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Do Investment Banks Have Skill? Performance Persistence of M&A Advisors

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Abstract

We document significant persistence in the average announcement returns to acquisitions advised by an investment bank. Advisors in the top quintile of returns over the past two years outperform the bottom quintile by 0.92% over the next two years, compared to a full-sample average return of 0.73%. Persistence continues to hold after controlling for the component of returns attributable to acquirer characteristics. These results suggest that advisors possess skill, and contrast earlier studies which use bank reputation and market share to measure advisor quality and find no link with returns. Our findings thus advocate a new measure of advisor quality – past performance. However, acquirers instead select banks based on market share, even though it is negatively associated with future performance. The publication of league tables based on value creation, rather than market share, may improve both clients' selection decisions and advisors' incentives to turn away bad deals.

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Mergers and acquisitions (M&A) are among the most critical decisions a CEO can make. Successful mergers can create substantial synergies through the combination of complementary assets and economies of scale and scope. By contrast, misguided acquisitions can lead to overinvestment in declining industries, and misallocation of companies to parents unable to reap their full potential. In addition to these large effects on shareholder value, a value-destructive takeover can cost the CEO his job.[1] The quality of M&A transactions is also of great importance to the economy as a whole. The total value of M&A announced by a U.S. acquirer in 2007 was $2.1tr, around 15% of GDP.

Since CEOs make M&A decisions rarely, they often lack experience and seek counsel from investment banks. The *skilled advice* hypothesis is that banks help clients to identify synergistic targets and negotiate favorable terms. However, existing research generally fails to find that high-quality advisors improve M&A performance. Bowers and Miller (1990) and Michel, Shaked and Lee (1991) measure an advisor's quality by its reputation and find no link with acquirer returns; Rau (2000) uses market share to measure quality and documents a negative relationship. Servaes and Zenner (1996) find no benefit of hiring an advisor at all. These findings seem inconsistent with the skilled advice hypothesis. Instead, they appear to support the *passive execution* hypothesis, that investment banks do not matter for M&A outcomes but are simply "execution houses" who undertake deals as instructed by the client. If true, such a conclusion has several troubling implications. The investment banking industry, which consumes a significant proportion of an economy's talented human capital, is predominantly a deadweight loss to society. Relatedly, the substantial fees paid by clients are unnecessary expenses with little corresponding benefit. Moreover, CEOs' inexperience in M&A is not mitigated by hiring an advisor, which may explain why so many acquisitions destroy value.

This paper reaches a different conclusion. Prior studies investigate skill by correlating returns against certain variables (e.g. market share or reputation), and thus will only find significance if ability (if it exists) is associated with their hypothesized variables. We instead start with a fixed effects analysis, similar to Bertrand and Schoar (2003). This is a broader approach which investigates whether banks exhibit any differential deal returns, without having to specify variables with which any differential will be correlated. Indeed, we find significant bank fixed effects to a deal's 3-day cumulative abnormal returns (CAR). The difference between

[1] Lehn and Zhao (2006) find that a bad acquisition significantly increases the likelihood that the CEO is fired. For example, the departure of Carly Fiorina from Hewlett Packard is widely attributed to her acquisition of Compaq.

the 25th and 75th percentile bank is 1.5%, which is economically meaningful applied to the mean bidder size of $10 billion and compared with the mean CAR of 0.73%.

Having documented that banks are associated with different CARs over the entire time period, we next investigate whether such differences are predictable based on historic data, and thus can be used by clients in their advisor selection decisions. The existence of bank fixed effects implies a persistent component to a bank's average CAR, and thus motivates us to predict future returns using an advisor's past returns, rather than the market share and reputation measures previously studied. Indeed, we find significant performance persistence: for example, the top quintile of banks based on CAR over the past 2 years outperforms the bottom quintile by 0.92 percentage points over the next 2 years.

Persistence analyses have also been conducted to evaluate skill in mutual funds, hedge funds and security analysts. Our setting shares two challenges also faced by studies of investment skill. The first is performance attribution – observed returns are affected by factors other than skill. In an investment setting, returns depend also on the portfolio's factor loadings and realized factor outcomes, and could be high simply because the portfolio has high systematic risk and the market has performed well. Since investment performance is a long-run concept, investment studies typically investigate long-horizon returns.[2] Therefore, the results are highly contingent on the benchmark asset pricing model used (Fama (1998)).

This problem is less severe in our setting, since performance can be measured by the event-study return – in an efficient market, it captures the full value impact of an acquisition. With short-horizon returns, risk adjustment is less of an issue. Instead, the performance attribution challenge takes a different form – CAR may be the responsibility of either the bank or the client. The advisor is indeed primarily responsible in two main categories of deals. First, in "bank-initiated deals", the advisor proposes the transaction to the client as well as negotiating terms. Second, the client may propose the transaction ("standard client-initiated deal"), but lacks skill in identifying value-creating deals and thus suggests both good and bad transactions. It wishes the bank to advise it against pursuing unattractive, and so the advisor is again responsible for CAR. A negative CAR results either because the bank lacks the expertise to identify deal quality ex ante, or knows that the deal is undesirable but accepts the mandate anyway because it wishes to maximize its own fee income and market share rather than client returns. Many prior

[2] However, see Baker, Litov, Wachter and Wurgler (2009) for an analysis of mutual fund skill using short-horizon returns to earnings announcements.

investment banking studies (e.g. Bowers and Miller (1990), Michel, Shaked and Lee (1991), Rau (2000), Hunter and Jagtiani (2003)) do not tackle the issue of performance attribution and instead assume CAR results entirely from bank ability. Under this interpretation, the findings of persistence are consistent with the *skilled advice* hypothesis.

However, the bank may not be wholly responsible for CAR in a "fixated client deal", where the client decides on the target and wishes the bank simply to execute it. This occurs in two main cases. First, it is the client (rather than the bank) that has skill in identifying synergistic transactions. A bank may exhibit high CAR not because it is skilled, but because it is systematically mandated by high-quality acquirers. Second, the client does not seek to maximize shareholder value, perhaps as it is empire building. A bank may caution that returns will be negative, but the client demands that the deal be undertaken anyway. Therefore, a bank may exhibit negative CAR because it is systematically mandated by value-destroying clients. Persistence in raw CAR thus may still be consistent with the *passive execution* hypothesis.

Some authors have recognized this potential endogeneity issue and control for deal characteristics (e.g. Servaes and Zenner (1996), Kale, Kini and Ryan (2003)). They acknowledge that this solution may go too far the other way, since deal characteristics are the advisor's responsibility in bank-initiated or standard client-initiated deals.[3] We therefore control for the component of CAR that can be explained by *acquirer* characteristics. We choose characteristics that proxy for the likelihood that the client is empire-building (such as free cash flow, leverage and various governance measures, as used by Masulis, Wang and Xie (2007)) and high-quality (such as stock and operating performance, and Tobin's *Q*). The orthogonal component is within the bank's control – even if a fixated client has decided on an inappropriate target, the bank can minimize the negative value impact by skilled negotiation of terms. We find significant persistence in both the component of CAR attributable to client characteristics, and also the orthogonal component attributable to the bank, consistent with the *skilled advice* hypothesis. Similarly, the bank fixed effects remain robust to controls for both acquirer characteristics and acquirer fixed effects which absorb unobservable differences across clients.[4]

[3] For example, Servaes and Zenner (1996) caveat their conclusion by acknowledging "it is not certain that the [deal characteristics] affecting investment banking choice are exogenous. For example, it is possible that investment banks influence the form of payment or the decision to pursue the acquisition."

[4] When acquirer fixed effects are included, identification is achieved purely based on repeat acquirers who use different banks. Such identification is possible when estimating bank fixed effects, since this analysis uses the entire 27-year dataset and there are several repeat acquirers in this time period. However, the persistence analysis requires measuring average CAR over a short horizon (1 to 3 years) and thus does not allow the use of acquirer fixed effects.

A second challenge shared with investment studies is that average returns depend not only on skill, but also scale. In Berk and Green (2004), a skilled mutual fund is able to attract inflows. If there are diminishing returns to scale, the fund will deliver moderate returns despite its skill. Applied to our setting, this *limited capacity* hypothesis posits that banks differ not in their skill, but their capacity to accept mandates. Small banks can only work on the highest-return transactions; large banks can also accept mandates with small (but still positive) value and consequently exhibit lower average returns. We refute this hypothesis by showing that the low CARs of the bottom-quintile banks do not arise from executing small but positive transactions, but double the proportion of value-destructive deals as the top quintile.

In addition to returns, clients may also place importance on the speed and probability of completion. We show that these performance measures are also persistent. Moreover, choosing on either of these variables does not lower returns. Banks with perfect completion records over the past two or three years are associated with higher CARs by 0.7%. This suggests that certain banks are skilled along multiple dimensions, and thus clients do not face trade-offs between objectives when selecting advisors.

Our results thus support the skilled advice hypothesis, that banks have skill. Moreover, clients can predict this skill using observable measures. The findings therefore guide acquirers on how to select advisors – not on the basis of market share or reputation, but prior returns. Similarly, while academic research has historically used market share or reputation as a measure of quality, our results suggest a new measure – past performance. By using this measure, we are the first study to find large-scale evidence that quality does improve future M&A performance.

We finally investigate whether bidders indeed use this quality measure in their selection decisions. Our evidence points to the contrary. A bank's market share is independent of its past total CAR (also documented by Rau (2000)), completion ratio and speed. Instead, it is significantly determined by past market share, which both we and Rau find is negatively related to future performance. One potential rationalization is that clients build up relationship-specific capital by working with a particular bank, and thus it is efficient to continue with the same bank irrespective of past performance. However, we find that retaining a previous advisor leads to CAR that is 0.30 percentage points lower than average, and 0.76 percentage points lower if the average CAR to hiring that advisor in the past was negative.

