

Industry Expertise, Information Leakage, and the Choice of M&A Advisors

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Abstract

This paper examines the impacts of M&A advisors' industry expertise on firms' choice of advisors in mergers and acquisitions. We show that an investment bank's expertise in merger parties' industries increases its likelihood of being chosen as an advisor, especially when the acquisition is more complex, and when a firm in M&A has less information about the merger counterparty. However, due to the concerns about information leakage to industry rivals through M&A advisors, acquirers are reluctant to share advisors with rival firms in the same industry, and they are more likely to switch to new advisors if their former advisors have advisory relationship with their industry rivals. In addition, we document that advisors with more industry expertise earn higher advisory fees and increase the likelihood of deal completion.

JEL Classification: G24, G34, L11

Keywords: Investment banking; Mergers and Acquisitions; Advisory Fees; Advisory Services; Industry Expertise

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I. Introduction

A major source of revenue for investment banks comes from the provision of corporate mergers and acquisitions (M&A hereafter) advisory services.¹ According to Golubov, Petmezas, and Travlos (2012), financial advisors were involved in global merger transactions worth around \$4.2 trillion in 2007 (representing more than 85% of all transactions by value) and the provision of these services earned the investment banks advisory fees of about \$40 billion. Given the economic magnitude and rapidly evolving nature of merger advisory business, there has been an increasing effort by academic researchers to identify the key driving forces behind the advisor-firm relationship. Among others, financial advisor reputation, acquirer experience, deal complexity, and target business structure have been shown by prior studies to be the important factors for firms in M&A when choosing their financial advisors.²

In this paper, we examine the economic causes and implications of choosing merger advisors. In particular, we focus on the aspects that have been largely underexplored in prior studies - namely the advisor's industry expertise and the firm's concerns about information leakage to their product-market rivals through M&A advisors.

In M&A investment banks advise acquiring and target firms by evaluating firms' assets and providing technical and tactical assistance throughout the takeover process (Bodnaruk, Massa, and Simonov, 2009). Through repeated participation in M&A transactions in a certain industry, advisors can accumulate industry-specific merger expertise that enables them to better assess firm value and synergies, execute complex deals, and reduce transaction costs. Moreover, by advising different firms in an industry and employing experienced industry analysts, advisors can become

¹ Throughout the paper, we use the terms mergers, acquisitions, takeovers, and M&A interchangeably. We also use the terms advisor, financial advisor, bank, and investment bank interchangeably.

² See among others, Servaes and Zenner (1996), Rau (2000), and Kale, Kini, and Ryan (2003).

privity to crucial legal and regulatory issues, important industry developments, and firm-level information, so that they can leverage their domain expertise to provide tailored advisory service for firms in the industry. When choosing advisors amongst all candidate banks, firms in M&A may therefore attach importance to a bank's expertise in industries that are of interest to them. Although Benveniste, Busaba, and Wilhelm (2002) have documented some causal evidence that banks use their industry expertise to develop unique underwriting capacity in certain industries, the effects of banks' industry expertise on advisor choice and merger outcomes have been largely remained unexplored.³ In addition, as a merger transaction involves both an acquirer and a target, it is an empirical question whether the two firms value industry expertise differently.

On the other hand, advisors' industry expertise may also heighten firms' concerns about leakage of sensitive information to industry (product-market) rivals.⁴ A firm's strategically sensitive information (e.g. operational efficiency, customer/supplier relationships, progress on research and development projects etc.) is amongst its most valuable intangible assets. Investment banks can gain access to the sensitive information through due diligence undertaken before the execution of a deal and/or information certification when selling securities to investors. Leaking firm-specific value-relevant information to a product-market rival is detrimental and such a concern may inhibit sharing of advisors between firms in an industry. In general, large firms that have significant market shares and can affect the market equilibrium should be more sensitive to the effects of information leakage than small firms (Asker and Ljungqvist, 2010). Therefore, they should be more willing to protect private information and inhibit information leakage to rival firms

³ For instance, in context of IPOs, Benveniste, Busaba, and Wilhelm (2002) find that, of the 15 IPOs completed between 1990 and 1994 in the trucking industry, 9 were lead-managed by one bank (Alex. Brown), suggesting that banks' industry expertise influences the likelihood of banks winning underwriting mandates.

⁴See Rajan and Zingales (2001), and Zbojnik (2002), and Baccara and Razin (2004) for analyses on the information leakage concern in situations where the crucial information is leaked outside of a firm through its current or former employees.

through M&A advisors. In addition, the concerns about information leakage to industry rivals may also vary between acquirers and targets. Target firms normally cease to exist as standalone companies if the mergers succeed, whilst acquiring firms continue competing against their rivals in product markets after acquisitions. This implies that other things being equal, acquirers should be more concerned about information leakage than target firms when selecting M&A advisors.

Taken together, we conjecture that a bank's industry expertise has both positive and negative effects on firms' choice of M&A advisors. On one hand, a bank's strong industry expertise can enable it to efficiently collect and process information in the industry, effectively facilitate deals, reduce transaction costs, and develop unique capacity in the industry. On the other hand, its potential clients may be concerned about the likelihood of it (the bank) leaking sensitive information to product market rivals. As a result, firms in M&A may trade off advisors' industry expertise garnered from dealing with industry peers against the chance that advisors may leak sensitive information to firms' product-market competitors.

Against this background, we examine how investment banks are chosen as merger financial advisors for a sample of 12,996 mergers announced between 1985 and 2008. We utilize the conditional logit model of McFadden (1973) and Morrison et al. (2013) to examine jointly the effects of banks' industry merger expertise and firms' concern about information leakage on the banks' likelihood of being chosen for a transaction, while controlling for prior bank-firm relationships, banks' market share and other bank-specific characteristics. Our empirical models examine advisor choices of both acquirers and targets. This setup recognizes that although all firms involved in a merger may consider similar factors in choosing an advisor, the influence of these factors on advisor choice may be different for acquirers and targets.

Our results show that banks' expertise in both firms' own industries and their counterparties' industries – when measured as prior merger advisory experience in those industries – are strong

determinants of advisor choice for firms in M&A. In addition, we find that the impact of banks' industry expertise on advisor choice is contingent on the nature of deal provisions. Specifically, banks' industry merger expertise becomes more important for advisor choice when firms in M&A have less information about the counterparties as characterized by higher R&D, a higher fraction of intangible assets, and a higher Tobin's Q. Banks' industry expertise is also more important in more complicated transactions, such as mergers of equals and mergers with termination fee provisions. Additionally, the existence of poison pills in targets' corporate charters also makes banks' industry expertise more valuable to acquirers.

Furthermore, consistent with our prediction that firms may avoid sharing investment banks with major product-market rivals, a bank is less likely to be chosen by a firm if it (the bank) has had a past relationship with the firm's major product-market rivals. To further investigate firms' concerns about information leakage to product-market rivals, we study the advisor switching decision in consecutive M&A transactions for both acquirers and targets. Our results indicate that acquirers and targets exhibit different switching behaviours – acquirers are more likely to switch advisors because of the concern about information leakage to product-market rivals, whereas targets' switching decisions are unaffected by advisors' past relationship with their major product-market rivals, supporting our conjecture that acquirers are more concerned about information leakage than target firms when selecting M&A advisors.

We then examine whether advisors' industry expertise affects the price and quality of their services. We find that acquirers' (targets') advisory fees are positively related to banks' expertise in acquirers' (targets') industries, implying that firms pay premium fees for services provided by advisors with industry experience. Do advisors with stronger industry expertise charge higher fees because they provide higher-quality services? To answer this question, we study the impact of advisors' industry expertise on various merger outcomes. To the extent that advisors' industry

expertise enhances advisors' ability to structure mergers with higher synergies or improve firms' bargaining power in negotiations, advisors' industry expertise should be positively related to shareholders' value in firms hiring the advisors. Furthermore, if advisors with industry merger experience are hired by firms to facilitate and complete the deal, this should be positively related to the likelihood of deal completion.

We find no evidence that advisors' industry expertise affects shareholders' value in acquiring and target firms, in terms of cumulative abnormal returns (*CAR*) around the merger announcement date, merger premium, and acquirers' post-merger stock returns. However, we do find that acquirers' advisors with stronger expertise in acquirers' and targets' industries are more likely to complete the transactions that they handle. These results are consistent with Rau (2000) who shows that deal valuation is of secondary importance for advisors because they generally have strong deal completion incentives and their objective is simply to close the deal.

Our contribution to the literature is threefold. First, we identify advisors' industry-specific merger experience and firms' concern about information leakage to industry rivals as new factors influencing advisor choice in M&A. In addition, we show that the impact of industry expertise on advisor choice is contingent on information asymmetry between the acquirers and targets and on deal complexity. Second, consistent with Asker and Ljungqvist (2010) who demonstrate that firms are reluctant to share underwriters in debt and equity issuance, our results suggest that in the context of M&A, merger parties, particularly acquirers, avoid sharing financial advisors with their product-market rivals. This finding sheds light on how investment banks compete for M&A advisory services. Third, we show that merger parties pay higher fees to advisors with stronger industry expertise, indicating that it makes economic sense for investment banks to build up and protect their industry expertise. In return for premium fees, advisors with stronger industry merger expertise increase the likelihood of deal completion.

Our work is related to several papers studying how M&A expertise or experience affects M&A outcomes. Mkrtchyan (2012) shows that directors' past acquisition experience is associated with higher announcement returns. Bao and Edmans (2011) identify a significant investment-bank fixed effect in M&A returns and show that advisors' past performance affects M&A outcomes. Ertugrul and Krishnan (2011) study the relation between individual investment bankers and acquisition outcomes. Lastly, Song, Wei, and Zhou (2013) document that the expertise of boutique advisors benefits acquirers' shareholders. In this paper we focus on advisors' merger expertise developed in an industry and examine whether it affects firms' advisor choice and merger outcomes.

The rest of the paper proceeds as follows. Section II briefly reviews the relevant literature and develops our hypotheses. Section III describes our sample, variable construction, and the empirical methodologies. Main results and robustness checks are presented in Section IV. Section V concludes.

II. Hypothesis Development

A. Industry Expertise, Information Leakage to Product-Market Rivals and the Choice of Financial Advisor

Financial advisors are thought to perform at least two important functions during a takeover (McLaughlin, 1990, 1992). First, they help their clients in identifying better mergers – mergers that are expected to result in high synergies, and propose mechanisms that allow the realization of these synergies once the merger is consummated. Second, they advise clients on strategic actions that may relate to the bid itself (designing the actual offer, bidding strategies etc.), and on actions to counteract any moves undertaken by merger counterparties and product-market competitors. By assisting different firms in an industry for M&A, advisors can build industry-specific merger

expertise and develop unique advisory capacity in the industry. They can also enjoy a lower cost of producing industry-wide information by bundling deals in the same industry (Benveniste, Busaba, and Wilhelm, 2002). Additionally, advisors specializing in a certain industry may achieve information advantage through past transactions and the research performed by experienced industry research analysts (Kadan et al., 2012). Collectively, advisors' industry expertise should enhance their ability to value firms in acquisitions, lower the transaction costs, and improve their skills in executing the transactions. Thus, firms in M&A should consider advisors' prior merger experience in an industry or a product market that is of interest (to them) when choosing advisors. When mergers are diversifying (i.e., the acquiring and target firms are from different industries), managers should also consider advisors' prior merger experience in the merger counterparties' industries due to their information disadvantages in new industries. Besides, diversifying mergers involve a higher degree of information asymmetry between merging firms and require quality advisory services.⁵ The preceding arguments form the basis for our first two hypotheses, stated in the alternative form:

H1: *Ceteris paribus*, the probability of an advisor being chosen by a firm to advise on an acquisition increases with the advisor's merger expertise in the firm's own industry.

