

**AN EXAMINATION OF AGENCY COSTS:
THE CASE OF REITs**

A Dissertation

by

DANIEL SCOTT LOWRANCE

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

August 2002

Major Subject: Urban and Regional Science

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ABSTRACT

An Examination of Agency Costs:

The Case of REITs. (August 2002)

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This dissertation provides a comprehensive analysis of shareholder rights plans and mergers and acquisitions (M&A) for a unique class of securities, i.e., the Real Estate Investment Trusts (REITs) between 1988 and 2000. This research seeks to establish what form of management, ownership structure and financial characteristics are exhibited by REITs which adopted antitakeover amendments as well as determine their impact on REIT values and the market for corporate control. While merger and acquisition transactions involving public REITs have much in common with M&A transactions involving other public companies, the role of governance has not been explored in REITs for these transactions. This paper finds that while firm specific variables can differentiate between targets and acquirers, the role of the governance structure appears to be quite limited. In fact, REITs seem to be driven by firm level performance.

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CHAPTER I

INTRODUCTION

Chapter II of this dissertation provides a comprehensive examination of shareholder rights plans and their effect on mergers and acquisitions by Real Estate Investment Trusts between 1988 and 1999. In general, it is found that the adoption of poison pills by REITs is associated with a sizeable decrease in shareholder wealth. Also it is found that the adoption of pills by REITs does not deter takeovers but instead is associated with increased takeover activity. Contrary to a number of previous studies, this study finds that REIT governance structure does not effect pill adoption and that these characteristics have no discernable impact on the wealth affects surrounding pill adoptions but do have an effect on and M&A premia. While this evidence is consistent with maximizing shareholder value in a control contest, it has not been a deterrent to the market for corporate control.

Chapter III then examines the proposition that a competitive market for corporate control effectively limits managerial divergence from shareholder wealth maximization and this implies that corporate takeovers are beneficial to shareholders of both firms involved in the transaction. However, while there is substantial evidence that shareholders of target firms realize large capital gains from these takeovers on average, the evidence on the profitability of takeovers for shareholders of bidder firms is mixed. Studies measuring abnormal stock price behavior around takeover events in the U.S. report average bidder firm performance that ranges from significantly positive to significantly negative. While merger and acquisition

This dissertation follows the style of *Journal of Real Estate Research*.

(M&A) transactions involving public REITs have much in common with M&A transactions involving other public companies, the special tax rules applicable to REITs and other peculiarities tend to complicate REIT transactions. This line of research finds that while firm specific variables can differentiate between targets and acquirers, the role of the governance structure appears to be quite limited. In fact, REITs seem to be driven by firm level performance. This could best be explained by the environment in which REITs operate. Given the distribution requirements of REITs, their ability to undertake mergers which do not maximize shareholder value is more limited. In addition, the division between target and acquirer shareholder announcement day returns generally follows that of corporate announcements of similar events. REIT acquirer returns, however, are less negative when compared to corporate M&As while there is a significantly positive stock price reaction for targets.

CHAPTER II
POISON PILL ADOPTIONS:
THE CASE OF REITs

In this chapter, a comprehensive analysis of shareholder rights plans and mergers and acquisitions is performed for REITs between 1988 and 1999. The paper seeks to establish what form of management, ownership structure and financial characteristics are exhibited by REITs which adopted antitakeover amendments as well as determine their impact on REIT values and the market for corporate control. Poison pills adopted by REITs are of particular interest because of their phenomenal growth, the current trend towards consolidation within the industry, the unique corporate governance structure of these firms including the use of outside advisors, operating partnerships (UPREITs) and the recent increase in institutional ownership. This study finds that REIT performance is the driving force behind pill adoption and that the pill characteristics are associated with the wealth effects surrounding both pill adoption and M&A activity. This research documents a significantly negative stock price reaction associated with poison pill adoptions; the market's negative perception is consistent with the managerial entrenchment hypothesis. However, while pill adoptions have a significant impact on firm value, they do not deter M&A activity and thus do not seem to impede the market for corporate control.

1. Introduction

This study is the first comprehensive examination of the influence of poison pills in the governance and the market for corporate control of a unique set of securities, i.e., Real Estate Investment Trusts, or REITs. Poison pills (also called shareholder rights plans) remain one of the most controversial devices affecting corporate governance. Opponents argue that poison pills insulate managers from the market for corporate control. This view is supported by early evidence, reported by Ryngaert (1988) and Malatesta and Walking (1988), that poison pill adoptions decrease share values. Proponents argue that adoptions of poison pills allow shareholder wealth maximization by enabling managers to extract larger takeover premiums. This is consistent with Comment and Schwert (1995) and Heron and Lie (2000) findings that the presence of a poison pill increases the takeover premium for firms that are acquired without reducing the probability of a takeover occurring. Since pill adoptions in the U. S. require no shareholder approval and have become so prevalent in recent years, Daines (2002) and Coates (2000) argue that all firms can be viewed as having latent poison pills. This third view implies that stock prices do not materially respond to actual pill adoptions.

Even if the average abnormal returns associated with pill adoption are insignificant, cross-sectional differences across firms can exist. Firms use a variety of mechanisms, some more effectively than others, to reduce agency costs and align managerial actions with shareholders' interests. One such mechanism, the use of outside directors on a firm's board of directors, is shown by Brickley, Coles and Terry (1994) to affect the valuation effects of pill adoptions by firms. Another potential mechanism to control agency problems is dividends. The agency cost explanation of cash dividends is that unless profits are paid out

to shareholders as dividends, they may be used by managers for personal use or invested in unprofitable projects that provide them private benefits.¹ This explanation implies that a consistent high dividend payout policy should reduce agency costs and “bind” managers to shareholders, making other monitoring mechanisms less important.²

This study analyzes poison pill adoptions and the takeover activity in equity REITs from 1988 to 2000. REITs are exempt from corporate income taxes but must distribute at least 95 percent of their income as dividends and have other unique characteristics which this research exploits to shed light on some important issues in corporate governance. Since REITs are the primary investment vehicle by which investors can diversify their security portfolios in real estate related assets, their growth has been phenomenal. The number of equity REITs grew from 56 in 1988 to 158 in 2000 and their market capitalization increased from \$6 billion to \$134 billion during the same time period, attracting both individual and institutional investors.³ Yet little is known about how poison pills affect this important segment of the market, especially given that a majority of the traded REITs have adopted poison pills.

There are several other reasons why the adoptions of shareholder rights plans by REITs are of particular interest. First, REITs must pay at least 95 percent of their income as dividends to retain their tax-exempt status.⁴ This allows a question rooted in the agency cost explanation of dividends to be asked— do governance mechanisms like the board and ownership structures have less significant valuation effects on pill adoptions by REITs than by corporations with more discretionary dividend policy? Second, the 1994 Revenue Reconciliation Act redefined share ownership limits in REITs, thereby allowing a much greater institutional ownership in REITs since then. Analyzing pill adoptions by REITs

allows for obtaining further evidence on the effectiveness of institutional investors as monitors. Third, prior to the Tax Reform Act of 1986, REITs were required to hire external advisors who selected independent contractors to manage REIT properties. The 1986 Act clarified that REITs could become internally advised, i.e., could internally decide the selection of independent contractors. Analyzing REITs allows this paper to investigate if an organizational form which allows internalization of certain business functions elicits a different response from the market than one which does not.

Fourth, each REIT charter limits a fraction of voting rights held by a shareholder (the fraction is determined by the REIT by itself). This excess share provision in all REITs' charters, while instituted to insure that REIT ownership remains dispersed, allowing small investors to diversify in real estate assets, is effectively an anti-takeover device.⁵ This study provides evidence whether the existence of this provision influences the market's response to a pill adoption. Fifth, since 1993, REITs have begun to convert ownership structures from down REITs to umbrella partnerships (or UPREITs) with unique tax and cash flow advantages. This greater dispersion in ownership structures in REITs provides an interesting opportunity to determine if such structures can uniquely effect pill adoptions. Sixth, criticizing previous research on poison pills, Daines (2002, page 2) notes that "no study explicitly controls for the pill's invention and its effect in combination with a classified board." Since three-fourth of the REITs in this sample have classified or staggered boards and it is controlled for, these results do not suffer from this criticism. Finally, studies have documented that earlier REITs had high agency cost with management fees often a function of asset size and not performance (Solt and Miller (1985)). By virtue of their corporate governance format and restructured managerial relationships, the fourth generation of REITs

since the early 1990s is assumed to be more accountable to shareholders. The results of this study shed light on this issue as well.

