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# The Mystique of the Boutiques

## The Wealth Effects of Boutique Banks in Mergers and Acquisitions\*

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### Abstract

We show that boutique banks, acting as Mergers and Acquisitions (M&As) financial advisors, help acquirers realise significant gains from informationally demanding deals. Boutique banks add value to acquirers of large private companies in the short-run. Acquirers of small private companies also benefit from boutique banks, but these gains are only pronounced in the long-run. We attribute the delayed market response to the limited activity of information-driven traders at the time of the announcement of small private deals. We further show that resourceful acquirers recognize the valuable services offered by boutique banks and are more likely to involve them in private target deals. Lastly, we present novel evidence suggesting that boutique banks contribute to wealth creation in small public target M&As that are economically consequential for the acquirer. This result emerges only after we address endogeneity concerns by controlling for the acquirer's quality.

**Keywords:** Financial advisors; Boutique banks; Mergers and Acquisitions; Private target companies; Small public targets; Abnormal returns.

**JEL classifications:** G14, G34.

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## 1. Introduction

Financial experts from expensive, external, and often reputable investment banks are involved in Mergers and Acquisitions (M&As) aiming to identify firms with great value potential and guide them through the complicated process of M&As (Bao and Edmans 2011; Bowers and Miller 1990; Kale et al., 2003; Servaes and Zenner, 1996).<sup>1</sup> In this paper, we provide the first empirical evidence on the valuation effects of a category of advisors – known as boutique banks – on acquirer gains in the U.S. M&A market. The emergence of these independent and relatively small (boutique) banks more than 20 years ago, as well as the consistent growth of their advising portfolio, have considerably changed the landscape of deal advising (De La Merced, 2014). Specifically, boutique banks commanded a mere 20% of the market share in 2007 (Oran, 2016) and gathered momentum after the financial crisis to account now for more than 40% of the global M&A advising market (Dealogic, 2019). While full-service investment banks establish a multidimensional relationship with their clients by offering a wide range of services that include M&A advice and security issuance, boutique banks limit their services to the M&A market.<sup>2</sup> Another key characteristic of boutique banks is their industry specialization, which increases demand for their services in complex and informationally demanding deals (Loyeung, 2019).

The presence of boutique banks in the acquirer’s advisory team is shown to be associated with favourable M&A outcomes that include, but are not limited to, the decrease in the takeover premium (Song et al., 2013). However, it remains to be examined whether hiring boutique banks as financial advisors helps acquirers generate significant gains for their shareholders. As a result, we are set out to answer the following question: Do the specialization and independence of boutique banks contribute to the increase in the acquirer’s shareholder wealth?

Our empirical analysis of domestic acquisitions announced by U.S. firms between 1996 and 2015 reveals various and interesting results. First, the involvement of boutique banks in private target M&As – which are generally characterized by significant valuation

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<sup>1</sup> Studies present ample evidence suggesting that acquirer gains are, at least partially, shaped by the presence of investment banks in the deal process (Servaes and Zenner, 1996; Bao and Edmans, 2011), the role of investment banking contracts and reputation in acquisitions (Bowers and Miller, 1990; Hunter and Walker, 1990; and McLaughlin, 1990, 1992), as well as the structure of advisory syndicates when multiple advisors are involved in the deal (Richardson et al., 2017).

<sup>2</sup> By exclusively focusing on M&A advice, boutique banks are not subject to the conflicts of interest concerns that lead full-service banks to recommend value-destroying acquisitions to seek future security issuance services from the acquirer’s managers (Song et al., 2013).

challenges (Adra and Barbopoulos, 2018; Kohers, 2004; Officer et al., 2009) – is associated with significant acquirer gains. These gains are more noticeable in the short-run for deals involving large private targets. Acquirers in large private deals advised by boutique banks realize, on average, up to 6% higher three-day announcement period Cumulative Abnormal Returns (CAR) than their counterpart deals advised by non-boutique (and non-top-tier) investment banks. In dollar value terms, these wealth effects translate into \$57 million gain for an average acquirer.

Second, small private target deals in which boutique banks advise the acquirer yield significant gains to acquirers in the post-announcement period. These M&As are, on average, associated with 10% increase in the acquirer's buy-and-hold abnormal returns (BHAR) compared to their non-boutique counterparts in the 12 months following the acquisition's announcement date. We attribute this delayed market response to the limited activity of information-driven traders in the acquirer's shares when such deals are announced. In particular, we posit that the limited disclosure of accounting information on private targets (Officer et al., 2009), as well as the high costs associated with information search, incentivize information-driven traders to turn their attention towards acquirers of large rather than small private targets. The analysis of the level of informed trading using the dynamics of the trading in the options and stock market – as proposed by Johnson and So (2017) – supports this prediction. We find that the level of informed trading in acquirers' shares is relatively limited in small private target acquisitions. However, such a level of informed trading increases with the size of the deal.

Third we show that the services of boutique banks are recognized by large acquirers. Specifically, large acquirers are 5% more likely to hire a boutique bank in a private target acquisition compared to a public target one. In turn, small acquirers are 7% less likely to hire a boutique bank when they acquire private targets. We interpret this result as evidence that the valuable services of boutique banks in the private takeover market are only afforded by resourceful acquirers. Our finding that large and resourceful acquirers decide to seek the services of boutique banks in private target deals testifies for the relevance of the boutique banks' services in such M&As.

It is worth noting that previous research on the impact of boutique banks on acquirer gains is exclusively focused on public target acquisitions (Loyeung, 2019; Song et al., 2013). The valuation of private companies, however, is much more informationally demanding than that of public ones due to opaque accounting environments, lack of

publicly traded shares, and reduced disclosure standards (Adra and Barbopoulos, 2019; Cain et al., 2011; Chang, 1998; Draper and Paudyal, 2006; Officer et al, 2009). If the boutique banks' autonomy and sector-specialization allow them to address significant valuation challenges, we expect boutique banks' services to be more value-enhancing and more sought after in private target acquisitions. Our paper provides novel empirical evidence supporting these predictions.

Prior studies that investigate public target deals suggest that boutique banks tend to be more popular in small rather than large acquisitions (Song et al., 2013). This result is partly attributed to the fact that full-service investment banks limit their attention to large M&As that include substantial resources and hefty advisory fees. This allows boutique banks to focus on a fraction of the market that is purposively left by bigger banks due to revenue inadequacy. Nevertheless, while small public deals are not characterized by significant managerial and logistical challenges, such M&As are informationally challenging. The low informed trading in the shares of small listed companies and the limited attention that they receive from equity investors (Barber and Odean, 2008; Da et al., 2011; Vega, 2005) and analysts (Chae, 2005) raise significant challenges in valuing these companies' future growth prospects based on their prevailing stock prices. As a result, we examine whether the autonomy and expertise of boutique banks allow them to address such valuation challenges and enhance the acquirer returns.

Our analysis of public target acquisitions suggests that boutique banks contribute up to 3% increase in the acquirer's value in small deals relative to the comparable cases in which these banks are not hired as advisors. Our results suggest that boutique banks help acquirers who generally experience significant losses from M&As to break even. We find that these results are more economically significant in deals where the target is small in absolute terms, but relatively large compared to the acquirer's size. These effects are not reversed in the post-announcement period. This novel empirical evidence extends previous results by Song et al. (2013) by showing that boutique banks do not only represent a mere substitute for full-service banks in small public target M&As, but are also equipped with the necessary skills to contribute to value creation in informationally challenging deals.

Our paper adds to the literature in several ways. First, it provides the first comprehensive examination of acquirer shareholder returns arising from hiring boutique banks as financial advisors in the U.S. market for corporate control. Despite the

growing role of boutique banks, their effect on the acquirer's gains have only been partially examined by Golubov et al. (2012) as part of a robustness test, without documenting significant wealth effects. Moreover, the original contribution by Song et al. (2013) examines the effect of boutique banks on various deal outcomes, yet without testing how the market reacts to the announcement of deals advised by boutique banks.

Second, our paper contributes to the literature on private target acquisitions and their impact on shareholders' wealth (Adra and Barbopoulos, 2018; Barbopoulos and Sudarsanam, 2012; Chang, 1998; Draper and Paudyal, 2006; Officer et al., 2009). This literature suggests that private target deals are associated with significant wealth gains, which tend to vary with the deal's payment method (Adra and Menassa, 2018; Chang, 1998), deal structure (Barbopoulos and Sudarsanam, 2012) and short-selling constraints (Ekkayokkaya et al., 2009), in addition to liquidity and information asymmetry considerations (Adra and Barbopoulos, 2019). Our paper adds a new dimension to this literature by showing that the gains from private target deals can be enhanced by the involvement of specialized and autonomous advisors that help acquirers address the informationally challenging aspect of these transactions.

Finally, our paper expands the literature on the determinants of informed trading around M&A announcements (Cao et al., 2005; Chae, 2005; Siougle et al., 2011) and the relevance of such trading in capturing the wealth effects arising from M&As (Adra and Barbopoulos, 2018). A key implication of our results is that focusing on the market's reaction in a short window surrounding the acquisition announcement day might not necessarily capture the deal's prospects or properly assess the effectiveness of financial advisors. This implication is particularly relevant in small and informationally challenging M&As that do not attract the interest of information-driven traders who tend to focus on large and attention-grabbing deals.

The paper proceeds as follows: Section 2 offers a brief review of the salient literature; Section 3 presents our empirical predictions; Section 4 describes our dataset and reports our results from our univariate tests; Section 5 discusses the multivariate results related to the wealth effects of hiring boutique banks; Section 6 presents the analysis of post-announcement returns; Section 7 examines the choice of hiring boutique banks; and finally, Section 8 offers a conclusion.

## 2. Review of the salient literature

The seminal paper by Song et al. (2013) is the first contribution examining the determinants of the choice of boutique advisors. The authors present two non-mutually exclusive hypotheses on the choice of hiring boutique banks as external financial advisors in M&As, as well as the role such banks play in improving the odds of the deal's success. The *Skill Hypothesis* posits that boutique advisors tend to be hired in complex deals. Specifically, the boutique advisors' specialization and industry expertise can help acquirers address the valuation challenges in informationally demanding deals. The *Scale Hypothesis*, in turn, predicts that full-service banks focus their efforts on large M&As with substantial resources and advisory fees, which therefore makes boutique banks' services likely to be concentrated in small and low-profile deals.

The evidence reported by Song et al. (2013) supports different aspects of both hypotheses. In line with the *Scale Hypothesis*, the authors find that boutique banks are less likely to be hired in large acquisitions. In turn, and as predicted by the *Skill Hypothesis*, boutique advisors are more likely to be hired in deals characterized by informational challenges, such as hostile takeovers. Likewise, in complex cross-industry and multi-bidder deals, acquirers tend to hire investment bank syndicates that include both boutique and full-service banks. Song et al. (2013) also examine the influence of boutique banks on various deal outcomes. One of the key results that the authors report is that the deals advised by boutique banks require relatively longer periods to be resolved. They present this result as evidence supporting the *Skill Hypothesis*, as boutique banks spend more time addressing the technical challenges of their deals. Moreover, and in line with the *Skill Hypothesis*, the authors report robust evidence that the reliance on boutique banks provides favourable merger outcomes for acquirers such as the payment of low premia.