H2: *Ceteris paribus*, for a diversifying merger, the probability of an advisor being chosen by a firm to advise on an acquisition increases with the advisor's merger expertise in the merger counterparty's industry.

⁵ For example, Coates (2012) finds that diversifying deals are more likely to include risk allocation provisions (RAP) than other deals. One of the common examples of RAP is the cap and floor embedded in the offer price of a stock merger. Similarly, Macias and Moeller (2013) find that diversifying mergers have broader firm-specific abandonment options provided by the Material Adverse Change (MAC) clause, which protects acquirers from events that lead to a significant reduction in targets' value. Custódio and Metzger (2013) documents that, in the diversifying takeovers, CEOs negotiate better deals if they have previous experiences in the target industries.

Firms' demand for advisors' industry expertise may vary across different types of transactions. For instance, we expect the effect of industry expertise on advisor choice to be contingent on both the degree of information asymmetry and the complexity of the transaction. For instance, Servaes and Zenner (1996) document that deal complexity increases the likelihood of an investment bank being used for a particular transaction. They also suggest that a transaction is more complex if the acquirer and the target are of comparable size. An acquirer may not count on advisors' industry expertise much if the target firm is relatively small.

Additionally, firms' demand for advisors' industry expertise should be higher when the merging firms have less information about each other.⁶ Through frequent participation in mergers in an industry, advisors can spread the cost of producing information across transactions and alleviate their clients' information disadvantage. We also expect advisors' industry expertise to be important in mergers where termination fees are present and anti-takeover devices are in place. A termination fee is a contingent payment made by a firm in M&A to another if the former dissolves the merger agreement. Servaes and Zenner (1996) suggest that a transaction is more complex if risk management devices are used. Bates and Lemmon (2003) find that target termination fee can increase the probability of deal completion and is more likely to exist in deals involving assets with higher growth opportunities, and that acquirer termination fee is more likely to exist in transactions where the costs of negotiation are high. In other words, termination fees can resolve a part of the contracting problems between the acquirer and the target (Officer, 2003), and they are particularly important for transactions that involve greater negotiation effort and strategically important assets.⁷

⁶ We thank the editor for suggesting that the information asymmetry between merging firms affects the importance of advisors' industry expertise.

⁷ Officer (2003) shows that termination fee agreements significantly affect shareholder wealth and interests. As the inclusion of such provisions necessarily indicates increasing deal complexity, it may also influence the advisor choice.

The existence of anti-takeover devices may also increase the difficulties in and the time for negotiation. Poison pill is one of the commonly used anti-takeover devices as it gives a firm's current shareholders the right to buy shares at a discount if an investor buys a certain percentage of the firm's shares. It is a strategy used by firms to discourage hostile takeovers by making themselves less attractive to potential bidders. Heron and Lie (2006) find that poison pills increase takeover premium through increasing target firms' bargaining power in merger negotiations. Motivated by the above arguments, we hypothesize that all else equal,

H3: Firms are more likely to select advisors with merger expertise in their own and merger counterparties' industries when acquiring and target firms are of similar size, when the information asymmetry between merger parties is more severe, and when the transaction involves termination fee agreements or poison pills.

Industry expertise inevitably comes with the potential threat of leaking sensitive firm-specific information to outsiders. It is reasonable to assume that such information is most useful to a firm's direct competitors and that the likelihood of such leakage increases after the firm-bank relationship is terminated. Further, the threat of leakage exists in both directions – the advisor may leak information about its other clients (who are the source of its industry expertise) to the new client or it may leak new client-related information to other firms.⁸ Asker and Ljungqvist (2010) examine the influence of potential information leakage on firms' sharing underwriters with competitors and on the extent of competition amongst banks providing underwriting services.

⁸ Anand and Galetovic (2000), Azoulay (2004), and Baccara (2007) examine various aspects of information leakage. Benveniste et al. (2003) document that information spillovers do exist in underwriting services. In particular, they find that valuation of an IPO is affected by the valuation of contemporaneous IPOs in the same industry.

Their analysis suggests that the possible cost (leaking sensitive information to competitors) of information leakage outweighs the potential gain (gaining sensitive information about competitors). Specifically, they show that firms' concerns about informational frictions make them reluctant to share a bank with major product-market rivals and that these issues pose an endogenous limit on banks' market power.

Arguably, concerns regarding information leakage may be even more pronounced around a merger as banks simultaneously manage multiple facets of the transaction such as raising capital to finance transactions, negotiating buyer, supplier, and employee relationships, and implementing integration strategies. Under such circumstances the "loss" due to information leakage may be substantial. We therefore propose that concerns regarding information leakage may also exert significant influence on how financial advisors are chosen by the merger parties in a merger transaction.

The preceding discussion suggests that the likelihood of an investment bank winning the merger advisory mandate may be positively influenced by its industry-specific experience *but* negatively influenced by its current clients' desire to inhibit information leakage to their product-market competitors. The significance of the information flow depends on the position of the firm in the industry. In general, leading large firms in an industry are expected to be more concerned about information leakage than smaller firms because they have more strategic options that are vulnerable to information leakage (Asker and Ljungqvist, 2010). We thus expect acquirers to be more concerned with information leakage than targets because acquirers are generally much larger than targets and because typically, on completion of the deals, targets may cease to exist. In the same vein, compared with target firms, acquirers are expected to be more likely to switch their advisors for a new transaction if their advisors have relationships with other leading (large) firms in the industry. The above discussions lead to the following hypothesis:

H4: The probability of a bank being chosen by an acquirer is lower if the bank has also advised the acquirer's major industry rivals. Besides, an acquirer is more likely to switch away from an advisor that advised past deals if the advisor also advised M&A transactions of the firm's major industry rivals.

B. The Effects of Industry Expertise on the Price and Quality of Advisory Services

M&A advisory fees serve as a major source of revenue for investment banks (Kolasinski and Kothari, 2008), it is thus interesting to investigate whether advisors' industry expertise is rewarded by a higher price of their services in M&As. The impact of banks' industry expertise on advisory fees is unclear ex ante. One may expect that a bank's industry expertise allows it to command a higher fee from the merging firms for providing superior services. On the other hand, industry experience may be associated with a lower advisory fee as the expertise (achieved through past transactions) may lower advisors' marginal costs of information production. It is an empirical question as to which view is more dominant. Thus, we propose the following hypothesis for merger advisory fee:

H5: Merger advisory fee is positively related to advisors' industry expertise.

We investigate two main views on the effects of advisors' industry expertise on the quality of advisory services. Advisors with superior industry merger expertise may lead to better matches and thus creation of higher synergies. We refer to this possibility as the "value enhancement" view. This view predicts that advisors' rich industry expertise results in value-enhancing deals for firms,

which would be evident by higher announcement-period excess returns and superior post-merger performance.

On the other hand, more experienced advisors could be hired simply to complete M&A transactions without creating any material value effects for shareholders. We term this as the “deal completion” view. This view predicts that advisors’ industry expertise should be positively associated with the likelihood of deal completion, but is not necessarily significantly related to shareholder value in acquisitions. This view is also examined by Rau (2000) who finds that investment banks focus on completing the deal because of the contingent structure of advisory fee, rather than enhancing shareholders’ value for firms hiring them in acquisitions. Following the above arguments, we hypothesize that:

H6: Advisors’ industry expertise is positively associated with merger announcement returns and post-merger performance.

H7: Advisors’ industry expertise is positively associated with the probability of deal completion.

III. Data and Variables

A. Sample and Data

We begin by outlining the steps followed to construct the set of candidate advisors (banks) used in the study. We collect the advisor information from SDC/Platinum and select sample banks by forming a union of two groups of banks: (1) the sample of Ljungqvist, Marston, and Wilhelm (2006); and (2) the sample of 50 most active banks in M&A activities by transaction value over the period January 1985 to December 2008. As SDC/Platinum sometimes reports multiple codes for the same bank, we manually check these codes and combine them into a single code if

they belong to the same bank. To account for major bank mergers during the study period, we utilize the data provided in Corwin and Schultz (2005) and Ljungqvist, Marston, and Wilhelm (2006), and the data supplemented by SDC/Platinum and other financial news sources. Appendix A lists the final set of survival banks, together with their predecessors, during the sample period. The number of candidate banks varies from 57 to 107 over time, depending on past mergers and the date a bank first appears in SDC Mergers and Acquisitions.

Our primary merger sample obtained from SDC M&A database includes mergers and acquisitions between U.S. firms between January 1985 and December 2008. We only include deals that are either completed or withdrawn, and we exclude “buybacks”, “exchange offers”, and “recapitalizations” as indicated by the SDC, and privatizations in which acquirers and targets have the same CUSIP. We require both the acquirer and target have available SIC codes and require that acquirers own less than 50% of targets’ shares before the announcement date and controls 100% of targets’ shares after acquisition. We exclude deals that are worth less than \$1 million or less than 1% of the acquiring firm’s market value of equity. Also excluded are transactions with no deal value disclosed. Finally, we eliminate deals in which neither the acquirer nor the target appoints an advisor in appendix A. Our final sample consists of 12,996 mergers and acquisitions. Financial data is obtained from Compustat Industrial Annual database.

Table 1 reports summary statistics about various firm and deal characteristics. About 32.0% of the transactions are pure-cash deals, 25.1% of the transactions are pure-stock deals, and the rest are others including cash-and-stock mix. A vast majority of transactions (95.7%) are classified as “friendly” by the SDC. Further, about 88.2% of the acquirers and 47.1% of the targets are publicly listed. To classify an acquisition as horizontal or diversifying, we compare the primary industry four-digit SIC codes of the acquirer and the target. An acquisition is classified as horizontal if the acquirer and target share the same four-digit SIC code. As a result, about 33.7% of the transactions

are classified as horizontal mergers, and the rest are classified as diversifying mergers. Finally, Table 1 also reports that 62.7% of acquirers and 81.4% of targets hire at least one financial advisor.

[Insert Table 1 here]

Table 2 reports the summary statistics for market shares of the twenty five most active financial advisors in our sample. We rank them based on the total value of all transactions (column 1) advised by the surviving bank and its predecessors. Column (3) reports the total number of transactions. If there are multiple advisors for an acquirer (target) in a merger, each advisor is allocated a $1/n$ share of value in column (1) or a count of $1/n$ in column (3), where n is the number of advisors for a transaction. Column 1 suggests that Goldman Sachs is the most active M&A advisor based on the total value of transactions advised over the period 1985-2008, followed by Bank of America Merrill Lynch, and Morgan Stanley. Following Golubov, Petmezas, and Travlos (2012), we refer to the top eight investment banks as top-tier, and all other advisors as non-top-tier.⁹

[Insert Table 2 here]

B. Variables

Bank's industry expertise. As the key variable of our interest, *bank's industry expertise* is set equal to the number of mergers advised by a bank for a firm's four-digit SIC industry divided by the total number of mergers in the industry during the past five years. This definition is similar to that of Asker and Ljungqvist (2010). By construction, it takes a value between zero and one. If

⁹ Note that the ranking reported in Table 2 may be different from that given by the SDC league tables because when calculating the number of deals advised by an advisor, we include all deals advised by the bank and its predecessors. In addition, the top eight investment banks are slightly different from those of Golubov, Petmezas, and Travlos (2012). Lazard and UBS rank number 8 and 9 in their Table I, but rank number 9 and 8, respectively, in our sample. The discrepancy is caused by the difference in sample period between theirs (1996-2009) and ours (1985-2008).

there was no merger in the industry over the past five years, all banks are assigned a value zero for industry expertise.

