Big Fish in Small Ponds: Human Capital Mobility and the Rise of Boutique Banks*

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Abstract

We document a rise of boutique banks in the M&A advisory industry that is traditionally dominated by bulge bracket banks. We show that high-performing individuals are more likely to migrate from bulge bracket to boutique banks, and that their clients and colleagues tend to follow. The performance of losing (gaining) banks in the transitioning bankers' specialized industries subsequently deteriorates (improves), potentially contributing to the prosperity of boutique advisors. To establish causality, we exploit the cross-department subsidization within bulge bracket banks that exogenously affects the skilled labor supply to boutique advisors. Our findings highlight how human capital mobility shapes industry structures.

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"More and more seasoned Wall Street bankers are abandoning bulge-bracket investment houses for advisory boutiques, potentially changing the M&A advice business in the process. The lure: a more entrepreneurial ethos, less bureaucracy, fewer conflicts of interest and, not to be discounted, more money and power."

— Institutional Investor Magazine, March, 2006

1. Introduction

Mergers and acquisitions (M&As) are crucial and common business activities in the corporate world, engaging more than 90% of public companies (Netter et al. 2010) and reaching an all-time high volume of $3.35 trillion in 2018. The vast majority of M&A deals are advised by investment banks, who are instrumental in negotiating deal terms and facilitating deal completion. The M&A advisory industry follows a rigid two-tiered power structure (e.g., Hayes 1971; Carter and Manaster 1990). On one end are the large, "bulge bracket" banks that provide a full spectrum of services to a wide range of clients. On the other end are boutique advisors, who are much smaller and focus on advising M&A deals in just a few industries. While bulge bracket banks are traditionally perceived to be dominant players in the M&A advisory market, we document a significant rise of boutique advisors over the past two decades. Boutique banks' market share increased from 20% in the early 2000s to over 40% by 2018, equating to $1.37 trillion in deal value.[1] This trend is accompanied by a notable increase in the share of skilled M&A bankers hired by the boutique sector.

What gives boutique banks a competitive advantage over their much larger, established peers? Is the change in the boutique sector's M&A market share linked to the change in its labor market share? How does such a structure change in the financial intermediary industry influence

[1] See also the anecdotal evidence by Daniel Schäfer (Mar 27, 2012), "Investment banking: David versus Goliath," The Financial Times; and David Gelles (March 25, 2015), "Biggest Banks Absent from Biggest Deal of Year," The New York Times.

the efficiency and characteristics of the M&A market? We attempt to address these questions by constructing a novel dataset that tracks investment bankers' career paths and M&A deal-advising history. Our dataset covers 2,756 individuals advising 24,959 deals over the 2000-2018 period.

We postulate that the simple organization structure of boutique banks allows them to attract high-performing bankers and the resulting relocation of skilled labor helps to boost boutique firms' market share. Specifically, one crucial difference between boutique and bulge bracket banks is that the latter operate with multiple lines of business. Resembling a conglomerate, poor performance in a bulge bracket's non-M&A divisions could spill over to the entire bank, influencing the compensation and incentives of its M&A bankers, especially the most productive ones (Morrison and Wilhelm 2007; Duchin et al. 2017). We thus expect high-performing bankers to be more likely to move to boutique banks than low-performing ones. To the extent that human capital represents the most important asset for M&A advisors, the departure of skilled bankers is likely to engender not only a loss of clients and business opportunities, but also a brain drain of other valuable employees — both of which are detrimental to the losing banks. This "alienable" nature of human capital suggests that the migration of high-performing individuals can shape the structure of the M&A advisory industry.

We first document that high-performing bankers are more likely to leave their bulge bracket employers to join or form a boutique bank, and even more so if the boutique bank is considered prestigious. The magnitude of this effect is economically sizeable. A one-standard-deviation increase in a departing banker's past deal volume is associated with a 10% higher likelihood that he joins a boutique bank, and a nearly 12% increase in the likelihood of joining a prestigious one. In contrast, these skilled individuals are less likely to transition to another bulge bracket bank, validating the fact that their migration to boutique advisors is not solely driven by

higher job separation rates for senior bankers. The result is robust to a host of controls, including the banker's experience, the past performance of both losing and gaining banks, as well as banker-, losing bank-, gaining bank-, and losing bank × year-fixed effects. The inclusion of these fixed effects helps disentangle the effect of human capital quality from the influence of the innate characteristics of bankers or banks, as well as macroeconomic conditions.

Following the loss of skilled employees, investment banks face declining performance in the industry that the departing banker specializes in, as compared to the same bank's performance in other industries during the same period. Specifically, within five years after the departure of a high-performing employee who specializes in an industry, the losing bank advises 20% fewer deals in that industry, as compared with its own performance in other industries without a loss of human capital. The losing bank's market share in that industry also drops by 10%. In contrast, the arrival of a high-performing individual is associated with a 77% increase in the number of deals advised by the gaining bank in the incoming banker's specialized industries, and the gaining bank's market share climbs by 35%.

To establish the causal effect of skilled banker migration on bank performance changes, we exploit one critical institutional friction pertaining to large, bulge bracket banks: cross-department subsidization. As discussed above, unlike boutique banks that focus on only one or two lines of investment banking business, bulge bracket banks provide a full range of financial services including equity issuance, debt underwriting, and M&A advisory. Compensation of M&A bankers is determined not only by their own performance but also by the performance of other divisions. When its non-M&A divisions perform poorly, the bulge bracket bank tends to cross-subsidize those divisions by freezing or even slashing compensation for the M&A bankers.[2] While

[2] See, for example, Pierre Paulden (March, 2006). "Booming Boutiques" (Institutionalinvestor.com). In particular, "boutiques can be much more remunerative for top bankers than big banks. For a start, bankers have a more direct

this cross-department subsidization may stabilize the compensation schemes for an average employee, it weakens the link between performance and pay for a skilled one. Anecdotal evidence suggests that high-performing bankers often complain that they do not receive the level of bonus they deserve, which may prompt their decisions to exit.

We verify that this institutional friction aggravates the migration of skilled employees from bulge bracket banks to boutique advisors. Specifically, when a bulge bracket bank's non-M&A divisions perform poorly, high-performing M&A bankers are more likely to switch to a boutique bank, as compared to periods of good performance in these non-M&A divisions. Building on this evidence, we consider the non-M&A performance of bulge bracket banks as a plausibly exogenous shock to the supply of skilled M&A bankers to boutique advisors. We further leverage on the fact that the same bulge bracket bank employs different fractions of skilled bankers specializing in different industries. When a bulge bracket bank that employs a large fraction of M&A bankers specializing in an industry experiences poor performance in its non-M&A divisions, it affects the skilled labor supply to boutique banks in this industry to a greater extent than in other industries. Accordingly, we construct a "shift-share" instrument that projects the potential labor outflow from bulge bracket banks on the increase in the labor supply for boutique advisors in a given industry. Our empirical approach then compares the same boutique bank's performance in more affected industries relative to other industries.

We find that when bulge bracket banks with larger industry-specific labor shares experience poor non-M&A performance, boutique banks benefit significantly by advising more M&A deals and seizing larger market share in that industry in following years. Boutique advisors

claim on the profits they earn for the firm". "If the deal flow is there, an investment banker at a boutique is in a far better position". "Without the overhead associated with distribution, sales, trading and capital markets, the margins are very, very high." (https://www.institutionalinvestor.com/article/b150ns631q273d/booming-boutiques).

are also more likely to expand their coverage to that industry if they have never advised any deals in that industry previously. By including gaining bank × year fixed effects, our estimation compares performance across industries covered by the same boutique bank in the same year that differ only in their exposure to banker exodus from multi-divisional banks.

We further sharpen the identification by exploiting the passage of the 2012 Jumpstart Our Business Startups Act (JOBS Act) as an exogenous shock to the non-M&A performance of certain bulge bracket banks. Since the JOBS Act disproportionally increased IPO activities in biotech and pharmaceutical industries relative to other industries (Dambra et al. 2015), bulge bracket banks that underwrite IPOs in these two industries ("exposed banks") should benefit more. The rising IPO underwriting revenue induced by this regulatory change should help exposed banks retain human capital in their M&A advisory departments to a greater extent. Accordingly, we find that following the JOBS Act, boutique advisors experience slower growth and market share expansion in industries dominated by exposed banks. They are also less likely to enter a new industry.

Overall, our results are consistent with the notion that cross-subsidization contributes to the migration of skilled labor, giving rise to boutique firms in the M&A advisory industry. We also note that, while our identification strategy relies on idiosyncratic shocks to non-M&A department performance, the cross-department subsidization could discourage high-performing bankers from exerting efforts in bulge bracket banks and lead them to migrate to the boutique sector. The migration rate of skilled human capital has been steady over time, likely due to labor market frictions preventing a swift regime shift.

We next explore potential channels through which skilled labor reallocation shapes the structure of the M&A advisory industry. Our evidence suggests that both former M&A clients and colleagues "follow" the migration of high-performing bankers to boutique firms. The "brain drain"

of fellow colleagues and the loss of client revenues are likely to amplify the changes in bank performance, and ultimately, aggregate to a shift in the competitive landscape of the industry.

Finally, we investigate how the characteristics of the M&A market change along with the rise of boutique advisors, and compare the productivity of skilled employees and the development of their human capital between the two types of investment banks. We conjecture that, by attracting and better incentivizing skilled bankers, boutique advisors can achieve better deal outcomes for their clients. Indeed, in large M&A deals that demand more sophisticated expertise, boutique advisors appear to be able to shorten deal duration and attain a higher success rate for their clients as compared to their bulge bracket counterparts. Their acquirer clients also directly benefit from a larger value gain, as measured by abnormal announcement period returns.

Perhaps more interestingly, high-performing individuals are more productive in terms of advising more M&A deals when working for boutique banks. They are also more likely to expand their expertise beyond their existing specialized industries and to advise diversifying mergers, which require not only knowledge in multiple industries but also the ability to handle complicated transactions. These results suggest that, rather than restricting their skilled employees to very specialized types of deals or industries, boutique banks provide better opportunities for these individuals to broaden the scope of their skill set, fostering the development of their human capital.

Our study contributes to three strands of literature. First, it adds to the emerging literature in finance that explores the effect of labor mobility on industry dynamics. Existing research in this literature suggests that a more efficient assignment of labor can improve firm productivity and innovation (e.g., Bradley et al. 2011; Tate and Yang 2015; Gofman and Jin 2019). Our findings are also related to prior studies on the value creation by M&A advisory firms (e.g., Rau 2000; Kale et al. 2003; Bao and Edmans 2011; Golubov et al. 2012; Song et al. 2013). For example, Golubov

et al. (2012) show that top-tier advisors deliver higher bidder returns than their non-top-tier counterparts in public acquisitions. Finally, this paper contributes to a growing body of research highlighting individuals as mobile carriers of skills and expertise (e.g., Huang et al. 2014; Giannetti et al. 2015; Liu et al. 2018; Bushman et al. 2019). Related to our setting, Chemmanur et al. (2019) document that individual M&A bankers with greater deal experience create more value for their clients, particularly for acquirers in more complex and opaque industries.

Our paper differs from the above studies in several ways. We are the first to provide evidence on the rise of boutique M&A advisors in both product and labor market shares. Importantly, we show that the organizational structure of boutique advisors helps them to recruit talent and that cross-subsidization within bulge bracket banks leads to the loss of valuable employees. Exploiting the differential effect of this institutional friction on skilled labor, we provide causal evidence on how human capital relocation redraws the boundaries of the firm and changes the competitive landscape of the M&A advisory industry. Lastly, we offer new evidence that boutique and bulge bracket advisors differ in M&A deal outcomes and in the development of human capital.

The rest of the paper is organized as follows. Section 2 introduces institutional background and describes the data. Section 3 presents patterns in banker career transition. Section 4 reports the resulting changes in bank performance, explores the institutional friction that may drive banker relocation, and highlights potential economic channels. Section 5 examines the real effects of advisors on the M&A market and the development of employee human capital. Section 6 provides additional discussions. Section 7 concludes. Variable definitions are in Appendix A. Additional figures and robustness tests are in the Internet Appendix.

2. Institutional Background, Data, and Stylized Fact

2.1 Bulge Bracket vs. Boutique Investment Banks

Since Hayes (1971), both academic literature and financial press have documented a two-tiered power structure in the investment banking industry (e.g., Tinic 1988; Carter and Manaster 1990; Carter et al. 1998; Fang 2005). This rigid hierarchy, often reflected in "tombstone announcements", classifies whether an investment bank belongs to the top tier "bulge bracket". The "bulge bracket" tier comprises the world's largest multi-national investment banks, serving a global base of premier clients such as governments, large corporations, and prominent institutions. These bulge bracket banks offer a broad array of financial products and provide a full range of services, including advisory and underwriting services, financial research, market making, sales and trading services, and asset management. They are often primary dealers of U.S. treasuries.

While the well-capitalized full-service banks are able to realize economies of scale and scope, their size also comes at a cost. As highlighted in Morrison and Wilhelm (2007), bulge bracket banks' large and complex operational scale makes it difficult to retain key human capital. The governance arrangement in these banks also blur the accuracy of performance evaluation, alter corporate culture, and compromise monitoring efficiency. As a result, it is challenging to tie the compensation of employees to their performance and to secure the future success of banks when their key human capital is discouraged.

In contrast to bulge bracket banks, boutique advisors are smaller in size, often focusing on a specific aspect of investment banking service and operating in a specific region or country. The

financial press often attributes the benefits of hiring boutique investment banks to the absence of conflicts of interest, and to the independence and skill of key employees.[3]

To identify a bank as a boutique or a bulge bracket, we rely on the Wall Street Oasis (WSO) — a leading job search forum for positions in many fields of the financial services industry, including investment banking, private equity, and hedge funds. The WSO classifies ten investment banks (including Goldman Sachs, Bank of America Merill Lynch, Citi, and Morgan Stanley) as bulge bracket. It also classifies 154 investment banks (including Centerview, Evercore, Greenhill, Moelis & Co., and Perella Weinberg) as boutique. In addition, we consider a boutique bank to be "prestigious" if it is one of the industry leaders, ranking above the median of all investment banks covering a given industry in terms of deal volume. If an affiliated investment bank does not fit as a boutique or a bulge bracket, we classify it as "others". In Appendix B, we provide a full list of bulge bracket and prestigious boutique banks in our sample.[4] Using selected banks from this list, Figure IA.1 of the Internet Appendix further illustrates that bulge bracket banks tend to cover a wider spectrum of industries, hire more bankers in their M&A advisory divisions, and seize a larger share of market individually than boutique banks.

2.2 M&A Advisors

We collect information regarding individual investment bankers' deal advising history from Mergermarket Ltd (formerly a subsidiary of Financial Times). This database tracks M&A deals conducted from 2000 to 2018 in both U.S. and abroad. It includes all deals with a transaction

[3] See, for example, Michael J. De La Merced (Dec 9, 2014). "Boutique Investment Banks Gain Prestige". The New York Times, and Brian DeChesare and Daniel Schäfer (Mar 16, 2014). "Small proves beautiful at boutique banks". The Financial Times.