To the best of our knowledge, the only available result on the wealth effects of boutique advisors on the acquiring firms' value in the U.S. M&A market for corporate control is reported as part of a robustness test by Golubov et al. (2012). In their analysis of the effectiveness of top-tier advisors in U.S. M&As, the authors control for the effect of boutique advisors on various deal outcomes. They find that boutique banks do not significantly influence the acquirer's CAR. However, the authors do not examine whether these effects vary between the short- and long-run, and if they are driven by private or public target acquisitions.

A recently published paper by Loyeung (2019) examines the role of boutique advisors in the acquisitions of Australian firms. The *Scale Hypothesis* is not supported in the Australian market due to the involvement of boutique banks in considerably large deals. Accordingly, such an analysis allows for a clear testing of the *Skill Hypothesis*. The overall evidence presented by Loyeung suggests that boutique banks are generally hired in deals that are complex and characterized by high information asymmetry.<sup>3</sup> Consistent with Golubov et al. (2012), the author shows that the presence of boutique advisors in M&As is not associated with significant announcement period shareholder gains. However, the clients of boutique banks experience significant improvement in their post-acquisition accounting performance.

### **3. Empirical Predictions**

#### *3.1. The wealth effects of boutique banks in private target acquisitions*

It is worth highlighting up-front that both Song et al. (2013) and Loyeung (2019) limit their analyses to the acquisitions of publicly traded companies. However, private target acquisitions are known for their informationally demanding aspect (Officer et al., 2009). For instance, private companies are not required to report audited financial statements in a timely manner (Adra and Barbopoulos, 2019; Datar et al., 2001; Draper and Paudyal, 2006; Officer et al., 2009). In addition, the lack of publicly traded shares in secondary markets limits the private company's valuation and incorporation of relevant information about the market's expectation of future growth prospects (Fama, 1970; Ouyang and Szewczyk, 2018). Moreover, the concentrated ownership of private firms and the lack of separation between management and control make private companies' valuations highly dependent on the human capital and creativity of a handful of individuals that usually include the owner/manager (Barbopoulos and Sudarsanam, 2012; Chang, 1998). Therefore, the separation of the business-specific growth prospects from the managerial influence of the owners remains a daunting task for acquirers (Barbopoulos and Adra, 2016; Ragozzino and Reuer, 2009).

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<sup>3</sup> The deals structured through "Schemes of Arrangement" are generally friendly and less complicated than other deals. In the Probit estimation predicting the presence of a boutique bank in a deal, the coefficient of the dummy variable referring to the "Scheme of Arrangement" is negative and significant. Loyeung (2019) also treats the presence of pre-acquisition toeholds and common directors between the merging firms as an indicator of limited information asymmetry challenges. Both factors are associated with limited reliance on boutique banks.



Put together, these challenges raise the need for the effective, specialized, and independent advice that could be provided by boutique banks in valuing privately held companies. Therefore, the role of boutique advisors is highly consequential for acquirers in private target deals, especially because full-service banks have limited incentive to invest substantial resources in designing high-synergy acquisitions of privately held companies. Instead, full-service banks focus primarily on large public deals that receive extensive media coverage and bring hefty fees (Golubov et al., 2012). Consequently, their limited interest in private target deals opens a unique market for boutique banks to distinguish themselves, to be placed at the spotlight of analysts and investors, and to become relevant through the creation of significant value for their clients. Accordingly, our first empirical prediction stands out as follows:

*Empirical Prediction 1: Acquirers in the private target M&As advised by boutique banks realize higher gains than acquirers in counterpart deals advised by non-boutique banks.*

### *3.2. The wealth effects of boutique advisors in small public target acquisitions*

As discussed in Section 2 of the paper, the *Skill* and *Scale Hypotheses* presented by Song et al. (2013) are not mutually exclusive. In particular, while the involvement of boutique banks in small public target deals can be attributed to the limited interest of full-service banks in such small deals, it is worth noting that small public target deals can raise significant valuation and informational challenges that still require a particular specialisation in order to effectively extract significant value from them. Due to the fixed costs associated with information gathering (Dow and Gorton, 1997; Hirshleifer and Teoh, 2011), equity traders can be highly selective in allocating their cognitive resources (Chen et al., 2018; Kahneman, 1973) and are likely to focus on large rather than small firms (Da et al., 2011; Easley and O'Hara, 2004; Vega, 2005). Accordingly, the limited attention that small firms receive from professional investors and analysts makes their share prices less informative (Chae, 2005; Diamond and Verrecchia, 1991; Vega, 2005). It is also widely documented that small firms face significant distress risk that makes their valuations more challenging (Chan and Chen, 1991; Kapadia, 2011). Moreover, as small firms are yet to expand their industrial base, the relative dependence of their valuation on human capital cannot be easily priced via the conventional asset pricing models (Pantazalis and Park, 2009).

Accordingly, boutique banks are likely to be hired in small public target M&As not only as mere substitutes for full-service banks, but also as a source of independent and specialized value-creating advice. While full-service investment banks have limited incentives to address the technical valuation-challenges in small public deals, boutique banks can leverage their skills and expertise in these types of transactions to ultimately help acquirers realize significant value gains. We therefore present the first attempt in the literature to determine whether hiring boutique banks as advisors in small public target acquisitions is associated with significant gains for the acquirers. Hence, our second empirical prediction is presented as follows:

*Empirical Prediction 2: Acquirers in the small public target M&As advised by boutique banks realize higher gains than acquirers in counterpart deals advised by non-boutique banks.*

#### **4. Data and descriptive statistics**

##### *4.1. The M&A dataset*

Our sample consists of U.S. M&As announced between January 1<sup>st</sup> 1996 and December 31<sup>st</sup> 2015, and recorded in Thomson One Securities Data Corporation (SDC) Database. The starting year is chosen following the emphasis of Song et al. (2013) on the scarcity of advisor-related data in SDC database in the early 1990s. The starting date is also the same used by comparable studies such as Golubov et al. (2012). The ending year of 2015 is chosen to allow for a comprehensive analysis of the post-announcement returns. We require the target to be either publicly listed or private. Furthermore, we require the name of the acquirer's financial advisor to be disclosed by the SDC database. Our dataset is limited to domestic acquisitions to ensure that the merging firms operate within the same economic and institutional framework. We exclude leveraged buyouts, restructurings, liquidations, acquisitions in the government sector, bankruptcies, going-private deals, and reverse takeovers. We also impose the restriction that the method of payment (stock, cash, or a mix of both stock and cash and other methods) and the deal value, are available.

Furthermore, we expect the acquirer (a) to own less than 10% of the target's shares six months before the deal's announcement, and (b) to aim to control more than 50% of these shares after the deal's completion. Overall, 4,649 deals satisfy these sample

selection restrictions: 1,988 deals (42.76%) are private target acquisitions and 2,661 (57.24%) are public target deals.

**(Insert Table 1 about here)**

Table 1 (Panel A) shows the annual distribution of our sampled deals. As in prior literature (Alexandridis et al., 2017, 2010), the aggregate M&A activity follows a pro-cyclical pattern with significant declines during periods of economic downturns, such as the recession in the early 2000s and the aftermath of the global financial crisis of 2008. Besides, we note that 7% of the deals are withdrawn and that most of the transactions (98.6%) are classified as friendly takeovers. A third of our sample is composed of industry diversifying transactions. We also notice that the percentage of deals with competing bidders is relatively small (2.73%). Regarding the payment method, we find the largest share of the deals to be cash-settled (38.57%). The remaining fraction of deals in our sample is equally split between stock-settled and mixed-settled ones. The relatively large fraction of cash-settled deals is driven by the private target subsample, as 47.74% of private target deals are fully settled in cash. Panel B (Table 1) represents the annual distribution of the sample based on the target's sector. The largest fractions of M&As in our sample are in the financial and high-tech sectors, with 24% of the deals allocated to each of these sectors. The lowest fractions are in the relatively less knowledge-intensive sectors such as retail, real estate, and consumer staples.

#### *4.2. Classification of boutique and non-boutique banks*

To the best of our knowledge, Song et al. (2013) provide the only classification of investment banks into boutique vs. non-boutique advisors in the U.S. market for corporate control. The authors check each reported advisors' website to determine whether it has advisory expertise in specific lines of business and sectors (i.e. boutique) or provides a wider range of investment banking services (research, lending, underwriting, etc). They also examine the Dow Jones Factiva database to assess the industry's consensus that a particular investment bank is classified as boutique. Investment banks that do not fit into this explicit binary-classification are excluded from the sample. Overall, Song et al. (2013) retrieve 294 advisors, 141 of whom are explicitly classified as boutique, while the rest are labelled as full-service investment banks. We have obtained the classification of advisors into boutique and non-boutique from

Professor Lei Zhou. Appendix 2 provides a detailed list of investment banks and M&A divisions that the authors classified as boutique (non-boutique).

The annual distribution of boutique advised deals is reported in Table 1 (Panel A). Overall, 31% of the deals in our sample are advised by boutique banks. In un-tabulated statistics, we find that 37% (27%) of private (public) target deals are advised by boutique banks. The latter result is close to the 22.2% that is reported by Song et al. (2013) for a relatively shorter period. This result provides an early indication that the services of boutique banks are more recognized in private rather than public target acquisitions.

#### 4.3. Key variables and initial univariate tests

Table 2 reports the mean and the median, in addition to the 25<sup>th</sup>, 50<sup>th</sup>, and 75<sup>th</sup> percentiles, for each of the continuous variables included in our empirical analysis. These variables cover the acquirer's announcement period CAR and a rich set of control variables used in prior studies. We estimate acquirers' risk-adjusted returns as follows:

$$AR_{i,t} = R_{i,t} - E(R_{i,t}) \quad (1)$$

where  $AR_{i,t}$ , is the abnormal return to acquirer in deal  $i$  on day  $t$ ,  $R_{i,t}$  is this acquirer's stock returns on day  $t$ , and  $E(R_{i,t})$  is the expected return of this acquirer on the same day, estimated based on the Fama and French (1996) three-factor model (3FF) as in Equation (2) below:

$$E(R_{i,t}) = (1 - \hat{\beta}_i)R_{f,t} + \hat{\beta}_i E(R_{m,t}) + \hat{\beta}_i^{smb} E(SMB_t) + \hat{\beta}_i^{hml} E(HML_t) \quad (2)$$

We estimate  $\hat{\beta}_i$ ,  $\hat{\beta}_i^{smb}$ , and  $\hat{\beta}_i^{hml}$  on the window covering days  $t - 250$  to  $t - 20$ , with  $t = 0$  as the M&A announcement day, as outlined in Equation (3):

$$(R_i - R_f)_t = \alpha + \beta_i(R_m - R_f)_t + \beta_i^{smb} SMB_t + \beta_i^{hml} HML_t + \varepsilon_{i,t} \quad (3)$$

The Cumulative Abnormal Returns (CAR) for the acquirer in deal  $i$  is the sum of the risk-adjusted returns in the three-day window ( $t - 1$  to  $t + 1$ ) around the day of M&A announcement ( $t = 0$ ):

$$CAR_i = \sum_{t=-1}^{t+1} AR_{i,t} \quad (4)$$

We control for key determinants of the variation in the acquirers' returns such as the acquirer's market value (Fuller et al., 2002), the deal size (Alexandridis et al., 2013), the acquirer's market-to-book valuation (Rau and Vermaelen, 1989; Sudarsanam and Mahate, 2003), the percentage of the deal subject to deferred payments (Barbopoulos and

Adra, 2016; Barbopoulos et al., 2018a, 2018b), and the payment method (Golubov et al., 2015a; Travlos, 1987). We also include the number of advisors (Richardson et al., 2017) in addition to the takeover premia and the target's market-to-book valuations when these levels are available for Compustat for public target deals.

