NAV Ratios and REIT Takeovers: The role of Public and Private Deal Premiums

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Research Question

How do NAV Ratios impact the market for corporate control?

Likelihood of Takeover

Public and Private Deal Premiums Target Announcement Returns

Defining Key Terms

- NAV: Net Asset Value
 - Analyst estimated market value of the property portfolio using CRE market information (NOI/Cap Rates) adjusted for non-RE assets and MV liabilities.
 - Compared to stock price for measure of relative valuation in the parallel markets (Public = Stock Price; Private = NAV).
 - Sometimes referred to as a measure of intrinsic (fundamental) value
- Public Deal Premium: Acquisition premium over public firm value
 - Acquisition Deal Value / Stock Price (t-28)
- Private Deal Premium: Acquisition premium over NAV estimated firm value
 - Acquisition Deal Value / NAV (t-28)

In the Context of the Literature

- Is the analyst estimated NAV informative for managers and shareholders or are they simply a measure of value lagging public markets?
- NAV useful to management
 - Issuance decisions (Boudry et al., 2010), Asset Acquisitions (Wiley and Kim, 2019), Capital Allocation decisions (Ling et al., 2016).
- NAV useful to investors
 - Information Content (Chacon et al., 2020); Shareholder Activism (Downs et al., 2019)
- Determinants of REIT M&A
 - Ling and Petrova (2011) focus on likelihood of being targeted and focus on public and private. They note the motivation of public-to-private arbitrage but do not explicitly examine P/NAV (likely due to data availability at the time).

Data

- M&A Transactions with equity REITs as targets.
- Sample Period: 2001-2017
- Analyst Estimated NAV (SNL Financial)
- Deal Characteristics (SNL Financial)
- Market Data (CRSP)
- Accounting Data (Compustat)
- 79 Acquisitions with non-missing data

Hypothesis 1: Takeover Likelihood

- Are REITs trading at discounts to NAV more likely to be acquired?
 - "The existence of opportunities for investors to acquire public REITs at parity to NAV or less is what is fueling the continued takeover activity by both public and private investors."
 - Cohen and Steers, Inc., November 2018
- The win-win for acquirers and targets:
 - Acquirers: If they incorporate the private market value of the REIT in their selection process, REITs trading at discounts to NAV should make for more attractive targets.
 - Targets: Shareholders exit at a premium to depressed stock price and closer to intrinsic value.

Takeover Likelihood Example

- Activism case highlighted in Downs et al. (2019) is also in our M&A sample because the activism led to a transaction.
- Land & Buildings (L&B) took a large stake in American Residential Properties (ARPI), specifically citing their discount to NAV as the reason.
- Ultimately, this led to a merger between American Residential Properties and American Homes for Rent.
- Jonathan Litt of L&B noted the following regarding the transaction:

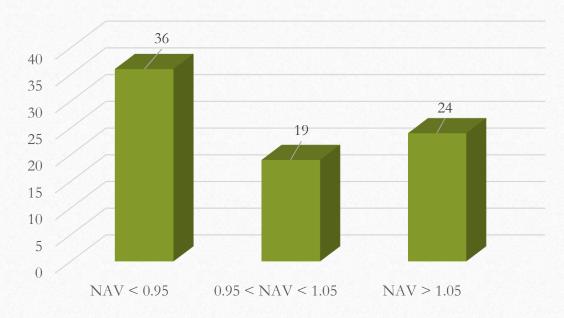
"We are pleased the Board of American Residential Properties has chosen to move forward with the transaction, a path which we believe represents a positive outcome for all shareholders. As we have publicly stated, ARPI has traded below its intrinsic value for some time and it was clear that a new path was needed to unlock the value imbedded in the company."

Hypothesis 1 Counter Argument

- REIT NAVs are estimated by sell-side analysts and widely available to both acquirers and targets. Therefore, the price discrepancy between markets is quantified and known between negotiating parties.
 - Selling parties may be reluctant to sell at a price below the NAV, even when the stock price is depressed if they expect it will approach the NAV over the longer horizon.
 - Buying parties may be unable to negotiate a deal value below the NAV and uninteresting in paying a premium to the NAV.
- To the extent the NAV is accurate, the REIT may be able to sell some dispose of some portion of the property portfolio at prevailing CRE market prices, which presents a potentially superior alternative to selling the entire REIT below the NAV.
 - However, Wiley and Kim (2019) find no relation between asset dispositions and NAV discounts.
 - Cite holding period concerns and management incentive to be larger as reasons.

