0.1631**	**0.1201**	**0.1848**	0.0646	**0.1402**	**0.2037**	-0.0635	0.0181
p-value	0.0000	0.0000	0.0000	0.0020	0.0000	0.0750	0.0000	0.3450	0.0000	0.0030	0.3410	0.5080
N	251	58	193		128	43	85		82	46		

Table 3 presents empirical evidence for targets regarding the normal and crisis periods. The normal period includes the years1995-1996, 2000-2006, and 2010. The crisis period includes the years1997-1999 and 2007-2009. 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. "Difference (1)" captures the difference in abnormal returns between the normal and crisis periods. "Difference (2)" captures the difference in abnormal returns between banks with tier-1/2 advisors and banks with tier-3 financial advisors during the normal period. "Difference (3)" captures the difference in abnormal returns between banks with tier-1/2 advisors and banks with tier-3 financial advisors during the crisis period. "Difference (4)" captures the difference in abnormal returns between bank M&As in the 1997-1999 crisis period and bank M&As in the 2007-2009 crisis period. The sample only includes targets that hire investment banks.

Table 4. Cross-sectional regression analysis of target cumulative abnormal returns

	(1)	(2)	(3)	(4)	(5)
(Constant)	0.172***	0.391***	0.401***	0.400***	0.396***
Relatedness	0.024		0.034	0.030	0.031
Cash	0.013		-0.002	0.001	0
ROA		0.075	-0.127	-0.211	-0.143
Growth		-0.041***	-0.041***	-0.042***	-0.043***
Capital		-0.102	-0.123	-0.115	-0.122
ln(total assets)		-0.009*	-0.010*	-0.010*	-0.010*
Tier-1	-0.018	-0.013	-0.013	-0.013	0.000
Crisis				0.019	0.021
Interactive					-0.029
Adjusted R^2	-0.002	0.044	0.045	0.046	0.044
F-value	0.683	4.587	3.598	3.315	2.996
(p-value)	(0.563)	(0.000)	(0.001)	(0.001)	(0.002)
N	405	387	387	387	387

Table 4 presents cross-sectional regression analysis for targets. The sample of the top and bottom 1% target 3-day (-1,+1) cumulative abnormal returns is deleted in order to control for outliers. The dependent variable is target 3-day (-1,+1) cumulative abnormal returns. The independent variable includes the dummy of relatedness, cash, ROA, growth, capital ratio, ln(total assets), tier-1, crisis and interactive. Interactive is calculated as the dummy of tier-1 financial advisors multiplied by the dummy of the crisis period. The dummy equals to1 if the deal is classified as diversification, payment is cash, target advisors are classified as tier-1 investment banks, and bank mergers take place in the crisis period. ROA is measured as net income to total assets. Growth (market to book ratio) is measured as the market value of the equity to the book value of the equity. Capital is measured as total capital 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 transaction in the Datastream database. White's (1980) heteroskedasticity is used to compute p-value. *** indicates significance at 0.01 level; ** indicates significance at 0.05 level; * indicates significance at 0.1 level.

Table 5. Bidder abnormal returns by quality of investment bank advisor

	With IB					Without IB	Difference
		tier-1	tier-2	tier-3	Kruskal-Wallis		
(-1,+1)	**-0.0161**	**-0.0219**	-0.0107	**-0.0153**	1.8800	-0.0026	**-0.0135**
p-value	0.0000	0.0010	0.2390	0.0000	0.3900	0.2370	0.0000
(-2,+2)	**-0.0149**	**-0.0216**	-0.0126	**-0.0136**	2.1300	-0.0019	**-0.0130**
p-value	0.0000	0.0010	0.1560	0.0000	0.3440	0.4630	0.0000
N	492	84	38	370		574	

Table 5 presents empirical results for bidders with/without the use of financial advisors, and the quality of financial advisors. If the firm does not hire investment banks or no investment banks are retained, the sample is categorized as "without IB". "Difference" captures the difference in abnormal returns between banks with and banks without investment bank advisors. The event study methodology with the market model is used to calculate the abnormal returns. The model parameters are estimated from day -286 to day -31, 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 the abnormal returns for the three tiers of financial advisors.