The average acquirer CAR reported in Table 2 is aligned with the results from prior studies, suggesting that acquirers fail to gain from M&As in the short-run (see Adra and Barbopoulos (2018)). Acquirers, on average, experience 1.34% decline in their announcement period CAR. However, the considerable variations in CAR suggest that the wealth effects of M&A can be influenced by various deal- and firm-specific factors.

**(Insert Table 2 about here)**

Table 3 reports results from our preliminary univariate tests of the variation in the key variables entering our analysis between boutique and non-boutique advised deals for the overall sample (Panel A), private target deals (Panel B), and public target deals (Panel C). Evidence reported in Panel (A) suggests that boutique-advised deals are associated with significantly lower announcement period CAR than non-boutique advised deals (three-day CAR of -2.42% vs. -0.85%). Furthermore, boutique advised deals are considerably smaller than non-boutique advised deals in both absolute dollar values (\$3,003m vs. \$8,587m) and deal relative size (39% vs. 46%). Put together, these results appear to be aligned with the *Scale Hypothesis* of Song et al. (2013), which predicts that boutique banks are inexpensive, non-wealth increasing substitutes for full-service banks in small deals.

Results from our univariate tests also provide some support for the *Skill Hypothesis* of Song et al. (2013). Specifically, boutique advised deals have a larger stock component in the payment (52.44% vs. 45.52%). If stock is considered as a contingent payment method reflecting valuation challenges (Hansen, 1987; Reuer et al., 2004), then boutique banks are perhaps appointed to handle valuation-challenging deals. Moreover, the use of stock can be a reflection of the financing constraints faced by acquirers (Faccio and Masulis, 2005). This alternative interpretation supports the assertion that boutique banks are appointed to complete deals initiated by financially constrained acquirers.

Similar patterns are presented in Panels (B) and (C) on the subsamples of private and public target acquisitions, respectively. It is also worth noting that solely in boutique-advised M&As, the losses in private target deals are relatively smaller than the losses experienced in public target ones (-1.35% vs -2.60%). In line with the results of Song et

al. (2013), we find that the premia paid in public-target deals advised by boutique banks are significantly smaller than the premia paid in deals advised by non-boutique banks (72.38% vs. 83.54%).

Lastly, it is important to treat the initial conclusions about the wealth effects of hiring boutique banks with caution. In particular, the significant differences in various deal characteristics between boutique and non-boutique advised deals raise the need for conducting a multivariate analysis as well as addressing selection bias concerns.

**(Insert Table 3 about here)**

## **5. Results on the Wealth Effects of Boutique Banks**

### *5.1. Results from our initial multivariate tests*

Results from our initial multivariate tests on the variation in the acquirer's CAR are presented in Table 4. Evidence from the estimations based on the full sample (Model (1)) suggests that the presence of a boutique bank in the deal is not associated with significant gains. This finding is consistent with the results reported in the robustness checks of Golubov et al. (2012). Model (2) provides similar conclusions based on the analysis of the subsample of private target acquisitions. The coefficient associated with *Boutique Advisor* (-0.074) depicts an effect that is both statistically and economically insignificant. Hence, these results do not seem supportive to our first empirical prediction. Along similar lines, Model (3) provides a similar conclusion in the realm of public target deals. This effect is robust after controlling for the effect of the deal premia and the acquirer's pre-acquisition market-to-book valuation in Model (4). Therefore, while the negative effects documented in our univariate tests fade after controlling for relevant firm- and deal-specific characteristics, results from our multivariate tests still suggest that boutique banks do not significantly contribute to shareholder wealth creation for their clients.

**(Insert Table 4 about here)**

### *5.2. The wealth effects of boutique banks based on deal size*

We re-estimate our multivariate models following a sorting of our sample into quartiles determined by the deal size. This approach permits us to explicitly test our second empirical prediction within public target acquisitions. It also allows us to determine whether our first empirical prediction holds for a subsample of private target

acquisitions. We divide each of the subsamples of private and public target acquisitions into four deal size-based quartiles. In private target acquisitions, the first quartile of deals covers transactions sized between \$1m and \$32.39m; the second quartile covers deals sized between \$32.40m and \$90m; the third quartile covers deals sized between \$90.1m and \$241.49m; and lastly, the fourth quartile covers deals sized above \$241.50m. In public target acquisitions, in turn, the first quartile of deals covers transactions sized between \$1m and \$110.85m; the second quartile covers deals sized between \$110.86m and \$398.77m; the third quartile of deals covers deals sized between \$398.78m and \$1,576.6m; lastly, the fourth quartile includes deals sized above \$1,576.7m. For each model, we present the intercept and the coefficient associated with *Boutique Advisor*.

The results reported in Table 5 (Panel A) strongly support our first empirical prediction in the group of large private target deals. Specifically, Model (4), which is estimated on the sample of private deals in the fourth quartile in terms of transaction value, suggests that large boutique-advised deals are, on average, associated with 6.50% higher acquirer CAR than the remaining deals. These effects translate into \$57 million gains for the average acquirer in this subsample. The remaining models, which are estimated on the first three quartiles, do not highlight a significant wealth effect.

The support of Empirical Prediction 1 on the subsample of large rather than small private target deals can have two non-mutually exclusive interpretations. The first interpretation is based on the economic relevance of the deal. In particular, small private target acquisitions may not be economically consequential to the point where the services of boutique banks can be distinguished from the services of full-service banks. The second interpretation can be attributed to the limited attention of equity investors to small private acquisitions at the time of their announcements. As discussed in Section 3, equity investors aim to efficiently manage their resources by limiting their short-run trading activity to deals that they expect to be economically relevant. The analysis of the drift in the acquirer's post-announcement gains in Section 6 allows us to test the validity of this interpretation. Specifically, if the insignificant effects of hiring boutique banks in small private target M&As are due to the limited market attention to these deals, we expect the true magnitude of the acquirers' gains/losses to become noticeable in the post-announcement period.

The evidence from Panel (B) (Table 5) does not support our second empirical prediction. In particular, the involvement of a boutique bank in public target deals is not

associated with any significant gains for the acquirer in any of the size-based quartiles. To the opposite, in the third size-based quartile of public target M&As, we find that the deals advised by boutique banks are associated with up to 4% lower announcement period CAR for the acquiring firms. In the following subsection, we re-asses this conclusion after addressing selection bias concerns.

**(Insert Tables 5 about here)**

### *5.3. Addressing selection bias concerns*

Michaely et al. (2016) introduce to the field of financial economics a common methodology that is generally used in medical research (see Chubak et al. (2013)) to present a straightforward and yet innovative approach for addressing selection bias concerns. Common approaches such as matching-based methods only address the bias due to observable factors, while the Heckman two-step procedure requires explicit exclusion restrictions (Heckman et al., 1997; Heckman and Navarro-Lozano, 2004). However, based on the Michaely et al. (2016) approach, one can control for the hidden characteristics that directly influence an outcome, without explicitly identifying such factors.

In the context of our analysis of the market's assessment of M&As, this approach consists of examining the boutique banks' clients in other deals in which no boutique banks are hired. The positive effect of boutique banks on the acquirer's returns in private target deals, for instance, might not be due to the skills offered by boutique advisors but to the tendency of acquirers who are capable of realizing significant gains from their deals to hire boutique banks. If the documented wealth effects in our initial multivariate results are driven by acquirer-specific attributes rather than the valuable advice offered by boutique banks, then we expect the variation in the acquirer's CAR to be influenced by the presence of boutique bank clients rather than boutique banks themselves. Separating the boutique effect from the client effect is highly relevant, especially as recent work by Golubov et al. (2015b) suggests that acquirer fixed effects have more power in explaining the variation in the M&A gains than the firm- and deal-specific factors suggested in the literature.<sup>4</sup> Hence, the Michaely (2016) approach allows for a direct assessment of the

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<sup>4</sup> Using this method, Michaely et al. (2016) show that the widely documented muted response of equity investors to corporate announcements on Fridays is driven by selection bias (see Louis and Sun (2010) for a discussion). By including in their regressions of market returns a dummy variable referring to Friday announcers (companies that announce at least one key event on Friday in their sample) and separating it from the dummy variable referring to



acquiring firm's synergy generating abilities, without the need to introduce acquirer-specific covariates that might not be accessible to the researcher.

Accordingly, we modify our estimations of the variation in acquirer CAR by adding the dummy explanatory variable *Boutique Advisor Client* which is assigned the value of 1 if the acquirer in the deal announces at least one deal with a boutique bank in the period covered in our sample, and 0 otherwise. We present this specification in Equation (5) as follows:

$$CAR_i = \beta_1 + \beta_2 \text{Boutique Bank}_i + \beta_3 \text{Boutique Client}_i + \sum_{j=4}^N \beta_j X_{i,j} + \varepsilon_i \quad (5)$$

Hence, the overall effects of boutique-advised deals on the acquirer's CAR can be decomposed into two components,  $\beta_2$  and  $\beta_3$ .  $\beta_2$  reflects the efforts made by the boutique bank in deal  $i$  while  $\beta_3$  reflects the synergy-generating ability of the client that hires the boutique bank. In other words, by assigning the value of 0 to the variable *Boutique Bank* and the value of 1 to the variable *Boutique Client*,  $\beta_3$  is a proxy of the average gains that boutique clients make in deals in which boutique banks are not involved.

The evidence from Table 6 suggests that our short-run results emphasizing the gains from hiring boutique banks in large private target M&As are relatively immune to the effect of endogeneity. Interestingly, the estimated wealth effect of hiring boutique banks in large private target deals increases in magnitude from 6.50% in Model (4) (Panel A of Table 5) to 7.90% in Model (4) (Panel A of Table 6). Moreover, the effect of the dummy variable *Boutique Client* is insignificant in all the reported models in Panel (A).

Panel (B) (Table 6) applies the same approach to public target acquisitions and provides strong support to our second empirical prediction. Model (1) (Panel B) shows that boutique banks contribute up to 3% increase in the acquirer's CAR after controlling for the common unobserved characteristics of boutique banks' clients. The coefficient associated with *Boutique Client* (-3.60%) suggests that insignificant effects in our initial estimations are mainly attributed to the acquirer's inability to identify synergy-generating deals rather than the efforts of boutique banks. To a large extent, these results justify the decision of acquirers to seek the services of boutique banks in small public target acquisitions (Song et al. 2013). These results also provide a direct support to Song et al.'s (2013) *Skill Hypothesis* by showing that the boutique advisors' independence and

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announcements made on Fridays, Michaely et al. (2016) show that Friday announcers receive muted market responses on other weekdays. Accordingly, the muted market response to corporate announcements on Fridays is driven by hidden characteristics of the companies that announce deals on Fridays, rather than the limited attention of investors on that day.

expertise allow them to help low-value-creating bidders, who would otherwise lose up to 3% at the time of the deal announcement, to at least break even in their M&A transactions.

