The Valuation Impact of Financial Advisors: An Empirical Analysis of REIT Mergers and Acquisitions

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Abstract   This paper analyzes the effect of financial advisor-monitors on the valuation of real estate investment trust (REIT) mergers. Advisor choice determinants and the effect of advisors on transaction value are examined using a sample of REIT mergers for the 1981 to 2001 period. A two-stage target firm pricing model is estimated: the first stage (logit) estimates the probability of advisor use and the second stage analyzes the effect of advisors on target firm valuation. The results indicate that financial advisor monitoring, possibly by reducing information asymmetries, has significant positive effects on the value of REIT acquisitions.

Merger and acquisition activity in the financial services sector has increased dramatically over the last decade. Real estate investment trusts (REITs) have been at the forefront of this trend. And the pace of merger activity in this sector appears to have been accelerating in recent years.[1] While the reasons for this upsurge in merger activity are diverse and complex, the overriding factors are likely the drive for efficiency gains and risk reduction necessitated by increasing competitive pressures.[2] Mergers may produce efficiency gains by combining complementary inputs, focusing post merger firm activities, or generating scale economies. Mergers may reduce risk by diversifying the firm's activities either geographically or in different product markets or both. Risk reducing mergers generate efficiencies by reducing the firm's cost of capital.

At the same time that incentives to merge have increased, legislative and regulatory initiatives have rendered the acquisition process more complex. New laws and regulations, a consequence of recent corporate accounting scandals, require greater documentation and disclosure, particularly for acquiring firms. The result has been a large increase in compliance costs for all transaction participants.

A consequence of increasing acquisition complexity is greater reliance being placed on external financial consultants (advisors) by both acquiring and target

firms. These advisors, typically affiliated with commercial or investment banks, are employed to monitor the transaction process. While the new environment clearly increases acquisition costs, the wealth effects of well-structured REIT transactions have nonetheless been large due to the strong performance of commercial real estate in recent years. The most crucial aspect of the transaction is determining the wealth maximizing transaction price. To this end, financial advisors evaluate, validate, and negotiate transaction terms. Presumably, they increase market efficiency by reducing information asymmetries between acquiring and target firms. In this role, advisors are said to perform a monitoring function.

Several studies attribute wealth gains for corporate mergers monitored by financial advisors to reductions in information asymmetries. Bowers and Miller (1990) report positive wealth effects in mergers monitored by advisors affiliated with top tier firms. Hunter and Walker (1990) measure the value of advisor services by the fees assessed and find a positive relationship between fees and wealth gains. Saunders and Srinivasan (2001) find that financial advisory fees vary in accord to the duration of the principal-agent relationship. Consistent with compensation for superior monitoring, longstanding relationships include a premium. Kale, Kini, and Ryan (2003) study the role of financial advisors in successful corporate acquisitions. They report systematic differences in transaction characteristics and wealth effects based on both the participation and reputation of financial advisors.[3]

This paper extends the analysis of the impact of financial advisors on merger transaction valuation in two ways. First, the focus is on REIT acquisition transactions, which have not been addressed previously in the literature. Because estimates of expected cash flows require analysis of localized real property markets, information asymmetries may be greater in the case of REITs, suggesting an enhanced monitoring role for advisors and possibly larger resulting wealth effects. Secondly, the analysis controls for the impact of advisors on different merger types. For example, the advisor impact of focus driven mergers (in which principals provide complementary resources to focus the firms' activities) may be different from mergers motivated by geographical diversification.

The advisor monitoring effect is analyzed empirically using a sample of REIT merger and acquisition transactions for the 1981 to 2001 period. A two-stage target firm transaction-pricing model is specified to control for simultaneity bias. The first-stage logit model estimates the probability that financial advisor(s) will be employed. The second-stage pricing model generates estimates of transaction value conditioned upon financial advisor usage. In addition to variables measuring the quantity and quality of such advisors, the model includes variables to measure transaction-specific characteristics.

The results indicate that financial advisor monitoring has significant and measurable effects on the value of REIT mergers and acquisitions: the quantity of financial monitoring inputs is positively related to transaction value. Separately,

the results indicate a strong positive effect of financial advisor quality, as measured by affiliation with first tier investment banks, on transaction value. This result is possibly explained by the complexity (greater information asymmetries) of REIT transactions and the resulting higher returns associated with higher quality monitoring.

