Internet Appendix (Not to be published)

Is it the Investment Bank or the Investment Banker? A Study of the Role of Investment Banker Human Capital in Acquisitions

1 Fixed Effects Analysis

We analyze the relative importance of investment banker and investment bank fixed effects. Existing literature analyzing individual fixed effects includes Bertrand and Schoar (2003), who use a fixed effects model to identify senior managements' impact on firm strategy and performance. Their identification strategy requires a manager to work for at least two different firms within the sample period to be able to separately identify manager and firm fixed effects. More recently, Graham, Li, and Qiu (2012) use the methodology of Abowd, Kramarz, and Margolis (1999) to isolate manager fixed effects. The idea is that we can keep the set of managers who have worked at only one firm in the sample as long as another manager has either moved from or to that firm. This allows the researcher to conduct the analysis using a larger number of individuals and isolate individual fixed effects from firm fixed effects.

1.1 Methodological details of the Fixed Effects Model

Consider the following linear model for acquisition performance:

$$y_{ijkt} = \beta x_{ijt} + \delta_t + \alpha_j + \gamma_k + \varepsilon_{ijkt} \tag{1}$$

where y_{ijkt} is the performance variable for the i^{th} deal advised by the j^{th} investment bank

and the k^{th} investment banker, x_{ijt} are control variables that represent deal, acquirer, target, and time-varying bank characteristics, δ_t are time fixed effects, α_j are investment bank fixed effects, and γ_k are investment banker fixed effects.

Our focus is the retrieval of the investment banker and the investment bank fixed effects, γ_k and α_j respectively. Bertrand and Schoar (2003) use movers within a sample of CEOs to identify whether individual fixed effects can explain cross-sectional variation in corporate policy variables (We call a sample composed purely of movers as the "mobility" sample from here on). As we discuss below, Abowd, Kramarz, and Margolis (1999) (AKM) develop a methodology to separate person and institution fixed effects using a larger sample than is allowed by using the mobility sample. We use their methodology, which is developed further in Abowd, Creecy, and Kramarz (2002). AKM is a part of a large literature in labor economics that attempts to isolate sources that are statistically related to employment compensation. Graham, Li, and Qiu (2011) use this methodology to examine the variation in CEO compensation. Ewens and Rhodes-Kropf (2015) use it to examine the impact of venture capital partners versus venture capital firms on the successful exit valuation of portfolio companies.

In our context, the AKM method allows us to estimate investment bank and investment banker fixed effects for both movers and stayers. As in the Bertrand and Schoar (2003) study, one has to define the sample in which fixed effects can be estimated, theirs being the mobility sample of CEOs. The analogous group in the AKM method is the "connected" group. Detailed by Abowd, Creecy, and Kramarz (2002), the "connectedness" sample provides the set of investment banks and investment bankers for which the fixed effects can be identified with the AKM method.

The connectedness sample requires some investment bankers to be employed by multiple investment banks. Any two investment banks are connected if an investment banker moves from one to the other and any string of investment banks is connected if they are connected to an investment bank that is connected to another investment bank. For example, if an

investment banker **a** from investment bank **A** moved to investment bank **B** and another investment banker **b** moved from investment bank **B** to investment bank **C** then **A**, **B**, **C,** **a**, and **b** are connected. If another investment banker **c** moved from investment bank **D** to **A**, **B**, or **C** then **A**, **B**, **C**, **D, a**, **b**, and **c** are all connected. Connectedness is related to, but not identical to, mobility. A small amount of mobility can generate a large amount of connectedness. Importantly, even an investment banker that has never moved from bank **A** is part of this connected group. Thus, even investment bankers that are not mobile can be part of the connected group.

Within each group, there is person mobility, which connects persons and firms within the group. Between groups, there is no mobility. Abowd, Kramarz, and Margolis (1999) formally prove that connectedness is necessary and sufficient for the separate identification of person and firm fixed effects. Further, Abowd, Creecy, and Kramarz (2002) show that connections invite computationally feasible estimation of the investment bank and person fixed effects for each connected group, relative to a within-group benchmark.[1]

There are some important benefits of using the AKM framework. First, rather than using only the sample of movers, the AKM methodology gives us greater sample size and statistical power by allowing us to include non-movers in the sample (and estimate investment banker fixed effects for both movers and non-movers). Second, having a broader sample of both movers and non-movers increases the generalizability of the results by reducing sample selection biases. A third benefit, namely the reduction of computation time in large datasets, is less important in our context since we have only 271 bankers in the sample. Cornelissen (2008) shows that the dummy variable fixed effects estimator gives the same results as the AKM estimation methodology. However, the dummy variable estimation masks the fact that fixed effects cannot be compared across connected groups without additional assumptions.

We use Cornelissen's (2008) Stata program (called *felsdvreg*) which implements the AKM methodology to estimate our fixed effects models. This methodology sweeps out one of the

[1]The analysis of managerial compensation in Graham, Li, and Qiu (2012) has more detail on the methodology, its strengths and its limitations.

fixed effects (in our case, investment banker fixed effects), by demeaning the equation (**??**) by the average value of this equation across all the investment banker fixed effects; and then estimating a two way fixed effects model. Investment banker fixed effects are then recovered from a simple calculation based on the estimated model.

