What are the reasons behind American reits mergers and acquisitions and what are the consequences of the announcement on the stock price of the acquiring firms ?

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WHAT ARE THE REASONS BEHIND AMERICAN REITS MERGERS AND ACQUISITIONS AND WHAT ARE THE CONSEQUENCES OF THE ANNOUNCEMENT ON THE STOCK PRICE OF THE ACQUIRING FIRMS?

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1. Keywords

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2. Introduction

In the early ‘60s, the Congress of the United States implemented a new sort of investment vehicle called REIT through the Real Estate Investment Trust Act. A REIT is a company formed with as first aim to own, operate and finance income-generating real estate. The asset structure of this type of firm consists of almost only fixed assets. As a consequence, depreciation, also considered as a non-cash expense, represents a significant portion of the REITs income statement. REITs can be separated into three types : Equity REITs, Mortgage REITs and Hybrid REITs. Equity REITs, which, as of 2015 accounted for 94% of market capitalization of all U.S. REITs, own and operate income-producing real estate assets (Ratcliffe, 2018). Mortgage REITs provide debt capital to all sorts of real estate (housing, offices, retail, healthcare, logistics,…) either directly through mortgages, or indirectly through investing into mortgage-backed securities (MBS). Hybrid REITs are companies that combine the investment purposes of both presented REITs. While some REITs own and operate several kinds of investment properties, many specialize only in one type as already cited, office, buildings, shopping malls, hotels, etc.

The main characteristic that differentiates REITs from regular and conventional firms is that Real Estate Investment Trusts are largely exempt from corporate income taxes. However, to qualify for tax-exemption, REITs must distribute a stated percentage of their total earnings. In the United States of America, since the year 2000, REITs are required to distribute at least 90% of their taxable income (Ratcliffe et al., 2018). This percentage varies across the countries where such trusts are put in place. To qualify as a REIT in the U.S., other prerequisites must be fulfilled. At least 75% of income must be derived from real estate sales, rents or even interest on mortgages. Most of the time, this prevents REITs from cross-industry M&As and restricts REIT managers’ options for diversification. Related to this latter requirement, the firm has to invest a minimum of 75% of its total assets in the real estate industry, keep cash as a buffer or even invest in U.S Treasuries. Finally, regarding the shareowners, the corporation must find 100 shareholders within the first year of inception and have no more than 50% detained by five

or less individuals or entities. This rule is commonly called the "5-50 rule". Non-REITs, named Real Estate Operating Companies, are not constrained by these regulations and functions like firms outside of the real estate industry in almost any aspects.

Until the end of the 20th century, these corporations played a limited role in the US economy. In 1992, equity REITs faced explosive growth, marking the beginning of the modern REIT era. Before this date, the administration of REITs was different. For instance, before 1987, every equity REITs was hiring external managers to conduct the properties of the firm. As of the early 90's, the equity REITs are almost all independent and self-managed entities which will have its importance in the analyzed results. In fact, external management brings asymmetry in the handover of information of any kind. (Myers and Majluf 1984). Later in the 90's, several countries started to implement the structure of the investment vehicle. In 2016, the REIT structure had been adopted or was at a planning stage in over 30 countries. The following eleven countries have established REIT structure : Australia, Canada, France, Germany, Hong Kong, Japan, the Netherlands, New Zealand, Singapore, the UK and the US.

Mergers and Acquisitions have always been the subject of in-depth studies. Indeed, the responses of the markets to such activities have been rather unpredictable and a key issue arising from such a context is the extent to which it promotes efficient market outcomes. From a logical and economic perspective, acquisitions should provide opportunities for a more efficient management of any firm. In fact, any company helped by external advice should be able to improve its mobility of capital and the allocation of scarce resources (Manne, 1965). Nonetheless, from literature backgrounds and statistical testing, evidence have raised that underperformance of bidding firms shares in the years following the M&A announcement is the standard regarding any studied industry, at least on the short-run. (Alexandridis, Mavrovitis, and Travlos, 2012; Bessembinder and Zhang, 2013). In his paper about corporate control (1983), Jensen, came to the conclusion that negative abnormal returns were irrational regarding the efficiency of the markets and suggested that changes in stock prices overestimate the future efficient gains from mergers. Campbell, Giambona, and Sirmans (2009) concluded with the same findings few years later. For them, results from M&A activities are troubling as they imply the existence of weak form market efficiency. This statement will represent one of the main hypothesis of this paper. While there is an ongoing debate about the post-merger performances, one might try to understand the reasons behind such processes. Why would a bidding firm get engaged into an acquisition while it perfectly knows that its stock returns will go down right after the announcement? Berkovitch and Narayanan (1993) identify three main reasons behind

M&As: the synergy motive, the agency motive and the hubris hypothesis. The stock underperformance of acquirers suggests that the motivation for M&As may be a result of hubris and/or agency issues rather than efficiency considerations (Conn, Cosh, Guest, and Hughes, 2005). Following Ratcliffe, Dimovski, and Keneley (2018), negative abnormal post-announcement performance may result from overconfidence or self-interest motivation of the manager. Savor and Lu (2009) argue that overconfidence of the manager might result from prior performance and this latter would therefore overpay for an acquisition supporting that way the weak form market efficiency hypothesis.

The contribution this paper intends to make is an in-depth analysis of post-merger performance in the U.S. REIT sector by considering a 16-year timeframe from 2001 to December 2016. This study of real estate mergers is motivated by the observation that the real estate industry is quite different from most other industries. This paper seeks to document the returns of REITs corporations after an M&A event has been completed between two firms of this industry. Changes can be interpreted between private and public firms and over the period that the event has taken place. The purpose of this paper is twofold. The first one is to investigate the potential underperformance of the U.S. REIT sector, in particular equity REITs, after an acquisition over the short and long-term. The second goal is to depict the changes between private and public acquisitions and this way examining the likely motivation(s) that might come up. Finally, we might be able to understand if the analyzed time period plays a significant role in the obtained results.

The remainder of this paper proceeds as follows: The literature review will be split into two different parts : one dedicated to the analysis of previous studies on the general M&A industry and one focusing on our comprehension on the particular industry of REITs in the U.S. to build up the context of the study. The next section will describe the methodology and the data collection. The results will then be analyzed and organized into three main parts; each of them will describe a model used for the study followed by the limitations that might arise. The last chapter is dedicated to the discussions and the conclusion. We end up with some thoughts that might be used as food for thought in a near future for further analysis.

3. Literature review on conventional firms

Five decades of scientific and academic research have examined post-merger performance. The most interesting observation regarding this field of analysis is undoubtedly acquiring firms facing negative stock returns right after the announcement of the deal and even over the long-run. To catch the reasons behind such a decrease in stock value, several perspectives can be considered.

There can be many possible motives behind a merger or an acquisition and even with loads of literature on the subject, it is most of the time ambitious to explain the occurrence of M&A activity and the pattern behind it. In this study, we will analyze the reasons directly related to the REIT industry. Previous papers distinguish two theories introducing the reasons behind such events. Neoclassical theories on the one hand and agency and hubris theories on the other hand (Bernile and Bauguess, 2010). Following neoclassical theories, mergers and acquisitions occur due to external shocks under the form of economic, political or financial shocks. They are set up to principally sustain or create competitive advantages (Jensen, 1986). Mergers under the neoclassical perspective lead to profit optimization and shareholder value creation, as it is assumed that managers are aligned with shareholders' interests (Martynova and Renneboog, 2008). Following this logic, any firm entering a M&A process should be able to increase its efficiency, whether through economies of scope, scale or general synergies, compared to individual standalone entities. This theory might be conclusive in some specific cases over the long-run but we will see through our results that no significant positive abnormal returns on the short-term.

Agency and hubris issues, on the contrary, introduce the possible destruction of value during a takeover. Agency theory explains disputes arising between shareholders and corporate executives from two main possibilities: a difference in corporate goals or in risk aversion. Managers, who are hired to act in favor of the shareholders' willingness might be tempted to act according to their personal interest. Following Jensen and Meckling (1976), this is mostly the case when their retribution, bonuses and eventual stock options are clearly bonded to the firm size and accordingly the general value of the firm more than its profitability. From that we can stand that firms might enter M&A processes while it is not necessary to increase their efficiency. In 1986, Jensen came up with the free cash-flow issue. In that paper, he stated that since managers have no interest in paying out cash to shareholders, they have the tendency to invest more than a rational investor. Based on this theory and on Harford's one (1999) the

following hypothesis was tested: managers of cash-rich firms might waste the excess free cash flow by using it on unnecessary acquisitions. Two dominant conclusions are emphasized from these studies. First, Harford shows through a cash-richness variable that acquisitions funded by excess cash are not value enhancing. Still he also finds out that cash-rich firms have a greater tendency to become bidders even with poor results.

As a complement to this study, Harford et al. (2008) found a few years later that poorly governed corporations with insiders having less shares of the overall company have smaller cash holdings. This might seem counter intuitive but further literature shows that, at least in the United States, firms with weak shareholder rights have a tendency to spend excess cash on unrelated acquisitions faster than peers that would be controlled by strong shareholders. They do so even though these transactions tend to destroy future potential value. Ratcliffe, Dimovski and Keneley (2017) concluded that when managers are restricted with the use of retained earnings and the type of investment, they may be less susceptible to agency issues. As this is the case for REITs, after our analysis we might be able to create a conclusion over this particular subject.

Furthermore, the hubris theory was born from the inappropriate behavior of the manager of a company. Roll (1986) asserts that managers of bidding firms tend to enter into value-destroying processes due to their personal egos or the misunderstanding of potential future synergies, which build up the negative returns described in the M&A literature. Malmendier and Tate (2005) also documented the overconfidence of executives who got involved in takeovers. The past performance of the firms were prominent in the decisions of a takeover rather than the potential value creation from the merger. On the same subject, McCardle and Viswanathan (1994) stated that bidding firms conduct mergers and acquisitions to hold on to competitors even in the case they have no more potential for internal growth opportunities.

Researches reveal that these three theories are not mutually exclusive. Managers along with insiders may simultaneously have more than one motive when launching a fusion (Berkovitch and Narayanan, 1993).

When we look at the deal itself, three other constituents need to be considered. Whether the deal is closed between public or private firms will be interpreted with different reactions of the market on the value of the stock. Closely bond to this reaction, even though this will not be included in the research pattern of this study, the method of payment in the merger, whether it

is cash or stock-financed will influence the external investors' opinion. Finally, performances vary according to the period in which they are analyzed.