The paper is organized as follows. The next section details the empirical model. The following section describes the variables, derivations, and predicted relationships. This is followed by a section that details data sources and presents descriptive statistics, then a section that details the empirical results. The final section presents concluding remarks.

The Empirical Model

Financial advisors are monitoring agents employed to maximize wealth: acquiring and target firms choose to employ advisors when expected benefits exceed costs. While wealth maximization motivates the choice to employ advisors, transaction-specific characteristics will affect the probability that advisors are employed. In general, characteristics associated with transaction complexity, such as firm size, the structure of proposed financing, etc., will increase the likelihood that advisors are employed. As the firms involved are larger, and terms and conditions of the proposed transaction more complex, information asymmetries are more likely. Thus, advisor use by either or both firms is more probable. It follows that the use of financial advisors will be correlated with determinants of transaction complexity, producing simultaneity bias in OLS estimates of advisor use on transaction value.[4] The following two-stage transaction value model is estimated to control for endogenity:[5]

$$ADVISOR_i^* = \gamma'\mathbf{Z_i} + \varepsilon_i. \tag{1}$$

$$TVALUE_i = \beta'\mathbf{X_i} + \delta IMILL_i + \mu_i. \tag{2}$$

Equation 1 is the first stage logit *ADVISOR* choice model. $ADVISOR_i^*$ measures the non-observable expected benefits of financial advisor use and $ADVISOR_i$ is the observed financial advisor choice for the ith firm. Firms choose to employ *ADVISORs* if *ADVISOR** exceeds some threshold level ($ADVISOR_i = 1$ if $ADVISOR_i^* > 0$ and $ADVISOR_i = 0$ otherwise). $\mathbf{Z_i}$ is a vector of variables determining the *ADVISOR* choice. Equation 2 is the second-stage pricing model; $TVALUE_i$ is the observed transaction value for the *i*th transaction, and $\mathbf{X_i}$ is vector of exogenous variables defined below. The normally distributed disturbance terms for each equation are given by ε_i and μ_i.[6]

Variable Definitions, Model Specifications, and Predicted Effects

The following list defines the variables included in **X** and **Z**. Three categories of variables are listed: control variables, financial advisor characteristics, and merger type variables.

Control Variables

$SIZE$ = The ratio of total acquiring firm assets to the sum of total acquiring firm and target firm assets.

$NUMBER$ = The number of offers considered by the target firm.

$STOCK$ = A binary variable that equals 1 if the transaction is financed with stock and 0 otherwise.

$OPTION$ = A binary variable that equals 1 if the target firm transaction involved stock options and 0 otherwise.

$BLOCK$ = A binary variable that equals 1 if the transaction involved block purchasers.

$DIVEST$ = A binary variable that equals 1 if the transaction was a forced divestiture and 0 otherwise.

$DIVISION$ = A binary variable that equals 1 if the transaction was a partial (firm division) sale and 0 otherwise.

Financial Advisor Characteristics

$ADVISOR$ = A binary variable that equals 1 if either the acquiring or target firm retains financial advisor(s).

$ADV\text{-}TAR$ = A binary variable that equals 1 if the target firm retains financial advisors(s) and 0 otherwise.

$ADV\text{-}ACQ$ = A binary variable that equals 1 if the acquiring firm retains financial advisors(s) and 0 otherwise.

$AQ\text{-}ADV\text{-}RANK$ = A binary variable that equals 1 if the acquiring firm financial advisor(s) affiliation was with a firm having a market share in the top 25 in the year of the transaction and 0 otherwise.

$TAR\text{-}AD\text{-}RANK$ = A binary variable that equals 1 if the target firm financial advisor(s) affiliation was with a firm having a market share in the top 25 in the year of the transaction and 0 otherwise.

$AQ\text{-}AD\text{-}NUM$ = The number of financial advisors for the acquiring firm.

$TAR\text{-}AD\text{-}NUM$ = The number of financial advisors for the target firm.

Merger Characteristics

$GEO\text{-}ACT\text{-}FOC$ = A binary variable that equals 1 if the acquisition is geographically and activity focusing and 0 otherwise. Geographically focusing mergers involve firms in the same region; activity focusing mergers identify REITs acquiring other REITs.

$GEO\text{-}DIVERS\text{-}ACT\text{-}FOC$ = A binary variable that equals 1 if the acquisition is geographically diversifying and activity focusing and 0 otherwise. Geographic diversification indicates mergers that are interregional.

