

A-REIT BIDDER RETURNS: AN EVALUATION OF PUBLIC AND PRIVATE TARGETS AND METHOD OF PAYMENT

CHRIS RATCLIFFE and BILL DIMOVSKI
Deakin University

ABSTRACT

This study examines the wealth effects of fifty-six Australian Real Estate Investment Trusts (A-REITs) acquirers around the announcement date of a merger and acquisition over the period of 1996 to 2010. This study extends Ratcliffe et al (2009) by examining mergers and acquisitions of private entity targets as well as public targets and confirms recent US REIT work in this field. Utilising event study methodology we find that bidding A-REITs earn positive and significant cumulative abnormal returns (CARs) of +0.966% around the three-day announcement period [-1,+1]. Analysis also indicates bidding firms earn higher CARs when the acquisition is financed by scrip and/or a combination of scrip and cash. Consistent with prior REIT research, event study results show that A-REIT acquirers earn higher excess returns when the target is private as compared to a public target, +2.834% and +0.457% respectively. Further investigation, employing regression analysis, shows book-to-market ratio has a negative impact on bidding firms CARs, suggesting that investors penalise high book-to-market A-REITs in an M&A due to their higher risk characteristics. We also find that both specialisation by property type and relative size of the bidder compared to the target has a positive and significant influence on bidder excess returns. Finally, our results show support for the method of payment findings in the event study, with method of payment returning a negative and significant impact on bidder CARs.

Keywords: real estate investment trusts (REITs), A-REITs, mergers, acquisitions, cumulative abnormal returns.

INTRODUCTION

Australian Real Estate Investment Trusts (A-REITs) are the largest holders of institutional-grade properties in Australia and have been a highly successful indirect property investment vehicle (Newell 2010). However, mergers and acquisitions (M&As) are one of the few opportunities of growth available for A-REITs, with Australia being one of the highest securitised property markets in the world (Murray 2012). Moody's Investment Service (2006) suggest that the merger activity in the A-REIT sector has been set in motion by the identification that size, asset growth and diversification are avenues to attract capital and improve returns. Since 1996 the A-REIT sector has grown from a market capitalisation of approximately \$11.5 billion to a peak of more than \$135 billion in 2007, though the global financial crisis has seen the market size of A-REITs fall to a low of \$46 billion in February 2009 and as of January 2012 the market capitalisation of the sector was \$75 billion¹. Chandler (2011) posits an increase in M&A activity within the A-REIT sector as market conditions improve.

This study investigates the wealth effects of A-REIT M&A announcements by acquiring firms over a period of 1996 to 2010. The study is an important extension on Ratcliffe et al (2009) and extends the study period from 2008 to 2010 to include private entity targets (not just public targets); resulting in an increase in the number of observations (36 versus 56), furthermore this study evaluates the impact on bidder returns when the target is either public or private. The aim of this paper is to add to the existing M&A literature and to fill the gap of excess returns for bidding Australian REITs when the target is privately held, an area that has not been covered in the literature at all.

¹ Authors computations sourced from ASX LMI Monthly Reports (www.asx.com.au)

Manne's (1965) seminal paper identifies that M&As provide some assurance of effective competition between managers and provides protection to the interest of non-controlling shareholders. Previous studies into the US Real Estate Investment Trust (REIT) sector have shown that acquiring firms earn mixed results when the target is public, ranging from +5.78% (Allen and Sirmans 1987) to -1.21% (Sahin 2005). However, when the target is private prior research has shown consistent results that acquiring firms have the opportunity to earn positive excess returns around announcement. For example, Campbell et al (2005) show that acquirers earn positive and significant excess returns of +1.52%.

Further studies on the method of payment have provided consistent results for REITs, in that the signalling impacts of payment method are negated when the target is private. Campbell et al (2011) provide evidence that acquiring REITs earn positive and significant excess returns of +0.81% when the transaction is financed by scrip and/or a combination of scrip and cash, while cash financed M&As return insignificant cumulative abnormal returns (CARs) of +0.07%. Our event study results show that bidders enjoy positive and significant CARs of +0.966% over the [-1,+1] event window for the entire sample. Furthermore, when the sample is divided into public and private targets, acquiring REITs earn higher excess returns when the target is private (+2.834% versus +0.457%). Finally we find that the use of scrip and/or combination of scrip and cash to finance the M&A produced significant CARs of +1.463%, compared to an insignificant CAR of +0.174% for cash paid mergers.

The paper will proceed as follows: the next section briefly reviews prior literature and identifies the central issues associated with shareholder returns during an M&A announcement within the A-REIT sector. The following section explains the methodology employed, while the section thereafter discusses the data and the next section reports the results. The final section makes some concluding remarks.