Bank's expertise in merger counterparty's industry. The variable is defined similarly as *Bank's industry expertise*. However, as the acquirer's and target's industry are the same in horizontal mergers, we set this variable to zero in horizontal mergers to avoid double counting the effect banks' industry expertise in horizontal mergers. For this purpose, we interact *Bank's expertise in merger counterparty's industry* with a dummy variable (*Diversifying*) that equals one for diversifying mergers, and zero otherwise. An acquisition is defined as a *diversifying* one if the acquirer and target have different 4-digit SIC codes.

Bank-industry rival relationship. To capture the concern of information leakage to industry rivals, we follow Asker and Ljungqvist (2010) and construct a bank-industry rival relationship variable, which is defined as the number of deals advised by a bank for largest three firms in the firm's four-digit SIC industry (excluding the firm itself if it is among top three) divided by the total number of advised deals in the firm's industry during the past 5 years. The three largest firms are defined using net sales in Compustat in the calendar year of the merger announcement. By construction, this variable is positively related to the measure of industry expertise defined above since both variables are based on banks' advisory experiences with firms in the same industry. Untabulated results show that the correlation coefficients between the bank-industry rival relationship and industry expertise is 0.37 for acquirers and 0.36 for targets, both significant at the 1% level. However, the bank-industry rival relationship variable is designed to capture the specific industry experience garnered from dealing with the firm's major industry rivals.

Control Variables. We consider the following control variables when examining firms' decision to choose or switch financial advisors in M&As. Prior studies have documented that the

bank-firm prior relationship increases the likelihood of a bank winning an underwriting mandate.¹⁰ James (1992) finds that the marginal cost of the repeated underwriting business with the same firm is lower. We thus expect that other things being equal, firms tend to stick with their previous advisors in M&As. We construct a proxy for prior bank-firm relationship based on the past merger advisory activities. Specifically, each firm's six-digit CUSIP and its SDC M&A advisor code is matched with M&A advisory mandates in the last five years to determine if a prior relationship exists. The *bank-firm prior relationship* is then defined as the number of mergers advised by a bank for a firm divided by the total number of mergers done by the firm during the past five years. If a firm was not involved in any mergers over the past five years, all banks are assigned a value of zero for the bank-firm prior relationship.

Furthermore, we include several other control variables that have been shown by previous studies to affect advisor choices. First, Kale, Kini, and Ryan (2003) use bank's market share as a proxy for advisor's reputation in providing advisory services and predict the advisor choice in M&As. We define a *bank's market share* as the fraction of total transactions that have been advised by the candidate bank in the previous calendar year.¹¹ Second, a bank is unlikely to advise a merger whereby the transaction value is either unusually large or unusually small relative to its average deal size over the sample period.¹² Therefore, we use the variable, *relative transaction size*, to capture the absolute difference between the current transaction value and the average transaction value advised by a bank during the past five years.

¹⁰ Ljungqvist, Marston, and Wilhelm (2006, 2009) examine U.S. debt and equity offerings completed between 1993 and 2002 for prior bank-firm relationships, and conclude that prior underwriting relationships increase the likelihood of winning a lead-underwriting mandate.

¹¹ More specifically, a *bank's market share* in mergers is defined as the number of mergers advised by the bank divided by the total number of mergers in previous calendar year. Similar results are obtained if we define market share using the transaction values rather than the number of transactions. We define a bank's market share over one year instead of five years following Kale, Kini, and Ryan (2003) who use market share defined over a short period (1-year) to predict the advisor choice.

¹² Asker and Ljungqvist (2010) make a similar argument in their analysis of underwriter choices in securities offerings.

IV. Results

A. The Conditional Logit Model for the Advisor Choice

We follow McFadden (1973) and Morrison et al. (2013) and employ a conditional logit model in which firms select merger advisors from amongst all possible competing banks based on advisor-specific attributes.¹³ To be more specific, each firm k (acquirer or target) is modelled as having a utility function as follows.

$$u_{kjt} = \alpha Y_{kjt} + \varepsilon_{kjt}, \quad (1)$$

where Y_{kjt} is a set of bank-specific variables of interest, including industry expertise and the bank-industry rival relationship. ε_{kjt} are independent Type I extreme-value random variables. Given this utility function, each firm chooses the advisor that maximizes its utility. The probability that a bank j advises a firm k at time t is modelled as,

$$Prob(\text{bank } j \text{ advises firm } k \text{ at time } t) = \frac{\exp(\alpha Y_{kjt})}{\exp(\sum_{j=1}^J (\alpha Y_{kjt}))}, \quad (2)$$

where the dependent variable takes a value of one if a bank is chosen to advise the acquirer (or the target) of a particular M&A deal, and zero otherwise.¹⁴ For each transaction, we include in the choice set all available advisors and create all possible pairs for each firm (acquirer or target) and advisors, resulting in 553,487 acquirer-advisor pairs and 707,841 target-advisor pairs.

¹³The conditional logit model differs from regular probit/logit regressions in that the data are grouped by M&A transactions and the likelihood is computed relative to each group; that is, a conditional likelihood is calculated. The model has a similar effect to including individual fixed effects. We are grateful to the anonymous referee for suggesting the use and the advantages of the conditional logit model. Our main results are qualitatively the same if advisor choice is estimated using the probit model of Ljungqvist, Marston, and Wilhelm (2006).

¹⁴A potential problem for advisor choice is that the unconditional probability of being selected as a financial advisor of a merger is low (around 1%). In other words, being selected is a rare event. King and Zeng (2001) argue that the use of traditional binary choices models will underestimate the probability of rare events. To correct for the bias, we use the rare event Logistic Regression developed by King and Zeng (2001) to re-estimate the regressions for Table 3 and Table 4 and find that our results are essentially the same.

[Insert Table 3 here]

Table 3 presents the advisor-choice results for acquirers and targets. In the acquirer's (target's) advisor choice model, only transactions in which the acquirer (target) uses at least one advisor are included. This results in 7,797 (10,033) transactions and 553,487 (707,841) acquirer (target)-advisor pairs for the acquirer (target) advisor choice model. Consistent with hypotheses H1 and H2, columns 1 and 2 indicate that banks' merger expertise in relevant industries influences their likelihood of being awarded the advisory mandate, with all four estimated coefficients being positive and significant at the 1% level in both columns. The economic magnitude is such that the odds of a bank being chosen as an advisor by an acquirer/target would increase by 0.608/0.653 times if prior industry expertise in the acquirer's/target's industry increases by one standard deviation (0.098).¹⁵ Similarly, the odds of a bank being chosen as an advisor by an acquirer/a target would increase by 0.283/0.409 times if prior industry expertise in the merger counterparty's industry increases by one standard deviation. Consistent with hypothesis H4 that the concerns about information leakage to product-market rivals negatively affects the advisor choice, the negative and significant coefficients of the *bank-industry rival relationship* in columns 1 and 2 indicate that firms avoid sharing financial advisors with product-market rivals. Other things being equal, if a bank's prior relationship with product-market rivals increases by one standard deviation (0.027), the odds of being chosen by the acquirer/target is reduced by 0.066/0.072 times.

The positive coefficients of *bank-firm prior relationship* in columns 1 and 2 suggest that firms tend to engage in repeated relationships with banks over time. Consistent with Kale, Kini, and Ryan (2003), we document that a bank's market share increases its likelihood of being chosen.

¹⁵ In a conditional logit model, the proportional impact of an increase of y for a variable Y on the odds of a positive outcome is estimated as $\exp(\alpha \times y) - 1$, where α is the coefficient of Y in the model. As the coefficient of *Bank's industry expertise* in model (1) is 4.85, the impact of a one-standard-deviation increase in *Bank's industry expertise* on the odds of a bank being chosen by the acquirer is $\exp(0.098 \times 4.85) - 1 = 0.608$.

In addition, negative coefficients of *relative transaction size* suggests that banks are less likely to advise clients (especially target firms) on mergers if the transaction value deviates drastically from the average size of deals advised in the past.

In a robustness check (unreported), we re-run the model using a subset of firms that choose non-top-tier advisors. We examine this subset of firms to mitigate the concern of potential reverse causality: experienced banks select their clients rather than firms choosing their advisors. The top-tier advisors are the eight advisors identified in Golubov, Petmezas, and Travlos (2012). We focus on non-top-tier banks for this test because they have weaker market power, are less likely to select clients, and are thus less subject to the reverse causality concern. The results (untabulated) obtained from excluding top-tier banks are qualitatively similar to those obtained using the full sample.¹⁶

The effect of industry expertise may not be equally important for all transactions. Hypothesis H3 suggests that the effect of industry expertise on advisor choice is contingent on the degree of information asymmetry and the complexity of the transaction. To test this hypothesis H3, we estimate the augmented conditional logit model as follows.

$$Prob(\text{bank } j \text{ advises firm } k \text{ at time } t) = \frac{\exp(\alpha Y_{kjt} + \gamma Y_{kjt} \times Z_t)}{\exp(\sum_{j=1}^J (\alpha Y_{kjt} + \gamma Y_{kjt} \times Z_t))}, \quad (3)$$

where Z is one of deal-specific variables that are constant across all firm-bank pairs for each deal (transaction). We interact deal-specific variables with our key variables of interest (Y) to capture the contingent effects.

The deal-specific variables include: (1) a dummy variable for mergers-of-equals; (2) the merger counterparty's intangible assets divided by total assets; (3) the merger counterparty's R&D

¹⁶ We acknowledge, however, that this test cannot completely rule out reverse causality, although it can partly alleviate the concern.

intensity defined as R&D expenses divided by total assets; (4) the merger counterparty's Tobin's Q; (5) a dummy variable for poison pills in place for the target firm; and (6) a dummy variable for the termination fee provision in the merger agreement. The dummy for mergers-of-equals is included to account for the possibility that a transaction is more complicated in a merger-of-equals where the acquirer and the target are similar in size than transactions with target firms being much smaller than acquirers.¹⁷ Intangible assets, R&D intensity, and Tobin's Q are proxies for the degree of information asymmetry about the merger counterparty. It is generally believed that a firm is more difficult to value if it has significant growth opportunities and is heavily involved in R&D activities. Finally, a transaction is considered to be more complex when risk management clauses are included or when the target has poison pills in place that increase its bargaining power. In general, we expect these factors to affect firms' reliance on banks' industry expertise when selecting advisors.

[Insert Table 4 here]

Panel A of Table 4 reports the results from the regressions for the advisor choice of acquirers. The findings are generally consistent with hypothesis H3 that firms in M&A value advisors' industry expertise in complex transactions. Column 1 of Panel A shows that acquirers attach more value to advisors' industry expertise in mergers-of-equals. The impact of a one-standard-deviation increase in industry expertise on the odds ratio of a bank being chosen as an acquirer's advisor is 0.393 ($= \exp(3.38 \times 0.098) - 1$) times higher for mergers-of-equals than for other mergers.¹⁸ The finding is intuitive as, compared with cases where acquirers are significantly

¹⁷ As per SDC's classification, merger-of-equals indicates deals that involve stock swaps, involve firms with similar market capitalization, and result in approximately equal ownership of the merged firm by acquirer and target shareholders.