[4] There is no definitive list of bulge bracket banks; multiple sources (such as Thomas Reuters league table, Wall Street Oasis, and Bloomberg 20) offer their own rankings. Nevertheless, there are significant overlaps among these rankings. We also consider alternative ways to classify boutique banks based on the relative importance of their non-M&A businesses, if any (see Section B of the Internet Appendix), as well as the WSO classification for prestigious boutique banks.

value larger than $5 million and involving at least 30% of the target firm being acquired. For each deal, Mergermarket provides the names of the lead bankers of the advisory team as well as their employment affiliations. This feature of the data differentiates Mergermarket from other M&A databases such as SDC Platinum, which do not disclose the identities of bankers.[5]

Mergermarket uses a relatively coarse industry classification for the acquirers and targets of M&A deals. To gauge individual bankers' industry expertise and advisory firms' industry-specific market share, we cross-validate the 2-digit SIC industry classification of acquirers and targets by matching deals in Mergermarket to their counterparts in SDC platinum based on the names and addresses of the acquirers and targets, as well as the deal announcement dates. We then manually check the consistency of each match. In case that the announcement dates recorded in the two databases differ, we manually search through internet and news sources to determine the correct date. For the remaining deals in Mergermarket that cannot be accurately matched to the SDC, we search for their industry classification from Compustat in case that either the acquirer or the target is a public firm. These steps allow us to identify the 2-digit SIC code for 52% of acquirers and 40% of targets in our sample.

2.3 Investment Banker Career Path

While Mergermarket documents the names and affiliations of individual bankers leading the deal advisory at the time of deal announcement, it does not reveal the accurate timing of bankers' job transitions. We gather this information from the BrokerCheck Report provided by Financial Industry Regulatory Authority (FINRA), a regulatory agency that monitors all individuals engaging in security transactions, collecting their names, affiliation, and the precise timing of job transitions.

[5] For a detailed comparison and discussion of M&A deal coverage between the Mergermarket and SDC, please see Chemmanur et al. (2019).

For each banker that appeared in the Mergermarket database, we search for his (her) career paths as reported by FINRA by name and affiliated banks. This step allows us to construct a banker-bank-year panel from 2000 to 2018 that contains 2,756 unique bankers, 384 unique investment banks, and 4,182 job transitions. This panel captures the career paths of bankers in our study. Other data sources are described as we introduce them in the analysis.

For our baseline analysis, we consider three types of exit outcomes for a transitioning banker. First, we define *Exit to Boutique* as a dummy variable that equals one if the year of observation is the last year that a banker works for a given bank and that the banker's next employer is a boutique bank. To ensure that a banker's exit to a boutique bank is not driven by an inevitable downward career spiral due to his poor performance in the bulge bracket bank, we also consider *Exit to Prestigious Boutique*, an indicator for whether the boutique bank that a banker transitions to is a "prestigious" one, whose deal volume in the past five years ranks above median of all investment banks covering a given industry. Lastly, *Exit to Bulge Bracket* is an indicator for whether a banker leaves his current employer to join a bulge bracket bank. In the case of a bank merger, employees in the target bank may appear to have a changed job affiliation even if they are retained in the combined entity. We do not count such cases as a career transition.[6]

Following Chemmanur et al. (2019), we measure a banker's quality by his past performance, calculated as the logarithm of one plus the number of M&A deals he advised in the past. We vary the horizon of past deal volumes over a 3- or 5-year rolling window, respectively. Past deal-making activity is a main indicator for a banker's performance and quality.[7]

[6] For example, following the merger between Bank of America and Merrill Lynch, bankers that previously worked for Merrill Lynch will be assigned to Bank of America without actually separating from their employer. In such cases, our indicators for banker exit are assigned to be zero. Excluding these cases also helps remove a mechanical relation between banker transition and bank performance that we examine in Section 4.

[7] We rely on the number of deals as a measure of bankers' past deal-making activity. This is because Mergermarket does not disclose the value of over 30% of deals in our sample. In untabulated robustness analyses, we verify that our baseline results hold when deal volume is measured with non-missing deal value. Different from Chemmanur et al.

2.4 Summary Statistics

Panel A of Table 1 summarizes the characteristics of sample bankers for the 2000-2018 period. In a given year, about 8% of our sample bankers leave their current employers to join a boutique bank, and approximately 5% of bankers join a prestigious boutique. The average banker quality is 0.22 for the 3-year horizon and is 0.27 for the 5-year horizon, implying that an average banker has advised 0.46 M&A deals in the past three years, and 0.61 deals in the past five years. Bankers in our sample have an average working experience of 7 years in the M&A division since they registered with FINRA.

Panel B of Table 1 reports the performance statistics for investment banks at industry-level. Among these industries covered by our sample banks, an average bulge bracket bank advises 2.48 (3.17) deals per industry during the past three (five) years, while an average boutique bank conducts 2.11 (2.45) deals. Prestigious boutique banks' deal volume is somewhere in between the average bulge bracket and the average boutique banks.

Table 2 compares the deal and employee characteristics between boutique and bulge bracket banks. An average bulge bracket bank advises 25.03 deals per year across all industries it covers, a much higher number compared to an average boutique (6.25 deals) or a prestigious boutique (15.45 deals). Bulge bracket banks also employ far more bankers, cover more industries, and conduct more diversifying deals than boutique banks.

2.5 The Rise of Boutique Banks

Figure 1 tracks the market share of boutique banks over time. Market share is defined as the fraction of deals advised by boutique (prestigious boutique) banks relative to the total deals recorded in the Mergermarket database. The blue dash (red solid) line represents the market share

(2019), we do not restrict our sample banker to advise at least two acquirers. This is because we focus on how a banker's quality relates to job transitions over his/her career path.

of boutique (prestigious boutique) banks, and the shaded areas represent the NBER recession periods. The market share of boutique banks experienced a dramatic increase over our sample period. At the beginning of 2000s, boutique banks advised only around 20% of the deals, while by 2018, more than 40% of the deals were advised by boutique banks. The market share of prestigious boutique banks follows a similar trend, suggesting that the rise of the boutique sector was not driven by an increasing number of low-quality boutique advisors.

The top panel of Figure 2 describes the 2-digit SIC industries that are covered by the bulge bracket sector (in blue) and by the boutique bank sector (in red) over time. We observe an increasing presence of boutique banks in many industries. Interestingly, in some industries (e.g., 2-digit SIC industries 22, 24, 47, and 75) that are previously covered mostly by bulge bracket banks, towards the end of the sample period, these banks apparently abandoned their presence, and boutique banks take over.

The bottom panel of Figure 2 demonstrates the total number of industries covered by the bulge bracket bank sector (in blue) and the boutique sector (in red). The industry coverage of the boutique sector grows over time and exceeds that of the bulge bracket sector in 2011.[8] Overall, Figure 2 suggests that the expansion of boutique banks occurs both at the intensive and the extensive margins.

Figure 3 depicts the time series variation in the percentage of bankers that work in the boutique or prestigious boutique advisors (i.e., the labor share of boutique and prestigious boutique banks). It is evident that investment bankers have increasingly migrated to boutique M&A advisors over our sample period. In the early 2000s, only 25% of bankers work for boutique firms, and less than 5% of bankers work for those that are now considered prestigious. By 2018, nearly half of

[8] Even though the boutique sector as a whole covers a large number of industries, individual boutiques stay quite focused. An average boutique bank covers 4 industries, compared to 17 industries covered by an average bulge bracket.

M&A bankers in our sample work for boutique banks and 45% choose prestigious boutique banks. Figure IA.2 in the Internet Appendix further illustrates bankers' migration pattern in a network graph. Taken together, boutique banks have become more prominent in the labor market for M&A bankers, and this could contribute to their increasing presence in the M&A advisory market.

3. Migration of High-Performing Bankers

In this section, we examine whether high-performing M&A bankers are more likely to migrate to boutique advisors. We estimate the relationship between a banker's quality and his job changes using the following specification:

$$y_{i,b,t} = \beta \times Banker\ Quality_{i,b,t} + \boldsymbol{\gamma X_{i,b,b',t}} + \alpha_i + \theta_{b,t} + \phi_{b'} + \tau_t + \epsilon_{i,b,t}, \quad (1)$$

where $y_{i,b,t}$ is a dummy variable indicating the job transition of banker i from his current employer b (i.e., the *losing bank*) during year t to a subsequent employer b' (i.e., the *gaining bank*). As described in Section 2.3, we consider three exit outcomes for the dependent variable, *Exit to Boutique*, *Exit to Prestigious Boutique*, and *Exit to Bulge Bracket*. If a high-performing individual is more likely to migrate to a boutique bank, then we expect that $\beta > 0$ when $y_{i,b,t}$ is defined as *Exit to Boutique* or *Exit to Prestigious Boutique*.[9]

We control for time-varying characteristics of bankers and their employers, $\boldsymbol{X_{i,b,b',t}}$, which include banker i's total years of working experience and the past performance of i's current and next employers. A banker's total years of work experience, defined as the difference between the year of observation and the first year that a banker enters an M&A advisory firm, captures the banker's seniority and potentially job preferences (i.e., stability or managerial roles). The past

[9] The estimated β already takes into account the frictions in the labor market that may hinder human capital mobility, including contractual or legal factors such as non-compete clauses in the employment contracts and the passage or termination of the doctrine of inevitable disclosure (see Garmaise 2011 and Klasa et al. 2018 for a detailed discussion).

performance of a losing (gaining) bank, defined as the log number of M&A deals that it advised in the past 3 or 5 year-window, respectively, captures the investment bank's prominence in the M&A market and its profitability in recent years. Including these variables helps mitigate the concern that deteriorating (improving) performance of the losing (gaining) bank may drive an individual's career transition decision.

Our estimation also controls for a host of fixed effects, including banker fixed effects (α_i), losing bank × year fixed effects ($\theta_{b,t}$), gaining bank fixed effects ($\phi_{b'}$), and year fixed effects (τ_t). These fixed effects help further remove potential confounding effects generated by bankers' time-invariant preferences, banks' innate characteristics, and macroeconomic conditions.

Panel A of Table 3 presents the regression estimates suggesting that high-performing bankers are indeed more likely to migrate to boutique banks. In columns 1-4, banker quality is measured by the number of M&A deals they advised in the past 3 years. We first control for banker, year, losing bank and gaining bank fixed effects in column 1, and then add the banker's years of experience in column 2. We find consistent results across the two specifications. This suggests that our finding is not driven by a banker's seniority in the financial service industry or time-invariant characteristics of the losing bank or gaining bank. In column 3, we further control for time-varying performance of the losing bank and gaining bank, measured by these banks' past deal volumes. Lastly, in column 4, we include losing bank × year fixed effects to control for time-varying shocks pertinent to the losing bank and to help narrow down our comparison to all the bankers working at the same bank during the same year. In columns 5-8 of Panel A, we vary the time horizon of performance measures (both for the banker and the banks) over a 5-year window. Our results are robust to these alternative horizons.

The positive relationship between a banker's quality and the likelihood of his migration to a boutique M&A advisor is statistically significant and generates stable coefficients across all specifications. Column 8 suggests that a one-standard-deviation increase in banker quality is associated with a 0.8-percentage points increase in the likelihood that the banker moves to a boutique bank. This translates into a 10% increase relative to the unconditional probability of a banker moving to a boutique bank in a given year, which is 7.8% (i.e., 0.8/7.8 = 10.3%).

Panel B of Table 3 evaluates the likelihood that a high-performing banker transitions to other types of M&A advisors. In columns 1 and 2, we replace the dependent variable with *Exit to Prestigious Boutique*, a dummy variable set to one if a banker exits to a *prestigious* boutique bank. The results suggest that a banker of higher quality is more likely to migrate to prestigious boutiques. A one-standard-deviation increase in a banker's quality is associated with a 0.6-percentage points higher likelihood that the banker moves to a prestigious boutique in a given year (column 2), which represents a 12.5% increase relative to the unconditional probability that a banker moves to a prestigious boutique, 4.8% (i.e., 0.6/4.8 = 12.5%). This result suggests that bankers' migration to boutique banks is not solely driven by their transitioning to poor-quality boutiques.

In columns 3 and 4, we repeat the test for the likelihood of joining a bulge bracket bank. Contrary to the findings on boutiques or prestigious boutiques, high-performing bankers do not exhibit a differential likelihood of joining bulge brackets compared to other bankers. The coefficients of interest are negative but insignificant for both columns, suggesting that, if anything, bulge bracket banks face difficulty in attracting high-performing individuals.

The above analyses so far consider how a banker's quality affects the likelihood of him switching to a specific type of investment bank. This likelihood, however, is a joint product of the probability of a job change and the probability of joining a specific type of bank *conditional* on

job change. We thus repeat our baseline regressions on an exit-only sample, which focuses on a banker's choice of potential employers, conditional on leaving the current one. In Section B.1 of the Internet Appendix, we confirm that, among all the bankers leaving the same employer in the same year, high performers are more likely to join a prestigious boutique bank compared to low performers.

4. Changes in Bank Performance

Researchers have established that high-quality human capital is key to firms' innovative output and survival (e.g., Kerr et al. 2015 and Dimmock et al. 2019). In this section, we explore how the job transitions of high-performing bankers affect the performance and market shares of their previous and current employers. This set of analyses help us draw inferences regarding the effect of human capital mobility on firm boundaries and industrial organization structure.[10]

4.1 OLS Results

We first examine the association between the migration of a skilled banker and the performance changes of his previous and new employers. Skilled bankers are defined as those whose deal volumes in the past five years rank at the top tercile among all bankers specializing in the same industries. We compare a bank's performance changes in the industries that the transitioning skilled banker specializes in (i.e., "treatment" industries) to its own performance in other industries (i.e., "control" industries). A banker's (time-varying) specialized industry is defined as the 2-digit SIC industry in which he advised the most deals during the past five years. By comparing the same bank's performance across industries during the same time frame, our

[10] This corresponds to the argument in Zingales (2000), i.e., "Human capital emerges as the most crucial asset [of the firm]. As a result of these changes, the boundaries of the firms are in constant flux, and financing and governance choices can easily change them."

strategy mitigates the concern that a bank's time-varying conditions may be associated with both human capital movement and its M&A advising activities.

We estimate the following regression:

$$Performance\ Growth_{b,n,t} = \beta \times Banker\ Departure_{b,n,t} + \theta_{b,t} + \psi_n + \vartheta_{b,n,t}, \quad (2)$$

where $Banker\ Departure_{b,n,t}$ is the number of skilled bankers who specialize in industry n and depart from bank b in year t. This variable is set to zero if there is no departure of skilled bankers. $Performance\ Growth_{b,n,t}$ is the change in bank b's performance in industry n over the $[t-T, t+T]$ window centered around year t. Performance is measured by both deal volume (in logs) and market share. We consider the duration of the event window, T, for 3 years and 5 years.

To restrict our comparison group to industries covered by the same bank at the same time, we control for losing bank × year fixed effects ($\theta_{b,t}$). We also control for industry fixed effects (ψ_n) to tease out industry-specific characteristics that may affect a bank's deal-advising activities in that industry. We restrict the sample for this analysis to bulge bracket banks to shed light on how banker migration negatively affects the competitive position of bulge bracket banks. We expect that the departure of a high-performing banker would weaken his employer's competitive position in the treatment industry relative to control industries, i.e., $\beta < 0$.