REIT M&A LITERATURE

Allen and Sirmans (1987) conducted the first study of REIT M&A bidders by investigating 38 completed REIT-REIT mergers from 1977 to 1983. Results showed that REIT acquirers earn a positive and significant CAR of +5.78% over the [-1,0] event window. This result is in contrast to non-REIT studies, for example, Andrade et al (2001) find small insignificant negative CARs over the [-1,+1] event window of -0.37% over the study period of 1973 to 1979. Extending on the research of Allen and Sirmans (1987), Campbell et al (1998) examined 27 completed REIT mergers from 1990 to 1998 and the results showed a negative CAR of -1.1%² over the [-1,+1] period. Sahin (2005) investigated 35 REIT-REIT mergers from 1990 to 1998 and found that bidding REITs experience significant negative CARs over the three-day event window of -1.21%.

An investigation of 95 international³ M&As of listed property companies from 1999 to 2004 was conducted by Eichholtz and Kok (2008) to determine the effectiveness of the market for corporate control in the real estate sector and found that the inefficient management hypothesis holds for both REITs and non-REITs. The inefficient management hypothesis suggests that M&A activity is motivated by the desire to enhance the performance of targets by replacing underperforming management, resulting in positive excess returns to both targets and acquirers (Agrawal and Jaffe 2003). The excess returns for REIT-REIT acquirers produced a small insignificant, but positive CAR over the three day event window of +0.27%. Keisers (2009) investigated 93 international REIT-REIT mergers from 1990 to 2005, acquiring REITs returned a negative but insignificant

² Unfortunately statistical significance of this result was not reported

³ Countries included: USA, Canada, UK, Australia, Sweden and The Netherlands.

excess return of -0.41% over the [-1,+1] window. Similarly, Campbell et al (2011) showed that REIT bidders earn an insignificant CAR of 0.00% during their study period of 1997 to 2006.

Ooi et al (2011) investigated 228 Japanese and Singaporean REIT property acquisitions from 2002 to 2007. The authors noted that aggressive growth in acquisitions by Asian REITs was a result of improved management practices and economies of scale. Results showed that acquiring REITs earn positive and significant excess returns of +0.21% over the [-1,+1] event window. Although the majority of the above results lack “statistical significance, they do support previous findings in real estate literature that bidding firms experience better excess returns in M&As compared to general corporate finance literature” (Ratcliffe et al 2009, p286).

The evidence on the impact of acquiring shareholders is somewhat mixed. Early studies show large excess returns to bidding shareholders, but it appears from later studies that the opportunity for bidding firms to obtain large excess returns has decreased. Campbell (2002) notes, since the 1986 Tax Reform Act⁴, REITs have become more dynamic, self-managed entities and are “much more similar to the rest of the corporate world” (p212) and suggests that the Act is a driver for the observed difference in excess returns reported for acquirers by Allen and Sirmans (1987) of +5.78% and those observed in more recent studies.

Studies into the excess returns for bidding REITs when the target is either public or private have produced similar results to more general corporate finance studies. Non-REIT studies have shown that bidders enjoy higher excess returns when the target is private, for example, Moeller et al (2004) show that acquiring firms earn a significant CAR of +1.49% when the target is private, compared to a significant negative CARs of -1.02% for public-public mergers.

Campbell et al (2001) investigated the wealth effects of 40 public-public and 45 public-private REIT M&As. The results demonstrated acquirers of public targets experienced negative and significant excess returns of -0.6% over the three-day event window. The CARs for bidding REITs when the target is private produced positive and significant excess returns of +1.9%. In a later study by Campbell et al (2005) of 53 public-private REIT mergers, the authors provided evidence of positive and significant abnormal returns of +1.52% over the [-1,+1] event window.

Consistent with these results, Keisers (2009) demonstrated that bidding REITs earn negative and significant CARs of -0.76% for public targets and positive (but insignificant) CARs of +0.66% when the target is private. However, the author also examined the mean difference of the CAR values and showed that the CARs for public-public and public-private acquisitions was statistically different over the [-1,+1] event window. Campbell et al (2011) investigated 70 public-public and 62 public-private REIT mergers, with results showing bidding REITs earn significant negative CARs of -0.95% around the announcement period [-1,+1] for public-public M&As. Public-private transactions produce positive and significant excess returns of +1.1% over the same period. Ling and Petrova (2011) found consistent results to general corporate finance studies that private targets enjoy higher excess returns in an M&A announcement compared to public targets.