Number of Transactions by P/NAV

Takeover
Likelihood
Results



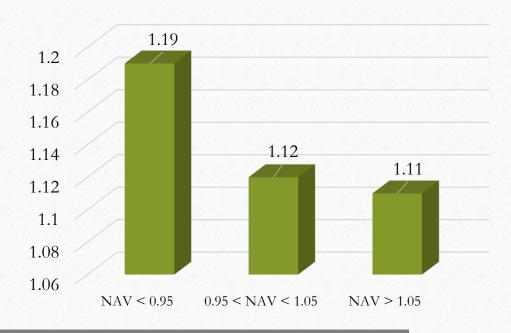
P/NAV Measure	Acquired REITs	Matched Control	Difference	T-Statistic
1 / 1 VII V IVICASAIC	ricquired 142713	Group	Difference	1 Statistic
P/NAV	0.96	1.046	-0.086	-2.09
Sector Adj P/NAV	-0.033	0.027	-0.06	-1.68
Market Adj P/NAV	-0.085	0.05	-0.135	-3.13

Hypothesis 2a: Public Deal Premiums

- Negative Relation b/t public deal premiums and NAV ratios:
 - Given the NAV is publicly available and a measure of the market value of the REITs assets, the deal value may anchor toward to the NAV.
 - This would lead to **higher** public deal premiums for REITs trading at discounts to NAV and **lower** deal premiums for those trading at premiums to NAV.
- Positive Relation b/t public deal premiums and NAV ratios
 - REITs trading at discounts to NAV are underperformers lacking bargaining power. They may be unable to negotiate attractive deal premiums. Similarly, REITs trading at premiums can be in a comfortable position to only select attractive deals.

Public Deal Premium Univariate

Public Deal Premium Results



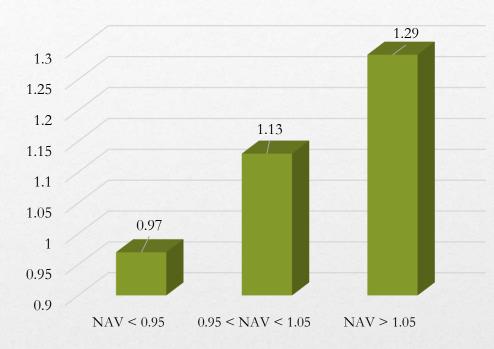
Public Dea	l Premiums Regres	sion
P/NAV Measure	Coeffient	P-Value
P/NAV	-0.76	< 0.01
Sector Adj P/NAV	-0.46	0.03
Market Adj P/NAV	-0.46	< 0.01

Hypothesis 2b: Private Deal Premiums

- Why would an acquiror pay a greater public premium for an underperforming REIT?
- Because they can acquire the REIT at a significantly lower private deal premium (Deal Value / NAV).
- Implication: Positive relation between private deal premiums and NAV ratios. Greater discount to NAV = Lower private deal premium paid by acquirer.

Private Deal Premium Univariate

Private Deal Premium Results



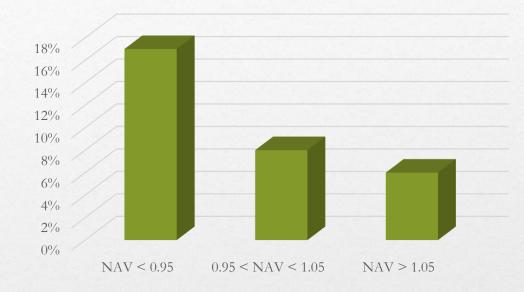
Private Dea	l Premiums Regres	ssion
P/NAV Measure	Coeffient	P-Value
P/NAV	0.64	< 0.01
Sector Adj P/NAV	0.65	< 0.01
Market Adj P/NAV	0.70	<0.01

Hypothesis 3: Target Announcement CARS

• As equityholders of the REIT, shareholders are predominantly concerned with the size of the public deal premium when acquired.

• Therefore, if REITs trading at discounts to NAV receive larger public deal premiums, we expect target CARs to also be higher for REITs acquired at a discount to NAV.