We now provide a detailed account of the AKM estimation methodology. It is useful to understand the basic features of how the AKM method separately identifies the investment banker and investment bank effect using the sample of movers. Define the variable F_{jkt} as a dummy variable equal to one if investment banker k works at investment bank j at time t, and zero otherwise. We can rewrite equation (1) as:

$$y_{ijkt} = \beta x_{ijt} + \delta_t + \sum_{j=1}^{J} F_{jkt}\alpha_j + \gamma_k + \varepsilon_{ijkt} \tag{2}$$

The AKM method first sweeps out the investment banker fixed effect by averaging over the investment banker's deals to get:

$$\overline{y}_k = \beta \overline{x}_k + \overline{\delta}_t + \sum_{j=1}^{J} \overline{F}_{jk}\alpha_j + \gamma_k + \overline{\varepsilon}_k \tag{3}$$

Here, $\overline{y}_k$ is investment banker k's average acquisition performance across the whole sample period. Next, demean equation (2) with equation (3) to get:

$$y_{ijkt} - \overline{y}_k = \beta(x_{ijt} - \overline{x}_k) + (\delta_t - \overline{\delta}_t) + \sum_{j=1}^{J}(F_{jkt} - \overline{F}_{jk})\alpha_j + (\varepsilon_{ijkt} - \overline{\varepsilon}_k) \tag{4}$$

First, note that the investment banker fixed effects have been removed with demeaning. Second, the term $(F_{jkt} - \overline{F}_{jk})\alpha_j$ makes it clear that the investment bank fixed effect is identified using investment bankers that move (i.e. $F_{jkt} \neq \overline{F}_{kj}$). Analogous to the description in Graham, Li and Qiu (2012) and Ewens and Rhodes-Kropf (2015), the differences in performance for investment bankers changing investment banks allow us to estimate the investment bank fixed effects for the investment banks which had a mover. Finally, we can recover the

investment banker fixed effects using the estimates from the standard least square dummy variable regression in (4) and the following equation ($\overline{\delta}_t$, often treated as the benchmark in estimating time effects, is assumed to be zero):

$$\widehat{\gamma}_k = \overline{y}_k - \hat{\beta}\overline{x}_k - \sum_{j=1}^{J} \overline{F}_{jk}\hat{\alpha}_j \tag{5}$$

Intuitively, the above procedure uses the performance differential of an investment banker who has worked in different investment banks to determine the fixed effects for all the investment banks at which he or she has been employed (with one bank fixed effect being the benchmark). Once the investment bank fixed effects are identified, the investment banker fixed effects can be determined by subtracting the observable determinants and firm fixed effects from the average performance of the investment banker.

Note that the connectedness sample requires dropping one investment banker by normalizing the group mean to zero for each of the connected groups. Further, comparison of fixed effects across these groups requires a normalization as discussed in Abowd, Creecy and Kramarz (2002). While we report the distribution of the investment banker fixed effects of the largest connected group for this reason, our results are similar when we focus on the largest connected group.

We also examine the relative importance of banker fixed effects, bank fixed effects, and other control variables in explaining the variation in our acquisition outcome variables. In particular, we follow Graham, Li, and Qiu (2012) and note that the model R-squared is calculated as

$$R^2 = \frac{cov(y_{ijk}, \widehat{y}_{ijk})}{var(y_{ijk})} = \frac{cov(y_{ijk}, \widehat{\beta}x_{ij} + \widehat{\delta}_t + \widehat{\alpha}_j + \widehat{\gamma}_k)}{var(y_{ijk})} = \frac{cov(y_{ijk}, \widehat{\beta}x_{ij} + \widehat{\delta}_t)}{var(y_{ijk})} + \frac{cov(y_{ijk}, \widehat{\alpha}_j)}{var(y_{ijk})} + \frac{cov(y_{ijk}, \widehat{\gamma}_k)}{var(y_{ijk})}$$

Each normalized covariance term (excluding the residual) above may be interpreted as a decomposition of the model's R-squared, with the covariance values corresponding to the fraction of the model sum of squares attributable to particular factors. Thus, we can consider

them as the relative importance of different covariates in explaining the dependent variable for a given regression model. We note that the fixed effects analysis meant to be a preliminary one and is intended to serve as a starting point of our analysis. We do not take any causal interpretation from this test. Rather, it is a an additional test in a package which will include much more rigorous analysis (reported below).