¹⁸ The coefficients of interaction terms in a non-linear model (such as Logit or Probit) warrant cautious interpretations. Ai and Norton (2003) show that the coefficient of an interaction term is not an accurate measure of the true interaction effect on the outcome probability. We thus interpret the interaction effect using odds ratios as Buis (2010) and Kolasinski and Siegel (2010) show that the interaction term is still relevant for measuring proportional marginal effects,

larger than targets, mergers-of-equals are generally more complicated as neither side possesses significant bargaining advantages and the post-merger integration may be more difficult. Columns 2 to 4 show that acquirers value advisors' industry expertise more in mergers when targets exhibit higher R&D intensity, have more intangible assets, and growth opportunities. As those targets are generally more difficult to value, advisors' industry expertise can help narrow the information gap between acquirers and targets. Column 5 shows that the effect of advisors' industry expertise is stronger for mergers with targets that have poison pills in place. Poison pills typically enhance targets' bargaining power, thus increasing the complexity of merger negotiations. Finally, column 6 shows that acquirers value advisors' industry expertise more in mergers that include termination fee provisions. Officer (2003) notes that termination fees help reduce the failure risk of an acquisition. In particular, he argues that target termination fee can be used as devices to "efficiently solve contracting problems between the bidder and the target" by protecting "the deal-related investment made by the bidder". Our finding suggests that such complexity increases the need for industry expertise. All the above findings hold for expertise not only in acquirers' industries but also in targets' industries. For example, for mergers-of-equals, the impact of a one-standard-deviation increase in targets' industry expertise on the odds ratio of a bank being chosen is 2.52 ($= \exp(12.85 \times 0.098) - 1$) times higher than that of other mergers. Finally, the coefficients of control variables in Table 4 are qualitatively the same as those reported in Table 3.

Panel B of Table 4 reports the results from regressions for the advisor choice of targets. The findings are consistent with those reported in Panel A, i.e., targets attach more value to advisors' industry expertise in mergers-of-equals, mergers with targets that have growth opportunities,

i.e. the impact on odds ratios. We thank the editor for pointing out this empirical issue and helping us improve the interpretation of the empirical results.

mergers with targets that have poison pills in place, and mergers that include a clause of termination fee.

Taken together, the results in Table 4 suggest that the effect of industry expertise on the advisor choice varies across firms for both acquirers and targets. Firms tend to value banks' industry expertise more in complicated transactions that require such banks to resolve contracting problems between the acquirers and targets. We have also estimated models by including the interaction terms between our measure of information leakage concerns, *Bank-industry rival relationship*, and various deal characteristics (Z). Results (untabulated) reveal that the interaction terms are statistically insignificant, implying that the negative effect of information leakage concerns on the advisor choice is insensitive to deal characteristics.

B. Advisor Switching Decisions

Our results so far suggest that banks' industry merger expertise and concern about information leakage to industry rivals are important determinants of the advisor choice. Further, the effect of industry expertise on the advisor choice is influenced by information asymmetry and deal complexity. We now study the advisor switching decision in consecutive transactions for both acquirers and targets. The model for advisor switching is different from the advisor choice model in at least two ways. First, the switching model requires firms in consideration to have merger experience and is thus conditional on an established bank-firm relationship, whereas the advisor choice model is an unconditional model. Thus, by construction, firms in the switching model are more experienced in M&As than those in the choice model. Second, it focuses on a particular bank-firm link and tests whether a firm retains the existing advisor or switches to other banks, while the advisor choice model assumes that a firm chooses among all candidate banks.

To examine the advisor switching decision of a firm we exclude the first M&A transaction for every firm in the sample. This reduces the numbers of observations for acquirers and targets to 2,231 and 920, respectively. The probit model for the switching decision is written as follows.

$$Prob(\text{firm switches advisor at time } t) = f(a + bY_{kjt} + cW_{kjt}), \quad (4)$$

where f is the cumulative normal distribution function, and the dependent variable is a dummy variable that equals one if the firm chooses a bank for the current deal that is different from the one in the most recent transaction. We define a switch if a firm does not hire advisors from its most recent deal (or, if ex-advisors have been acquired, their successors). If multiple advisors were hired in the previous deal, we define a switch if the firm does not retain every advisor from the previous deal (Asker and Ljungqvist, 2010).¹⁹ Y_{kjt} includes *Bank's industry expertise*, *Bank's expertise in merger counterparty's industry* \times *Diversifying*, and *bank-industry rival relationship*. W_{kjt} is a vector of other determinants of the advisor switching decision, as used by Asker and Ljungqvist (2010). It includes bank-firm prior relationship, banks' overall market share, a loyalty measure that captures how often the bank retains its clients, and a bank-merger dummy indicating whether the previous financial advisor itself has been involved in any bank mergers since the previous deal.²⁰ It also includes the number of years since the previous transaction as a control variable, which is motivated by James (1992) who shows that the value of firm-specific information (in a bank-firm relationship) degrades over time, suggesting the likelihood of a firm switching advisors increases with the time elapsed since the last transaction.

¹⁹ The regression is not run on a transaction basis, instead, it is on a firm-bank pair basis. Let us consider an example: A firm hires A, B, and C banks as advisors in the previous deal and the firm only retains bank A as the advisor in the current deal. In switching regression, for the current deal, we actually have 3 observations: firm-bank A, firm-bank B, and firm-bank C. The switching dummy is equal to 0 for firm-bank A, but 1 for firm-bank B and firm-bank C.

²⁰ *Loyalty index* measures how often an advisor retains its client firms in consecutive M&A deals. Let I_{ck} and $I_{rk} = 1$ if an advisor j advisor firm k 's penultimate and the most recent M&A transactions, respectively, in the past five years, and zero otherwise, then advisor j 's loyalty index is set equal to $\sum_k (I_{ck} \times I_{rk}) / \sum_k I_{ck}$, which represents the number of retained clients over the total number of clients.

[Insert Table 5 here]

Column 1 of Table 5 reports the results obtained from estimating Equation (4) for acquirers. The coefficient of *bank's industry expertise* is negative and significant at the 5% level, implying that advisors with expertise in the acquirers' industries are more likely to be retained in future transactions. The economic magnitude is such that a one-standard-deviation increase in industry expertise (0.098) is associated with a reduction of the odds for switching by 0.07 ($= \exp(-0.74 \times 0.098) - 1$) times. The coefficient of banks' expertise in targets' industries is also negative and significant at the 5% level. That is, a bank is more likely to be retained by an acquirer in a diversifying merger if it also has merger expertise in the target's industry. An increase in industry expertise in the target's industry by one standard deviation (0.098) is associated with a reduction of the odds for switching by 0.124 times. Furthermore, we find that an acquirer is more likely to switch from its former advisor if its former advisor had relationship with top three firms in the industry. An increase in *bank-industry rival relationship* by one standard deviation (0.027) increases the odds for switching by about 0.194 times. These findings confirm the results documented in Table 3 that although firms value advisors' industry expertise, they are also concerned about information leakage to industry rivals.

The results for targets in column 2 of Table 5, however, suggest that banks' industry expertise and firms' concern about information leakage to industry rivals do not significantly affect the likelihood of targets switching advisors. Experienced targets do not seem to ascribe much importance to banks' industry expertise given that they are already "in play", and perhaps because they have been on the other side of the table in past M&A transactions. More importantly, two possible factors may contribute to the finding that targets are not concerned about information leakage to industry rivals. First, targets are often smaller than acquirers. As smaller firms are generally followers in an industry and have smaller market share and weaker pricing power, they

are less concerned about information leakage to industry rivals. Second, on completion of the deals, targets may cease to exist, and as a result, target managers are less concerned about product-market competitions in the future. Their advisor switching decision is thus less affected by the concern about information leakage.

The coefficients of other explanatory variables in Table 5 are consistent with expectations. Switching is less likely if an advisor has stronger past relationship with the firm, stronger ability to retain clients (higher loyalty index), or a larger market share. Consistent with James (1992), the more time has passed since acquirer's most recent merger, the more likely that firm will switch advisors for the next transaction.

C. Advisors' Industry Expertise and Advisory Fees

We have documented significant influence of advisors' industry expertise on firms' advisor choice in mergers and acquisitions. In addition, our results also suggest that advisors' merger experience with major industry rivals gives rise to information leakage concerns, which prevent firms from sharing advisors with competitors. In this section, we explore the economic implications of banks' industry expertise and information leakage concerns by examining their effects on M&A advisory fees.

By measuring advisor reputation using a binary classification that classifies the top-8 investment banks as top-tier according to the value of deals advised, Golubov, Petmezas, and Travlos (2012) document a significantly positive relation between advisor reputation and advisory fees. To examine whether advisors' industry expertise has any impact on advisory fees (in addition to the effect of advisors' overall reputation), we augment the advisory fee model of Golubov, Petmezas, and Travlos (2012) by including our key variables of interest, namely banks' expertise in both acquirers' and targets' industries, and the bank-industry rival relationship.

The dependent variable, *advisory fee*, is measured as the natural logarithm of advisory fees paid to advisors (McLaughlin (1990, 1992)).²¹ Note that our empirical analysis is conditional on firms disclosing the information of advisory fees and having non-missing values for variables in fee regressions. Thus the numbers of observations are reduced to 1,652 for acquires and 2,705 for targets.²² To capture advisor's overall reputation, we follow Golubov, Petmezas, and Travlos (2012) by including a *top-tier advisor* dummy, which is equal to one if the advisor is from the top eight investment banks listed in Table 2, and zero otherwise. Furthermore, we control for a set of explanatory variables that have been shown by previous studies to affect advisory fees (e.g., Golubov, Petmezas, and Travlos (2012)). These are the natural logarithm of transaction value, size of transaction relative to the acquirer's market capitalization, and five dummy variables for tender offers, conglomerate mergers, hostile takeovers, mergers involving public targets, and pure-cash deals.

[Insert Table 6 here]

Columns 1 and 2 of Table 6 report the OLS regressions results for advisory fees paid by acquirers and targets, respectively. Columns 3 and 4 report the results from Tobit models to account for the fact that advisory fee is strictly bounded above zero. Nevertheless, the results are qualitatively similar across the two estimation methods. Consistent with Golubov, Petmezas, and

²¹ Robustness checks (untabulated) suggest that similar results are obtained if we deflate the total fees by the deal value or use the natural logarithm of the fees to deal value ratio.

²² There are at least two reasons for advisory fees to be missing in SDC datasets: (1) no advisor is hired, in which case the fee is actually zero; (2) an advisor is actually hired but the fee is not disclosed. We are not concerned about case (1) since firms with no advisor are removed from our sample in the first place. However, our sample contains many transactions in which advisors are hired but fees are not disclosed (case (2)). For the acquirer's (target's) advisory fee regression, only 2,012 (4,145) transactions have advisory fees reported. Ignoring case (2) may give rise to selection issues. In other words, if any hidden factors that determine the disclosure of advisory fees are correlated with the hidden factors that determine the level of fees, an OLS estimation of advisory fees is biased. To tackle this problem, ideally we should use the Heckman's two-stage estimation method, which explicitly models the disclosure of advisory fees in the first stage model and estimate the advisory fee model in the second stage. Unfortunately, it is difficult to find variables explaining the first stage decision - the decision to disclose fees or not in SDC. Our results in Table 6 thus should be interpreted with caution. To the extent that the decision to disclose advisory fees is related to the level of fees, the estimated coefficients in Table 6 can be biased.

Travlos (2012), we document that top-tier advisors charge premium fees for their services. More importantly, after controlling for the impact of overall advisor reputation, we find that acquirers pay a premium for advisors' expertise in both acquirers' (t -statistics = 2.1) and targets' (t -statistics = 2.2) industries (column 1). The result suggests that acquirers value advisors' industry merger expertise and pay a fee premium for it. A one-standard-deviation increase in expertise in acquirers'/targets' industries (0.098) increases the advisory fee by \$1.05/\$1.06 million for acquirers, which is economically significant given that the mean advisory fee is \$4.469 million for acquirers. On the other hand, targets pay a premium for advisors' expertise in targets' (t -statistics = 3.5) industries only (column 2). A one-standard-deviation increase in expertise in targets' industries (0.098) increases the advisory fee by \$1.04 million for targets, which is economically significant given that the mean advisory fee is \$4.499 million for targets.

