

Master's Thesis

The impact of Merger & Acquisition announcements on Real Estate Investment Trust returns in the United States

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Abstract

This study examines the effect of merger and acquisition announcements on acquiring real estate investment trust (REIT) returns in the United States, analyzing a sample of 464 announcements dating from 1999 to 2024, employing the market and risk adjusted model by Brown and Warner (1985). Prevailing literature suggests that such announcements should lead to economics of scale and more efficient resource allocation, thus being appreciated by investors, leading to positive stock returns. The main variable of interest in this context is the average abnormal return, measuring the statistical deviation from observed returns and those that would have been expected without the M&A announcement taking place. Furthermore, a sensitivity analysis is differentiating between M&As of REITs operating within and outside the same industry, as well as within and outside the same state of residence, investigating if these M&A characteristics are valued differently. The main findings indicate that merger and acquisition announcements are associated with a statistically, but not economically, significant average abnormal return of -0.2% for the acquiring party one day before the announcement. Cumulative average abnormal returns, the sum of average abnormal returns surrounding the event day, are statistically not significant over the entire five-day event window. Therefore, it can be inferred that merger and acquisition announcements in this sample of acquiring REITs can generally not be associated with abnormal REIT returns, suggesting that, in aggregate, investors do not react to named announcements. The same holds true for REIT M&A announcements in the sensitivity analysis, with -0.3% average abnormal returns two days after the M&A announcement regarding the difference between M&As within and outside the same industry and -0.68% cumulative average abnormal returns over the five-day event window regarding the difference between M&As within and outside the same state of residence.

1. Introduction

Mergers and acquisitions (M&As) are a cornerstone of corporate strategy, serving as a powerful mechanism for companies to adapt to evolving market conditions, expand their reach, and enhance shareholder value. In the realm of the real estate sector, M&A activity has surged dramatically in the last two decades, with real estate investment trusts (REITs) raising more capital than ever before (NAREIT, 2021). This acceleration in REIT M&A activity is a response to a combination of interrelated market forces. Intensifying competition, fueled by the entry of new players and the expansion of existing ones, has caused REITs to look out for new avenues of growth (S&P Global, 2023). Moreover, the historically low interest rate policy of the last two decades, by the Federal Reserve's monetary policy, and consistently low yields on U.S. Treasury bonds, have created a favorable financing landscape for M&A activity (FRED, 2024). With access to cheap debt, REITs are more inclined to pursue acquisitions as a means of investing capital and expanding their asset base (Adra et al., 2020). Within this context, the present thesis will focus on the impact of acquiring REIT M&A announcements and its immediate effects on returns surrounding the announcement event.

Existing literature investigating the impact of REIT M&A announcements on abnormal returns is predominately concerning the target side of such deals. In related studies the announcement of M&As is associated with significant positive abnormal returns for targets of 3.4% to 10,86% over a three-day event window (Campbell et al., 2005, 2011; Eichholtz & Kok, 2008; Elayan & Young, 1994; Ling & Petrova, 2011; Sahin, 2005). These findings align with general corporate finance literature, indicating that target firms tend to receive the majority of benefits in an M&A (Campbell et al., 2011). However, the average abnormal target REIT returns observed tend to be lower compared to those in corporate studies (Campbell, 2002; Eichholtz & Kok, 2008).

The impact on acquiring REITs on the other hand has yielded mixed findings, highlighting the need for further research to investigate market reaction to acquirer announcements. While some studies report positive abnormal returns following M&A announcements in the low single-digit range over the three-day announcement window (Campbell et al., 2005; Eichholtz & Kok, 2008), other studies document negative or insignificant effects (Elayan & Young, 1994; Sahin, 2005). This lack of consensus underscores the importance of distinguishing not only between acquirers and targets, but also between different M&A announcement characteristics and REIT divestiture strategies, examining their distinct impacts on immediate market reactions.

It is theorized from corporate literature that consolidation through M&As offers the potential to achieve economies of scale, optimize resource allocation, and diversify portfolios, thus mitigating risk and enhancing overall financial performance (Calipha et al., 2010). Anderson et al., (2012) however have highlighted the rarity of hostile takeovers in the real estate industry, questioning the underlying motivations behind M&As within the real estate sector and REITs specifically. The lack of hostile takeovers, combined with the

distinctive characteristics of the real estate market such as asset illiquidity as well as asset heterogeneity and information asymmetry, questions whether the conventional corporate M&A motives can be applied to the REIT industry (Anderson et al., 2012).

Therefore, this paper is going to build on existing research by clarifying the relationship between M&A announcements and their immediate impact on REIT returns in the United States. Employing a larger, more recent dataset, also capturing the industry-reshaping effects of the REIT Modernization Act of 1999, allowing REITs to fully own a taxable subsidiary and lowering the mandatory payout requirement from 95% to 90% of total earnings (Congressional Research Service, 2016). This broader timeframe ranging from 1999 to 2024 provides a new selection of deals that have not been researched in the context of abnormal returns and M&A announcements so far. Moreover, by examining a larger and regulatory homogeneous sample of REIT M&As, this study aims to provide more robust and generalizable findings for the REIT industry compared to previous research.

A key novelty of this research approach lies in the differentiation between inter- and intra-state deal announcements, as an additional approach of understanding the distinct features of industry focus increasing take overs. Inter-state deals are defined as deals with acquirer and target REITs being located in different states and intra-state M&As as deals with both parties located in the same state. Industry focusing M&As are defined as M&As within the same industry, whereas focus decreasing M&As are divestures outside the acquiring REITs industry. Examining these two distinct types of M&As, is a more in depth attempt to assess whether the geographic and industrial scope of a transaction influences investor perceptions and market reactions to M&A announcements.

For this purpose the study will follow the event study methodology based on the market and risk adjusted model proposed by Brown & Warner, (1985) and MacKinlay, (1997). Identical models, sometimes just referred to as the “market model” to estimate abnormal returns are used in comparable studies by Eichholtz & Kok, (2008), Elayan & Young, (1994) and Sahin, (2005). This approach allows for the examination of abnormal returns around the announcement date, isolating the impact of the M&A event from overall market movements. Data on REIT M&A announcements, stock prices, REIT locations and REIT industries was collected from the LSEG Refinitiv database and analyzed to assess the statistical significance and economic magnitude of abnormal returns in the pre-and post-event windows as well as the five and three-day event windows.

The unexpectedness of these announcements is a critical assumption for the validity of the event study methodology. Given the strategic and sensitive nature of M&As, information regarding such corporate actions is typically held in confidential until the official public announcement. This creates an element of surprise for investors, with M&As announcements generally being considered unexpected events.