An already well documented pattern in the literature on M&As is that shareholders of acquiring firms often face stock valuation decrease at the announcement of a stock-financed transaction. On the contrary, cash transactions announcements have no real impact on the value at all. These findings are generally considered through the hypothesis of information asymmetry; meaning that stock-payment method reflects managers' understanding that the stock of the acquired firm, is overvalued. "*The separation of ownership from professional management naturally creates asymmetric information*" (Myers and Majluf 1984). Shleifer and Vishny (2003) found out that "*financial markets are inefficient, so some firms are valued incorrectly*". Myers and Majluf (1984) concluded in the same paper that if acquiring firms facing information asymmetries pay with stocks, then they send a signal to the market that they believe their stock is overvalued. That is why the reaction of the market creates a drop in the value of the stock of the acquiring firm.

However, Chang (1998) came up with a completely opposite conclusion when the target of the deal is privately held. What he discovered fits perfectly with what was said by other researchers and his personal conclusions. Abnormal returns are significantly positive (+2.6%) when the target is private but stay negative (-2.5%) in stock-financed acquisitions when the target is public. In addition to this, cash-financed mergers' abnormal returns are comparable and close to zero. Chang (1998) argues that this value enhancement may be caused by monitoring benefit. In accordance with this conclusion, Campbell, Ghosh and Sirmans (2001) found out that when the target is a private firm, significant valuation gains are present for the acquiring firm's shareholders in stock-financed mergers. The optimistic signal emerging from a private investor, who is supposed to be better informed through better opportunities to learn about the acquiring firm's prospects, will have a considerable impact on the reaction of the market. An alternative possibility is that the percentage change in ownership due to these transactions might have as principal effect a more effective monitoring of the acquiring firm's managers. Shleifer and Vishny (1986) observed that when public to private mergers are stock-financed, target firm owners often assume significant ownership positions in the combined firm. These blockholders'[1] monitoring activities can favorably influence stock value. Chang (1998) details a positive relation between stock returns from the acquiring firm and the blockholders'

[1] A blockholder is the owner of a large portion of the overall company's shares. They have the power to influence decisions of the principal holding through their voting rights.

presence, which is consistent with the monitoring theory he develops in the same paper. However, he reports that even when no new blockholder post-merger, the abnormal return continues to be significantly positive. We will get the occasion to test this conclusion throughout our analysis on the REITs industry. In fact, due to the particular institutional environment, REITs must have at least 100 shareholders after one year of existence and no more than 50% of its shares held by five or fewer investors. These requirements make the creation of large blockholders almost impossible and will have an impact on the stock returns of the bidding firm.

To be able to compare the post-merger performances of this particular industry, we need general results from the corporate world. In their paper, Loughran and Vijh (1997) analyzed post-acquisition performance, separating cash and stock-financed deals. Analyzing a sample of 788 events from companies of different industries over a period of 20 years starting in 1970, they identified a BHAR (Buy and Hold Abnormal Returns) of −6.5% for the total sample over a 5-year period. However, in accordance with the theory skimmed hereabove, they also report that abnormal returns in stock-financed buy-outs are much lower and reach −24.2%. Savor (2006), still using the BHAR's method of computation, reported over a 3-year period following the acquisition, abnormal returns of −12.9% when the method of payment used is only stocks. The shareholders of bidding firms in public acquisitions generally obtain lower returns when stock swaps are involved than strictly cash transactions. Travlos (1987) and Chang (1998), also come up to the conclusion that bidding firms get returns are significantly negative in stock transactions, but insignificantly different from zero in cash-financed deals. For instance, Chang reported −2.5% returns throughout stock-financed mergers between public companies, but only −0.2% in cash-financed public mergers. Another cause for such discrepancies seem to be the use of different samples and time periods. Deriving the results for a recent time frame will be one of the main focus of this paper.

Focusing on the divergence between public and private companies, Fuller (2002) discovered that the abnormal returns involving privately held corporations were outperforming those from public targets with a difference of approximately 2% on a five-day time period (Fuller et al. 2002). On the same basis, Wong and Cheung (2009) analyzed the effects of mergers on the stock prices of Asian bidding firms. They concluded that private firms, on the contrary, were yielding lower abnormal returns than public corporations on a 50-day period post-announcement. This might introduce a pattern evoking that public firms might perform better on the longer run.

4. REITs literature review

The main purpose of this paper is to draw conclusions as the ones stated above for one particular industry: the REITs in the United States. Prior literature demonstrates that REITs provide characteristics that are not furnished in general investments. Liquidity and transparency are the main features from REITs property investment in contrast with direct property investment. Moreover, the inclusion of REITs in an investment portfolio can act as a defensive stock due to their lower volatility and diversification benefits (Newell, 2005; Ratcliffe and Dimovski, 2007).

Looking back at the reasons behind a buy-out, there are multiple rationales for an equity value maximizing company to initiate an acquisition: first, the bidder's intention might be to erase inefficient management of the target firms. However, Campbell et al. (2001) and Womack (2012) documented that REIT mergers are friendly transactions in more than 90% of the cases. This finding indicates that managers of target REITs admit that they have shortcomings in the way they conduct their company and consequently agree with the proposition of merger. That is why, if inefficiency is the cause of the acquisition, positive changes in the stock return should appear on the long run after the merger. However, this theory has been thwarted by Campbell (2009) who discovered long-term underperformance for REIT acquirers. Consequently, changes in the internal management of the company do not seem to be the main reason behind REITs merger.

The second reason is that the acquiring firms from most industries can use surplus funds or tax surplus funds through entering merging processes. But in actual fact, this theory does not apply to REITs either as these corporations are required to pay out 90% of their net earnings and are tax exempted. Thus it should not be possible to take advantage of these funds in this particular industry except if funds from depreciation compensate for the lake of available taxable income. This will be part of our research.

Thirdly, acquiring firms can reduce risk of operations through diversification by taking over firms in the other industries within its own entities. As stated in the introduction, this will not be possible for REITs as their underlying assets are restricted to real estate only. They are not allowed to diversify through Real Estate Operating Companies or companies from unrelated industries.

The three reasons presented here cannot be a referential to explain the motives behind REITs mergers. However, there are still three possibilities left: expansion, overconfidence or divergent

goals between managers and shareholders. Expansion comes from the fact that managers may try to capture economies of scale. Since REITs have a limited scope of activity from income-producing real estate to owning real estate assets, it seems to be the most convenient method to grow. Therefore, the popular reason behind investment decisions in this particular industry should be the horizontal acquisitions. In this case, there should be a positive response from the stock market to the acquisition announcement. Consequently, underperformance should not exist on the long-run benefiting from the expansion of operations and the reduction in the cost of operations. However, as demonstrated earlier by Campbell (2009), the underperformance of REIT acquirers on the long-term is a common conclusion from statistical analysis. That is why this paper will further analyze this particular topic.

The last plausible reasons are the overconfidence of the managers intending to acquire a competitor and agency issues. As in any industry, REIT managers may end up overconfident if they face a period when each of their decision pays off. They engage in value-destroying acquisitions, specifically when acquiring assets or even the whole company is the one solution for growth, making it easier for managers to disguise their overconfidence. Roll (1986), Malmendier and Tate (2005), all concluded in their paper that the managers' overconfidence was emerging from the past performance of their firms rather than the potential value creation generated from the merger. The divergence of objectives between shareholders and managers is called the agency cost. REIT institutional environment forces managers to distribute at least 90% of their net taxable income if owners want to enjoy the related advantages (IRS tax implications). The implications of this particularity are twofold. First of all, Real Estate Investment Trusts avoid the double taxation of typical corporations in exchange for meeting the dividend payout requirements. This is consistent with the evidence quoted by Feng, Ghosh and Sirmans (2007) that the average payout ratio in REITs exceeds 150 % of earnings. Consequently, internal funds are insufficient for REITs to support all investment initiatives (Ott et al. 2005). However, Feng et al. (2007) demonstrated that large depreciation write-offs in REITs result in internally generated cash far in excess of net income. The shareholders are concerned that their managers might use excess cash-flow in poor and value-destroying acquisitions. Harford (1999) observed a negative relationship between excess cash holdings and abnormal returns at the announcement period of a merger. They thus recognize that distribution of excess dividends mitigates agency conflicts by reducing REIT managers' opportunity to waste cash flow. Then, if the results of this study lead us to negative abnormal returns, this would indicate that even with over 90% of mandatory dividends payout, it is not sufficient to

constrict investors' point of view on potential self-interested managers. On the contrary, if we find a positive relationship, this would mean that the average investor thinks that the REITs managers have less than average cash at their disposal preventing them to over-invest.

Secondly, dividend distribution enhances information transmission, and mitigates once again agency conflicts by restricting managers' access to free cash flow, and exposing firms to the scrutiny and monitoring of market participants when raising external capital reducing similarly the information asymmetry. In fact, REITs rely on the capital market to raise funds for investment. For this relationship to be successful, public information on financial and operational statements must be available at any time, reinforcing the possible scrutiny of the markets and the related investors and analysts. The increased monitoring should reduce agency conflicts.

Hardin and Hill (2008) came up to the conclusion that REIT managers' choice of the level of excess dividends predicts the level of agency costs in a corporation. Those executives consequently refer that decision to the need for access to capital markets and the inherent favorable rates as demonstrated by Ghosh in 2007. It follows that by reducing agency conflicts and creating a guaranteed access to capital raising from the market, dividends enhance growth. Hardin and Hill (2008) used the theory of the positive relation between excess dividends and Tobin's Q, (the ratio created by James Tobin measuring the market value of a company compared to the replacement value of the firm's assets), as an indication that firms are willing to pay excess dividends to garner continued access to the capital markets required for a growth strategy. Jensen (1986) and Easterbrook (1984) also studied the impact of dividend distribution on agency conflicts and whether it reduces this latter or not. As demonstrated by many other scientists, dividend payments reduce free cash flow at the disposal of the manager in charge. Furthermore, it forces them to access the capital market any time a consequent amount of money is required for investment, which subjects the firm to scrutiny and analysis from the market. Khurana et al. (2006) conclude that the reduction in agency costs and improvement in information dissemination reduce the cost of funds, and ultimately enhances the firm value.

Based on these three possible reasons behind REIT acquisitions, Lu, Mao and Shen (2013) hypothesize that if REIT takeovers are mainly conducted for expansion purposes, the market will respond positively and acquirers will, at the very least, not underperform non-acquiring REITs in the long run. However, if the acquisitions are conducted due to REIT managers' overconfidence or agency conflicts, we hypothesize that market perceives the acquisition as bad news and acquirers will underperform non-acquirers in the long run.