Our findings may be of interest to multiple parties. For managers, they guide the important decision of investment bank selection. For academics and policymakers, they imply a

double-edged sword. On the one hand, they suggest that certain investment banks possess skill, and are not simply a deadweight cost. On the other hand, they imply inefficiencies in the allocation of M&A mandates, since clients are not selecting on the basis of this skill. While it seems puzzling that acquirers are focusing on measures negatively correlated with future performance, it is entirely consistent with practices in the investment banking industry. Market share league tables are widely publicized by both the media and the banks themselves, and so clients (erroneously) use them as a proxy for quality. The current exclusive publication of market share league tables may both persuade acquirers to select based on an erroneous variable, and encourage banks to accept value-destructive mandates to maximize their league table position. Our results therefore suggest that clients (and, if necessary, policymakers) should promote the dissemination of league tables of past shareholder returns, as it positively predicts future performance. This may not only improve client selection decisions through providing relevant information, but also deter a bank from accepting a mandate it believes to be value-destructive because this will worsen its position in the value creation league table.

This paper proceeds as follows. Section 1 reviews the literature and Section 2 discusses potential sources of persistence. Section 3 describes the data. Section 4 presents the core result of the paper, illustrating the persistence of CAR and thus its appropriateness as a measure of advisor quality. Section 5 shows that clients overlook this criterion in favor of market share, and Section 6 concludes.

1. Literature Review

Existing literature on investment bank advisors is broadly divided into two segments. The first strand investigates whether clients can improve M&A outcomes by hiring high-quality banks, or by hiring an external advisor in the first place. It thus answers two questions: the positive question of whether investment banks have skill, and the normative question of how acquirers should select advisors.

Bowers and Miller (1990) and Michel, Shaked and Lee (1991) define advisor quality according to whether a bank belongs to the "bulge bracket", i.e. has a prestigious name. They find that bidder returns are not enhanced by using a more reputable advisor. Ma (2006) shows that the target's use of a reputable bank does not hurt the acquirer. Measuring bank quality using market share leads to similarly mixed findings. Rau (2000) finds that bidders in mergers advised by market-leading banks earn lower CAR and pay higher premia in tender offers. Ismail (2008)

finds similar results, although the difference is mainly driven by a small number of highly value-destructive deals by market leaders. Hunter and Jagtiani (2003) find that acquirer gains decrease in the use of high-market-share advisors by the target, but also in their use by the bidder. Servaes and Zenner (1996) find no benefit to hiring an investment bank in the first place, compared to seeking advice in-house. To our knowledge, Kale, Kini and Ryan (2003) is the only paper to document the benefits of employing market leading advisors. They focus on 324 contested takeovers of public targets, and find that large banks are more likely to withdraw from value-destructive deals. By contrast, both this paper and Rau (2000) find a negative link between market share and performance when examining all M&A transactions, the vast majority of which are private deals. One reason may be that the incentives to act in the client's interest are far stronger in public situations, where "honest" advice to withdraw from a transaction is widely observed and thus leads to a large reputational boost.

In sum, existing literature finds little evidence that banks have skill, since high-quality advisors do not lead to better M&A outcomes. Therefore, the question "how should acquirers select advisors?" appears unresolved, as it seems that there is no criterion that clients can select on to improve future M&A outcomes. We address this open issue by identifying a measure of bank quality that is correlated with higher future M&A returns – past returns – in turn suggesting that investment banks do have skill.

The second strand of the literature addresses the question "how *do* acquirers select advisors?" The central paper is Rau (2000), who finds that a bank's market share is positively related to its deal completion rate. However, somewhat surprisingly, it is unaffected by the average market reaction to its past transactions. Servaes and Zenner (1996) and Kale, Kini and Ryan (2003) study the factors that lead a client to hire an external advisor in the first place. Francis, Hasan and Sun (2008) show that bidders tend to remain with banks that have advised their M&A transactions or underwritten their equity issues in the past.

While the two questions, of how acquirers do and should select advisors, have been pursued largely independently, we believe they are highly complementary. For example, Rau's finding that clients ignore past performance does not suggest inefficiency if returns are not persistent. To evaluate whether advisor selection practices are efficient, we must understand how the very characteristics clients are focusing upon, or ignoring, impact future M&A performance. Indeed, if banks do not have skill, or skill cannot not be predicted using observable measures, then acquirers' selection criteria are irrelevant and the question "how do

acquirers select advisors?" becomes moot. This question becomes particularly interesting with the knowledge of how bidders *should* choose banks. Therefore, by answering the question of how acquirers should choose advisors, we also shed light on existing findings on how clients select advisors in practice. Since banks have skill, selection criteria do matter. Rau's (2000) finding that past CAR does not matter becomes even more puzzling since CAR is persistent.

Ertugurul and Krishnan (2008) also study the existence of skill in investment banking. They focus on individual bankers who switch between companies, rather than banks themselves.[5] Another difference is that, in addition to identifying a fixed effect in the full sample, we also investigate persistence and thus the predictability of future outcomes using past performance. Jaffe, Pedersen and Voetmann (2009) demonstrate persistence in M&A performance at the client (rather than advisor) level, especially in firms that retain their CEO. Mikhail, Walter and Willis (2004) and Hoberg (2007) document persistence in two other services offered by investment banks: equity underwriting and security analysis, respectively. [6]

2. Motivation: Why Might Persistence Arise?

This section discusses the theoretical motivation for why a bank's average returns may be persistent. To understand the possible sources of persistence, we first outline the role that advisors play in M&A deals. Their actual level of involvement can vary significantly across transactions, and is unobservable in the data.[7] There are three broad categories of involvement.

At the most active extreme is a "bank-initiated deal". The advisor proposes an acquisition to the client, based on analyses of strategic fit and valuation. If the client agrees to proceed with the transaction, the bank advises on the transaction terms. It undertakes analysis to recommend a price to offer. If the initial bid is rejected, the bank advises the client either to increase its bid, or to withdraw from the deal as the price is now unfavorable. In the latter case,

[5] We study banks rather than individual bankers as it is difficult to know which particular banker worked on a certain deal. Advising on a transaction typically leverages resources across the entire bank (e.g. a debt-financed acquisition of a German chemicals target by a UK pharmaceuticals acquirer may involve the M&A, debt capital markets and credit ratings product groups and pharmaceuticals, chemicals, UK and Germany coverage teams). Hence most of the existing literature also studies banks.

[6] Kaplan and Schoar (2005) find persistence in private equity performance. Hendricks, Patel and Zeckhauser (1993) and Brown and Goetzmann (1995) document persistence in mutual fund performance, but Carhart (1997) finds that this result disappears when controlling for momentum. Brown, Goetzmann and Ibbotson (1999) find no persistence in offshore hedge funds.

[7] We use the standard data source, *Thomson Financial*'s Securities Data Company (SDC), which lists the advisor(s) hired for each transaction but not their level of involvement. SDC does record a field called "Acquirer Advisor Assignment", but this field is almost always labeled as "Advisory", which provides little information on the actual role played.

the transaction does not appear in SDC. For bank-initiated deals, the advisor is predominantly responsible for CAR.

A second type broad category is a "standard client-initiated deal". Here, the client proposes the transaction, but lacks the skill to identify value-creating deals. It therefore initiates both good and bad transactions, and relies on the bank to advise them on which deals to pursue. Since the bank can reject a value-destructive transaction, it is again responsible for deal selection in addition to negotiation, and thus the entire CAR.[8] Not all banks will reject the deal, but this will be for reasons which are their responsibility. Some lack the skill to identify value-adding transactions ex ante; others know that the deal will destroy value but accept the mandate as they wish to maximize their own fee income rather than pursuing the client's interests. A bank cannot blame low CARs on having to work on non-synergistic deals, since it controls the transactions on which it advises – just as a lender cannot blame poor operating performance on an adverse selection of credit quality, since the loans it chooses to undertake are under its control.

The final classification is a "fixated client deal". Here, the acquirer has already decided on the transaction and thus does not seek advice from the bank on whether the target is appropriate; instead, it uses the bank simply to execute the transaction on the best terms possible. This may occur in two cases. First, the client may be skilled in identifying value-creating transactions and does not need the bank's input to do so. Second, the client is empire-building or hubristic and wishes to pursue a negative-CAR transaction even if the bank cautions otherwise. In such a case, the bank may still be adding shareholder value compared to the non-zero counterfactual of the client pursuing the acquisition with a rival bank. The bank is not responsible for the component of CAR that can be attributed to the acquirer's non-value-maximizing objectives. It remains responsible for the orthogonal component, since it should negotiate the transaction on the best possible terms.

Given the varying extent to which investment banks may be involved in a transaction, persistence in average returns may stem from three main sources. The first is the *skilled advice* hypothesis, that certain advisors possess underlying skill, either in identifying synergistic acquisitions (for bank-initiated deals) or in negotiating transactions (regardless of the deal

[8] For example, Morgan Stanley states that "we take a serious and long-term view of our client relationships. Sometimes the best advice is not to do a deal and we do not hesitate to provide that advice if we think it right". JP Morgan similarly claims "objectivity is central to the advice we provide clients – sometimes the best deal is not to do a deal". Not all banks will act in this manner because some will pursue their own interest; our performance measure captures banks' differing propensity to turn down bad deals.

category). Alternatively, persistence may stem from systematically turning away value-destructive transactions initiated by standard clients - this in turn requires skill in identifying such deals ex ante, combined with trustworthiness to maximize client shareholder value rather than its own short-run fee income. We use the term "skilled advice" to include these three qualities of deal identification, transaction negotiation and trustworthiness.

The second is the *passive execution* hypothesis. An advisor may exhibit a persistently high (low) CAR because it is systematically mandated by skilled (empire-building) clients; moreover, it has no skill in negotiating the best terms possible, given the target preselected by the fixated client. It is an "execution house" that does not offer advice but simply executes deals according to a client's instructions (similar to an execution-only stockbroker compared to a with-advice broker). [9] We distinguish between the above two hypotheses by controlling for proxies for acquirer quality and governance, to isolate the component of CAR under the bank's control.

Finally, the *limited capacity* hypothesis posits that banks differ not in skill, but their ability to accept mandates. A bank may exhibit a high average CAR because it can work on only the highest value-creating deals, whereas a bank's persistently low CAR may arise because it has the capacity to execute all deals that create positive value, even if the value creation is small. This echoes Maksimovic and Phillips (2002) who argue that conglomerate firms' lower productivity arises since they are able to accept all projects until NPV is zero, and thus report lower average profitability; Berk and Green (2004) make a similar argument for mutual funds.