Advisors' prior relationship with industry rivals have a negative effect on advisory fees, implying that firms pay discounted fees to advisors who advised industry rivals because of the concern of information leakage. However, this effect is statistically insignificant (t -statistics = -1.4 and -1.6 for acquirers and targets, respectively). Not surprisingly, we document that the amount of advisory fees increases with the size of transaction. In addition, firms are found to pay significantly higher fees in tender offers, perhaps reflecting the greater difficulty and longer time taken in completing tender offers. Finally, target's advisory fee is also higher when the target receives cash in acquisitions.

D. Effects of Advisor's Industry Expertise on Deal Completion and Shareholders' Value

Our results so far suggest that advisors' industry expertise is an important factor in advisor choice and firms pay a significant fee premium for it. We now explore what, if any, benefits accrue to the firms from hiring such advisors.

Section II outlines two views regarding the impact of advisors' industry expertise on the quality of advisory services. The "value enhancement" view predicts that advisors' industry expertise should be positively associated with their clients' shareholder value in acquisitions. In contrast, the "deal completion" view mainly predicts that there should be a positive relation between advisors' industry expertise and the probability of deal completion. While the two hypotheses are not entirely mutually exclusive, we evaluate their relative importance by examining the effects of advisors' industry expertise on various aspects of M&A transactions using regression analysis.

The dependent variables in our regression analysis include three-day [-1, +1] cumulative abnormal returns (*CAR*) around the acquisition announcement date, merger premium, acquirer's post-merger stock returns, likelihood of deal completion, and the time to resolution of transaction.²³ For independent variables, in addition to *bank's industry expertise*, *Bank's expertise in merger counterparty's industry* \times *Diversifying*, *bank-industry rival relationship*, and the *top-tier advisor* dummy, we include control variables employed in previous studies (e.g., Moeller, Schlingemann, and Stulz (2004), Masulis, Wang, and Xie (2007), Golubov, Petmezas, and Travlos (2012), and Harford, Humphery-Jenner, and Powell (2012)). The results are reported in Tables 7 and 8.

[Insert Tables 7 and 8 here]

Table 7 shows that there is no significant effect of advisors' industry expertise on shareholders' value of acquirers and targets. In regressions, *bank's industry expertise*, *Bank's expertise in merger counterparty's industry* \times *Diversifying*, and *bank-industry rival relationship* do not significantly affect *CARs*, deal premium, and the acquirer's post-merger stock returns.²⁴

²³ Post-merger stock returns are defined as three-year buy-and-hold stock returns (BHR) after the effective date minus one.

²⁴ Moreover, we follow the approaches in Healy, Palepu, and Ruback (1992) and Powell and Stark (2005) to further our analysis on operating performance. For the performance measure, we choose operating income scaled by sales.

In contrast, in support of the “deal completion” view, Table 8 shows that the industry expertise of advisors hired by acquirers is positively associated with the likelihood of deal completion. Column 1 reports the Probit regression analysis for the probability of deal completion. The marginal effects at the mean are reported. The dependent variable, *deal completion*, equals one for completed transactions, and zero for withdrawn deals. Consistent with Golubov, Petmezas, and Travlos (2012), we find that advisor reputation, measured by the *top-tier advisor* dummy, has no effect on deal completion. However, industry expertise of advisors hired by acquirers has a positive and significant impact on the probability of deal completion (z -statistics = 2.8) for expertise in the acquirer’s industry, as well as for expertise in the target’s industry (z -statistics = 2.2). The economic magnitude is that a one-standard-deviation increase in acquirer’s industry expertise (0.098) is associated with an increase in the probability of deal completion by 0.007 ($= 0.098 \times 0.07$), where the unconditional probability of completion is 0.913. Similarly, a one-standard-deviation increase in target’s industry expertise is associated with an increase in the probability of deal completion by 0.009. The coefficient of *bank-industry rival relationship* is negative but statistically insignificant (z -statistic = -0.9), indicating that while advisors’ relationship with industry rivals heightens the concern of information leakage, it does not impede advisors’ capability to complete the deal. As an additional test (untabulated), we include in the regression *bank’s industry expertise* and *bank-industry rival relationship* for target firms, but find no evidence suggesting that they affect the likelihood of deal completion. Column 2 reports the result of OLS regression analysis for time to resolution. However, neither industry expertise nor bank-industry rival relationship has significant impact on the time to resolution.

We estimate the change in this performance measure by comparing the combined performance of the target and acquirer in the year prior to the merger transaction with the performance of the acquirer in the years after the takeover. The changes are industry-adjusted. However, we do not find any significant relation between advisors’ industry expertise and the change in operating performance.

Finally, we re-examine all the preceding results by augmenting the models by including variables that measure banks' industry expertise, bank-industry rival relationship, and bank-firm relationship based on whether a bank provided underwriting services in the five years prior to the merger. It is possible that our proxies for expertise and relationship based on M&A activities may actually be capturing expertise and relationship acquired from other corporate finance activities such as securities underwriting. By including relationship measures that capture previous interactions both in the mergers as well as in underwriting, we aim to demonstrate the effect of relationship between banks and sample firms due to M&A activity. Our results (untabulated) show that firms are more likely to choose banks with industry underwriting experience. However, and perhaps more importantly, after controlling for all underwriting-based variables, our main results with the merger-based variables remain qualitatively unchanged. Further analysis also reveals that underwriting-based variables have no significant impact on advisory fees and the probability of completion. These findings suggest that when firms undertake mergers, they ascribe significant value to banks' past expertise in takeovers, which is more relevant than expertise in underwriting activities.

V. Conclusions

This study investigates the impact of merger advisors' industry expertise and concerns about information leakage to product-market rivals on firms' choice of financial advisors in mergers and acquisitions. We argue that advisors' industry expertise is a double-edged sword. While a bank's experience in mergers is valuable to its clients, its clients are also concerned about potential leakage of information (Calomiris and Singer, 2004; Asker and Ljungqvist, 2010) when the bank conducts businesses with other firms. This paper explores the interactions of these factors and concerns by examining the acquirers' and targets' choices of financial advisors and their

decisions to switch advisors between consecutive completed transactions. It also explores the influence of these factors on value, advisory fee, probability of deal completion, and time to resolution as associated with these transactions.

We find that advisors' industry merger expertise is a strong determinant of firms' advisor choice. Firms value advisors' expertise not only in their own industries but also in their counterparties' industries. The above effect is stronger when the firms in M&A are less informed about each other, and when a transaction is more complicated – a transaction involving similar sized firms, a target with poison pills in place, and a termination fee. This overall result persists even after controlling for banks' prior relationships with firms and overall market share, and therefore identifies industry expertise as a new factor (previously unidentified in the literature) that significantly affects the choice of advisors in mergers and acquisitions.

However, a bank's industry expertise also heightens its clients' concern about information leakage to product-market rivals and they avoid sharing advisors with their rivals. This finding is further supported by results of investigation of acquirers' and targets' advisor switching decision between consecutive completed transactions. In particular, acquirers are more likely to switch away from advisors who have relationships with major industry rivals. Finally, both acquirers and targets pay higher fees if their advisors have more industry expertise, but targets only pay premium fees for advisors' expertise in their own industries. The higher fees probably reflect banks' ability to leverage their industry expertise to complete M&A deals, and this notion is supported by our analysis of the probability of deal completion. However, we find no evidence indicating that advisors' industry merger expertise is associated with value creation for target and acquiring firms.

Our analysis offers interesting insights into the effects of industry expertise and information leakage concerns on the choice of financial advisors. Our findings represent important advances

in understanding the causes of choosing merger advisors from the perspectives of acquirers and targets and add to the overall understanding of the roles played by investment banks in mergers.

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Table 1: Summary Statistics of M&A Transactions

The merger and acquisition data is obtained from Thomson Financial's SDC Mergers and Acquisitions database. The sample includes 12,996 mergers and acquisitions announced between 1985 and 2008, in which either the acquirer or the target employs at least one advisor from the list in Appendix A. An acquisition is defined as a diversifying (horizontal) one if the acquirer and target have different (the same) 4-digit SIC codes reported by SDC.

Deal characteristics	No. of transactions	% of the sample
<i>Method of offer</i>		
Pure cash	4,158	32.0
Pure stock	3,267	25.1
Others, or combination of cash and stock	5,571	42.9
<i>Attitude</i>		
Friendly	12,441	95.7
Hostile or unsolicited	506	3.9
Undefined	49	0.4
<i>Status of acquirer and target</i>		
Public acquirer	11,466	88.2
Public target	6,117	47.1
Public acquirer and public target	4,658	35.8
<i>Industry relatedness</i>		
Horizontal	4,383	33.7
Diversifying	8,613	66.3
<i>Deal status</i>		
Completed	1,1860	91.3
Withdrawn	1,136	8.7
<i>Number of acquirer's financial advisors</i>		
0	4,847	37.3
1	7,189	55.3
2	810	6.2
3	114	0.9
4+	36	0.3
<i>Number of target's financial advisors</i>		
0	2,418	18.6
1	9,273	71.4
2	1,144	8.8
3	138	1.1
4+	23	0.2

Table 2: Most Active Advisors in M&A over the Period 1985-2008

This table presents the market shares of the twenty five most active financial advisors over the period 1985-2008. Transaction value is in US\$ billion. Column (1) reports the total value of all mergers advised by the bank and its predecessors. Column (3) reports the total number of all mergers advised by the bank and its predecessors. Column (2) reports the total transaction value of an advisor as a percentage of total transaction values of all advisors. Column (4) reports the total number of transactions advised by a bank as a percentage of the total number of deals done by all advisors. If there is more than one bank advising the acquirer/target in a transaction, each participating bank will get 1/n share of deal value or 1/n of the count, where n is the number of advisers. Bidders' and targets' advisors are counted separately. Therefore, if both the acquirer and the target of a transaction use advisors, the total number of counts is two for the transaction.

Surviving bank	(1) Transaction value (\$billion)	(2) % of total value	(3) No. of deals	(4) % of total counts
<u>Top-Tier</u>				
Goldman Sachs	2,907	15.9	1,538	8.2
Bank of America Merrill Lynch	2,422	13.2	1,954	10.4
Morgan Stanley	2,150	11.7	1,279	6.8
JP Morgan	2,083	11.4	1,461	7.8
Credit Suisse	1,783	9.7	1,806	9.6
Citigroup	1,739	9.5	1,414	7.5
Lehman Brothers (now Barclays Capital)	1,167	6.4	950	5.1
UBS	819	4.5	1,000	5.3
<u>Non-Top-Tier</u>				
Lazard	725	4.0	396	2.1
Deutsche Bank	335	1.8	660	3.5
Dresdner Bank (now Commerzbank)	270	1.5	153	0.8
Wachovia (now Wells Fargo)	184	1.0	456	2.4
Houlihan Lokey	132	0.7	375	2.0
Evercore Partners	126	0.7	46	0.2
Drexel Burnham Lambert	117	0.6	210	1.1
Keefe, Bruyette and Woods	104	0.6	436	2.3
Allen & Company	96	0.5	52	0.3
Blackstone	92	0.5	45	0.2
Sandler O'Neill Partners	86	0.5	322	1.7
Jefferies	85	0.5	462	2.5
Thomas Weisel Partners	81	0.4	92	0.5
Greenhill	73	0.4	38	0.2
Oppenheimer Holdings	73	0.4	235	1.3
Rothschild	71	0.4	66	0.4
Peter J Solomon	58	0.3	94	0.5

Table 3: Conditional Logit Models Explaining Acquirer's and Target's Advisor Choices

We model the probability that a bank is chosen as a financial advisor by acquirers and targets over the period 1985-2008. Column 1 reports the result from conditional logit model for the outcome between being chosen as an acquirer's advisor or not. Column 2 reports the result from conditional logit model for the outcome between being chosen as a target's advisor or not. For the acquirer's (target's) advisor choice regression, only transactions in which the acquirer (target) employs at least one advisor from the list in Appendix A are included. *Bank's industry expertise* is defined as the number of M&As advised by a bank for a firm's industry divided by the total number of M&As in the firm's industry in past 5 years. *Bank's expertise in merger counterparty's industry* is defined as the number of M&As advised by a bank for a firm's counterparty industry divided by the total number of M&As in the firm's counterparty industry in past 5 years. An acquisition is defined as a *diversifying* one if the acquirer and target have different 4-digit SIC codes. *Bank-industry rival relationship* is defined as the number of M&As advised by a bank for a firm's industry rival (largest three firms ranked by Compustat net sales, excluding the firm itself) divided by the total number of M&As in the firm's industry in the previous five years. *Bank-firm prior relationship* is defined as the number of mergers advised by a bank for the acquirer (target) divided by the total number of M&As done by an acquirer (target) during the past five years. *Bank's market share* is defined as the number of M&As advised by a bank divided by the total number of M&As in the previous calendar year. *Relative transaction size* is the absolute difference between the transaction value and the average transaction value of a bank during the past five years. Heteroskedasticity-consistent z-statistics are shown in parentheses. We use ***, **, and * to mark coefficients significance at the 1%, 5% and 10% levels, respectively.