Target CAR	
Results	

Target CA	AR [-1,+1] Regress:	ion
P/NAV Measure	Coeffient	P-Value
P/NAV	-0.71	0.03
Sector Adj P/NAV	-0.50	0.05
Market Adj P/NAV	-0.40	0.04

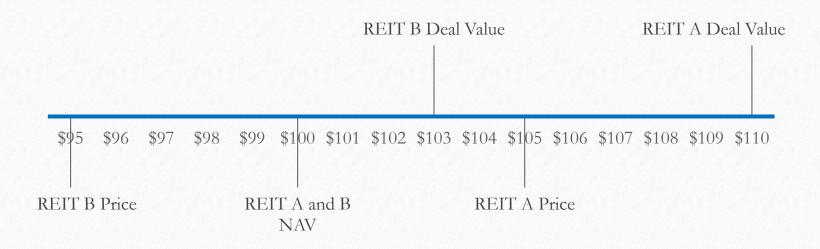
Summary

- We are the first to our knowledge to examine the impact of NAV ratios on REIT Takeovers.
- We find that REITs trading at discounts to NAV are more likely to be acquired.
- Discounted REITs receive greater public premiums, lower private premiums, and greater announcement returns.
- The sale of a REIT trading at a discount to NAV appears to be a productive transaction for potential acquirers and target shareholders alike. Buyers acquire the REIT at or near the private market valuation (NAV) and target shareholders exit at a significant premium to the public market valuation (stock price).

THANK YOU!



Hypotheses 2 Diagram



REIT	Price to NAV	Public Deal Premium	Private Deal Premium
REIT A	1.05	1.05	1.10
REIT B	0.95	1.08	1.03

Hypothetical 1

Anchor Toward NAV (our findings)

	REIT A	REIT B	
Price	\$ 105.00	\$ 95.00	
NAV	\$ 100.00	\$ 100.00	
Deal Value	\$ 110.00	\$ 103.00	
Price/NAV	1.05	0.95	
Public Premium	1.05	1.08	Negative Relation
Private Premium	1.10	1.03	Positive Relation

Hypothetical 2

Bargaining Power

	REIT A	REIT B	
Price	\$ 105.00	\$ 95.00	
NAV	\$ 100.00	\$ 100.00	
Deal Value	\$ 115.00	\$ 99.00	
Price/NAV	1.05	0.95	
Public Premium	1.10	1.04	Positive Relation
Private Premium	1.15	0.99	Positive Relation

Hypothetical 3

Overpay for Discounted REITs w/o Private Premium Bargain

	0		
	REIT A	REIT B	
Price	\$ 105.00 \$	95.00	
NAV	\$ 100.00 \$	100.00	
Deal Value	\$ 110.00 \$	115.00	
Price/NAV	1.05	0.95	
Public Premium	1.05	1.21	Negative Relation
Private Premium	1.10	1.15	Negative Relation

Next Steps – Private vs. Public Acquirers

- Preliminary results suggest the deal premium and CAR results significantly differ by public or private buyer.
 - The negative relation between NAV ratios and public premiums is mitigated when the buyer is public. They are more likely to pay higher deal premiums for high p/nav firms.
 - The positive relation between NAV ratios and private premiums is magnified when the buyer is public. They are more likely to pay higher private deal premiums for high p/nav firms.
 - The negative relation between NAV ratios and target CARS is mitigated when the buyer is public. CARs are higher for high p/NAV.
- Public buyers don't appear to price the acquisition based on the NAV as much as private buyers.

PSM Procedure and Balance

- First stage covariates:
 - Firm age, size, leverage, cash, profitability, dividend yield, UPREIT.
 - If a REIT is later acquired, it cannot be a matched firm (Eichholtz and Kok, 2008).
 - 2 nearest neighbors without replacement

Data Collection Procedure

- 118 Initial Observations from SNL Financial between 2001 and 2017.
- Exclude partial acquisitions and retain 100% ownership.
- Screen out if not ID'd on Compustat and CRSP
- 12 of the observations required hand collection of a few accounting variables via Bloomberg database.

Results without FE

• Results for T6-8 are consistent and statistically significant whether we include any variation of fixed effects.