The analysis begins with an examination of the characteristics of poison pills adopted by REITs, and their other anti-takeover devices, versus those adopted by corporate firms. Then, the study details the performance and governance characteristics of REITs that adopt shareholder rights plans relative to a size, structure, and investment focus matched sample. The analysis examines whether the wealth effects surrounding pill adoptions depend upon performance, pill characteristics, governance and partnership structure, or takeover activity. In addition, the study looks at how pills affect the likelihood of defeating a takeover and the wealth effects associated with a takeover. It explores both the role pills play when the REIT is the target of a takeover and whether they institute poison pills before they increase their acquisition activities. Finally, the paper concludes with an analysis of M&A announcements and the market's reaction to them.

The results show that the wave of shareholder rights plans adopted by REITs occurred much later than that by other corporations and the pills are technically very similar. For example, 99% of the pills adopted by REITs are flip-in/flip-over type plans with an average trigger of 15.56%. However, there are some notable differences between REITs and public corporations, including charter provisions for general ownership limits called excess share provisions. Nearly all REITs have this provision in their charter to ensure that investors do not exceed the ownership limit mandated by congress in order to maintain REIT qualification. While these provisions are in place to maintain the tax benefits REITs enjoy, they provide an interesting dimension to the analysis not found in corporate firms.

The findings suggest that a REIT's organizational structure and pill characteristics affect the market's reaction to announcements of pill adoptions. In addition, the paper documents that the reaction is negatively related to the size of the REIT and positively related to its performance in the prior year. However, little evidence is found that governance characteristics play a role in the market's reaction to pill adoptions by REITs. There is some evidence that pill may be adopted as a substitute for ownership.

Overwhelmingly, this study finds the wealth effects surrounding pill adoptions to be negative and statistically significant. In addition, pill characteristics and the advisor structure affect the abnormal returns associated with the pill adoption. The wealth effects associated with the pill adoption are more negative the lower the pill's flip-in trigger and appear to be related to the anti-takeover provision already in place by virtue of the charter. The market's reaction to pill adoptions is also more negative the worse a REIT's prior performance and indifferent to the ownership by executives and directors. The results also show that the board of director structure, presence of a staggered board and number of voting issues has little explanatory power. Furthermore, the market's reaction does not appear to be influenced by whether the CEO is also the chairman of the board. Overall, the evidence suggests that more restrictive pills result in a greater loss in shareholder value upon pill adoption and that the advisor form significantly affects both the likelihood of adopting a pill and the negative impact on shareholders.

This study also finds that pills are adopted prior to an increase in takeover activity. In the full sample, 28% of the pills adopting REITs are targets of a takeover and 70% of the pill adopting REITs targeted other firms for takeover. There was also a surprising lack of

multiple bidders for REITs regardless of their structural, governance, or performance characteristics.

The contribution to the current literature includes the following. First, this paper provides further evidence on the use of shareholder rights plans and their effect on shareholder value for REITs. Poison pills are still useful weapons in a takeover and several recent occurrences have renewed interest in the debate of whether poison pills are beneficial or harmful to shareholders. All of the pills that were adopted by REITs in the late 1980s and early 1990s had ten-year expirations and a number of firms are now debating whether to renew these devices. Second, this paper examines the advisor structure and its affect on the adoption of poison pills. Third, this research provides the first analysis of the umbrella partnership structure and its effect on REIT governance and takeovers. Fourth, this paper documents how the 1993 Revenue Reconciliation Act, and the subsequent increase in institutional ownership, affected the governance characteristics of the fourth generation REITs. Fifth, this research provides evidence on how board independence affects the market's reaction to pill announcements and whether the market for corporate control in REITs has been subverted by the plethora of antitakeover devices both inherent in and recently instituted by REITs. Finally, this paper examines whether a consistent and high dividend payout policy reduces agency costs and helps to align shareholder's and manager's interests thus making other monitoring mechanisms less important.

The study is organized as follows. The institutional environment and structural characteristics of REITs is described in section 2. Section 3 contains a review of the literature on REITs and corporate governance as well as reviews the literature in the area of antitakeover devices. In section 4, the sample selection technique is discussed along with data

collection and research design. Sections 5, 6 7 and 8 present the empirical results and section 9 summarizes the paper.

2. Institutional Environment of REITs

REITs were created by congressional legislation in 1960 as a mutual fund type investment vehicle for individual investors. REITs are limited to investments in real property and the earnings from these investments are “passed through” to REIT shareholders. In order to achieve and maintain REIT status, and the income tax exemption that accompanies it, REITs must operate within the limits of a restrictive institutional environment. REIT qualification consists of three yearly income tests. First, at least 75% of a REITs gross income must come from property rents, interest on property mortgages, gains from the disposition of property, or certain other miscellaneous categories. Second, it must pay out at least 95% of its ordinary taxable income as dividends. Finally, less than 30% of a REIT’s income can come from the disposition of certain short-term assets (REIT Handbook, 1998). In addition, REITs are typically classified by their investment focus as equity, hybrid, or mortgage REITs according to their respective real property or mortgage holdings.⁶

While the original intention of congress in 1960 was to pattern the REIT industry after that of the mutual fund industry by separating the title holders and management, this created a situation in which agency costs were exasperated by the advisor relationship. Prior to 1986, REITs were required to hire an outside advisor who then advised them on and facilitated the hiring of a management company for the REIT and its properties. Advisors frequently had management companies in house that they then advised the REIT to hire. Thus, while the REIT was separated from the management of properties, the structure of REITs was not truly reducing agency costs. In the 1986 Tax Reform Act, congress clarified

its ruling on REIT advisors and that allowed REITs the option of hiring management for their real estate portfolios directly. Thus, after 1986, REITs began moving towards internal advisement and self-management of their properties. This allowed for not only the possibility of reducing agency costs, but also gave REITs better quality control of property management.

In 1993, congress opened the door to institutional investment in REITs with the Revenue Reconciliation Act (RRA). Prior to this act, no more than 50% of a REIT's stock could be owned by five or fewer persons, making it difficult for institutional investors to own sizeable positions in REITs. After the RRA, this 'five or fewer' restriction was lifted which then allowed for large-scale investment by institutions beginning in 1994. This change in the operating environment of REITs allows this research to examine the effect of large-scale institutional investment and whether this change brought on increased monitoring by these investors.

In late 1993, the very first umbrella partnerships, or UPREITS, began to be formed by REITs. With the UPREIT structure, a REIT holds the general partnership interest in an operating limited partnership that directly owns all of the real estate. The limited partnership shares have a convertibility feature that allows their holders to exchange the UPREIT units for common stock in the REIT at a latter date if desired. In addition, the holders of these units generally have to approve any transactions that would constitute a change in control of the REIT. The main factor limiting UPREIT unit conversion lies in the fact that there can be substantial taxable gains in the event of conversion to common stock. The UPREIT structure has steadily increased in popularity since its inception to the point where now over half of all

REITs have the UPREIT structure. This does, of course, provide an interesting dimension to the analysis of REIT ownership structure and its consequences.

3. Previous Research

A REIT is run directly by a board of directors or trustees, which is responsible for raising capital, setting investment policy, and approving recommendations made by an advisor if an advisory contract is in place. REITs may, therefore, be exposed to a greater potential for agency problems due to shirking and prerequisite consumption. The corporate governance literature for U.S. public corporations is both broad and deep. Drawing upon this corporate background and applying it to REITs, this paper seeks to determine whether managers' and shareholders' interests are truly aligned. Various control mechanisms exist that can help align the interests of managers with stockholders or limit the agency costs managers can create. It should be noted, however, that firms use the individual mechanisms in various combinations to control agency costs that are unique to those individual firms (Agrawal and Knoeber, 1996).

A number of empirical studies of U.S. corporations document a positive relationship between managerial stock ownership and firm performance. However, the relationship is not monotonic. Friday and Sirmans (1998) find that there is a positive, nonlinear, relationship between REIT market-to-book ratios and director ownership which provides support for alignment benefits associated with increased director stock ownership. On the other hand, Stulz (1988) showed that relatively high levels of stock ownership by managers can increase conflicts between stockholders and managers by enabling managers to avoid the firm's monitoring mechanisms and external disciplinary forces like the market for corporate control.

The evidence from studies of stock-price reactions to board decisions indicates that the U.S. market tends to view decisions by outsider-dominated boards more favorably than similar decisions by insider-dominated boards. The market appears skeptical that insider-controlled boards are acting in shareholder interests. Brickley, Coles, and Terry (1994) studied 284 pill adoptions by firms between 1984 and 1986 and find that insider majority boards that enacted poison pills had negative market reactions around the announcement date. Furthermore, Cotter, Shivdasani, and Zenner (1997) find that independent outside directors enhance target shareholder gains from tender offers and that boards with a majority of independent directors are more likely to use resistance strategies to enhance shareholder wealth.