METHODOLOGY

Event Study

Event study methodology as described by Brown and Warner (1985) is used to measure the excess returns of acquiring firm shareholders. To implement the event study methodology the market

⁴ Prior to the 1986 Tax Reform Act, REITs were not permitted to be self-managed entities and were passive, static investment vehicles offering shareholders advantages of liquidity and portfolio diversification within the property sector (Ling and Ryngeart 1997).

model method is employed. This method explicitly accounts for the risk associated with the market and mean returns. The market model was estimated for each A-REIT over a 120 day estimation period ($t_{.150}, t_{.30}$). Ordinary least squares (OLS) regression is employed to determine the parameter estimations. The following market model is employed:

$$E(R_{i,t}) = \alpha_i + \beta_i(R_{m,t}) + \varepsilon_{i,t} \quad \text{Equation 1}$$

where:

- $E(R_{i,t})$ represents the estimated return on security i on day t ;
- α_i represents the intercept term;
- β_i represents the slope coefficient;
- $R_{m,t}$ represents the observed return for the market index, S&P/ASX200⁵, on day t ; and
- $\varepsilon_{i,t}$ represents the standard error term

To avoid the bias associated with the estimation of parameters using daily returns for securities with infrequent trading (Heggen and Gannon 2008), we employ the Scholes and Williams (1977) adjusted beta method. The abnormal return (AR) of the common stock of firm i in the event window is calculated as⁶:

$$AR_{i,t} = R_{i,t} - E(R_{i,t}) \quad \text{Equation 2}$$

We estimate the cumulative abnormal returns (CAR) for any interval $[t_1:t_2]$ during the event window T as:

$$CAR_{[t_1:t_2]} = \sum_{[t_1:t_2]} AR_{i,t} \quad \text{Equation 3}$$

The event window T is 41 days ($T = [-20,+20]$), where $t = [0]$ denotes the trading day the M&A is announced. Haleblian et al (2009) note that the primary advantage of studying short-term event windows is that this allows the study to investigate any changes in share prices attributed to the M&A announcement with a high level of confidence that ‘noise’ from potentially confounding variables is minimised. Furthermore, McWilliams and Siegel (1997) identify that M&A often result from a strategic planning process, thus information from the pending announcement may have been leaked to or predicted by the market. Therefore we provide analysis of $[-1,+1]$, $[-2,+2]$, $[-5,+5]$, $[-20,0]$ and $[+20,0]$ event windows to capture any possible information leakage, along with post announcement reaction by the market. Finally, the additional event windows will allow us to investigate the robustness of our results and to provide comparison with previous real estate trust M&A literature.

To determine the statistical significance of the calculated AR and CAR, a standard cross-sectional test statistic was estimated. First, we calculate a standardised abnormal return by dividing each AR in the event window by its estimation period standard deviation:

$$\hat{AR}_{i,t} = \frac{AR_{i,t}}{\sigma(AR_{i,t})} \quad \text{Equation 4}$$

where:

⁵ S&P/ASX200 is the investable benchmark for the Australian equity market. The index is comprised of the top 200 stocks listed on the Australian Stock Exchange.

⁶ Returns include dividend payment and other corporate actions.

$$\sigma(AR_{i,t}) = \sqrt{\frac{\sum_{t=-150}^{t=-30} (AR_{i,t} - AR^*_i)^2}{120}} \quad \text{Equation 5}$$

$$AR^*_i = \frac{\sum_{t=-150}^{t=-30} AR_{i,t}}{120} \quad \text{Equation 6}$$

The test statistic for the AR on any given day is given by:

$$AR - t - statistic = \left(\sum_{i=1}^{N_t} \hat{AR}_{i,t} \right) \cdot (N_t)^{-\frac{1}{2}} \quad \text{Equation 7}$$

where:

N_t is the number of sample securities for time period t .

The test statistic for CAR during the event window is given by:

$$CAR - t - statistic = \frac{\left(\sum_{i=1}^{N_t} \hat{AR}_{i,t} \right) \cdot (N_t)^{-\frac{1}{2}}}{\sqrt{L_t}} \quad \text{Equation 8}$$

where:

L_t is the number of abnormal returns that have been accumulated in the event window.

Regression Analysis

Regression models were developed to examine the abnormal returns calculated above for A-REIT acquirers. Independent variables were selected on the basis of prior literature along with variables unique to the A-REIT structure. OLS regression was utilised to test the significance of the relationship between each A-REIT CAR over the three-day event window [-1,+1] and the explanatory variables are discussed below.

$$CAR_{[-1,+1]} = \alpha + \beta_1 RELSIZE + \beta_2 LEV + \beta_3 MOP + \beta_4 PUBLIC + \beta_5 BVMV + \beta_6 HHPROP + \beta_7 GFC + \varepsilon \quad \text{Equation 9}$$

Relative Size

Relative size (RELSIZE) is measured as the natural log of the ratio of the bidder's market capitalisation divided by the price paid for the acquisition. Prior REIT research has found that relative size is positive and significant for bidding REITs (Campbell 2001, Ratcliffe et al 2009) suggesting that the smaller the value of the target, relative to the bidder, the higher excess returns. We hypothesise that relative size will have a positive impact on excess returns.