$GEO\text{-}ACT\text{-}DIVERS$ = A binary variable that equals 1 if the acquisition is both geographically and activity diversifying and 0 otherwise. Activity diversifying indicates REITs acquiring non-REITs or vice-versa.

$GEO\text{-}FOC\text{-}ACT\text{-}DIVERS$ = A binary variable that equals 1 if the acquisition is geographically focusing and activity diversifying and 0 otherwise.

$MILL$ = The inverse Mills ratio.

The reduced form of the logit financial advisor choice model is given by:

$$
\begin{aligned}
ADVISOR = \alpha_0 &+ \beta_1(SIZE) + \beta_2(NUMBER) + \beta_3(STOCK) \\
&+ \beta_4(OPTION) + \beta_5(BLOCK) \\
&+ \beta_6(GEO\text{-}ACT\text{-}FOC) \\
&+ \beta_7(GEO\text{-}DIVERS\text{-}ACT\text{-}FOC) \\
&+ \beta_8(GEO\text{-}ACT\text{-}DIVERS) + \varepsilon_i.
\end{aligned} \tag{3}
$$

Equation 3 estimates the probability that advisors will be retained by either the acquiring or target firm. The variables *SIZE*, *NUMBER*, *STOCK*, *OPTION*, and *BLOCK* relate straightforwardly to transaction complexity and are predicted to increase the likelihood that advisors will be retained. The remaining variables test for the effect of merger type on financial advisor use. Mergers may be defined as to whether they focus or diversify the acquiring firm's activities. Focusing mergers result from the combinations of firms producing a similar product in the same geographic market (*GEO-FOC*) or combinations of firms in the same product but different geographic market (*ACT-FOC*). The motivation for focusing mergers is efficiencies attributable to factors such as complementary inputs or scale economies. Diversification mergers involve combinations of firms in different product markets in the same area or the same product market in different areas.

The merger variables test for the effect of merger-acquisition type on the decision to employ advisors. Diversifying mergers, particularly geographically, are likely to exhibit greater information asymmetries, thus raising the probability that advisors will be retained. Relative to diversification, activity-focusing mergers may be less information asymmetric, suggesting a lower likelihood of advisor use. In cases where both focus and diversification motivations are present, the expected effect on advisor choice is indeterminate. The model allows the data to reveal the effect of merger type on advisor use.

The predicted *ADVISOR* values from Equation 3 are included in the following reduced form transaction value model:

$$
\begin{aligned}
LNTVALUE = \; & \alpha_0 + \beta_1(ADVISOR) + \beta_2(BLOCK) + \beta_3(SIZE) \\
& + \beta_4(AQ\text{-}AD\text{-}RANK) + \beta_5(TAR\text{-}AD\text{-}RANK) \\
& + \beta_6(DIVEST) + \beta_7(DIVISION) \\
& + \beta_8(GEO\text{-}FOC\text{-}ACT\text{-}FOC) \\
& + \beta_9(GEO\text{-}DIVERS\text{-}ACT\text{-}FOC) \\
& + \beta_{10}(GEO\text{-}DIVERS\text{-}ACT\text{-}DIVERS) \\
& + \beta_{11}(AQ\text{-}AD\text{-}NUM) + \beta_{12}(TAR\text{-}AD\text{-}NUM) \\
& + \beta_{13}(MILL) + \mu_i, \quad\quad\quad\quad\quad\quad (4)
\end{aligned}
$$

where *LNTVALUE* is the log of transaction value.[7]

The variables *BLOCK*, *SIZE*, *DIVEST*, and *DIVISION* are included in the pricing model to control for transaction characteristics.[8]

Large firm (*SIZE*) mergers are associated with larger transaction values. The effect of *DIVEST*, *DIVISION*, and *BLOCK*, however, are indeterminate. Large *BLOCK* transactions may either positively or negatively influence transaction value. Likewise, divestitures (*DIVEST*) or division sales (DIVISION), holding *SIZE* constant, may affect transaction value in either direction. The effect of these variables is revealed by the data.

The merger variables are included to control for the expected efficiency gains of different merger types. If markets function efficiently, expected merger benefits will be capitalized in the transaction value. To the extent that mergers promote efficiency gains, all merger types are predicted to positively influence transaction value. However, of the three merger types analyzed, larger gains are likely to be associated with *GEO-DIVERS-ACT-FOC*[9] mergers. In this study, such mergers are defined as REITs that acquire other REITs in different geographical markets.

Because the firms operate in the same product market, acquirers and their agents have expertise in evaluating merger benefits. At the same time, diversification benefits may be more likely due to the regional nature of real property markets.