**(Insert Table 6 about here)**

#### 5.4. *The effect of the relative deal size*

While the results in the previous sections focus on the absolute size of the deal, it is reasonable to suggest that the documented wealth effects of boutique banks should be more pronounced when the deal is large relative to the acquirer's size. For instance, the ability of boutique advisors to contribute to wealth creation in small public target M&As should be more consequential in cases when the acquirer is relatively small rather than large.

The evidence presented in Table 7 supports this conjecture by showing that the documented positive wealth effect of boutique advisors in (a) large private target acquisitions, and (b) small public target deals is economically larger in deals where the target is large relative to the acquirer. Model (1) is estimated on the fourth size-based quartile of private target M&As while Model (2) is estimated on the first size-based quartile of public target M&As. In both models, we introduce the dummy variable *High Relative Size* which is assigned the value of 1 if the relative size exceeds the median level in the corresponding sample (private and public deals, respectively), and 0 otherwise. We also introduce the interaction of this variable with *Boutique Advisor* while also controlling for the unidentified characteristics of the boutique banks' clients using the variable *Boutique Client*. In both models, the interaction of *Boutique Advisor* with *High Relative Size* is economically significant (8% increase in CAR in Model (1), and 3.60% increase in CAR in Model (2)), which suggests that the wealth effects of the advice provided by boutique banks in large private and small public M&As are strongly dependent on the relative size of the deal and hence its economic relevance to the acquirer.

**(Insert Table 7 about here)**

## 6. Post-Announcement Gains

We examine whether the short-run wealth effects from hiring boutique banks are reversed in the post-announcement period. The literature presents two commonly used methods for estimating long-run abnormal returns. The first method is the calendar time regression portfolio (CTRP) approach (Andre et al., 2004; Manconi et al., 2019) which

consists of forming and evaluating the risk-adjusted performance of portfolios consisting of separate firms that took specific actions – which in the context of our study refers to hiring boutique banks – and firms that did not hire boutique banks. The second method consists of matching companies that take specific actions with control firms that have comparable characteristics (such as size and book-to-market) (Barber and Lyon, 1997; Lyon et al., 1999). The long-run consequences of specific corporate actions are evaluated by estimating the difference between the buy-and-hold abnormal returns (BHAR) of the treated and control groups.

However, Li and Zhao (2006) criticise these approaches' ability to evaluate the long-run performance of corporate actions. Specifically, the authors show that these approaches fail to create good matches when companies need to be compared on many dimensions. Li and Zhao (2006) instead recommend that researchers rely on the Propensity Score Matching (PSM) method (Heckman et al., 1997; Heckman and Robb, 1985; Rosenbaum and Rubin, 1984). In short, PSM consists of introducing a rich set of observable covariates to a qualitative response model that estimates the propensity of assigning a treatment. Treatment effects are then estimated on a sample of observations with close levels of propensity scores. PSM addresses the multidimensionality problem by focusing the matching analysis on the balancing of propensity scores between treated and control observations.

Accordingly, we apply PSM to evaluate the post-announcement performance of acquirers in boutique-advised deals. For each size-based quartile in private and public target acquisitions, we estimate the propensity score of hiring a boutique advisor using the deal value, the acquirer's size, and its market-to-book value. We include these factors as they are commonly used as ex-ante characteristics to match portfolios in long-run event studies. We also add to the Logit models the variables that significantly influence both the likelihood of hiring a boutique bank and the acquirer's returns on our overall sample. This approach ensures that the same specification is used to estimate the Logit model in each size-based quartile. In an alternative approach, we follow Li and Zhao (2006) and include only the variables that jointly affect BHAR and the likelihood of hiring boutique banks for each subsample. These results do not differ from the ones discussed below.

We use the Caliper Matching (CM) approach via which for each boutique-advised deal we match a non-boutique-advised deal provided that the difference in the estimated

propensity score levels does not exceed 0.1 times the standard deviation of propensity score estimates. For each treated (boutique-advised) deal, two control (non-boutique-advised) deals are matched. Each deal is used as a match only once, and deals with no matches are dropped from the analysis. We choose the caliper level of 0.1 because it provides consistent and reasonable-sized matched samples across all the size-based quartiles for both public and private target deals covered in this study.<sup>5</sup>

For each boutique-advised deal, we calculate the cumulative 12-month cumulative gains  $\prod_{t=1}^{t=12}(1 + R_{Boutique\ Advisor,t})$  from the first month after the announcement date. We also calculate the cumulative gains for the control non-boutique-advised deal for the same period, i.e.  $\prod_{t=1}^{t=12}(1 + R_{Non-Boutique\ Advisor,t})$ . The level of BHAR is calculated as:

$$BHAR = \frac{\sum_{i: Boutique\ Advisor=1} \{ \prod_{t=1}^{t=12}(1 + R_{Boutique\ Advisor,t}) - \prod_{t=1}^{t=12}(1 + R_{Non-Boutique\ Advisor,t}) \}}{N} \quad (6)$$

where  $N$  is the number of boutique-advised deals that were assigned matches. To test the null hypothesis of no treatment effect, we use the standard errors developed by Abadie and Imbens (2006) following the results of the Abadie and Imbens' (2008) simulations that highlight the superior performance of these estimators, even in small samples.

The estimations of BHAR for private and public target acquisitions are reported in Tables 8 and 9, respectively. The Logit models used to estimate the propensity scores are reported in Panel (A) of each of these tables. The outcome of the PSM analysis is reported in Panel (B). We report the estimated propensity scores for treated and control observations before and after the matching. Additionally, we report the  $p$ -values of the Kolmogorov-Smirnov (KS) test of the null hypothesis that the treated and untreated observations have the same empirical distribution, before and after the matching. The general evidence from Panel (B) in both Tables 8 and 9 highlight the success of the PSM exercises in balancing the average levels of propensity scores and their empirical distributions on the matched sample.

**(Insert Tables 8 and 9 about here)**

The evidence from Table 8 (Panel B) suggests that the small private target deals advised by boutique banks are associated with significant post-announcement gains for the acquirers compared to non-boutique-advised deals. In particular, the boutique-

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<sup>5</sup> It is worth noting that our main conclusions are not altered if the alternative calipers of 0.1 and 0.3 are used in our analysis. Our results also hold if Nearest Neighbour (NN) matching is used as a matching algorithm. This algorithm, however, is not applicable in cases where the number of boutique-advised deals exceeds the number of non-boutique-advised deals such as the first size-based quartile in the subsample of private target acquisitions.

advised small private target M&As generate 14% and 11% higher acquirer gains for acquirers in the first and second size-based quartiles, respectively. To a large extent, this result supports the attention-based interpretation of our results in Section 5. Specifically, boutique banks seem to contribute to the wealth creation in most of the size-based quartile of private target M&As. These effects are more pronounced in the short run for large deals that attract the equity investors' attention. The wealth gains of smaller M&As, however, are realized in the post-announcement period. The BHAR results for public target M&As in Table 8 show that, except for a weekly significant positive drift in the third size-based quartile, there are no noticeable drifts in the acquirer's gains.

To explicitly test the conjecture that market attention to private target M&As is highly dependent on the deal's size, we examine the variation in the informed trading measure developed by Johnson and So (2017) in the period preceding the deal's announcement. A key advantage of Johnson and So (2017) measure is its emphasis on the dynamic relationship between the options and stock markets in quantifying the magnitude of informed trading by equity investors. This follows from the suggestion by Black (1975) that the options market provides an efficient low-cost venue for traders to make information-driven bets on corporate events.

The assumption underlying this measure is that trading in options relative to equities varies over time depending on the type of signals that investors receive. For investors who do not trade based on an informational advantage, the fraction of trading in the options versus equity markets is relatively stable. Hence, abnormally high (or low) trading in options relative to equities is treated as an indicator of significant informed trading activity. Hence, the Multimarket Measure of Information Asymmetry (MIA) for the acquirer in deal  $i$  on day  $t$  is presented as:

$$MIA_{i,t} = \frac{\left| \frac{O_{i,t}}{S_{i,t}} - M_{i,t} \right|}{\frac{O_{i,t}}{S_{i,t}} + M_{i,t}} \quad (7)$$

$O_{i,t}$  is the volume of traded options company  $i$ 's shares on day  $t$ .  $S_{i,t}$  is the volume of traded shares.  $\frac{O_{i,t}}{S_{i,t}}$  is the option-to-stock volume ratio used in previous studies such as Roll et al. (2010).  $M_{i,t}$  is the estimated average of  $\frac{O_{i,t}}{S_{i,t}}$  in the absence of informed trading. Accordingly, MIA quantifies the deviation of the options-to-shares ratio relative to the predicted value in the absence of informed trading. The denominator ensures that MIA is

non-negative and converges to 1 in the extreme cases when all trading takes place in either the options or the stock markets.

As shown by Cao et al. (2005), a key indicator of the market's attention to a deal is the increase in informed trading before its announcement. To quantify the degree of interest of informed traders in the acquirer's shares before the deal's announcement, we estimate the average MIA for the acquirer in deal  $i$  as the average daily MIA ( $Pre - Announcement MIA_i$ ) between the 10<sup>th</sup> and the second day before the announcement date. Due to the availability of option pricing data, the acquirer MIA measure is available for 1,040 deals in our sample (22.37%). The average (median) value of  $Pre - Announcement MIA_i$  in our sample is 0.37 (0.36). We estimate a specification that includes the dummy variable  $Private_i$  referring to private targets, the natural logarithm of the deal value  $\ln(Deal Value)_i$  and their interaction in addition to the effects of control variables  $\sum_{j=4}^k \beta_j X_{i,j}$ :

$$\begin{aligned}
 Pre - Announcement MIA_i & \quad (8) \\
 & = \beta_1 + \beta_2 Private_i + \beta_3 \ln(Deal Value)_i + \beta_4 Private_i \\
 & \quad \times \ln(Deal Value)_i + \sum_{j=4}^k \beta_j X_{i,j} + \varepsilon_i
 \end{aligned}$$

Thus, the marginal effect of private target acquisitions is specified as:

$$\frac{\partial Pre - Announcement MIA_i}{\partial Private_i} = \beta_2 + \beta_4 \ln(Deal Value)_i \quad (9)$$

The coefficient  $\beta_4$  determines the extent to which this marginal effect varies with the deal's value. The results in Table 10 support our conjecture that the informed trading in private target acquisitions is highly dependent on the deal's size. Both Models (1) and (2) show that the coefficient associated with the private acquisition dummy is negative and significant (at the 10% and 5% levels respectively). Moreover, in both models, the interaction between the natural logarithm of the deal value and the dummy variable referring to private acquisitions is statistically significant. Hence, for considerably small acquisitions, acquirers tend to experience a decrease in the level of pre-acquisition informed trading. This level only picks up when the deal's value increases and becomes more consequential to attract the interest and attention of information-driven investors.

**(Insert Table 10 about here)**

## **7. The choice of Advisors in Private Target Acquisitions**

In this section, building on the results of Section 5 which provide strong support for Empirical Prediction 1, we test a key implication of this prediction. If boutique firms contribute to wealth creation in private target M&As, we expect acquirers to be more likely to hire these banks in such transactions. Model (1) in Table 11 does not provide an initial support for this prediction. Specifically, in predicting the decision to hire a boutique bank in the Logit model, the dummy variable referring to private target deals is highly insignificant. Therefore, the initial implication of this finding is that the added wealth benefits of boutique banks in private target deals are not recognized by acquirers.