Degree of Financial Leverage

The degree of financial leverage (LEV) is defined as the degree of financial gearing employed by the A-REIT, measured as *Financial Debt / (Financial Debt + Equity)*.⁷ Jensen (1986) proposed that firms with higher financial leverage make better investment decisions due to their lower levels of

⁷ Financial debt includes both long- and short-term debt.

financial-slack or free-cash flow. Maloney, McCormick and Mitchell (1993) provide evidence to support this view and conclude “that debt improves managerial decision making” (p189). In the case of REITs, Campbell et al (2001) found no significant relationship between acquirer excess returns and leverage in public-public acquisitions. The authors hypothesised that this result was due to the REIT institutional structure and the restriction it placed on REITs free-cash flow. The current study aims to add to the existing real estate literature on the impact of leverage; we expect the degree of financial leverage to have a positive impact on excess returns.

Method of Payment

Research has documented that choice of payment has an impact on excess returns. Both bidder and target excess returns are higher when cash is used as the method of payment (see, for example, Wansley et al (1983), Travlos (1987), Davidson and Cheng (1997) and Andrade, Mitchell and Stafford (2001)). There are two hypotheses for the difference in the observed excess returns between the methods of payment. First, the different signalling implications of cash versus stock (Myers and Majluf 1984). Takeovers financed with cash reduce the asymmetric information problem that is associated with the use of stock or a combination. Second is the tax implication hypothesis, which suggests that target firm shareholders require a higher payment from the bidder to compensate them for the immediate tax liability that cash bids create (Wansley et al 1983).

In the case of REITs, prior research has shown that bidding firms earn higher excess returns when scrip and/or a combination of scrip and cash is used to finance the acquisition. For example, Campbell et al (2011) provided evidence of positive and significant CARs of +0.81% when scrip/combination financed acquisitions, however when cash is utilised as the method of payment, bidders earn CARs of +0.07% over the [-1,+1] event window. Ratcliffe et al (2009) provided similar results when investigating A-REIT M&As. Scrip/combination deals produced significant excess returns of +1.55%, compared to cash financed deals of -0.22%. Similarly, when the target is privately held, Campbell et al (2005) show that bidders earn a CAR of +1.58% when scrip/combination is used, compared to +0.76% for cash financed mergers.

Campbell et al (2001) suggest that this difference in REIT results compared to more general corporate finance studies is due to a REITs legal requirement to payout 95% of their earnings which limits the opportunity to finance acquisitions with internally generated funds, therefore may lessen the negative implications of using stock as the method of payment. Given prior evidence, we expect the payment variable to be in contrast to prior general corporate finance studies. MOP is a dummy variable for the method of payment, 1 if cash only is used to finance the merger, otherwise 0.

Public-Private Targets

General corporate finance studies have identified a sharp contrast in acquirer excess returns for public-public and public-private mergers, for example, Fuller et al (2002) find that acquirers earn positive and significant CARs of +2.08% for public-private acquisitions, public-public M&As return a negative and significant excess return of -1.00%. Moeller et al (2004) display similar results, with a significant CAR of +1.49% public-private, compared to significant negative CARs of -1.02% for public-public mergers. Chang (1998) suggests that these results are due to the monitoring activities of target shareholders and reduced information asymmetries. In the case of REITs this trend is continued, Campbell et al (2011) find positive and significant excess return for public-private mergers of +1.1%, compared to negative and significant CARs of -0.95% for public-public mergers⁸. A dummy variable of 1 is used to identify public-public acquisitions. We expect the public-public M&A to have a negative impact on excess returns.

⁸ *This result is consistent with Campbell et al (2001, 2005).*

Book-to-Market Ratio

Book-to-market ratio represents a value strategy employed by investors (La Porta et al 1997), with Lakonishok et al (1994) suggesting that stocks with low book-to-market ratios are overpriced and high book-to-market stocks are under-priced and argue high book-to-market value stocks have been under-priced relative to their risk and return characteristics. Conversely, Fama and French (1992; 1995) stipulate that high book-to-market stocks have a higher risk premium due to lower earnings, higher financial leverage and higher earnings volatility. Therefore a negative relationship between acquiring A-REIT CARs and their book-to-market ratio suggests that investors penalise high book-to-market A-REITs in an M&A due to their higher risk characteristics. Book-to-market ratio (BVMV) is calculated as the A-REITs book value of equity, divided by its market value equity. Book values are obtained from the firm's annual (or semi-annual) report prior to the M&A announcement, market values are taken as the market capitalisation on the day the annual report is released to the market⁹.