1.2 CAR Fixed Effects Results

The results of our fixed effects analysis for cumulative abnormal returns (CAR) on acquisition announcements are reported in Table A1. We include a constant term in the fixed effects estimations as well as all the control variables described above, and industry of the acquirer fixed effects. We cluster the standard errors at the deal level since one deal can appear more than once if multiple bankers provide advice on a deal. Panel A of Table A1 reports the results of this analysis for CAR(-2,+2), CAR(-3,+3), and CAR(-5,+5). The empirical evidence indicates that both the investment banker and the investment bank fixed effects are significant predictors of CAR. In Panel A of Table A1, investment banker fixed effects are jointly significant at the 5 percent level or better. Further, the investment bank fixed effects are jointly significant at the 5 percent level for CAR(-3,+3) and CAR(-5,+5), but not for CAR(-2,+2). Thus, both investment bank and investment bankers are significant determinants of acquisition CAR. We also examine the significance on investment bank fixed effects if we exclude investment banker fixed effects in Column (5), and find that the significance of the investment bank fixed effects substantially improves. Thus, part of the investment bank fixed effects may reflect the human capital of the investment bankers that work on a deal.

Panel B of Table A1 reports the relative importance of banker and bank fixed effects in explaining the variation in CAR. Investment banker fixed effects have a higher explanatory power than investment bank fixed effects. For instance, the explanatory power of banker fixed effects for CAR (-3,+3) is 0.566 compared to 0.114 for investment bank fixed effects.

The control variables scaled covariance value is 0.077 and that for the residuals is 0.242. To obtain an intuitive understanding of these results, we calculate what fraction of the model R-squared is attributable to the investment banker and the investment banker fixed effects. We find that 74.7 percent (=0.566/(1-0.242)) of the model R-square is attributable to investment banker fixed effects whereas 15.04 percent of the model R-squared is attributable to investment bank fixed effects. We find similar results for CAR(-2,+2) and CAR(-5,+5).

Figure 1 shows the distribution of the demeaned investment banker fixed effects for CAR for the largest connected group. Note that the estimated investment banker fixed effects are not comparable across connected groups without additional assumptions and normalization, and so we report the distribution for the largest connected group, which represents 512 bankers or roughly 72.2 percent of our sample of investment bankers. Our results are qualitatively similar for the fixed effects estimates for all bankers. Our results in this section suggest that investment bankers may have significant association with acquisition outcomes, over and above the effect of the investment banks that employ them.

1.3 Abnormal ROA Fixed Effects Results

We also analyze the impact of investment banker advisers on post-acquisition operating performance of the acquirer, which we measure as ABNORMAL_ROA. We re-estimate the fixed effects model described above with ABNORMAL_ROA as the dependent variable. Note that, in all our regressions with ABNORMAL_ROA, we control for effective year fixed effects, since ABNORMAL_ROA is measured relative to effective year. We present the results of our fixed effects analysis for ABNORMAL_ROA in Table A2. In Panel A of Table A2, we find that while investment banker effects are statistically significant determinants of ABNORMAL_ROA, and investment bank fixed effects are not. Indeed, investment bank fixed effects become statistically significant once we remove investment banker fixed effects.

Panel B of Table A2 reports the extent of explanatory power of investment bank and investment banker fixed effects. In particular, the relative importance of the investment

banker fixed effects is 0.627 whereas that for bank fixed effects is about 0.084. The proportion of model R-squared for ABNORMAL_ROA attributable to investment banker fixed effects is about 75.45 percent, and that to investment bank fixed effects is 10.1 percent. As in the previous set of fixed effects analysis, we interpret these results as suggestive of a potentially important role played by investment bankers in adding value to acquiring firms, over and above the effect of the investment bank. Figure 2 shows the distribution of the demeaned investment banker fixed effects for ABNORMAL_ROA for the largest connected group.

Table A1: Fixed Effects Analysis for Deal Announcement Returns

This table presents the results of fixed effects regressions for deal announcement CARs. In Panel A we report the F-statistics for the joint significance of banker fixed effects, and bank fixed effects. We also report the number of bankers. *, **, and *** denote statistical significance at 10%, 5%, and 1% levels, respectively. In Panel B we report the relative importance of investment banker fixed effects, investment bank fixed effects, all other control variables, and the residual term in explaining the variation in the deal announcement returns. In this panel, we report the percentage of model R-squared explained by each set of variables in parentheses. All models are estimated with a constant term, as well as year and industry fixed effects.

Panel A: Statistical significance of banker and bank fixed effects

	(1)	(2)	(3)	(4)	(5)
	Banker fixed effects F-statistic	Bank fixed effects F-statistic	N	Number of bankers	Bank fixed effects F-statistic in regressions excluding banker fixed effects
CAR(-2,+2)	1.19**	1.100	1293	709	3.59***
CAR(-3,+3)	1.48***	1.42**	1293	709	4.12***
CAR(-5,+5)	1.43***	1.55**	1293	709	4.15***

Panel B: Relative importance of bank and banker fixed effects (Percentage of R-sq. explained in parentheses)