Abnormal returns, or deviations from expected stock price movements, observed around the announcement date are therefore directly attributable to the release of new information (McWilliams & Siegel, 1997). This assumption relies on the semi-strong form of the efficient market hypothesis, which posits that stock prices reflect all publicly available information, including past price data (Fama, 1970).

The main research question of this thesis is:

Do merger and acquisition announcements of acquiring real estate investment trusts in the United States between 1999 and 2024, lead to positive abnormal returns?

Aiming to investigate the impact of real estate investment trusts that announce the merger with or acquiring of other real estate firm in the United States between 1999 and 2024 and its impact on immediate stock returns. Furthermore, this research's sensitivity analysis aims to deepen the understanding of investors and market reactions to the announcement of industry focus and geographic focus increasing M&As in the REIT sector. Thus, a greater emphasis will be given to merger and acquisition announcements of acquiring real estate investment trusts in the United States between 1999 and 2024 that promote industry and geographic focus to investigate if given focus results in different abnormal returns compared to M&As that do not emphasize such focus.

The remainder of this study is structured as follows. The chapter two, the literature review, will provide a brief overview of the findings to date, motives and theories explaining M&As and differentiate between the corporate and the REIT industry. The third chapter, the methodology of this study, will describe the data selection process, the sample, the model, and statistical tests. Subsequently, in the fourth chapter, the results are explained, discussed and distinguished from other studies. Finally, the findings are summarized and interpreted in the conclusion, followed by an outlook for future research and a short discussion about the generalizability of this study's findings.

2. Background

2.1 General M&A Motives and REIT Particularities

Research on the motives behind M&A in general is quite extensive, ranging from sector-specific studies to broader analyses covering whole countries, revealing multiple reasons for divestiture activities. Generally, most theories can be assigned to two main umbrella categories with the neoclassical theory and the agency and behavioral theory being the most widely accepted ones in corporate literature.

The neoclassical theory views M&As as value-creating events, primarily triggered by external factors, such as economic fluctuations or regulatory changes (Jensen, 1996). The underlying assumption is that M&As are strategic tools employed by firms to maintain or establish a competitive advantage within their industry (Jensen, 1996). The ultimate objectives of such activities are to optimize profits and enhance shareholder value, given that management's interests align with those of the shareholders. M&As, in this perspective, enable combined entities to operate more efficiently than individual firms by realizing positive synergies, economies of scale and cost reductions (Anderson, 2012).

The behavioral and agency theory challenges the neoclassical view by suggesting that M&As can take place although they might be not value-enhancing (Berkovitch & Narayanan, 1993). It is generally argued that managements self-interest can be a driving force behind M&A activities. Managers may seek to expand the firm's size and scope through acquisitions to build their own "empire," even if this does not necessarily translate into increased shareholder value, motivated by the power and prestige associated with managing a larger firm (Mueller, 1969). Another reason for this behavior lies potentially in the compensation structure of most companies with compensation often being more closely tied to firm size than to profitability (Mueller, 1969). Furthermore, does Jensen, (1996) suggests that a booming financial market with a favorable financing environment can lead to an increase in M&As, as funds become more easily accessible to firm management, potentially fueling their empire-building ambitions and subsequently increasing the potential for conflicts of interest between managers and shareholders.

The application of these theories to explain M&As in the real estate sector however needs more careful considerations due to the unique characteristics of the real estate industry and REITs in particular. Most of these considerations in literature are founded on the high number of regulations and restrictions for REITs and their close supervision by the United States Securities and Exchange Commission.

For example, do REITs enjoy tax advantages and are not subject to double taxation like normal corporate firms. In order to get and maintain their status of a REIT they must follow strict ownership, income, and dividend rules (SEC, 2016). These regulatory constraints can significantly influence the motivations for M&A activity within the real estate sector, that eventually lead to some traditional corporate merger motives

becoming less relevant. The recently largest change in regulation, whose implications on M&A announcement returns is rarely investigated, is the Real Estate Investment Trust Modernization Act of 1999. The new act allowed REITs to hold all shares in taxable subsidiaries and provide a broader complementary set of services to tenants and the amount of necessary earnings distribution to shareholders fell from 95% to 90% (Congressional Research Service, 2016).

Allen and Sirmans (1987) argue that the unique structure of REITs and especially their highly regulated industry rule out certain classic merger motives. They highlight that REITs significant distribution of their taxable income as dividends to shareholders, limits their ability to retain earnings for internal growth, thus potentially making M&As a more attractive option for expansion.

Additionally, as argued by Eichholtz & Kok, (2008) does the rarity of hostile takeovers in the REIT industry further challenges the assumption that the reasons and mechanisms for M&A in real estate are fundamentally the same as in other industries. They expect that concentrated ownership of many REITs by institutional investors creates an environment which does not favor such hostile takeovers. Therefore, while general theories can provide a starting point, a complete understanding of M&As in real estate however needs to take the industry's unique context and regulatory framework into account.

2.2 REIT M&A Announcement Return Findings

One of the very early studies concerning M&As in the REIT industry was conducted by Allen & Sirmans (1987) investigating the impact of 38 REIT M&A announcements on acquiring REIT returns from 1977 to 1983. They found significant and positive cumulative average abnormal returns of 5.8% over the day of the announcement and the day before, employing the mean adjusted model. The estimation window for average returns of their study ranges from 120 to 40 days before the announcement date and their event window covers 80 days, from 40 days before and after the announcement.

Elayan & Young (1994) examined 136 REIT M&A returns between 1972 and 1979 and found insignificant abnormal returns for acquiring firms of 0.49% over the three-day event window. Their estimation draws on the market model with a quite different approach for the estimation window spanning from 250 days to 121 days prior to the announcement and an event window surrounding the event within 20 days, leaving a gap of 100 days between the two. An explanation or rationale for this approach however is not provided.

A later study by Sahin (2005) investigated 35 M&A transactions from 1990 to 1998, utilizing the event study methodology following the market model and found significant negative abnormal returns of -1.2% for acquiring REITs over the three-day event window. Their estimation window is with almost 180 days longer

than that of Allen and Sirmans (1987), however also uses a rather large event window of over 40 day surrounding the event.

Campbell et al. (2005) used a sample of 53 M&As from 1995 to 2001 and found significant abnormal returns of 1.52% over the three-day window for the whole sample. Employing the market model they use an estimation period from day-110 to day-3 and a shorter event window of 7 days. They argue that REIT divestures through M&A lead to reduced agency costs and information asymmetry and thus are considered value enhancing.

Kirchhoff et al. (2006) also employed an event study methodology with a market model to examine 69 M&A deals 1995 and 2002. They found insignificant abnormal returns to bidding firms across all event windows ranging from 20 days before to 20 days after the announcement of -0.56%, using an estimation window of 252 day.