In this study, two competing hypotheses for REITs are tested: Management entrenchment hypothesis and the shareholder interest hypothesis. The management entrenchment hypothesis suggests poison pill adoptions entrench incumbent managers retarding monitoring by the market and therefore increasing agency costs. If this is true, stock prices should decline when a poison pill adoption is announced. The shareholder interest hypothesis contends that poison pills are adopted to maximize the price shareholders will receive in change-of-control transactions. This theory holds that management is acting in the shareholders' best interest by using the pill to negotiate a better deal for shareholders. If this is the case, the announcement of a poison pill should exhibit an increase in the stock price.⁷ The "latent pill" hypothesis says that since pill adoptions have become so easy, inexpensive and do not require shareholder approval, all firms can be viewed as having a latent pill. As this effect should already be priced, stock prices will not respond to actual pill adoption announcements.

The market for corporate control suggests that takeovers enhance the efficiency of target firms. For example, Healy, Palepu, and Ruback (1992) find that corporate performance improves after mergers. In addition, this performance is not the result of reductions in capital expenditures. There are, however, potential deterrents to the corrective actions of takeovers but the results of pill adoptions on firm value are mixed. Comment and Schwert (1995) estimated that 87 percent of U.S. exchange-listed firms have some type of antitakeover measure, such as fair-price amendments and poison pills. They presented evidence that antitakeover amendments do not deter takeovers but the amendments are associated with higher takeover premiums. In general, the evidence suggests that poison pills are not solely tools to entrench management or benign devices adopted purely in shareholder interests.⁸

Economic theory suggests that stockholders monitor corporate managers less than the optimal amount. One reason may be that an individual who monitors managers absorbs all the costs of that activity but reaps benefits only in proportion to his or her ownership stake. Based on this line of reasoning, the presence of large block holders should increase the likelihood of monitoring which should then decrease agency costs and increase firm value. The empirical evidence on the effect of large block holders and institutional investors on corporate value is mixed. Bethel, Liebeskind, and Opler (1997) examined block share purchases and found that when activist investors purchase the blocks, observable changes occur in firms' behavior including a rise in divestitures and a fall in mergers. Chan, Leung, and Wang (1998) find that the percentage of institutional holdings of a REIT stock is positively correlated with the performance of the REIT stock. They also find that the trend of institutional investment has increased for REITs since 1990. With strong participation

from institutional investors, it is anticipated that the agency problems prevailing in past generations of REITs will be alleviated in the future.

This study seeks to answer several of the above issues but with regards to REIT corporate governance. Given the unique nature of REITs as having a potential governance mechanism imposed exogenously, it is expected that the results found will be different from those obtained by previous research. This study examines whether these differences, if any, are consistent with an agency cost explanation of dividends and also investigates whether governance characteristics are significantly different between REITs that adopt poison pills and those that do not. Finally, this research seeks to determine whether pill adoptions deter takeovers, impeding the functioning of the market for corporate control, and influence the takeover premia.

4. Research Design and Data Selection

The sample consists of all equity REITs listed on one of the major American exchanges (e.g., NYSE, AMEX, or NASDAQ) that adopted a shareholder rights plan between 1988 and 1999. Prior to 1988, only a handful of shareholder rights plans were issued by REITs and consisted mainly of option style puts which were very different from the current poison pill plans in this sample.⁹ The identification of the sample and the pill adoption announcement date comes from both Dow Jones News Retrieval and Lexis/Nexus searches of press releases for pill announcements by exchange listed REITs. The data consists of 82 REITs that adopted poison pills after the IPO.¹⁰ The first pill in the sample period to be adopted was by Chicago Dock and Canal Trust in late 1988.¹¹ In addition, all merger and acquisitions in which a REIT was involved is collected over the 1987 to 2000 time period for both public and private firms.

For the set of pill adopting equity REITs, a set of control REITs was identified that did not adopt pills and matched them by total assets, UP/Down REIT structure, and investment focus. Year-end total assets from the year prior to the pill adoption announcement is used for the size match and four-digit SIC codes from Compustat are used for the industry match. In addition, SEC filings are used to determine the REIT's partnership structure and investment focus. In those cases where a REIT was involved in a M&A transaction during 1987 to 2000, all available data was collected utilizing Securities Data Corporation Mergers and Acquisitions, SEC filings, and search routines of both Lexis-Nexus and Dow Jones News Retrieval.

Specifically, for all data sets, information is gathered on the governance structure of the REIT from proxy statements filed with the SEC. Governance variables include the size and composition of the board of directors, executive and director ownership, both affiliated and unaffiliated block holders ownership, the partnership structure of the REIT and whether it is internally advised and/or self managed. Also identified in the paper, is whether the firm has multiple classes of voting shares and if the CEO is also the chairman of the board. Furthermore, for the time period 1994 to 1999, data was collected on institutional ownership from Vickers and SNL REIT Quarterly. For director classification, a taxonomy similar to Brickley, Coles, and Terry (1994) is used. Directors who are employed by the firm or who are retired from the firm including members of their immediate families are considered inside directors. Directors with existing or potential business ties to the firm, but who are not full time employees are classified as gray directors. Outside directors are individuals whose only business relationship with the firm is their directorship. This study categorizes block holders as either affiliated or unaffiliated. Affiliated block holders are defined as including

ownership by family trusts, company stock ownership programs, and retirement plans. If an officer of the firm is described in the proxy statement as being an officer or trustee of a block then the block is also included in the affiliated block holder category. Unaffiliated holders are those who have no apparent relationship with management of the firm except in their role as stockholders. Stock price data comes from CRSP and other financial data comes from Compustat and SEC filings.

Year-end information on the financial and performance characteristics of the REITs was collected going back two years before the pill adoption or the M&A event. For all REITs, data was gathered on funds from operations (FFO), FFO growth rate and total revenues defined as interest revenue plus rental revenue, partnership income, and other income. Total revenue is then divided by FFO to get a performance measure for comparison among equity REITs and has become an accepted industry performance measure. For the purposes of defining the investment focus of the REIT, SEC filings are examined to determine the classification of the REIT as reported in the 10-K and quarterly previous to the pill adoption.

For the poison pills, information is gathered on the characteristics of the rights plans from SEC statements including information on the date the board met to adopt the pill, the expiration, flip-in trigger, exercise price and the type of plan (e.g., flip-in vs. flip-over) put in place. Information is also collected on all antitakeover measures already in place for all REITs in the sample including classified boards, multiple classes of voting stock, excess share provision limits, UPREIT status, and the state of incorporation.

Finally, information was gathered on the merger activity associated with all REITs in the pill and match samples and for the industry as a whole from 1987 to 2000. Information is

collected on whether the pill and matched REITs were the targets of a takeover or the acquiring firm in a takeover for one year prior and one year subsequent to the pill adoption announcement. This is an appropriate time period to attribute to the pill. When the pill or matched sample REIT is a target or bidder in a takeover, information is gathered on all firms involved in that takeover, the announcement date, whether there were multiple bidders, if the takeover was completed and all of the governance and performance measures previously discussed. This study includes all M&As whether or not they are subsequently consummated. In addition, this study only includes mergers in which the target has total assets of over \$50 million and is at arm's length. This cutoff point is reasonable and has been used in other REIT studies including Campbell, Ghosh, and Sirmans (2001). News on takeover activity comes from SDC and both Lexis/Nexus and D.J.N.R. searches of press releases. Following previous convention, if the announcement time is less than thirty minutes before the markets close, the announcement day is shifted to the next trading day.

Several studies have documented evidence that changes in the market environment may cause merger outcomes to change during a merger cycle.¹² Following earlier studies, the sample is divided into two groups based on announcement date period and a dummy variable is set to equal one if the announcement falls during 1988 to 1993 and zero otherwise. These breakpoints also serve to divide the sample by major events in the REIT industry including the conversion from external to internal advisement and by REIT generation type. The second time period also represents the start of the 1993 Revenue Reconciliation Act allowing widespread institutional investment and represents the time segment for the fourth generation REITs which were suppose to have lower agency costs. These two time segments also capture the two separate merger waves in the REIT industry for the sample period.

5. Characteristics of REITs Adopting Pills

The analysis begins with an examination of the characteristic of pill adopting REITs and a matched sample of non-pill REITs by studying their univariate characteristics. The hypothesis of interest here is whether performance and governance characteristics will affect a REIT's choice of whether to adopt a shareholder rights plan. It is anticipated that prior performance and governance structure will affect whether a REIT adopts a poison pill. In addition, it is expected the decision to adopt a pill will depend upon whether alternative antitakeover devices are in place such as UPREIT change of control approval requirements or the ability to lower the excess share provision limits in the Articles of Incorporation.