	(1)	(2)	(3)	(4)	(5)
	Banker fixed effects	Bank fixed effects	Other covariates	Residual	Bank fixed effects in regressions excluding banker fixed effects
CAR(-2,+2)	0.500 (69.35%)	0.087 (12.07%)	0.135 (18.72%)	0.279	0.204 (55.2%)
CAR(-3,+3)	0.566 (74.67%)	0.114 (15.04%)	0.077 (10.16%)	0.242	0.228 (60.45%)
CAR(-5,+5)	0.556 (72.97%)	0.104 (13.65%)	0.102 (13.39%)	0.238	0.218 (55.66%)

Table A2: Fixed Effects Analysis for Abnormal ROA

This table presents the results of fixed effects regressions for the post-acquisition operating performance of the acquirer as measured by abnormal ROA. The calculation of abnormal ROA is explained in the Appendix. In Panel A, we report the F-statistics for the joint significance of banker fixed effects, and bank fixed effects. We also report the number of bankers. *, **, and *** denote statistical significance at 10%, 5%, and 1% levels, respectively. In Panel B, we report the relative importance of investment banker fixed effects, investment bank fixed effects, all other control variables, and the residual term in explaining the variation in the abnormal ROA. In this panel, we report the percentage of model R-squared explained by each set of variables in parentheses. All models are estimated with a constant term, as well as year and industry fixed effects.

Panel A: Statistical significance of banker and bank fixed effects

	(1)	(2)	(3)	(4)	(5)
	Banker fixed effects F-statistic	Bank fixed effects F-statistic	N	Number of bankers	Bank fixed effects F-statistic in regressions excluding banker fixed effects
ABNORMAL_ROA	2.15***	0.89	990	586	2.54***

Panel B: Relative importance of bank and banker fixed effects (Percentage of R-sq. explained in parentheses)

	(1)	(2)	(3)	(4)	(5)
	Banker fixed effects	Bank fixed effects	Other covariates	Residual	Bank fixed effects in regressions excluding banker fixed effects
ABNORMAL_ROA	0.627 (75.45%)	0.084 (10.1%)	0.121 (14.56%)	0.169	0.242 (74.29%)

Table A3: Investment Banker Experience and Deal Announcement Returns

This table presents the results of OLS regressions where the dependent variable is deal announcement returns. *PRIOR_3_YEAR_EXP (DEAL_COUNT)* is the log of one plus the number of deals that the banker has worked on over the past three years. *PRIOR_3_YEAR_EXP (DEAL_AMOUNT)* is the log of one plus the total deal value of the deals that the banker has worked on over the past three years. All other independent variables are defined in Appendix I. All specifications include a constant, industry, year, and bank fixed effects. We also report the number of bankers. Robust standard errors clustered at the acquisition level are in parentheses. *, **, and *** denote statistical significance at 10%, 5%, and 1% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
	CAR(-2,+2)	CAR(-2,+2)	CAR(-3,+3)	CAR(-3,+3)	CAR(-5,+5)	CAR(-5,+5)
PRIOR_3_YEAR_EXP (DEAL_COUNT)	0.008**		0.012***		0.013***	
	(0.003)		(0.004)		(0.004)	
PRIOR_3_YEAR_EXP (DEAL_AMOUNT)		0.002***		0.003***		0.003***
		(0.001)		(0.001)		(0.001)
LOG_TRANSACTION_VALUE	-0.007**	-0.008**	-0.007*	-0.008**	-0.010**	-0.010**
	(0.003)	(0.003)	(0.004)	(0.004)	(0.004)	(0.004)
TENDER_OFFER_DEAL	-0.008	-0.009	-0.012	-0.014	-0.032*	-0.034**
	(0.013)	(0.013)	(0.016)	(0.017)	(0.017)	(0.017)
FRIENDLY_DEAL	-0.015	-0.016	-0.036	-0.037	-0.077*	-0.077*
	(0.034)	(0.034)	(0.036)	(0.036)	(0.040)	(0.040)
DIVERSIFYING_DEAL	-0.010	-0.010	-0.018*	-0.018*	-0.016	-0.016
	(0.008)	(0.008)	(0.009)	(0.009)	(0.010)	(0.010)
PERCENTAGE_CASH	0.008	0.009	0.018	0.018	0.024*	0.024*
	(0.010)	(0.010)	(0.011)	(0.011)	(0.012)	(0.012)
PUBLIC_TARGET	-0.024***	-0.023***	-0.021**	-0.020*	-0.010	-0.009
	(0.009)	(0.009)	(0.010)	(0.010)	(0.011)	(0.011)
LOG_ACQUIRER_ASSETS	0.000	0.000	0.002	0.002	-0.000	-0.000
	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)	(0.004)
ACQUIRER_ROA	0.022	0.025	0.061	0.065	0.103	0.107
	(0.052)	(0.052)	(0.066)	(0.065)	(0.067)	(0.067)
ACQUIRER_MARKET_TO_BOOK	0.000	0.000	0.000	0.000	0.000	0.000
	(0.001)	(0.000)	(0.001)	(0.001)	(0.000)	(0.000)
PERC_OWNED_BEFORE	0.000	0.000	0.001	0.001	0.001	0.001
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
PRIOR_12_MONTH_RET	0.015	0.015	0.016	0.017	0.012	0.012
	(0.010)	(0.010)	(0.011)	(0.011)	(0.011)	(0.011)
ACQUIRER_ADVISOR_REPUTATION	0.874	0.914	0.803	0.850	0.374	0.425
	(0.646)	(0.640)	(0.675)	(0.670)	(0.704)	(0.698)
Observations	1,293	1,293	1,293	1,293	1,293	1,293
Number of bankers	709	709	709	709	709	709
Adjusted R-squared	0.285	0.289	0.296	0.298	0.312	0.315