	(1)	(2)
	Acquirer Advisor	Target Advisor
<i>Bank's industry expertise</i>	4.85*** (26.1)	5.13*** (36.2)
<i>Bank's expertise in merger counterparty's industry × Diversifying</i>	2.54*** (11.7)	3.50*** (16.3)
<i>Bank- industry rival relationship</i>	-2.49*** (-4.8)	-2.76*** (-6.0)
<i>Bank-firm prior relationship</i>	4.14*** (72.2)	3.44*** (44.7)
<i>Bank's market share</i>	37.54*** (71.1)	38.09*** (85.6)
<i>Ln(Relative transaction size)</i>	-0.04*** (-4.3)	-0.12*** (-16.7)
Number of Deals	7,797	10,033
Observations	553,487	707,841
Pseudo R-squared	0.21	0.15

Table 4: Firm Characteristics, Deal Characteristics and the Impact of Industry Expertise on Merger Advisor Choice

Panel A reports the results from conditional logit models for the outcome between being chosen as an acquirer’s advisor or not. Panel B reports the results from conditional logit models for the outcome between being chosen as a target’s advisor or not. *Bank’s industry expertise* is defined as the number of M&As advised by a bank for a firm’s industry divided by the total number of M&As in the firm’s industry in past 5 years. *Bank’s expertise in merger counterparty’s industry* is defined as the number of M&As advised by a bank for a firm’s counterparty industry divided by the total number of M&As in the firm’s counterparty industry in past 5 years. An acquisition is defined as a *diversifying* one if the acquirer and target have different 4-digit SIC codes. *Bank-industry rival relationship* is defined as the number of M&As advised by a bank for a firm’s industry rival (largest three firms ranked by Compustat net sales, excluding the firm itself) divided by the total number of M&As in the firm’s industry in the previous five years. *Industry expertise* is interacted with six variables (*Z*) as follows. *Merger-of-equals dummy* is defined by the SDC indicating similar pre-merger market values of the two companies. *Intangible assets* is defined as the percentage of intangible assets to total assets. *R&D intensity* is defined as the percentage of R&D expense to total assets. Tobin’s *Q* is the market value of assets over book value of assets. *Poison pill* is a dummy equal to one if the target invokes a poison pill or the existence or enactment of a poison pill discourages the potential acquirer. *Acquirer (Target) termination fee dummy* is equal to one if the acquirer (target) pays a pre-determined termination fee if it violates the conditions for the transaction. Other variables are defined in Table 3. Heteroskedasticity-consistent z-statistics are shown in parentheses. We use ***, **, and * to denote significance at the 1%, 5% and 10% levels, respectively.

Panel A: Acquirer’s advisor choice

	(1) Z = <i>Merger-of-equals</i>	(2) Z = <i>Target’s intangible assets</i>	(3) Z = <i>Target’s R&D intensity</i>	(4) Z = <i>Target’s Tobin’s Q</i>	(5) Z = <i>Poison pill</i>	(6) Z = <i>Acquirer’s termination fee</i>
<i>Bank’s industry expertise</i>	4.81*** (25.9)	5.03*** (11.3)	3.94*** (14.4)	2.92*** (7.6)	4.81*** (25.9)	4.48*** (21.1)
<i>Bank’s expertise in merger counterparty’s industry</i> × <i>Diversifying</i>	2.51*** (11.4)	3.18*** (6.2)	1.58*** (4.9)	1.03* (1.8)	2.62*** (11.9)	2.03*** (7.1)
Z × <i>Bank’s industry expertise</i>	3.38** (2.0)	3.04*** (2.8)	9.49*** (2.6)	0.71*** (4.2)	18.65* (1.9)	1.21*** (3.4)
Z × <i>Bank’s expertise in merger counterparty’s industry</i> × <i>Diversifying</i>	12.85** (2.2)	4.20*** (2.9)	29.55*** (3.4)	0.78** (2.2)	3.74** (2.0)	1.29*** (2.9)
<i>Bank- industry rival relationship</i>	-2.48*** (-4.7)	-1.50** (-2.0)	-1.56** (-2.1)	-1.33* (-1.8)	-2.47*** (-4.7)	-2.37*** (-4.5)
<i>Bank-firm prior relationship</i>	4.14*** (72.1)	4.10*** (46.8)	4.10*** (47.9)	4.11*** (47.1)	4.14*** (72.1)	4.14*** (72.1)
<i>Bank’s market share</i>	37.49*** (71.0)	41.13*** (56.1)	41.24*** (57.4)	41.19*** (56.2)	37.52*** (71.0)	37.55*** (71.1)
<i>Log(Relative transaction size)</i>	-0.04***	-0.07***	-0.08***	-0.08***	-0.04***	-0.04***

	(-4.2)	(-5.1)	(-5.8)	(-5.6)	(-4.3)	(-4.2)
Number of Deals	7,797	3,544	3,696	3,566	7,797	7,797
Observations	553,487	249,418	260,430	251,373	553,487	553,487
Pseudo R-squared	0.21	0.22	0.23	0.23	0.21	0.21

Panel B: Target's advisor choice

	(1)	(2)	(3)	(4)	(5)	(6)
	Z =	Z =	Z =	Z =	Z =	Z =
	<i>Merger-of-</i>	<i>Acquirer's</i>	<i>Acquirer's</i>	<i>Acquirer's</i>	<i>Poison</i>	<i>Target's</i>
	<i>equals</i>	<i>intangible assets</i>	<i>R&D intensity</i>	<i>Tobin's Q</i>	<i>pill</i>	<i>termination fee</i>
<i>Bank's industry expertise</i>	5.11*** (36.0)	6.87*** (26.2)	5.25*** (32.3)	2.50*** (9.5)	5.10*** (35.9)	4.64*** (30.0)
<i>Bank's expertise in merger</i>	3.46***	5.24***	3.17***	1.89***	3.61***	2.97***
<i>counterparty's industry × Diversifying</i>	(16.0)	(12.2)	(12.5)	(4.4)	(16.5)	(11.3)
<i>Z × Bank's industry expertise</i>	3.81** (2.5)	4.75*** (7.4)	17.52*** (6.5)	1.84*** (13.1)	3.94** (2.5)	2.29*** (7.4)
<i>Z × Bank's expertise in merger</i>	15.56* (1.9)	5.69*** (4.5)	35.47*** (4.2)	1.24*** (4.6)	3.45** (2.2)	1.46*** (3.2)
<i>counterparty's industry × Diversifying</i>	(1.9)	(4.5)	(4.2)	(4.6)	(2.2)	(3.2)
<i>Bank- industry rival relationship</i>	-2.80*** (-6.0)	-3.17*** (-6.1)	-3.25*** (-6.3)	-3.16*** (-5.9)	-2.81*** (-6.0)	-3.04*** (-6.4)
<i>Bank-firm prior relationship</i>	3.43*** (44.6)	3.42*** (39.2)	3.44*** (39.9)	3.40*** (39.1)	3.43*** (44.6)	3.39*** (43.9)
<i>Bank's market share</i>	38.06*** (85.5)	38.69*** (77.5)	38.63*** (78.9)	38.32*** (76.9)	38.04*** (85.4)	38.04*** (85.6)
<i>Log(Relative transaction size)</i>	-0.12*** (-16.6)	-0.13*** (-15.6)	-0.13*** (-16.3)	-0.12*** (-15.3)	-0.12*** (-16.6)	-0.12*** (-16.4)
Number of Deals	10,033	8,223	8,588	8,239	10,033	10,033
Observations	707,841	585,505	612,271	587,357	707,841	707,841
Pseudo R-squared	0.15	0.15	0.15	0.15	0.15	0.15

Table 5: Advisor Switching Decisions for Acquirers and Target Firms

We estimate the probability that acquirers and targets switch away from their prior banks in consecutive M&A deals. We define a switch if a firm does not hire advisors from its most recent deal (or, if ex-advisors have been acquired, their successors). If multiple advisors were hired in the previous deal, we define a switch if the firm does not retain every advisor from the previous deal. *Bank's industry expertise* for an acquirer (a target) is defined as an advisor's share of the acquirer (target) industry's merger transactions during the past five years. *Bank's expertise in merger counterparty's industry* is defined as the number of M&As advised by a bank for a firm's counterparty industry divided by the total number of M&As in the firm's counterparty industry in past 5 years. An acquisition is defined as a *diversifying* one if the acquirer and target have different 4-digit SIC codes. *Bank-industry rival relationship* is defined as the number of M&As advised by a bank for a firm's industry rivals (largest three firms ranked by Compustat net sales, excluding the firm itself) divided by the total number of M&As in the firm's industry in previous 5 years. *Bank-firm relationship* is defined as an advisor's share of the firm's merger transactions during the past five years. *Bank's market share* is an advisor's market share of merger activity in the calendar year prior to the current deal in consideration. *Loyalty index* measures how often an advisor retains its client firms in consecutive M&A deals. Let I_{ck} and $I_{rk} = 1$ if an advisor j advisor firm k 's penultimate and the most recent M&A transactions, respectively, in the past five years, and zero otherwise, then advisor j 's loyalty index is set equal to $\sum_k (I_{ck} \times I_{rk}) / \sum_k I_{ck}$, which represents the number of retained clients over the total number of clients. *Bank-merger dummy* indicates whether the previous financial advisor itself has involved in any bank mergers since the previous deal. Robust z-statistics are shown in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)
	Acquirer's advisor switching decision	Target's advisor switching decision
<i>Bank's industry expertise</i>	-0.74** (-2.5)	-0.10 (-0.3)
<i>Bank's expertise in merger counterparty's industry</i> × <i>Diversifying</i>	-1.35** (-2.4)	-0.52 (-0.5)
<i>Bank-industry rival relationship</i>	6.56** (2.1)	-0.84 (-0.3)
<i>Bank-firm prior relationship</i>	-0.66*** (-7.2)	-0.33** (-2.0)
<i>Bank's market share</i>	-1.05 (-0.8)	-6.37*** (-3.2)
<i>Loyalty index</i>	-1.04*** (-4.9)	-1.23*** (-3.8)
<i>Bank-merger dummy</i>	0.30** (2.4)	0.02 (0.1)
<i>Ln(1 + the number of years since the previous transaction)</i>	0.53*** (8.2)	0.92*** (9.5)
<i>Constant</i>	0.59*** (5.9)	0.24 (1.3)
Number of Observations	2,231	920
Pseudo R-squared	0.06	0.11