The financial advisor variables are the main focus of the analysis in this study. To the degree that retaining financial advisors produces wealth gains for either or both participants,[10] the *ADVISOR* coefficient is predicted to be positive. In addition to the overall value-added effect measured by *ADVISOR*, the quantity and quality impact of financial advisors is also analyzed. *TAR-AD-RANK* and *AQ-AD-RANK* measure the effect of higher quality advisor services for targets and acquiring firms, respectively. The quantity of financial advisor services is measured by *TAR-AD-NUM* and *AQ-AD-NUM* for target and acquiring firms, respectively. If larger quantities and higher quality services contribute to transaction value, the coefficients of these variables will be positive.

The Mills ratio (*MILL*, from the first-stage equation estimates) is also included to test for the presence of selectivity (simultaneous equation) bias.[11]

Data Sources and Descriptive Statistics

The primary source of data is the Thomson Financial Securities Data Corporation database (SDC). All mergers and acquisitions during the sample period (1981–2001) involving REIT targets are included. Supplemental data on characteristics of target and acquirer firms were obtained from Research Insight. The data is national in scope and includes a large sample (456) of finalized merger transactions. Acquirers include, in addition to REITs, private investors and non-REIT corporations. The merger transactions are grouped by financial advisor use by the target, acquirer, or both. Exhibit 1 details the distribution of sample observations by the year in which the transaction was announced (finalized) and by financial advisor use.

Exhibit 1 indicates a clear upward trend in the volume of transactions over time. In 1982, only four transactions involved REIT acquisitions, while in 1997 there were 64 transactions involving REITs. The data also reveal an increased tendency to retain financial advisors in recent years. From 1997 through 2001 more than 50% of all transactions involved financial advisors by either one or both parties. These trends are consistent with the increased financial returns and greater complexity of mergers in the current legal environment.

Exhibit 2 presents the means and standard deviations for the all variables for both the full sample and separately by financial advisor usage. Panel A reports summary statistics for continuous variables and Panel B reports summary statistics for the binary variables. Exhibit 2 indicates that the average *TVALUE* (transaction value) was $233 million. The standard deviation of $624 billion suggests a relatively large dispersion for *TVALUE*. The statistics for the variable *SIZE* indicate that the likelihood of financial advisor usage increases as the acquiring firm is larger relative to the target. The mean value of *SIZE* for firms using financial advisors

Exhibit 1 | The Distribution of Mergers and Financial Advisor Usage

| Year | Total | Target | | Acquirer | | Target or Acquirer |
		Using Financial Advisor(s)	Not Using Financial Advisor(s)	Using Financial Advisor(s)	Not Using Financial Advisor(s)	Using Financial Advisor(s)
1982	4 (0.95%)	2 (1.32%)	2 (0.74%)	2 (1.69%)	2 (0.66%)	2 (1.14%)
1983	12 (2.85%)	2 (1.32%)	10 (3.70%)	3 (2.54%)	9 (2.97%)	3 (1.71%)
1984	13 (3.09%)	1 (0.66%)	12 (4.44%)	1 (0.85%)	12 (3.96%)	2 (1.14%)
1985	2 (0.48%)	1 (0.66%)	1 (0.37%)	1 (0.85%)	1 (0.33%)	1 (0.57%)
1986	4 (0.95%)	1 (0.66%)	3 (1.11%)	1 (0.85%)	3 (0.99%)	1 (0.57%)
1987	6 (1.43%)	1 (0.66%)	5 (1.85%)	2 (1.69%)	4 (1.32%)	3 (1.71%)
1988	14 (3.33%)	8 (5.30%)	6 (2.22%)	4 (3.39%)	10 (3.30%)	8 (4.57%)
1989	9 (2.14%)	1 (0.66%)	8 (2.96%)	4 (3.39%)	5 (1.65%)	4 (2.29%)
1990	12 (2.85%)	2 (1.32%)	10 (3.70%)	2 (1.69%)	10 (3.30%)	4 (2.29%)
1991	8 (1.90%)	1 (0.66%)	7 (2.59%)	2 (1.69%)	6 (1.98%)	2 (1.14%)