Table A4: Investment Banker Experience, Deal Announcement Returns, and Abnormal ROA: Industry R&D and Intangibility

This table presents the results of OLS regressions where the dependent variable in Panel A is deal announcement returns and in Panel B is the abnormal ROA. The calculation of abnormal ROA is explained in the Appendix. *PRIOR_DEAL_EXP (DEAL_COUNT)* is the log of one plus the number of deals that the banker has worked on over the past five years. *PRIOR_DEAL_EXP (DEAL_AMOUNT)* is the log of one plus the total deal value of the deals that the banker has worked on over the past five years. *IND_R&D_TO_ASSETS* is the average industry R&D to assets ratio in the industry of the acquirer. *IND_INTAN_TO_ASSETS* is the average industry intangibles to assets ratio in the industry of the acquirer. All other independent variables are defined in Appendix I. All specifications include a constant, year, and bank fixed effects. Panel A models additionally include industry fixed effects. We also report the number of bankers. Robust standard errors clustered at the acquisition level are in parentheses. *, **, and *** denote statistical significance at 10%, 5%, and 1% levels, respectively.

Panel A: CAR(-3,+3)

	(1)	(2)	(3)	(4)
PRIOR_DEAL_EXP (DEAL_COUNT)	0.021***		0.026***	
	(0.008)		(0.010)	
PRIOR_DEAL_EXP (DEAL_AMOUNT)		0.005***		0.006***
		(0.002)		(0.002)
PRIOR_DEAL_EXP (DEAL_COUNT) x IND_R&D_TO_ASSETS	0.002**			
	(0.001)			
PRIOR_DEAL_EXP (DEAL_AMOUNT) x IND_R&D_TO_ASSETS		0.001*		
		(0.000)		
PRIOR_DEAL_EXP (DEAL_COUNT) x IND_INTAN_TO_ASSETS			0.006**	
			(0.003)	
PRIOR_DEAL_EXP (DEAL_AMOUNT) x IND_INTAN_TO_ASSETS				0.002*
				(0.001)
LOG_TRANSACTION_VALUE	-0.008*	-0.008**	-0.008*	-0.008**
	(0.004)	(0.004)	(0.004)	(0.004)
TENDER_OFFER_DEAL	-0.013	-0.015	-0.012	-0.014
	(0.016)	(0.017)	(0.016)	(0.017)
FRIENDLY_DEAL	-0.037	-0.037	-0.036	-0.036
	(0.035)	(0.035)	(0.035)	(0.035)
DIVERSIFYING_DEAL	-0.018*	-0.018*	-0.018*	-0.018**
	(0.009)	(0.009)	(0.009)	(0.009)
PERCENTAGE_CASH	0.018	0.018	0.018	0.018
	(0.011)	(0.011)	(0.011)	(0.011)
PUBLIC_TARGET	-0.020*	-0.019*	-0.020*	-0.020*
	(0.010)	(0.010)	(0.010)	(0.010)
LOG_ACQUIRER_ASSETS	0.002	0.002	0.002	0.002
	(0.003)	(0.003)	(0.003)	(0.003)
ACQUIRER_ROA	0.057	0.058	0.056	0.058
	(0.065)	(0.065)	(0.066)	(0.065)
ACQUIRER_MARKET_TO_BOOK	0.000	0.000	0.000	0.000
	(0.001)	(0.001)	(0.001)	(0.001)
PERC_OWNED_BEFORE	0.001	0.001	0.001	0.001
	(0.001)	(0.001)	(0.001)	(0.001)
PRIOR_12_MONTH_RET	0.017	0.016	0.017	0.017
	(0.011)	(0.011)	(0.011)	(0.011)
ACQUIRER_ADVISOR_REPUTATION	0.883	0.925	0.893	0.944
	(0.677)	(0.670)	(0.675)	(0.665)
Observations	1,293	1,293	1,293	1,293
Number of bankers	709	709	709	709
Adjusted R-squared	0.297	0.297	0.297	0.297

Table A4 (Continued)