A. Univariate results

Summary statistics of the 82 pill adopting REITs is presented in Table 1 panel A and shows the distribution of pill adoptions, revocations, and amendments across the sample period. This data reveals that REITs have experienced two waves of pill adoptions. The first coincided with the down turn in the real estate market during the late 1980s and the second occurred during the late 1990s and coinciding with a large-scale industry wide consolidation. The amendments also coincided with these merger waves and were cases in which the pill characteristics were modified to lower the flip-in trigger. In the case of pill redemptions, the REITs redeemed their pills and this usually coincided with an approved merger agreement between two REITs. In addition, four REITs IPOed with a pill in place as well as the standard antitakeover measures already in the Articles of Incorporation for the purpose of maintaining REIT qualification. These four REITs are excluded from the first portion of the analysis but are included in the M&A analyses.

Panel B provides summary statistics on the pills, excess share provisions and other REIT characteristics. As can be seen, the UPREIT structure has become quite popular and makes up over half of the pill adopting REIT sample even though it has only been available for half of the sample time period. Over all, almost half of the industry now has a pill in place. As for the pill characteristic, there is a fairly wide dispersion for the flip-in trigger percentage. The trigger is an average of 6.86% more than the excess share trigger already in place to maintain REIT qualification. In addition, all pills have a 10-year life upon adoption as opposed to the varying terms of their corporate counterparts.

Table 2 reports hypothesis tests between the 82 equity REITs in the sample and their matches and provides summary statistics on the governance, partnership structure, and financial characteristics.¹³ Little evidence is found in univariate analysis that governance structure is associated with the adoption of poison pills. However, one indication of an answer may be in the number of institutional investors. While there are a larger number of institutions investing in pill adopting REITs, the concentration ratio within pill adopting REITs is smaller. Ling and Ryngaert (1997) report institutional investment in the REIT market in the 1990s is different from that prior to 1990. The implications are that REITs with less financial analyst attention and thin trading might not enjoy the same level of attention and thus could benefit from the increased monitoring. In addition to this significant difference, the annual return of pill adopting REITs adjusted by the equity NAREIT index is significantly different than the match in non-parametric tests. This could mean pill adopters are poor performers in the market. Pill adopters, on average, exhibit lower ownership by executives and directors and unaffiliated block holders, however, the results are not

significant. This lends some support to Danielson and Karpoff's (1998) finding in which pill adoptions are more often associated with lower percentages of ownership by insiders.

The results on board composition suggest pill adopters are no different than their matches with respect to board composition. This suggests that board structure has minimal affect on the adoption of poison pills by REITs. This is in contrast to the findings of Danielson and Karpoff (1998) who find that poison pills are more likely to be adopted by firms with a larger percentage of outside directors in univariate analysis. While not significant, this study also finds that REITs with higher excess share provision triggers and a larger percentage of multiple classes of stock are more likely to adopt pills.

Table 2 also shows that the structural characteristics between the two samples are insignificant which means a good match was obtained. Total assets, partnership structure and investment focus is similar between the samples. However, the financial characteristics indicate that pill adopting REITs exhibit mixed accounting performance, as measured by FFO (or EPS) growth as well as the performance ratio of FFO/Revenues, for the years previous to the pill.

In general, table 2 provides little evidence in the univariate analysis that governance structure and financial characteristics are associated with the adoption of poison pills. This could be because of the large sample period studied or the structural changes within the industry which occurred during the shift from the third to fourth generation REITs. However, examination of financial and governance differences provide only limited evidence on why REITs institute poison pills.

B. Multivariate logit results

To further examine the importance of firm characteristics associated with shareholder rights provisions, a multivariate logit analysis is performed on the pill adopting REITs and is presented in Table 3. Independent variables representing REIT governance and performance are chosen, as well as, organizational structure. Control variables include a dummy variable for the 1988-1993 time periods and the log of total assets for size differences. Three different models are run in order to show the robustness of the findings and to provide insight on the differences that exist in the likelihood of adopting a rights plan. In all model specifications, the dependent variable for REITs that adopt a poison pill is one, and zero otherwise. All the analyses include the same control variables and organizational structure characteristics. To capture the incremental effects of governance, the second and third models vary these characteristics to discern their effects on the probability of a REIT adopting a pill.

Table 3 presents the results of the logistic regressions and appear to be consistent with many of the univariate tests. The coefficient on the log of total assets is significant for models one and two (p-value .034 and .094) and indicates that size does matter in the choice to adopt poison pills for equity REITs. This provides support for the Comment and Schwert's (1995) finding in which larger firms are more likely to adopt pills due to the fixed costs associated with their adoption. In addition, the financial performance as measured by the market value to total assets is significant and negative in all models. This indicates that the low performing REITs have a higher probability of adopting a pill.

Interestingly, the coefficient estimates on whether the CEO is also the chairman of the board is negative and significant in the first model (p-value .080) and close to significant in

the other models. This indicates that the combination of the CEO and chairman functions is not viewed as increasing the likelihood of adopting a pill. One explanation for this finding could be that the CEO is already sufficiently entrenched. In addition, the greater the fraction of inside directors on the board the more likely a REIT will adopt a pill. This seems to support the entrenchment hypothesis. These findings are contrary to the findings of previous research on corporations.

In addition to the variables above, for all logit models, organizational dummy variables are added which equal one for those REITs which were internally advised (zero otherwise) and one if it is an UPREIT (zero otherwise). While the internal advisement dummy was not significant, the UPREIT structure was negative and significant in the first two models (p-value .062 and .033 respectively). The firm was less likely to adopt a pill if it was an UPREIT. This is consistent with the view that this REIT structure provides managers some degree of protection against takeovers.

For the second model, the analyses included all the previous variables and as well as executive and director stockholdings, affiliated blockholders ownership, institutional ownership and a dummy variable equal to one if the firm had a staggered board. While the previous variables of the first model retained their significance, the additional variables in this model were insignificant. This finding further supports the contention that REIT governance structure may have little effect on the likelihood of pill adoption. Finally, for the third model, all of variables in model two (except affiliated block holder ownership) were included and an interaction variable was added which consisted of an internal advisement dummy times the fraction of inside directors on the board. The results are significant for the interaction variable but the fraction of inside director's coefficient becomes insignificant.

This result indicates that the probability of pill adoption increases when the REIT is internally advised and has a high fraction of inside directors.

6. Pill Adoption Wealth Effects

This study now turns to analyzing the wealth effects associated with the announcements of poison pill adoptions and the variables explaining these effects. Based on previous non-REIT research, it is expected that prior performance and governance structure will effect whether a REIT chooses to adopt a pill and the subsequent impact on shareholder wealth. It is also believed that the decision to adopt a pill will depend on what other antitakeover devises may be in place.

For the event study analysis, abnormal returns are obtained using the market model. The parameters of the market model are estimated using daily returns and a CRSP value-weighted portfolio of returns as a proxy for market returns. This study uses an estimation period from -220 to -31 trading days prior to each shareholder rights plan announcement with day zero being the event date (Brown and Warner 1980, 1985). The estimates of the market model are then used to generate expected returns around the announcement of pill adoptions by REITs. Abnormal returns are defined as the difference between daily returns and expected returns from the market model. Announcements that occurred on a non-trading day or after 3:30 p.m. Eastern, Standard Time were deemed as occurring on the next day trading day.

A. Stock price reaction

To shed further light on the effects of pill adoptions by REITs, Table 4 provides summary statistics for the market's reaction on the event date. This study uses the earliest of the board meeting date or the pill adoption announcement date as the event date. In all cases,

the meeting date coincided with or preceded the announcement date. With the event date being specified as day (0), Panel A reports abnormal returns on plus and minus three days surrounding day (0). For the full sample of REITs, the market's reaction on day (0) has a mean abnormal return of -0.55%, a t-statistic of -2.96 and is significant at .01. A significantly negative reaction is observed on day +1 as well.¹⁴

The event study analysis is consistent with earlier studies by Malatesta and Walking (1988) that examined pill adoption wealth effects and find a negative and significant average market reaction while Ryngaert (1988) finds negative but insignificant reaction. These results suggest that the market views the adoption of poison pills by REITs as an entrenchment tool. Panel B shows the cumulative abnormal returns over various event windows as well as the average dollar impact of the adoption on firm value. A benchmark is provided for comparison and shows that in all cases the mean dollar impact is negative and significant. In fact, the mean dollar value loss ranges from -\$4 million on day (0) to -\$15 million during the (-2,2) interval for REITs with a mean market capitalization of \$577 million as of day (-3).