Panel A of Table 4 reports the result. Bulge bracket banks experience significant setbacks in their performance following the departure of high-performing employees. Column 1 suggests that over the three years following a banker's turnover, the losing bank experiences a 27% decline in the log deal volume in the treatment industry compared to control industries. This negative effect attenuates to 20% in a five-year horizon (column 2).[11] Column 3 shows that losing one skilled

[11] Specifically, one additional banker's transition is associated with 0.0618 (0.0617) decline in deal growth over the next three (five) years, which is a 27% (20%) change relative to the sample average log deal number of 0.2284 (0.3087).

employee is also associated with the bank losing 0.12 percentage points more market share in the treatment industries over the next three years. This represents a 6% decrease of the average industry market share of a bulge bracket bank. The negative effect on market share growth accrues to 0.2 percentage points after five years (column 4), approximately a 10% reduction in market share.

Next, we examine whether the arrival of skilled bankers is associated with improving performance of the gaining bank. We restrict our sample for this analysis to boutique advisors and estimate the following regression:

$$Performance\ Growth_{b\prime,n,t} = \beta \times Banker\ Arrival_{b\prime,n,t} + \theta_{b\prime t} + \psi_n + \vartheta_{b\prime,n,t}, \quad (3)$$

where $Banker\ Arrival_{b\prime,n,t}$ is the number of skilled bankers specializing in industry n (i.e., treatment industry) that bank b' recruits in year t. This variable is set to zero if the bank does not receive skilled bankers in that industry (i.e., control industry). $Performance\ Growth_{b\prime,n,t}$ is defined analogously for the gaining bank b' over the $[t-T, t+T]$ event window centered around year t. Similarly, we control for gaining bank × year fixed effects ($\theta_{b\prime t}$) and industry fixed effects (ψ_n). Contrary to Equation (2), we expect that the arrival of a skilled banker should improve his employer's performance in the treatment industry, thus $\beta > 0$.

Panel B of Table 4 reveals that the gaining bank experiences an improvement in performance following the arrival of high-performing bankers. Within five years after hiring a skilled banker, the gaining bank experiences a 77% increase in the log deal volume in the banker's specialized industry (column 2). Gaining banks also expand their market share by 35% during the post-arrival period (column 4).[12]

[12] One additional banker's transition is associated with a 0.0361 decline in deal growth over the next five years. This is 77% compared to the sample average log deal volume of 0.0469. The magnitudes (changes in %) are larger in Panel B of Table 4 compared with Panel A because boutique banks are smaller than bulge bracket banks on average.

Overall, our OLS analyses indicate that banks losing (gaining) skilled employees face deteriorating (improving) performance in the area where they rely on the expertise of those bankers. The effects we document are both economically sizeable and statistically significant. The inclusion of various high-dimensional fixed effects in our analysis helps mitigate the potential impact of unobservable factors that otherwise could explain the observed relationship between banker migration and the redrawing of boundaries among M&A advisory firms.

4.2 Identification

To further address endogeneity concerns arising from bankers' job transition, we explore (exogenous) shocks to banker migration and their effects on bank performance. Specifically, we consider the multi-divisional feature of bulge bracket banks as a potential cause for high-performing bankers' transition to small, focused boutique advisors. Understanding the catalyst of banker migration not only sheds light on the frictions inside these banks that hinder their ability to retain talent, but also helps establish a testing strategy to isolate the causal effect of human capital mobility on the rise of boutique advisors.

As discussed in Section 2.1, bulge bracket banks provide a full range of services to a variety of clients, including IPO and SEO underwriting, M&A advisory, and debt issuance. The organizational structure of bulge bracket banks thus resembles that of conglomerates. One prevalent feature of conglomerate firms is cross-division subsidization: when one division suffers from poor performance, its losses can be smoothed over by the profit made by other divisions. As a result, the compensation to an employee hinges on not only the profitability of his own division, but also that of other divisions. In fact, Duchin et al. (2017) provide micro-level evidence that a change in industry pay in one division of a conglomerate firm spills over to the managerial pay in other divisions of the same firm. In the context of bulge bracket banks, cross-division subsidization

results in the salaries and bonuses of M&A bankers being affected by the performance of non-M&A divisions within the same bank (Morrison and Wilhelm 2007).[13] By making it difficult to tie the compensation to these bankers' own performance, especially the most productive ones, this institutional friction may hinder bulge bracket banks' ability to retain high-performing bankers.

Boutique advisors, on the other hand, are less subject to this friction because they focus on only one or two lines of investment banking business and are often structured as partnerships. This allows the compensation of their employees to be closely tied to performance.

We examine whether high-performing bankers' tendencies to move to a boutique are moderated by the performance of their employers' non-M&A departments, such as equity and debt underwriting. We first test whether high-performing bankers are more likely to exit a bulge bracket bank when the bank experiences poor performance in its non-M&A divisions. We then use the variations in non-M&A performance of bulge bracket banks as quasi-exogenous shocks to the supply of high-quality M&A bankers for *boutique* banks. We further strengthen our identification strategy by using policy-induced variations in *non-M&A* performance of bulge bracket banks. We discuss these tests in turn.

4.2.1 Validation

We obtain data on IPO and SEO underwriting from SDC Platinum and on syndicated loans writing from LPC Dealscan. We measure a bank's performance in its non-M&A departments by $Non\text{-}M\&A\ Volume_{b,[t-k,t]}$, defined as the total number of IPO, SEO, and syndicated loan deals underwritten by bank b during the past k years. We then augment Equation (1) with a full interaction of *Non-M&A Volume* and *Banker Quality* of the corresponding horizon. When a bulge

[13] In untabulated analysis, we verify that the deal volume from non-M&A businesses is comparable to the total volume M&A deals advised by an average multi-divisional bank. The time-series variation of M&A and non-M&A deal volumes are also economically similar. These facts help corroborate our strategy that the deal volume in non-M&A departments can generate meaningful effects on M&A bankers.

bracket bank experiences low volume in non-M&A departments, the bank is likely to face a greater need to cross-subsidize, which should in turn trigger more exits of high-performing bankers in its M&A department. We thus expect the interaction term to carry a negative coefficient.

Table 5 reports the results. Similar to the findings in Table 3, a banker's past performance remains positively and significantly related to the likelihood of transitioning to a (prestigious) boutique bank. Importantly, the interaction term between an M&A banker's quality and his employer's non-M&A performance carries a negative, significant coefficient. The estimates from columns 2 and 4 suggest that a one-standard-deviation (3.24) reduction in the non-M&A deal volume increases the tendency of a high-performing banker to join a boutique (prestigious boutique) firm by one third (e.g., 3.24×0.0033 is around a third of 0.0341).

Note that our specification includes losing bank × year fixed effects, which absorb the main effect of *Non-M&A Volume* and other time-varying bank-specific shocks. These fixed effects also allow us to compare the differential effects of poor non-M&A performance on high-performing versus low-performing employees within the *same* bank.

4.2.2 Non-M&A Spillover and Changes in Boutique Bank Performance

Results from the previous section suggest that skilled M&A bankers are more likely to exit during periods of poor performance in the non-M&A divisions of their current employers. Leveraging this institutional friction, we exploit variations in the non-M&A performance of bulge bracket banks as (exogenous) shocks to the supply of skilled M&A bankers to boutique advisors. We further consider the fact that the same bulge bracket bank may employ different fractions of skilled bankers specializing in different industries. When a bulge bracket bank that employs a large fraction of M&A bankers specializing in an industry faces a negative shock in its non-M&A

businesses, more skilled bankers should exit to join boutique firms, and this should improve the performance of boutique firms in that specific industry.

Our empirical strategy involves several steps. First, for each industry n in year t, we calculate bank b's share of skilled bankers in this industry:

$$Skilled\ Banker\ Share_{b,n,t} = \frac{\#Skilled\ Bankers_{b,n,t}}{\sum_{j=1}^{J} \#Skilled\ Bankers_{j,n,t}},$$

where $\#Skilled\ Bankers_{b,n,t}$ is the number of skilled bankers specializing in industry n employed by bank b during year t, and $\sum_{j=1}^{J} \#Skilled\ Bankers_{j,n,t}$ is the total number of skilled bankers specializing in industry n employed by all banks in year t. The ratio *Skilled Banker Share* captures the share of bank b in the labor market of M&A bankers with expertise in industry n.

For each bulge bracket bank b, we calculate its equity issuance and debt underwriting volume during the past three or five years and define $Low\ Non\text{-}M\&A\ Volume_{b,t}$ as an indicator for whether bank b's non-M&A department volume in year t falls into the bottom tercile of its own sample. We then aggregate the non-M&A shocks to all bulge bracket banks to proxy for the aggregate labor supply shock to a boutique bank. Specifically, we take a weighted average of the non-M&A performance across all bulge bracket banks, with the weight being these banks' industry-specific skilled banker share:

$$Non\text{-}M\&A\ Spillover_{b',n,t} = \sum_{b} Skilled\ Banker\ Share_{b,n,t-1} \times Low\ Non\text{-}M\&A\ Volume_{b,t},$$

Higher values of this measure indicate that more bulge bracket banks that employ greater shares of skilled bankers in industry n experience poor non-M&A performance in year t. Based on the findings that poor non-M&A performance of multi-divisional banks increases the exit rate of high-performing bankers, a higher *Non-M&A Spillover* should lead to a larger increase in the supply of skilled bankers to boutique bank b' in industry n. By construction, this variable does not

impose any assumption in the matching between skilled bankers and any specific boutique bank. The prediction is thus that higher *Non-M&A Spillover* will boost the performance of an average boutique bank in this industry relative to its own performance in other industries.

We re-estimate Equation (3), replacing the independent variable of interest, *Banker Arrival*, with *Non-M&A Spillover*. We still restrict the sample of gaining banks to be boutique advisors. We impose gaining bank × year fixed effects and industry fixed effects in our estimation so that we compare a bank's performance change in an industry relative to other industries.

Table 6 shows the results. *Non-M&A Spillover* bears a positive, significant coefficient for deal growth and market share growth (columns 1-4). A boutique advisor is also more likely to enter an industry within five years after experiencing a positive shock to the supply of high-performing bankers in that industry (column 5), corroborating the graphical evidence presented in Figure 2. Columns 6-10 confirm the same findings for prestigious boutique advisors, except that the effect of the same supply shock on these banks appears stronger. Columns 7 and 9 suggest that a one-standard-deviation increase in *Non-M&A Spillover* (0.35) is associated with a 5% greater growth in a prestigious boutique bank's deal volume and a 2% greater growth in its market share in a given industry in the next five years relative to other industries.[14] Overall, these findings support the view that the relocation of human capital alters bank performance.

Our identification relies on the assumption that the future growth of a boutique bank is uncorrelated with idiosyncratic shocks to non-M&A performance of bulge bracket banks outside the channel of human capital mobility. One may argue that a bulge bracket's non-M&A

[14] These percentage numbers are relative to the sample average of deal volume and market shares for prestigious boutique banks. The coefficients in Table 6 are smaller than those in the OLS regressions in Table 4. This is because *Non-M&A Spillover* captures shocks to the supply of skilled bankers to *all* boutique advisors ex ante, but given the large number of boutique banks in the sample, only a small fraction of them can eventually hire the transitioning bankers following the shocks ex post.

performance is highly correlated with its M&A volume in the departing banker's specialized industries. Under this scenario, poor performance in non-M&A departments is associated with the bank advising fewer M&A deals in these industries, thus allowing boutique advisors to take over a large M&A market share in these industries. We check this argument in Table IA.3 of the Internet Appendix, but do not find a significant correlation between a bulge bracket bank's non-M&A volume and its M&A deal volume in the specialized industries. The lack of synchronicity between the industry-specific M&A deal volumes and non-M&A departments' deal volumes provides further support for our identification strategy.

4.2.3 The JOBS Act

To further strengthen our identification, we exploit a quasi-exogenous shock to banks' non-M&A deal volume — the 2012 enactment of the Jumpstart Our Business Startups Act (JOBS Act). The JOBS Act disproportionally increased the IPO activities in the biotech and pharmaceutical industries relative to other industries (Dambra et al. 2015). Given that the IPO underwriting services are specialized and segmented (Benveniste et al. 2002; Benveniste et al. 2003), the JOBS Act differentially increased the IPO underwriting revenue for banks specializing in those two industries (i.e. "exposed banks") relative to other banks. We expect the exposed banks to be more likely to retain skilled M&A bankers following the JOBS Act, and consequently, their boutique counterparts should expand market share at a slower pace.

We modify the definition of *Non-M&A Spillover* by focusing on banks' (pre-existing) exposure to IPO deals in biotech and pharmaceutical industries. Specifically, *JOBS Spillover* is defined as follows:

$$JOBS\ Spillover_{b',n} = \sum_{b} Skilled\ Banker\ Share_{b,n} \times Exposed\ to\ JOBS_{b}$$

where $Exposed\ to\ JOBS_b$ is a dummy variable indicating whether a bulge bracket bank b has underwritten any IPO deal in the biotech and pharmaceutical industries during the pre-JOBS Act period of 2007-2011. The weights *(Skilled Banker Share*) are calculated as of 2011. In a difference-in-differences framework, we compare a boutique bank's performance growth from pre-JOBS (2010-2011) to post-JOBS periods (2012-2014), in an industry with higher *JOBS Spillover* relative to an industry with lower spillover. To mitigate the concern that the JOBS Act may also directly affect the M&A market for the pharmaceutical and biotech industries, we exclude these two industries from our sample of M&A deals.

We estimate the following model:

$$Performance\ Growth_{b\prime,n,t} = \beta \times JOBS\ Spillover_{b',n} \times Post_t + \theta_{b\prime,t} + \psi_n + \vartheta_{b\prime,n,t}, \quad (4)$$

where *Post* is a dummy variable that equals one for the post-JOBS period, and zero otherwise. Our regressions continue to control for bank × year fixed effects and industry-fixed effects.

Table 7 shows reduced growth rates in both deal volume and market share for boutique banks following the enactment of JOBS Act. For each M&A industry covered by the exposed bulge bracket banks, boutique banks that cover the same industry face a significant slowdown in M&A deal volume growth and market share growth. These results echo the findings in Table 6, suggesting that when multi-divisional banks face reduced need for cross-department subsidization, they are more likely to retain high-performing M&A bankers and are thus more capable of maintaining their position in the industry.[15]

Overall, our findings provide causal evidence that the migration of skilled bankers contributes to the rise of boutique banks in the M&A advisory industry.

[15] In Table IA.4 of the Internet Appendix, we also conduct a placebo test, assigning a pseudo post-JOBS dummy as one for years after 2008 and repeat the analysis in Equation (4) for the sample period of 2006-2010. We do not find any effect from this pseudo enactment, suggesting the results in Table 7 are induced by this regulatory event.

4.3 Economic Channels

The results so far indicate that human capital mobility helps shape the structure of the M&A advisory industry. Exploring potential economic mechanisms underlying our findings, we look into the portability of client relationships and the cascading effect of human capital movement.