In this context, Allen and Sirmans (1987) write that some merger motives from conventional firms can be excluded for REITs due to the uniqueness of their structure as much as the institutional environment. For example, ‘‘*it is unlikely that a business combination of REITs would create any monopolistic power*’’ (p. 177). In fact, the majority of revenues have to come from rents and/or mortgages. Moreover, other special features of the market such as numerous large private firms that compete directly against public firms are also expected to have different consequences such as a tendency for publicly traded companies to buyout rapidly growing private competitors. Another discrepancy compared to other industries demonstrates that hostile buy-outs among real estate firms almost never occur and thus drop any doubt on the hypothesis that the reasons for takeovers in the real estate industry are basically the same than for those outside the industry. (Womack, 2012). To understand the absence of hostile takeover bids between REITs, Campbell et al. (2001) explain that managers from this industry are likely to connive to counter hostile takeovers since REIT assets are limited by regulation to the real estate sector. Harford et al. (2008) find that excess cash reserve encourages hostile M&As. In fact, firms have the possibility to avoid market disciplinary forces leading to less scrutiny and corporate control. If those forces were not implemented, REIT managers would get the occasion to preserve excessive cash from operation and expense it for their own benefit and consequently increase the size of the firm without thinking about profitability.

As stated earlier, Ghosh and Sirmans (2001; 2007) suggest that the regulation on REIT ownership hinder the creation of large blockholders. This might degrade the relationship between managers and shareholders and this way intensify agency costs. In fact, Chang (1998) reported in his study a positive relation between acquiring firm stock returns and the appearance of blockholders, which is consistent with the monitoring theory. As explained in the introduction, REITs must follow a detention rule called “5– 50” rule, meaning that each of the five largest share owners cannot own more than 10% individually. This results in mechanisms implemented by all Equity REITs to constrain the number of shares concentration to a level below 10%, usually revolving around 7% to 9% (Napoli and Smith 1999), representing half of the average block in Chang’s (1998) sample (16.7%).

Another specificity of the REITs industry is the non-diversification requirement. In fact, managers of such companies must invest at least 75% of total assets in real estate, cash or U.S. Treasuries to retain their tax transparency status. On the same basis, they have to derive the same percentage of gross income from rents, interest on mortgages or real estate sales depending on the financial purpose of the corporation. REIT limitations on asset composition

have the potential to prevent cross-industry M&As and this way to reduce the manager's possibilities for value destroying diversification motives and empire building (Ghosh et al., 2012).

Contrary to the results for general industries, Allen and Sirmans (1987) found that acquiring firms within the Real Estate Investment Trusts industry obtain positive stock returns during the period right after the acquisition's announcement. This way, more efficient management and expansion perspectives may be the principal motivations behind the merger decision. A study by Campbell et al. (2011) further indicates that abnormal shareholder returns for REIT acquirers are significantly positive when the target firms are private companies. They also indicate that most takeovers are friendly transactions, which implies less severe information asymmetry and should result in a smaller negative abnormal return for the acquiring firms (Chang 1998). On the same basis, Travlos (1987) found that friendly acquisitions also called manager-negotiated mergers experienced small negative abnormal returns of -1% to -2%. Consistent with this notion, Campbell et al. (2001) and others observed that hostile takeovers are rare among REITs. Consequently, they come up to the conclusion that what functions best within the REIT industry is the internal control of the firm.

In studies of post-acquisition returns, on different periods that include both cash-financed and stock-financed mergers, Asquith (1983) finds abnormal returns of −7.2% for all acquirers 240 trading days post-merger. Loderer and Martin (1992) found insignificant results with negative shareholder returns of −5% over a period 750 trading days after the announcement of the acquisition while, Rauand Vermaelen (1998) resulted with a study of significantly negative 3-year cumulative abnormal return (CAR) of −4%. Agrawal et al. (1992) examine a 33-year sample of 1,164 mergers starting from 1955 and observed abnormal returns of −5.5% after 3 years and −7.9% after 5 years.

Analyzing public REIT mergers through a sample of 40 firms from 1994 to 1998, Campbell, Ghosh and Sirmans (2001) came up to the conclusion that for stock transactions, acquirer returns were significantly negative, but still small : -0,6%. This finding reinforces the following statement: smaller effects are encountered for transactions within the REIT industry as the consequences are way more substantial when corporations from other industries use stocks.

On the contrary, Campbell, Giambona and Sirmans (2009) performed a long-horizon analysis and concluded that post-acquisition underperformance in the conventional corporate world can be applied to the REITs world as well. Significantly negative BHARs of −10% were computed

for acquiring firms on a 60-month period after announcement. Chang (1998) reports the same result for acquirers in the conventional corporate world. On the short-term, Campbell et al. (2001) figured out that public–private REIT mergers create a positive value. However, they found evidence in 2009 that this creation of value disappears as time passes, and that 5 years following the merger, negative abnormal returns are approximately the same regardless of the public or private nature of the target.

5. Methodology

For the past 30 years, researchers have struggled to explain persistent empirical evidence that the shares of acquiring firms underperform appropriate benchmarks in the years immediately following corporate mergers. This finding is troubling because it constitutes prima facie evidence of weak form market inefficiency : future returns can be predicted, at least partly, by past events, and investors can improve their returns by systematically selling shares of acquirers, and purchasing shares of similar firms that did not merge.

This paper will be composed of three different models to analyze the post announcement stock returns of acquiring firm within the United States REITs industry. The first model analyzes the variation of stock return to the announcement of a merger through an event study. Each event, which in this case is the news of a merger, generates a different reaction from the stock market. It is then possible to jointly use a sample of firms to test which theory is best supported by data. On the longer term, we will have two ways to understand the variations and potential excess returns. Through the well-known Buy-and-Hod Abnormal Returns model, we will set up synthetic benchmarks related to the firm size for firms that did not merge within the time frame considered. To do so, we will follow the recommendations of Lyon et al. (1999) to set up the reference portfolio composed of control firms. By doing so, it will be possible to compute the buy-and-hold abnormal returns and compare the benchmarks to actual REIT merger results. The third method is based on the Fama and French (2015) five-factor model, which estimates the average monthly ARs. Limmack (1997), in one of his paper analyzed the impact of the choice of the event study on the long-term performance results. Following his conclusions, the level of abnormal returns might vary much according to the implemented model. Making use of two different methods will give us the opportunity to test the robustness of our study on the post-merger performance within the REIT industry. To the author's knowledge this is the first American REITs post announcement study applying the five-factor model to analyze monthly abnormal returns.

Information about the mergers is obtained from the Refinitiv Eikon Thomson Reuters database through which two functions have been used. The "RI" function retrieve the return index of all the analyzed companies and the "MV" function will give us the market value at any point in time for the same corporations. The announcement date will be defined here as the date on which a corporation gives public official details on the start of a merger process. For mergers announced on a weekend day, the first following trading day will be used as the announcement

date. Only definitive announcement will be considered in this study. In this kind of paper, it is common to define that rumors and hearsay are rejected from analysis. Furthermore, this paper only includes fully completed mergers. Let us mention that mergers in which the target firm has total assets of less than $10 million are ignored. This industry contains companies with significant market value. In order not to bias the results of our studies, we have decided to choose a reasonable cutoff point. Also, observations are excluded if there are other major announcements during the event period.

To get a proper event study, we will have to choose a sample as large as possible, classify the firms within subdivisions (public-to-public and public-to-private REIT mergers), choose an appropriate event period and understand the discrepancies between each subgroup's results.

5.1. Event-study/Market model

The period analyzed for this event study will start from 1st January 2001. The rules for double-taxation avoidance have changed on that year (The dividend payouts threshold changed from 95% of the taxable income to 90%). The REIT Modernization Act of 1999 changed the rules of mandatory payout requirement to 90% of earnings (Howe and Jain, 2004). Howe and Jain (2004) concluded from a profound analysis of the Act that it completely changed the REITs industry. The witnessed impacts were numerous and the main ones were changes in growth, risk, and profitability of the corporations. If the period prior to 2000 had been analyzed, we could have expected alteration in the outcomes. That is why we chose to start as of 2001 to be sure that the new rules were implemented all over the United States. From this point, we thus consider a 16-year timeframe (2001-2016) so that our conclusions will not be disturbed by different dividend mandatory payouts. Our event window is day −10 to day +10, that is, the 10 trading days prior to the merger, the actual day of the event (day 0), and the 10 trading days after the event. We use a period of 120 trading days prior to the start of our chosen event window to determine an estimation of the alpha and beta of each stock considered in the sample portfolio. Each stock will be a dependent variable and the benchmark used to represent the REITs industry will be the Russell 2000 Index. The Russell 2000 index measures the performance of approximately 2,000 American companies with capitalization comprised approximatively between US$300 million and $2 billion. We use it as a market proxy instead of the S&P 500 because it is more representative of small capitalization and includes more REITs.

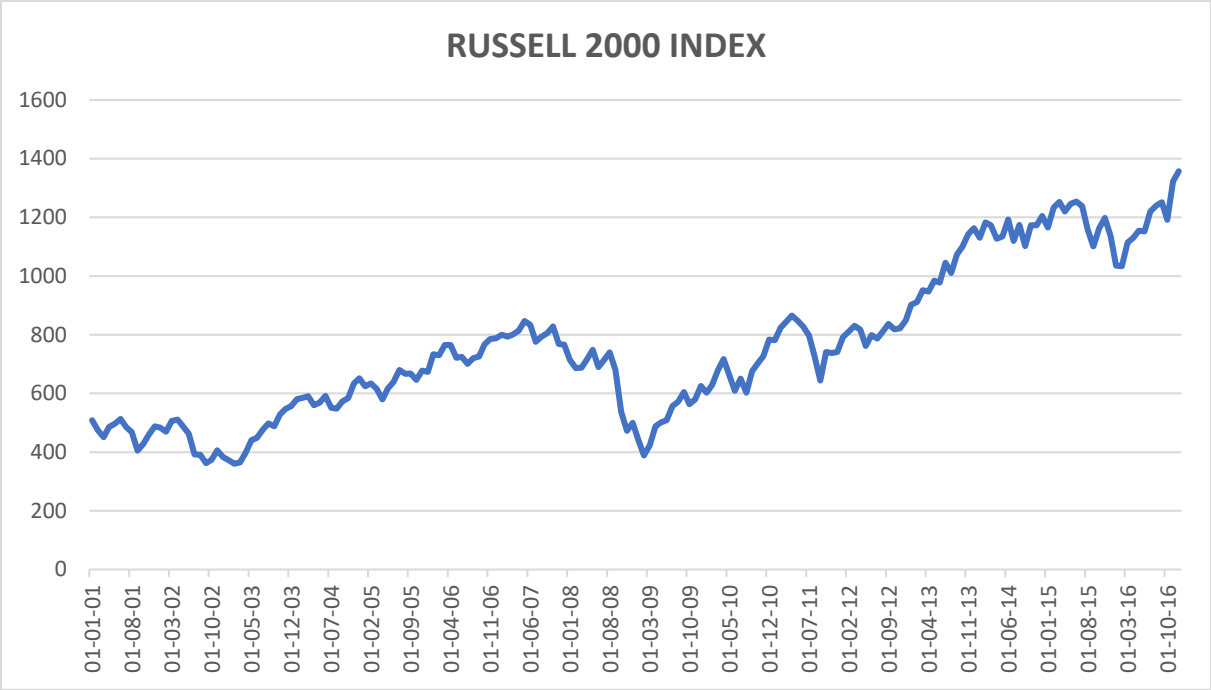

Fig 1. : Russel 2000 Index returns from 2001 to 2016

We use a 120-day estimation period because Armitage, said in his studies over event study methodology, "*100 days or more seems safe*" (Armitage 1995). We then take a 20-trading days period as safety cushion. Once those valuations are calculated, we still have to apply the returns obtained from the market over the 21-day period of the event window to calculate the expected returns for the stock following the formula of expected returns :