We evaluate this hypothesis by investigating whether a bank's low average CAR stems from advising on deals with small but positive value, or value-destructive deals. We should also note that this hypothesis is less likely for investment banks than corporations or mutual funds. Most mutual funds have a single manager; similarly, small corporations may be unable to accept projects that create modest value owing to a lack of funds. By contrast, banks' capacities are relatively flexible. The key inputs are humans, who can be hired much more rapidly than physical capital. Bankers' hours can be escalated when required, and a number are primarily designated for client coverage but can be rapidly reassigned to transaction execution. Deal size is rarely an issue for small banks, since boutique advisors often work on very large

[9] The passive execution hypothesis would also be supported if there is no persistence or bank fixed effect in the first place.

transactions.[10] We are not aware of any cases where a bank has turned down a mandate owing to a lack of capacity for either deal size or deal volume.

3. Performance Metrics, Data and Descriptive Statistics

3.1. Data Sources

We use *Thomson Financial*'s Securities Data Company (SDC) data for mergers announced between January 1980 and December 2007. We wish to identify deals that involve a change of control, as these are most likely to have an effect on acquirer returns. We therefore retain only transactions categorized as "Merger", "Acquisition", "Acquisition of Assets" or "Acquisition of Majority Interest" and drop all deals for which the acquirer's initial stake exceeded 50%, or its final stake was below 50%. We also drop transactions for which the acquirer hired no advisor, had no stock returns on CRSP, or the deal value was below $1m (as in Rau (2000)). Our final sample contains 15,423 deals. Where a deal has multiple advisors, the deal is credited to each advisor separately. This is consistent with how SDC constructs market share league tables.

3.2. Measures of Performance

3.2.1. Cumulative Abnormal Returns

Our principal measure of performance is the CAR to acquirers above the CRSP value-weighted index, which we winsorize at 1% and 99%.[11] CAR is the relevant performance measure as it equals the gain in shareholder value, which the CEO has a fiduciary duty to maximize;[12] hence it is the primary variable in past studies such as Rau (2000), Bowers and Miller (1990), and Servaes and Zenner (1996). We use a window of (-1, +1) around the

[10] For example, the boutique Gleacher employs 50 staff and advised on Bank of Scotland's $40b merger with Halifax, AT&T's $22b sale to SBC Communications and MFS Communications' $14b merger with WorldCom.

[11] We also obtain beta model returns from Eventus. The correlation between beta model returns and returns above the CRSP value-weighted index is 99%. Since the beta model cannot be calculated for some acquirers, we use returns above the CRSP value-weighted index. In addition, Hackbarth and Morellec (2007) show that betas change substantially upon a merger, and so a beta calculated based on historical data is likely to be misleading. Our results are qualitatively unchanged when using beta model returns. We use the CRSP value-weighted index as a benchmark as Rau and Vermaelen (1998) document biases when using size and book-to-market adjusted CARs.

[12] One alternative, used by Morck, Shleifer and Vishny (1990), is the "return on investment" of an acquisition: the dollar change in the bidder's market value, divided by the transaction price. The differences are similar to the distinction between NPV and IRR for capital budgeting. NPV is preferred as it measures the value added to shareholders, thus leading to correct decisions when projects are of different size. Similarly, if a client must choose between acquisition targets, he should select the one which leads to the greatest value gains even if the "return on investment" is lower. It is redundant to divide by the purchase price, since the cost of acquisition is already accounted for in the bidder return.

announcement date; the results are similar for a (-2, +2) window. While CAR refers to one specific deal, the main variable used in our analyses is *RET*, the average CAR to all deals advised by a bank that were announced in a certain period. To be included in the analysis, a bank must have announced at least three deals within the applicable period.

Some papers attribute the entire CAR to the bank (e.g. Bowers and Miller (1990), Michel, Shaked and Lee (1991), Rau (2000), Hunter and Jagtiani (2003)). As previously discussed, this may constitute an over-attribution in fixated client deals. Others remove the component of CAR that can be explained by deal characteristics (e.g. Servaes and Zenner (1996), Kale, Kini and Ryan (2003)). However, this leads to an under-attribution, since deal characteristics may be chosen by the advisor, either directly by initiating the deal or indirectly by accepting a client-proposed mandate. Our approach is to control for acquirer characteristics that proxy for client quality or the likelihood of non-value-maximizing-behavior, since they are outside a bank's control, taking its client base as given. Note that banks may be able to control their client base to some degree; for example, if a firm proposes a value-destructive acquisition, the bank could advise against the deal and so the firm does not enter the bank's client base. Therefore, controlling for acquirer characteristics is conservative: since they are not completely outside the bank's control, it under-attributes the proportion of returns for which a bank is responsible.

A number of our characteristics are related to governance. Masulis, Wang and Xie (2007) find that governance mechanisms are significantly related to acquirer returns. Their primary measure is the shareholder rights index of Gompers, Ishii, and Metrick (2003). Unfortunately, this variable is not suitable for our study since it is only available from 1990 and we require a long time series to test for persistence. We therefore include other governance mechanisms studied by Masulis et al.: institutional ownership, leverage, and product market competition (as measured by the Herfindahl index and the industry's median ratio of selling expense to sales). The second main group of characteristic are proxies for acquirer quality, also from Masulis et al: Tobin's *Q*, pre-announcement stock price runup, and operating performance. We also use all of the other bidder characteristics studied by Masulis et al.: free cash flow (a proxy for managerial discretion) and size. Acquirer size is particularly important because it is significantly negatively related to returns (Moeller, Schlingemann and Stulz (2004)).

Since omitted acquirer characteristics may over-attribute the component of CAR for which the bank is responsible, we add additional controls over and above those featured in prior literature. We include inside ownership from Compact Disclosure, to measure management's

alignment with shareholders. Where it is missing, we impute it using firm sales and age.[13] We use dummy variables for the bidder's Fama-French industry[14] and for whether it made an acquisition in the previous five years, as this may signal empire building. We also include the number of distinct acquirer SIC codes as this may proxy for empire-building intent. Full variable definitions are given in Table 1 of Appendix A. All of these variables are calculated for the fiscal year ending the year before deal announcement. [15]

Total CAR from each deal is split into an explained component, CAREXP, and a residual component, CARRES. We define *RETEXP* (*RETRES*) as the average CAREXP (CARRES) over a particular time period. The regression results are shown in Panel A of Table 2. Most of the coefficients are of the expected sign: returns are increasing in leverage, firm operating performance and insider ownership, and decreasing in free cash flow and the number of acquirer SIC codes.[16] The R^2 of 3% is commensurate with Masulis et al.'s R^2 of 5%. Their R^2 is higher as they include multiple deal characteristics, which are not appropriate for our context since they are under the bank's control.

Since the bank is responsible for raw CAR in all but fixated client deals, it constitutes our core measure. As with any investment decision, an M&A transaction should be undertaken if the NPV, *irrespective of project characteristics*, exceeds zero. A bank cannot justify a negative-NPV transaction by arguing that other clients with many SIC codes undertook even more value-destructive deals, if it had the option to turn away the deal in the first place.

3.2.2. Completion Ratio and Time

[13] Specifically, we winsorize sales at 1% and 99% and regress inside ownership on firm sales and age . We then use the coefficients to predict inside ownership for the firms in which it is missing. The R^2 of the first-stage regression is 13%.

[14] We use acquirer industry fixed effects rather than running the analysis for each industry separately (i.e. studying persistence of a particularly industry group within a bank) because very few banks undertake at least three transactions within a given industry in the required timeframe, the minimum required to calculate an accurate *RET* measure.

[15] Appendix B discusses the timing of our performance measures and Appendix C addresses bank mergers. Our regression of CAR on characteristics is run on the entire sample with year-fixed effects. Using a rolling window would cause data from the early period of the sample to be dropped and would also produce less precise estimates. Full-sample regressions are thus often used in asset pricing (e.g. Fama and French (1992)). We are not assuming that CEOs use past data to estimate the characteristics parameters for themselves when choosing banks. Instead, we posit that CEOs already have in mind a model of the effect of acquirer characteristics on returns, which they use to isolate the portion of CAR that is outside the bank's control. As econometricians, we are attempting to estimate this model, for which we require the full sample.

[16] While runup and Tobin's *Q* may proxy for acquirer quality, they may also represent an acquirer's ability to stock-finance a large value-destructive deal. This may explain why these variables are not positively related to CAR.

A CEO wishing to maximize shareholder value may place weight on performance measures other than CAR. We therefore investigate two further performance measures: the deal completion ratio and the average speed of completion.

The deal completion ratio is motivated by Rau's (2000) finding that it is a significant determinant of market share. A bidder's concern with completion may result from managerial self-interest, but can also be fully consistent with value maximization: a CEO who has identified a value-adding deal will justifiably place weight on the probability of eventual completion.

There are three stages to a transaction: the initial award of the *mandate* by the client to the bank, the *announcement* of the deal, and eventual *completion*. An announced deal may not be completed for reasons such as antitrust rulings or material adverse changes; such deals are classified as "withdrawn". Rau's measure of completion ability is the number of completed deals as a percentage of announced deals. One alternative metric would be completed deals as a percentage of mandates awarded, as this would take into account banks' failure to bring mandates even to the announcement stage. However, such a measure cannot be used since we only observe announcements, not mandates. More importantly, it may not capture true completion ability. For private deals and negotiated mergers (89% of our sample), the seller has agreed on the transaction terms by the time the deal is announced and appears in SDC. A bank can bring a high proportion of mandates to announcement simply by advising its clients to overpay, thus winning bidding auctions and overcoming target management resistance. By contrast, whether an announced deal is subsequently completed depends not on the price paid, but other factors such as the bank's ability to negotiate regulatory hurdles.[17]

The measure we use in our study, *CR*, is the number of completed deals as a percentage of total *resolved*, rather than announced deals. A deal is resolved when it is completed or withdrawn. This methodology is to avoid look-ahead biases, since resolution occurs after announcement. For example, a client at the start of 2000 is unable to observe the proportion of deals announced in 1999 that will be eventually completed, since many deals announced in late 1999 will not be resolved until after the start of 2000. We assume that a deal has been withdrawn if it was announced more than two years prior to the end of our sample and is not yet

[17] For tender offers, the target board has not agreed on the terms upon announcement. The transaction may not be completed if the target board does not recommend the deal to shareholders or a counter-bid arises, and the bank advises the client not to make a higher offer. A high ratio of completed to announced tender offers may thus stem from advising clients to overpay. However, tender offers comprise only 11% of our sample. All of our results involving completion ratios are unchanged when dropping these deals.

completed. The resolution date for such deals is then coded as two years from the announcement date. Pending deals announced within 2006 and 2007 are as yet unresolved and not used for the calculation of *CR*. 14,162 deals are labeled as complete, 1,094 as withdrawn, and 167 as pending. A bank's *CR* is its ratio of complete to resolved deals in a specific time period.