More Technical NAV Calc

- 12 month forward NOI
- Determine Cap rate for NOI
- Add Management Fees
- Determine Cap rate for Fees
- Add other assets (cash and equiv, land held for development, unleased space, development projects)
- Subtract MV liabilities
- Divide by shares outstanding

UDR, Inc. Net Asset Value (1) \$000				Current Value		
	Assumed	Assumed	NOI			
	Nominal	Economic	before Int. Exp.			% of Gross
Capitalized Income	Cap Rate	Cap Rate (2)	after CapEx		\$ per share	Assets
NOI Contribution from (3):						
Apartment Properties	6.39%	5.85%	411,097	7,027,900	\$36.64	91%
Pro Rata JV Properties	6.39%	5.85%	18,490	316,092	\$1.65	4%
Third Party Mng't		12.0%	2,500	20,833	\$0.11	0%
Real Estate Operations				7,364,826	\$38.39	96%
		N - 65				
Balance Sheet Assets		% of Carrying	B/S Value			
		Value (4)	D/S value			
Development and Land		110%	07.013	107 703	¢n sc	1%
Construction in Progress			97,912	107,703	\$0.56	
Land Held For Future Development Total Development and Land		105%	114,883 212,795	120,627 228,330	\$0.63 \$1.19	2% 3%
Total Development and Land			212,/95	228,330	\$1.19	370
Gross Real Estate Value				7.593.156	\$39.58	98%
				-,,	400.00	
Other Balance Sheet Assets						
Cash and Cash Equivalents			9,486	9,486	\$0.05	0%
Other Assets			101,709	101,709	\$0.53	1%
Investments in Uncons. JVs		0%	148,057	0	\$0.00	0%
Benefit of Tax-Exempt Debt (5)				7,059	\$0.04	0%
Other Balance Sheet Assets				118,254	\$0.62	2%
Gross Market Value of Assets				7,711,410	\$40.20	100%
Balance Sheet Liabilities						
Debt						
Mortgage Debt				1,963,670	\$10.24	25%
Line of Credit and Term Loan				31,750	\$0.17	0%
Unsec Debt (ex Line of Credit)				1,572,084	\$8.20	20%
Pro Rata IV Debt				209.927	\$1.09	3%
Total Debt				3,777,431	\$19.69	49%
Other Liabilities				204,006	\$1.06	3%
Total Liabilities				3,981,437	\$20.76	52%
Other Claims on Equity				85 130	£0.44	10/
Preferred				85,139	\$0.44	1%
Minority Interest, excl. OP units Other Claims on Equity				3,687 88,826	\$0.02 \$0.46	0% 1%
Other Claims on Equity				00,020	30,40	170
Net Asset Value						
Net Market Value of Assets				3,641,147	\$18.98	47%
Diluted Shares & Units Outstanding				191,830		
Current Value per share				\$18.98	l	

	N	<u>Mean</u>	Std	25 th	<u>Median</u>	75 th
Public Acquirer	79	0.57	0.50	0	1	1
UPREIT	79	0.89	0.32	1	1	1
Total Assets (thousands)	79	\$2,340,705	\$3,064,635	\$879,432	\$1,572,951	\$2,957,372
Firm Age	79	9.48	5.47	6	10	12
Leverage	79	0.54	0.15	0.49	0.54	0.59
Cash to Total Assets	79	0.02	0.02	0.00	0.01	0.02
EBITDA to AT	79	0.08	0.03	0.06	0.08	0.10
Dividend Yield	79	0.06	0.03	0.04	0.06	0.07
Price-to-NAV	79	0.96	0.17	0.87	0.96	1.07
Firm/Sector Price-to-NAV	79	-0.03	0.12	-0.11	-0.05	0.05
Firm/Market Price-to-NAV	79	-0.09	0.19	-0.16	-0.06	0.03
Target CAR	79	0.12	0.26	0.02	0.08	0.15

Panel B: Target R	REITs sector breakdown			
<u>Sector</u>	Frequency	<u>%</u>	Cumulative Freq.	Cumulative %
Diversified	4	5.06	4	5.06
Healthcare	3	3.80	7	8.86
Hotel	9	11.39	16	20.25
Industrial	4	5.06	20	25.32
Multifamily	12	15.19	32	40.51
Office	20	25.32	52	65.82
Other	10	12.66	62	78.48
Retail	17	21.52	79	100
Total	79	100		