$$E(R) = \alpha + \beta(RMkt) \quad (1)$$

For each of the 21 days, we have the actual return for each stock that is being analyzed from the REITs industry and a forecast of the risk-adjusted expected value for that stock. The abnormal returns are simply computed by reducing the expected return for a specific trading day from the actual return of that same trading day. CARs (Cumulative Abnormal Returns) are computed by summing each daily abnormal return thus far starting from 10 days before the announcement date. For instance, the CAR on the event day will be the sum of the 11 abnormal returns found in days −10 through 0. It might be plausible that the results reported throughout this study vary solely regarding the amount of time surrounding the merger announcement that was studied. Consequently, we used six different event windows from one to twenty-one days to compute the CARs for target firms. If the event window was chosen in a wrong way, this would induce a bias that could be easily analyzed in comparison with the other windows.

Finally, for each day from ten days before the event occurs until ten days post-announcement, an arithmetic mean and a sample standard deviation of the cumulative abnormal returns are calculated through the sample. Standard errors are calculated as the sample standard deviation divided by the square root of the sample size. The spreadsheet then calculates t-statistics for each day in the event window as the mean CAR for that day divided by the standard error.

$$t_{CAAR} = \frac{\overline{CAAR}_T}{\sigma(CAAR_T)/\sqrt{N}} \quad (2)$$

In order to check the robustness of our findings, another benchmark has been used to compare the results on the 21-day period. The same methodology has thus been applied to the iShares U.S. Real Estate index. This benchmark seeks to track U.S. real estate companies and REITs through the Dow Jones U.S. Real Estate Index and is thus more convenient for the sake of our research.

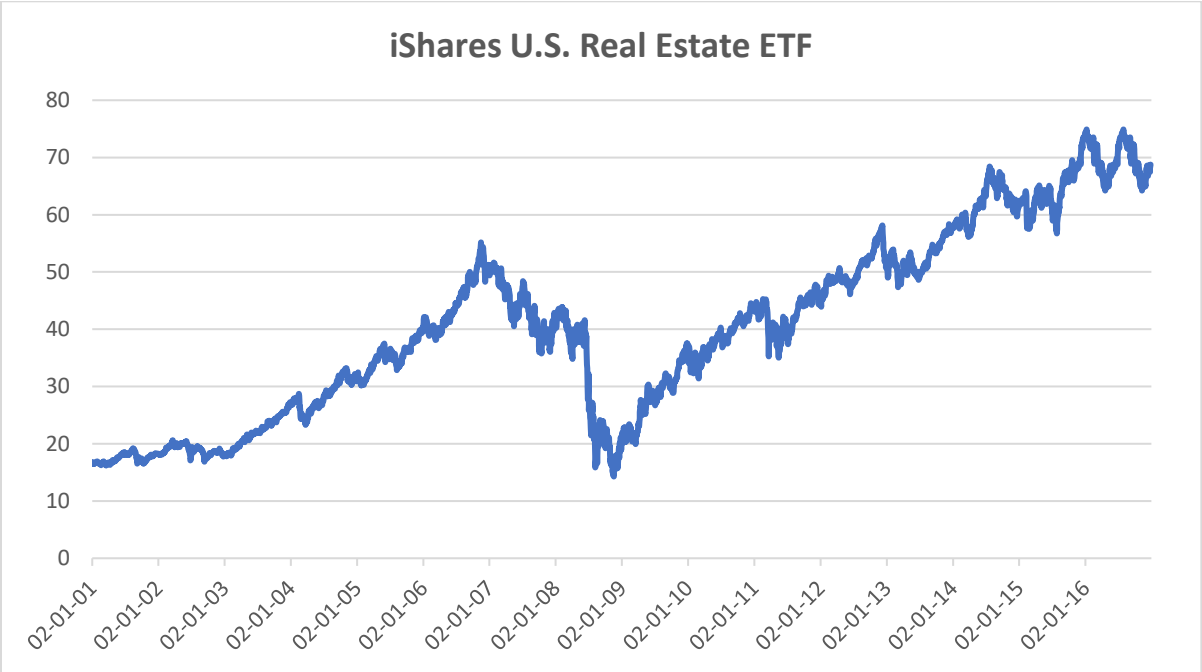

Fig 2. : iShares U.S. Real Estate ETF Index returns from 2001 to 2016

5.1.1. Robustness check

Following Kolari et al. (1976), stock prices are not normally distributed, thus there is a dominance of nonparametric tests over parametric tests in abnormal returns event study analysis. To analyze the results of the previously used T-test and enhance the robustness of our empirical analysis, we conducted another statistical test, the Corrado Rank test. Corrado (1989) introduced a non-parametric rank test in order to assess the performance of potential stocks abnormal performances which was at that time preferable to conventional parametric T-tests

present in the literature. The Corrado test ranks the returns in the event window relative to the period including both the estimation window and the event window. Here is the theoretical computation:

$$CT = \frac{\frac{1}{N}\sum_{i=1}^{N}\left(K_{i,0} - \overline{K}_i\right)}{\sqrt{\frac{1}{T}\sum_{t=0}^{T}\left(\frac{1}{N}\sum_{i=1}^{N}\left(K_{i,t} - \overline{K}_i\right)\right)^2}} \quad (3)$$

Where $\overline{K}_i$ represents the mean of the ranks used for the computation over the 141 days of examination (comprising the event window and the 120 days for the regression computation).. $K_{i,0}$ is used as the rank of each company for a particular day i. Finally, N is the number of days in our analysis representing the event window and the following trading days.

However, problems arise in the application of nonparametric tests to multiple day analyses of cumulative abnormal returns (Cowan, 1992) that have caused researchers to normally rely upon parametric tests. That is why we used both tests to check the robustness of our results.

5.1.2. Limitations – Market model

Despite the fact that there are clear benefits in using event study methodology in this paper, there are still some limitations to the model.

The methodology only works if one assumption is fulfilled : the presence of an efficient market. The semi-strong form of the efficient market hypothesis (Fama 1970) expects that as soon as information becomes public, it is immediately incorporated into a stock price. However, the time expected for any investor to respond to a market signal is random and therefore, the direct consequence is that market reactions could prove market inefficiencies because stock prices will not directly mirror all publicly available information. Sometimes the abnormal returns might be displayed over such huge amount of time that there is no significant evidence of changes in returns on the graph. That is why the CAR graph is more suitable for our analysis.

The second shortfall of the market model methodology is the impact of unconsidered events that might weaken or reinforce the market's reaction on the stocks under investigation resulting in abnormal returns that are not caused by the specific event of interest. Even if we do not consider the possible inefficient markets, firms under study are contaminated by ensuing events.

Finally, an analysis has to be made on whether or not changes in the benchmark used for our study will significantly change the abnormal returns. On the same basis, a change in the

estimation window as much as the size of the sample might interfere in the final results of our paper. Test will have to be computed to understand eventual impacts of such characteristics changes. The sensitivity of event studies will result in different conclusions being drawn by researcher studying the same event. As mentioned earlier, two different benchmarks have been used to compare the results and check the robustness of the findings.

5.2. Buy-And-Hold Abnormal Returns

To avoid these limitations, it is advisable to apply long-term models. To analyze long-term returns, two different methodologies have been implemented in this paper. The buy-and-hold abnormal returns (BHAR) and the Fama & French five-factor model. Following Lyon, Barber, and Tsai (1999) BHAR develops more precise results than CAR methods when assessing long-run performance. That is why the CAR computations have been used for short-term purposes only. On the other hand, Mitchell and Stafford (2000) over the three-factor model and Fama & French (2015) both defend the use of the multiple-factor model. They argue that there is a cross-sectional correlation between respective event firms when computing ARs. According to them, employing these models automatically justify for cross-sectional correlations in the portfolio variance at each point in time.

Given the discussions regarding the most appropriate methodology, we employ both methodologies. As stated earlier, making use of two different methods will give us the opportunity to test the robustness of our study on the post-merger performance within the REIT industry.

Following Campbell et al. (2009), the long term performance is estimated by the following Buy-and-Hold Abnormal Return calculation:

$$BHAR_i = \prod_{t=1}^{T}(1 + r_{it}) - \left(BHAR_{RP,i}\right) \tag{4}$$

And

$$BHAR_{RP,i} = \sum_{j=1}^{n} \frac{[\prod_{t=1}^{T}(1 + R_{j,t})]}{n} \tag{5}$$

Where $BHAR_i$ is the buy-and-hold abnormal return for event firm i over the time period T; r_{it} is the monthly total return for event firm i in month t; $R_{j,t}$ is the monthly total return for non-event firm j in month t; n is the number of non-event firms that make up the control portfolio; and $BHAR_{RP,i}$ is the arithmetic average compounded monthly return of the control portfolio. The expected buy-and-hold return is defined as the compounded monthly returns of the most suitable control firm.

To gauge abnormal returns as stated in the equation hereabove, we need to identify or create a proxy of expected returns had the analyzed event not occurred. While there are common benchmarks used in the prior literature, there is a consensus corroborated by Lyon et al. (1999) that identifies a size and book-to-market matched control firm. To identify these control firms, we first classify all REITs that did not enter such an M&A event for the considered period. The non-event corporations are then listed regarding their market size. The book-to-market value will not be considered here. Another criteria is also often cited in the literature : the Beta of the firm. However, Ang and Zhang (2013) showed that picking up matching firms based on their beta in addition to size and BE/ME does not improve the performance of the approach. There is then no point for us to add this element in our analysis. Market size is defined as the number of shares multiplied by the closing share price one calendar month before the announcement of the acquisition. When this is done, we set up different groups regarding the size of the firms and match the REIT firms from our portfolio within sample comprising 70% and 130% of the market value of the control firm. (Barber and Lyon, 1997). In this paper, a portfolio of 34 non-merging companies has been chosen based on their market size. This benchmark will be used to be compared with the one-, two- and three-year stock returns of the predefined portfolio of firms involved in a merger over this period of time.