We also analyze completion speed as CEOs may wish to accelerate the realization of synergies or reduce distractions from core operations. As in Hunter and Jagtiani (2003), we calculate SPEED, the number of days between announcement and completion. We winsorize SPEED at 2 years, obtaining an average time to completion of 102 days. Fewer than 0.5% of deals are affected by the winsorization. *TIME* is the average SPEED for all deals resolved by a bank in a specified period, calculated in an analogous manner to *RET* and *CR*.

Banks may exhibit low completion ratios and slow speeds because they are systematically given transactions that are difficult to complete. If these deals are also positive-NPV, the bank should not be advising against them. Therefore, difficult deal characteristics are a justifiable explanation for poor *CR* and *TIME*, even though they are under the bank's control and do not excuse negative *RET*. Therefore, we construct *CRRES* and *TIMERES* by regressing on deal, rather than acquirer, characteristics. Our chosen deal characteristics proxy for deal complexity, as this affects ease of completion. We include dummy variables for whether the transaction was hostile, was a tender offer, involved no target advisors, was executed in two tiers (all used by Hunter and Jagtiani (2003)), or was challenged (Rau (2000)). We also include the number of target SIC codes, the bidder's toehold (both Servaes and Zenner (1996)), target size relative to the acquirer (Masulis et al. (2007)), percentage of stock financing[18] (both Servaes and Zenner (1996)), a public target dummy (Chang (1998), Officer (2007)) and a diversification dummy. We also include dummies for the Fama-French industry of the target.

4. Persistence in Investment Bank Performance

4.1. Full-Sample Fixed Effects

[18] The percentage of stock financing is the one deal characteristic that is potentially also important for the *RET* regressions, since a firm may engage in a stock-financed acquisition to exchange overvalued equity for hard assets (Shleifer and Vishny (2003), Savor and Lu (2009)) – i.e. the takeover is a disguised equity issuance. Even if returns are negative, the transaction may be value creating as the stock price would fall further without the transaction (when the overvaluation is corrected). We therefore conduct an additional robustness check by analyzing only cash-financed deals. All of our results are qualitatively unchanged.

Most prior research into the existence of investment bank skill attributes a deal's CAR entirely to the advisor's ability, and studies the association between average CAR and market share or reputation. Such analyses will only uncover a significant relationship if skill is correlated with their chosen measures of advisor quality. Therefore, the absence of a link between CAR and market share or reputation need not imply that banks lack skill.

We therefore start by taking a broader approach. Rather than hypothesizing what variables skill is correlated with, we investigate whether banks exhibit differential announcement returns in the first place. Table 3 displays summary statistics for the entire sample and for the top 15 banks by number of deals. The average bidder return across all deals is a significantly positive 0.73%, and 93% of deals are completed; both figures are commensurate with Rau (2000). We can also see significant variation in the average returns to each bank, which range from 0.08% (Goldman Sachs) to 1.37% (Bank of America). Nine of the top 10 banks are associated with below-average returns, but four of the next five are above average. The table also illustrates significant variation in completion rate and speed of completion.

The full-sample results in Table 3 could be driven by certain banks executing deals in time periods where the market was less enthusiastic about M&A, or being systematically mandated by high quality or value-destructive clients. We therefore estimate the bank fixed effect component of a deal's CAR. We regress CAR on time fixed effects and then successively add acquirer characteristics (to proxy for observable measures of quality or empire-building) and acquirer fixed effects (to proxy for unobservables). Table 4 illustrates the results. Panel A finds that the fixed effects are strongly jointly significant using an F-test. In addition to this statistical significance, Panel B demonstrates that the bank-specific differences are economically significant. The difference between the 25th and 75th percentile banks is 1.5%, compared with the average CAR of 0.73% and the mean bidder size of $10 billion.

4.2. Selection on Past Announcement Returns

While significant bank fixed effects are suggestive of advisor skill, the results of Table 4 results are not actionable by clients in their advisor selection decisions, since they are based on the full 27-year sample. We therefore analyze whether clients can predict positive future returns based on available historic data. The existence of a bank fixed effect implies a persistent component to a bank's average CAR, and thus motivates us to predict future returns using an advisor's past returns, rather than the market share and reputation measures previously studied.

We calculate persistence in advisor performance in a similar manner to Jegadeesh and Titman (1993) for individual stocks and Carhart (1997) for mutual funds. At the start of each year, we sort the banks into quintiles based on *RET* for the past j calendar years, where j = {1,2,3}. Next, for each quintile, we calculate *RET* for all banks within the quintile over the next k calendar years, where k = {1,2,3}. We report the difference in *RET* between the top (Q5) and bottom (Q1) quintiles.[19]

Table 5 illustrates the results. Panel A documents significant persistence in raw CAR in 8 out of the 9 time horizons. For example, when j=k=2, the difference between the top and bottom quintiles is a statistically significant 0.92 percentage points. This result need not imply skill, if fixated client deals comprise a substantial proportion of all transactions. To investigate the sources of persistence, we therefore control for acquirer characteristics, and the results are in Panels B and C. They illustrate persistence in both the component attributable to acquirers (*RETEXP*), and that attributable to advisors (*RETRES*). The results for *RETRES* suggest that the persistence in *RET* does not arise simply because banks are systematically mandated by fixated acquirers, and supports the skilled advice hypothesis.[20]

However, the existing results admit other interpretations than the existence of differential bank skill. A notable feature of Panel A is that the average returns are positive for even the bottom quintile of banks. Therefore, it is consistent with the limited capacity hypothesis that the bottom quintile's low returns arise because they have the capacity to accept mandates with small but positive value.

Second, the standard (-1, +1) window may fail to capture the full impact of a transaction. We thus repeat all of our analyses with a (-2, +2) window, which is also sometimes used in the M&A literature, and find that all of our results are qualitatively unchanged. However, this window may also be too short. While long-run returns would capture a greater proportion of the transaction's impact, they would also incorporate many other corporate events and hence suffer from a high noise-to-signal ratio. Moreover, errors resulting from failure to use the "true" benchmark model of stock returns are compounded over long horizons and distort inference (Fama (1998)).

Long-horizon drift for many corporate events is typically in the same direction as the original announcement (see Barberis and Thaler (2003) for a survey of the literature). If the

[19] Appendix D describes an autocovariance correction procedure for overlapping future returns.
[20] In unreported results we show that selecting on past *RET* improves future *RETRES* (as well as future *RET* as shown in Panel A).

same is true for M&A, and under-measurement is similar across banks, our measure of CAR, and all of our results, will be downward biased in magnitude. However, under-measurement may not be similar across banks – it may be that bottom-quintile banks are systematically advising on value-creating deals, but ones that are more prone to leakage (e.g. because their clients are large and attract media coverage). Such under-measurement would merely weaken our results if the mean return was zero, since it would bring measured *RET* towards the mean. However, in our sample, the mean CAR is positive while measurement error biases reported returns towards zero and thus below the mean. Thus, we may be detecting persistence in deal leakage rather than persistence in underperformance.[21]

To address the limited capacity and leakage interpretations, we calculate the "success ratio" of each bank: the percentage of deals which have a positive CAR. The correlation between bank success ratio and *RET* is a highly significant 0.76. Panel D illustrates that the top quintile of banks by *RET* has approximately double the success ratio of the bottom quintile (65-70% compared to 30-35%), a highly significant difference. Therefore, inconsistent with these hypotheses, the low returns of banks in the bottom quintile stem from a high proportion of value-destructive deals, rather than transactions which create small but positive value.

Additional evidence against the limited capacity hypothesis is in Table 3. It shows that, while the very top banks by number of deals have low *RET*, there are a number of large banks within the top 15 with high *RET*, e.g. Bank of America. It is unlikely that such banks' high *RET* result from capacity constraints. As additional evidence against the leakage explanation, it is conservative to assume that transactions with measured CARs exceeding 10% in absolute value did not suffer from attenuation. The remaining 87% of deals is the subset for which attenuation may be present. However, the mean CAR for this subset is -0.01%, very close to zero. Hence, any attenuation is indeed towards the mean, and leads to our results being understated. [22]

Table 5 calculates future performance across banks in each quintile, and averages across banks. This weights each bank equally, irrespective of the number of deals it has undertaken. A

[21] Even if low past returns are driven by deal leakage rather than poor negotiation or non-selectivity, a client may still wish to avoid such banks. Leakage attracts the risk of interlopers, distracts employees, causes unrest among the current shareholder base, and may be particularly harmful if the client eventually decides against the deal. Hence minimizing leakage is seen as a key role of an M&A advisor.

[22] A further hypothesis is that banks differ not in skill, but the fees that they charge: low *RET* banks may be adding the same value as their rivals, but charging more fees. However, fees are too small to explain our results. Hunter and Jagtiani (2003) find average fees of $2.3m. Even a fee of four times the average is only 0.1% of the average acquirer size of $10m, and thus low compared to the average return to a deal and to the difference in returns between quintiles. (Fee data is missing for several deals, preventing us from estimating a "pre-fee" CAR.)

different approach would be to equally weight deals. Table 6 allocates each deal to a quintile according to the past performance of the advisor over the past 1, 2 or 3 years, and then calculates the average return of deals with top (bottom) quintile advisors. (For this table, we restrict the deals to those with only one advisor.) Consistent with the results in Table 5, we find statistically and economically significant evidence of persistence. For example, deals where the advisor was in the top quintile based on 2-year prior performance outperform the bottom quintile by 0.93% per year, which is significant at the 1% level. This persistence continues to hold after controlling for acquirer characteristics.