Asset Diversification

Allen and Sirmans (1987) argued that REITs that specialised in particular types of properties or geographical location provide bidding trusts with the expertise in identifying mismanaged REITs of similar type. This could result in higher abnormal returns to acquiring firms when the target is the same type of trust as the acquirer. Allen and Sirmans (1987) found statistically significant difference in the performance of related and unrelated mergers. Related mergers produced a CAR of 6.63%, as compared to 4.61% for unrelated acquisitions. Measurement of diversification/specialisation is calculated using the Hirscham-Herfindahl index (Hirscham 1964) and is defined as:

$$HHPROP = \sum_i w_i^2 \quad \text{Equation 10}$$

where:

w_i = the proportion of an A-REITs portfolio invested in property type i

This measure shows how focused or diversified the A-REIT is, a score close to one means the trust is highly focused, whereas a score close to zero is a diversified trust. Finance theory on diversification suggests that we would expect a focused M&A to earn higher CARs.

Global Financial Crisis

The global financial crisis (GFC) has had a significant impact on the market values of the A-REIT sector (Dimovski 2009; Newell and Peng 2009). The A-REIT sector market capitalisation fell by over 65% from February 2007 to February 2009, BDO Kendall (2008) suggesting that the A-REIT sector started to show significant impacts of the GFC in December 2007. Dimovski (2009) found evidence of a shift in the systematic risk of A-REITs post December 2007. Therefore to capture the possible impact on the excess returns from the GFC, we include a dummy variable of 1 for M&A announcements that occur post December 2007.

DATA

Successful A-REIT M&A bidders were identified, along with the announcement day¹⁰, from the *Connect 4 Takeovers Database*¹¹ over the period of January 1996 to December 2010. Daily share

⁹ When the annual (or semi-annual report) is released to the market after the close of trade, the following trading day market capitalisation is used.

¹⁰ To confirm announcement date, each transaction was cross referenced with ASX Announcements database. If an announcement occurred after the close of trade, the following trading day was employed as day 0

price data for the identified M&As was obtained from *Bloomberg*. Accounting data (leverage, book value and property specialisation) was collected from the *Connect 4 Annual Reports* collection and ASX website (www.asx.com.au). Potential firms were subjected to the following screens before they were included in the sample:

- the firm share prices must be listed in Bloomberg for the period beginning 150 trading days prior the announcement and ending 20 days after the announcement, a total 171 days;
- there must be an absence of large-scale confounding events occurring within five trading days of the announcement;
- the acquirer must be a listed entity and be classified as an Australian Real Estate Investment Trust; and
- the target firm must also be classified as a real estate investment trust, whether listed or unlisted.

A total of fifty-six transactions were identified that met the above criteria. Table 1 provides a breakdown of the 56 M&A announcements by year. Two interesting points seem to appear; first a total seventeen announcements occur in the years 2000-01, this coincides with the introduction of the Managed Investments Act 1998 that allowed for the introduction of a single Responsible Entity role post June 2000 (Dimovski 2010), paving the way for A-REITs to become self-managed entities. The second point of interest is the number of announcements in the run up to the global financial crisis (GFC), during and post. In 2006-07 we saw a total of eight announcements and the market capitalisation of the A-REIT sector reached its high in 2007. However, in 2008, during the height of the GFC there were no M&A attempts made; in fact the one announcement in 2009 did not occur until October that year, after the A-REIT sector market capitalisation had hit its low in February 2009. Finally, in 2010 we have seen an increase in announcements to a total of five as the sector recovered.

Year	No. Obs	Year	No. Obs
1996	2	2004	6
1997	0	2005	2
1998	1	2006	3
1999	5	2007	5
2000	9	2008	0
2001	8	2009	1
2002	2	2010	5
2003	7	Total	56

Announcement of 56 M&As by Year

Source: Authors

Table 1

Table 2 provides the descriptive statistics for the sample. The mean value of all acquiring A-REITs is \$2.1 billion; the mean value of the acquisition is almost \$700 million. The relative size of the acquisition has a mean value of 6.434, suggesting that the bidding A-REITs are substantially larger than the target A-REITs. As the assumptions associated with the independent samples t-test could not be met, therefore a non-parametric analogue, the Mann-Whitney test was used. When we divide the sample into public-public and public-private acquisitions, we find a significant statistical

¹¹ *Connect 4* is a well regarded private company provider of Australian Stock Exchange (ASX) information to universities, government departments, banks, stockbrokers and other such finance researchers.

difference in the size of the acquiring firms. The mean value of the acquisition for public-public M&A is \$833 million compared to \$200 million for public-private M&A, when we employ the Mann-Whitney test we find the difference to be statistically significant at the 1% level. Finally, the relative size of the M&A for public-public transactions is smaller than those that are public-private (5.201 versus 6.770); this may suggest that smaller A-REITs find it easier to increase their size by targeting unlisted trusts.