Investment banking deals are largely conducted based on inter-personal relationships (Bradley et al. 2011). We postulate that former clients are likely to "follow" a high-performing banker after the job transition by hiring his new employer to advise their M&A deals (i.e., the portability of client relationship). In addition, we conjecture that prior colleagues of a high-performing banker may follow him to a new advisory firm, generating further paucity of human capital in the losing bank (i.e., the cascading effect of human capital loss).

We compare the number of colleagues and clients that follow a high-performing banker with those following a lower-performing banker. Our analysis estimates the model below:

$$Follower_{i,b,t} = \beta \times Banker\ Quality_{i,b,t} + \boldsymbol{\gamma X_{i,b,b',t}} + \gamma_b + \phi_{b'} + \tau_t + \epsilon_{i,b,t}, \quad (5)$$

where $Follower_{i,b,t}$ is either the number of clients, or the number of colleagues, who follow banker i within 3 or 5 years after his transition to a new employer in year t. We define a *follower client* as an acquirer who was advised by banker i at the *losing* bank and subsequently hires the *gaining* bank at least once after the banker's transition.[16] We identify a colleague as an individual whose job span at the losing bank overlaps with that of the transitioning banker. A *follower colleague* is then defined as a colleague of banker i who also leaves the losing bank and joins the gaining bank after the banker's job transition.

Columns 1 and 2 of Table 8 show that prior clients are more likely to follow high-performing bankers to the new M&A advisory firm than to follow low-performing ones. Our

[16] Target firms, by definition, are unlikely to be follower clients, because they often cease to exist post deal completion.

results are largely consistent with the findings of Bradley et al. (2011) and Chemmanur et al. (2019), suggesting that a boutique bank can "steal" clients from bulge bracket banks as it attracts high-quality bankers from those banks. Columns 3 and 4 of Table 8 provide evidence consistent with the job transition of a high-performing banker inducing more colleagues to leave the losing bank and join the gaining bank, which may result in a substantial "brain drain" for his former employer.

Our analyses shed light on the underlying mechanisms through which human capital mobility influences the performance of both the losing banks and the gaining banks. As the effect of human capital relocation accumulates, it redraws the boundaries of M&A advisory firms and reshapes the organization of this industry.

5. Deal Outcomes and Human Capital Development of Boutique Advisors

In this section, we explore how the change in the M&A advisory industry structure affects the M&A market. We also aim to understand the effect of different institutional environments on the human capital development of skilled bankers.

5.1 M&A Deal Performance

We first investigate how the characteristics and outcomes of M&A deals differ when they are advised by boutique and bulge bracket banks. We postulate that boutique advisors' ability to attract and incentivize skilled bankers helps their clients achieve better deal outcomes. We look at several dimensions of M&A deal outcome, including deal duration, success rate, and deal announcement returns. *Deal Duration* is defined as the number of days between deal announcement day and the day of completion or withdrawal. A shorter deal duration implies a smoother negotiation and a faster decision-making process, arguably as the results of a well identified bidder-target match as well as the effort and ability of the M&A advisors (Bhagwat et

al. 2016). *Success Rate* is an indicator for whether the deal is eventually completed. *CAR* represents the cumulative abnormal returns for the advisee (i.e., the bidder or the target that hires the M&A advisor) from the four-week before to three days after the announcement. Abnormal returns are benchmarked on the Fama-French 3-factor model.

Large deals are on average more complicated and require bankers to have more expertise to broker, advise, and negotiate on behalf of their clients. These deals are also more profitable and often attract fierce competition among M&A advisory banks. For this set of analyses, we compare the performance of M&A deals advised by bulge bracket banks and those by boutique banks, allowing the difference to vary with deal size. We thus regress deal outcomes on the interaction between *Deal Size* and the *Boutique* dummy in the regression of deal performance.

Table 9 presents the results. As expected, larger deals tend to take longer to settle (columns 1-2) and have a lower success rate (columns 3-4). Importantly, the interaction term *Deal Size* × *Boutique* is negatively and significantly linked to deal duration, and positively and significantly related to the likelihood of success. This suggests that boutique advisors can close large deals faster and attain a higher success rate for those deals compared to bulge bracket banks.

Columns 5-6 of Table 9 reveal that boutique firms help generate higher abnormal announcement period returns for their bidder clients than bulge bracket banks, especially when the bidders they advise engage in larger acquisitions. Interestingly, we do not observe that boutique banks significantly outperform bulge bracket banks in advising target firms (columns 7-8): the coefficients for *Deal Size* × *Boutique* are positive for both columns, albeit insignificant. This may not be surprising: unlike bidders that may return to the same investment bank for future advisory business and present a potential repeated revenue source, most target firms are one-time visitors to the market for corporate control.

One potential concern is that boutique (bulge bracket) banks disproportionately advise (large) small deals, making the above comparison less informative. We thus perform the regressions using a matched deal sample in which we match the size of deals advised by both types of banks. In Table IA.5 of the Internet Appendix, we show that our findings remain robust in the matched sample setting.

5.2 Application of High-Quality Human Capital

As discussed above, boutique banks have more of an advantage in incentivizing and retaining their employees than do bulge bracket banks. In this section, we explore how different institutional environments of bulge bracket and boutique advisors affect the productivity and scope of their skilled employees.

We measure the productivity of a high-performing M&A banker by the number of M&A deals he advises. Panel A of Table 10 reports the coefficient estimates from regressing the natural logarithm of M&A deals a banker advised on his quality, as well as the interaction between banker quality and a dummy for boutique bank. Coefficients of *Banker Quality* confirm that high-performing bankers tend to advise more deals. The positive and significant coefficients for the interaction term, *Banker Quality* × *Boutique*, suggest that skilled employees are more productive when they work for boutique banks. In column 4, we further control for banker fixed effects in addition to year fixed effects, which allow us to gauge the differential performance of the *same* individual at different types of institutions.

In Panel B of Table 10, we explore how the two types of investment banks cultivate their employees' human capital. We create a dummy variable *Restrict to Specialized Industry,* which is set to one if a deal advised by a banker matches the banker's existing specialized industry and zero otherwise. This variable indicates whether an investment banker is always restricted to working in

his specialized industry. Ideally, as an investment banker becomes sufficiently skilled in one industry, he may benefit from expanding his scope to other industries.

We examine whether boutique banks provide more such opportunities to their skilled employees. In columns 1 and 2 of Panel B, we regress *Restrict to Specialized Industry* on banker quality and on the interaction between banker quality and the dummy for boutique bank. We find that, even though high-performing bankers are more likely to be appointed to advise deals within their expertise, boutique banks offer more opportunities for them to extend their knowledge and gain experience in other industries.

Consistent with this finding, skilled bankers also advise more diversifying mergers while working for boutique advisors than for bulge bracket banks, as suggested in columns 3-4 of Panel B. Since diversifying mergers involve targets and acquirers from different industries, M&A advisors are required to have expertise in both industries. These findings are not driven by boutique banks exploiting their skilled bankers and appointing them to arbitrary deals, because the results in Panel A confirm that skilled bankers in boutique banks generate more value for their clients.

Overall, Panel B of Table 10 offers evidence consistent with boutique banks broadening the scope of the skill set of their high-quality employees, rather than restricting their employees to certain types of deals or industries.

6. Discussions

Our analysis so far identifies one contributing factor — human capital mobility — to the rise of boutique advisory firms. A natural question then arises: why do bulge bracket banks fail to retain their skilled employees? We postulate that there are three reasons hampering these banks' ability to avert the loss of human capital. First, like conglomerates, bulge bracket banks aim to

maximize the value of the entire firm rather than that of individual divisions. As such, cross-division subsidization may be the optimal response to the negative shocks to their non-M&A department performance. Put differently, preserving the stability of the core teams in their non-M&A departments during a difficult time can be more important than retaining a few skilled M&A bankers. Second, bulge bracket banks are subject to more intense regulatory scrutiny than small boutique advisors; they may also suffer from heavy overhead and bureaucracy, both of which undermine efficient resource allocation. Lastly, maintaining high-level compensation for skilled employees can be costly, especially if their compensation packages are rigid. These factors pose significant challenges for bulge bracket banks, limiting their capacity to retain skilled bankers and to swiftly respond to their demands.

To the extent that boutique and bulge bracket sectors in the M&A advisory industry each have a distinct corporate structure, one may also wonder whether high-quality bankers quickly flocked to the boutique sector from the onset, suggesting that the speed of banker migration peaked at the beginning, rather than at the end, of the sample period. To investigate how the banker migration pattern varies over time, we interact *Banker Quality* with dummies for 2-year intervals (2002-2004, 2004-2006, ..., 2016-2018) and repeat our baseline regressions specified by Equation (1). The coefficients of these interaction terms capture the differential human capital reallocation rates in each period relative to the base interval of 2000-2001.

Figure 4 plots these coefficients and the corresponding 95% confidence intervals for *Exit to Boutique* (upper panel), and *Exit to Prestigious Boutique* (lower panel), respectively. It is evident that the migration propensity of skilled bankers does not vary significantly over time, suggesting that they have been gradually switching from bulge brackets to boutique banks. There was not a regime shift even in the aftermath of the 2008 Global Financial Crisis. This evidence is

consistent with the steady expansion of both the M&A and labor market shares of the boutique sector over the recent two decades, as illustrated by Figures 1 and 3.

Why do we observe a gradual reallocation of human capital to the boutique sector, but not an abrupt shift? It is possible that labor market frictions may have prevented boutique advisors from immediately capturing all the talented bankers. For instance, both bankers and recruiting boutiques face substantial uncertainty regarding the quality and the fit of the candidate during job searches. Transitioning bankers also need to adapt to a new corporate culture environment and bear the loss of firm-specific human capital accumulated during their job spans at bulge bracket employers. These frictions can partially offset the benefits of relocating to boutiques. In addition, despite the institutional frictions we identify, bulge bracket banks offer advantages such as a broad career network, the certification effect, and career stability. These factors may contribute to a gradual shift between the two equilibrium states.

7. Conclusions

This paper is the first to document the rise of boutique investment banks in both the M&A advisory market and in the labor market for skilled bankers. When exploring the role of human capital mobility in affecting industry structure, we show that high-performing bankers are more likely to migrate to boutique advisors and that the organizational advantage of boutique advisors contributes to this migration. Following bankers' job transitions, losing (gaining) banks experience deteriorating (improving) performance in their specialized industries. Critically, the cross-department subsidization inside large, multi-divisional banks aggravates the departure of skilled bankers, which is then followed by the flight of investment banking clients and the cascading loss of human capital. Finally, our findings suggest that structural change in the M&A advisory

industry is not just a “side show”. Instead, it affects the efficiency of merger deals conducted by non-financial firms and influences the scope and development of high-quality human capital.

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Appendix A: Variable Definition

Variable	Definition and Data Source
# of Follower Clients	The number of clients of a transitioning banker under the previous employer that follow the banker to his (her) new bank. Sources: Mergermarket, SDC, and FINRA.
# of Follower Colleagues	The number of past colleagues of a transitioning banker in the previous employer that follow the banker to his (her) new bank. Sources: Mergermarket and FINRA.
Banker Arrival	The number of high-quality bankers specializing in industry n that join a boutique bank. High-quality bankers refer to bankers who have the top tercile deal volume in an industry-year.
Banker Departure	The number of high-quality bankers specializing in industry n that leave a bulge bracket bank. High-quality bankers refer to bankers who have the top tercile deal volume in an industry-year.
Banker Experience	The number of years that a banker has worked in the M&A advisory industry. Sources: Mergermarket and FINRA.
Banker Quality	The logarithm of one plus the number of deals advised by the bank in the past 3 years or 5 years. Source: Mergermarket.
Bidder's CAR	Bidder 3-day abnormal announcement period return, computed from Fama-French 3 factor model, plus 4 weeks' price run-up prior the announcement. Sources: CRSP and Ken French's Website.
Bidder Size	Bidder firm's market value of equity. Source: Compustat.
Bidder Leverage	Bidder firm's total liabilities scaled by total assets. Source: Compustat.
Bidder Market to Book	Bidder firm's market value of equity divided by book value of equity. Source: Compustat.
Bidder ROA	Bidder firm's net income divided by total assets. Source: Compustat.
Boutique	A dummy variable set to one if an M&A advisory is a boutique bank, and zero otherwise. Source: Wall Street Oasis.
Deal Duration	The number of days between deal announcement and deal completion/withdrawal. Sources: Mergermarket and SDC.
Deal Growth	The difference in the natural logarithm of one plus the number of M&A deals in an industry advised by a bank from $[t-T, t]$ to $[t, t+T]$ around year t. T varies in 3 and 5 years, respectively. Sources: Mergermarket and FINRA.
Deal Size	The natural logarithm of one plus transaction value in term of 2012 dollar. Sources: Mergermarket and SDC.
Diversifying Merger	A dummy variable set to one if the target firm's industry is different from the bidder's primary industry, and zero otherwise. Industry classification is based on the 2-digit SIC code. Sources: Mergermarket, SDC, and FINRA.
Exit to Boutique	A dummy variable set to one if a banker leaves his current employer and joins or forms a boutique bank, and zero otherwise. Sources: Mergermarket, FINRA and Wall Street Oasis.

Exit to Bulge Bracket	A dummy variable set to one if a banker leaves his current employer and joins a bulge bracket bank, and zero otherwise. Sources: Mergermarket and FINRA.
Exit to Prestigious Boutique	A dummy variable set to one if a banker leaves his current employer and joins or forms a prestigious boutique bank, and zero otherwise. A boutique bank is considered prestigious if it ranks above median among banks specializing in an industry-year. Sources: Mergermarket, FINRA, and Wall Street Oasis.
Gaining Bank Past Performance	The natural logarithm of one plus the number of deals advised in the past 3 years or 5 years by the bank that experiences the arrival of high-quality employees. Source: Mergermarket.
JOBS Spillover	Weighted average of indicator variables for whether a bulge bracket bank has underwritten any IPOs in the pharmaceutical or biotech industries over a 5-year window prior to the JOBS Act. The weights are a bulge bracket bank's share of skilled bankers in a given industry Source: SDC.
Log(Deals)	The natural logarithm of one plus the number of deals advised by a banker/bank during a certain time frame. Source: Mergermarket.
Losing Bank Past Performance	The natural logarithm of one plus the number of deals advised in the past 3 years or 5 years by the bank that experiences a departure of its high-quality employees. Source: Mergermarket.
Market Share Growth	The difference in the market share of M&A deals of a bank in an industry from $[t-T, t]$ to $[t, t+T]$ around the departure of its employee(s) in year t. T varies in 3 and 5 years, respectively. Sources: Mergermarket and FINRA.
New Industry	A dummy variable set to one if a bank starts advising deals over the next five years, for which the client is in an industry that the bank has not covered before. Source: Mergermarket.
Non-M&A Spillover	Weighted average of non-M&A department deal volumes conducted by bulge bracket banks, with the weight being a bulge bracket bank's share of skilled bankers in a given industry. Skilled bankers refer to bankers who have the top tercile deal volume in an industry-year. Sources: DealScan, SDC and Mergermarket.
Post	A dummy variable equal to one if the year is equal or greater than 2012 and zero otherwise.
Restrict to Specialized Industry	A dummy variable set to one if the banker's existing specialized industry is the same as the target's or acquirer's industry. Industry classification is based on the 2-digit SIC code. Sources: Mergermarket and SDC.
Success Rate	A dummy variable equal to one if the deal was completed and zero if it failed. Sources: Mergermarket and SDC.
Target's CAR	Target 3-day abnormal announcement period return, computed from Fama-French 3 factor model, plus 4 weeks' price run-up prior the announcement. Sources: CRSP and Ken French's Website.