An alternative interpretation of this result is that the services of boutique banks are not afforded by all acquirers in private target deals. Given that value-generating advisors tend to charge higher fees for their services (Golubov et al. 2012), we expect boutique banks to be hired in the private deals initiated by resourceful acquirers.<sup>6</sup> Models (2) and (3) predict the likelihood of hiring boutique banks as advisors by small (lower than median) and large (higher than median) acquirers in our sample. The evidence from dividing the sample according to the acquirer's size supports the notion that boutique banks are more likely to be hired in private target deals when the acquirer is large, and less likely to be hired in such deals when the acquirer is small. In particular, our marginal effect analysis suggests that private target deals are 7% less likely to be advised by boutique banks in deals by small acquirers. In contrast, our prediction is strongly supported in the presence of large acquirers. Private target acquisitions initiated by these acquirers are 5% more likely to be advised by boutique banks than public target deals.

**(Insert Table 11 about here)**

## **8. Conclusion**

We trace the valuation effects of advisory services provided by boutique advisors on acquirer returns in U.S. Mergers and Acquisitions (M&As). Our study is motivated by the lack of empirical evidence on the value creating potentials of boutique banks in the U.S. market for corporate control. We investigate how both the announcement and post-announcement gains of acquirers vary in both private and public target deals in the presence of boutique banks advising the acquirer. We present the first evidence in the

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<sup>6</sup> It is worth noting that the SDC does not sufficiently report data on advisory fees in private target M&As.

literature on the ability of boutique banks to deliver significant gains for acquirers in private target deals. These gains are more pronounced in the short run in M&As involving large private target. We also find that boutique banks add significant acquirer gains in small private target deals. These gains, however, are only pronounced in the post-announcement period. Put together, these findings suggest that the wealth effects arising from hiring boutique banks cannot be assessed using the market response in the short run. We show that, to a large extent, this is due to the limited informed trading activity in small private acquisitions. Our findings also suggest that boutique banks' services in private target M&As are recognized by resourceful acquirers.

For public target acquisitions, we provide novel evidence suggesting that boutique banks manage to contribute to shareholder wealth creation in small deals. These effects emerge only after addressing the endogeneity concerns. In particular, we show that acquirers seeking the services of boutique banks in small public target M&As generally fail to realize significant gains from the deals in the absence of boutique banks. Rather than being inexpensive non-value-creating substitutes for full-service banks in small public deals, boutique banks are shown to be an independent source of value creation via their advisory services. Taken together, our findings add a new dimension to the rich literature on advisory roles in M&As.



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## Appendix 1 Definitions of Variables

Variable	Description	Source
% Stock	The percentage of the deal payment that is settled in stock.	SDC
% Toehold	The percentage of the target shares owned by the acquirer 6 months before the deal's announcement.	SDC
Acquirer Market to Book Value	The market value of the acquirer 43 days before the acquisition, divided by its book value of equity from the most recent accounting statement prior to the bid announcement.	Compustat
Acquirer Market Value (m\$)	The acquirer's market value of equity 43 days prior to the bid announcement, in millions of dollars.	Compustat
Boutique Advisor	Dummy=1 if the advisor is classified as boutique bank by Song et al. (2015), and 0 otherwise.	Song et al. (2013) through correspondence with Professor Lei Zhou
Boutique Client	Dummy=1 if acquirer involved in the deal relied on the services of a boutique bank at least once in the period covered in our sample.	SDC + Song et al. (2013) data.
CAR (%)	The acquirer's three-day (-1, 1) announcement period cumulative? abnormal returns, estimated via Equation (4).	CRSP + Authors' Estimations
Competing Bid	Dummy=1 if a competing bidder is reported by SDC, and 0 otherwise.	SDC
Deal Value (m\$)	The transaction value reported in millions of dollars.	SDC+ Authors' Estimations
Deferred Payment	The total earnout payments divided by the total deal value.	SDC
Diversifying	Dummy=1 if the acquirer and the target have different two-digit SIC codes, and 0 otherwise (FCSD).	SDC
Full Cash	Dummy=1 if the consideration is 100% financed with cash, and 0 otherwise.	SDC
Full Stock	Dummy=1 when the consideration is 100% financed with stock, and 0 otherwise.	SDC
High Relative Size	Dummy=1 if the relative size exceeds the median level in the corresponding sample (private and public deals respectively), and 0 otherwise.	SDC + Compustat
Hostile	Dummy=1 if the deal is classified as hostile, and 0 otherwise [Friendly].	SDC
Mixed Payment	Dummy=1 if the consideration is financed by a mix of cash and stock, and 0 otherwise.	SDC
Number of Advisors	The number of financial advisors involved in the deal.	SDC
Premium	The deal value is divided by the target's market value 43 days before the acquisition. We subtract 1 from the result and multiply it by 100, as in Officer (2003).	SDC
Pre-Announcement MIA	The acquirer's average multimarket information asymmetry measure developed by Johnson and So (2017) for the period between the 10 <sup>th</sup> and the second day preceding the acquisition's announcement.	Travis Johnson Webpage
Private	Dummy=1 if the target is a private company, and 0 otherwise [Public].	SDC
Relative Size	The deal value divided by the acquirer's pre-acquisition market value.	SDC + Compustat
Target Market to Book Value	The market value of the target 43 days before the acquisition, divided by its book value of equity from the most recent accounting statement prior to the bid announcement.	Compustat
Target Market Value (m\$)	Target's market value of equity 43 days prior to the bid announcement, in millions of dollars.	Compustat
Top Tier	Dummy=1 if the acquirer's advisors include any of the following companies: Goldman Sachs, Merrill Lynch (now Bank of America Merrill Lynch), Morgan Stanley, JP Morgan, Citi/Salomon Smith Barney, Credit Suisse First Boston, Lehman Brothers (now Barclays Capital), and Lazard, and 0 otherwise.	SDC

## Appendix 2 The Universe of Boutique Banks

The following investment banks or M&A divisions are classified by Song et al. (2013) as *boutique advisors*: Adams Harkness & Hill Inc, Alex Sheshunoff & Co, Allen C. Ewing, Alliant Partners, America's Growth Capital, Austin Associates Inc, BNY Capital Markets Inc, Barr Beaty Devlin & Co., Barr Devlin Associates, Baxter Fentriss & Co, Belle Plaine Partners, Berenson Minella, Berkshire Capital, Berwind Financial Group, Black & Co Inc, Blackstone Group LP, Broadview, Broadview Associates, Brookwood Associates, Brown, Gibbons, Lang & Co LP, Bryant Park Capital, Burke Capital Group, CE Unterberg Towbin, CIBC Oppenheimer, Cain Brothers Co., Carson Medlin Co, Castle Creek Financial LLC, Cedar Hill Advisors LLC, Cleary Gull Reiland & McDevitt, Cleary Gull Reiland McDevitt, CoView Capital Inc., Cochran, Caronia & Co., Cohen & Steers Capital Advisor, Cohen Bros & Co, Commonwealth Associates, Covington Associates, Cowen, Cowen & Co, Craig-Hallum, Inc., Curtis Securities LLC, Danielson Capital LLC, Duff and Phelps, Endicott Financial Advisors LL, Evercore Partners, Evergreen Capital Markets Ltd, Ewing Monroe & Co, Fechter, Detwiler, FinPro Inc, Financial Technology Partners, Financo, First Albany, First Albany Capital Inc, First Analysis Securities, Fox-Pitt Kelton, Freeman & Co, Gilford Securities, Gleacher & Co LLC, Gleacher NatWest, Goldsmith Agio Helms & Co., Grant Thornton, Grant Thornton LLP, Greenbridge Parnters LLC, Greene Holcomb & Lannin LLC, Greenhill & Co, LLC, Griffin Financial Group LLC, HC Wainwright & Co Inc, Hambrecht & Quist, Harris Williams & Co, Hoak Breedlove Wesneski & Co, Hoefer & Arnett Inc, Houlihan Lokey Howard & Zukin, Hovde Financial, Inc., Howard Lawson, JMP Financial Inc, James D Wolfensohn Inc, John G Kinnard & Co, Kafafian Group Inc, Kaufman Brothers LP, Keefe Bruyette & Woods Inc, Keefe Ventures LLC, Lane Berry & Co Int'l LLC, Lazard, Lazard Freres & Co LLC, Lazard Houses, Lincoln Partners LLC, Mann Armistead & Epperson Ltd., Marshall and Stevens Inc, McColl Partners LLC, McFarland Dewey & Co, Montgomery & Co, Montgomery Securities, Navigant Consulting Inc, Needham & Co Inc, Newbury Piret & Co Inc, Northeast Capital, Oppenheimer & Co Inc, Orr Group, Ostrowski & Company Inc, Pacific Crest Securities Inc, Patricof & Co Capital Corp, Perseus Group LLC, Peter J. Solomon Co Ltd, Petrie Parkman & Co Inc, Prairie Capital Services, Professional Bank Services, Prudential Volpe Technology Gr, Putnam Lovell Securities, Putnam, Lovell, de Guardiola, Quarterdeck Investment Partner, R. J. Steichen, Relational Advisors LLC, Renninger & Associates LLC, Revolution Partners LLC, Robertson Stephens & Co, SG Barr Devlin, Salomon Brothers, Sandler O'Neill Partners, Scura Rise & Partners LLC, Shattuck Hammond Partners, Simmons & Co International, SoundView Technology Group Inc, Southard Financial, Southcoast Capital, Stanford Keene, T. Stephen Johnson & Assoc., TM Capital, The Bank Advisory Group, Thomas Weisel Partners LLC, Trautman Kramer & Co., Trident Financial Corp, Trident Securities, Tucker Anthony Cleary Gull, Tucker Anthony Inc, Tucker Anthony Sutro, Updata Capital Inc, Vector Securities Intl, Volpe Brown Whelan & Co, WR Hambrecht & Co LLC, Wasserstein Perella Group Inc, Waterous & Co, Wessels Arnold & Henderson LLC, and Wit Soundview Group Inc.