Panel B: Abnormal ROA

	(1)	(2)	(3)	(4)
PRIOR_DEAL_EXP (DEAL_COUNT)	0.035***		-0.003	
	(0.009)		(0.009)	
PRIOR_DEAL_EXP (DEAL_AMOUNT)		0.007***		-0.002
		(0.002)		(0.002)
PRIOR_DEAL_EXP (DEAL_COUNT) x IND_R&D_TO_ASSETS	0.006***			
	(0.002)			
PRIOR_DEAL_EXP (DEAL_AMOUNT) x IND_R&D_TO_ASSETS		0.002***		
		(0.000)		
PRIOR_DEAL_EXP (DEAL_COUNT) x IND_INTAN_TO_ASSETS			-0.004	
			(0.003)	
PRIOR_DEAL_EXP (DEAL_AMOUNT) x IND_INTAN_TO_ASSETS				-0.001
				(0.001)
LOG_TRANSACTION_VALUE	0.005	0.005	0.008**	0.008**
	(0.004)	(0.004)	(0.004)	(0.004)
TENDER_OFFER_DEAL	0.055*	0.052*	0.068**	0.067**
	(0.029)	(0.028)	(0.030)	(0.030)
FRIENDLY_DEAL	0.052	0.051	0.060	0.062*
	(0.037)	(0.038)	(0.036)	(0.036)
DIVERSIFYING_DEAL	-0.020*	-0.020*	-0.021**	-0.021**
	(0.010)	(0.010)	(0.011)	(0.011)
PERCENTAGE_CASH	0.038***	0.036***	0.048***	0.048***
	(0.013)	(0.012)	(0.013)	(0.013)
PUBLIC_TARGET	-0.001	-0.001	-0.001	-0.000
	(0.011)	(0.011)	(0.011)	(0.011)
LOG_ACQUIRER_ASSETS	0.004	0.005	-0.000	-0.001
	(0.004)	(0.005)	(0.004)	(0.004)
ACQUIRER_MARKET_TO_BOOK	0.001	0.000	0.000	0.000
	(0.001)	(0.001)	(0.001)	(0.001)
PERC_OWNED_BEFORE	-0.002*	-0.002*	-0.002**	-0.002*
	(0.001)	(0.001)	(0.001)	(0.001)
PRIOR_12_MONTH_RET	0.000	-0.002	-0.001	-0.001
	(0.011)	(0.011)	(0.011)	(0.011)
ACQUIRER_ADVISOR_REPUTATION	-0.644	-0.586	-1.136	-1.110
	(0.716)	(0.704)	(0.715)	(0.711)
Observations	990	990	990	990
Number of bankers	586	586	586	586
Adjusted R-squared	0.274	0.282	0.242	0.240

Table A5: Investment Banking Team Experience and Deal Announcement Returns

This table presents the results of OLS and instrumental variable (IV) regressions where the dependent variable is deal announcement returns. *TEAM_EXPERIENCE (DEAL_COUNT)* is the average across all investment bankers of the log of one plus the number of deals each investment banker has worked on over the past five years. *TEAM_EXPERIENCE (DEAL_AMOUNT)* the average across all investment bankers of the log of one plus the total value of deals each investment banker has worked on over the past five year. *TEAM_EXPERIENCE (DEAL_COUNT)* and *TEAM_EXPERIENCE (DEAL_AMOUNT)* are the endogenous variables in the instrumental variable regressions. *EARLY_CAREER* is a dummy variable that is 1 if the time between the acquisition announcement year and the investment bankers' college graduation year is less than the sample median. *POOR_GRAD_YEAR_STK_MKT* is a dummy variable that is 1 if the S&P stock returns in the two years prior to the graduation from college is in the lowest quintile across all investment bankers in the sample. *I(POOR_MKT_GRADUATES_EARLY_CAREER)* is a dummy variable for whether or not the deal has any bankers that have *EARLY_CAREER* equal to 1 and *POOR_GRAD_YEAR_STK_MKT* equal to 1. *GRADUATE_DEGREE_FRACTION* is the fraction of the investment banking team members that have a graduate degree. All other independent variables are defined in Appendix I. All specifications include a constant, industry, year, and bank fixed effects. We also report the number of bankers. Robust standard errors are reported in parentheses. *, **, and *** denote statistical significance at 10%, 5%, and 1% levels, respectively.