5.2.1. Robustness check

The statistical significance of the BHARs is calculated for each event window. We employ two statistical tests to assess the robustness of the BHARs' significance. The first is a traditional test statistic:

$$t_{BHAR} = \overline{BHAR}_T \Big/ \sigma(BHAR_T)\sqrt{n} \qquad (6)$$

Where $\overline{BHAR}_T$ is the sample mean BHAR calculated over time period T; $\sigma(BHAR_T)$ is the cross-sectional sample standard deviation; and n is the number of event observations.

We use a T-test to compare the average values obtained from the two data sets (benchmark and portfolio of stock REITs returns) and to determine if the chosen samples correspond to the same population. As we compare two samples, we assume the null hypothesis, meaning that means of each sample are equal. If the result of the test diverges from 0, we will be able to reject the hypothesis and this way conclude with different levels of significance that abnormal returns are present in our analysis.

The second method to test the robustness of our findings has been developed by Charles P. Winsor at the beginning of the twentieth century. The main objective of this theorem is to find out the potential presence of outliers in the data analyzed. This way, we can check whether our results might be driven by the effect of a small number of influential outliers. Cowan and Sergeant (2001) show through simulation that winsorizing effectively mitigate the role of outliers in the context of long-horizon event studies. Winsorizing requires replacing the x most extreme values for a variable with the x−1 value. This way, the outliers are not simply rejected from the sample portfolio but we adapt their market value to the nearest value of an observation not seriously suspect and finally find another suited control firm. We winsorized our BHAR variable using thresholds of 5% and 95% to trigger the adjustment. This implies that we replaced all values above the 95th percentile value with the 95th percentile and similarly adjusted all values falling below the fifth percentile. Winsorizing causes the mean BHAR for our full sample portfolio to drop lightly to a lower level. We will demonstrate the results in the next section of the paper. However, we can already notice that the presence of small and extremely high market value stocks has a positive influence on the BHARs of this study; meaning that those kind of firms react in a more efficient way to a merger announcement than average companies.

5.2.2. Limitations – BHAR

Barber and Lyon (1997) remark that the control firm approach eliminates the new listing bias, the rebalancing bias, and the skewness problem. The new listing bias would appear in the case the firms chosen to be part of the reference portfolio would begin trading subsequent to the event month while firms from the sample most of the time have a long stock return history. The rebalancing bias intervenes when the reference portfolio is rebalanced after a defined period of time so that out- or underperforming stocks would be reconsidered. The fact that we choose control firms ourselves erases this bias. The last appearance is the skewness bias. It has been proved many times that long-run abnormal returns are positively skewed (Barber and Lyon, 1997). Considering control firms reduces this bias to its maximum. Following the Pearson's coefficient of skewness[2], the mean value of the control firm will be the same as the modal value, this way erasing any possibility of skewness. Furthermore, because the event REITs and the control firms are both from the Real Estate Investment Trust industry, the bad model problem highlighted by Fama (1970) is seen as insignificant. Using control firms all from the REITs

[2] Pearson's Skewness = $\frac{\bar{X}-M_0}{s}$; where s is the standard deviation of the control firm, $\bar{X}$ the mean value and M_0 the mode.

industry reduces inaccuracies that could arise in the implementation of a proxy. Ang and Zhang (2013) finally found out another important problem being overcome by the matching firm method. Using multiple companies to create the reference portfolio brings unrepresentativeness in important aspects of the respective matched portfolio. This will automatically create bias in the estimation of expected returns and particularly concerning small firms where divergences in return are substantial. However, this method does not fit to control the cross-sectional dependence in our observations. Fama & French (1993) argue that the Buy-and-hold Abnormal Returns method does not take into consideration possible cross-sectional dependence of the over-lapping excess returns from individual event firms. That is why we will make use of the Fama and French five-factor model later in this study to check the robustness of the conclusions.

5.3. Fama & French Five-Factor Model

The purpose of this methodology is to use the recently created Fama & French five-factor model instead of the three-factor model. This latter is an empirical asset pricing model. Typical APM intend to depict the intentions and tastes of individual investors and this way describe how risk should be measured compared to the expected return on a selected time period. To do so, one must consider patterns on average returns and create subsequent model to understand forward stock movements. The Fama & French three-factor model (1993) has been set up to apprehend the relation between average return and a market factor, a size factor and the book-to-market ratio. The regression formula is:

$$R_{i,t} - R_{f,t} = \alpha_i + \beta_i RMRF_t + s_i SMB_t + h_i HML_t + \varepsilon_{i,t} \quad (7)$$

Where $R_{i,t}$ is the return on security i in month t; $R_{f,t}$ is the return from a risk-free asset in month t; α_i is the intercept term as in any regression computation; $RMRF_t$ is the excess return compared to the equally-weighted benchmark; SMB_t is the return difference between being long on a portfolio of small capitalization stocks and short on large stocks in month t; HML_t refers to the book-to-market value of the stocks being analyzed and returns the difference between the portfolios of high values and low values in month t; and $\varepsilon_{i,t}$ is the standard error term. β_i , s_i, and h_i represent the sensitivity of each variable they are related to. If they are all worth 0, the intercept will also have a null value.

Following further research on the subject, Fama & French came to the conclusion that the model as-is might be incomplete because the three factors are probably not representative enough of all the inputs that create variations on the expected returns. The study of Novy-Marx (2013) on profitability premiums concludes that the three-factor model is incomplete and misses profitability and investment variables. In fact, the research proves that the five-factor model illustrates between 71% and 94% of the cross-sectional variance of expected returns for the five factors analyzed here. This is the main limitation of the Buy-and-Hold Abnormal Returns and consequently the reason why we will make use of the five-factor model instead of the three-factor one. The performance of the last model has proven better results through lower anomaly average returns. These evidence motivate changes into the three-factor model, coming to a new formula:

$$R_{i,t} - R_{f,t} = \alpha_i + \beta_i RMRF_t + s_i SMB_t + h_i HML_t + r_i RMW_t + c_i CMA_t + \varepsilon_{i,t} \quad (8)$$

In this equation RMW_t is the result of robust profitability portfolio returns minus weak profitability ones. CMA_t is the result of low investment stock returns minus high investment ones which are commonly called conservative and aggressive.

The purpose of the different regressions performed here is to understand whether the five-factor model apprehends average returns on the variables and to check correlations between each factors. Finally, we can determine the slope of the regression and the impact of each factor on average returns of the REITs stocks.

5.3.1. Robustness check

One statistical test will be applied here to test the robustness of the results. Through the regressions between the Fama & French five factors and the excess returns from our sample portfolio, we are able to determine P-values. This way, we will determine the probability for a given statistical model under the null hypothesis to obtain the same value or an even more extreme value than the one observed. The excess returns were obtained by subtracting the risk free rate from the equally weighted returns of the portfolio of stocks being analyzed on a one-two and three-year period.

5.3.2. Limitations - FF5

Two main setbacks result from the limitations of the five-factor Fama & French model. Following prior literature, these anomalies generate considerable returns and should be considered in future models.

First, Similar to the 3-factor model, the main issue arising from the 5-factor model remains its incapability to explain the momentum premium, and Fama & French decided to ignore it on purpose. Yet, because momentum is too pervasive and important to ignore, most studies also look at 4-factor alphas, based on the 3-factor model augmented with the momentum factor.

Secondly, the model fails to capture the average returns on a particular type of company, small stocks. These latter have returns performing like highly investing firms to the detriment of profitability. (Fama & French, 2015).

6. Data collection

We collected REITs acquisition announcement from the Refinitiv Eikon database for the following period : January 1, 2001 (REITs are bound to distribute at least 90% of net earnings as dividends (prior to 2001, the requirement was 95%)) to December 31, 2016. We end up our sample period before 2017 in order to allow for sufficient data to calculate the long run performance after acquisitions that will be computed over the one-, two-, and three-year event periods. To be included in our sample, we require the acquirer to be a publicly traded U.S. REIT, the acquisition transaction to be completed, and stock returns and data to be available from the Thomson Reuters database.

While there are 84 events within our sample period, 14 events are removed due to insufficient data, leaving our sample with 70 events. The reasons behind the removal are mainly the lack of information and events involving the same firms founding place over the same period of time, consequently overlapping each other. Table below presents the sample distribution each year from 2001 to 2016. In addition, we observe that most targets are public firms while only 22 events are related to privately traded REITs. Figure three below shows how many equity REITs merger announcements took place each year for the considered period. It can be easily interpreted that from 2008 to 2010, the Great Financial Crisis caused a substantial slowdown in the M&A activities. On the contrary, we notice a recent peak in announcements, 2016 being the most representative year of this increase in observations.

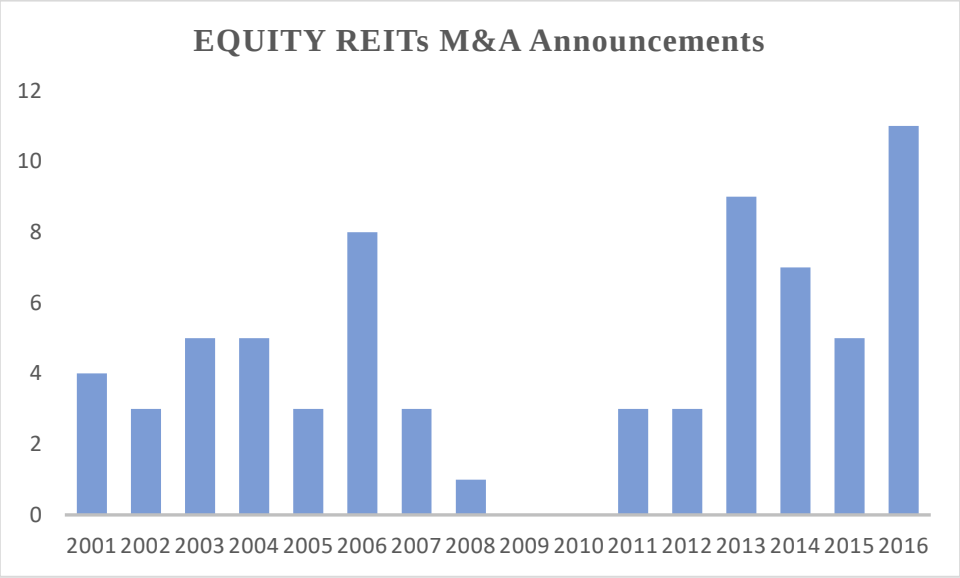

Fig. 3 : Graph of Equity REITs M&A announcements employed in the study by year.