| Year | Total | Target | | Acquirer | | Target or Acquirer |
		Using Financial Advisor(s)	Not Using Financial Advisor(s)	Using Financial Advisor(s)	Not Using Financial Advisor(s)	Using Financial Advisor(s)
1992	9 (2.14%)	1 (0.66%)	8 (2.96%)	1 (0.85%)	8 (2.64%)	2 (1.14%)
1993	25 (5.94%)	4 (2.65%)	21 (7.78%)	2 (1.69%)	23 (7.59%)	5 (2.86%)
1994	21 (4.99%)	7 (4.64%)	14 (5.19%)	6 (5.08%)	15 (4.95%)	9 (5.14%)
1995	46 (10.93)%	9 (5.96%)	37 (13.70%)	6 (5.08%)	40 (13.20%)	10 (5.71%)
1996	64 (15.20%)	15 (9.93%)	49 (18.15%)	11 (9.32%)	53 (17.49%)	17 (9.71%)
1997	56 (13.30%)	26 (17.22%)	30 (11.11%)	18 (15.25%)	38 (12.54%)	30 (17.14%)
1998	46 (10.93%)	27 (17.88%)	19 (7.04%)	20 (16.95%)	26 (8.58%)	27 (15.43%)
1999	31 (7.36%)	17 (11.26%)	14 (5.19%)	12 (10.17%)	19 (6.27%)	17 (9.71%)
2000	20 (4.75%)	12 (7.95%)	8 (2.96%)	8 (6.78%)	12 (3.96%)	14 (8.00%)
2001	19 (4.51%)	13 (8.61%)	6 (2.22%)	12 (10.17%)	7 (2.31%)	14 (8.00%)
n	421	151	270	118	303	175

Notes: The percentage of the total sample is reported in parentheses. All mergers and acquisitions are completed transactions. Total = the total number of acquisitions made in the REIT industry for the year.

Exhibit 2 | Descriptive Statistics

	Total	Target		Acquirer		Target or Acquirer
		Using Financial Advisor(s)	Not Using Financial Advisors	Using Financial Advisor(s)	Not Using Financial Advisors	Using Financial Advisors
Panel A: Continuous Variables						
SIZE	0.32	0.27	0.35	0.28	0.33	0.29
	(0.23)	(0.21)	(0.23)	(0.21)	(0.24)	(0.21)
TVALUE (Millions)	$233	$573	$43	$702	$50	$515
	($624)	($943)	($104)	($1031)	($99)	($892)
LNTVALUE	3.37	5.22	2.34	5.55	2.53	5.07
	(2.27)	(1.67)	(1.86)	(1.61)	(1.89)	(1.68)
NUMBER	1.47	1.77	1.31	1.94	1.29	1.78
	(0.80)	(0.86)	(0.71)	(0.95)	(0.65)	(0.90)
TAR-AD-NUM	1.16	1.16	0	1.16	1.16	1.00
	(0.42)	(0.42)		(0.41)	(0.42)	(0.56)
AQ-AD-NUM	1.19	1.08	1.22	1.19	0	0.77
	(0.48)	(0.28)	(0.52)	(0.48)		(0.69)

Exhibit 2 | (continued)

Descriptive Statistics

	Total	Target		Acquirer		Target or Acquirer
		Using Financial Advisor(s)	Not Using Financial Advisors	Using Financial Advisor(s)	Not Using Financial Advisors	Using Financial Advisors
Panel B: Binary Variables						
ADV-TAR	0.36	1.00	0.00	0.80	0.39	0.86
ADV-AQ	0.28	0.62	0.90	1.00	0.00	0.67
ADVISOR	0.36	1.00	0.00	0.80	0.39	0.86
AQ-AD-RANK	0.19	0.43	0.05	0.68	0.00	0.46
TAR-ADV RANK	0.24	0.66	0.00	0.56	0.11	0.57
REIT	0.49	0.66	0.40	0.75	0.39	0.69
OPTION	0.16	0.44	0.01	0.43	0.06	0.38
REGION	0.93	0.95	0.93	0.96	0.92	0.94
BLOCK	0.19	0.11	0.23	0.04	0.24	0.12
DIVEST	0.11	0.11	0.10	0.10	0.10	0.13
DIVISION	0.05	0.07	0.05	0.04	0.06	0.07
GEO-ACT-FOCUS	0.22	0.15	0.25	0.23	0.21	0.21
GEO-DIVERS-ACT-FOCUS	0.28	0.51	0.14	0.52	0.18	0.47
GEO-FOCUS-ACT-DIVERS	0.07	0.06	0.08	0.06	0.08	0.05
GEO-DIVERS-ACT-DIVERS	0.44	0.28	0.53	0.19	0.53	0.26

Notes: Values are means by financial advisor usage. Standard deviations appear in parentheses. The number of observations appears in Exhibit 1.

is 0.27 and 0.28 for targets and acquirers, respectively. For firms not retaining advisors, the values are 0.35 and 0.33 for targets and acquirers, respectively.