The following investment banks or M&A divisions are classified by Song et al. (2013) as *non-boutique advisors*: ABN AMRO Chicago Corp, ABN AMRO Hoare Govett, ABN AMRO Incorporated, ABN-AMRO Holding NV, AG Edwards & Sons Inc, AG Edwards Inc, Alex Brown & Sons Inc, Allen & Co Inc, Anderson & Strudwick, BMO Nesbitt Burns Inc, BT Alex Brown Inc, BT Alex. Brown/Wolfensohn, Banc of America Securities LLC, BancAmerica Robertson Stephens, BancAmerica Securities Inc, BancBoston Robertson Stephens, Bank of Boston Corp, Bankers Trust / BT Wolfensohn, Bankers Trust Co, Bankers Trust

Company (HK), Barclays Bank of New York, Bear Stearns & Co Inc, Bear Stearns International, CIBC Wood Gundy Securities, CIBC World Markets Inc, CS First Boston Corp, Chase H&Q, Chase Manhattan Bank NA, Chase Manhattan Corp, Chase Securities Inc, Chicago Corp. Citigroup, Citigroup Global Markets Inc, Credit Suisse (USA) Inc, Credit Suisse First Boston, Credit Suisse First Boston Inc, Credit Suisse First Boston Int, Credit Suisse First Boston Ltd, Credit Suisse First Boston/ CS, Credit Suisse Group, DA Davidson & Co Inc, Dain Bosworth Inc, Dain Rauscher Corp, Dain Rauscher Wessels, David A. Noyes, Dean Witter, Deutsche Banc Alex Brown, Deutsche Bank AG, Deutsche Bank Securities, Deutsche Bank Securities Corp, Deutsche Morgan Grenfell, Dillon, Read & Co Inc, Donald & Co. Securities, Donaldson Lufkin & Jenrette, Dresdner Kleinwort Benson, Dresdner Kleinwort Wasserstein, Enskilda, First Security Van Kasper & Co, First Union Securities Inc, Fleet Boston Corp, Fleet Financial Group Inc, Fleet Securities, Friedman Billings Ramsey & Co, Friedman Billings Ramsey Group, Goldman Sachs & Co, Goldman Sachs Group Inc, Goldman Sachs International, Howe Barnes Investments, ING Baring Furman Selz LLC, ING Barings, JP Morgan, JP Morgan Chase & Co, JP Morgan Securities Inc, Janney Montgomery Scott Inc, Janney Montgomery Scott LLC, Jefferies & Co Inc, Key Banc Capital Markets, KeyCorp/McDonald Investments, Ladenburg Thalmann & Co, Legg Mason & Co Inc, Legg Mason Wood Walker, Lehman Brothers, McConnell Budd & Romano, McConnell Budd & Downes, McDonald Investments. Merrill Lynch, Merrill Lynch, Pierce, Fenner, Merriman Curhan Ford & Co, Morgan Keegan Inc, Morgan Lewis Githens & Ahn, Morgan Stanley, Morgan Stanley & Co, NatWest Markets, NationsBanc Capital Markets, NationsBanc Montgomery Sec, NationsBank, NationsBank Investment Banking, Pacific Growth Equities Inc, PaineWebber, Piper Jaffray Cos, Piper Jaffray Inc, Prudential Securities Inc, RBC Capital Markets, Raymond James & Associates Inc, Raymond James Financial Inc, Robert W Baird & Co Inc, Robinson-Humphrey Co, Rothschild Group, Rothschild Inc., Ryan Beck & Co, SBC Warburg, SBC Warburg Dillon Read Inc, SG Cowen Securities Corp, SG Warburg & Co Inc (SZ), Salomon Smith Barney, Schroder & Co Inc, Schroder Wertheim & Co, Scott & Stringfellow Financial, Smith Barney & Co Inc, Smith Barney Inc, Societe Generale, Stephens Financial Group, Stephens Inc, Stern Stewart, Stifel Nicolaus & Co Inc, SunTrust Banks, SunTrust Robinson Humphrey, TD Securities Inc, Toronto Dominion Sec. (USA), UBS, UBS Investment Bank, UBS Securities Inc, UBS Warburg, UBS Warburg LLC, US Bancorp, US Bancorp Piper Jaffray, Union Bank of Switzerland, Wachovia Bank & Trust Co, Wachovia Bank NA, Wachovia Capital Markets, Wachovia Securities Inc, Wallach, Warburg Dillon Read Inc, Wedbush Morgan Securities, Wedbush Securities, Wells Fargo & Co, Wells Fargo Securities LLC, Wertheim Schroder, Wheat First Butcher & Singer, Wheat First Securities Inc, Wheat First Union, and William Blair & Co.

**Table 1** Annual distribution of the sample

Panel A: Annual distribution based on the deal characteristics												
Year	All	Boutique Advisor	Private	Public	Withdrawn	Diversifying	Friendly	Competing Bid	Full Stock	Full Cash	Mixed	
1996	303	89	116	187	24	104	288	6	143	86	74	
1997	413	125	158	255	36	151	404	19	191	126	96	
1998	431	138	173	258	26	140	425	14	206	131	94	
1999	425	123	176	249	34	139	418	7	199	125	101	
2000	383	104	172	211	30	129	378	5	190	93	100	
2001	262	93	102	160	19	78	259	9	96	63	103	
2002	195	55	99	96	11	71	193	3	45	78	72	
2003	208	76	92	116	8	70	204	3	42	100	66	
2004	261	87	120	141	14	72	258	2	53	116	92	
2005	240	75	123	117	11	75	237	7	40	112	88	
2006	230	76	99	131	13	88	229	8	33	120	77	
2007	214	71	90	124	16	72	214	4	23	114	77	
2008	131	35	51	80	24	41	129	6	22	65	44	
2009	109	33	39	70	11	36	109	10	32	41	36	
2010	125	36	43	82	8	37	124	3	22	72	31	
2011	105	27	50	55	9	31	104	5	15	58	32	
2012	130	34	67	63	5	47	130	0	11	72	47	
2013	131	48	62	69	7	31	131	2	20	69	42	
2014	172	66	77	95	13	41	171	7	33	77	62	
2015	181	57	79	102	14	40	179	7	32	75	74	
<i>N</i>	4,649	1,448	1,988	2,661	333	1,493	4,584	127	1,448	1,793	1,408	
%	100	31.15	42.76	57.24	7.16	32.11	98.60	2.73	31.15	38.57	30.29	

  

Panel B: Annual distribution based on the target's sector												
Year	Industrials	Healthcare	Consumer Staples	Materials	Consumer Products	High Technology	Energy and Power	Telecommunications	Financials	Real Estate	Media and Entertainment	Retail
1996	24	37	9	13	24	54	14	16	53	13	17	29
1997	37	45	11	14	31	61	26	27	102	21	22	16
1998	34	36	9	22	36	91	33	18	86	19	19	28
1999	31	27	6	18	35	114	33	29	83	8	25	16
2000	31	25	11	15	25	142	17	22	64	6	14	11
2001	17	31	7	3	18	81	21	12	50	8	10	4
2002	6	25	5	4	12	65	12	8	41	4	7	6
2003	11	29	5	3	10	55	8	11	59	7	4	6
2004	9	35	8	7	16	59	14	4	75	8	17	9
2005	9	27	6	5	16	56	13	16	68	7	7	10
2006	13	29	3	5	11	48	11	16	71	12	9	2
2007	11	36	6	7	15	41	11	10	60	5	5	7
2008	6	12	3	4	14	37	12	7	29	2	1	4
2009	4	16	4	4	10	29	9	8	20	1	2	2
2010	10	18	5	2	6	30	18	8	26	0	2	0
2011	6	15	3	7	5	22	15	4	21	2	2	3
2012	10	17	4	7	10	21	13	7	31	1	6	3
2013	8	19	4	3	6	20	3	3	51	6	3	5
2014	12	15	9	6	5	19	13	5	68	6	8	6
2015	13	22	6	6	9	32	10	3	65	3	5	7
<i>N</i>	302	516	124	155	314	1077	306	234	1123	139	185	174
%	6.50	11.10	2.67	3.33	6.75	23.17	6.58	5.03	24.16	2.99	3.98	3.74

Panel A represents the annual distribution of domestic public and private target acquisitions announced by U.S. public companies between January 1<sup>st</sup> 1996 and December 31<sup>st</sup> 2015. For each year, we present the total number of deals and the deals advised by boutique banks. Moreover, we report the annual distribution of deals based on the target's listing status (private/public), the deal's status (withdrawn/completed), the industry scope of the transaction (diversifying vs. focused), the deal's attitude (friendly vs. hostile), the presence of competing bids, in addition to the deal's payment method (cash, stock, and mixed payment). We also report the total number of deals *N* in each category and the percentage relative to the total number of deals. Panel B presents the annual distribution of deals in each sector covered in our sample. The sectors covered by SDC are: Industrials, Healthcare, Consumer Staples, Materials, Media and Entertainment, Retail, Consumer Products, High Technology, Energy and Power, Telecommunications, Financials, and Real Estate. *N* is the number of deals in each sector and (%) is the percentage of deals in each sector relative to the total number of deals.



**Table 2** Sample statistics of the continuous variables

Variable	<i>N</i>	Mean	25 <sup>th</sup> Percentile	50 <sup>th</sup> Percentile	75 <sup>th</sup> Percentile
CAR (%)	4,649	-1.34	-5.28	-0.42	3.69
Acquirer Market Value (m\$)	4,649	6,848.04	269.84	909.62	3,655.13
Acquirer Market to Book Value	4,649	3.05	1.41	2.20	3.32
Deal Value (m\$)	4,649	1,595.25	58.00	193.08	731.2
% Stock	4,649	47.67	0.00	48.15	100.00
%Toehold	4,649	0.04	0.00	0.00	0.00
Relative Size	4,649	0.47	0.09	0.23	0.55
Number of Advisors	4,469	1.17	1.00	1.00	1.00
Deferred Payment	4,649	0.02	0.00	0.00	0.01
Premium	2,443	80.60	27.39	53.82	100.29
Target Market-to-Book Value	2,122	2.79	1.22	1.84	3.11

This table presents key statistics for each of the continuous variables covered in this paper. For each variable, we report the total number of available observations and the mean, in addition to the 25<sup>th</sup>, 50<sup>th</sup>, and 75<sup>th</sup> percentiles. Please refer to Appendix 1 for an accurate description of the variables.

**Table 3** Univariate analysis

<b>Panel A: All Deals</b>			
Variable	(a) Boutique Advisor	(b) Non-Boutique Advisor	(a)-(b)
CAR (%)	-2.42	-0.85	-1.57***
Acquirer Market Value (m\$)	3,003.79	8,587.02	-5,583****
Acquirer Market to Book Value	2.75	3.19	-0.44***
Deal Value (m\$)	775.74	1,956.56	-1,180.82***
% Stock	52.44	45.52	6.92***
% Toehold	0.03	0.04	-0.01
Relative Size	0.39	0.46	-0.07***
Number of Advisors	1.20	1.17	0.03**
Deferred Payment	0.02	0.01	0.01
<b>Panel B: Private Targets</b>			
Variable	(a) Boutique Advisor	(b) Non-Boutique Advisor	(a)-(b)
CAR (%)	0.08	1.43	-1.35*
BHAR <sub>12</sub>	-18.23	-18.81	0.58
Acquirer Market Value (m\$)	1081.09	3,498.07	-2,416.98***
Acquirer Market to Book Value	3.09	3.37	-0.28**
Deal Value (m\$)	129.75	360.53	-230.78***
% Stock	42.15	34.41	7.74***
% Toehold	0.00	0.10	-0.10
Relative Size	0.26	0.36	-0.10***
Number of Advisors	1.13	1.07	0.06***
Deferred Payment	0.03	0.03	0.00
<b>Panel C: Public Targets</b>			
Variable	(a) Boutique Advisor	(b) Non-Boutique Advisor	(a)-(b)
CAR (%)	-4.94	-2.34	-2.60***
Acquirer Market Value (m\$)	4942.48	11,894.85	-6,952.37***
Acquirer Market to Book Value	2.41	3.08	-0.67***
Deal Value (m\$)	1427.10	3,009.49	-1,582.39***
% Stock	62.83	52.73	10.10***
% Toehold	0.05	0.07	-0.02
Relative Size	0.51	0.53	-0.02
Number of Advisors	1.26	1.22	0.04
Deferred Payment	0.01	0.01	0.00
Premium	72.38	83.54	-11.16***
Target Market-to-Book Value	2.23	3.03	-0.80***

This table presents the univariate analysis of the continuous variables used in the paper on the overall sample (Panel A), the subsample of private target acquisitions (Panel B), and the subsample of public target acquisitions (Panel C). For each variable, we report the means for the deals advised by boutique banks, the deals advised by non-boutique banks, and the difference between both means and its significance. \*\*\*, \*\*, and \* represent significance at the 1%, 5%, and 10% levels, respectively. Please refer to Appendix 1 for an accurate description of the variables.