All Obs (n = 56)	Mean	Median	Max	Min	S.D.
Mkt Value of Bidder (\$M)	2120.40	1484.49	8056.72	45.34	2077.33
Value of Acquisition (\$M)	697.66	378.74	8460.53	20.00	1213.28
Relative Size of Acquisition	6.434	3.342	53.904	0.411	8.984
Public-Public (n = 44)	Mean	Median	Max	Min	S.D.
Mkt Value of Bidder (\$M)	2431.86	1619.75	8056.72	184.09	2172.43
Value of Acquisition (\$M)	833.32	427.92	8460.53	24.98	1337.91
Relative Size of Acquisition	6.770	3.447	53.904	0.423	9.707
Public-Private (n = 12)	Mean	Median	Max	Min	S.D.
Mkt Value of Bidder (\$M)	978.38	676.72	3981.09	45.34	1147.58
Value of Acquisition (\$M)	200.22	177.75	475.00	20.00	139.28
Relative Size of Acquisition	5.201	2.640	19.757	0.411	5.754
Mann-Whitney Test	Diff in medians	p-value			
Mkt Value of Bidder	943.03	(0.011)**			
Value of Acquisition	250.17	(0.007)***			
Relative Size of Acquisition	0.096	(0.618)			

Note: ***, ** denotes statistical significance at the 1% and 5% level respectively.

Descriptive Statistics for Event Study

Source: Authors

Table 2

RESULTS AND DISCUSSION

Event Study Results

Table 3 displays the event study results for the A-REIT bidders. Panel A displays the results for all A-REIT acquirers and the CARs shows positive and significant excess returns over event windows [-2,+2] and [-1,+1]. Prior research on bidding REITs has been mixed, Eichholtz and Kok (2008) found bidding REITs experience positive CARs of 0.37% over days [-1,+1], however the result was not significant, Keisers (2009) observed insignificant negative CARs around the announcement period of 0.41%. Finally, Sahin (2005) and Campbell et al (2001) both observed negative and significant excess returns of 1.21% and 0.6% respectively over the three-day event window.

Interestingly, we find positive excess returns of 0.641% for the [-20,0] event window and negative CARs of -1.177% for the [0,+20] window. Although neither window is statistically significant, it

does suggest that there may be some information leakage within the market prior to announcement, however, as time passes post announcement the market is able to digest the information and re-price the acquiring firms. Elayan and Young (1994) achieve different results over similar event windows, the authors finding that bidding real estate firms earn negative, but insignificant, CARs of -0.3% in the [-20,-2] window and positive and significant CARs of +2.7% over the [+2,+20] period.

Panel A: A-REIT Bidders						
	Total sample (n = 56)		Cash (n = 30)		Combination (n = 26)	
Interval (Days)	CAR	pValue	CAR	pValue	CAR	pValue
[-20,+20]	-0.905%	(0.367)	-2.506%	(0.068)*	1.025%	(0.470)
[-20,0]	0.641%	(0.504)	0.046%	(0.668)	1.326%	(0.149)
[0,+20]	-1.177%	(0.134)	-2.314%	(0.036)**	0.135%	(0.953)
[-5,+5]	0.640%	(0.375)	-0.495%	(0.314)	1.560%	(0.067)*
[-2,+2]	0.880%	(0.015)**	0.321%	(0.622)	1.231%	(0.016)**
[-1,+1]	0.966%	(0.001)***	0.174%	(0.707)	1.463%	(0.001)***

Panel B: Public-Public						
	Total sample (n = 44)		Cash (n = 21)		Combination (n = 23)	
Interval (Days)	CAR	pValue	CAR	pValue	CAR	pValue
[-20,+20]	-1.135%	(0.503)	-3.488%	(0.077)*	1.122%	(0.396)
[-20,0]	0.088%	(0.417)	-1.628%	(0.291)	1.655%	(0.079)*
[0,+20]	-1.058%	(0.244)	-1.954%	(0.120)	-0.240%	(0.899)
[-5,+5]	-0.014%	(0.494)	-1.111%	(0.354)	0.720%	(0.138)
[-2,+2]	0.326%	(0.079)*	-0.345%	(0.840)	0.714%	(0.030)**
[-1,+1]	0.457%	(0.017)**	-0.286%	(0.776)	0.947%	(0.002)***