The sample used for our research is smaller than the average size of many post-announcement studies for conventional industries. Although the size limit might interfere with the power of the test, our analysis is based on a unique industry. This way, we are enhancing the reliability of our tests because our data are not corrupted by confounding exogenous influences that may have significant industry-specific effects.

We then used the following screening process to isolate the final sample: REITs daily and monthly stock time series must be available from our database for a minimum period of four months before the announcement date and going forward, it must be available for a period of three years after the event.

In relation to the Buy-and-Hold methodology, we also required the construction of a matching/control portfolio. The control firms were selected from the equity REIT sector and were subject to the same filtering processes described above, with the additional constraint that the control firm is not involved in a M&A during the sample period.

7. Empirical results

7.1. Market model

The first results that will be analyzed are the short-term results computed through the cumulative average abnormal returns. The market model is the one model used to calculate the abnormal returns. However, to test the robustness of our findings, we divided the full sample into six different time windows from a one- to a twenty-one-day analysis. Furthermore, to comprehend the results more in-depth, we sub-divided the full sample into two different portfolios. The first one analyzes public-to-public mergers while the second one focuses on public-to-private acquisitions. The benchmarks used to set up the model are the Russell 2000 and the iShares U.S. Real Estate ETF index. While the calculated returns and associated tests are presented in Table 1, Fig. 4 represents the cumulative average abnormal returns from 10 days before the announcement of the merger to 10 days after, leaving us with a 21-day period of time to analyze over 70 M&A deals.

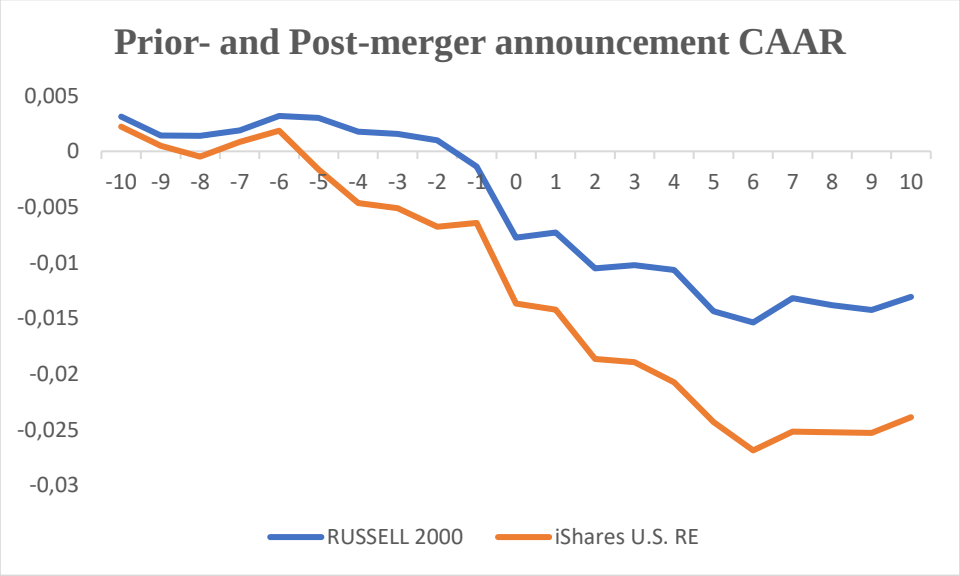

Fig. 4 : Prior- and Post-merger announcement CAR over a 21-day period revolving around the announcement date.

First of all, it is easily noticeable that the use of two different benchmarks, with the iShares index being the one with a higher correlation to the REITs industry, yields approximatively the same results of the 21-day period of time.

The significance of the results obtained here will be analyzed through the results of the T-test. The reason behind this choice is that the Corrado rank test, although non-parametric test, might create bias when it comes to multiple days abnormal returns analysis. We will then focus on the second and parametric test.

From dividing the CARs into different sub-periods, some conclusions can be drawn. Although the significance of the results changes a lot, except for the ten- and twenty-day period for the public-to-private portfolio, all abnormal returns are negative. This is consistent with prior literature. For instance, Dodd and Rubeck (1977), and Malatesta (1983) who all found negative cumulative abnormal returns over the post announcement period utilizing the market model. The subdivision shows that the obtained results are robust because only small changes can be noticed regarding each time period even though the one-day period centered on the announcement date shows higher results for all analyzed samples. We can conclude from this that on the short-run, the markets react negatively to the announcement of a merger in the REITs industry whether the target firm is private or public even though the significance varies much between the analyzed time periods.

Regarding the splitting of the sample between public and private firms more substantial observations can be detected. On average, it appears that for public-to-public mergers, at a 5% level of significance, for a one- and two-day period starting from the event date, CAARs are respectively -1,7% and -1,9% regarding the iShares Real Estate ETF. For public-to-private acquisitions they are -0,6% and -0,33% and not significantly different from zero under the null hypothesis. Thus we cannot certify under a certain level of confidence that public-to-private buy-outs create significant abnormal returns a few days before and after the announcement date.

From the graph, it is also interesting to notice that from day five before the announcement of the M&A event, the average cumulative stock returns begin to drop down. It might be interpreted as a sign of information leakage or insider trading at a 10% level of confidence for full-sample analysis from a three- to ten-day period with the event as median. In a perfectly efficient market, public and private information over the merger would be known by anyone at the time of the announcement. Although the returns from the Russell 2000 are not statistically different from zero, the fact that the returns begin to drop before the official announcement and keep on doing so for a few days after the occurrence of the event tells us that the semi-strong form of the efficient market hypothesis (Fama 1970) cannot be confirmed here. This latter expects as soon as information becomes public, it is immediately incorporated into a stock's price.

While several prior papers end up with an opposite conclusion, finding positive abnormal returns over a short period of time right after the announcement date with statistical significance like Womack (2012) and Campbell, Ghosh and Sirmans (2001), we are able to conclude that more recent event initiated by equity REITs M&A's gets negative results from the market.

However, we cannot assert that the abnormal returns derived from the public-to-private acquisitions are significantly different from zero.

7.1.1. Market model: table 1

American Real Estate Investment Trust cumulative average abnormal returns separated following the legal status of the bidder on different periods of time.

Cumulative abnormal returns for acquirers around acquisition annoucements

Russell 2000	Full-sample portfolio			*iShares U.S. RE*	Full-sample portfolio		
	N=70				N=70		
	CARs	T-STAT	CORRADO		CARs	T-STAT	CORRADO
Panel A				Panel A			
1-DAY (0)	-0,78%	-1,449	-1,978	1-DAY (0)	-1,41%**	-2,208	-2,717
2-DAY (0,1)	-0,75%	-1,336	-1,391	2-DAY (0,1)	-1,42%**	-2,117	-1,455
3-DAY (-1,1)	-0,55%	-0,983	-1,577	3-DAY (-1,1)	-1,13%*	-1,786	-1,079
5-DAY (-2,2)	-0,52%	-0,884	-1,575	5-DAY (-2,2)	-1,2%*	-1,807	-1,282
10-DAY (-5,5)	-0,50%	-0,730	-1,217	10-DAY (-5,5)	-1,2%*	-1,765	-1,114
20-DAY (-10,10)	-0,54%	-0,604	-0,761	20-DAY (-10,10)	-1,22%	-1,523	2,628
	Public-to-Public portfolio				Public-to-Public portfolio		
	N=48				N=48		
	CARs	T-STAT	CORRADO		CARs	T-STAT	CORRADO
Panel B				Panel B			
1-DAY (0)	-1,01%	-1,443	-3,097	1-DAY (0)	-1,71%**	-2,282	-2,264
2-DAY (0,1)	-1,08%	-1,458	-2,348	2-DAY (0,1)	-1,93%**	-2,338	-1,856
3-DAY (-1,1)	-0,69%	-0,929	-1,746	3-DAY (-1,1)	-1,52%*	-1,873	-1,159
5-DAY (-2,2)	-0,70%	-0,888	-1,556	5-DAY (-2,2)	-1,61%*	-1,899	-1,258
10-DAY (-5,5)	-0,73%	-0,776	-1,247	10-DAY (-5,5)	-1,6%*	-1,806	-1,003
20-DAY (-10,10)	-0,79%	-0,694	-0,637	20-DAY (-10,10)	-1,54%	-1,565	-0,436
	Public-to-Private portfolio				Public-to-Private portfolio		
	N=22				N=22		
	CARs	T-STAT	CORRADO		CARs	T-STAT	CORRADO
Panel C				Panel C			
1-DAY (0)	-0,27%	-0,347	0,979	1-DAY (0)	-0,60%	-0,547	-1,669
2-DAY (0,1)	-0,03%	-0,052	0,929	2-DAY (0,1)	-0,33%	-0,298	0,080
3-DAY (-1,1)	-0,23%	-0,483	-0,230	3-DAY (-1,1)	-0,38%	-0,405	-0,271
5-DAY (-2,2)	-0,13%	-0,279	-0,492	5-DAY (-2,2)	-0,37%	-0,377	-0,500
10-DAY (-5,5)	0,00%	-0,101	-0,317	10-DAY (-5,5)	-0,42%	-0,431	-0,570
20-DAY (-10,10)	0,01%	-0,009	-0,396	20-DAY (-10,10)	-0,53%	-0,323	-0,293

Notes: This table reports the cumulative abnormal returns (CARs) as a percentage for 70 acquiring REITs. We apply standard event study methodology through the use of the market model. The estimation period is from day -130 to day -10. The left-column results are retrieved from the use of the Russell 2000 as a proxy for the market sample while the right column use the iShares U.S. Real Estate index. We examine the response for the full-sample portfolio, the public-to-public portfolio, and the public-to-private portfolio. For each portfolio, we calculated the CARs for 6 different event windows, 21-day (-10 to +10), 11-day (-5 to +5), 5-day (-2 to +2), 3-day (-1 to +1), 2-day (0 to +1), and 1-day (day 0). For each event window, the CAR is the sum of the abnormal returns during the event window.

* = Statistical significance at the 10% level.

** = Statistical significance at the 5% level.

*** = Statistical significance at the 1% level

7.2. BHAR

The BHAR results for REIT acquirers are presented in Table 2. Panel A displays the results for the full sample. Twelve month returns for all acquirers (Panel A) are -0.884% which is a good fit with the research findings of event window returns that are small and negative. However, the absolute value of the negative return increases over time and the three-year buy-and-hold returns are -4.49%. This finding is similar to the findings of wide prior literature (Campbell et al., 2009; Ratcliffe et al., 2017) but it is not consistent with the conclusions drawn from the Fama & French five-factor model as we will further analyze in the following section.