**Table 4** Multivariate analysis of the acquirer CAR

Dependent Variable	CAR	CAR	CAR	CAR
Target Status	All	Private	Public	Public
Explanatory Variable\Model	(1)	(2)	(3)	(4)
Intercept	4.936*** (2.060)	9.992*** (3.529)	3.004 (2.532)	0.869 (2.892)
Boutique Advisor	-0.674 (0.669)	-0.074 (1.017)	-1.123 (0.894)	-0.690 (1.099)
Private	3.670*** (0.668)			
Top Tier	2.555*** (0.695)	3.000*** (1.193)	2.100*** (0.842)	1.746* (0.997)
ln(Deal Value)	0.975*** (0.361)	2.360*** (0.599)	0.169 (0.414)	0.295 (0.490)
ln(Acquirer Market Value)	-1.682*** (0.608)	-3.166*** (0.704)	-0.659 (0.459)	-0.779 (0.527)
Acquirer Market-to-Book Value	0.169 (0.125)	0.218 (0.195)	0.030 (0.169)	-0.046 (0.206)
Number of Advisors	-0.192 (0.548)	0.853 (1.339)	-0.345 (0.595)	-0.606 (0.647)
Deferred Payment	-6.474** (2.927)	-6.074* (3.228)	-7.515 (11.268)	-5.553 (11.524)
Full Stock	-0.506 (0.684)	-0.133 (1.220)	-0.127 (0.837)	0.046200 (0.997)
Full Cash	2.150*** (0.710)	0.171 (1.087)	4.254*** (0.954)	4.703*** (1.012)
Hostile	-3.659** (1.609)	-	-3.479** (1.690)	-3.335 (2.145)
Diversified	0.496 (0.593)	0.164 (0.993)	0.695 (0.751)	0.724 (0.878)
% Toehold	0.374 (0.392)	0.273 (0.278)	0.208 (0.424)	0.423 (0.541)
Competing Bid	0.337 (1.602)	-2.688 (3.589)	0.605 (1.670)	0.183 (1.907)
Premium				0.008 (0.008)
Target Market-to-Book Value				0.004 (0.118)
Industry Effects	YES	YES	YES	YES
Year Effects	YES	YES	YES	YES
<i>N</i>	4,649	1,988	2,661	2,097
Adjusted R-Squared	0.06	0.06	0.06	0.04

This table presents four models examining the variation in the acquirer's three-day (-1,1) Cumulative Abnormal Returns (CAR). Model (1) is estimated on the overall sample. Model (2) is estimated on the sample of private target acquisitions. Models (3) and (4) are estimated on samples of public target acquisitions. Heteroskedasticity-adjusted standard errors are reported in parentheses. "-" is reported when the explanatory variable does not predict a variation in the outcome. *N* represents the number of observations. \*\*\*, \*\*, and \* represent significance at the 1%, 5%, and 10% levels, respectively. Please refer to Appendix 1 for an accurate description of the variables.

**Table 5** The variation of the acquirer's returns with the deal size in private and public target deals

<b>Panel A: Private target deals</b>				
Dependent Variable	CAR	CAR	CAR	CAR
Quartile	Q1	Q2	Q3	Q4
Explanatory Variable \ Model	(1)	(2)	(3)	(4)
Intercept	13.561*** (4.402)	8.645 (8.646)	10.882** (5.221)	2.311 (8.655)
Boutique Advisor	-0.941 (1.143)	0.343 (2.632)	-1.116 (1.882)	6.555** (3.298)
Industry Effects	YES	YES	YES	YES
Year Effects	YES	YES	YES	YES
Number of Boutique Advised Deals	287	219	135	84
<i>N</i>	497	497	497	497
Adjusted R-Squared	0.03	0.05	0.03	0.03
<b>Panel B: Public target deals</b>				
Dependent Variable	CAR	CAR	CAR	CAR
Quartile	Q1	Q2	Q3	Q4
Explanatory Variable \ Model	(1)	(2)	(3)	(4)
Intercept	11.738*** (4.622)	2.076 (13.445)	14.353 (13.340)	-4.062 (5.178)
Boutique Advisor	-0.228 (1.101)	0.122 (2.052)	-4.029* (2.220)	0.652 (2.000)
Industry Effects	YES	YES	YES	YES
Year Effects	YES	YES	YES	YES
Number of Boutique Advised Deals	347	178	109	86
<i>N</i>	665	666	665	665
Adjusted R-Squared	0.46	0.03	0.05	0.02

This table examines how the wealth effects of hiring boutique advisors vary with the size of the deal in private and public target acquisitions. The independent variables in all the reported models are the ones used in Model (1) Table 4. Panel A examines the variation in the announcement period CAR under the first, second, third, and fourth quartiles in the subsample of private target acquisitions. In private target acquisitions, the first quartile of deals covers transactions with values between \$1m to \$32.39m; the second quartile covers deals between \$32.40m and \$90m; the third quartile covers deals between \$90.1m and \$241.49m; and the fourth quartile includes deal values above \$241.50m. For each model, we present the intercept and the coefficient associated with *Boutique Advisor*. Panel B adopts the same approach in examining the variation in the acquirer's CAR for public target acquisitions. In public target acquisitions, the first quartile of deals covers transactions with values between \$1m and \$110.85m; the second quartile covers deals between \$110.86m to \$398.77m; the third quartile covers deals between \$398.78m and \$1,576.6m; and the fourth quartile includes deal values above \$1,576.7m. Heteroskedasticity-adjusted standard errors are reported within parentheses. *N* represents the number of observations. The number of boutique-advised deals is reported for each model. \*\*\*, \*\*, and \* represent significance at the 1%, 5%, and 10% levels, respectively. Please refer to Appendix 1 for an accurate description of the variables.

**Table 6** Endogeneity in the variation of the acquirer's returns with the deal size

<b>Panel A: Private target deals</b>				
Dependent Variable	CAR	CAR	CAR	CAR
Quartile	Q1	Q2	Q3	Q4
Explanatory Variable \ Model	(1)	(2)	(3)	(4)
Intercept	15.790*** (4.865)	-6.240 (15.886)	-5.682 (16.012)	-2.229 (8.823)
Boutique Advisor	0.731 (3.846)	-3.442 (3.337)	-2.781 (2.966)	7.971** (4.078)
Boutique Client	-1.218 (3.449)	1.754 (3.629)	3.262 (3.156)	-2.595 (3.540)
Industry Effects	YES	YES	YES	YES
Year Effects	YES	YES	YES	YES
Number of Boutique Advised Deals	287	219	135	84
<i>N</i>	497	497	497	497
Adjusted R-Squared	0.03	0.05	0.03	0.03
<b>Panel B: Public target deals</b>				
Dependent Variable	CAR	CAR	CAR	CAR
Quartile	Q1	Q2	Q3	Q4
Explanatory Variable \ Model	(1)	(2)	(3)	(4)
Intercept	15.797*** (3.354)	-1.073 (11.771)	20.113 (13.681)	-3.613 (5.436)
Boutique Advisor	2.922** (1.442)	0.881 (2.904)	-3.409 (2.420)	1.800 (2.399)
Boutique Client	-3.587** (1.582)	-2.244 (2.473)	-2.193 (2.772)	-2.366 (2.449)
Industry Effects	YES	YES	YES	YES
Year Effects	YES	YES	YES	YES
Number of Boutique Advised Deals	347	178	109	86
<i>N</i>	665	666	665	665
Adjusted R-Squared	0.47	0.05	0.05	0.02

This table examines how the wealth effects of hiring boutique advisors vary with the size of the deal in private and public target acquisitions while addressing endogeneity concerns. The independent variables in all the reported models are the ones used in Model (1) Table 4. Panel A examines the variation in the announcement period CAR under the first, second, third, and fourth quartiles in the subsample of private target deals. Panel B applies the same approach to public target acquisitions. The deal values covered in each quartile are discussed in the note of Table 5. For each model, we present the intercept and the coefficient associated with *Boutique Advisor* in addition to the coefficient of the variable *Boutique Client*. Heteroskedasticity-consistent standard errors are reported within parentheses. *N* represents the number of observations. \*\*\*, \*\*, and \* represent significance at the 1%, 5%, and 10% levels, respectively. Please refer to Appendix 1 for an accurate description of the variables.

**Table 7** Relative size and the wealth effects of boutique banks

Dependent Variable	CAR	CAR
Target Status	Private	Public
Quartile	Q4	Q1
Explanatory Variable\Model	(1)	(2)
Intercept	6.807 (9.349)	15.891*** (4.489)
Boutique Advisor	3.267 (4.364)	1.615 (1.412)
Boutique Advisor × High Relative Size	7.969* (4.743)	3.685** (1.914)
High Relative Size	-4.700* (2.832)	-0.493 (1.546)
Boutique Client	-3.140 (3.448)	-4.108*** (1.633)
Top Tier	5.767** (2.774)	-0.754 (1.655)
ln(Deal Value)	4.591*** (1.600)	-1.646 (1.029)
ln(Acquirer Market Value)	-4.262*** (1.204)	-0.470 (0.772)
Acquirer Market-to-Book Value	0.441 (0.367)	-0.108 (0.249)
Number of Advisors	-2.783* (1.632)	-1.918 (2.571)
Deferred Payment	3.442 (4.905)	45.392** (22.116)
Full Stock	0.705 (3.561)	-2.419* (1.406)
Full Cash	0.223 (2.299)	1.469 (1.490)
Hostile	-	1.632 (2.385)
Diversified	-0.171 (1.862)	-1.904 (1.217)
% Toehold	-0.515 (0.653)	-0.025 (0.242)
Competing Bid	-4.148* (4.167)	1.240 (1.734)
Industry Effects	YES	YES
Year Effects	YES	YES
<i>N</i>	497	665
Adjusted R-Squared	0.04	0.47

This table presents the moderating effect of the deal's relative size on the wealth effects of boutique banks in deals involving large private targets and small public ones respectively. Model (1) estimates these wealth effects on the fourth size-based quartile of private target M&As. Model (2) estimates these effects on the first size-based quartile of public target M&As. In each model, we include the dummy variable *High Relative Size* which is assigned the value of 1 if the relative size exceeds the median level in the corresponding sample (private and public deals respectively), and 0 otherwise. We also include the interaction of this variable with *Boutique Advisor*. Heteroskedasticity-consistent standard errors are reported within parentheses. *N* represents the number of observations. \*\*\*, \*\*, and \* represent significance at the 1%, 5%, and 10% levels, respectively. Please refer to Appendix 1 for an accurate description of the variables.