A more recent study by Eichholtz & Kok (2008) examined M&As from 1999 to 2004. They found insignificant returns of 0.37% for acquirers over the three-day event window using the market model with an estimation window of only 100 day and an event window of over 40 days. The authors argue that the lower returns compared to broader corporate finance studies might be due to the homogeneity of assets, limiting potential synergistic gains.

Given the insights from the review of existing research listed above, the level of abnormal returns associated with REIT announcements tends to be less pronounced, than findings across various corporate industries indicate. Evidence regarding the impact on acquiring shareholders is generally, less clear with earlier research indicating gains for bidding shareholders, while more recent studies indicate a tendency towards smaller and more negative abnormal returns.

2.3 Methodological Differences Across Studies

Looking at the current REIT literature it can generally be observed that the exact methodologies vary significantly, thus making it more complicated to disentangle if differences in abnormal returns are due to regulatory changes or due to employed methodologies.

The selection criteria for deriving the net sample and the filtering process differ significantly across studies and are often only superficially discussed (Allen & Sirmans, 1987; Sahin, 2005; Campbel et al. 2005) making direct comparisons challenging. Closely linked to this is the handling of confounding events, only the study by Elayan and Young (1994) explicitly names and accounts for such events. The omission in other

studies raises concerns about potential biases, hindering the accurate assessment of the actual relationship between the event of interest and abnormal returns (McWilliams and Siegel, 1997).

Moreover, the number of M&A announcements in the final sample varies greatly across studies, with all of them reporting less than 100 observations, except for Elayan & Young (1994). This raises questions about the statistical validity of the commonly used student t-test, as the distribution of returns might not be normal, and outliers could significantly influence the overall results (MacKinlay, 1997).

Finally, there's considerable variation in the length of estimation and event windows used in these studies. Research, such as from Allen & Sirmans (1987), Elayan & Young (1994) or Eichholtz & Kok (2008) shorter estimation windows and longer event windows, than recommended by Brown and Warner (1985) potentially impacting the accuracy of their risk-adjusted return models due to coefficient biases. Only Campbell et al. 2005 has adopted shorter windows, aligning with recommendations from Brown and Warner (1985) for improved accuracy. Furthermore, none of the reviewed studies is clear about its calculations of stock and index returns in their event methodology, leaving the question whether simple or compounded returns had been used, additionally questioning the comparability of models across studies.

2.4 Hypothesis Development

Based on prevailing literature and their findings the following one main hypotheses and two sensitivity hypotheses had been developed.

Given the mixed literature findings and no clear association between abnormal returns and the announcement of M&As over time, this study assumes no relationship between the two events in the null hypothesis. Furthermore, had only very little research been conducted in the period after 1999 capturing potential changes due to the implementation of the real estate investment trust modernization act, making outcomes rather ambiguous.

Hypothesis 1: "The average abnormal returns of REIT merger and acquisition announcements for acquirers in the United States are equal to zero"

The second hypothesis follows the strategic alignment hypothesis, postulating that, that M&As create value when they exploit synergies and i Such synergies are expected to reduce costs and enhance efficiency, thereby increasing profitability and theoretically leading to higher stock prices for the acquiring firm (Barai & Mohany 2010). The resultant increase in size due to the combination of identical resources can further provide transactional efficiencies and increase market power, potentially leading to higher revenues and profitability (Kim & Finkelstein, 2009).

Hypothesis 2: “The average abnormal returns of focus increasing REIT merger and acquisition announcements is larger than that of non-focus increasing announcements for acquirors in the United States”

The third hypothesis, information asymmetry hypothesis, tries to add depth to the previous hypothesis by introducing another layer of geographical differentiation. It suggests that firms with geographically concentrated operations experience reduced information asymmetry due to closer distance between management and assets, leading to better monitoring, a deeper understanding of local market conditions, thus facilitating more efficient decision-making, and subsequently leads to higher firm value (Coval & Moskowitz, 1999).

Hypothesis 3: “The average abnormal returns for intra-state REIT merger and acquisition announcements is larger than that of inter-state merger and acquisition announcements for acquirers in the United States”

3. Data and Methods

The subsequent part is divided into three sub-sections. Firstly, the selection and construction of the final sample is elaborated to ensure the studies replicability, and sample characteristics pointing to potential biases and weaknesses are discussed. Secondly, the statistical model employed in this study, the market and risk adjusted model, is described and its variables explained. Thirdly, the statistical test used are presented and discussed.

3.1 Data Selection

The final sample consists of 464 M&A announcements of U.S. REITs between 1999 and 2024. The United States had been chosen as the geographic region of interest due to its large presence of REITs, abundant data availability and pronounced M&A cycles. The mentioned research period was set to ensure more homogeneous regulation throughout the observation period, including all events that took place after the Real Estate Investment Trust Modernization Act of 1999 came into force. The act introduced two fundamental changes to the REIT industry. Firstly, REITs were allowed to hold all shares in taxable subsidiaries and provide a broader complementary set of services to tenants and secondly the amount of earnings distribution to shareholders fell from 95% to 90% (Congressional Research Service, 2016). A Merger and acquisition event in the scope of this study is defined as a M&A announcement by the acquiring REIT to overtake the target, with both having their headquarters in the U.S., while the target of this transaction can be of REIT or non-REIT nature. Focus increasing events are events for which acquirers and targets share the same TRBC industry group classification according to LSEG DataStream. Intra state events are defined as M&A announcements at which acquirer and target share the same main operational location, measured on the state level.

Table 1: Descriptive statistics estimation window

Variable	Obs	Mean	Std. Dev	Min	Max
REIT Returns	464	0.04%	1.74%	-30.75%	47.47%
Index Returns	464	0.03%	1.27%	-21.95%	17.12%
Abnormal Returns	464	0.00%	1.36%	-30.96%	47.88%

Table 2: Descriptive statistics event window

Variable	Obs	Mean	Std. Dev	Min	Max
REIT Returns	464	0.02%	2.14%	-47.73%	17.91%
Index Returns	464	0.04%	1.32%	-21.95%	15.88%
Abnormal Returns	464	-0.03%	1.82%	-48.12%	17.98%

Price data for REITs and indices is sourced from LSEG DataStream. To ensure consistency, daily security prices of type "RZ" are used for both REITs and indices to display total returns, with adjustments made for dividend payments and capital changes. Industry specific returns were used to obtain a benchmark that best reflects the REIT industry in order to enable a comparison at industry level, drawing on recommendations from Campbell et al. (2010) and Mackinlay (1997). Furthermore, it aims to isolate event effects from broader market movements, strengthening analytical robustness and providing more accurate insights into industry specific effects within the sensitivity analysis (Campbell et al., 2010; Mackinlay, 1997). Therefore, the value-weighted S&P United States REIT index had been employed, covering 133 REITs across the U.S. (*S&P United States REIT*, 2024).