Panel A: OLS regressions

	(1)	(2)	(3)	(4)	(5)	(6)
	CAR(-2,+2)	CAR(-2,+2)	CAR(-3,+3)	CAR(-3,+3)	CAR(-5,+5)	CAR(-5,+5)
TEAM_EXPERIENCE (DEAL_COUNT)	0.014*		0.017**		0.020**	
	(0.007)		(0.008)		(0.008)	
TEAM_EXPERIENCE (DEAL_AMOUNT)		0.003**		0.004**		0.005***
		(0.002)		(0.002)		(0.002)
LOG_TRANSACTION_VALUE	-0.007**	-0.008**	-0.008*	-0.008*	-0.011**	-0.011**
	(0.004)	(0.004)	(0.004)	(0.004)	(0.005)	(0.005)
TENDER_OFFER_DEAL	-0.006	-0.006	-0.010	-0.011	-0.028	-0.029
	(0.014)	(0.014)	(0.017)	(0.017)	(0.018)	(0.018)
FRIENDLY_DEAL	-0.013	-0.015	-0.037	-0.038	-0.080**	-0.082**
	(0.031)	(0.030)	(0.033)	(0.033)	(0.039)	(0.039)
DIVERSIFYING_DEAL	-0.012	-0.012	-0.018*	-0.018*	-0.018*	-0.018*
	(0.008)	(0.008)	(0.010)	(0.010)	(0.010)	(0.010)
PERCENTAGE_CASH	0.011	0.011	0.020*	0.020*	0.029**	0.030**
	(0.010)	(0.010)	(0.011)	(0.011)	(0.012)	(0.012)
PUBLIC_TARGET	-0.026***	-0.026***	-0.024**	-0.024**	-0.010	-0.010
	(0.009)	(0.009)	(0.011)	(0.011)	(0.011)	(0.011)
LOG_ACQUIRER_ASSETS	0.001	0.000	0.002	0.002	-0.000	-0.000
	(0.003)	(0.003)	(0.004)	(0.004)	(0.004)	(0.004)
ACQUIRER_ROA	0.072	0.070	0.113*	0.112*	0.141**	0.139**
	(0.054)	(0.053)	(0.067)	(0.066)	(0.067)	(0.066)
ACQUIRER_MARKET_TO_BOOK	0.000	0.000	0.000	0.000	-0.000	-0.000
	(0.001)	(0.001)	(0.001)	(0.001)	(0.000)	(0.000)
PERC_OWNED_BEFORE	-0.000	-0.000	0.001	0.001	0.000	0.001
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
PRIOR_12_MONTH_RET	0.011	0.011	0.012	0.011	0.004	0.004
	(0.011)	(0.011)	(0.011)	(0.011)	(0.012)	(0.012)
ACQUIRER_ADVISOR_REPUTATION	0.563	0.594	0.655	0.694	0.156	0.200
	(0.700)	(0.696)	(0.714)	(0.710)	(0.725)	(0.718)
Observations	700	700	700	700	700	700
Adjusted R-squared	0.235	0.237	0.247	0.247	0.276	0.278

Table A5 (Continued)

Panel B: IV analysis for CAR(-2,+2)

	(1)	(2)	(3)	(4)
	First stage: TEAM_EXPERIENCE (DEAL_COUNT)	Second stage: CAR (-2,+2)	First stage: TEAM_EXPERIENCE (DEAL_AMOUNT)	Second stage: CAR (-2,+2)
TEAM_EXPERIENCE (DEAL_COUNT)		0.079*		
		(0.041)		
TEAM_EXPERIENCE (DEAL_AMOUNT)				0.017*
				(0.009)
I(POOR_MKT_GRADUATES_EARLY_CAREER)	-0.333***		-1.523***	
	(0.098)		(0.457)	
EARLY_CAREER_FRACTION	-0.314***	0.012	-1.617***	0.016
	(0.087)	(0.020)	(0.394)	(0.022)
POOR_GRAD_YEAR_STK_MKT_FRACTION	-0.001	0.011	-0.004	0.011
	(0.109)	(0.015)	(0.515)	(0.015)
LOG_TRANSACTION_VALUE	-0.025	-0.003	-0.040	-0.004
	(0.030)	(0.004)	(0.136)	(0.004)
TENDER_OFFER_DEAL	-0.150	0.007	-0.558	0.005
	(0.121)	(0.018)	(0.547)	(0.018)
FRIENDLY_DEAL	0.170	-0.041	0.883	-0.043
	(0.176)	(0.030)	(1.139)	(0.026)
DIVERSIFYING_DEAL	-0.020	-0.011	-0.029	-0.012
	(0.062)	(0.009)	(0.298)	(0.009)
PERCENTAGE_CASH	-0.090	0.024**	-0.471	0.025**
	(0.078)	(0.011)	(0.354)	(0.012)
PUBLIC_TARGET	0.093	-0.031***	0.403	-0.031***
	(0.069)	(0.011)	(0.305)	(0.011)
LOG_ACQUIRER_ASSETS	0.045*	-0.005	0.184*	-0.005
	(0.024)	(0.004)	(0.108)	(0.004)
ACQUIRER_ROA	0.182	0.015	1.120	0.010
	(0.357)	(0.057)	(1.574)	(0.055)
ACQUIRER_MARKET_TO_BOOK	-0.002	-0.001***	-0.009	-0.001**
	(0.008)	(0.001)	(0.036)	(0.001)
PERC_OWNED_BEFORE	-0.010	0.001	-0.044	0.001
	(0.011)	(0.001)	(0.046)	(0.001)
PRIOR_12_MONTH_RET	0.039	0.019*	0.423	0.015
	(0.076)	(0.011)	(0.300)	(0.011)
ACQUIRER_ADVISOR_REPUTATION	7.580	-0.286	20.387	-0.038
	(5.498)	(0.836)	(27.686)	(0.862)
GRADUATE_DEGREE_FRACTION	0.117	0.003	0.483	0.004
	(0.095)	(0.014)	(0.395)	(0.014)
Observations	527	527	527	527
Adjusted R-squared	0.463	0.038	0.435	0.007