4.3. Selection on Past Completion Ratios and Time

Rau (2000) finds that acquirers hire banks on the basis of past completion ratios. Even if the CEO's principal objective is completion, such a selection method is logical only if completion ratios are persistent. The same argument applies for selection according to past speed.

Panel A of Table 7 therefore examines persistence in other performance measures. The left-most column studies the raw completion ratio. Since substantially more than 20% of banks have a completion ratio of 1 over a particular time period, we cannot divide banks into quintiles. Instead, we create a dummy variable, *ALLCOMP*, that equals 1 if *CR* is l over the past j calendar years, and 0 otherwise. We group banks according to *ALLCOMP* and study whether they complete all of the deals they announce in the next j calendar years. (We use the same timeframe for past and future performance in Table 7 for brevity).

The left-most column of Table 7 shows significant persistence in completion ratios. A bank that completed all of its deals in the past j calendar years is over 30% more likely to do so over the next j years than one that did not. All of these results are significant at the 1% level. While our use of *ALLCOMP* is enforced by the inability to use quintiles, it may proxy for the bank's market share rather than true completion ability – banks that announce few deals are particularly likely to complete all deals. The analysis of *CRRES* addresses this issue, since *CRRES* is an unbounded variable and thus allows us to conduct the standard quintile analysis. We find no persistence in completion ability, controlling for deal characteristics. By contrast, *TIME* is persistent both in absolute terms, and after controlling for deal characteristics.

Panel B of Table 7 examines the shareholder value consequences of selecting advisors on the basis of other performance measures. The left-most column illustrates that banks with

perfect completion ratios over the past two or three years are associated with an increased *RET* by 0.7%. Banks with higher *CRRES* and lower *TIME* and *TIMERES* are also associated with higher future returns; four of the nine results are statistically significant. This result suggests that the selection criteria documented by Rau (2000) need not be inefficient. Good advisors appear to be skilled across multiple dimensions, and so clients need not face a tradeoff between objectives when selecting banks. In particular, selecting on completion speed and ability does not negatively impact future shareholder returns, and may indeed increase them.

This conclusion differs from Rau, who hypothesizes that banks can either "focus on completing the deal", or on "preventing poor deals". As discussed in Section 3.2.2, a bank intent upon executing all transactions would complete a high percentage of *mandates* awarded. However, here and in Rau (2000), *CR* is the percentage of deals *announced* that are eventually completed. A high *CR* likely results from skill in negotiating regulatory hurdles, for example by finding creative ways to dispose of assets to overcome antitrust barriers. Hence the pursuit of *RET* and *CR* need not be inconsistent.

4.4. Regression Analysis

In addition to the univariate results of Tables 5-7, we estimate a multiple regression model to allow us to compare the explanatory power of different determinants of future *RET* performance. We estimate the following pooled regression across all banks:

$$RET_{t,t} = \alpha_t + \beta_{RET} RET_{t\text{-}j,t\text{-}1} + \beta_{CR} CR_{t\text{-}j,t\text{-}1} + \beta_T TIME_{t\text{-}j,t\text{-}1} + \beta_S SHARE_{t\text{-}j,t\text{-}1}. \quad (1)$$

$SHARE_{t\text{-}j,t\text{-}1}$ is the market share over the past j calendar years, by dollar value of deals (using share by number of deals leads to the same results). Since we have shown that bank fixed effects are significant, and past performance measures may not capture the full fixed effects, the residuals for deals advised by the same bank might be correlated. We therefore cluster standard errors at the bank level.

The results are illustrated in Table 8. The regressions replicate the positive correlation between future *RET* and both past *RET* and completion ratio documented in the quintile analysis. Market share is negatively related to future returns, and is significant in one specification. This market share finding is consistent with Rau (2000), who does not investigate the effect of past *RET*. While Table 8 weights each bank equally, regardless of the number of deals it has

executed, Table 9 regresses the CAR of a particular deal on advisor characteristics; as in Table 6, this analysis is restricted to deals with only one advisor.[23] Again, past *RET* is positive and significant in nearly all specifications, and *SHARE* is negatively significant at the 1% level in all specifications. In sum, our results suggest that past performance is a superior measure of advisor quality to the market share measure typically used in the literature.

5. How Are Advisors Selected in Practice?

Section 4 addressed the question "How should acquirers select advisors?". It finds that deal returns have a significant bank fixed effect, and that this association is predictable by clients – they should select positively on past CAR performance and negatively on past market share. This section investigates whether bidders actually use these criteria in practice, i.e. "How do acquirers select advisors?" Existing papers typically focus on either the first or the second question. Coordinating both issues within the same framework allows us to investigate whether the very characteristics that do predict future performance are actually used by clients, i.e. whether they select banks as they should.

Table 10 investigates whether the three raw predictors of performance identified in Section 4, *RET*, *CR* and *TIME*, affect a bank's future market share. Since bank-client relationships take a long time to develop, large banks are likely to have persistently high market shares irrespective of past performance. We therefore either include a bank fixed effect or the bank's past market share as explanatory variables. Standard errors are clustered at the bank level.

Strikingly, the very characteristics that are positive predictors of future performance are insignificant in all specifications (aside for one regression where *RET* enters with the wrong sign), while market share is highly positively significant.[24] This suggests that clients ignore the three desirable criteria, instead selecting upon the one characteristic negatively correlated with

[23] An alternative would be to include deals with multiple advisors, and calculate average performance measures across the different advisors. However, this would not allow us to cluster standard errors by the advisor to correct for correlation is residuals for deals advised by the same bank.

[24] The insignificance of *RET* is consistent with Rau (2000). However, our insignificantly positive coefficients on the completion ratio contrast with Rau, who finds a significantly positive coefficient. This difference may result from a number of methodological differences. First, our data covers the period 1980-2007 whereas Rau's sample extends from 1980-1994. Second, we calculate the completion ratio according to the year of resolution, rather than the year of announcement, to avoid a "look-ahead" bias. Third, if there are multiple advisors, Rau credits the transaction to the most senior bank only. We choose to credit a transaction to all banks since we do not wish to impose *a priori* beliefs over which banks are the most important in a deal.

performance. In unreported results, the three performance measures are also insignificant when changes in market share are the dependent variable.

One rationalization of the significance of market share is that clients build up relationship-specific capital when working with a particular bank (e.g. comfort in working with certain bankers), which can be leveraged by continuing to use the same advisor for future deals. Table 11 investigates this hypothesis by studying repeat acquirers, who have conducted at least one acquisition in the prior five years. Using a previously-mandated advisor is associated with a lower CAR of 0.30 percentage points (*t*-statistic of 2.12). Moreover, if the advisor had generated a negative average CAR for that particular client in question, the CAR is 0.76 percentage points lower than using past advisors that generated positive CARs (*t*-statistic of 4.53). As with the *RET* persistence results of Section 4, this finding suggests that certain banks are systematically associated with poor advice or non-selectivity. Moreover, it suggests that the use of repeat advisors may reflect entrenchment, rather than leveraging relationship-specific capital.

Given the substantial impact an acquisition can have on shareholder value, and the CEO's own continued employment, such inefficient selection of M&A advisors appears puzzling. However, the findings of Table 10 are entirely consistent with standard practices in the investment banking industry, where *Thomson Financial* league tables on market share are widely publicized and used as a proxy for experience and expertise.[25] Therefore, industry participants have grown to equate market share with quality; similarly, many academic studies such as Rau (2000), Kale, Kini and Ryan (2003) and Hunter and Jagtiani (2003) use market share as their measure of quality. However, practitioners appear to be using market share as a measure of quality without having verified that it is actually correlated with superior performance. Indeed, our results suggest that it is a poor proxy.

The significance of market share can also be explained by legitimacy reasons. Even if the CEO is aware that it is a negative predictor of future performance, or well-performing banks break from the industry trend and attempt to advertise their past value creation, shareholders and the board may follow the industry standard practice of equating league table position with ability. The CEO is an agent of shareholders and the board, and may find it easier to justify hiring a bulge bracket advisor to his principals.

[25] For example, banks typically include league tables at the back of "pitchbooks" used when pitching for deals. They try to present the league table that gives them the highest ranking (e.g. excluding particular types of deals if this increases their position) as the client will infer quality from its ranking. Similarly, banks employ staff whose sole duty is to ensure that *Thomson Financial* gives them full league table credit for each transaction.

Since clients ignore the very measures that do predict future performance and instead focus on market share, it is entirely logical for banks to maximize their league table position – in particular, by accepting even value-destructive mandates.[26] Not only will the mandate boost fee income today, but it will also increase market share and the ability to earn fee income in the future, since clients award mandates based on market share. (Indeed, the market share motive is sufficiently strong that banks sometimes advise on deals for free.) Even though accepting bad deals will depress *RET*, this is not taken into consideration by clients. Indeed, if certain banks are systematically non-selective and accept value-destructive deals, this would lead to the negative correlation between market share and *RET* that we find in the data.

Our results suggest that it may be desirable for the investment banking industry to reduce its focus on market share. Instead, clients (and, if necessary, policymakers) should propose acquirer returns as the primary measure of expertise and encourage the publication of league tables based on this measure. This would more closely align the M&A industry with equity underwriting, where the after-market performance of past IPOs is frequently used when soliciting mandates. Dunbar (2000) and Hoberg (2007) find that this measure is positively correlated with future market share. It is puzzling that returns are publicized for IPOs and not M&A, when they are arguably more useful in the latter: while high *RET* is unambiguously desirable, strong post-IPO performance may reflect excessive underpricing. Similarly, in markets for other expensive goods and services where quality is important and uncertain, such as autos, manufacturers acquire a "brand name" based on product quality rather than sale volume.