Confounding events are defined as events that occurred during the event window of the M&A announcement and could have a potential impact on the REITs price (McWilliams & Siegel, 1997). Such events can, not exclusively, include other M&A, stock split or dividend announcements of the REIT. Generally, confounding events impact prices and thus influence abnormal returns by introducing bias to the parameter estimation and causing the price change no longer being attributable to the M&A event (McWilliams & Siegel, 1997). Therefore, observations with confounding events had been deleted (Mackinlay, 1997; Datta et al., 1992).

The gross sample of 2,275 events in this study had been obtained from the LSEG Refinitiv database, using the screen functions subcategory for merger and acquisition deals. The initial number of events was 1,489,072 filtering for all dates. After specifying the deal status to only include deals that are classified as complete, withdrawn, pending and without rumors prior to the announcement as well as restricting the headquarters nation for the acquiring and target REIT to the United States 1,014,534 observations were dropped. Next, the M&A TRBC activity was set to real estate, the public status to only public, the REIT segment set to all segments and the REIT type to equity, debt, and hybrid REITs, leading to a further drop of 471,540 events. Finally, events with a related M&A at the same date as well as repurchase and restructuring M&As are excluded using the corresponding "flags", reducing the sample by 723 observations, and leading to a gross sample of 2,275 events.

Next, the constant sample is generated by deleting events with missing observations, controlling the previously used filters in the LSEG database, excluding events with no price data, and removing observations with confounding events, leading to a constant sample of 470 events. The aim of this procedure is to align the dataset with the scope of the study and ensure that complete dummy variables for the sensitivity analysis can be derived.

Initially, all REITs that were falsely classified as U.S. based were deleted, leading to the subtraction of 125 events. Thereafter, missing, and unknown acquiror REIT types, “midindustry” classifications, DataStream codes and deal values were excluded, reducing the gross sample by another 588 events. So called “midindustry” classifications are used to identify the company’s main industry of operation. Subsequently, 824 events that took place before the 28th of April 1999, the day the REIT Modernization Act came into force (US Congress, 1999), were excluded. During the process of gathering price data, an additional number of 56 events were excluded, because no REIT prices could be obtained. Lastly, 218 observations that found to be contaminated with confounding events were deleted.

3.2 Model

In line with the prevailing methodology adopted in event studies researching the impact of M&A announcements on REIT returns (Campbell et al., 2001; Sahin, 2005; Wansley et al., 1983) this research employs the market and risk adjusted model outlined by Brown and Warner (1985). This model serves to determine the expected returns, defined as the hypothetical returns that would prevail in the absence of any event (MacKinlay, 1997). First, however, compounded REIT and index (benchmark) returns are calculated.

For the computation of individual stock and index returns, compounded returns are the preferred metric. This choice is due to their more symmetrical distribution, making them better suited for the parametric testing assumptions, which presuppose a more normal distribution of returns compared to simple returns (Vollmar, 2014). Nevertheless, it needs to be noted that abnormal returns, despite this adjustment, exhibit non-normal right tailed distribution characteristics.

$$R_{i,t} = \ln(P_{i,t}/P_{i,t-1}) \quad (1)$$

$R_{i,t}$: Return of security i at time t

$P_{i,t}$: Security price i at time t

$P_{i,t-1}$: Security price i at time $t-1$

The market and risk adjusted model operates under the assumption of a linear relationship between stock returns and benchmark (market) returns to compute expected (normal) returns (MacKinlay 1997; Brown and Warner, 1985). Within an estimation window spanning 250 days before the event window [-250; -3], the regression parameters alpha and beta are estimated (Brown and Warner, 1985; Campbell et al. (2010) Alpha the intercept term (α) representing the discrepancy between expected and required returns, and beta the slope term (β) reflecting securities' volatility relative to the market (systematic risk). It is crucial to note that estimating these parameters over the entire period, including the event window, is not advised due to potential bias introduced, particularly in the beta estimation, influenced by the event under study (MacKinlay, 1997; Brown and Warner, 1985).

$$E(R_{i,t}) = \alpha_i + \beta_i * R_{m,t} + \varepsilon_{i,t} \quad (2)$$

$E(R_{i,t})$: Expected (normal) return of security i at time t

α_i : Difference between expected return and required return of security i

β_i : Systematic risk of security i

$R_{m,t}$: Benchmark return m at time t

$\varepsilon_{i,t}$: Error term of security i 's expected (normal) return at time t

Abnormal returns, the main variable of focus, are derived by subtracting the expected returns from observed stock returns for each security and time period. Thereby, showing the discrepancy of the returns if there were no event taking place and the real returns observed. These abnormal returns quantify the deviation from expected performance, which can be attributed to the M&A announcement.

$$AR_{i,t} = R_{i,t} - E(R_{i,t}) \quad (3)$$

$AR_{i,t}$: Abnormal return of security i at time t

$R_{i,t}$: Return of security i at time t

$E(R)_{i,t}$: Expected return of security i at time t

The average abnormal returns are computed as the mean of all abnormal returns at time t and are subject to significance tests. Following the findings of Brown and Warner (1985) that shorter event windows increase the power of tests, this study employs an event window of five days $[-2; 2]$. Furthermore, given the findings of Campbell et al. (2010), that parametric tests often falsely reject the null hypothesis for single market samples, especially if events could affect the market index, this study additionally employs non-parametric testing next to the commonly used parametric tests.

$$AAR_t = \sum_{i=1}^N AR_{i,t} \quad (4)$$

AAR_t : Average abnormal return at time t

$AR_{i,t}$: Abnormal return of security i at time t

Additionally, are cumulative average abnormal returns computed as the sum of average abnormal returns over specified periods within the event window, examining the average abnormal returns of M&A announcements in the three-and five-day as well as the pre-and post-announcement window $[t_1- t_2]$. By distinguishing between the whole event window $[-2; 2]$, a narrower event window $[-1; 1]$, pre- $[-2; -1]$, and post-announcement periods $[1; 2]$, the analysis aims to isolate and assess event effects across distinct phases.

$$CAAR_{t_1 - t_2} = \sum_{t=t_1}^{t_2} AAR_{i,t_1 - t_2} \quad (5)$$

$CAAR_{t_1-t_2}$: Cumulative average abnormal returns in the event window $[t_1- t_2]$

AAR_{i,t_1-t_2} : Average abnormal returns at time t .