The typical acquirer or target employed one advisor but targets were more likely to retain advisors as compared to acquirers: target and acquiring firm advisor use was 36% and 28%, respectively. The data reveal that advisor usage increases (for both parties) as more offers (*NUMBER*) are tendered: for acquirers and targets using advisors, *NUMBER* was 1.94 and 1.77, respectively. This trend likely reflects the increased complexity of transactions involving multiple bidders.

The binary variable summary statistics in Panel B of Exhibit 2 indicate that 49% of all mergers involved *REITs* acquiring other *REITs*. However, for the subset of cases involving financial advisor use, the percentage of *REITs* acquiring *REITs* increased to 66% and 75% for acquirers and targets, respectively. This indicates that financial advisors are more likely to be retained in focus motivated REIT mergers, possibly due to greater information asymmetries.

Private investors (*INVEST*) accounted for 13% of all transactions but were less likely to involve advisor use. This may reflect reduced information asymmetries in private transactions.[12] The advisor quality variables (*AQ-AD-RANK* and *TAR-AD-RANK*) indicate that 24% of all acquirers used higher quality advisors as compared to 19% of targets. Only 16% of total transactions involved *OPTIONs*. For the subset of observations involving advisors, however, the percentage of transactions involving *OPTIONs* increases to over 40% for both targets and acquirers. The greater advisor use is likely attributable to the increased complexity of *OPTION* financed transactions. *BLOCK* transactions are associated with a reduced likelihood of advisor use. *BLOCKs* were involved in 19% of total transactions, but in only 11% and 4% of advisor-assisted transactions for targets and acquirers, respectively. This possibly reflects the greater leverage of *BLOCK* purchasers, which may reduce the role of external advisors. Divestitures (*DIVEST*) and *DIVISION* sales accounted for a relatively small percentage (11% and 5%, respectively) of total transactions. The data imply that *DIVEST* and *DIVISION* sales have little effect on the decision to retain advisors.

The merger type variables suggest that certain acquisition types are associated with an increased likelihood of advisor use. For example, transactions that were geographically diversified and activity focused (*GEO-DIVERS-ACT-FOC*) were far more likely to involve the use of a financial advisor(s). For such merger types, 51% and 52% of target and acquirers, respectively, retained external advisors. The increased usage of advisors probably reflects the greater likelihood of information asymmetries for this merger type. Geographical diversification and activity focus involves acquisitions in the same product market but in distant areas. Because real estate market performance tends to be localized, information will be more constrained for such mergers in the case of REITs. Other merger types exhibited a lower likelihood of advisor usage. For example, transactions that were geographically diversified and activity diversified (*GEO-DIVERS-ACT-DIVERS*), which accounted for almost half (44%) of total transactions, utilized advisors in

28% and 19% of all cases, respectively, for targets and acquirers. The other merger type variables (*GEO-FOC-ACT-FOC* and *GEO-FOC-ACT-DIVERS*) suggest that the likelihood of advisor use is not affected by these acquisition types.

Model Estimates

Exhibit 3 reports the logit advisor choice model estimates (Equation 3). Panel A reports the coefficient estimates and Panel B computes elasticities evaluated at the mean value of the explanatory variables.

The results indicate that, as expected, variables measuring the overall complexity of the transaction strongly influence the decision to retain financial advisors by

Exhibit 3 | Logit Estimates

Variable	Coefficient	*t*-Stat
Panel A: Log of Odds Ratio Estimates		
Intercept	−3.0863	4.68*
SIZE	0.8014	1.44
NUMBER	0.6856	4.04*
STOCK	1.9949	4.27*
OPTION	4.0525	5.31*
BLOCK	0.2731	0.83
GEO-FOCUS-ACT-FOCUS	0.5895	0.96
GEO-DIVERS-ACT-FOCUS	1.7811	2.93*
GEO-DIVERS-ACT-DIVERS	0.4006	0.68
Panel B: Elasticity Estimates		
Intercept	−1.6492	4.25*
SIZE	0.1367	1.42
NUMBER	0.5395	3.85*
STOCK	0.0988	4.09
OPTION	0.3498	6.41*
BLOCK	0.0270	0.83
GEO-FOCUS-ACT-FOCUS	0.0681	0.95
GEO-DIVERS-ACT-FOCUS	0.2622	2.88*
GEO-DIVERS-ACT-DIVERS	0.0936	0.68