Table 6: Financial Advisory Fees for Acquirers and Target Firms

The columns 1 and 2 of the table present results of the OLS regression analysis of advisory fees and the dependent variable is the natural logarithm of advisory fees paid by firms to the advisors. The columns 3 and 4 present results of the Tobit regression analysis and the dependent variable is the level of advisory fees paid by firms to the advisors. *Bank's industry expertise* is defined as the number of M&As advised by a bank for a firm's industry divided by the total number of M&As in the firm's industry in past 5 years. *Bank's expertise in merger counterparty's industry* is defined as the number of M&As advised by a bank for a firm's counterparty industry divided by the total number of M&As in the firm's counterparty industry in past 5 years. An acquisition is defined as a *diversifying* one if the acquirer and target have different 4-digit SIC codes. *Bank-industry rival relationship* is defined as the number of M&As advised by a bank for a firm's industry rival (largest three firms ranked by Compustat net sales, excluding the firm itself) divided by the total number of M&As in the firm's industry in the previous five years. For the above three bank-related variables, we sum up the values across advisors involved if there are multiple advisors in one deal. *Top-tier* is a dummy variable and it equals one if the firm retains a top-tier advisor, and zero otherwise. *Relative size* is defined as the transaction value divided by acquirer's market capitalization at the end of the fiscal year prior to the acquisition announcement. *Tender offer*, *Hostility*, *Public target*, and *Pure-Cash deals* are dummy variables and other variables are self-explanatory. Constant terms, year fixed effects, and industry fixed effects are included but not reported. The t-statistics in parentheses are calculated from the Huber/White/Sandwich heteroskedastic consistent errors, which are also corrected for correlation across observations for a given deal. The symbols ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

	(1) Acquirer's Advisory Fee OLS	(2) Target's Advisory Fee OLS	(3) Acquirer's Advisory Fee Tobit	(4) Target's Advisory Fee Tobit
<i>Bank's industry expertise</i>	0.50** (2.1)	0.47*** (3.5)	1.10** (2.1)	0.74** (2.0)
<i>Bank's expertise in merger counterparty's industry</i> × <i>Diversifying</i>	0.55** (2.2)	0.06 (0.4)	1.23** (2.4)	-0.09 (-0.2)
<i>Bank-industry rival relationship</i>	-1.22 (-1.4)	-0.48 (-1.6)	-0.65 (-0.3)	0.72 (0.6)
<i>Top-tier Advisor</i>	0.40*** (6.9)	0.33*** (8.9)	0.11 (0.9)	0.46*** (5.1)
<i>Ln (Transaction size)</i>	0.65*** (38.7)	0.67*** (54.8)	1.53*** (41.3)	1.66*** (60.4)
<i>Tender offer</i>	0.31*** (3.1)	0.12** (2.5)	0.11 (0.6)	-0.08 (-0.7)
<i>Relative size</i>	-0.02 (-0.6)	-0.05** (-2.5)	-0.04 (-0.9)	-0.07 (-1.6)
<i>Diversifying</i>	-0.04 (-0.8)	0.03 (0.9)	-0.01 (-0.1)	0.01 (0.2)
<i>Hostility</i>	-0.05 (-0.4)	0.10 (1.0)	0.36 (1.5)	0.63*** (2.9)
<i>Public target</i>	-0.02 (-0.3)	0.04 (0.2)	-0.45*** (-2.7)	-0.42*** (-3.3)
<i>Pure-Cash deals</i>	0.06 (0.5)	0.11** (2.6)	0.10 (0.5)	0.17 (1.6)
Number of deals	1,652	2,705	1,652	2,705
Adjusted R-squared	0.69	0.73		
Pseudo R-squared			0.21	0.23

Table 7: Advisors' industry expertise and merger outcomes

The table presents results of the OLS regression analysis of merger performances for a sample of U.S mergers and acquisitions announced over the period 1985 to 2008. The dependent variables are *Acquirer's CAR*, *Target's CAR*, *Premium* and *Post-merger performance*, respectively. *Cumulative abnormal returns (CAR)* is measured from one day before to one day after the announcement date. The market model parameters are estimated over the period (-210, -11) with the CRSP equally-weighted return as the market index. *Premium* is measured as the initial offer price (or final price if initial price unavailable) as reported by SDC, deflated by the share price of the target at five trading days preceding the announcement date, less one. *Post-merger performance* are defined as three-year buy-and-hold stock returns (BHR) after the effective date minus one. *Bank's industry expertise* is defined as the number of M&As advised by a bank for a firm's industry divided by the total number of M&As in the firm's industry in past 5 years. *Bank's expertise in merger counterparty's industry* is defined as the number of M&As advised by a bank for a firm's counterparty industry divided by the total number of M&As in the firm's counterparty industry in past 5 years. An acquisition is defined as a *diversifying* one if the acquirer and target have different 4-digit SIC codes. *Bank-industry rival relationship* is defined as the number of M&As advised by a bank for a firm's industry rivals divided by the total number of M&As in the firm's industry in the previous five years. For the above three bank-related variables, we sum up the values across advisors involved if there are multiple advisors in one deal. *Top-tier* is a dummy variable and it equals one if the firm retains a top-tier advisor, and zero otherwise. *Relative size* is defined as the transaction value divided by acquirer's market capitalization at the end of the fiscal year prior to the acquisition announcement. *Leverage* is defined as total debt/total assets. *Tobin's Q* is the market value of assets over book value of assets. *Free cash flow* is (Net Income + Depreciation - Capital Expenditure)/Assets. *Run-up* is the buy-and-hold abnormal return during the period (-210, -11). The market index is the CRSP value-weighted return. *Tender offer*, *Hostility*, *Public target*, and *Pure-Cash deals* are dummy variables and other variables are self-explanatory. Constant terms, year fixed effects, and industry fixed effects are included but not reported. The *t*-statistics in parentheses are calculated from the Huber/White/Sandwich heteroskedastic consistent errors, which are also corrected for correlation across observations for a given deal. The symbols ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

	(1) Acquirer's CAR	(2) Target's CAR	(3) Premium	(4) Post-merger performance
<i>Bank's industry expertise</i> ^{Acquirer}	-0.01 (-0.8)		-0.08 (-1.2)	0.08 (0.2)
<i>Bank's expertise in merger counterparty's industry</i> ^{Acquirer} × <i>Diversifying</i>	0.01 (1.2)		0.08 (0.9)	0.26 (0.6)
<i>Bank-industry rival relationship</i> ^{Acquirer}	0.04* (1.7)		0.15 (1.3)	-0.32 (-0.9)
<i>Top-tier Advisor</i> ^{Acquirer}	0.00 (0.7)		-0.00 (-0.1)	-0.00 (-0.0)
<i>Bank's industry expertise</i> ^{Target}		-0.01 (-0.3)	0.05 (0.6)	0.36 (0.9)
<i>Bank's expertise in merger counterparty's industry</i> ^{Target} × <i>Diversifying</i>		0.01 (0.3)	0.08 (1.0)	0.14 (0.4)
<i>Bank-industry rival relationship</i> ^{Target}		-0.04 (-0.5)	-0.01 (-0.1)	-0.54 (-1.4)
<i>Top-tier Advisor</i> ^{Target}		-0.02* (-1.8)	-0.01 (-1.0)	-0.15** (-2.2)
<i>Tender offer</i>	0.02*** (6.1)	0.09*** (8.0)	0.03** (2.6)	0.12 (1.4)
<i>Relative size</i>	0.01*** (5.5)	-0.02*** (-6.2)	0.01** (2.3)	0.08 (0.8)
<i>Diversifying</i>	-0.00 (-0.6)	-0.00 (-0.4)	-0.01 (-0.4)	0.02 (0.2)

<i>Hostile</i>	-0.02*** (-3.8)	0.03** (2.2)	0.00 (0.2)	-0.10 (-1.1)
<i>Public target</i>	-0.04*** (-15.7)	-0.00 (-0.1)	0.02 (0.3)	0.03 (0.2)
<i>Pure-Cash deals</i>	0.01*** (2.6)	0.05*** (4.6)	0.01 (1.0)	0.04 (0.6)
<i>Leverage^{Acquirer}</i>	0.01** (2.1)		-0.07** (-2.0)	-0.32 (-1.0)
<i>Ln(Assets)^{Acquirer}</i>	-0.00*** (-6.0)		0.02*** (4.1)	-0.00 (-0.1)
<i>Tobin's Q^{Acquirer}</i>	-0.00 (-0.4)		0.01*** (4.0)	-0.04* (-1.7)
<i>CashFlow^{Acquirer}</i>	0.00 (0.2)		0.01 (0.7)	-0.08 (-0.5)
<i>Run-up^{Acquirer}</i>	-0.01*** (-4.4)		0.05*** (4.0)	-0.21** (-2.4)
<i>Leverage^{Target}</i>		-0.01 (-0.2)	0.07** (2.2)	0.00 (0.0)
<i>Ln(Assets)^{Target}</i>		-0.00 (-0.7)	-0.03*** (-4.9)	-0.06 (-1.6)
<i>Tobin's Q^{Target}</i>		-0.01* (-1.7)	-0.02*** (-5.0)	-0.00 (-0.1)
<i>CashFlow^{Target}</i>		0.03*** (3.2)	-0.00 (-0.4)	-0.02 (-0.1)
<i>Run-up^{Target}</i>		-0.05*** (-5.7)	-0.10*** (-9.9)	-0.09 (-1.2)
Observations	7,607	2,517	2,029	1,722
Adjusted R2	0.08	0.14	0.12	0.04

Table 8: Acquirer Advisor's Industry Expertise, Probability of Completion and Time to resolution

The column one presents result of the probit regression analysis of the probability of deal completion for a sample of U.S mergers and acquisitions announced over the period 1985 to 2008. The dependent variable is a dummy variable, *deal completion*, which is equal to one for completed transactions, and zero for withdrawn deals. The column two shows the result of OLS regression analysis for the *time to resolution* and the dependent variable is defined as the number of calendar days between the announcement and resolution (completion or withdrawal) dates. The definitions of the other variables can be found at the legend of table 7. The probit model is estimated and marginal effects at the mean are reported. The z-statistics in parentheses are calculated from the Huber/White/Sandwich heteroskedastic consistent errors, which are also corrected for correlation across observations for a given deal. Constant terms, year fixed effects, and industry fixed effects are included but not reported. The symbols ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

	<i>Deal Completion</i>	<i>Time to resolution</i>
<i>Bank's industry expertise</i> ^{acquirer}	0.07*** (2.8)	16.06 (1.2)
<i>Bank's expertise in merger</i>	0.09**	1.56
<i>counterparty's industry</i> ^{acquirer} × <i>Diversifying</i>	(2.2)	(0.1)
<i>Bank-industry rival relationship</i> ^{acquirer}	-0.07 (-0.9)	45.32 (1.2)
<i>Top-tier</i> ^{acquirer}	-0.00 (-0.9)	8.50*** (3.4)
<i>Tender offer</i>	0.03*** (5.5)	-41.31*** (-9.1)
<i>Relative size</i>	-0.01*** (-6.9)	11.03*** (7.3)
<i>Diversifying</i>	0.00 (0.0)	-7.70*** (-3.1)
<i>Hostility</i>	-0.57*** (-19.1)	1.05 (0.1)
<i>Public target</i>	-0.08*** (-12.1)	53.89*** (17.6)
<i>Pure-Cash deals</i>	0.00 (0.0)	-17.00*** (-6.2)
<i>Leverage</i> ^{acquirer}	-0.00 (-0.2)	4.31 (0.6)
<i>Ln (Assets)</i> ^{acquirer}	0.00* (1.7)	4.11*** (4.4)
<i>Tobin's Q</i> ^{acquirer}	0.00 (0.4)	-0.34 (-0.7)
<i>Free cash flow</i> ^{acquirer}	0.01** (2.2)	-0.59 (-0.3)
<i>Run-up</i> ^{acquirer}	0.02*** (3.3)	-2.42 (-1.3)
Number of Deals	7,610	7,610
R-squared	0.28	0.22

Appendix A: Major Bank Mergers in the Banking Industry

The table summarizes the major merger and acquisition events in the banking industry. The sample banks are selected by forming a union of two groups of banks: (1) the sample of Ljungqvist, Marston and Wilhelm (2006); and (2) the sample of 50 most active banks in M&A activities by transaction value over the period 1985 to 2008. The effective dates of bank mergers are obtained from Corwin and Schultz (2005), supplemented by other financial news sources. The numbers in the brackets following bank names define the predecessor-successor relationships among banks. The number at the beginning represents the surviving bank. The first subsequent character (a or b) represent one of the two predecessors of the surviving bank. The second, third and fourth characters further define the earlier predecessors. For example, Credit Suisse First Boston (2a) and Donaldson Lufkin & Jenrette (2b) are predecessors of Credit Suisse (2), the surviving bank. Credit Suisse (2a) and First Boston Corp. (2b) are predecessors of Credit Suisse First Boston (2a).