3.3 Significance Tests

Three tests of significance are utilized to examine average abnormal and cumulative average abnormal returns. Firstly, the one-sample parametric student t-test, following the approach outlined by Campbell et al. in 2010, also known as the CDA test, is employed for all AARs and CAARs. This test, as proposed by the methodology from Brown and Warner in 1985, uses the average abnormal returns standard deviation, considering their time-series characteristics, and thereby correcting for autocorrelation of returns. Assuming a normal distribution, the test statistic follows the student t-distribution.

The second test employed is the Wilcoxon signed rank test, a non-parametric approach. Initially, the returns under examination on day t are transformed into absolute values. These absolute returns are then used to create a ranking list. Thereafter, the ranks are assigned negative one or plus one based on whether the underlying returns are negative or positive.

The test statistic is obtained by subtracting the median from the sum of the smaller ranks in absolute terms and then dividing by the standard deviation. This test is chosen for two main reasons: It does not rely on further assumptions considering the distribution of returns, as it is based on the returns medians (Wilcoxon, 1945). Additionally, does the test provide more reliable significance levels, as it is more robust against outliers (McWilliams & Siegel, 1997). These attributes are particularly important for the sensitivity analysis of this study, due to the smaller size of the samples.

Another test employed for assessing significance is the rank sum test. This test, also known as the Mann-Whitney U test, is a non-parametric method used to compare two independent samples. Firstly, the returns under examination for day t are transformed into absolute values. These absolute returns are then utilized to generate a ranking list. Next the ranks are assigned values of negative one or plus one depending on whether the underlying returns were negative or positive. The test statistic is obtained by summing the ranks of the smaller absolute returns and then comparing it with the sum of the ranks for the larger absolute returns (Mann & Whitney, 1947).

The rank sum test is chosen for its ability to handle non-normally distributed data without necessitating additional assumptions. Moreover, it also offers robustness against outliers, enhancing the reliability of the significance levels, especially when dealing with smaller sample sizes (Kolari & Pynnönen, 2010).

In contrast to the Wilcoxon signed rank test this test does not rely on matched pairs and is therefore used to evaluate the differences between two sets of returns, with different sample sizes when comparing for example inter-state with intra-state M&As in the sensitivity analysis. This makes it a valuable addition to the set of statistical tests employed in this analysis.

4. Results and Discussion

4.1 Main Analysis

The empirical results of the impact of M&A announcements on REIT returns for the whole sample in table 3 show the cumulative average abnormal returns covering the five and three-day event windows, as well as the pre-and post-announcement windows. Cumulative average abnormal returns regarding the five and three-day the pre-and post-announcement windows consistently show no significant abnormal returns using the CDA and Wilcoxon signed rank test. Table 4 displays the individual daily average abnormal returns over the five-day event window. Significant average abnormal returns of -0.18% could be detected only for the day prior to the M&A announcement, using both the CDA as well as the Wilcoxon signed rank test. All other days within the five-day announcement period exhibit average abnormal returns not significantly different from zero.

Table 3: Cumulative average abnormal returns for U.S. REIT M&A announcement's

Day	(1) CAAR	(2) Student p-value	(3) WSR p-value
[-2;+2]	-0.16%	0.4295	0.7669
[-1;+1]	-0.09%	0.5523	0.6316
[-2; -1]	-0.20%	0.1257	0.2906
[+1;+2]	-0.04%	0.7449	0.6964

Column 1 reports the CAAR's for all merger and acquisitions (N=464). Column 2 reports the p-values of the DCA-test and column 3 the p-values for the Wilcoxon sign rank test, both for the differences. Significant levels are labeled as followed: * Significant at 10%; ** Significant at 5%; *** Significant at 1%.

Table 4: Average abnormal returns for U.S. REIT M&A announcement's

Day	(1) AAR	(2) Student p-value	(3) WSR p-value
-2	-0.01%	0.8936	0.4617
-1	-0.18%**	0.0427	0.0300
0	0.08%	0.3878	0.1822
1	0.01%	0.8851	0.9443
2	-0.05%	0.5456	0.6120

Column 1 reports the AAR's for all merger and acquisitions (N=464). Column 2 reports the p-values of the DCA-test and column 3 the p-values for the Wilcoxon sign rank test, both for the differences. Significant levels are labeled as followed: * Significant at 10%; ** Significant at 5%; *** Significant at 1%.

The non-significant abnormal returns, observed across both statistical tests, except for the day prior to the announcement suggests that the market's reaction to these announcements is, in aggregate, very weak of magnitude and, if present at all, more likely to be negative. Indicating that the announcement of mergers and acquisitions can not be associated with abnormal returns at the event day. Therefore, the null hypothesis "The average abnormal returns of REIT merger and acquisition announcements for acquirers in the United States are equal to zero" cannot be rejected. Economically it can be concluded that, in aggregate, investors seem not to react to REIT M&A announcements, measured by abnormal returns.

These results are generally in line with more recent literature outcomes investigating the effect of M&A announcements on REIT returns on acquirers employing the market and risk adjusted model. Campbell et al. (2005) found significant abnormal returns in the three-day event window of 1.52%. Eichholtz & Kok (2008) and Elayan & Young (1994) on the other hand found non-significant results of 0.15% and 0.37% covering the three-day event window. However, their model specifications regarding the event window length are less strict with substantially longer event windows leading to potential biases in the coefficient estimation, potentially increasing the variance of abnormal returns and decreasing the likelihood to detect significant differences (Campbell et al., 2010). Furthermore, is the treatment of confounding events not discussed in their methodologies, increasing the risk of measuring returns of events other than the M&A announcement causing further bias (McWilliams & Siegel, 1997). Sahin (2005) found significant abnormal returns of -1.21% over the three-day event window. Confounding events were not mentioned as in the studies from Eichholtz & Kok (2008) and Elayan & Young (1994) also increasing the likelihood of potential biases. Furthermore, are all named studies characterized by substantially lower numbers of observations, leading to smaller statistical power according to Brown & Warner (1985), thus being less representative. Finally, Campbell et al. (2011) found mixed results ranging from -0.95% to 1.1% significant abnormal returns in the three-day event window, underlying the discrepancies in results regarding acquirers abnormal returns associated with REIT M&A announcements. Abnormal returns concerning single days in the event window are unfortunately not reported nor discussed in any of the mentioned studies.