Appendix B: Investment Bank Classification

We provide the list of bulge bracket and boutique banks based on the Wall Street Oasis's classification. A boutique bank is considered prestigious if it is an industry leader.

Bulge Bracket Banks	Prestigious Boutique Banks
Goldman Sachs	Allen & Company
Morgan Stanley	Alvares & Marsal
JP Morgan	Arlington Asset Investment
Credit Suisse	BB&T Capital Markets
Bank of America Merrill Lynch	BMO Capital Markets
Barclays Capital	BNP Paribas
Citigroup	Brown Brothers Harriman
Deutsche Bank AG	Cantor Fitzgerald
UBS Investment Bank	Centerview Partners
Wells Fargo	CIBC Wholesale Banking
	Cowen Group
	Duff & Phelps
	Edgeview Partners
	Gleacher & Company
	Evercore Partners
	Greenhill & Co.
	Guggenheim Partners
	Harris Williams & Co.
	Houlihan Lokey Howard & Zukin
	Jefferies & Company
	Keefe Bruyette & Woods Inc.
	Lazard Ltd
	Moelis & Company
	Montgomery & Co.
	Morgan Keegan
	Nomura Holdings, Inc.
	Oppenheimer & Co.
	Perella Weinberg Partners
	Peter J. Solomon Company
	Piper Jaffray
	Raymond James Financial Inc.
	RBC Capital Markets
	Robert W. Baird & Company
	Rothschild
	Royal Bank of Scotland
	Sandler O'Neill & Partners L.P.
	Stephens Inc.
	The Blackstone Group
	Thomas Weisel Partners/Stifel Financial
	William Blair & Company
	Wedbush

Figure 1: Market Share of Boutique Advisors

This figure plots the market share dynamics of the boutique and prestigious boutique M&A advisors during the 2000-2018 period. Market share is defined as the fraction of deals advised by boutique banks and prestigious boutique banks relative to the total deals recorded in the Mergermarket database.

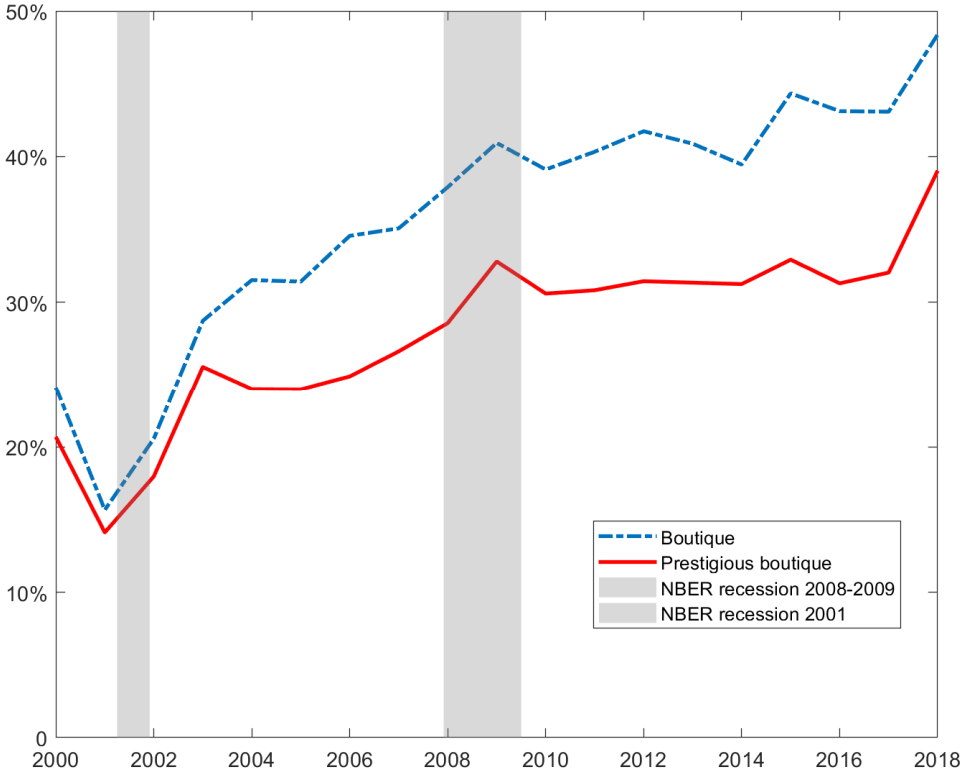

Figure 2: Industry Coverage by the Bulge Bracket and Boutique Bank Sectors

The sample period is 2000-2018. The upper panel shows the 2-digit SIC industries covered by the bulge bracket bank sector (in blue bars) and by the boutique bank sector (in red bars). The lower panel shows the total number of 2-digit SIC industries covered by the bulge bracket bank sector (in blue line) and by the boutique bank sector (in red line) over time.

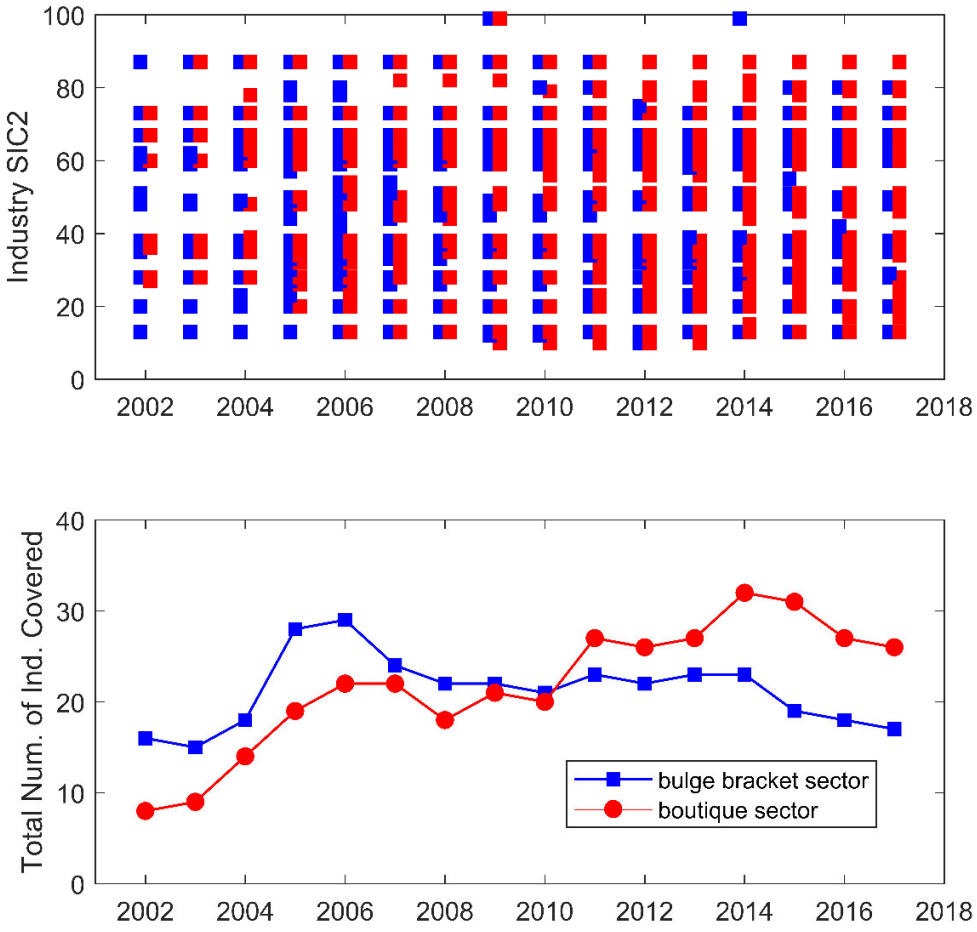

Figure 3: Labor Share of Boutique Advisors

This figure plots the labor share dynamics of the boutique and prestigious boutique M&A advisors during the 2000-2018 period. Labor share is defined as the fraction of M&A bankers who work in the boutique sector or the prestigious boutique bank sector.

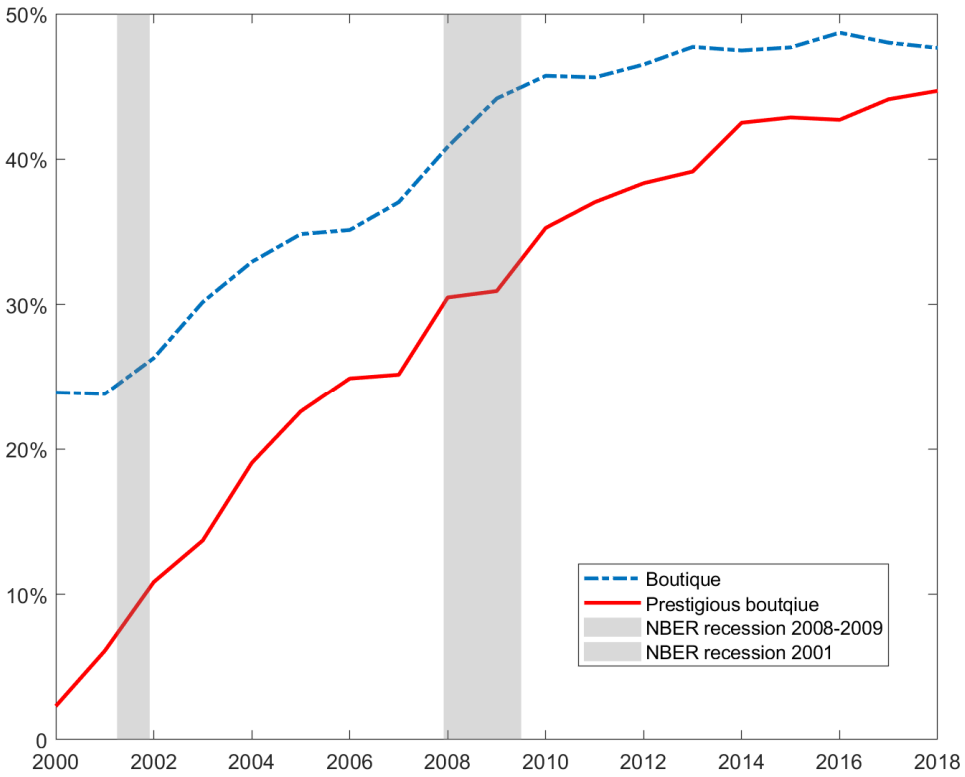

Figure 4: Exit Rate – Banker Quality Sensitivity Over Time

The sample period is 2000-2018. The upper (lower) panel plots the coefficients of *Banker Quality* and its 95% confident intervals when we consider the effect of *Banker Quality* on *Exit to Boutique* (*Exit to Prestigious Boutique*) over 2002-2004, 2004-2006, …, 2016-2018 periods.

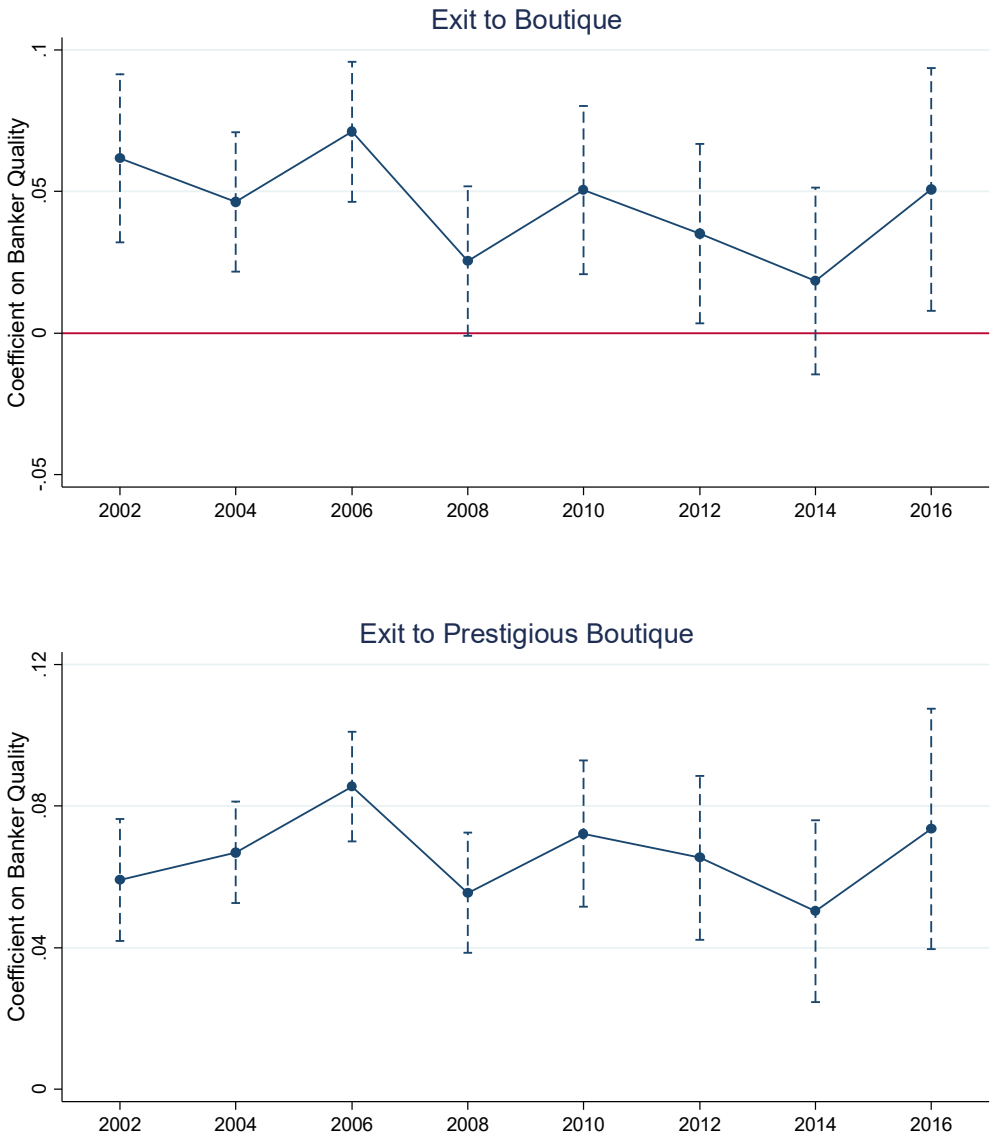

Table 1: Descriptive Statistics

This table provides summary statistics for the variables of interest in our sample. Panel A shows the summary statistics for the banker-bank-year panel. Panel B shows the summary statistics for the bank-industry-year sample. In this panel, industries not covered by a bank will have a deal volume of zero. Variable definitions are reported in Appendix A.