	\mathbf{N}	Mean	Std	25 th	Median	75 th
Deal Value (in \$ million)	79	\$1,979	\$2,968	\$461	\$1,081	\$2,555
DVPS	79	\$27.34	\$17.31	\$14.20	\$23.00	\$37.75
Private Deal Premium	79	1.10	0.20	0.98	1.09	1.24
Public Deal Premium	79	1.15	1.17	1.05	1.12	1.21
% Cash	79	0.75	0.40	0.52	1	1
% Stock	79	0.25	0.40	0	0	0.48
All Cash	79	0.67	0.47	0	1	1
All Stock	79	0.09	0.29	0	0	0

Table 3 – Unmatched Sample Difference of Means

Table 3 presents the difference of means between treatment firms (REITs that are targeted) and an unmatched control group. The control group includes all equity REITs from 2001 to 2017 in the SNL Financial universe with non-missing data. Panel A presents the difference in means for the control variables and Panel B presents the difference of means for the variables of interest. All variables are defined in the appendix. ***, **, and * denote significance of coefficients at the 1%, 5%, and 10% levels, respectively.

Panel A: Sample balance				
Variable	Treatment	Control	<u>Difference</u>	T-stat
UPREIT	0.886	0.821	0.065	1.47
Firm age	9.481	14.290	-4.809***	-6.83
Total Assets	2,340	3,939	-1,599***	-3.04
Leverage	0.545	0.523	0.022	1.43
Cash to assets	0.016	0.019	-0.003	-1.00
EBITDA to assets	0.080	0.086	-0.006*	-1.71
Dividend yield	0.057	0.056	0.001	0.32
Panel B: P/NAV Difference of	f Means			
	Treatment	<u>Control</u>	Difference	T-stat
Firm Price-to-NAV	0.960	1.001	-0.040	-1.52
Firm/Sector Price-to-NAV	-0.033	-0.003	-0.030	-1.39
Firm/Market Price-to-NAV	-0.085	-0.004	-0.081***	-3.89

Table 4 - PSM Sample Difference of Means

Table 4 presents the difference of means for the propensity score matched sample. The treatment group includes all REITs acquired from 2001-2017 and the treatment group includes a matched sample based on the PSM matching procedure (defined in the empirical methods section). Panel A presents the first-stage logit regression for the PSM. Panel B presents the difference of means for the control variables. Panel C presents the difference of means for the variables of interest. ***, **, and * denote significance of coefficients at the 1%, 5%, and 10% levels, respectively.

Panel A: Propensity Scores First Stage			
<u>Variable</u>	Coefficient		
UPREIT	0.15 (0.39)		
Firm age	-0.06*** (<0.01)		
Total Assets (in \$ million)	-0.04* (0.05)		
Leverage	0.50 (0.24)		
Cash to assets	-3.01 (0.20)		
EBITDA to assets	-2.33 (0.23)		
Dividend Yield	-2.76 (0.17)		
N	1,779		
Adjusted R ²	0.094		

Panel B: Matched sample balance				
Variable	Treatment	Control	Difference	T-stat
UPREIT	0.886	0.892	-0.006	-0.13
Firm age	9.481	9.405	0.076	0.09
Total Assets	2,340	2,488	-148	-0.34
Leverage	0.545	0.563	-0.018	-0.87
Cash to assets	0.016	0.016	-0.000	-0.09
EBITDA to assets	0.080	0.081	-0.001	-0.25
Dividend yield	0.057	0.060	-0.003	-0.59
Panel C: P/NAV Difference of Mea	ns			
Firm Price-to-NAV	0.960	1.046	-0.086**	-2.09
Firm/Sector Price-to-NAV	-0.033	0.027	-0.060*	-1.68
Firm/Market Price-to-NAV	-0.085	0.050	-0.136***	-3.13