The reasons that cumulative average abnormal returns were not detected could be possibly explained in three ways. Firstly, like touched upon before, the magnitude of abnormal returns might be simply so small that they cannot be confidently separated from the normal, random ups and downs of the market (Kothari & Warner, 2004). Secondly, abnormal returns occurred on a smaller timescale, which could not be detected by the daily closing price data employed in this study and thus seem to be non-existing (Brown & Warner, 1985). This may have been caused by investors and traders taking very short-term arbitrage opportunities and pushing prices back to their fair value before the end of the day. Thirdly, the assumption of the events unexpectedness might have been violated and confidential insider information leaked into the market filtering for non-rumor announcements did subsequently not work. Such violation would lead to the event already being incorporated into REIT prices before its official announcement and the defined event window of this study, thus having no effect on prices at the official announcement day. Taking the second argument into consideration one could draw the hasty conclusion that the semi-strong efficient market assumption which posits that prices should only react to publicly available information, of this study holds and that competition among investors would lead to the rapid incorporation of new information, into prices, making it difficult to consistently achieve abnormal returns as also argued by Fama et al. (1969).

However, the empirical analysis also reveals a statistically significant negative average abnormal return of -0.18% one day prior to the official M&A announcement. This finding suggests the presence of information leakage in the market, as some investors appear to have had access to information about the upcoming deal before it became public. Thus, this study's assumption regarding the semi-strong efficient market hypothesis might be violated by the presence of potential insider trading. Moreover, the lack of significant abnormal returns on the announcement day itself further supports this observation, as it suggests that the market had already largely priced in the M&A deal based on the leaked or anticipated information. This finding is consistent with the study by Keown & Pinkerton (1981), who found evidence of insider trading activity prior to merger announcements, indicating that some market participants may have access to privileged information. Additionally, Jarrell & Poulsen (1989) found evidence of abnormal stock trading activity prior to tender offer announcements, suggesting that some investors and traders might be able to anticipate these events or trade on their rumors. They also note that the detection of these patterns and their classification as insider trading should be done with caution in aggregated statistics, as such rumors could also be spread by the media, making them publicly available information.

4.2 Sensitivity 1: Differences between focus and non-focus increasing REIT M&A announcements

The results of the first sensitivity analysis for different types of REIT M&A announcements, characterized by focus increase versus focus decrease, provides further insights into the effect of M&A announcement on acquiring REIT returns. Focus-increasing M&As are defined as M&As within the same REIT industry, potentially leading to higher abnormal returns due to anticipated operational and collusive synergies as well as improved efficiency (Barai & Mohanty, 2010), whereas focus decreasing M&As are defined as M&As with targets outside the acquiring REITs main industry. The cumulative average abnormal returns over the five and three-day the pre-and post-announcement windows do not show statistically significant differences between the two types of M&A announcements (table 5) using both the parametric and non-parametric test for focus-increasing and focus-decreasing M&A announcements, as well as for their differences. Moreover, the results show only statistically significant differences in average abnormal returns at the 10% level for the difference between focus-increasing and non-focus-increasing M&A announcements of -0.26% at day two in the event window (table 6) using the CDA and the rank sum test. The findings indicate that the REIT market discounts focus increasing M&As compared to non-focus-increasing M&A deals in terms of abnormal returns after the announcement day.

Table 7: Cumulative average abnormal returns for focus increasing and decreasing U.S. REIT M&A announcements

Event Windows	(1) Focus increase	(2) Focus decrease	(3) Difference	(4) Student p-value	(5) WRS p-value
[-2;+2]	-0.23%	-0.15%	-0.08%	0.7812	0.2749
[-1;+1]	0.00%	-0.11%	0.11%	0.6274	0.7024
[-2;-1]	-0.18%	-0.20%	0.02%	0.9144	0.9140
[+1;+2]	-0.22%	0.00%	-0.22%	0.2438	0.0685

Column 1 reports the CAAR's for merger and acquisitions in the same industry (N=82). Column 2 does the same for merger and acquisitions in two different industries (N=382). Column 3 reports the difference of column 1 and 2 (N=464). Column 4 reports the p-values of the DCA-test and column 5 the p-values for the Wilcoxon rank sum test, both for the differences. Significant levels are labeled as followed: * Significant at 10%; ** Significant at 5%; *** Significant at 1%.

Table 8: Average abnormal returns for focus increasing and decreasing U.S. REIT M&A announcements

Day	(1) Focus increase	(2) Focus decrease	(3) Difference	(4) Student p-value	(5) WRS p-value
-2	0.04%	-0.02%	0.06%	0.6469	0.8802
-1	-0.22%	-0.18%	-0.04%	0.7595	0.8759
0	0.17%	0.06%	0.12%	0.3803	0.7024
1	0.04%	0.01%	0.04%	0.7881	0.2581
2	-0.26%	-0.01%	-0.26%*	0.0561	0.0616

Column 1 reports the AAR's for merger and acquisitions in the same industry (N=82). Column 2 does the same for merger and acquisitions in two different industries (N=382). Column 3 reports the difference of column 1 and 2 (N=464). Column 4 reports the p-values of the DCA-test and column 5 the p-values for the Wilcoxon rank sum test, both for the differences. Significant levels are labeled as followed: * Significant at 10%; ** Significant at 5%; *** Significant at 1%.

Thus, the null hypothesis “The average abnormal returns of focus increasing REIT merger and acquisition announcements is larger than that of non-focus increasing announcements for acquirors in the United States” can be rejected. In the context of REITs in the United States, the market appears to differentiate between focus-increasing and non-focus-increasing M&A announcements in terms of abnormal returns, discounting focus increasing M&As, only after the merger announcement. This could suggest that investors expect no improved synergies or efficiencies in the merger of industry related REITs as they are not translated into positive abnormal returns at the announcement day. The strategic fit hypothesis, anticipating that focus-increasing M&As would lead to higher abnormal returns due to potential operational and collusive synergies as well as improved efficiency (Barai & Mohanty, 2010) can subsequently not be supported in this study.

Literature concerning focus vs non-focus increasing M&A's regarding the strategic alignment hypothesis in the REIT sector is rather scarce. The only two comparable study by Allen & Sirmans, (1987) and Ratcliffe et al. (2010) investigating such synergies found significant abnormal returns for acquirors of 2% over the day prior to and at the announcement (Allen & Sirmans, 1987) and 0.54% at the announcement day focusing on Australian REITs (Ratcliffe et al., 2010). General corporate literature investigating M&As that can be categorized under the scope of the strategic fit hypothesis delivers mixed results. So did Akbulut & Matsusaka (2010) find significant abnormal returns of -1.3% in the three-day event window for acquirors who announced mergers within related industries in the United States. Other studies investigating the United States found 1.62% abnormal returns at the announcement day between (Delaney & Wamuziri, 2004) and 0.35% (Matsusaka, 1993) and support the hypothesis that interindustry synergies can be associated with abnormal

return. Research outside the United States found predominantly positive abnormal returns associated with the announcement of focus increasing M&As of 0.91% in India (Barai & Mohanty, 2010), 4.5% in Korea (Bae et al., 2002) and 0.81% in the five-day event window in Italy (Bigelli & Mengoli, 2004). Findings are explained by the strategic fit hypothesis being the reason for investors positive reactions at the announcement day. Negative abnormal returns for a single day after the announcement, like found in this analysis, had not been detected in previous studies.