Looking at the public-to-private acquisitions, all the obtained results are highly significant regarding the null hypothesis of the computed abnormal returns (below the 1% level). They range from -4.273% on the one-year time period while it drops down to -11.848% and -9.583% after respectively two and three years. Contrary to the results obtained from common literature, the acquisition of privately held companies yields negative abnormal returns on the long-term. Researchers like Campbell et al. (2001) found out an average of positive abnormal returns of 2% on the same range of time. Similarly, Chang (1998) concluded from his paper that returns of acquirers stay significantly positive around 1.5% in a public-to-private acquisition. Chang also proves that such results are obtained from the use of stock as the method of payment. In fact, the abnormal returns are −2.5% in stock-financed mergers when the target is public, but +2.6% when the target is private. As stated in the introduction, Chang (1998) details a positive relation between stock returns from the acquiring firm and the presence of blockholders, which is consistent with the monitoring theory he developed in the same paper. Other industries can benefit from the arrival of these new shareholders having important stakes in the considered firm. In contrast, the legislative environment of REITs prohibits a shareholder from holding more than 10% of the shares of the company. Knowing from Campbell et al. (2001) that 82% of the public-to-private transactions involving REITs use stocks as a method of payment, this clearly has an impact on the way the company is managed and is reflected in the figures. This way, REITs cannot be managed by internal stakeholders owning a high percentage of shares, that is why the positive abnormal returns obtained by Chang are misleading. This may be one reason explaining negative abnormal returns when the target firm is privately held. In addition to this we can retrieve from this analysis that the considered time period might create discrepancies in the obtained results. Furthermore, the private sample is composed of 22 firms from 2001 to 2016, the small size of the pattern might interfere in the results. These negative

outcomes also imply the existence of hubris and agency costs. Finally, one particularity of the real estate market is the existence of a large private market that competes directly against publicly traded firms for the ownership of assets of any kind. From this, we might think that public firms having the possibility to pull the rug out from under the private firms will do almost anything to buy out a newly growing competitor. (Eichholtz and Kok, 2008).

The same kind of conclusions can be drawn looking at the public-to-public mergers. Prior literature (Campbell et al., 2009; Sahin, 2005) tells us that long-term abnormal returns are all negative and increasing in absolute value as time passes. Campbell (2009) came up to a -11.9% over a five-year period. However, just as with public-to-private acquisitions, the results of our study reveal reversed conclusions. The one- and two-year BHAR both yield significant positive abnormal returns (respectively 1.339% and 3.674%) at a 5% level of confidence while the longer run gives us negative results but insignificantly different from zero. There could be one explanation to our positive results. Campbell et al. (2001) show in their paper over the information content of method of payment in REITs mergers that public-to-public mergers have a greater tendency to be sealed with cash than stock-financed. In this respect, a significant finding from Travlos (1987) and Wansley, Lane, and Yang (1987) inform us that the acquiring firms in publicly-managed firms yield lower abnormal returns in stock exchanges than in cash transactions. Their analysis was based on different samples over different periods of time, so the results seem robust enough to be used in this study. They all find that acquirer returns are significantly negative in stock transactions, but insignificantly different from zero in cash purchases. For example, Chang reports that acquirer returns are −2.5% in a sample of stock-financed mergers between public companies, but only −0.2% in cash-financed public mergers. So, our analysis seems to be based more on cash-financed deals than stock swaps given the results we obtained. The last plausible explanation is that the REITs industry witness almost any time takeovers with friendly acquisitions. This good relationship between managers might enhance the synergies by reducing the information asymmetry when two firms enter into a deal.

Finally, as mentioned in the BHAR methodology, we have implemented a winsorization on the retrieved data to discover the potential presence of outliers. The grey column of the table 2 tells us that for any analyzed period and any kind of acquisition, the abnormal returns drop slightly. In fact, for the one-year period, panel A abnormal returns change from -0,884% to -2,638%, from 1,339% to -1,041% for panel B and finally from -4,273% to -6,124% in the private panel. This information can easily be interpreted and supported by Fama & French (2012) as a better performance from the small stocks. In fact, performing the winsorization, we have replaced the

companies having the three largest and the three smallest market value in our sample portfolio by, each time, the company having a market value respectively exactly above and under the 5^{th} and the 95^{th} percentile. We also changed the control firms so that they fit with the new considered market value. These six companies were then yielding better performance than the 64 other ones still considered.

7.2.1. BHAR: table 2

American Real Estate Investment Trust buy-and-hold abnormal returns separated following the legal status of the bidder.

REIT Acquirer Buy-and-Hold Abnormal Returns

	One Year	Winsor	Two-Year	Winsor	Three-Year	Winsor
Panel A: Full Sample						
BHAR	-0,884%	-2,638%	-1,59%	-3,816%	-4,49%*	-5,777%
T-test	-0,371		-0,773		-1,551	
Obs.	70		70		70	
Panel B: Public-to-Public						
BHAR	1,339%**	-1,041%	3,674%**	1,795%	-2,152%	-3,269%
T-test	-2,495		2,256		-0,612	
Obs.	48		48		48	
Panel C: Public-to-Private						
BHAR	-4,273%***	-6,124%	-11,848%***	-16,057%	-9,583%***	-11,251%
T-test	3,892		-9,369		-6,043	
Obs.	22		22		22	

* Statistical significance at the 10% level of confidence

** Statistical significance at the 5% level of confidence

**** Statistical significance at the 1% level of confidence

Notes: This table shows the buy-and-hold abnormal returns (BHARs) for acquiring REITs over the study period of January 2001 to December 2016. BHARs are calculated over the one-, two-, and three-year post-announcement periods. Panel A shows the BHARs calculations for the full sample of firms. Panel B shows the BHARs calculations for the public-to-public acquisitions. Panel C shows all BHAR calculations that represent the public-to-private mergers. BHARs are calculated by creating a portfolio of control firms regarding their size at the announcement date as described by Lyon, Barber, and Tsai (1999). P-values are calculated using a standard t-statistic from a two-tailed test.

7.3. Fama & French Five-Factor Model

Table 3 presents the abnormal returns from the five-factor model procedure. The full sample analysis details the results for the full sample considering public and private acquisitions. It shows insignificant abnormal excess returns over three different period of times. One-year monthly excess returns are -0.25%, equating to an annual abnormal return of -3% and the two-year excess return is 2.4% (0.2% monthly return). These results seem to be consistent with the results obtained from the market model. They are showing us that the negative reaction from the market seems to be reversed as time passes. The synergy motive for REIT acquisitions is reinforced here over the long-run. However, the p-values obtained from the regression between monthly excess returns and the Fama & French North American five factors pulled from the data library created by the two economists and updated in August 2019, are so large (from 0,636 to 0,971) that there is no presumption against the null hypothesis. This is consistent with the coefficient of the intercept observed over the three years that stays closely tied to zero. The relevance of the data can also be questioned by the smaller than average R^2, explaining only 29,5% to 38,9% of the variance between the dependent and independent variables which seems quite low even if only American data is considered in the Fama & French data set. What could be emphasized here are the divergences of the REITs industry compared to more conventional firms. The high mandatory payout ratio and the obligation to hold a minimum percentage of real estate assets at any point in time might interfere in the way people react to M&A announcements in this particular industry but also how these firms are managed internally.

The second and third panel respectively show the results from the public-to-public transactions and the public-to-private ones. The same conclusions can be drawn here, the intercept for the three event windows are all statistically insignificant and vary between monthly abnormal returns of -0.09% and +0.25%, which equals to -1.08% and 3% if they are converged annually.

Finally, we can notice that CMA (conservative minus aggressive) factor is statistically insignificant in eight out of the nine results. Therefore, from this component, we cannot reject the null hypothesis when computing the abnormal returns over the long-term. The RMRF factor statistically seems to be the one explaining the potential abnormal returns resulting from mergers and acquisitions.

The results from this methodology being close to zero, it is difficult to come up with one clear conclusion. It could be emphasized here that the positive abnormal returns seem to be

encountered for public-to-public acquisitions and consequently the synergy motive might be linked to this kind of merger while the private ones seem to have no point in the M&A activity or even hubris and agency costs. It is hypothesized that REITs M&A motivation is not static and is influenced by external macroeconomic events like a potential financial crisis.

7.3.1. FF5: table 3

American Real Estate Investment Trust Five-Factor Model separated following the legal status of the target company.

REITs Five-Factor Model Abnormal Returns

	One Year		Two Year		Three Year	
	Coeff.	P-Value	Coeff.	P-Value	Coeff.	P-Value
Panel A: Full Sample						
Intercept	-0,002	0,688	0,002	0,636	0,000	0,971
RMRF	0,818	0,000***	1,005	0,000***	1,053	0,000***
SMB	0,078	0,767	0,555	0,005***	0,413	0,036**
HML	0,838	0,008***	0,683	0,002***	0,680	0,003***
RMW	0,362	0,283	0,571	0,019**	0,445	0,072*
CMA	-0,425	0,271	-0,254	0,354	-0,126	0,652
R^2	0,315		0,402		0,402	
Adj. R^2	0,295		0,387		0,389	
Number observations	178		202		225	

	One Year		Two Year		Three Year	
	Coeff.	P-Value	Coeff.	P-Value	Coeff.	P-Value
Panel B: Public-to-Public Acquisitions						
Intercept	-0,001	0,845	0,003	0,568	0,001	0,884
RMRF	0,884	0,000***	0,958	0,000***	1,010	0,000***
SMB	0,203	0,354	0,536	0,008***	0,394	0,064*
HML	0,257	0,302	0,679	0,003***	0,728	0,002***
RMW	0,356	0,171	0,558	0,026**	0,475	0,073*
CMA	0,023	0,938	-0,333	0,236	-0,266	0,373
R^2	0,266		0,372		0,370	
Adj. R^2	0,245		0,356		0,355	
Number observations	175		202		215	

	One Year		Two Year		Three Year	
	Coeff.	P-Value	Coeff.	P-Value	Coeff.	P-Value
Panel B: Public-to-Private Acquisitions						
Intercept	0,001	0,784	0,001	0,836	-0,001	0,803
RMRF	0,664	0,000***	0,834	0,000***	1,178	0,000***
SMB	0,190	0,404	0,355	0,102	0,546	0,026**
HML	0,222	0,422	0,223	0,365	0,626	0,021**
RMW	-0,019	0,950	0,049	0,853	0,186	0,538
CMA	0,503	0,156	0,674	0,032**	0,262	0,458
R^2	0,190		0,275		0,438	
Adj. R^2	0,154		0,250		0,421	
Number observations	119		156		168	

Notes: This table presents the results of the five-factor model OLS regression using monthly data for REIT bidders over the sample period of 2001 to 2016. RMRF is the excess return coming from the difference between the return on the North American's weighted value market portfolio with the US one month T-bill rate (Fama & French, 2015). SMB is the return difference bewteen a portfolio of small and large REITs, HML is the return difference between the portfolios of high and low book-to-market REITs. RMW is the result of robust profitability portfolio returns minus weak profitability ones. CMA is the result of low investment stock returns minus high investment ones which are commonly called conservative and aggressive. The Intercept measures the mean monthly abnormal return. The number of observations represents monthly bidder excess returns over the event windows. The analysis has been first split up between different time period from one to three years and on a second plan divided bewteen public and private acquisitions.