The findings also have implications for the nature of contracts between acquirers and advisors. McLaughlin (1990) finds that banks are paid primarily for deal completion with no explicit link to returns. He suggests that reputational concerns may be sufficient to align banks with shareholder value. However, the insignificance of *RET* implies that banks' implicit incentives are also low, and so explicit incentives would be valuable. In a similar vein, clients frequently solicit fairness opinions to verify that the transaction price, negotiated by the advisor, is "fair" (Kisgen, Qian and Song (2009)). However, as part of its mandate, an advisor should ensure that the client is undertaking only favorable deals in the first place, and there should be no need for a separate fairness opinion. The prevalence of such opinions is consistent with the view that implicit and explicit incentives to act in clients' interests are insufficient.

[26] The investment bank benefits from accepting a mandate in terms of both immediate fees and higher market share (and thus future revenues). Moreover, investment bankers have additional private incentives, as their value in the labor market is often linked to the past transactions on which they have advised.

6. Conclusion

This paper finds a significant investment bank fixed effect in the announcement returns to an acquisition. Moreover, the positive association between certain banks and high returns is predictable by clients using past performance – a bank's average returns are persistent. The low returns of the bottom quintile banks result from value-destructive transactions rather than advising on deals with small but positive-NPV. While most prior research attributes the entire CAR to the advisor, we remove the component that can be explained by acquirer characteristics; the orthogonal component remains persistent. Raw speed and completion probabilities are also persistent; moreover, banks that outperform with respect to these measures also exhibit mildly superior shareholder value creation. These results suggest that certain banks have skill in identifying acquisitions or negotiating terms, or trustworthiness in turning down bad deals. They contrast with prior findings that bank quality, as measured by market share or reputation, have no positive effect on M&A outcomes, thus suggesting that banks do not matter. Instead, they suggest that a new measure of advisor quality – past performance. Clients should select positively on this measure, and negatively on market share.

However, acquirers in fact appear to use inefficient selection criteria, ignoring past performance and choosing upon market share. These practices may result from the extensive publication of market share league tables, both by the financial media and by banks during their marketing activities. Given such client behavior, banks have incentives to accept all mandates non-selectively. Hence policymakers should encourage the dissemination of league tables based on past value creation. In addition to helping clients identify the high-quality banks, such practices may also improve banks' incentives to turn down bad deals.

Some caveats must be noted when interpreting our results. First, we cannot direct a client's fixation and so use observable characteristics as proxies. Even though we have used a long list of controls (over and above those used in prior literature), recall that the R^2 of our regression in Table 2, Panel A is low. While this result is consistent with earlier research, it implies that returns are difficult to predict. If the residual proportion of returns arises from deal-specific characteristics, the low R^2 is not a concern as these are under the advisor's control. However, if a significant part of the residual is the result of unobservable acquirer characteristics (an omitted variable), than our *RETRES* measure overstates the portion of CAR that is attributable to banks. The standard way of controlling for unobservables is to use acquirer fixed

effects and identify only on repeat acquirers. We are able to do so for the fixed effect analysis of Table 4 since it uses 27 years of data and several acquirers execute multiple deals in that timeframe; indeed, we find that bank fixed effects remain robust to such controls. However, we cannot use fixed effects so for the persistence analyses which use shorter windows of 1-3 years, owing to the low frequency of repeat acquirers in this timeframe. For omitted variables to drive our results, this requires fixated client deals to be sufficiently prevalent that they dominate bank-initiated and standard client-initiated transactions and thus account for the persistence in raw *RET*, *and* that the persistence in *RETRES* arises because fixation is uncorrelated with our long list of observable acquirer characteristics. Even in this case, negative past performance remains potentially useful information. If negative-CAR banks are persistently used by clients to push through value destructive deals, persistence would imply that boards should particularly scrutinize deals for which they are mandated.

A second issue stems from our use of announcement returns, and is shared with many other event studies.[27] Announcement returns also convey the market's reaction not only to the transaction specifics, but also any private information revealed by the decision to acquire. For example, a pharmaceuticals company acquiring a biotechnology start-up may imply deficiencies in the acquirer's own R&D efforts; a pre-emptive acquisition may be better than the alternative of allowing a competitor to buy the target. Since we cannot observe the counterfactual (the bidder's standalone performance), CAR is the best available measure and hence is the primary variable used in this literature.[28]

In addition, this paper leaves a number of questions unanswered. First, it is unclear *why* clients appear to be choosing advisors incorrectly. While the "innocent" use of market share league tables may be a reason, agency variables such as corporate governance or managerial incentives may also explain advisor selection practices, just as they do for acquirer returns (Masulis et al. (2007), Morck et al. (1990)). The prestige of working with a bulge-bracket bank may constitute a private benefit and be an important determinant for entrenched managers. Second, the low returns to skill or trustworthiness appear puzzling. While superior underwriting performance is rewarded with higher future market share (Dunbar (2000), Hoberg (2007)), banks

[27] See Prabhala (1997) and Li and Prabhala (2007) for an analysis of inference from event studies.

[28] A separate concern with event-study returns is that they reflect the market's perception of the transaction's value, rather than the actual value. This perception may be swayed by the perceived reputation of the advising bank. If anything, these results would work against us – it would bias upward the announcement returns to deals advised by market leading banks, with the strongest reputation, and weaken the negative correlation between market share and returns that we find.

seem to be obtaining little benefit from advising on value-creating deals. In a rational world, a skilled advisor should be able to increase its deal flow to the point where performance is no longer persistent (Berk and Green (2004)). One potential explanation is that agents may be intrinsically motivated to pursue the principal's objective even in the absence of explicit financial rewards: see Bénabou and Tirole (2003) for an example of a model. Third, we have focused on persistence in acquirer returns since these are frequently negative, and so advisor selection is particularly important for bidders to ensure positive value creation; in addition, substantially more bidders are publicly traded than targets. However, it would also be interesting to investigate whether target returns are equally persistent, and whether the banks that consistently create value for bidders are also skilled at defense mandates. Finally, awards such as "M&A advisor of the year" are highly prized by banks. Whether these awards are granted on the basis of past performance, and whether star banks indeed generate strong future performance, warrants investigation.

Appendix

A. Description of Variables

Table 1

Panel A: Used in the calculation of residuals for CAR[29]	
Variable	Definition
RUNUP	Log stock return for the acquirer from -210 to -11.
Q	Q = Market value of assets / Total assets (#6) Market value of common stock = Common shares outstanding (#25) * Price (#199) Market value of assets = Book value of assets (#6) + Market value of common stock – Book value of common stock (#60) – Balance sheet deferred taxes (#74)
LEVERAGE	LEVERAGE = Book debt / (Total assets (#6) – Book equity + Market equity) Book equity = Total assets (#6) – Total liabilities (#181) – Preferred stock (#10) + Deferred taxes (#35, if available) Substitute Redemption value of preferred stock (#56) if Preferred stock is missing. Book debt = Total assets (#6) – Book equity Market equity = Common shares outstanding (#25) * Price (#199)
FCF	FCF = Free cash flow / Total assets (#6) Free cash flow = Operating income before depreciation (#13) – Interest expense (#15) – Income taxes (#16) + Δ Deferred taxes and investment tax credit (#35 - #35 from previous year) – Preferred dividends (#19) – Common dividends (#21)
SIZE	Log of Total assets (#6)
HERFINDAHL	$\sum_i (\frac{firm\_sales_i(\#12)}{industry\_sales})^2$, where industries are defined by the Fama-French 49 industries.
SELLEXP	SELLEXP = Firm's selling expenses (#189) over Sales (#12) minus the industry median, where industries are defined by the Fama-French 49 industries.
INST	Fraction of outstanding common shares owned by institutions from Thomson Financial 13f filings.
OPPERF	Firm operating performance minus the industry median in the past year, where industries are defined by the Fama-French 49 industries. Operating performance = Operating income before depreciation (#13) / 0.5(Total assets + last year's total assets (#6))
INSIDER	Insider ownership as a % of total shares outstanding, from

[29] Where applicable, we include the Compustat item number in the description.

	Compact Disclosure. Where this is missing, we impute it using Sales (#12) and firm age (from CRSP)
ACQSIC	Log of 1 + number of acquirer SIC codes
REPEAT ACQUIRER	Dummy variable that equals 1 if the acquirer announced or completed an acquisition in the previous 5 years

Panel B: Used in the calculation of residuals for completion rate and speed	
Variable	Definition
TRANSVAL	Log of transaction value
RELSIZE	Transaction value / acquirer market cap one day before announcement
TARSIC	Log of number of target SIC codes
PERSTOCK	Stock financing as a percentage of bidder's market cap
TWOTIER	Dummy variable that equals 1 if deal was executed in two tiers
TO	Dummy variable that equals 1 if deal was a tender offer
HOSTILE	Dummy variable that equals 1 if deal was hostile
NOTARADV	Dummy variable that equals 1 if target had advisors
DIVERS	Dummy variable that equals 1 if acquirer and target share at least one two-digit SIC code
CHALLENGED	Dummy variable that equals 1 if deal was challenged
PUBLIC	Dummy variable that equals 1 if target was public
TOEHOLD	Acquirer's percentage ownership of target before announcement

Panel C: Constructed for direct use in quintile analysis and regressions	
Variable	Definition
RET	Average CAR (3-day cumulative abnormal return) for deals advised by an investment bank over a given number of years
RETRES	Residual from a regression of CAR on deal characteristics defined in Panel A
CR	Fraction of deals completed for deals by an investment bank or investment bank-acquirer pair over a given number of years
CRRES	Residual from a regression of whether a deal was completed on deal characteristics defined in Panel B
TIME	Average time to completion for deals by an investment bank or investment bank-acquirer pair for a given number of years
TIMERES	Residual from a regression of time to completion of deals on deal characteristics defined in Panel C
SHARE	Market share by value of acquirer-advised deals for an investment bank over a calendar year

B. Notes on Timing

To create the most actionable guide to bidders wishing to choose an advisor, we would ideally calculate future performance of deals *mandated* after the period over which past performance is measured. For example, to calculate the 2-year performance of the top quintile

based on *RET* between 1994-5, it would be optimal to measure returns to mandates awarded in 1996-7. However, since the mandate date is unavailable, we measure performance of acquisitions announced in 1996-7. Particularly for deals announced in early 1996, it may be that the banks were hired in late 1995, when performance for the entire 1994-5 period was unobservable.[30]

Importantly, the strategy of hiring banks based on past performance remains actionable, since a mandate award is non-committal. If a mandate is awarded in late 1995, the bidder will have observed performance over the entire 1994-5 period by the time the transaction is announced in 1996-7. If the hired bank suddenly announces a number of strongly value-destructive acquisitions in late 1995, the client can abandon the deal, particularly as the vast proportion of advisory fees is paid at announcement.