Note: The dependent variable is *ADVISOR*. $n = 421$. Pseudo-$R^2 = 0.36$.
*Significantly different from zero at the 5% level or better, two-tailed test.

either or both of the principals. The estimated coefficients for *NUMBER*, *STOCK*, and *OPTION* are highly significant and the elasticity's reported in Panel B indicate large effects of these variables on the advisor decision. For example, if the *NUMBER* of bids increased by its standard deviation, the probability that an advisor would be retained increased by over 50%. The *SIZE* of the transaction and whether or not *BLOCK* purchasers were involved did not affect the decision to retain advisors. The latter result may reflect the superior bargaining position of *BLOCK* purchasers such that the costs of advisors exceed expected benefits. With regard to the acquisition type variables, the results indicate that *GEO-DIVERS-ACT-FOC* mergers had large effects on the advisor choice decision. In cases involving this type of merger, the probability that advisors were retained increased by 26%. The other merger type variables, however, did not affect the likelihood of advisor use.

The pricing model (semi-log functional form, Equation 4) estimates are reported in Exhibit 4. Of the variables included to control for transaction characteristics (*BLOCK*, *SIZE*, *DIVEST*, and *DIVISION*) only *BLOCK* and *DIVEST* were statistically significant. Both have positive effects on transaction value and *DIVEST* has the largest effect of all variables included in the model. The *DIVEST*

Exhibit 4 | Semi-Log Transaction Value Estimates

Variable	Coefficient	t-Stat
Intercept	1.2790	3.45*
ADVISOR	0.6058	2.31*
BLOCK	0.3768	1.73*
SIZE	−0.4288	1.07
AC-ADV-RANK	0.6322	2.63*
TAR-ADV-RANK	0.8507	4.37*
DIVEST	1.4135	3.87*
DIVSION	−0.5165	1.14
GEO-FOCUS-ACT-FOCUS	0.3316	1.20
GEO-DIVERS-ACT-FOCUS	0.4732	1.84**
GEO-DIVERS-ACT-DIVERS	0.3072	1.24
AQ-ADV-NUM	0.6456	3.62*
TAR-ADV-NUM	0.1006	0.48
MILL	1.2115	3.43*

Notes: The dependent variable is *LNTVALUE*. $n = 421$. $R^2 = 0.61$.
*Significantly different from zero at the 5% level or better, two-tailed test.
**Significantly different from zero at the 10% level or better, two-tailed test.

coefficient estimate indicates that transactions involving forced divestiture targets are associated with an increase in transaction value of approximately 141%. This result likely reflects higher overall quality for firms that are subject to forced divestiture. With the exception of *GEO-DIVERS-ACT-FOC*, which was positive and significant at the 10% level of confidence, the merger type variable coefficients indicate no effect on transaction value. *GEO-DIVERS-ACT-FOC* mergers were associated with a 47% increase in transaction value, possibly reflecting higher expected returns, which are capitalized in larger transaction values for such mergers. Geographic diversification possibly reduces risk and the post merger cost of capital; activity focus may generate greater expected gains due to complementary inputs. These results imply that merger type has a greater influence on the decision to retain advisors but that, given that advisors have been retained, the merger type has only minimal effects on *TVALUE*.

The primary variables of interest are the advisor use variables. The results indicate that these variables generally have a positive and significant effect on transaction value. *ADVISOR*, the predicted probability of advisor usage, is highly significant and the Mills ratio (*MILL*) estimate indicates the presence of simultaneity bias (in a simple OLS framework), which is corrected by the two-stage procedure. Separately, the results indicate that both the quantity and quality of advisor inputs positively affect transaction value. Both *AQ-ADV-RANK* and *TAR-AD-RANK* are positive and highly significant. Further, the magnitude of the coefficient estimates indicates a large effect of advisor quality on transaction value. *AQ-AD-NUM* (but not *TAR-AD-NUM*) is also positive and significant at the 5% level. These results are consistent with reductions in information asymmetries attributable to financial advisor inputs, which are capitalized in transaction values.[13]