To further explore the market's reaction to the pill adoption, the sample of 82 equity REIT pill adoptions is divided into pre and post 1994 samples to determine if the valuation effect of pill adoptions has moderated over the sample period. Table 5 provides additional evidence with panel A showing that the negative effect of pills was stronger in the pre-1994 period with a mean abnormal return of -1.27% and t-statistic of -3.32 with significance at .001 level. In addition to the dollar impact being larger in relative terms, the dollar impact of the adoption translates to \$2 million in market value loss for window (-2,2). Results in Panel B on the other hand indicate that pills adopted in the later period of the sample were still

significantly negative but of a smaller magnitude. The mean abnormal return is -0.35% with a t-statistic of -1.70 and significance at 10%. However, the mean dollar impact for window (-2,2) is -\$18 million in mean shareholder value destruction since REITs have become much larger in size. This provides support to the latent pill hypothesis that poison pill adoptions have become more expected over the sample period and are partially priced in the market. In fact, several recent REIT initial public offerings have poison pills in place at the time of the issue.

B. Cross-sectional analysis of abnormal returns

In table 6, the study proceeds with the analysis of governance and firm characteristics by performing a cross-sectional analysis. The regressand for all the models is the abnormal returns associated with day (0), however the results were robust across windows (0,2) and (-2,2). In nearly all nine models, significance is found in the time dummy, total assets and debt to market value of the firm. This finding for total assets is consistent with the logit model and confirms that larger REITs adopt pills more often than their smaller counterparts. The time dummy included in the models captures two effects in this analysis; the reduced effect of pill adoptions over time and the passing of OBRA 1993 which gave institutional investors greater access to the REIT market.

Model one of table 6 consists of only the firm characteristics and shows that time, log of total assets, and the debt to market value variables are all significant (adj. R^2 .1057). To isolate the effects of various characteristics, this analysis now begins to systematically add governance and pill characteristics to provide insight on their effects. Model two adds stock ownership held by insiders of the firm and the model's explanatory power actually worsens (adj. R^2 .0890). The previous coefficients are stable but the variable for insider holdings is

insignificant. Model three includes board of director's variables including the presence of a staggered board, CEO/Chairman combination, multiple voting stock issues, and the fraction of outside directors to the previous model. Once again the model becomes slightly worse and no variable is significant beyond those in model one. The fraction of outside directors, though insignificant, has a negative coefficient. This finding is contrary to the results of Brickley, Coles, and Terry (1994) who find the wealth effects to be positively associated with the percent of outside directors. However, this result may not be surprising in light of the fact that managerial discipline could be provided by a REITs' 95 percent dividend payout and this may have made these other monitoring devices of less use. The insignificance of the staggered board dummy variable's coefficient is inconsistent with Daines' (2002) argument that staggered boards are what make pills potent.

Finally, in model four, pill characteristics are added to model three and include the flip-in trigger percentage and the excess share provision adjusted by the match sample. In this model, all of the pill characteristics become significant and positive while the governance characteristics remain insignificant. The model's adjusted R^2 increases to .3520. The results seem to indicate that the market views more restrictive pills as being less desirable and having a negative effect. In model five, a dummy variable equal to one if the firm is internally advised is added. All of the previous variables remain and the model has an adjusted R-square of .3980 with the coefficient for internal advisement being positive and significant. In all the models so far, the variables representing governance have remained insignificant. This seems to indicate that ownership and board structure do not affect the markets reaction to pill adoption and this finding is unique to REITs.

In order to confirm this finding, model six drops all of the variables with the exception of firm and pill characteristics. The model's overall significance increases further to .4291 with an F-statistic of 7.12. The only variable becoming insignificant is that of the adjusted excess share provision variable. Model seven then tests the robustness of the previous model with respect to the excess share provision adjusted by the match by replacing that one variable with the excess share provision in absolute form and it remains significant as well. In Model eight, the effects of institutional investment are studied by taking model six and adding the total percentage of institutional investment variable. The overall model maintains the significance of model six and the coefficient of institutional investment is positive but not significant. Finally, model nine provides another test of robustness by including all the variables with the exception of unaffiliated block holdings. The full model holds with an adjusted R^2 of .3876 while maintaining the significance and coefficient signs of the variables. However, no significance was found for the institutional variable. It seems institutional investors are passive and invest in REITs for diversification or indexing purposes and are not perceived as effective monitors.

The three characteristics that consistently seem to matter to the market are the firm and pill characteristics along with whether the REIT is internally advised. Since the market generally follows the overall performance of firms, the importance of the firm characteristics makes sense and follows previous findings in corporate finance. The other results that are consistent are that of the advisement structure of REITs and to a lesser degree, the pill trigger percentage. One possibility for the advisement structure being important is the idea that REITs that are externally advised are then pressured to adopt a pill by the external advisor. This advisor has the most to lose in a takeover because the advisory contract would almost

certainly be cancelled after a takeover. Therefore, the advisor has the most to lose in a control contest. As for the pill's flip-in trigger percentage being significant, the more restrictive a trigger percentage is, the less likely the pill will be used for extracting shareholder value.

In general, the wealth effects associated with poison pill adoptions by REITs are significantly negative. The evidence indicates that early pills were more detrimental and over time have may have become somewhat expected. In addition, the findings of the cross-sectional analysis show overwhelming support for the contention that governance structure does not influence the market's reaction when it comes to pill adoption by REITs. This is not surprising since REITs do not have the same discretionary dividend policies as their corporate counterparts but rather have to distribute at least 95% of their income. Therefore, managers do not have the free cash flows available for prerequisite consumption and so the governance structure becomes less important than that of other firms. In general, the results support Jensen's (1986) agency explanation of dividends. At the same time, the market views pill adoptions by REITs as clearly negative and may signal entrenchment by some managers.

7. Merger & Acquisition Activity Surrounding Pill Adoptions

Table 7 provides information on the merger and acquisition activity in the REIT industry over the 1986 to 2000 time period. The table shows the number of targets and acquirers in the industry while also providing information on whether they were covered by a pill. As can be seen from the table, there have been two merger waves in the sample period with the earliest being in the late 1980s and the most recent in the late 1990s. Information is also detailed on the public status of the firm, whether it was a REIT or not and if the merger was consummated. For the purposes of this study, all events are analyzed whether they

completed or not. In addition, only those mergers which involved firms with over 50 million in assets are included. This is done to separate change in REIT control events from simple property level transactions.

The takeover frequency presented in Table 8 shows the occurrence of pill and matched REITs involved M&As. Panel A presents data for those REITs that were the target of an M&A for one month, six month and one year prior and post period to the pill adoption. The findings indicate the comparison for the pill sample for before versus after is highly significant across most of the time segments. This raises the question, are poison pills deterrents or are they simply adopted by REITs that are targets? Panel A shows a significant difference between the prior and post pill sample time period for takeovers in the six-month (p-value .083) and one-year (p-value .001) time frame. This reinforces the idea that poison pills adopted by REITs are not a deterrent to takeovers.

Panel B presents data on REIT M&As in which there were multiple bidders for a target. Interestingly, the pill sample only contained one such event and the match contained none. While there is not enough data to make extrapolations, it is certainly interesting to note the virtual absence of competitive bidding in the REIT market for corporate control.

In Panel C, the table shows the frequency of REITs in the pill and matched sample that are bidders in a takeover. The data indicates that pill adopting REITs become bidders less frequently compared to the matched sample. In addition, after adopting a pill, REITs become statistically indistinguishable from the matched sample. In general, REITs do not appear to adopt pills prior to becoming active acquirers.

Table 9 reports the results of an event study analysis of the mergers and acquisition announcements in the REIT industry. Two separate portfolios are created which consist of

23 targets and 57 acquirers across a (-3,3) day period with the announcement event date being day (0). Panel A reports the mean abnormal return on day (0) to be positive 3.39% (p-value .001) and shows the dollar impact of the announcement across several windows with all of them being significantly positive. Panel B of table 9 provides data on acquirers and shows a significantly negative impact across all cumulative abnormal return intervals and ranges from -0.67% to -2.12%. In addition, the mean market value of both targets and acquirers is reported and shows that acquirers are almost three times larger than the targets. The results of M&A announcement by REITs follow those of corporate announcements. In fact, REITs appear to exhibit the same wealth effects as those reported by Jensen and Ruback (1986) but of a smaller magnitude.