* = Statistical significance at the 10% level.

** = Statistical significance at the 5% level.

*** = Statistical significance at the 1% level

8. Conclusion

This study extends the prior U.S. REIT post-announcement literature highlighted by Campbell et al. (2001; 2009), Lu, Mao and Shen (2015) and Womack (2012) and other researchers. The REIT sector was selected as a case study because of its regulatory structure. This environment allowed for the examination of long-term post-announcement shareholder performance in a setting that is less vulnerable to agency problems (Eichholtz and Kok, 2008; Ratcliffe et al., 2009). Three models have been applied on a 16-year period (from 2001 to 2016) to comprehend in depth the different outcomes from the mergers of this particular industry. First, on the short-term, we simply put in place a market model to analyze the abnormal returns over the short-term regarding different time windows revolving around the announcement date of the event. On the longer term, both the Buy-and-Hold Abnormal Returns and the Fama & French Five-factor model are measured from a one- to three-year period post-announcement. Since our sample portfolio of target companies is composed of 48 public companies and 22 private trusts, another sub-division of the full sample is made considering those characteristics.

As mentioned earlier, the purpose of this study was to examine the divergences between the potential REITs industry abnormal returns from mergers compared to more conventional industries with less regulations. That is why the rest of this conclusion will resume the distinctive features of these trusts and explain what deviates from rationale prior literature.

First of all, to be eligible for tax exemption, REITs have a legal obligation to distribute at least 90% of their taxable income to their shareholders. Although Feng et al. (2007) demonstrated that large depreciation write-offs in REITs result in internally generated cash far in excess of net income, the results obtained in our study seem to corroborate the fact that managers of such corporations have less cash than average at their disposal. In fact, the Fama & French five-factor model yields abnormal returns ranging from -3% to 3% over one- two- and three-year period of time while the BHARs result from -0,884% to -4,49% for respectively one and three years post announcement. These results are lower than those found by Loughran and Vijh (1997) that reached -6,5% and Savor (2006) with -12,9% over a 3-year time period. This reduction in abnormal returns can be explained by the lower cash available to managers and consequently the reduced agency costs and hubris issues. Another specificity can be derived from the lack of cash of such companies. Managers of REITs must count on financial markets to finance their project. This will consequently enhance information transmission, and mitigates agency conflicts by restricting managers' access to free cash flow. On the same basis, this will

expose firms to the scrutiny and monitoring by market participants when raising external capital reducing similarly the information asymmetry. In fact, REITs rely on the capital market to raise funds for investment. For this relationship to be successful, public information on financial and operational statements must be available at any time, reinforcing the possible scrutiny of the markets and the related investors and analysts. The increased monitoring should reduce agency conflicts.

A second prominent characteristic is the so-called "5-50" rule. The five largest share owners of any REIT cannot own more than 10% individually. This results in an average shares detention revolving around 7% to 9% (Napoli and Smith 1999) for all Equity REITs. Results are doubled (16.7%) when it comes to conventional corporations (Chang, 1998). Chang also details a positive relation between stock returns from the acquiring firm and the blockholders' presence, which is consistent with the monitoring theory he developed in the same paper. "*The separation of ownership from professional management naturally creates asymmetric information*" (Myers and Majluf 1984). As a complement to this study, Harford et al. (2008) found a few years later that poorly governed corporations with insiders having less shares of the overall company have smaller cash holdings. This might seem counter intuitive but further literature shows that, at least in the United States, firms with weak shareholder rights have a tendency to spend excess cash on unrelated acquisitions faster than peers that would be controlled by strong shareholders. They do so even though these transactions tend to destroy future potential value. We could conclude from these findings that worse than average management skills would increase information asymmetry and this way agency issues. Event thought abnormal results seem higher than for conventional industries, they are still significantly negative regarding our market model and Buy-and-Hold Abnormal Returns results and insignificantly negative through the Fama & French computations.

On the contrary, and this is the last main aspect of the REITs industry, 75% of the total assets of the trusts has to be related to the real estate. Since REITs have a limited scope of activity from income-producing real estate to owning real estate assets, horizontal acquisitions seem to be the most convenient method to expand the business of the company. This also brings up the fact that most takeovers in this particular industry are friendly transactions, which implies less severe information asymmetry and should result in a positive response from the markets and investors and consequently a smaller negative abnormal return for the acquiring firms (Chang 1998). On the same basis, Travlos (1987) found that friendly acquisitions also called manager-negotiated mergers experienced small negative abnormal returns of -1% to -2%. Consistent

with this notion, Campbell et al. (2001) and others observe that hostile takeovers are rare among REITs.

All these observations lead us to the conclusion that even though agency and hubris problems might appear from the non-presence of large shareholders, the dividend distribution leading to the scrutiny of the markets and the impossible scope diversification reduce the well-known negative abnormal returns encountered in the wide prior literature.

This paper represents a small portion of what could be analyzed in the post-announcement merger theory. There could be many expansions of these conclusions. From the results obtained in this paper, one could extend the conclusions by interpreting which of the factors quoted here has the greater impact on the final outcomes. Which of the private/public acquisitions, the period analyzed or even cash- or stock-financed deals has a substantial importance on the reactions of the market?

Secondly, as demonstrated by Ratcliffe, Dimovski and Keneley (2017), Australian REITs retrieved way better results before the 2008 Great Financial Crisis. During the pre-crisis period, REIT bidders earned positive and significant excess returns while abnormal returns for acquirers whose post-announcement returns extended over the GFC period were negative and highly significant. They draw conclusions that they had enough robust evidence to interpret that the GFC had significantly impacted the variations of the market in the REIT sector. This conclusion leaves us a hint that the same conclusions might be drawn from a future analysis of the impact of the COVID 19 on the real estate M&A market reactions. It might be interesting to test it a few years' time.

Analyzing what happened in the past could in fact help us to deal with it in the future. This was one of the conclusions of Graham (1959) quoting Santayana: "*Those who do not remember the past are condemned to repeat it*".

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I. Appendices

I.A. Appendix 1

Public REITs involved in a merger for the 16-year period from 2001 to 2016.

SAMPLE PORTFOLIO	
Amb Property Corp	Health Care Property Investors Inc
American Campus Communities Inc	Health Care REIT Inc
American Homes 4 Rent	HRPT Properties Trust
American Homes 4 Rent	Independence Realty Trust Inc
American Realty Capital Properties Inc	iStar Financial Inc
American Realty Capital Properties Inc	Kimco Realty Corp
American Realty Capital Properties Inc	Kimco Realty Corp
American Realty Capital Properties Inc	Kimco Realty Corp
American Realty Capital Properties Inc	Kite Realty Group Trust
American Tower Corp	Lexington Corporate Properties
Annaly Capital Management Inc	Liberty Property Trust
Annaly Capital Management Inc	Liberty Property Trust
Apollo Commercial Real Estate Finance Inc	Mid-America Apartment Communities Inc
Apple Hospitality REIT Inc	Mid-America Apartment Communities Inc
ARMOUR Residential REIT Inc	Monmouth Real Estate Investment Corp
BioMed Realty Trust Inc	Omega Healthcare Investors Inc
Brandywine Realty Trust	Pan Pacific Retail Properties Inc
Camden Property Trust	Pennsylvania Real Estate Investment Trust
CBL & Associates Properties Inc	Public Storage Inc
Chambers Street Properties	RAIT Investment Trust
Colonial Properties Trust Inc	Regency Centers Corp
Colony Capital Inc	Select Income REIT
Commercial Net Lease Realty Inc	Simon Property Group Inc
Cornerstone Realty Income Trust Inc	SL Green Realty Corp
Cousins Properties Inc	Starwood Waypoint Residential Trust
Developers Diversified Realty Corp	The GEO Group Inc
Developers Diversified Realty Corp	Ventas Inc
Equity Office Properties Trust	Ventas Inc
Equity One Inc	Ventas Inc
Equity One Inc	Ventas Inc
Essex Property Trust Inc	Ventas Inc
Extra Space Storage Inc	Vornado Realty Trust
Farmland Partners Inc	WP Carey Inc
Global Net Lease Inc	WP Carey Inc
Gramercy Capital Corp	ZAIS Financial Corp

I.B. Appendix 2

Control firms used to form the synthetic benchmark of the Buy-and-Abnormal Returns model.

CONTROL FIRMS
American Realty Investors Inc
Asia Properties Inc
Avalonbay Communities Inc
Boston Properties
BRT Apartments Corps
CBRE Group Inc
Diversified Healthcare TRUST
Duke Realty Corp
Equity Commonwealth
Equity Lifestyle Properties
Equity Residential
Federal Realty Investment Trust
First Real Estate Investment Trust of New Jersey
Intergroup Corp
Investors Real Estate Trust
Iron Moutain Inc
Lexington Realty Trust
Life Storage Inc
LTC Properties Inc
Macerich Co
National Health Investors Inc
New England Realty Associates
Omega Healthcare Investors Inc
One Liberty Properties
PotlatchDeltic Corp
Public Storage
Regency Centers Corp
Saul Centers Inc
St. Joe Company
Tejon Ranch CO
UDR Inc
Universal Health Realty Income Trust
Washington Reeal Estate Investment Trust
Weingarten Realty Investors

Executive summary

Unlike operating companies, acquisitions between Real Estate Investment Trusts (REITs) are friendly and acquirers have been previously found to experience higher than average abnormal returns. This study examines the short- and long-term post-merger performance of American Equity Real Estate Investment Trusts through three different methods: a market model, the Buy-and-Hold Abnormal Returns and the Fama & French Five-Factor model. A subdivision was made to analyze the difference between the public and private acquisitions. We found out that public acquisitions yield better results than private ones. Several reasons have been explored to explain such results. One of them is that the REIT industry comprises a large private market and public companies might have a tendency to overreact if a private opponent extends faster than its peers. We further find that mandatory dividend distribution reduces information asymmetry and in the same way hubris and agency issues that might arise from divergent opinion between managers and shareholders. This is mainly to due to a lower level of cash available for managers of such companies. On the same basis, we further find that due to due to specific legislation, acquisitions are mainly horizontal in the REITs industry, which also reduces information asymmetries and in the same direction agency costs. In contrast, we find that the non-presence of blockholders in this particular industry diminishes the efficiency of the management and consequently has a negative impact on the returns.