Table A5 (Continued)

Panel C: IV analysis for CAR(-3,+3) and CAR(-5,+5)

	(1)	(2)	(3)	(4)
	Second stage: CAR(-3,+3)	Second stage: CAR(-3,+3)	Second stage: CAR(-5,+5)	Second stage: CAR (-5,+5)
TEAM_EXPERIENCE (DEAL_COUNT)	0.105**		0.111**	
	(0.045)		(0.045)	
TEAM_EXPERIENCE (DEAL_AMOUNT)		0.023**		0.024**
		(0.010)		(0.010)
EARLY_CAREER_FRACTION	0.024	0.028	0.022	0.027
	(0.022)	(0.025)	(0.023)	(0.025)
POOR_GRAD_YEAR_STK_MKT_FRACTION	0.022	0.022	0.024	0.024
	(0.016)	(0.017)	(0.017)	(0.017)
LOG_TRANSACTION_VALUE	-0.002	-0.003	-0.004	-0.006
	(0.005)	(0.004)	(0.005)	(0.005)
TENDER_OFFER_DEAL	0.010	0.007	-0.008	-0.011
	(0.021)	(0.021)	(0.022)	(0.023)
FRIENDLY_DEAL	-0.053*	-0.056*	-0.125***	-0.127***
	(0.029)	(0.030)	(0.041)	(0.036)
DIVERSIFYING_DEAL	-0.018*	-0.019*	-0.017	-0.018
	(0.010)	(0.011)	(0.011)	(0.011)
PERCENTAGE_CASH	0.031**	0.032**	0.037***	0.038***
	(0.013)	(0.013)	(0.013)	(0.014)
PUBLIC_TARGET	-0.033***	-0.032***	-0.019	-0.019
	(0.012)	(0.012)	(0.012)	(0.012)
LOG_ACQUIRER_ASSETS	-0.005	-0.005	-0.008*	-0.008*
	(0.005)	(0.005)	(0.005)	(0.005)
ACQUIRER_ROA	0.060	0.053	0.123*	0.116*
	(0.070)	(0.068)	(0.069)	(0.067)
ACQUIRER_MARKET_TO_BOOK	-0.001**	-0.001**	-0.001**	-0.001**
	(0.001)	(0.001)	(0.001)	(0.001)
PERC_OWNED_BEFORE	0.002*	0.002*	0.002	0.002
	(0.001)	(0.001)	(0.001)	(0.001)
PRIOR_12_MONTH_RET	0.018	0.012	0.017	0.012
	(0.011)	(0.012)	(0.011)	(0.011)
ACQUIRER_ADVISOR_REPUTATION	-0.372	-0.043	-0.557	-0.212
	(0.963)	(1.015)	(0.956)	(1.015)
GRADUATE_DEGREE_FRACTION	0.003	0.004	0.013	0.015
	(0.015)	(0.015)	(0.016)	(0.016)
Observations	527	527	527	527

Figure 1: CAR Fixed Effects Distribution for the Largest Connected Group

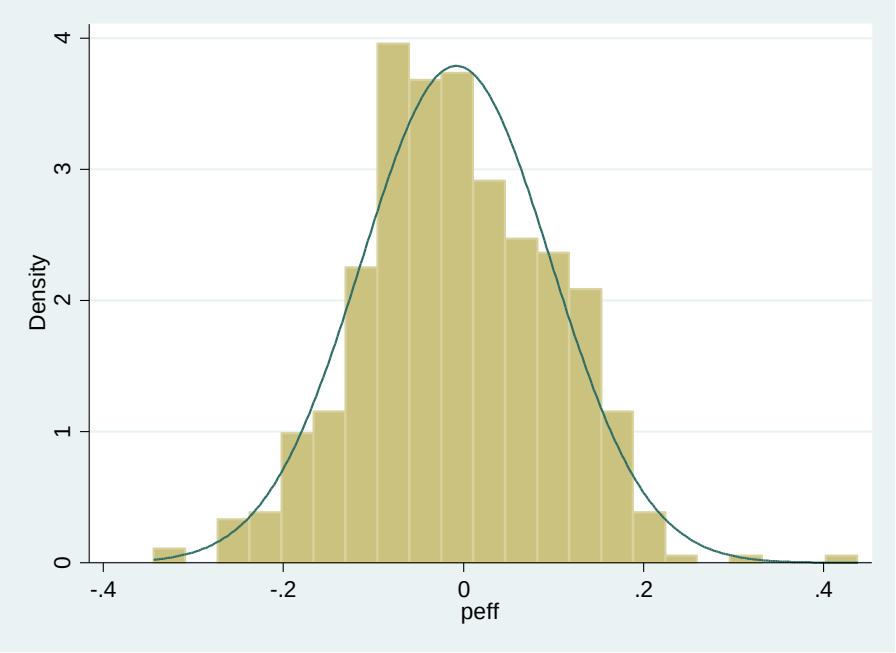

Figure 2: Abnormal ROA Fixed Effects Distribution for the Largest Connected Group