8. Market Merger & Acquisition Value Impact

To better understand the impact of pill adoptions for both targets and bidders, Table 10 presents further evidence of the impact of these devices on merger and acquisition activity in the REIT industry across three separate windows including (0,0), (0,2) and (-2,2). Panel A. presents the CARs associated with M&As both before and after the adoption of a pill and compares it to the targets in the matched sample. While the sample size is small for comparisons before pill adoptions, the data clearly shows a positive abnormal return associated with M&A announcements after pills are adopted when compared to the matched sample. This finding supports the hypothesis that pill are used to extract shareholder value in a merger. In addition, panel B presents data in which REITs are acquirers. This panel shows the CARs to be positive for pill adopting REITs after they that take a pill when compared to the matches for the same period and are statistically significant when compared to the match sample. This reinforces the hypothesis that REITs may take pills before becoming active

acquirers and could be done in order to insulate the firm from becoming a target in a merger of equals.

Next, the paper shows the dollar impact associated with poison pill adoptions for both the pill and matched samples. Table 11 provides information on the dollar value change in the market value of takeover activity in millions before and after the adoption date of poison pills. Panel A examines the dollar value impact of M&As on REITs that were targets of takeover attempts for both pill adopting REITs and their matches for dates preceding and following the pill adoption date and is calculated as of the first definitive announcement of a takeover. This table shows that, in percent terms, pill adopting REITs gained more value than their matches. In fact, the matches actually lost value after the matching time segment. While the sample size is not large enough for clear inferences, the implications are still apparent and indicate that pills may be useful in the REIT industry as a negotiating device.

Panel B shows the dollar value of M&As impact on REITs that were bidding on other firms for both pill adopting REITs and their matches for dates preceding and following the adoption date. This panel provides evidence that acquirers who adopt a pill tend to exhibit smaller negative effects than that of the match sample in the pre-pill period. In addition, while acquirers in general, have negative returns in the REIT industry, those with pills actually show positive dollar value impacts.

Finally, Table 12 shows the total M&A dollar value impact change from announcement day to completion date for takeover activity involving pill adopting REITs and their matches. Panel A examines the dollar value impact of M&As on REITs that were targets of takeover attempts for both pill adopting REITs and their matches for dates before and after the pill adoption date and is calculated over a window from the first definitive announcement to the

date the M&A was either completed or withdrawn. The most interesting results are given by the total dollar gain, in percentage terms, after the pill adoption and indicate a mean increase of 26.80% compared to their matches which actually lost value. Unfortunately, while the results are intriguing, the sample size once again precludes testable hypotheses.

On the other hand, panel B has a somewhat larger sample and symmetrical characteristics which allow for closer examination of the dollar value impact of M&As on REITs that were acquirers in a takeover attempt. This panel provides similar information to panel A but does not show the large percentage gains. In fact, the effect of pill adoption actually decreases the gain to acquire ring firms. This result could be due to the inverse relationship between the two panels or simply because of the sample distributions.

8. Summary

Poison pills remain one of the most controversial devices affecting corporate governance. This study provides a comprehensive examination of shareholder rights plans and their effect on mergers and acquisitions by Real Estate Investment Trusts between 1987 and 2000. In general, it is found that the adoption of poison pills by REITs is associated with a sizeable decrease in shareholder wealth. This provides additional support to studies such as Malatesta and Walking (1988) and Ryngaert (1988) which find the adoption of poison pills is associated with a negative effect on shareholder wealth. Also it is found that the adoption of pills by REITs does not deter takeovers but instead is associated with increased takeover activity. Contrary to a number of previous studies, this study finds that REIT governance structure does not effect pill adoption and that these characteristics have no discernable impact on the wealth effects surrounding pill adoptions. While this evidence is consistent with maximizing shareholder value in a control contest, it has not been a deterrent to the

market for corporate control. These results are explained by the unique exogenously imposed high payout policy of REITs. The results support the agency cost explanation of dividends. Indeed the overall findings are consistent with the view that monitoring mechanisms are endogenous to the firm. Firms adapt their discretionary mechanisms to their exogenously imposed circumstance.

Notes

¹ See Easterbrook (1984) and Jensen (1986). Other explanations of dividend payouts are related to taxes, signaling, transaction costs, tradition, etc.

² La Porta, Lopez-de-Silanes, Shleifer and Vishny (1997) support the agency explanation of dividends by analyzing 4,000 firms from 33 countries.

³ This information is from the website of the National Association of Real Estate Investment Trusts (NAREIT) at www.nareit.com/research and statistics.

⁴ See Brueggeman and Fisher (1997) for REIT tax rules. Starting 2001, the distribution requirements are only 90 percent of taxable income.

⁵ In order to maintain REIT qualification, REITs have excess share provisions restricting the amount of equity owned by any one individual or entity. In the event this excess share provision percentage is exceeded, then any stock held over the limit will be held in trust for future transferees with the voting rights suspended until such time. This study was able to confirm the existence of these provisions in all but one of the very earliest pill adopting REITs.

⁶ To be considered an equity REIT, at least 75 percent of the REIT's investment portfolio must consist of income producing property. Mortgage REITs are at the opposite end of the investment portfolio with at least 75 percent of their assets in mortgage instruments while hybrid REITs fall in-between.

⁷ For a more detailed discussion of the shareholder interest and managerial entrenchment hypothesis see Ryngaert (1988) and Malatesta and Walking (1988).

⁸ See Danielson and Karpoff (1998) and Comment and Schwert (1995) for a more thorough discussion of different antitakeover devices and their history.

⁹ See McIntosh (1991) for an examination of these put style options for a 1985-89 sample of 3rd generation REITs.

¹⁰ The initial sample consisted of 84 pill adoptions and 2 were dropped due to concurrent M&A announcements and thus event contamination.

¹¹ One of the earliest pills adopted in the sample (1988) was an option style pill similar to those adopted by corporations in the early 1980s.

¹² See Bradley, Desai, and Kim (1988) and Maloney, McCormick, and Mithchel (1993).

¹³ The analyses included both parametric and nonparametric tests (Kruskal-Wallis) in all the univariate tests and the results were similar.

¹⁴ The results are robust to different estimation periods

CHAPTER III
MERGERS AND ACQUISITIONS WITHIN
REAL ESTATE INVESTMENT TRUSTS

The proposition that a competitive market for corporate control effectively limits managerial divergence from shareholder wealth maximization implies that corporate takeovers are beneficial to shareholders of both firms involved in the transaction. However, while there is substantial evidence that on average shareholders of target firms realize large capital gains from these takeovers, the evidence on the profitability of takeovers for shareholders of bidder firms is mixed. Studies measuring abnormal stock price behavior around takeover events in the U.S. report average bidder firm performance that ranges from significantly positive to significantly negative. While merger and acquisition (M&A) transactions involving public REITs have much in common with M&A transactions involving other public companies, the special tax rules applicable to REITs and other peculiarities tend to complicate REIT transactions.

1. Introduction

The proposition that a competitive market for corporate control effectively limits managerial divergence from shareholder wealth maximization implies that corporate takeovers are beneficial to shareholders of both firms involved in the transaction. However, while there is substantial evidence that on average shareholders of target firms realize large capital gains from these takeovers, the evidence on the profitability of takeovers for shareholders of bidder firms is mixed. Studies measuring abnormal stock price behavior around takeover events in the U.S. report average bidder firm performance that ranges from significantly positive to significantly negative. While merger and acquisition (M&A) transactions involving public REITs have much in common with M&A transactions involving other public companies, the special tax rules applicable to REITs and other peculiarities tend to complicate REIT transactions.

There are two opposing hypotheses concerning the relationship between inside ownership and firm value. The convergence of interest hypothesis contends that as inside ownership increases, insiders bear a larger proportion of the costs associated with non-value maximizing behavior.¹ Therefore, there is a direct relationship between inside ownership and firm value. However, the entrenchment hypothesis posits an indirect relationship between inside ownership and firm value. This theory puts forth the idea that inside manager's consumption increases as their organizational control increases and they become more difficult to replace.² Empirical testing of these two hypotheses on a sample of REIT M&As is the main thrust of this research.

2. REITs Defined

REITs are essentially closed-end investment companies that provide a passive medium for investors to invest in income producing real estate properties and income.³ The REIT organizational form was created through legislation in 1960 providing tax exemptions for qualified REITs. Like stock and bond closed-end funds, REITs are a passive conduit for the income they earn. Thus, qualification as a REIT provides the benefit of avoiding double taxation on distributions to shareholders and also prevents accumulation of earnings and profits.