Panel A: Banker-Bank-Year Sample Characteristics

Variable	N	Mean	Std. Dev.
Exit to Boutique	22,345	0.0776	0.2675
Exit to Prestigious Boutique	22,345	0.0478	0.2133
Exit to Bulge Bracket	22,345	0.0557	0.2293
# of Deals (3 Years)	22,345	0.4607	1.2140
# of Deals (5 Years)	22,345	0.6111	1.5896
Banker Quality (3 Years)	22,345	0.2230	0.4704
Banker Quality (5 Years)	22,345	0.2705	0.5365
Banker Experience	22,345	6.9605	5.4064

Table 1 continued.

Panel B: Bank-Industry-Year Sample Characteristics

Variable	N	Mean	Std. Dev.
Bulge Bracket Banks			
# of Deals (3 Years)	15,050	0.5134	1.4532
# of Deals (5 Years)	15,050	0.8035	2.1915
# of Deals among Industries Covered (3 Years)	3,521	2.4820	2.3072
# of Deals among Industries Covered (5 Years)	4,324	3.1728	3.3752
Log(Deals) (3 Years)	15,050	0.2284	0.5001
Log(Deals) (5 Years)	15,050	0.3087	0.6086
Market Share (3 Years)	15,050	1.9589	6.8363
Market Share (5 Years)	15,050	2.0572	6.2602
Boutique Banks			
# of Deals (3 Years)	103,320	0.0747	0.8157
# of Deals (5 Years)	103,320	0.1107	1.1708
# of Deals among Industries Covered (3 Years)	4,509	2.1122	4.2015
# of Deals among Industries Covered (5 Years)	5,806	2.4457	5.4983
Log(Deals) (3 Years)	103,320	0.0346	0.1970
Log(Deals) (5 Years)	103,320	0.0469	0.2376
Market Share (3 Years)	103,320	0.2726	2.9333
Market Share (5 Years)	103,320	0.2703	2.6925
Prestigious Boutique Banks			
# of Deals (3 Years)	34,860	0.2085	1.3897
# of Deals (5 Years)	34,860	0.3107	1.9960
# of Deals among Industries Covered (3 Years)	4,045	2.2368	4.4186
# of Deals among Industries Covered (5 Years)	5,191	2.6130	5.7918
Log(Deals) (3 Years)	34,860	0.0936	0.3216
Log(Deals) (5 Years)	34,860	0.1270	0.3863
Market Share (3 Years)	34,860	0.7344	4.7407
Market Share (5 Years)	34,860	0.7362	4.3801

Table 2: Univariate Comparison

This table compares deal characteristics and employee characteristics between bulge bracket banks and boutique banks. All variables are measured at the bank-year level except for *Banker Experience*, which is measured at the bank-banker-year level. We only count employees who work for the M&A advisory department in these banks. *, **, and *** indicate significance at the 10%, 5%, and 1% level, respectively.

Variable	Bulge Bracket Banks	Boutique Banks	Prestigious Boutique Banks	Difference in Mean	Difference in Mean
	(1)	(2)	(3)	(1) - (2)	(1) - (3)
# of Deals/Year	25.0295	6.2525	15.4495	18.7771***	9.5801***
Diversifying Mergers (%)	0.1815	0.1218	0.1390	0.0597***	0.0426***
# of Industries Covered/Year	8.4895	1.4735	3.5296	7.0159***	4.9598***
# of Employees/Year	49.2611	6.6380	10.0322	42.6230***	39.2289***
Banker Experience	8.1607	7.4897	9.0895	0.6710**	-0.9289***

Table 3: Career Transition of High-Performing Bankers

This table presents results for the career transition of bankers. The dependent variable is *Exit to Boutique* in Panel A, is *Exit to Prestigious Boutique* in columns 1-2 of Panel B, and is *Exit to Bulge Bracket* in columns 3-4 of Panel B. The unit of observation is a banker-bank-year. In each column, *Time Horizon* indicates both the horizon during which we measure a banker's quality in terms of his past deal volume and the horizon during which we measure a losing/gaining bank's past performance in terms of its deal volume. Variable definitions are in Appendix A. Robust standard errors clustered by banker-losing bank are in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% level, respectively.

Panel A: Exit to Boutique Bank

	Dependent Variable: *Exit to Boutique*							
Time Horizon	3 Years	3 Years	3 Years	3 Years	5 Years	5 Years	5 Years	5 Years
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Banker Quality	0.0114**	0.0113**	0.0109**	0.0100*	0.0145***	0.0144***	0.0143***	0.0139**
	(0.005)	(0.005)	(0.006)	(0.006)	(0.005)	(0.005)	(0.005)	(0.006)
Banker Experience		0.0338	0.0324	0.0298		0.0336	0.0321	0.0297
		(0.023)	(0.024)	(0.027)		(0.023)	(0.025)	(0.027)
Losing Bank Past Performance			0.0010				0.0005	
			(0.003)				(0.003)	
Gaining Bank Past Performance			0.0128***	0.0115***			0.0126***	0.0113***
			(0.002)	(0.002)			(0.002)	(0.002)
Banker FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	No	Yes	Yes	Yes	No
Losing Bank FE	Yes	Yes	Yes	No	Yes	Yes	Yes	No
Losing Bank × Year FE	No	No	No	Yes	No	No	No	Yes
Gaining Bank FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	22,110	22,110	22,110	20,979	22,110	22,110	22,110	20,979
Adjusted R-squared	0.154	0.154	0.156	0.253	0.155	0.155	0.156	0.253

Table 3 continued.

Panel B: Prestigious Boutique and Bulge Bracket Banks

Dependent Variable:	*Exit to Prestigious Boutique*		*Exit to Bulge Bracket*	
Time Horizon	3 Years	5 Years	3 Years	5 Years
	(1)	(2)	(3)	(4)
Banker Quality	0.0086*	0.0110**	-0.0064	-0.0051
	(0.005)	(0.005)	(0.006)	(0.005)
Banker Experience	0.0086	0.0084	0.0061	0.0058
	(0.008)	(0.008)	(0.013)	(0.012)
Gaining Bank Past Performance	0.0219***	0.0224***	0.0204***	0.0211***
	(0.002)	(0.002)	(0.003)	(0.003)
Banker FE	Yes	Yes	Yes	Yes
Losing Bank × Year FE	Yes	Yes	Yes	Yes
Gaining Bank FE	Yes	Yes	Yes	Yes
Observations	20,979	20,979	20,979	20,979
Adjusted R-squared	0.241	0.242	0.159	0.160

Table 4: Bank Performance

This table examines the changes in bank performance surrounding bankers' job transition. Panel A reports the results for the performance changes of losing banks. The sample only includes bulge bracket banks. Panel B shows the results for the performance changes of gaining banks, for which the sample includes only boutique banks. Both panels utilize a bank-industry-year panel. *Banker Departure* is the number of skilled bankers specializing in a certain industry that depart a given bank during the year of observation. *Banker Arrival* is the number of skilled bankers specializing in a certain industry that join a bank during the year of observation. Skilled bankers refer to bankers whose deal volumes in the past five years rank at the top tercile among other bankers specializing in the same industry. In each column, *Time Horizon* indicates the horizon during which we measure a high-performing individual banker's past deal volume and the horizon during which we measure *Deal Growth* and *Market Share Growth* of the losing/gaining banks. Detailed definition of variables is provided by Appendix A. Robust standard errors clustered by bank-year are reported in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% level, respectively.

Panel A: Losing Banks

Dependent Variable:	*Deal Growth*		*Market Share Growth*	
Time Horizon	3 Years	5 Years	3 Years	5 Years
	(1)	(2)	(3)	(4)
Banker Departure	-0.0618***	-0.0617***	-0.1249***	-0.1994***
	(0.015)	(0.015)	(0.028)	(0.043)
Losing Bank × Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Observations	12,250	10,290	12,250	10,290
Adjusted R-squared	0.115	0.209	0.089	0.193

Panel B: Gaining Banks

Dependent Variable:	*Deal Growth*		*Market Share Growth*	
Time Horizon	3 Years	5 Years	3 Years	5 Years
	(1)	(2)	(3)	(4)
Banker Arrival	0.0187	0.0361**	0.0503*	0.0948***
	(0.017)	(0.019)	(0.027)	(0.036)
Gaining Bank × Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Observations	96,740	89,740	96,740	89,740
Adjusted R-squared	0.057	0.111	0.046	0.097

Table 5: Banker Departure and Cross-subsidization within Bulge Bracket Bank

This table presents results for the career transition of bankers. We examine whether a high-performing banker's tendency to join boutique firms is modulated by his current bulge bracket employer's cross-department subsidization activity. The dependent variable is *Exit to Boutique* in columns 1-2 and *Exit to Prestigious Boutique* in columns 3-4. *Non-M&A Volume* is the log of total number of non-M&A deals underwritten by the current employer in the past 3 or 5 years. In each column, *Time Horizon* indicates the horizons during which we measure a banker's past deal volume, the losing bank's non-M&A volume, and the gaining bank's past performance. Detailed definition of variables is provided by Appendix A. Robust standard errors clustered by banker-losing bank are reported in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% level, respectively.

Dependent Variable:	*Exit to Boutique*		*Exit to Prestigious Boutique*	
Time Horizon	3 Years	5 Years	3 Years	5 Years
	(1)	(2)	(3)	(4)
Banker Quality × Non-M&A Volume	-0.0031	-0.0033*	-0.0037**	-0.0042***
	(0.002)	(0.002)	(0.002)	(0.001)
Banker Quality	0.0275**	0.0341***	0.0290***	0.0356***
	(0.012)	(0.012)	(0.009)	(0.010)
Banker Experience	0.0300	0.0297	0.0087	0.0082
	(0.028)	(0.027)	(0.008)	(0.008)
Gaining Bank Past Performance	0.0116***	0.0113***	0.0219***	0.0223***
	(0.002)	(0.002)	(0.002)	(0.002)
Banker FE	Yes	Yes	Yes	Yes
Losing Bank × Year FE	Yes	Yes	Yes	Yes
Gaining Bank FE	Yes	Yes	Yes	Yes
Observations	20,752	20,752	20,752	20,752
Adjusted R-squared	0.254	0.254	0.243	0.244

Table 6: Boutique Bank Performance and Non-M&A Department Performance in Bulge Bracket Banks

This table examines how bankers' job transition affects the performance of gaining banks. To establish causality, we instrument the labor supply to a gaining bank's M&A division using the non-M&A department performance of bulge bracket banks, which is likely to affect these potential losing banks' cross-subsidization incentive. Columns 1-5 report the results for boutique banks and columns 6-10 report the results for prestigious boutique banks. The dependent variable is *Deal Growth* in columns 1-2 and columns 6-7, *Market Share Growth* in columns 3-4 and columns 8-9, and *New Industry* in columns 5 and 10. The unit of analysis is at the bank-industry-year level. In each column, *Time Horizon* indicates the horizon during which we measure an M&A advisory bank's performance changes and *Non-M&A Spillover*. Detailed definition of variables is provided by Appendix A. Robust standard errors clustered by bank-year are reported in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% level, respectively.

Sample:	All Boutiques					Prestigious Boutiques				
Dependent Variable:	*Deal Growth*		*Market Share Growth*		*New Industry*	*Deal Growth*		*Market Share Growth*		*New Industry*
Time Horizon	3 Years	5 Years	3 Years	5 Years		3 Years	5 Years	3 Years	5 Years	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Non-M&A Spillover	0.0162***	0.0049*	0.0211***	0.0060	0.0082***	0.0405***	0.0184***	0.0578***	0.0407***	0.0249***
	(0.002)	(0.003)	(0.004)	(0.007)	(0.003)	(0.006)	(0.005)	(0.010)	(0.014)	(0.006)
Gaining Bank × Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	96,740	89,740	96,740	89,740	96,740	33,880	31,990	33,880	31,990	33,880
Adjusted R-squared	0.057	0.111	0.046	0.097	0.139	0.059	0.111	0.046	0.096	0.118

Table 7: Boutique Bank Performance and The JOBS Act

This table examines how bankers' job transition affects the performance of gaining banks. The sample period is 2010-2014, two years before and two years after the enactment of the JOBS Act. To establish causality, we instrument the labor supply to the gaining banks' M&A division using multi-divisional banks' ex ante exposure to the JOBS Act. Columns 1-5 report the results for boutique banks and columns 6-10 report the results for prestigious boutique banks. The dependent variable is *Deal Growth* in columns 1-2 and columns 6-7, *Market Share Growth* in columns 3-4 and columns 8-9, and *New Industry* in columns 5 and 10. The unit of analysis is at the bank-industry-year level. In each column, *Time Horizon* indicates the horizon during which we measure an M&A advisory bank's performance changes. Detailed definition of variables is provided by Appendix A. Robust standard errors clustered by bank-year are reported in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% level, respectively.

Sample:	All Boutiques					Prestigious Boutiques				
Dependent Variable:	*Deal Growth*		*Market Share Growth*		*New Industry*	*Deal Growth*		*Market Share Growth*		*New Industry*
Time Horizon	3 Years	5 Years	3 Years	5 Years		3 Years	5 Years	3 Years	5 Years	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
JOBS Spillover × Post	-0.0097**	-0.0420***	-0.0233***	-0.0882***	-0.0110**	-0.0155*	-0.0742***	-0.0399**	-0.1625***	-0.0178**
	(0.004)	(0.006)	(0.008)	(0.016)	(0.004)	(0.008)	(0.013)	(0.016)	(0.031)	(0.008)
JOBS Spillover	0.0122***	0.0283***	0.0259***	0.0590***	0.0144***	0.0184**	0.0496***	0.0414***	0.1066***	0.0214***
	(0.004)	(0.005)	(0.007)	(0.013)	(0.004)	(0.008)	(0.009)	(0.015)	(0.025)	(0.008)
Gaining Bank × Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	32,637	32,637	32,637	32,637	32,637	15,318	15,318	15,318	15,318	15,318
Adjusted R-squared	0.024	0.102	0.019	0.088	0.065	0.025	0.114	0.018	0.090	0.057

Table 8: Mechanisms

This table examines the mechanism through which the job transitions of high-performing bankers may generate detrimental impact on their former employers' performance. The dependent variable is the number of clients that follow the banker to the new bank in columns 1-2 and is the number of colleagues that follow the transitioning banker to the new bank in columns 3-4. In each column, *Time Horizon* indicates the horizons during which we measure a banker's past deal volume, the number of following clients/colleagues in the future, and a losing/gaining bank's past deal volume. Detailed definition of variables is provided by Appendix A. Robust standard errors clustered at the bank level are reported in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% level, respectively.