Panel A: Low P/NAV (Group 1: Price-to-NAV < 0.95)								
•	N	Mean	Median	Mean diff 1 v 2	Mean diff 1 v 3			
Price-to-NAV	36	0.83	0.87	***	***			
Firm/Sector Price-to-NAV	36	-0.11	-0.11	***	***			
Firm/Market Price-to-NAV	36	-0.21	-0.16	***	***			
Public Deal Premium	36	1.19	1.16	*	*			
CARs	36	0.17	0.09	*	*			
Private Deal Premium	36	0.97	0.97	***	***			
Panel B: Medium P/NAV (Gro	Panel B: Medium P/NAV (Group 2: 0.95 < Price-to-NAV < 1.05)							
	N	Mean	Median	Mean diff 1 v 2	Mean diff 2 v 3			
Price-to-NAV	19	0.98	0.97	***	***			
Firm/Sector Price-to-NAV	19	-0.02	-0.05	***	***			
Firm/Market Price-to-NAV	19	-0.08	-0.03	***	***			
Public Deal Premium	19	1.12	1.11	*				
CARs	19	0.08	0.08	*				
Private Deal Premium	19	1.13	1.14	***	***			
Panel C: High P/NAV (Group	3: Price-	to-NAV > 1.0	15)					
•	N	<u>Mean</u>	<u>Median</u>	Mean diff 1 v 3	Mean diff 2 v 3			
Price-to-NAV	24	1.14	1.11	***	***			
Firm/Sector Price-to-NAV	24	0.07	0.06	***	***			
Firm/Market Price-to-NAV	24	0.09	0.08	***	***			
Public Deal Premium	24	1.11	0.12	*				
CARs	24	0.06	0.07	*				
Private Deal Premium	24	1.29	1.28	***	***			

	Public Deal Premium (Deal Value/Stock Price)				
	(1)	(2)	(3)		
P/NAV	-0.76***		•		
1/1/11/	(<0.01)				
Firm-Sector P/NAV		-0.46**			
I'm bootor I'mil		(0.03)			
Firm-Market P/NAV			-0.46***		
11/11-12U/Net 1/11/11			(<0.01)		
Public acquirer	-0.02	-0.02	-0.03		
none acquirer	(0.75)	(0.67)	(0.59)		
UPREIT	0.05	0.04	0.03		
OI NEII	(0.35)	(0.53)	(0.61)		
All-cash	0.07	0.08	0.06		
All-cusn	(0.16)	(0.13)	(0.24)		
All-stock	0.01	0.01	-0.02		
All-Slock	(0.93)	(0.92)	(0.83)		
Firm age	0.06	0.05	0.06		
rirm age	(0.15)	(0.24)	(0.20)		
Total assets	0.01	0.01	0.00		
Total assets	(0.59)	(0.72)	(0.92)		
Lavaraga	0.00	0.01	0.02		
Leverage	(0.97)	(0.90)	(0.80)		
Cash/TA	0.18	0.06	0.33		
Cush/1A	(0.74)	(0.91)	(0.57)		
EBITDA/TA	0.48	0.14	0.14		
EBIIDA/IA	(0.35)	(0.80)	(0.81)		
Dividend Yield	-0.98	-0.62	-0.79		
Dividena Пеш	(0.31)	(0.55)	(0.46)		
Sector FE	Yes	Yes	Yes		
Year FE	Yes	Yes	Yes		
N	79	79	79		
Adjusted R ²	0.410	0.213	0.228		

	Private Deal Premium (Deal Value/NAV)			
	(1)	(2)	(3)	
P/NAV	0.64***		•	
F/IVAV	(<0.01)			
Firm-Sector P/NAV		0.65***		
Tim-Sector 1714AV		(<0.01)		
7irm-Market P/NAV			0.70***	
TIM-MUREI 1/1VAV			(<0.01)	
Public acquirer	0.06	0.06	0.07**	
none acquirer	(0.11)	(0.13)	(0.05)	
JPREIT	0.01	0.01	0.02	
71 11211	(0.87)	(0.79)	(0.56)	
All-cash	0.09**	0.10*	0.12***	
iii cusn	(0.04)	(0.06)	(<0.01)	
lll-stock	-0.06	-0.06	-0.02	
III-SIOCK	(0.34)	(0.33)	(0.72)	
irm age	0.00	0.01	0.00	
ırın üğe	(0.91)	(0.80)	(0.90)	
Total assets	0.03	0.02	0.03	
oldi dabola	(0.33)	(0.41)	(0.22)	
everage	0.05	0.07	0.06	
ierer age	(0.55)	(0.43)	(0.50)	
Cash/TA	-0.20	0.04	-0.34	
	(0.72)	(0.95)	(0.55)	
EBITDA/TA	0.99*	0.92*	0.87*	
	(0.07)	(0.08)	(0.08)	
Dividend Yield	0.18	-0.07	0.19	
	(0.79)	(0.91)	(0.77)	
Sector FE	Yes	Yes	Yes	
Year FE	Yes	Yes	Yes	
V	79	79	79	
Adjusted R ²	0.666	0.644	0.692	