A REIT is defined as a corporation that invests principally in real estate and/or mortgages and elects a special tax treatment as a REIT. To qualify for the tax treatment, a REIT must meet several organizational, income and asset tests including:

- A. For a corporation, trust or association to be considered as a REIT for any tax year, it must elect to be a REIT or must have made the election in a previous tax year.
- B. A REIT must be managed by one or more trustees or directors, prove its beneficial ownership by transferable shares, be taxable as a domestic corporation, not be a financial institution or insurance company, and not be closely held.
- C. For REITs during the years 1980 to year end 2000, at least 95 percent of taxable income must be distributed to REIT shareholders each year. The REIT Modernization Act (RMA, 1999) will return the REIT distribution requirement from 95% to the 90% level currently applicable to mutual funds and that applied to REITs from 1960 to year end 1979.⁴

- D. Prior to the Omnibus Reconciliation Act of 1993 (OBRA, 1993), the number of beneficial owners must typically exceed one hundred, with the five largest shareholders owning no more than 50% of the outstanding shares. However, after OBRA 1993 this ‘five or fewer’ ownership constraint imposed on REITs was lifted.

In addition to the above, REITs must also meet a three fold income test aimed at making sure that income is derived primarily from passive real estate investments:

- E. Prior to RMA 1999, at least 95 percent of gross income must be derived from sources such as dividends, interest, rent from real property, gains from the sale of stock and real property, and income foreclosure property. In addition, REITs are prohibited from owning more than 10% of the voting securities of another company and those securities may not exceed 5% of the value of the REIT’s total assets. After December 31, 2000, Taxable REIT Subsidiaries (TRS) were established which are not subject to the 10% vote or value rule.⁵ REITs are not entitled to the dividends received deduction (IRC, Section 857(b)(2)(A)).
- F. At least 75 percent of gross income must be derived from sources such as rent from real property, interest on mortgages, dividends from other qualified REITs, income from the sale of real property, and other related sources.
- G. Less than 30 percent of gross income may be received from the sale of stock or securities held for less than one year, property in prohibited transactions, and real property held for less than four years.

The National Association of Real Estate Investment Trusts (NAREIT) classifies REITs as equity, hybrid or mortgage REITs according to their respective holdings of real property, or mortgage instruments. To be considered an equity REIT, at least 75 percent of the REIT's investment portfolio must consist of income-producing real property. Mortgage REITs lie at the opposite end of the investment spectrum with at least 75 percent of their assets consisting of mortgage instruments while hybrid REITs fall in between mortgage and equity REIT investment portfolios. In addition, NAREIT further defines REITs by the type of advisor system that they operate under. Self-administered REITs are those with a professional internal management team while advisor REITs are those which have an external management company which hires managers and other personnel for day to day operations.

Currently, there are several competing hypotheses concerning REIT governance structure. Insufficient information is available for REITs to properly evaluate various methods for maximizing shareholder wealth and there is a need for decision-makers to adequately understand how differing structures and agency control mechanisms will impact their shareholders. Management wants to know how shareholders will react to changes in corporate structure and control while understanding the costs and benefits of various structures before adopting them is also important. In addition, decision-makers have an obligation to render decisions that are in the best interest of the shareholders.

The hypothesis of concern here is that a REIT's board structure effects the market's reaction to merger and acquisition announcements. It is believed that REITs governed by independent boards are controlling agency costs within the firm. There has not been any literature in the area of REITs that identifies how governance structure effects mergers and

acquisitions within the industry. This study hopes to address this problem in a comprehensive manner.

The principal objective of this research is to compare the performance of various REIT governance structures during and after mergers and acquisitions. The issues of agency costs, market reaction, and shareholder value will be empirically addressed. Furthermore, this analysis will provide insight into several conflicting hypotheses addressing the impact of firm ownership structure on REIT value during mergers and acquisitions.

3. Significance of Research

From the literature, it appears that there is little information pertaining to the specific corporate governance mechanisms, board structure and their impact on REIT mergers and acquisitions. This research will provide information that should contribute to a better understanding of the costs and benefits to stockholders of various agency control mechanisms. Since the recent changes in REIT legislation, it is an appropriate point in time to look at how agency control mechanisms have impacted shareholder wealth and how the new forth generation REITs have performed.

This research seeks to provide insight on REIT structural policies that can be used to reduce agency costs and increase shareholder wealth. In addition, this research will provide a measure by which it can be determined whether REITs have reduced agency costs via various managerial alignment mechanisms including compensation structures and governance structures.

4. Literature Review

While the finance literature for merger and acquisition studies is both deep and broad, a base for REIT M&As has yet to be formed in terms of corporate structure. Thus, this study

will pull from the finance literature and make adjustments for the structural differences of REITs. A number of theories have been put forth to explain why value-maximizing firms might engage in merger or acquisition activities. These theories suggest that improving target managerial efficiency, undervalued target shares, and agency costs, enhancing market power, and tax considerations are all possible motives for the growing trend in REIT M&As.

In 1995, Cannon and Vogt examined self-administered and advisor REITs and found that self-administered outperformed advisor REITs over the sample period even after adjusting for greater market risk. Capozza and Seguin (1998) extended this line of research and studied externally advised REITs. They found evidence that advisor REITs may be motivated to have more debt than self-advised REITs and use it to over-invest in assets to the detriment of shareholder value. Glascock and Ghosh (2000) examined the changes that have occurred in the REIT industry over the 1990s and in particular the move from external to internal advisement. They found that by 1999 there were only 29 externally advised REITs but 139 self-advised REITs. This move from external to internal advisement is consistent with agency cost reductions in the industry.

Although REIT growth and industry consolidation is generally viewed by some as inevitable, relatively few studies of the benefits of REIT consolidation exist. In one of the few studies to examine this issue, Bers and Springer (1998) focus on potential sources for economies of scale and find evidence for scale economies in the reduction of general and administrative expenses and management fees. However, Ambrose, Ehrlich, Hughes, and Wachter (2000) studied potential forms of signals through organizational structure and their impact on value and find no size economies, that branding in real estate is allusive, and that geographic specialization has no significant benefit. They provide evidence that REITs

should concentrate on operational efficiencies and not attempt to provide diversification or other portfolio benefits to investors. This line of reasoning is also put forth by Rainman (1999) who argues “that REITs that seek to merely grow in size will ultimately deter shareholder value.”

Vogel (1997) discusses some of the facts that may inhibit the future scale of REITs and points out that it is possible for economies of scale to decrease when the size of a firm gets too large. However, Liang and Yang (2000) examine the economies of scale of equity REITs and find support for the concavity of the cost function which indicates economies of scale within the industry.

Recently tax motives have been put forth as possible reasons for REIT M&As. Li and Elayan (1999) study the tax motive and find that the market’s reaction is consistent with this hypothesis. However, they contradict a portion of Capozza and Seguin and find that bidders with external management advisors are associated with higher abnormal returns relative to self-managed REITs. Pierzak (1999) extended Li and Elayan by examining the method of payment choice in equity REIT property acquisitions and in particular the use of operating partnership units. The empirical findings of Pierzak further supported the tax motive hypotheses.

The conflict of interest between owners and managers, characterized as the separation of ownership from control by Berle and Means (1932), is usually put in a value-enhancing context. This leads to the competing goals of owners and manager and may lead to misalignment of interests and less than optimal share price performance. Fama and Jensen (1983) argued that independent boards are more likely to make decisions consistent with shareholder-wealth maximization. These results corroborate evidence presented by Brickley,

Coles, and Terry (1994) who find that poison pills adopted by independent boards are associated with a more favorable stock-price reaction than are poison pills adopted by non-independent boards. In addition, Sundarsanam, Holl and Salami (1996) find that the effects of ownership structure significantly impact shareholder returns in a non-REITs sample. They also find evidence to support the hypothesis that large shareholdings decrease returns to both the bidder and target shareholders, but some results are time invariant.

Song and Walking (1993) examined targets with lower managerial ownership than either their industry counterparts or randomly selected non-targets and found managerial ownership is significantly related to abnormal returns in contested cases that are ultimately successful. These results are consistent with the positive impact of managerial ownership where it is used to negotiate a merger or acquisition. Song and Walking's results were further substantiated by Cotter, Shivdasani, and Zenner (1997) who examined a non-REIT sample and the role of the target firm's independent outside directors during takeover attempts by tender offer. They found that when the target's board is independent, the initial tender premium and target shareholder's gains over the entire period are greater.

In another non-REIT sample, Shinn (1999) investigates the extent to which the wealth effects of acquisition activity undertaken by firms are related to the ownership and wealth characteristics of both the executives and the board of directors. Evidence is presented that both the ownership of management and the concentration of large outside block holders appear to contribute to the alignment of executives and shareholder's interests.