Surviving Bank	Effective date	Bank 1	Bank 2	
<i>Sample bank from Ljungqvist, Martson and Wilhelm (2006)</i>				
Citigroup/Salomon Smith Barney (1)	19860731	Schroders (1aba)	Wertheim Holdings (1abb)	
	19971128	Salomon Brothers (1aaba)	Smith Barney Inc. (1aabb)	
	19981008	CitiCorp (1aaa)	Travelers (1aab)	
	20000501	Salomon Smith Barney Holdings (1aa)	Schroders-Worldwide Investment (1ab)	
Credit Suisse (2)	20010202	Salomon Smith Barney Holdings (1a)	Geneva Companies (1b)	
	19881222	Credit Suisse (2aa)	First Boston Corp. (2ab)	
	20001103	Credit Suisse First Boston (2a)	Donaldson Lufkin & Jenrette (2b)	
Lehman Brothers (3) (now Barclays Capital)	19840510	Shearson/American Express (3aa)	Lehman Brothers (3ab)	
	19880429	Shearson Lehman Brothers (3a)	EF Hutton (3b)	
JP Morgan (4)	19920326	Chemical Bank (4aaaaaa)	Manufacturers Hanover Bank (4aaaaaab)	
	19960331	Chemical Bank (4aaaaaa)	Chase Manhattan (4aaaaab)	
	19990325	Robert Fleming Hldgs Ltd (4aaaba)	Jardine Fleming Group Ltd (4aaabb)	
	19991210	Chase Manhattan Corp. (4aaaa)	Hambrecht & Quist Group (4aaaab)	
	20000411	Chase Manhattan Corp. (4aaaa)	Robert Fleming Hldgs Ltd (4aaab)	
	20001231	Chase Manhattan Corp. (4aaa)	JP Morgan & Co. (4aab)	
	20040701	JP Morgan Chase & Co. (4aa)	Bank One Corp. (4ab)	
	20080530	JP Morgan Chase & Co. (4a)	Bear Stearns Companies, Inc. (4b)	
	UBS (5)	19950131	PaineWebber (5baa)	Kidder Peabody & Co., Inc. (5bab)
		19950703	Swiss Bank Corp. (5abaa)	SG Warburg Securities (5abab)
19970902		SBC Warburg (Swiss Bank Corp.) (5aba)	Dillon Read & Co. (5abb)	
19980629		Union Bank of Switzerland (5aa)	Swiss Bank Corp. (5ab)	
20000612		PaineWebber Group, Inc. (5ba)	JC Bradford & Co. (5bb)	
Deutsche Bank (6)	20001103	UBS AG (5a)	Paine Webber Group, Inc. (5b)	
	19900330	Deutsche Bank AG (6ba)	Morgan Grenfell (6bb)	
	19960801	James D Wolfensohn Inc. (6aba)	Bankers Trust New York Corp. (6abb)	
	19970902	Alex Brown, Inc. (6aa)	Bankers Trust New York Corp. (6ab)	
Wachovia Corp. (7) (now Wells Fargo)	19990604	BT Alex Brown (6a)	Deutsche Bank AG (6b)	
	19980202	First Union Corp. (7aaaa)	Wheat First Butcher Singer (7aaab)	
	19990401	Wachovia Corp. (7aaba)	Interstate/Johnson Lane (7aabb)	
	19990731	Prudential Securities (7abaa)	Vector Securities Intl., Inc. (7abab)	

Oppenheimer Holdings (8)	19991231	Prudential Securities (7aba)	Volpe Brown Whelan & Co. (7abb)
	20010904	First Union Corp. (7aaa)	Wachovia Corp. (7aab)
	20030701	Wachovia Corp. (7aa)	Prudential Securities (7ab)
	20071001	Wachovia Corp. (7a)	AG Edwards Inc. (7b)
	19890815	Canadian Imperial Bank of Commerce (8abaa)	Wood Gundy Inc. (8abab)
	19971103	CIBC Wood Gundy Securities (8aba)	Oppenheimer & Co., Inc.(8abb)
Bank of America Merrill Lynch (9)	20030103	Fahnestock Viner Holdings Inc. (8aa)	CIBC Oppenheimer's retail brokerage business (the Private Client and U.S. Asset Management Divisions) was sold (8ab)
	20080114	Oppenheimer Holdings Inc. (8a)	CIBC World Markets-US Businesses (8b)
	19920422	BankAmerica Corp. (9aaaaa)	Securities Pacific (9aaaaab)
	19940901	BankAmerica Corp. (9aaaaa)	Continental Bank (9aaaab)
	19971001	BankAmerica Corp. (9aaaa)	Robertson Stephens & Co. (9abbb)
	19971001	NationsBank Corp. (9aaba)	Montgomery Securities (13a)
	19980202	Fleet Financial Group Inc. (9abaa)	Quick & Reilly Group(9abab)
	19980901	BankBoston Corp. (9abba)	Robertson Stephens & Co. (9abbb)
	19980930	BankAmerica Corp. (9aaa)	NationsBank Corp. (9aab)
	19991001	Fleet Financial Group Inc. (9aba)	BankBoston Corp. (9abb)
	20040401	BankAmerica Corp. (9aa)	FleetBoston Financial (9ab)
	20061218	Merrill Lynch & Co., Inc.(9ba)	Petrie Parkman & Co., Inc.(9bb)
	20090101	Bank of America Corp. (9a)	Merrill Lynch & Co., Inc.(9b)
	Morgan Stanley (10)	19970531	Dean Witter Discover & Co. (10a)
Cowen Group (11)	19980630	Cowen & Co. (11a)	Societe Generale Securities (11b)
	2006	Cowen carved out	
Goldman Sachs (12)			
Thomas Weisel Partners (13)	19980921	Spun off from Montgomery Securities (13a)	

Other banks which are classified as the top-50 in SDC by transaction value

Drexel Burnham Lambert (14)			
Lazard (15)			
Piper Jaffray (16)	19980501	US BanCorp. (16aa)	Piper Jaffray Companies (16ab)
	19990104	US BanCorp. (16a)	Libra Investment, Inc. (16b)
	20031231	US BanCorp. (16x) spun off Piper Jaffray (16)	
SunTrust Robinson-Humphrey (17)	19980102	SunTrust Banks Inc. (17aa)	Equitable Securities Corp. (17ab)
	20010727	SunTrust Banks Inc. (17a)	Robinson-Humphrey (17b)
Houlihan Lokey (18)			

ABN-AMRO (19)	19950309	ING (19baa)	Barings Securities (19bab)
	19950927	ABN-AMRO Holding N.V. (19aa)	Chicago Corporation (19ab)
	19971008	ING Barings (19ba)	Furman Selz LLC (19bb)
	20010430	ABN-AMRO Holding N.V. (19a)	ING Baring-US Operations (19b)
Dresdner (20)	19950823	Dresdner Bank AG (20aa)	Kleinwort Benson (20ab)
(now Commerzbank)	20010105	Dresdner Bank AG (20a)	Wasserstein Perella Group, Inc. (20b)
Stephens Inc. (21)			
Greenhill (22)			
Jefferies (23)	20010321	Jefferies & Co. (23aaa)	Quarterdeck Investment (23aab)
	20031223	Jefferies Group Inc. (23aa)	Broadview Holdings (23ab)
	20070621	Jefferies & Co. (23a)	Putnam Lovell Group Inc. (23b)
Blackstone (24)			
EverCore Partners (25)			
Allen & Co. (26)			
RBC Capital Market (27)	19980102	Dain Bosworth (27aabaa)	Rauscher Pierce Refsnes (27aabab)
	19980406	Dain Rauscher Corp. (27aaba)	Wessels Arnold & Henderson LLC (27aabb)
	20010110	Royal Bank of Canada (27aaa)	Dain Rauscher Corp. (27aab)
	20011101	Royal Bank of Canada (27aa)	Tucker Anthony Sutro (27ab)
	20070111	RBC Capital Market (27a)	Daniels & Associates Inc. (27b)
Stifel Financial Corp. (28)	20020429	Ryan Beck & Co. (28ba)	Gruntal & Co. (28bb)
	20070228	Stifel Financial Corp. (28a)	Ryan Beck & Co. (28b)
KPMG (29)			
Peter J Solomon (30)			
Raymond James (31)	19980511	First Chicago NBD Corp. (31aaa)	Roney & Co. (31aab)
	19981002	First Chicago NBD Corp. (31aa)	BANC ONE Corp. (31ab)
	19990614	Roney Capital Markets (BANC ONE) (31a)	Raymond James Financial, Inc. (31b)
William Blair (32)			
PricewaterhouseCoopers (33)	19980701	Price Waterhouse (33a)	Coopers & Lybrand LLC (33b)
Ernst & Young (34)			
Needham & Co. (35)			
Simmons & Co. (36)			
KeyCorp(37)	19980908	McDonald & Co. Investments, Inc. (37aaa)	Essex Capital Markets, Inc. (37aab)
	19981026	McDonald & Co. Investments, Inc. (37aa)	KeyCorp(37ab)
	19990603	McDonald & Co. Investments, Inc. (37a)	Trident Financial Corp. (37b)
Keefe, Bruyette and Woods (38)	19960508	Keefe, Bruyette and Woods (38a)	Charles Webb & Co. (38b)
Sandler O'Neill Partners (39)			
Alliant Partners (40)			
Austin Associates Inc. (41)			
Robert W Baird & Co. (42)			

Baxter Fentriss & Co. (43)			
BB&T Corp. (44)	19971002	BB&T Corp. (44aaa)	Craigie Inc. (44aab)
	19990326	BB&T Corp. (44aa)	Scott & Stringfellow Financial (44ab)
	20050105	BB&T Corp. (44a)	Windsor Group LLC (44b)
Berkery, Noyes & Co. (45)			
BMO Capital Markets (46)	19871031	Bank of Montreal (46a)	Nesbitt Thomson Inc. (46b)
Brown, Gibbons, Lang & Co. (47)			
Duff & Phelps (48)			
Friedman Billings Ramsey (49)			
Goldsmith Agio Helms & Co. (50)			
Grant Thornton LLP (51)			
Harris Williams & Co. (52)			
Hovde Financial (53)			
Lincoln International (54)			
Morgan Joseph & Co., Inc.(55)			
Morgan Keegan Inc. (56)			
Rothschild (57)			
RSM EquiCo Capital Markets (58)			
Sperry Mitchell (59)			
Updata Capital Inc. (60)			