Dependent Variable	*# of Follower Clients*		*# of Follower Colleagues*	
Time Horizon	3 Year	5 Year	3 Year	5 Year
	(1)	(2)	(3)	(4)
Banker Quality	0.0697***	0.0605***	0.1244*	0.1930***
	(0.022)	(0.023)	(0.072)	(0.073)
Banker Experience	0.0018**	0.0015*	0.0026	0.0012
	(0.001)	(0.001)	(0.011)	(0.011)
Losing Bank Past Performance	0.0007	0.0006	-0.2200	-0.3007
	(0.003)	(0.003)	(0.200)	(0.187)
Gaining Bank Past Performance	-0.0009	-0.0014	-0.1597	-0.1572*
	(0.003)	(0.003)	(0.107)	(0.088)
Year FE	Yes	Yes	Yes	Yes
Losing Bank FE	Yes	Yes	Yes	Yes
Gaining Bank FE	Yes	Yes	Yes	Yes
Observations	3,865	3,865	3,865	3,865
Adjusted R-squared	0.108	0.107	0.342	0.326

Table 9: Deal Performance of Advisees

This table compares the outcomes of deals advised by boutique and bulge bracket banks. The unit of analysis is at the M&A deal-advisor level. The dependent variable is the duration of a deal in columns 1-2, success rate in columns 3-4, the CAR of bidders (columns 5-6), and the CAR of targets (columns 7-8), respectively. *Boutique* is a dummy variable set to one if the investment bank is a boutique bank, and zero if a bulge bracket bank. Industry classification is based on the 2-digit SIC code. Robust standard errors clustered by bank are reported in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% level, respectively.

Dependent Variable	*Deal Duration*		*Success Rate*		*Bidder's CAR*		*Target's CAR*	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Deal Size × Boutique	-7.4480***	-5.8760**	0.0136***	0.0177***	0.0172***	0.0104**	0.0115	0.0213
	(2.470)	(2.263)	(0.003)	(0.005)	(0.004)	(0.005)	(0.012)	(0.019)
Deal Size	25.8268***	32.1272***	-0.0240***	-0.0445***	-0.0144***	-0.0123***	-0.0337***	-0.0662***
	(1.236)	(1.366)	(0.001)	(0.003)	(0.003)	(0.003)	(0.010)	(0.014)
Bidder Size		-6.5704***		0.0136***		-0.0074**		0.0259**
		(0.868)		(0.002)		(0.003)		(0.010)
Bidder Leverage		11.7381		0.0627***		0.0667		0.1692
		(7.745)		(0.020)		(0.043)		(0.120)
Bidder Market to Book		0.1861		0.0002		0.0018***		0.0003
		(0.133)		(0.000)		(0.001)		(0.001)
Bidder Cash Holding		29.2578***		-0.0753**		0.0126		-0.0523
		(10.048)		(0.032)		(0.029)		(0.085)
Bidder ROA		-20.5217**		0.1289**		-0.0100		0.2666*
		(9.304)		(0.055)		(0.085)		(0.139)
Bank FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	No	Yes	No	Yes	No	Yes	No	Yes
Bidder Industry FE	No	Yes	No	Yes	No	Yes	No	Yes
Observations	13,504	4,169	13,729	4,240	2,015	1,391	1,562	517
Adjusted R-squared	0.217	0.338	0.020	0.094	-0.010	0.067	0.030	0.154

Table 10: Application of Human Capital

This table compares the productivity and scope of high-quality human capital between boutique and bulge bracket banks. In Panel A, the unit of analysis is at the banker-year level and the dependent variable is *Log*(*Deals*), the natural logarithm of one plus the number of M&A deals that a high-quality banker advises in a year. In Panel B, the unit of analysis is at the M&A deal level. The dependent variable is *Restrict to Specialized Industry* in columns 1-2 and *Diversifying Merger* in columns 3-4. *Boutique* is a dummy variable set to one if the investment bank is a boutique bank, and zero if it is a bulge bracket bank. Detailed variable definitions are in Appendix A. Robust standard errors, clustered by banker in Panel A and by bank-year in Panel B, are reported in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% level, respectively.

Panel A: Productivity of High-Quality Bankers

Dependent Variable	*Log*(*Deals*)			
	(1)	(2)	(3)	(4)
Banker Quality	0.3450***	0.2932***	0.2722***	0.0641***
	(0.007)	(0.022)	(0.022)	(0.017)
Banker Quality × Boutique		0.0679**	0.0768**	0.0475*
		(0.030)	(0.030)	(0.025)
Boutique		0.0691***	0.0577***	0.0668***
		(0.006)	(0.006)	(0.014)
Banker FE	No	No	No	Yes
Year FE	No	No	Yes	Yes
Observations	19,027	19,027	19,027	18,879
Adjusted R-squared	0.108	0.121	0.140	0.221

Panel B: Deal Scopes of High-Quality Bankers

Dependent Variable	*Restrict to Specialized Industry*		*Diversifying Mergers*	
	(1)	(2)	(3)	(4)
Banker Quality	0.0432***	0.0444***	-0.0238	-0.0265
	(0.013)	(0.013)	(0.020)	(0.020)
Banker Quality × Boutique	-0.0484***	-0.0481***	0.0553**	0.0457*
	(0.017)	(0.017)	(0.024)	(0.024)
Boutique	0.0216	0.0234	0.0142	0.0118
	(0.032)	(0.032)	(0.033)	(0.033)
Banker FE	Yes	Yes	Yes	Yes
Year FE	No	Yes	No	Yes
Observations	14,731	14,731	12,740	12,740
Adjusted R-squared	0.251	0.253	0.135	0.145

Internet Appendix for

"Big Fish in Small Ponds: Human Capital Mobility and the Rise of Boutique Banks"

This online appendix consists of the following discussions and supplemental figures and tables:

A. Additional Stylized Facts

B. Robustness Checks

A. Additional Stylized Facts

In this section, we present additional stylized facts regarding the rise of boutique advisors and the relocation of human capital in the M&A advisory industry.

Figure IA.1 illustrates industry coverage, market share, and labor allocation of selected banks in our sample. The blue bubbles represent bulge bracket banks, and the red bubbles represent prestigious boutique banks. Bubble size indicates the size of their market share as M&A advisors. A few prominent players, ranking at the top of either the list of bulge brackets or the list of prestigious boutique banks as in Appendix B, are labeled next to their bubbles. We plot the average number of industries they cover as M&A advisors on the *x*-axis and the annual average number of employees in the M&A advisory division of these banks on the *y*-axis.

Overall, bulge bracket banks cover a wide spectrum of industries and hire more bankers in their M&A advisory division. Boutique banks, on the other hand, stay more focused in term of industry coverage and employ fewer M&A bankers.

Figure IA.2 graphs the flow of human capital among some notable M&A advisors. Red nodes represent boutique advisors and blue nodes represent bulge bracket banks. Each arrow between two nodes points to bankers migrating from the losing bank to the gaining bank. The thickness of the arrow represents the net number of bankers that have transitioned between two banks throughout our sample period. Only bank pairs with at least five net transitioning bankers between them are represented in the figure.

Figure IA.2 suggests that bulge bracket banks experience the largest banker outflow, both to other bulge bracket banks and to boutique banks. Some prestigious boutique banks, such as Moelis & Co., Centerview Partners, Lazard, and Jefferies, are the major receivers of bankers leaving their bulge bracket employers. While there are also exchanges of bankers between

boutique advisors, the magnitudes are much smaller compared to the flow between bulge bracket and boutique banks.

B. Robustness Checks

B.1. Exit-only Sample

Our analyses in Table 3 so far consider how a banker's past deal-advising performance affects the likelihood of switching to a boutique advisor. This likelihood, however, is a joint product of the probability of a job change and the probability of joining a specific type of bank *conditional* on job change. One may wonder whether our results in Table 3 simply reflect a higher separation rate for high-performing bankers, rather than their preference for boutique advisors.

To mitigate this concern, we restrict the sample to only banker-year observations in which a job transition takes place. This exit-only sample allows us to focus on a banker's choice of potential employers, *conditional* on leaving the current employer.

We re-estimate our baseline regressions and present the results in Table IA.1. Despite the fact that the sample size is significantly reduced, we continue to observe *Banker Quality* to be positively related to the propensity to migrate to boutique advisors. Among all bankers leaving from the same employer in the same year, high performers are more likely to join a prestigious boutique bank compared to low performers. This result helps validate that the job separation rates of high-performing bankers do not solely account for their tendency to move to boutique advisors.

B.2. Alternative Classifications of Boutique M&A Advisors

When conducting baseline analyses, we rely on the Wall Street Oasis to classify boutique advisors. Admittedly, there is no uniform definition of boutique banks in the literature. In this section, we test the robustness of our results using alternative classifications of boutique advisors.

A key distinction between boutique and bulge bracket banks, in the context of our analysis, is that the former focus on advising M&A deals whereas the latter also engage heavily in many other types of investment banking business such as equity issuance and debt underwriting. Since this feature is pertinent to the institutional friction (i.e., cross-subsidization) that we explore in the paper, we modify our classification of boutique banks by excluding those that have non-trivial non-M&A activities. Specifically, for each bank, we calculate the average fraction of its non-M&A deal volume relative to its M&A volume. This ratio reflects the degree of the bank's business concentration in the M&A advisory industry. We then consider, as a threshold, the minimum non-M&A ratio among the bulge bracket banks identified by the Wall Street Oasis. Only those with a non-M&A ratio falling below the threshold are identified as boutique banks.

Using this alternative classification scheme, we repeat our baseline analyses regarding human capital relocation between the two sectors and the performance of boutique banks. Table IA.2 shows that our results are robust.

In a similar vein, we also consider an M&A advisor to be a boutique if it is classified by the Wall Street Oasis as a boutique and is also absent from both the SDC's new issues databases and DealScan. This suggests that the bank does not have a substantial presence in non-M&A businesses such as equity issuance or loan underwriting. While this approach excludes many well-known M&A boutique banks that have small-scale, non-M&A services, we re-estimate our baseline regressions and find similar results (untabulated).

B.3. Validating the Identifying Assumption

To establish causality, we explore the cross-department subsidization within multi-divisional banks, which resemble conglomerates. One crucial identifying assumption is that a bank's non-M&A department performance does not strongly correlate with its M&A advisory

department performance, in which case cross-subsidization becomes a possible friction. Put differently, there is no need (and no room) to cross-subsidize if the performances of these departments are highly synchronized. In addition, a highly correlated performance between the M&A and non-M&A departments would offer an alternative explanation for the results in Table 6. That is, boutique banks' gain of market share comes from their multi-divisional counterparts' poor performance in their M&A advisory division, proxied by the poor performance in their non-M&A departments, rather than from the arrival of high-quality human capital.

In Table IA.3, we perform a set of validation tests. Panel A reports the correlation between a multi-divisional bank's non-M&A department performance and the performance of its M&A department in a specialized industry. The correlation coefficient is both economically small and statistically insignificant. In Panel B, we regress the M&A advisory department performance in a specialized industry on the non-M&A department performance of the same bank, controlling for various sets of fixed effects. Again, the loadings are all statistically insignificant. These findings confirm the absence of a strong co-movement in performance between the M&A and non-M&A departments within multi-divisional banks, lending further support for our identifying assumption.

B.4. A Placebo Test for the JOBS Act

To further sharpen our identification strategy, we explore the cross-industry heterogeneity of going-public activities brought about by the passage of the JOBS Act, which affects differently the IPO underwriting revenues of investment banks with different degrees of ex-ante industry exposure. Since IPO activities in pharmaceutical and biotech industries responded more to the JOBS Act than other industries (Dambra et al. 2015), investment banks specializing in underwriting IPOs in these two industries face less need to cross-subsidize, thus boosting their

ability to retain talent compared to other banks and thereby reducing the supply of skilled M&A bankers to boutique advisors.

In this section, we perform a placebo test to verify that the results are indeed induced by this (exogenous) regulatory event. Specifically, we counterfactually assign year 2008 as an artificial enactment time for the JOBS Act. For the sample period of 2006-2010, we redefine the dummy variable *Post* as one if it is in year 2008-2010, and zero otherwise. We then rerun our regressions and report this placebo test results in Table IA.4. We observe no significant loading in this placebo test, suggesting that the results we obtain from the JOBS Act are unlikely to be driven by other confounding factors.

B.5. Matched Sample Evidence Regarding Deal Outcomes

In Table 9 of the paper, we compare the outcomes of M&A deals advised by boutique advisors and by bulge bracket banks. One potential explanation for the documented differences in deal outcomes is that bulge bracket and boutique banks advise deals of different sizes. To consider this possibility, we re-estimate this set of analyses using a matched sample. Specifically, we use a propensity matching procedure and compare the outcome of each deal advised by a boutique bank with those of three deals that are closest in size and that are advised by bulge bracket banks.

Table IA.5 reports results based on this matched sample. Our findings remain robust.

Figure IA.1: Bulge Bracket vs. Prestigious Boutique Banks

This figure illustrates examples of bulge bracket banks and prestigious boutique banks in our sample. We plot the average number of industries they cover as M&A advisors and the average number of bankers working in the M&A advisory division of these banks every year (observed in our sample). The blue bubbles represent bulge bracket banks, and the red bubbles represent prestigious boutique banks. Bubble size indicates the size of their market shares as M&A advisors. For the top players in each category, we label their names in the figure. See Appendix B for a full list of bulge bracket banks and boutique banks in our sample.

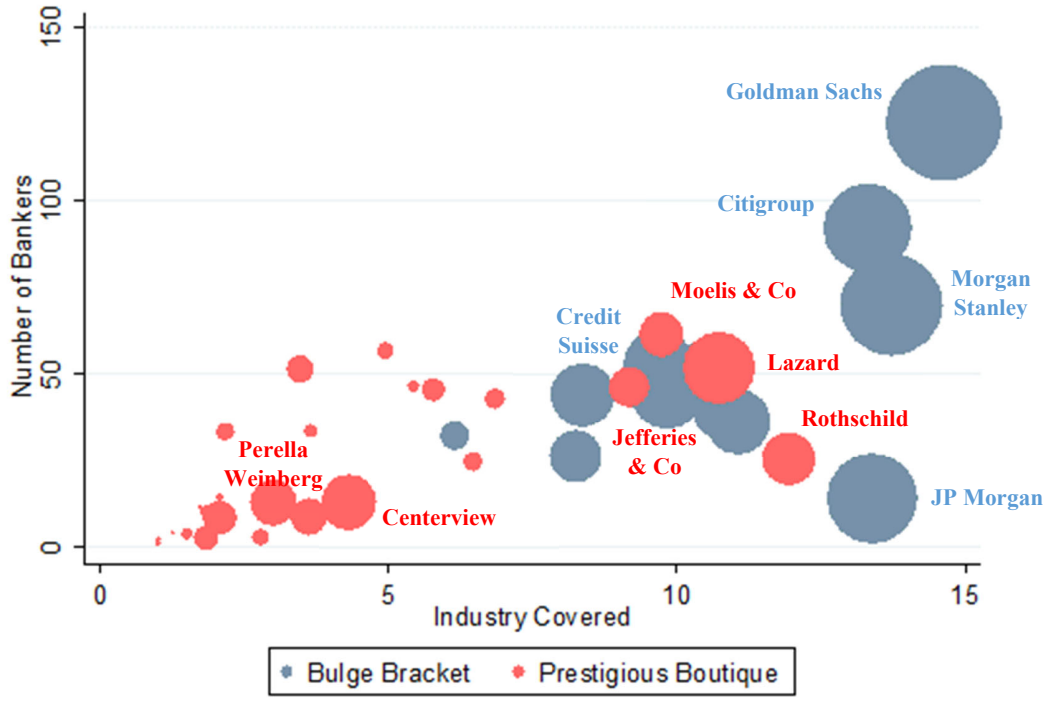

Figure IA.2: Banker Migration among M&A Advisors

This figure illustrates the migration of bankers among some notable M&A advisors. Red nodes represent boutique advisors and blue nodes represent bulge bracket advisors. The arrows between two nodes indicate the migration of bankers, with each arrow pointing from the losing bank towards the gaining bank and the thickness of the arrow representing the net number of bankers that have transitioned between two banks throughout our sample period. Only bank-pairs with at least five net transitioning bankers between them are represented in the figure. Overall, the patterns suggest that bulge bracket banks experience the largest amount of banker outflow, both to other bulge bracket banks and to boutique banks. Some prestigious boutique banks, such as Moelis & Co, Centerview, Lazard, Jefferies, etc., are major receivers of bankers leaving bulge bracket banks. There are also exchanges of bankers between boutique advisors, but the magnitudes are smaller in comparison to the flow between bulge bracket and boutique banks.