Table 6. Bidder abnormal returns, quality of investment bank advisor, and the effect of financial crises

	Normal				Crisis							Difference(1)
		tier-1/2	tier-3	Difference(2)		tier-1/2	tier-3	Difference(3)	1997-1999	2007-2009	Difference(4)	
(-1,+1)	**-0.0155**	**-0.0215**	**-0.0128**	-0.0087	**-0.0170**	**-0.0152**	**-0.0197**	0.0045	**-0.0230**	-0.0002	**-0.0228**	0.0015
p-value	0.0000	0.0020	0.0000	0.2340	0.0000	0.0460	0.0000	0.6240	0.0000	0.9880	0.0690	0.7690
(-2,+2)	**-0.0156**	**-0.0243**	**-0.0120**	**-0.0123**	**-0.0139**	**-0.0131**	**-0.0164**	0.0033	**-0.0195**	0.0018	-0.0213	-0.0017
p-value	0.0000	0.0000	0.0000	0.0900	0.0050	0.0820	0.0080	0.7350	0.0000	0.8790	0.1010	0.7580
N	298	62	236		194	60	134		140	50		

Table 6 presents empirical evidence for bidders in normal and crisis year periods. The classification of the period depends on the occurrence of financial crisis. The normal period includes the years 1995-1996, 2000-2006, and 2010. The crisis period includes the years 1997-1999 and 2007-2009. 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. "Difference (1)" captures the difference in abnormal returns between the normal and crisis periods. "Difference (2)" captures the difference in abnormal returns between banks with tier-1/2 and banks with tier-3 financial advisors during the normal period. "Difference (3)" captures the difference in abnormal returns between banks with tier-1/2 and banks with tier-3 financial advisors during the crisis period. "Difference (4)" captures the difference in abnormal returns to bank M&As in the 1997-1999 crisis period vs. bank M&As in the 2007-2009 crisis period. The sample only includes targets that hire investment banks.

Table 7. Cross-sectional regression analysis of bidder cumulative abnormal returns

	(1)	(2)	(3)	(4)	(5)
(Constant)	-0.010***	0.000	-0.001	0.000	0.000
Relatedness	0.003		0.003	0.003	0.002
Cash	0.008**		0.008**	0.008**	0.008**
ROA		0.251	0.214	0.206	0.203
Growth		-0.001	-0.001	0.000	0.000
Capital		0.047***	0.045***	0.044**	0.043**
ln(total assets)		-0.001	-0.001	-0.001	-0.001
Tier-1	-0.010**	-0.009**	-0.009**	-0.008**	-0.014**
Crisis				-0.001	-0.002
Interactive					0.010
Adjusted R^2	0.010	0.013	0.017	0.016	0.017
F-value	4.342	3.683	3.445	3.037	2.862
(p-value)	(0.005)	(0.003)	(0.001)	(0.002)	(0.002)
N	1,044	997	997	997	997

Table 7 presents cross-sectional regression analysis for bidders. The sample of top and bottom 1% 3-day (-1,+1) bidder cumulative abnormal returns is deleted in order to control for outliers. The dependent variable is bidder 3-day (-1,+1) cumulative abnormal returns. The independent variable includes the dummy of relatedness, cash, ROA, growth, capital ratio, ln(total assets), tier-1, crisis, and interactive. Interactive is calculated as the dummy of tier-1 financial advisors multiplied by the dummy of the crisis period. The dummy equals to 1 if the deal is classified as diversification, payment is cash, target advisors are classified as tier-1 investment banks, and bank mergers take place in the crisis period. ROA is measured as net income to total assets. Growth (market to book ratio) is measured as the market value of the equity to the book value of the equity. Capital is measured as total capital 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 transaction in the Datastream database. White's (1980) heteroskedasticity is used to compute p-value. *** indicates significance at 0.01 level; ** indicates significance at 0.05 level; * indicates significance at 0.1 level.