		CAR [-1; 1]			CAR [-2; 2]		
	(1)	(2)	(3)	(4)	(5)	(6)	
P/NAV	-0.71** (0.03)			-0.77** (0.02)			
Firm-Sector P/NAV		-0.50** (0.05)			-0.53** (0.05)		
Firm-Market P/NAV			-0.40** (0.04)			-0.42** (0.04)	
Public acquirer	-0.03 (0.61)	-0.03 (0.59)	-0.04 (0.53)	-0.03 (0.58)	-0.03 (0.56)	-0.04 (0.5)	
UPREIT	0.14** (0.03)	0.12** (0.05)	0.11* (0.06)	0.14** (0.04)	0.12* (0.06)	0.11* (0.07)	
All-cash	0.12** (0.02)	0.12** (0.02)	0.10** (0.04)	0.11** (0.04)	0.11** (0.04)	0.10* (0.06)	
All-stock	0.04 (0.65)	0.04 (0.64)	0.02 (0.86)	0.05 (0.62)	0.05 (0.61)	0.02 (0.83)	
Firm age	0.08 (0.15)	0.07 (0.21)	0.08 (0.2)	0.08 (0.13)	0.07 (0.2)	0.08 (0.19)	
Total assets	-0.02 (0.4)	-0.02 (0.34)	-0.03 (0.28)	-0.02 (0.53)	-0.02 (0.45)	-0.02 (0.37)	
Leverage	-0.04 (0.72)	-0.03 (0.74)	-0.02 (0.85)	-0.06 (0.6)	-0.05 (0.63)	-0.04 (0.71)	
Cash/TA	0.39 (0.46)	0.24 (0.63)	0.53 (0.33)	0.33 (0.54)	0.18 (0.73)	0.47 (0.39)	
EBITDA/TA	0.05 (0.92)	-0.18 (0.73)	-0.31 (0.55)	0.09 (0.84)	-0.17 (0.75)	-0.31 (0.57)	
Dividend Yield	-1.94 (0.14)	-1.61 (0.22)	-1.75 (0.21)	-2.02 (0.14)	-1.67 (0.23)	-1.81 (0.22)	
Sector FE	Yes	Yes	Yes	Yes	Yes	Yes	
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	
N	79	79	79	79	79	79	
Adjusted R ²	0.650	0.587	0.576	0.632	0.558	0.547	

Appendix A – Variable Definitions	
Variable	Description
All-cash	An indicator variable equal to one if the deal was paid for using cash only, zero otherwise.
All-stock	An indicator variable equal to one if the deal was paid for using equity only, zero otherwise.
Cash/TA	The target's cash normalized by total assets.
Private deal premium	The ratio of the deal value per share over the target's net asset value 28 trading days before announcement.
Public deal premium	The ratio of the deal value per share over the target's stock price 28 trading days before announcement.
Dividend Yield	Dividend paid over stock price as of the year preceding the announcement.
EBITDA/TA	The target's EBITDA normalized by total assets.
Firm age	The number of years the REIT has been in operation.
Firm P/NAV	The target's price to NAV ratio computed as the target's stock price over the target's NAV estimate 28 trading days before announcement.
Firm-Sector P/NAV	The difference between the firm's price to NAV ratio and the average price to NAV ratio of REITs within the same sector.
Firm-Market P/NAV	The difference between the firm's price to NAV ratio and the average price to NAV ratio of all REITs.
Leverage	The percentage of debt in a REIT capital structure, computed as debt over total assets.
Public Acquirer	An indicator variable equal to one if the acquirer is a listed on a stock exchange, zero otherwise
Target CARs [-1;1]	Cumulative Abnormal Returns computed using the market model with the CAPM as the benchmark model. The three-day trading window is centered around the announcement of the merger.
Target CARs [-2;2]	Cumulative Abnormal Returns computed using the market model with the CAPM as the benchmark model. The five-day trading window is centered around the announcement of the merger.
Total Assets	The dollar value of the firm's assets (in \$million).
UPREIT	An indicator variable equal to one if the target operates under an umbrella partnership structure, zero otherwise