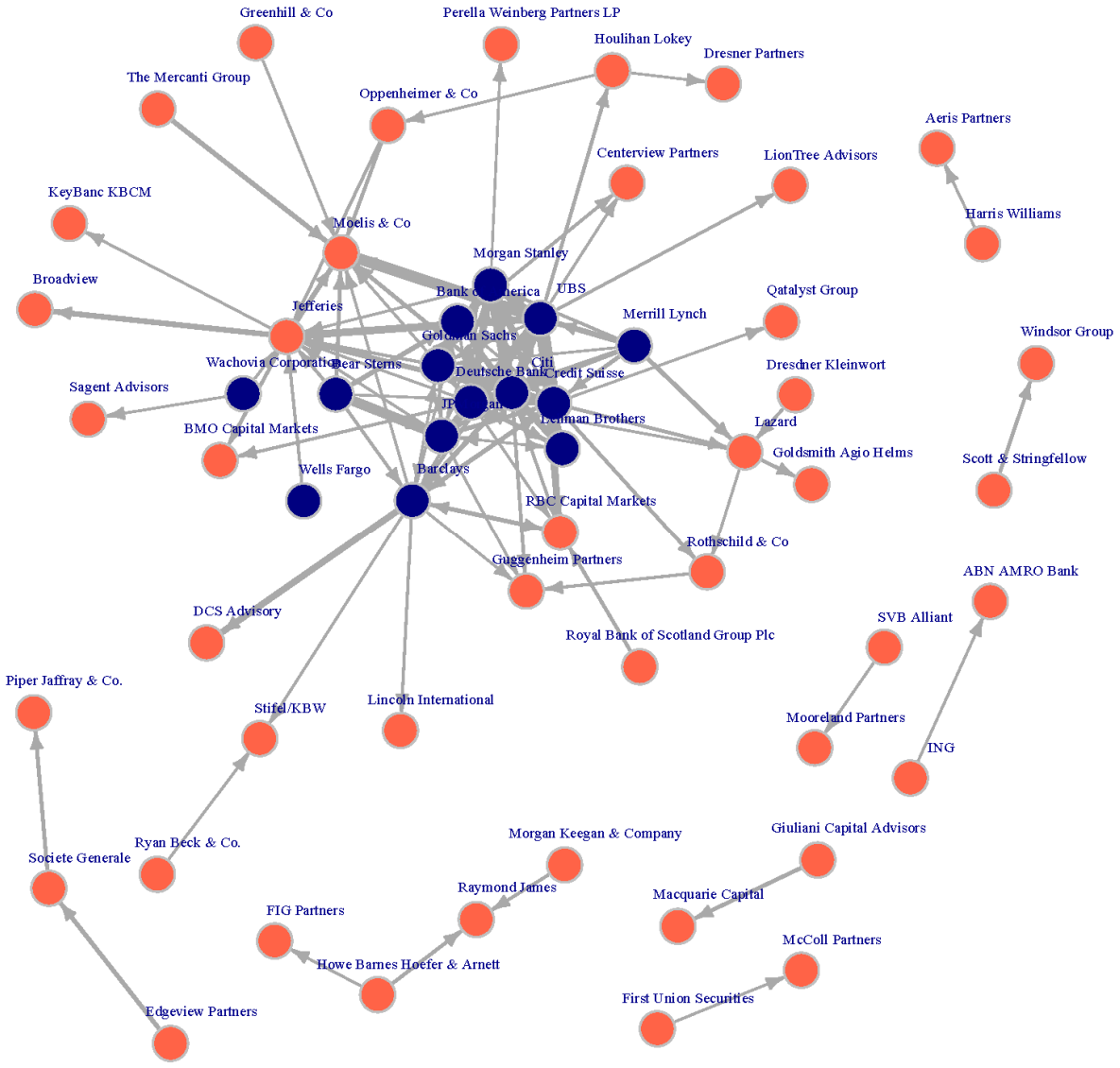

Table IA.1: Exit-only Sample

This table presents results for the career transition of bankers based on a sample that includes only observations where a banker is transitioning from one bank to another. The dependent variable is *Exit to Boutique* in columns 1-2 and is *Exit to Prestigious Boutique* in columns 3-4. The unit of observation is a banker-year. In each column, *Time Horizon* indicates both the horizon during which we measure a banker's quality in terms of his past deal volume and the horizon during which we measure a losing/gaining bank's past performance in terms of its deal volume. Variable definitions are in Appendix A. Robust standard errors clustered at the bank level are in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% level, respectively.

Dependent Variable:	*Exit to Boutique*		*Exit to Prestigious Boutique*	
Time Horizon	3 Years	5 Years	3 Years	5 Years
	(1)	(2)	(3)	(4)
Banker Quality	0.0342	0.0494*	0.0529**	0.0540**
	(0.029)	(0.026)	(0.024)	(0.025)
Banker Experience	-1.3271***	-1.2927***	-0.2545	-0.2373
	(0.173)	(0.171)	(0.174)	(0.167)
Gaining Bank Past Volume	0.0292**	0.0267*	0.0836***	0.0788***
	(0.015)	(0.014)	(0.012)	(0.011)
Banker FE	Yes	Yes	Yes	Yes
Losing Bank × Year FE	Yes	Yes	Yes	Yes
Observations	1,925	1,925	1,925	1,925
Adjusted R-squared	0.350	0.351	0.413	0.415

Table IA.2: An Alternative Way to Classify Boutique Banks

This table presents results for the career transition of bankers (Panel A) and boutique bank performance (Panel B) using an alternative way to define boutique banks. We consider an M&A advisor to be boutique if the fraction of its non-M&A deal volume (i.e., the deal volume of equity issuance and loan underwriting divided by the total deal volume in equity issuance, loan underwriting, and M&A advisory) is less than the minimum of such ratio in the bulge bracket bank sample. In Panel A, the dependent variable is *Exit to Boutique.* The unit of observation is a banker-bank-year. In each column, *Time Horizon* indicates both the horizon during which we measure a banker's quality in terms of his past deal volume and the horizon during which we measure a losing/gaining bank's past performance in terms of its deal volume. Robust standard errors clustered by banker-losing bank are in parentheses. In Panel B, we instrument the labor supply to the gaining banks' M&A division using the non-M&A department performance of bulge bracket banks, which is likely to affect the losing banks' cross-subsidization incentive. The dependent variable is *Deal Growth* in columns 1-2, *Market Share Growth* in columns 3-4, and *New Industry* in column 5. In each column, *Time Horizon* indicates the horizon during which we measure an M&A advisory bank's performance changes and *Non-M&A Spillover*. Robust standard errors clustered by bank-year are reported in parentheses. Detailed definition of variables is provided by Appendix A. *, **, and *** indicate significance at the 10%, 5%, and 1% level, respectively.

Panel A: Career Transition of High-Performing Bankers

Dependent Variable: *Exit to Boutique*								
Time Horizon	3 Years	3 Years	3 Years	3 Years	5 Years	5 Years	5 Years	5 Years
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Banker Quality	0.0099*	0.0099*	0.0112*	0.0101	0.0123**	0.0123**	0.0133**	0.0131**
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
Banker Experience		0.0254	0.0246	0.0196		0.0253	0.0240	0.0195
		(0.023)	(0.024)	(0.020)		(0.023)	(0.024)	(0.020)
Losing Bank Past Performance			-0.0035				-0.0031	
			(0.003)				(0.003)	
Gaining Bank Past Performance			0.0198***	0.0173***			0.0194***	0.0168***
			(0.003)	(0.003)			(0.002)	(0.003)
Banker FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	No	Yes	Yes	Yes	No
Losing Bank FE	Yes	Yes	Yes	No	Yes	Yes	Yes	No
Losing Bank × Year FE	No	No	No	Yes	No	No	No	Yes

Gaining Bank FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	22,110	22,110	22,110	20,979	22,110	22,110	22,110	20,979
Adjusted R-squared	0.153	0.153	0.156	0.268	0.153	0.153	0.156	0.268

Panel B: Boutique Bank Performance and Non-M&A Department Performance in Bulge Bracket Banks

Dependent Variable:	*Deal Growth*		*Market Share Growth*		*New Industry*
Bank Performance Horizon	3 Years	5 Years	3 Years	5 Years	
	(1)	(2)	(3)	(4)	(5)
Non-M&A Spillover	0.0065***	0.0033***	0.0072***	0.0051**	0.0059***
	(0.001)	(0.001)	(0.002)	(0.002)	(0.001)
Gaining Bank × Year FE	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes
Observations	271,320	243,250	271,320	243,250	271,320
Adjusted R-squared	0.048	0.090	0.042	0.101	0.102

Table IA.3: A Validation Test of the Identifying Assumption

This table examines the correlation between non-M&A departments' performance of a multi-diversional bank and the performance of its M&A department in a specialized industry. The unit of observations is bank-year. The dependent variable is *Log*(*M&A Volume in a Specialized Industry*), defined as the natural logarithm of one plus the number of M&A deals in an industry that the bank has the largest labor share. *Log*(*Non-M&A Volume*) is the natural logarithm of one plus the number of IPOs, SEOs, and loans underwritten by the bank. Panel A shows correlation statistics. Panel B shows the regression results. Robust standard errors clustered by bank are reported in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% level, respectively.

Panel A: Correlation

	Log(*M&A Volume in a Specialized Industry*)
Log(*Non-M&A Volume*)	0.0451
	(0.171)

Panel B: Multivariate Regressions

Dependent Variable: *Log*(*M&A Volume in a Specialized Industry*)				
	(1)	(2)	(3)	(4)
Log(Non-M&A Volume)	0.0088	0.0073	0.0126	0.0108
	(0.007)	(0.008)	(0.010)	(0.011)
Bank FE	No	No	Yes	Yes
Industry FE	No	Yes	No	Yes
Observations	920	920	901	901
Adjusted R-squared	0.001	0.001	0.458	0.466

Table IA.4: Boutique Bank Performance and the JOBS Act—A Placebo Test

This table performs a placebo test for Table 7. The sample period is 2006-2010. Instead of 2012, *Post* is re-defined as one if it is in year 2008-2010, and zero otherwise. Columns 1-5 report the results for boutique banks and columns 6-10 report the results for prestigious boutique banks. The dependent variable is *Deal Growth* in columns 1-2 and columns 6-7, *Market Share Growth* in columns 3-4 and columns 8-9, and *New Industry* in columns 5 and 10. In each column, *Time Horizon* indicates the horizon during which we measure an M&A advisory bank's performance changes. Detailed definition of variables is provided by Appendix A. Robust standard errors clustered at the bank-year level are reported in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% level, respectively.

Sample:	All Boutiques					Prestigious Boutiques				
Dependent Variable:	*Deal Growth*		*Market Share Growth*		*New Industry*	*Deal Growth*		*Market Share Growth*		*New Industry*
Time Horizon	3 Years	5 Years	3 Years	5 Years		3 Years	5 Years	3 Years	5 Years	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
JOBS Spillover × Post	0.0031	-0.0073	0.0046	-0.0019	0.0040	0.0124	-0.0127	0.0168	0.0039	0.0030
	(0.004)	(0.005)	(0.007)	(0.012)	(0.004)	(0.009)	(0.012)	(0.017)	(0.028)	(0.008)
JOBS Spillover	-0.0034	0.0029	-0.0052	-0.0037	-0.0023	-0.0172*	-0.0010	-0.0261	-0.0273	-0.0073
	(0.004)	(0.005)	(0.007)	(0.011)	(0.004)	(0.010)	(0.012)	(0.016)	(0.027)	(0.008)
Gaining Bank × Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	34,707	34,707	34,707	34,707	34,707	12,765	12,765	12,765	12,765	12,765
Adjusted R-squared	0.021	0.049	0.019	0.042	0.066	0.021	0.042	0.015	0.036	0.055

Table IA.5: Client Deal Performance — Matched Sample Evidence

This table compares the outcomes of deals advised by boutique and bulge bracket banks using a matched sample. For each deal advised by a boutique bank, we match it to three closest neighbors based on deal size that are advised by bulge bracket banks. The unit of analysis is at the M&A deal level. The dependent variable is the duration of a deal in columns 1-2, success rate in columns 3-4, the CAR of bidders (columns 5-6), and the CAR of targets (columns 7-8), respectively. *Boutique* is a dummy variable set to one if the investment bank is a boutique bank, and zero if a bulge bracket bank. Industry classification is based on the 2-digit SIC code. Robust standard errors clustered by bank are reported in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% level, respectively.

Dependent Variable	*Deal Duration*		*Success Rate*		*Bidder's CAR*		*Target's CAR*	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Deal Size × Boutique	-4.8494*	-4.3130**	0.0101***	0.0141**	0.0160***	0.0091*	0.0178	0.0095
	(2.502)	(1.975)	(0.003)	(0.006)	(0.004)	(0.005)	(0.011)	(0.018)
Deal Size	25.7796***	32.0954***	-0.0241***	-0.0454***	-0.0143***	-0.0126***	-0.0303***	-0.0580***
	(1.232)	(1.362)	(0.001)	(0.003)	(0.003)	(0.004)	(0.009)	(0.014)
Bidder Firm Size		-6.6578***		0.0151***		-0.0063*		0.0296***
		(0.947)		(0.002)		(0.003)		(0.009)
Bidder Leverage		11.6032		0.0713***		0.0628		0.0980
		(7.665)		(0.019)		(0.045)		(0.096)
Bidder Market to Book		0.1914		0.0002		0.0019***		0.0005
		(0.120)		(0.000)		(0.001)		(0.001)
Bidder Cash Holding		30.3716***		-0.0861**		0.0095		0.0061
		(11.050)		(0.034)		(0.032)		(0.074)
Bidder ROA		-12.4321		0.1289**		-0.0569		0.2617*
		(10.231)		(0.057)		(0.099)		(0.144)
Bank FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	No	Yes	No	Yes	No	Yes	No	Yes
Bidder Industry FE	No	Yes	No	Yes	No	Yes	No	Yes
Observations	11,948	3,829	12,082	3,872	1,773	1,266	1,436	479
Adjusted R-squared	0.203	0.326	0.022	0.098	-0.011	0.077	0.023	0.167