**Table 8** The Buy-and-Hold Abnormal Returns (BHAR) from private target acquisitions

Quartile	Q1	Q2	Q3	Q4
Panel A: Logit models				
Dependent Variable	Boutique Advisor=1 Non-boutique Advisor=0	Boutique Advisor=1 Non-boutique Advisor=0	Boutique Advisor=1 Non-boutique Advisor=0	Boutique Advisor=1 Non-boutique Advisor=0
Explanatory Variable\Model	(1)	(2)	(3)	(4)
Intercept	0.573*** (0.178)	0.380 (0.327)	0.381 (0.369)	0.368*** (0.145)
ln(Acquirer Market Value)	-0.036* (0.021)	0.016 (0.019)	0.026* (0.016)	-0.003 (0.012)
ln(Deal Value)	-0.045 (0.039)	-0.080 (0.078)	-0.116* (0.070)	-0.065*** (0.024)
Acquirer Market to Book	0.004 (0.010)	-0.006 (0.009)	-0.013** (0.007)	0.0001 (0.005)
%Stock	-0.0002 (0.0005)	0.0005 (0.0005)	0.001*** (0.005)	0.001*** (0.0005)
Number of Advisors	0.287** (0.129)	0.270*** (0.098)	-	-
Number of Boutique Advised Deals	285	218	135	82
N	492	493	495	492
Pseudo R-Squared	0.01	0.01	0.06	0.07
Panel B: Propensity Score Matching results				
Propensity Score in the Treated Group Before Matching	0.59	0.45	0.32	0.23
Propensity Score in the Control Group Before Matching	0.56	0.43	0.25	0.15
KS p-value of the Difference in Propensity Scores Before Matching	0.00	0.00	0.00	0.00
Propensity Score in the Treated Group After Matching	0.57	0.44	0.27	0.21
Propensity Score in the Control Group After Matching	0.57	0.44	0.27	0.21
KS p-value of the Difference in Propensity Scores After Matching	0.99	0.99	0.99	0.99
Number of Observations in the Treated Group	174	151	86	26
Number of Observations in the Control Group	348	302	172	52
BHAR (%) (Abadie and Imbens (2006) standard error)	13.75** (6.77)	11.02** (5.44)	6.38 (8.55)	10.59 (7.43)

This table presents the estimation of the 12-month post-acquisition Buy-and-Hold Abnormal Returns (BHAR) for acquirers in boutique-advised private target deals relative to acquirers in comparable non-boutique advised private target deals. The estimations are made via Propensity Score Matching (PSM). For each quartile based on the deal size, Panel A reports the Logit model used to estimate the propensity scores. The dependent variable is assigned the value of 1 if a boutique advisor is involved in the deal, and 0 otherwise. The algorithm that we follow is caliper matching. Starting from the highest estimated propensity scores, we match each treated deal (boutique-advised) with a non-treated one (non-boutique advised) provided that the difference in the estimated propensity scores does not exceed 0.1 standard deviation. We allow each control observation to be matched more than once. Panel B reports the outcome of the PSM analysis. The estimated propensity score in the treated and control groups and the significance of their difference using the Kolmogorov-Smirnov test are reported before and after the matching. We also report the number of treated and control observations on the matched sample. Finally, the BHAR estimates and the corresponding Abadie and Imbens (2006) standard errors are reported. “-” is reported when the explanatory variable does not predict a variation in the outcome. *N* represents the number of observations. \*\*\*, \*\*, and \* represent significance at the 1%, 5%, and 10% levels, respectively. Please refer to Appendix 1 for an accurate description of the variables.

**Table 9** The Buy-and-Hold Abnormal Returns (BHAR) from public target acquisitions

Quartile	Q1	Q2	Q3	Q4
Panel A: Logit models				
Dependent Variable	Boutique Advisor=1 Non-boutique Advisor=0	Boutique Advisor=1 Non-boutique Advisor=0	Boutique Advisor=1 Non-boutique Advisor=0	Boutique Advisor=1 Non-boutique Advisor=0
Explanatory Variable\Model	(1)	(2)	(3)	(4)
Intercept	0.841*** (0.139)	0.939*** (0.255)	0.273 (0.241)	0.128 (0.124)
ln(Acquirer Market Value)	-0.015 (0.017)	-0.032** (0.014)	-0.015 (0.011)	-0.009 (0.011)
ln(Deal Value)	-0.091*** (0.031)	-0.144*** (0.047)	-0.027 (0.036)	-0.003 (0.015)
Acquirer Market to Book	-0.022** (0.010)	-0.0002 (0.0007)	-0.0003 (0.0005)	-0.001 (0.004)
%Stock	-0.0004 (0.0004)	0.001*** (0.0003)	0.0006** (0.0003)	0.0007** (0.0003)
Number of Advisors	0.172** (0.072)	0.214*** (0.049)	0.138*** (0.038)	0.061*** (0.015)
Number of Boutique Advised Deals	346	175	109	86
<i>N</i>	660	659	659	652
Pseudo R-Squared	0.04	0.08	0.04	0.03
Panel B: Propensity Score Matching results				
Propensity Score in the Treated Group Before Matching	0.54	0.32	0.20	0.16
Propensity Score in the Control Group Before Matching	0.50	0.24	0.15	0.12
KS p-value of the Difference in Propensity Scores Before Matching	0.00	0.00	0.00	0.00
Propensity Score in the Treated Group After Matching	0.53	0.30	0.18	0.15
Propensity Score in the Control Group After Matching	0.53	0.30	0.18	0.15
KS p-value of the Difference in Propensity Scores After Matching	0.99	0.99	0.99	0.99
Number of Observations in the Treated Group	106	53	100	26
Number of Observations in the Control Group	212	106	200	52
<i>BHAR</i> (%)	1.74	7.19*	-2.33	-2.45
(Abadie and Imbens (2006) standard error)	(4.40)	(4.27)	(4.88)	(5.38)

This table presents the estimation of the 12-month post-acquisition Buy-and-Hold Abnormal Returns (BHAR) for acquirers in boutique-advised public target deals relative to acquirers in comparable non-boutique advised public target deals. The estimations are made via Propensity Score Matching (PSM). For each quartile based on the deal size, Panel A reports the Logit model used to estimate the propensity scores. The dependent variable is assigned the value of 1 if a boutique advisor is involved in the deal, and 0 otherwise. The algorithm that we follow is caliper matching. Starting from the highest estimated propensity scores, we match each treated deal (boutique-advised) with a non-treated one (non-boutique advised) provided that the difference in the estimated propensity scores does not exceed 0.1 standard deviation. We allow each control observation to be matched more than once. Panel B reports the outcome of the PSM analysis. The estimated propensity score in the treated and control groups and the significance of their difference using the Kolmogorov-Smirnov test are reported before and after the matching. We also report the number of treated and control observations on the matched sample. Finally, the BHAR estimates and the corresponding Abadie and Imbens (2006) standard errors are reported. *N* represents the number of observations. \*\*\*, \*\*, and \* represent significance at the 1%, 5%, and 10% levels, respectively. Please refer to Appendix 1 for an accurate description of the variables.



**Table 10** Determinants of informed trading before the deal

Dependent Variable	Pre-Announcement MIA	Pre-Announcement MIA
Explanatory Variable\ Model	(1)	(2)
Intercept	0.614** (0.028)	0.602*** (0.033)
Private	-0.070* (0.040)	-0.080** (0.041)
Private × ln(Deal Value)	0.012* (0.007)	0.014** (0.007)
ln(Deal Value)	0.005 (0.004)	0.003 (0.005)
Boutique Advisor	-0.001 (0.012)	-0.004 (0.012)
Top Tier	0.004 (0.010)	-0.001 (0.010)
ln(Acquirer Market Value)	-0.031*** (0.004)	-0.030*** (0.004)
Acquirer Market-to-Book Value	-0.002** (0.001)	-0.002* (0.001)
Number of Advisors	-0.001 (0.006)	-0.002 (0.006)
Deferred Payment	0.021 (0.051)	-0.010 (0.053)
Full Stock	-0.023** (0.011)	-0.016 (0.012)
Full Cash	0.013 (0.010)	0.008 (0.011)
Hostile	0.079*** (0.030)	0.101*** (0.030)
Diversified	-0.003 (0.009)	0.001 (0.009)
% Toehold	-0.014*** (0.002)	-0.013*** (0.004)
Competing Bid	-0.001 (0.024)	-0.006 (0.023)
Industry Effects	NO	YES
Year Effects	NO	YES
<i>N</i>	1,042	1,042
Adjusted R-Squared	0.10	0.11

This table presents two models explaining the variations in the acquirers' multimarket measure of information asymmetry (MIA) developed by Johnson and So (2017) from 10 to 2 days before the deal's announcement. Model (1) does not control for year and industry effects while Model (2) does control for these factors. Heteroskedasticity-adjusted standard errors are reported in parentheses. *N* represents the number of observations. \*\*\*, \*\*, and \* represent significance at the 1%, 5%, and 10% levels, respectively. Please refer to Appendix 1 for an accurate description of the variables.

**Table 11** The choice of hiring a boutique advisor

Dependent Variable	Boutique Advisor=1 Non-Boutique Advisor=0	Boutique Advisor=1 Non-Boutique Advisor=0	Boutique Advisor=1 Non-Boutique Advisor=0
Acquirer Size	All	Small	Large
Explanatory Variable\Model	(1)	(2)	(3)
Intercept	0.208 (0.149)	-0.244 (0.399)	0.718 (0.558)
Private	0.010 (0.047)	-0.183* (0.106)	0.311** (0.132)
ln(Deal Value)	-0.213*** (0.022)	-0.492*** (0.052)	-0.235*** (0.059)
ln(Acquirer Market Value)	-0.082*** (0.018)	0.014 (0.052)	-0.244*** (0.068)
Acquirer Market-to-Book Value	0.009 (0.009)	-0.002 (0.023)	0.016 (0.020)
Number of Advisors	0.482*** (0.053)	0.971*** (0.156)	0.770*** (0.113)
Full Stock	0.143*** (0.056)	0.202* (0.121)	0.307** (0.158)
Full Cash	0.024 (0.053)	0.131 (0.117)	-0.007 (0.154)
Hostile	-0.086 (0.230)	0.011 (0.630)	-0.472 (0.551)
Diversified	0.026 (0.046)	0.099 (0.105)	0.026 (0.125)
% Toehold	0.009 (0.046)	-0.156 (0.138)	0.102 (0.079)
Competing Bid	-0.119 (0.154)	-0.389 (0.489)	-0.072 (0.349)
Industry Effects	YES	YES	YES
Year Effects	YES	YES	YES
<i>N</i>	4,649	2,324	2,325
Pseudo R-Squared	0.18	0.14	0.11

This table presents three Logit models predicting the hiring of boutique advisors in M&A. The dependent variable in all models is *Boutique Advisor* which is assigned the value of 1 if at least one boutique advisor is hired in the deal, and 0 otherwise. Model (1) is estimated on the overall sample. Model (2) is estimated on the sample of deals announced by small acquirers i.e. the ones with pre-acquisition market valuation below the median level in our sample. Model (3) is estimated on the sample of deals announced by large acquirers. Heteroskedasticity-adjusted standard errors are reported in parentheses. *N* represents the number of observations. \*\*\*, \*\*, and \* represent significance at the 1%, 5%, and 10% levels, respectively. Please refer to Appendix 1 for an accurate description of the variables.