Conclusion

This paper investigates the impact of financial advisor monitors on both sides of the market on the transaction value of finalized mergers and acquisitions involving REITs. The findings indicate that financial advisor-monitors employed by acquiring and target firms add substantial value to the total transaction. The total value of merger-acquisition transactions, which utilize the services of investment or commercial bank financial advisers, on average, are approximately 10% higher, all other factors constant, than similar transactions in which no advisor services are utilized. Acquiring firm advisors contribute more (approximately 11%, on average) than advisors employed by target firms. Perhaps the most noteworthy finding is the effect of financial advisors that are affiliated with top-tier investment or commercial banks. The impact of such advisors on transaction value is large. According to the results, top-tier advisors are associated with a relatively large increase in total transaction value as compared to transactions monitored by advisors affiliated with lower ranked financial institutions. This effect is most pronounced in the case of target REITs.

Endnotes

[1] In 2004, for example, the volume of REIT acquisitions exceeded $220 billion, establishing a new record.

[2] While the theoretical and empirical literature on corporate mergers and acquisitions is extensive, there are relatively few studies focusing on REITs. The early REIT literature (see, for example, Allen and Sirmans, 1987; McIntosh, Officer, and Born, 1989; and Elayan and Young, 1994), addressed the effect of merger announcement timing on acquiring firm returns. More recently, Campbell, Ghosh, and Sirmans (2001) and Pierzak (2001) analyze the effect of the financing choice (cash vs. stock swaps) on acquiring firm returns and transaction value. Sirmans, Worzala, and Zietz (2000) address the effect of investor type on acquiring firm returns.

[3] In a similar vein, Allen, Jagtiani, Peristiani, and Saunders (2001) find that commercial banks acting as financial advisors for target firms having prior banking relationships with them, a certification effect results in wealth gains for the target firms. However, when commercial banks act as financial advisors for banking clients who are acquirers, possibly due to market perceptions of interest conflicts, a negative wealth effect is observed.

[4] This methodology follows Trost and Lee (1984), who note that merger transaction value and financial advisor use may be simultaneously determined.

[5] Lee (1983) and Greene (1995) use the multinomial logit model to correct for sample selection bias. In the current analysis, the procedure is used as a sequential model to correct for the simultaneity bias introduced by the advisor choice.

[6] Given that the disturbances in the two regressions are correlated, a simple OLS estimation produces biased coefficients. To correct for this problem, an inverse Mills ratio from the logit first-stage estimates is included in the second-stage equation. Including this term in the transaction value model leads to consistent parameter estimates.

[7] To control for time trends, the model also includes binary variables for each year of the sample period. To economize on space, these variables were omitted from the model specification in Equation 4.

[8] Brown and Ryngaert (1991) also recognize the importance of the method of payment on the transaction value. They develop a model in which the method of payment conveys information about the value of the bidder. More importantly, they show that cash acquisitions have a higher transaction value to compensate for the capital gains tax consequences of cash offers. Due to legal restrictions that limit cash reserves, REIT transactions are less likely to involve cash only financing. Thus, the method of payment is not included in the analysis in this study.

[9] See, for example, Delong (2001) who analyzes wealth effects of focusing versus diversifying mergers in commercial banking.

[10] Three cases may be identified: (1) acquiring but not target firms employ advisors; (2) target but not acquiring firms employ advisors; and (3) both acquiring and target firms employ advisors. Cases 1 and 2 are unilateral wealth maximizing choices. Because agents are acting on behalf of principals, Case 3 will involve a series of strategic bilateral interactions (negotiations). Since advisors often engage in a zero sum game regarding wealth transfers, wealth effects for either of the principals are indeterminate theoretically

in Case 3. The empirical model specified here allows the data to reveal the wealth effects of the financial advisor inputs.

[11] The presence of selectivity bias in indicated by a statistically significant Mills ratio coefficient. The approach used here is similar to that of Pierzak (2001), who estimates a two-stage merger pricing model to analyze the effect of favorable tax treatment for certain REIT types. Pierzak controls for the financing choice using a profit model to analyze the stock versus cash financing choice, whereas the model in this study employs a logit first-stage model to estimate the probability that advisors will be retained.

[12] Sirmans, Worzala, and Zietz (2000) report greater returns for private investor acquisitions. They attribute this to greater market efficiency, possibly due to reduced information asymmetries. Private investors may be more inclined to perform the monitoring function, thus reducing the role of external advisors.

[13] The binary variable (which identified the year of each observation) estimates indicated no discernable time trend effects and is not reported here. The model estimates were essentially identical separate specifications with and without the time trend variables.

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