The variations in results for focus-increasing M&A announcements of this study compared to the existing literature can, despite regional and thus regulation differences, partially attributed to differences in data selection criteria and model specifications. Most studies do not explicitly describe their methods for identifying and excluding confounding events within the event window (Akbulut & Matsusaka, 2010; Bae et al., 2002; Bigelli & Mengoli, 2004; Matsusaka, 1993), which could introduce further bias (McWilliams & Siegel, 1997). Furthermore, do some studies utilize a limited number of observations (Bae et al., 2002; Bigelli & Mengoli, 2004) and do not adhere to the recommendations of Campbell et al. (2010), which increases the risk of bias from outliers in the dataset. Other reasons that might explain the predominately non-significant results could be due to the same the reasons elaborated in the main analysis: low magnitude of returns, inability of daily price data to capture the effect and violation of the assumption that the event was unexpected.

Two main arguments have been theorized to potentially explain why focus-and non-focus increasing REIT M&A announcements lead to non-distinguishable abnormal returns at the announcement day. Firstly, REIT assets are naturally illiquid and more homogeneous, making it less likely to realize operational synergies and benefit from them quickly compared to other industries (Eichholtz & Kok, 2008). Secondly, the geographic dispersion of REIT portfolios, fostering information asymmetry can create operational challenges, further hindering the integration process and delaying cost savings and other synergies (Garmaise & Moskowitz, 2004; Levitt & Syverson, 2008).

4.3 Sensitivity 2: Differences between inter-and intra-state REIT M&A announcements

To further explore the potential impact of geographic diversification on abnormal returns as one of the explanations for why focus increasing M&As lead to lower abnormal returns than non-focus increasing ones, the differences in abnormal returns between interstate and intrastate M&A announcements have been examined. Cumulative average abnormal returns are shown in table 7 and show no significantly different abnormal returns for the three-day and post-announcement windows for intra-and inter-state deals, as well as for their differences. The five-day announcement window in column 3 however indicates that interstate M&As are associated with -0.68% lower abnormal returns than intrastate M&As at the 5% significance level and the pre-announcement window shows follows a similar interpretation with -0.54% lower returns before the announcement day at the 1% significance level. The results appear to be largely driven by the negative cumulative average abnormal returns in the five-day event window of -0.67% at the 5% significance level and

the cumulative average abnormal returns in the pre-announcement window of -0.6% at the 1% significance level. Table 8 presents the single day average abnormal returns within the event window and shows negative average abnormal returns of -0.36% for acquirer's intra-state M&A announcements at the 1% significance level. Inter-state M&A announcements from acquirers found to have no statically significant effect on average abnormal returns. Differences between intra-and inter-state M&A announcements by acquirers are associated with average abnormal returns of -0.3% two days before the M&A announcement day at the 5% significance level with both test statistics and -0.24% abnormal returns at the 10% significance level one day before the announcement using the CDA test.

Table 7: Cumulative average abnormal returns for intra-and inter-state U.S. REIT M&A announcements

Event Windows	(1) Intra-State	(2) Inter-State	(3) Difference	(4) Student p-value	(5) WRS p-value
[-2;+2]	-0.67%**	0.01%	-0.68%**	0.0164	0.0279
[-1;+1]	-0.27%	-0.03%	-0.24%	0.2744	0.2730
[-2;-1]	-0.60%***	-0.06%	-0.54%***	0.0027	0.0098
[+1;+2]	-0.11%	-0.02%	-0.09%	0.6089	0.8356

Column 1 reports the CAAR's for merger and acquisitions in the same state (N=114). Column 2 does the same for merger and acquisitions between two different states (N=350). Column 3 reports the difference of column 1 and 2 (N=464). Column 4 reports the p-values of the DCA-test and column 5 the p-values for the Wilcoxon rank sum test, both for the differences. Significant levels are labeled as followed: * Significant at 10%; ** Significant at 5%; *** Significant at 1%.

Table 8: Average abnormal returns for intra-and inter-state U.S. REIT M&A announcements

Day	(1) Intra-State	(2) Inter-State	(3) Difference	(4) Student p-value	(5) WRS p-value
-2	-0.24%	0.06%	-0.30%**	0.0175	0.0178
-1	-0.36%***	-0.13%	-0.24%*	0.0582	0.1012
0	0.04%	0.09%	-0.05%	0.6989	0.5009
1	0.05%	0.00%	0.05%	0.6928	0.6947
2	-0.16%	-0.02%	-0.14%	0.2640	0.8646

Column 1 reports the AAR's for merger and acquisitions in the same state (N=114). Column 2 does the same for merger and acquisitions between two different states (N=350). Column 3 reports the difference of column 1 and 2 (N=464). Column 4 reports the p-values of the DCA-test and column 5 the p-values for the Wilcoxon rank sum test, both for the differences. Significant levels are labeled as followed: * Significant at 10%; ** Significant at 5%; *** Significant at 1%.

The results appear to suggest that over the five-day event window and prior to the announcement the REIT market reacts significantly more negatively to M&A deals that involve acquiring targets within the acquirer's home state compared to deals with targets outside the acquirer's home state from an economic perspective. Therefore, the null hypothesis “The average abnormal returns for intra-state REIT merger and acquisition announcements is larger than that of inter-state merger and acquisition announcements for acquirers in the United States” can be rejected. It must however be noted that the rejection is based on the significant result of the five-day event window, which is largely driven by the negative abnormal returns in the pre-announcement window. Furthermore, does the results indicate that intra-state M&A announcements are associated with negative abnormal returns for acquirers one day before the announcement. Given the

significant abnormal returns in the pre-announcement window the possibility of insider trading or information leakages prior to the announcement can't be precluded, following the same argumentation as earlier for the whole sample analysis.

A possible explanation to why REIT M&As with more distant targets tend to have lower returns than those with closer targets is the managerial alignment hypothesis, proposed by Landier et al. (2009) concerning asset valuation. This hypothesis suggests that managers of geographically dispersed firms may prioritize and pay more attention to assets closer allocated to their main operational business, due to their own reputational interests within the company, than to shareholder interests. Investors anticipating such managerial behavior could therefore be inclined to sell off shares, leading to negative returns.