Panel C: Public-Private						
	Total sample (n = 12)		Cash (n = 9)		Combination (n = 3)	
Interval (Days)	CAR	pValue	CAR	pValue	CAR	pValue
[-20,+20]	-0.062%	(0.504)	-0.216%	(0.524)	0.282%	(0.824)
[-20,0]	2.666%	(0.686)	3.953%	(0.417)	-1.195%	(0.531)
[0,+20]	-1.615%	(0.315)	-3.156%	(0.143)	3.009%	(0.599)
[-5,+5]	3.041%	(0.544)	0.943%	(0.672)	8.003%	(0.196)
[-2,+2]	2.914%	(0.060)*	1.876%	(0.228)	5.196%	(0.272)
[-1,+1]	2.834%	(0.022)**	1.246%	(0.262)	5.419%	(0.349)

Note: ***, **, * show statistical significance at the 1%, 5% and 10% level respectively.

Cumulative Abnormal Returns
Source: Authors
Table 3

To further investigate the wealth effects for bidding A-REITs, the sample was divided into method of payment. Contrary to prior general corporate finance research (but consistent with REIT research), we find the bidders earn higher CARs when scrip or a combination of cash and scrip is

used to finance an acquisition. The CARs are positive across all event windows for scrip/combination and significant in event windows [-5,+5], [-2,+2] and [-1,+1] at the 10%, 5% and 1% level respectively. The CARs when M&As are financed with cash are slightly positive in the shorter event windows, but produce a negative 2.506% CAR (and slightly significant) over the 41 day window. This result supports Campbell et al's (2001) proposal that the limitation of internally generated funds due to the organisational structure of REITs may lessen the negative implications of using stock as the method of payment.

In panels B and C, the sample has been divided into public-public and public-private M&As. Consistent with prior REIT research, bidding firms earn higher excess returns when the target is private (e.g. Campbell et al (2011) and Keisers (2009)). Public-private M&As return a positive and significant CAR of 2.834% compared to a positive CAR of 0.457% (significant at the 5% level) for public-public acquisitions. The CARs for public-public M&As remain positive and significant when the transaction employs scrip/combination to finance the merger over the shorter event window (0.947% for [-1,+1] period). However, the cash CARs are now negative across all the event windows and slightly significant for [-20,+20]. This result is somewhat consistent with Campbell et al (2005) which showed scrip/combination produced higher excess returns compared to cash financed mergers. When examining the public-private method of payment, we see that scrip/combination excess returns are 5.419% compared to 1.246% for cash payments over the three-day event window, however, neither display statistical significance¹².

Our results suggest that bidding A-REITs earn positive and significant returns around the announcement period, however, the level of CARs is low. This result supports Eichholtz and Kok's (2008) claim that lower CARs are possibly due to the homogeneity of the assets. We find over the 41 day event period the excess returns are negative and non-significant. Further investigation finds that the negative CARs occur in the post announcement period [0,+20] possibly suggesting that the market is able to digest the information and re-price the acquiring firms.

Cross-section Regression Results

In regression analysis a number of the independent variables may exhibit high levels of correlation, this can have an impact on their explanatory power and hence the robustness of the results. Table 4 displays the correlation matrix of the explanatory variables. It can be seen that we experience a moderate level of correlation (0.456) between the variables GFC and BVMV, however this level is not high enough to warrant adjustment of the model. The remaining variables all exhibit a low level of correlation.

	GFC	HHPROP	LEV	MOP	PUBLIC	RELSIZE	BVMV
GFC	1						
HHPROP	-0.011	1					
LEV	0.216	0.391	1				
MOP	0.091	0.074	0.098	1			
PUBLIC	-0.241	-0.119	-0.349	-0.224	1		
RELSIZE	-0.129	0.256	0.343	-0.240	-0.117	1	
BVMV	0.456	-0.057	0.011	-0.089	-0.130	0.060	1

Correlation Coefficient Matrix of Independent Variables

Source: Authors

Table 4

¹² This result is possibly due to the low number of observations for method of payment.

Table 5 displays the regression model results. Ordinary least squares is employed to test the significance of the relationship between bidding A-REIT three-day CARs [-1,+1] and the independent variables described above. Standard diagnostic tests are also run to examine for normality, heteroskedasticity¹³ and omitted variables. Panel A shows the regression results for the full sample; Panel B provides the results after removing outliers¹⁴. One of the observations is over 5 standard deviations away from the mean CAR while the other observation is high on 3 standard deviations away from the mean CAR. In both regression model results, book-to-market variable is negative and significant at the 5% confidence level suggesting that bidding A-REITs with a lower book-to-market ratio earn improved CARs than A-REITs with a higher BVMV. This result supports Fama and French's (1992, 1995) claim that high BVMV firms have a higher risk premium and suggests that investors penalise high BVMV A-REITs in an M&A due to their higher risk characteristics.