C. Mergers Between Investment Banks

The effect of advisor mergers on our performance variables is best illustrated by an example. Consider the merger of Deutsche Bank and Bankers Trust, which occurred in June 1999, and a regression of 2-year *RET* on past 2-year *CR*. For any observations where *RET* ends in 1998 or earlier, Deutsche Bank and Bankers Trust enter separately and both *RET* and *CR* are calculated on a standalone basis. For any observations where *RET* ends in 1999 or later, we drop the two standalone observations and create one combined observation. Specifically, *RET* for 1998-1999 will include all deals advised by either Deutsche Bank, Bankers Trust or the merged entity during this period. To be consistent, the *CR* used as an explanatory variable will also include all deals advised by either bank or the merged entity in 1996-1997. Since a client hiring the merged entity knows that it will be accessing the pooled resources of both banks, it should consider their combined past performance. If anything, combining measures should make it more difficult to find persistence, as the number of observations is reduced.

D. Autocovariance Correction

[30] Since the "gestation period" between the award of a mandate and the announcement of an acquisition varies considerably across deals, we cannot address this issue by skipping an interval between the quintile formation period and the window over which future performance is measured. Any interval is unlikely to change the results, particularly for the long-horizon analyses where the interval will be relatively small and persistence is already strong.

For our quintile analysis in Section 4, we rely on a *t*-test to test the equality of means between banks classified as quintile 5 past performance and quintile 1 past performance. The standard *t*-test is:

$$t = \frac{\bar{x} - \bar{y}}{\sqrt{\frac{s_x^2}{n_x} + \frac{s_y^2}{n_y}}}, \text{ where } \frac{s_x^2}{n_x} \text{ is the variance of } \bar{x} \text{ and } \frac{s_y^2}{n_y} \text{ is the variance of } \bar{y}.$$

However, in many cases, we measure future performance over multiple years while sorting on past performance each year. Thus, if a bank is in the same quintile for consecutive years, their future performance variables will be correlated by construction. Specifically, we may have $X_{1,\ 1990\text{-}1992}$, $X_{1,\ 1991\text{-}1993}$, and $X_{1,\ 1992\text{-}1994}$ in our sample, where $X_{i,j}$ is the performance for bank i in years j. Thus, we have:

$$Var(\bar{X}) = \frac{Var(X)}{n_x} + \frac{2a}{n_x^{\ 2}} Cov(X_{i,j}, X_{i,j+1}) + \frac{2a}{n_x^{\ 2}} Cov(X_{i,j}, X_{i,j+2}),$$ where a is the number of cases with overlapping future returns.

Note that the second and third terms are the autocovariance corrections. We estimate these terms by using pooled covariance estimates.

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Table 2

Results from first stage regression of performance variables on deal characteristics. CAR is the return in excess of the CRSP value-weighted index over a (-1,+1) window relative to the announcement date. COMP is a dummy variable that equals 1 if the deal was completed. SPEED is the number of days between announcement and completion for completed deals. The regressors are described in Table 1. The sample period is 1980-2007.

Panel A	**CAR**
RUNUP	-0.0009
	(0.49)
Q	-0.0054
	(2.73)***
LEVERAGE	0.0132
	(2.83)***
FCF	-0.0450
	(5.92)***
SIZE	-0.0031
	(7.81)***
HERFINDAHL	0.0375
	(3.42)***
SELLEXP	-0.0244
	(3.56)***
INST	-0.0038
	(1.76)*
OPPERF	0.0282
	(3.53)***
INSIDER	0.0148
	(2.61)***
NUMSIC	-0.0026
	(2.06)**
REPEAT ACQUIRER	-0.0023
	(1.50)
Year Fixed Effects	Yes
Acquirer Industry Fixed Effects	Yes
Observations	11,477
R-squared	0.03

Panel B	**COMP**	**SPEED**
TRANSVAL	-0.0042	1.4467
	(2.29)**	(2.01)**
RELSIZE	-0.0001	0.0841
	(0.34)	(0.70)
TARSIC	-0.0211	3.3180
	(3.57)***	(1.43)
PERSTOCK	-0.0002	0.3839
	(2.92)***	(16.44)***
TWOTIER	0.0364	35.8348
	(0.95)	(2.40)**
TO	0.0336	-28.4030
	(3.84)***	(8.12)***
HT	-0.3455	24.2301
	(19.17)***	(2.65)***
NOTARADV	-0.0349	-11.8856
	(6.49)***	(5.67)***
DIVERS	-0.0098	-9.8296
	(1.67)*	(4.33)***
CHALLENGED	-0.2465	29.4536
	(18.44)***	(4.79)***
PUBLIC	-0.0376	36.1372
	(6.45)***	(15.80)***
TOEHOLD	0.0020	0.7705
	(5.15)***	(5.23)***
Year Fixed Effects	Yes	Yes
Target Industry Fixed Effects	Yes	Yes
Observations	9,615	9,069
R-squared	0.11	0.22

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 3

Summary statistics for the top 15 investment banks by value of announced deals from 1980-2007. The averages provided in the last row include deals for all investment banks in the sample.

Investment Bank	Number of Deals	Market Share by Value of Deals	RET	σ(CAR)	RETRES	RETEXP	CR	TIME
Bank of America	255	2.47%	1.37%	8.48%	0.86%	0.57%	93.63%	83.83
Bear Stearns	375	3.04%	0.99%	8.56%	0.01%	0.74%	90.08%	116.03
Citi	308	2.81%	0.96%	6.45%	0.78%	0.05%	92.67%	100.56
CSFB	644	6.05%	0.50%	8.70%	-0.26%	0.18%	89.75%	99.56
Deutsche Bank	246	2.14%	1.03%	8.09%	0.50%	0.45%	94.56%	87.20
DLJ	411	3.60%	0.70%	9.28%	-0.55%	0.75%	92.94%	100.65
Goldman Sachs	1,084	10.71%	0.08%	6.37%	0.22%	-0.11%	92.99%	110.78
JP Morgan	617	5.69%	0.23%	6.06%	-0.02%	0.17%	92.12%	108.30
Lazard	428	3.42%	0.47%	6.60%	0.36%	0.15%	90.57%	100.89
Lehman Brothers	618	5.66%	0.53%	7.10%	-0.07%	0.21%	93.00%	104.51
Merrill Lynch	1,001	9.45%	0.19%	6.86%	-0.15%	0.19%	91.38%	119.49
Morgan Stanley	1,117	11.03%	0.11%	6.78%	-0.07%	-0.16%	92.41%	106.82
Salomon (pre-merger)	286	2.51%	0.66%	6.70%	-0.37%	0.33%	89.51%	138.96
Salomon Smith Barney	546	5.09%	0.40%	7.77%	-0.14%	0.29%	92.49%	112.46
Avg over entire sample	15,423		0.73%	7.43%	0.00%	0.46%[31]	92.84%	96.87

[31] This number is less than the 0.73% over the entire sample, since 3,946 deals do not have full acquirer characteristics and thus have missing RETEXP.

Table 4

Panel A reports F-tests for the joint significance of bank fixed effects from a regression of (-1, +1) abnormal returns on bank fixed effects and listed controls. F-statistics, p-values, and number of constraints are listed. Panel B reports the distribution of bank fixed effects.

Panel A: Investment Bank Fixed Effects

	Controls	Bank FE F-test	N	Adj-Rsqd (%)
(1)	Time FE	1.86(0.0000, 92)	15,423	0.85
(2)	Acq chars, time FE	1.70(0.0000, 92)	11,477	3.50
(3)	Acq chars, acq FE, time FE	1.77(0.0000, 92)	11,477	30.76

Panel B: Distribution of Bank Fixed Effects

	Std Dev	25th	75th
(1)	1.52%	-0.77%	0.75%
(2)	1.77%	-0.67%	0.80%
(3)	2.62%	-0.60%	1.01%

Table 5

Persistence in a bank's average cumulative abnormal returns. At the start of each year, we sort banks into quintiles based on their *RET* over the past j calendar years, where j = {1,2,3}. To be included in the analysis, a bank must have announced at least three deals over the relevant period. Q1 represents the banks with the lowest past *RET*, Q5 the highest. For each quintile, we then calculate the average CAR to future acquisitions announced by the banks in that quintile over the next k calendar years, where k = {1,2,3}. The sample period is 1980-2007. Autocovariance corrected *t*-statistics are in parentheses.