Literature focusing on the impact of M&A announcements on REIT returns in the context of geographical divestures in particular is non-existing. However, the following findings from the real estate corporate literature could help to contextualize the results of this study. Landier et al. (2009) found that U.S. corporate divestiture announcements are associated with 0.6% higher abnormal returns for divestitures within the same state compared to outside the same state. They hypothesize that concentrated geographically operations benefit from reduced information asymmetry, arguing that closer proximity of management to assets facilitates better monitoring and a deeper understanding of local market conditions (Coval & Moskowitz, 1999). Thus, leading to higher abnormal returns. Uysal et al. (2008) found comparable results with 1.47% higher returns for local divestiture transactions, defined as transactions within 100km of the target firm, compared to non-local ones, within the five-day event window. They explain their results using the soft information and information-based synergy theory, postulating that the decrease in distance between acquirer and target leads to enhanced exchange of soft information facilitating the acquirer and target in identifying information-driven synergies, such as joint research and development projects, leading to increased value for both entities (Uysal et al., 2008). The research done by Cai et al. (2016) investigating the impact of divestiture announcements on real estate corporate returns differentiating between urban and non-urban targets find that increasing the distance between acquirer and target by 810 miles leads to 1.3% lower announcement returns for the acquirer over the five-day event window. Given this large increase in distance their scale can be fairly compared to this study differentiating between inter-and intra-state announcements. They justify their findings following the soft information and information-based synergy theory by Uysal et al. (2008).

Comparing these corporate real estate findings to the finding of this study, investigating REITs, it becomes apparent that investors evaluate REIT M&As differently than corporate real estate divestures. Instead of positive abnormal returns, negative abnormal returns are associated with the announcement of intra- vs inter-state M&A announcements, pointing to REIT and corporate divestiture valuations being distinctively different from an investor's perspective.

5. Conclusion

This study examined the impact of 464 REIT M&A announcements in the United States between 1999 and 2024 on acquirer REIT returns, employing the event study methodology by Brown and Warner (1985). The analysis differentiated between the whole sample and focus versus non-focus increasing and intra- versus interstate divestitures in the sensitivity analysis. Theory from corporate literature suggests that M&A announcements should be associated with positive abnormal acquirer returns at the announcement day due to investors expecting positive synergies, economics of scale and cost reductions, which enable combined entities to operate more efficiently than individual firms (Anderson, 2012). Literature concerning REITs on the other hand argues that corporate theories may not apply to the REIT industry due to their highly regulated environment and the near absence of hostile takeovers (Allen & Sirmans, 1987; Eichholtz & Kok, 2008) and found mixed results on abnormal returns on the announcement day with diminishing magnitude of returns over time.

Therefore, this study tried to contribute to the existing literature by finding out whether there is a general market reaction in term of abnormal returns to M&A announcement's and adding another layer with its sensitivity using the strategic alignment hypothesis and the information asymmetry hypothesis. The strategic alignment hypothesis states that acquirers can expect positive abnormal returns following an M&A announcement and suggests that the potential for named synergies is greater when both corporations operate in the same industries (Barai & Mohany 2010). The information asymmetry hypothesis postulated that firms with geographically concentrated operations experience reduced information asymmetry due to closer distance between management and assets and thus acquirers can expect positive abnormal returns following an M&A announcement (Coval & Moskowitz, 1999).

Contrary to these theoretical expectations however, this study finds that M&A announcements of REITs cannot be associated with significant average abnormal returns, for acquirers, at the announcement day looking at the whole sample, focus- and non-focus increasing as well as intra- and interstate announcements. The generalizability of these results is likely to be limited to the REIT industry in the United States. Inferences regarding other industries are due to the high regulatory environment in which REIT operate very unlikely and are if at all only applicable to REIT industries in countries with a regulatory framework similar to that of the United States. Furthermore, should the temporal as well as the market context within this studies investigation period be taken into account when comparing its results with other studies.

For the whole sample, significant average abnormal returns of -0.18% were found one day before the M&A announcement, challenging the null hypotheses that: "The average abnormal returns of REIT merger and acquisition announcements for acquirers in the United States are equal to zero" and subsequently not leading to its rejection. It can be stated that acquirers REIT M&A announcements cannot be associated with statistically significant abnormal returns at their announcement, suggesting that investors do not react to

named announcement's. From an economic perspective even the abnormal returns before the announcement day are likely to be neglectable.

Regarding the difference between focus- and non-focus increasing divestures -0.26% average abnormal returns two days after the M&A announcement were found. The second hypothesis: "The average abnormal returns of focus increasing REIT merger and acquisition announcements is larger than that of non-focus increasing announcements for acquirors in the United States" can therefore be rejected. Higher industry focus didn't lead to higher abnormal returns as previously expected, contradicting the strategic alignment hypothesis in this study. Investors therefore seem to have expected that a greater increase in synergies in the future, given the available information on the day of the announcement, is unlikely.

The analysis differentiating between intra-, and interstate M&A announcements found -0.68% cumulative average abnormal returns over for the five-day event window. The third hypothesis: "The average abnormal returns for intra-state REIT merger and acquisition announcements is larger than that of inter-state merger and acquisition announcements for acquirors in the United States" can therefore be rejected too. Being closer located to the target subsequently cannot be associated with greater abnormal returns, suggesting that the information asymmetry hypothesis might not hold, and investors don't expect greater returns.

Differences between the findings of this study and existing literature are likely to be caused by the employed methodology and period under investigation. While prior studies often focused on smaller samples and shorter estimation windows, this study employed a comprehensive dataset spanning 25 years and a robust event study methodology with longer estimation windows to mitigate the influence of confounding events. Furthermore, did previous research mainly focus on the period before the year 2000, with different regulations and market environments present.

This study contributed to the existing literature by providing a transparent and replicable event analysis of acquirer REIT M&A announcement impacts on REIT returns in the United States with a larger and so far, uninvestigated sample. It also underscores the changing market and investor perceptions of these events over the years by adding to the limited research on REIT M&A announcement events after the real estate investment trust modernization act introduction in 1999.

The main limitation is the potential violation of the assumption that the events were unexpected, since signs for potential information leakages had been found. Another limitation might be delayed announcement days in the LSEG Refinitiv database, which make the data appear to show an information leak.

Replicating previous studies with a focus on confounding events, return calculations, clear sample selection criteria and pre-announcement market activity could shed further light on this issue. Further investigating the reliability of LSEG Refinitiv's price data in this regard would additionally help to reduce

potential error sources. Future research could also consider using different benchmark indices, comparing results using an equally weighted benchmark index and a value-weighted index and investigating its impact on abnormal returns following Peterson, (1989).

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