The independent variable for diversification/focus (HHPROP) displays significance in panel A at the 10% level, but after outliers are removed increases in significance to the 5% confidence level. This result suggests that bidding A-REITs who invest mainly in a single property type (for example, retail or office) earn higher excess returns than A-REITs that are more diversified across different property types.

Variable	Panel A		Panel B	
	No. of Obs	(p-value)	No. of Obs	(p-value)
Intercept	0.115	(0.069)*	0.000	(0.994)
RELSIZE	-0.005	(0.521)	0.009	(0.039)**
LEV	-0.208	(0.051)*	-0.030	(0.571)
MOP	-0.021	(0.176)	-0.021	(0.022)**
PUBLIC	-0.039	(0.067)*	-0.004	(0.577)
BVMV	-0.032	(0.018)**	-0.006	(0.042)**
HHPROP	0.033	(0.094)*	0.027	(0.031)**
GFC	0.029	(0.516)	-0.035	(0.053)*
R ²	0.286		0.352	
Adjusted R ²	0.182		0.253	
White Test	53.583	(0.007)	39.467	(0.192)
Jarque-Bera	38.826	(0.000)	0.778	(0.677)
Ramsey Reset	26.354	(0.123)	30.154	(0.030)

Notes: ***, **, * show statistical significance at the 1%, 5% and 10% level respectively.

Regression Results for Bidding A-REITs
Source: Authors
Table 5

Leverage is negative and significant in Panel A, suggesting that higher levered bidders earn lower CARs around the announcement period. This result is in contrast to Jensen's (1986) proposal that firms with lower levels of financial slack or free-cash-flow make better investment decisions. The negative coefficient is however consistent with Campbell et al (2001, 2011)¹⁵ and supports the author's theory that the institutional structure and restriction of free-cash-flow may reverse the

¹³ White Test reported heteroskedasticity, thus model was re-run to adjust for this.

¹⁴ Jarque-Bera normality test identified two outliers that were more than two standard deviations away from the mean.

¹⁵ The coefficient was negative, but not significant.

conclusions of Maloney et al (1993) that the managerial decision making process improves as debt levels increase. However, once outliers are removed, the significance of leverage is lost, thus this result is one for further empirical investigation.

Panel B also shows that relative size is positive and significant. This result is consistent with Campbell (2001) and Ratcliffe et al (2009), suggesting that size has an impact on the bidding shareholder returns. The financial crisis variable is negative and slightly significant in panel B. This result supports the findings of Dimovski (2009). The negative coefficient suggests that the CARs for bidding A-REITs post GFC are lower, supporting the market sentiment experienced post December 2007. However, we feel that the low number of observations may be driving the result. We feel that this is an area for future investigation as more M&A announcements occur.

Finally, in Panel B, the method of payment variable is negative and significant. This result supports our findings from the event study analysis, where bidding A-REITs earn higher CARs when scrip and/or a combination of scrip and cash is used to finance the acquisition.

CONCLUSION

This paper has examined the impact on returns for acquiring A-REITs over the period of 1996 to 2010 and included the acquisition of private targets in Australia, which has not been examined in the literature before. Furthermore, this study adds to the existing literature by Ling and Petrova (2011), Eichholtz and Kok (2008) and Campbell et al (2001, 2005) by examining the excess returns for acquiring trusts for both public-public and public-private announcements.

Employing event study methodology, we examined 56 M&A announcements in the Australian sector, including both public and private target announcements. This is the first Australian study to investigate private targets and as such, is an important addition to the international real estate literature. Our results show that bidding A-REITs enjoy positive and significant CARs around the announcement period and adds to the existing literature from the US. Further investigation shows that the choice of payment is important for A-REIT bidders and we find that deals financed by scrip and/or combination provide higher excess returns than those deals financed by cash, with this result due to the organisational structure of A-REITs. Finally, we find that, consistent with prior REIT research, bidding firms earn higher excess returns when the target is private. While this finding is consistent with previous US REIT studies, this study now informs investors in A-REITs.

The final section of our analysis investigated the characteristics of A-REITs which may be driving the CARs observed in our event study analysis. Using the estimated CARs, we tested how the excess returns of A-REIT bidders is conditioned on size, financial leverage, book-to-market ratio, the degree of specialisation, type of target and method of payment. The BVMV result suggests that investors penalise high BVMV A-REITs in an M&A due to their higher risk characteristics. We also find the level of focus by the acquiring A-REIT to have a positive impact on CAR, suggesting that focused A-REITs can earn higher excess returns in an M&A announcement. Finally, after adjusting for outliers, we find that relative size has a positive impact on bidding A-REIT CARs. More specifically, the larger the acquirer, relative to the target, the greater the excess returns.

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Email contact: c.ratcliffe@deakin.edu.au