Panel A: Persistence in Raw Returns

	Future RET Measured Over		
Quintiles Measured Over	1yr	2yrs	3yrs
1yr RET			
Q1	0.59%	0.65%	0.65%
Q5	1.16%	1.05%	1.13%
Q5 - Q1	0.57%	0.41%	0.48%
	(1.77)*	(1.37)	(1.67)*
2yrs RET			
Q1	0.76%	0.63%	0.67%
Q5	1.51%	1.55%	1.42%
Q5 - Q1	0.74%	0.92%	0.75%
	(2.00)**	(2.38)**	(2.01)**
3yrs RET			
Q1	0.51%	0.57%	0.51%
Q5	1.53%	1.43%	1.32%
Q5 - Q1	1.01%	0.86%	0.82%
	(2.62)***	(2.31)**	(2.23)**

Panel B: Persistence In Explained Returns

	Future RETEXP Measured Over		
Quintiles Measured Over	1yr	2yrs	3yrs
1yr RETEXP			
Q5 - Q1	0.97%	0.81%	0.77%
	(10.41)***	(8.11)***	(6.61)***
2yrs RETEXP			
Q5 - Q1	0.96%	0.88%	0.84%
	(10.93)***	(8.44)***	(6.80)***
3yrs RETEXP			
Q5 - Q1	1.02%	0.93%	0.90%
	(10.71)***	(8.21)***	(6.86)***

Panel C: Persistence in Unexplained Returns			
	Future RETRES Measured Over		
Quintiles Measured Over	1yr	2yrs	3yrs
1yr RETRES			
Q5 - Q1	0.92%	0.85%	0.69%
	(2.30)**	(2.55)**	(2.03)**
2yrs RETRES			
Q5 - Q1	0.71%	0.95%	0.54%
	(1.65)*	(2.29)**	(1.30)
3yrs RETRES			
Q5 - Q1	0.87%	0.97%	0.72%
	(1.88)*	(2.04)**	(1.63)

Panel D: Percentage of Positive CAR deals, by RET Quintile			
	RET Measured Over		
	1yr	2yrs	3yrs
Q1	33.39%	33.98%	35.64%
Q5	67.32%	66.63%	65.30%
Q5 - Q1	33.93%	32.65%	29.84%
	(18.60)***	(17.10)***	(14.93)***

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 6

The average cumulative abnormal return (CAR), acquirer characteristic explained return (CAREXP), and acquirer characteristic unexplained return (CARRES) are reported in the three columns for deals in which the advisor's past performance over 1, 2, or 3 years is in a given quintile. Only deals which include only one advisor in our list of 93 advisors are included. t-statistics are reported in parentheses.

Predicting CAR using Bank Past Performance

	Measure of Past Performance		
Quintiles Measured Over	RET	RETEXP	RETRES
1yr			
Q1	0.70%	0.03%	-0.64%
Q5	1.29%	1.13%	0.42%
Q5 - Q1	0.59%	1.10%	1.06%
	(2.09)**	(19.85)***	(3.43)***
2yrs			
Q1	0.74%	0.05%	-0.51%
Q5	1.66%	1.13%	0.70%
Q5 - Q1	0.93%	1.08%	1.22%
	(2.94)***	(20.33)***	(3.42)***
3yrs			
Q1	0.69%	0.05%	-0.56%
Q5	1.79%	1.15%	0.72%
Q5 - Q1	1.10%	1.10%	1.28%
	(3.22)***	(19.76)***	(3.34)***

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 7

Persistence in other performance measures, and the relationship between these measures and future announcement returns. Panel A examines persistence in four other measures of performance. To be included in the analysis, a bank must have resolved at least three deals over the relevant period. *ALLCOMP* is a dummy that equals 1 if a bank successfully completed all deals resolved in the past j years and 0 otherwise, for j = {1,2,3}. *CRRES* is the average completion residual for deals resolved by the bank over the past j years. The completion residual for each transaction is calculated by regressing a completion dummy variable on a set of deal characteristics. *TIME* is the average time between announcement and completion for deals resolved by the bank over the past j calendar years. *TIMERES* is the average time residual, where the time residual for each transaction is calculated in an analogous manner to *CRRES*. In the first column, we sort banks into two groups based on *ALLCOMP*. For each group, we calculate the average *ALLCOMP* for deals announced by the banks over the next j years. The reported number is the difference between the two groups. In the second column, we sort banks into quintiles based on *CRRES*. For each quintile, we then calculate the average *CRRES* to future acquisitions announced by the banks in that quintile over the next j calendar years. The reported number is the difference between Q5 and Q1. The third and fourth columns are calculated analogously.

Panel B examines the effect on future CAR of selecting banks on the basis of the four other performance measures. The groups and quintiles are as in Panel A. For each group (quintile), we calculate the average CAR to future acquisitions announced by the banks in that group (quintile) over the next j calendar years and report the difference between the two groups (Q5 and Q1). The sample period is 1980-2007. Autocovariance corrected *t*-statistics are in parentheses.

Panel A: Completion Ratio and Time vs Past Levels

	ALLCOMP	CRRES	TIME	TIMERES
1yr on 1yr	0.3324	0.0010	44.53	9.54
	(9.27)***	(0.11)	(8.31)***	(1.87)*
2yrs on 2yrs	0.3454	-0.0046	55.21	16.29
	(7.43)***	(0.57)	(7.26)***	(2.85)***
3yrs on 3yrs	0.3238	-0.0055	61.02	12.34
	(5.88)***	(0.66)	(7.14)***	(1.96)*

Panel B: RET vs. Past Completion Ratio and Time

	ALLCOMP	CRRES	TIME	TIMERES
1yr on 1yr	0.27%	0.03%	-0.39%	0.45%
	(1.40)	(0.11)	(1.16)	(1.39)
2yrs on 2yrs	0.77%	1.10%	-0.48%	-0.33%
	(3.21)***	(3.19)***	(1.24)	(0.90)
3yrs on 3yrs	0.73%	1.12%	-1.02%	-0.83%
	(2.77)***	(3.04)***	(2.52)**	(2.12)**

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 8

Determinants of future value creation. The dependent variable is *RET*, a bank's average CAR across all deals announced by the bank over a single calendar year. The past j years average CAR (labeled RET) is a dependent variable. CR is the average completion ratio for deals resolved by the bank over the past j calendar years. *TIME* is the average time between announcement and completion over the past j calendar years. *SHARE* is the bank's market share, by value of deals, over the past j calendar years. The data is pooled across all banks and regressions are estimated using year fixed effects. To be included in the univariate regressions, a bank must have announced at least three deals over the relevant period. To be included in the multivariate regressions, a bank must have announced and completed at least three deals over the relevant period. The sample period is 1980-2007. *t*-statistics are in parentheses.

	Determinants of RET					
	1yr	**1yr**	**2yrs**	**2yrs**	**3yrs**	**3yrs**
Past j years						
RET	0.0504	0.0265	0.0971	0.0591	0.1132	0.0760
	(1.36)	(0.69)	(2.40)**	(1.43)	(2.48)**	(1.62)
CR		0.0065		0.0235		0.0418
		(0.63)		(2.00)**		(3.06)***
TIME		-2.1E-05		-3.4E-06		-3.1E-05
		(0.97)		(0.15)		(1.27)
SHARE		-0.0336		-0.0510		-0.0156
		(1.38)		(2.05)**		(0.95)
#obs	718	665	791	754	801	749
R-squared	0.08	0.07	0.07	0.08	0.08	0.09

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 9

Determinants of future cumulative abnormal returns. The dependent variable is a deal's cumulative abnormal return. The past j years average CAR (labeled RET) is an independent variable. CR is the average completion ratio for deals resolved by the bank over the past j calendar years. *TIME* is the average time between announcement and completion over the past j calendar years. *SHARE* is the bank's market share, by value of deals, over the past j calendar years. Regressions include year fixed effects and standard errors are clustered by bank. t-statistics are reported in parentheses.

	Determinants of Announcement Returns					
	1yr	1yr	2yr	2yr	3yr	3yr
RET	0.0856	0.0445	0.1720	0.1096	0.1792	0.1274
	(1.98)*	(0.91)	(3.24)***	(1.83)*	(3.50)***	(2.29)**
CR		0.0112		0.0162		0.0317
		(1.26)		(1.38)		(2.11)**
TIME		-3.7e-05		-8.0e-06		-2.7E-05
		(1.68)*		(0.27)		(0.87)
SHARE		-0.0523		-0.0684		-0.0338
		(4.06)***		(5.14)***		(4.14)***
Obs	10,241	9,944	10,616	10,405	10,659	10,345
R-sqd (%)	0.60	0.72	0.70	0.82	0.69	0.88

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 10

Determinants of market share. The dependent variable is a bank's market share, by value of deals, in one particular year. *RET* is the bank's average CAR across all deals announced by the bank over the past 3 calendar years. *CR* is the average completion ratio for deals resolved by the bank over the past 1, 2, or 3 calendar years. *TIME* is the average time between announcement and completion over the past 1, 2,or 3 calendar years. *SHARE* is the bank's market share, by value of deals, over the past 1, 2, or 3 calendar years. The data is pooled across all banks and regressions are estimated using bank fixed effects and clustering standard errors at the bank level. To be included in the results, a bank must have announced and completed at least three deals over the relevant period. The sample period is 1980-2007. *t*-statistics are in parentheses.

	1yr	2yrs	3yrs	1yr	2yr	3yrs
Constant				0.0042	-0.0044	-0.0002
				(0.69)	(0.71)	(0.04)
RET	-0.0094	0.0049	-0.0097	-0.0256	-0.0119	-0.0320
	(0.47)	(0.19)	(0.36)	(1.08)	(0.56)	(1.91)*
CR	0.0004	0.0050	0.0040	-0.0001	0.0085	0.0044
	(0.05)	(0.55)	(0.41)	(0.01)	(1.24)	(0.85)
TIME	1.5E-05	1.7E-05	2.0E-06	6.6E-05	9.2E-06	-3.1E-06
	(0.68)	(0.68)	(0.10)	(2.18)**	(0.67)	(0.35)
SHARE				0.6680	0.7977	0.5193
				(11.22)***	(20.48)***	(27.98)***
Bank FE	Yes	Yes	Yes	No	No	No
#obs	755	955	1025	755	955	1025
R-squared	0.69	0.69	0.70	0.57	0.66	0.70

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 11

Deals in which the acquirer has made an acquisition in the last five years are considered. Panel A divides the deals into ones in which the acquirer retained an advisor that had been previously mandated in the last five years and deals in which a previous advisor was not retained. Panel B considers the retention of past acquirer advisors with a negative average CAR for previous deals announced by the client in question. *t*-statistics are in parentheses.

Panel A

	Did not retain an old advisor	Retained an old advisor	Difference
(-1, +1) CAR	0.0036	0.0007	0.0030
t-statistic	(3.78)***	(0.65)	(2.12)**
Observations	4,029	3,907	

Panel B

	Did not retain an advisor with negative past performance	Retained an old advisor with negative past performance	Difference
(-1, +1) CAR	0.0039	-0.0037	0.0076
t-statistic	(4.88)***	(2.50)**	(4.53)***
Observations	6,128	1,808	

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