Huang and Walking (1987) studied the abnormal returns earned by target firms at the time of initial acquisition announcements to test if they are related to the form of payment, degree of resistance, and type of offer. The results indicated that interdependence among

these characteristics is important. Allen and Sirmans (1987) used capital market data to measure the effects of REIT mergers on the wealth of the acquiring trust's shareholders and found a significant increase in shareholder wealth. The primary source of the value gain seemed to be improved management of the acquired trust's assets however they were unable to confirm a tax motive for the combination. Allen and Sirmans findings are consistent with Jensen and Ruback (1983) who reported that acquiring firms experience a 4% gain in tender offers and no gain in voluntary mergers. In comparison, target firms shareholders have averaged gains of 30% and 20% respectively.

McIntosh, Officer, and Born (1989) used a small sample of REITs to study the announcement of M&As and the effect on target shareholder wealth. They confirmed that the event is associated with a positive and significant increase in shareholder wealth. In addition, there is weak evidence that bids made by other REITs are greeted more positively by targets than are bids made by non-REITs. In a more recent paper, Taylor and Paolone (1997) used a small sample of REIT M&As to examine the market's reaction to the form of payment. They find that balance-sheet neutral transactions tend to produce stronger share-price performance. Evans and Kolbe (2000) examined the stochastic process of REIT merger activity in the 1980s and 1990s and conclude a random walk model for the annual time series of acquired REITs.

Schwert (2000) examines hostile bids and finds that they can not be distinguished from friendly takeovers. In addition, there is evidence to support both the hypotheses of target management's entrenchment and the bargaining strategy of management as explanations for the perception of hostility in takeovers.

Cambell, Ghosh, and Sirmans (1998) found reason to doubt that a sweeping consolidation in REITs had begun. Negative returns for most acquirers, comparatively low returns for most acquired firms, and the absence of effective hostile takeovers led them to suspect that there may be systematic structural problems in the market for corporate control among REITs. Einhorn (2000) confirms Cambell, Ghosh, and Sirman's suspicions with a review of the conflicts of interest that can occur in REITs. They find that due to their various structural forms and the unique defenses available in the case of a forced M&A, hostile takeovers are extremely rare in REITs. In an M&A study with 1994-1998 REITs, Cambell, Ghosh and Sirmans (2001) find that there is evidence that stock-financed merger announcements involving public targets produce negative stock price reactions in acquiring REITs, positive effects in the targets, and positive reactions in public acquirers targeting private firms. In addition, these returns are much less negative than returns observed for stock-financed non-REIT mergers and are similar to returns in cash-financed non-REIT mergers.

In a 1984 non-REIT study by Hasbrouck, an attempt was made to assess differences in the financial characteristics of targets and non-target firms using q ratios and it was found that financial leverage measures were not significant. Palepu (1986) points out several methodological flaws in past takeover prediction studies and after correcting for the flaws, it is found that prediction is difficult with public data. Ambrose and Megginson (1992) extended Palepu's acquisition likelihood model by incorporating measures of insider and institutional shareholders to increase prediction and found the only governance characteristics that are significant are changes in institutional holdings. In a latter study, Crawford and Lechner (1996) use a two-stage model to predict mergers in non-REITs and

found that the acquisition premium is a nonmonotonic function of attributes that make the firm an attractive acquisition target.

The paper is organized as follows. First, the data set and selected sources for obtaining the data will be described. This will be followed by the nature of the methodology. Then, empirical analyses including univariate and cross sectional models will be detailed. Finally, the paper will finish with the conclusions on REIT agency costs.

5. Methodology

A. The Data

The relationship between a REIT's ownership structure and merger and acquisitions news is evaluated by determining the market's reaction to the announcement of the event. For this analysis, an initial sample of REITs is obtained from the SDC Mergers & Acquisitions Database for the years 1994 through 2000 and identified as targets or acquirers. This study only includes arm's length transactions and those which were subsequently completed.⁶ Furthermore, mergers in which the target has less than \$50 million in total assets are excluded in order to separate M&As from property level acquisitions.

The time segment was chosen based on several factors. There were no arm's length transactions during the period 1989 through 1993 and only three from 1986 to 1988. These three pre-1990 mergers represented an earlier (third) generation of REITs in which agency costs were well documented. In addition, prior to OBRA 1993, the number of beneficial owners must exceed one hundred, with the five largest shareholders owning no more than 50% of the outstanding shares. However, after OBRA 1993 this 'five or fewer' ownership constraint imposed on REITs was lifted. The year end 2000 cut point for the sample was selected because of the passing of the 1999 REIT Modernization Act. This act became

effective December 31, 2000 and provided for some structural changes to the industry including the annual distribution requirement being lowered from 95% to 90% thus allowing for additional cash reserves.

Information about merger announcements is obtained from public press releases using Dow Jones News Retrieval and Lexis-Nexis. The announcement day is shifted to the next trading day when press releases are after 3:30 P.M. and the analysis uses the first definitive announcement to the market. As is the case for studies of this type, only definitive announcements of actual agreements are used for event study purposes.

Once the population of REIT M&As was collected, those with financial data available on Compustat, CRSP files, and EDGAR SEC files were retained. This procedure yields 156 events during the 1994-2000 time period. In 70 of those events, the target is public and in 22 cases the target is privately held. As for acquirers, 86 of the events involved public REITs and 6 acquirers were private. Structural characteristics are then collected for the resulting group of REITs including NAREIT classification, UPREIT status, and total assets. Table 14 provides a summary of the merger and acquisition activity in the REIT industry during the sample period and some characteristic of the REITs involved.

Then, comprehensive governance characteristics are obtained including stock ownership by executives and directors, identification of combination CEO/Chairman, presence of a staggered board, and a board of director taxonomy similar to that of Brickley, Coles and Terry (1994) including inside, outside and gray director affiliation. Stock ownership data is also collected for both beneficial and institutional owners as well as financial data as of the year-end previous to the M&A including total debt, funds from operations, revenues, market value of equity, and relative performance.

B. Research Methodology

To estimate the response associated with the announcement, an event study methodology as examined by Brown and Warner (1985) is employed using the market model approach to characterize stock returns. OLS estimates of the parameters for each stock are obtained using daily returns from day -220 through day -31 where day (0) is the announcement day.

The announcement window begins -15 days before the first announcement appears in either Lexis-Nexis or Dow Jones News Retrieval and continues until 15 days after the announcement using different coverage periods. The effect of the announcement abnormal returns are examined across several windows including one-day (Day 0), three-day (Days 0,2) and five day (Days -2,2) intervals to capture the effects (t_{-2}, t_0, t_{+2}) where t_0 is the trading day in which the announcement occurs. The coefficients from the market model are used to calculate the announcement period abnormal return for each security i ($AR_{i,t}$). The abnormal returns are then averaged across firms for each day t to get the average abnormal returns (AAR_t). The AAR_t are summed over different intervals to obtain the CAR for those intervals.

If the capital markets are efficient, and if shareholders of a REIT bidding firm perceive that a merger will be beneficial to them, the stock price of the bidding firm will react positively at the announcement date. If shareholders perceive an alternative motivation by management such as simply growing asset control to the detriment of shareholders, the market reaction will be negative.

6. Univariate Analyses

Table 13, panel A provides a summary of the merger and acquisition activity in the REIT industry during the sample period and provides the NAREIT classification of the

REITs in the sample. In the sample, there are 70 public targets and 86 public acquirers. In addition, there are 27 transactions involving a non REIT and 29 involving private REITs. This study will focus primarily on public REITs. Panel B shows a breakdown by investment focus for both the targets and acquirers in a merger. As can be seen, there is few mortgage or hybrid REITs in the sample. There are so few, in fact, that it precludes separate analyses on these firms.

In Table 14, univariate analyses have been produced to summarize and differentiate the characteristics of targets and acquirers. While governance characteristics are very similar between the two samples, the financial performance differentiates the two groups. Nearly all of the performance variables are significant and they clearly indicate that targets are poor performers. In addition, the total asset size is significantly different between the two groups. However, these results were expected based on the previous literature and characteristics inherent in the groups.

Table 15 presents the CARs for the two separate portfolios consisting of public targets and public acquirers. Panel A provides the daily returns over the (-3,3) day period for all public REIT M&A targets. Panel B provides the daily returns over the (-3,3) day period for all public REIT M&A acquirers. In addition, abnormal return intervals are provided for both panels which detail the mean dollar value impact over the various windows. The results are consistent with the previous literature in that the targets have significantly positive abnormal returns over the announcement period while acquirers have significantly negative abnormal returns over the announcement period. In fact, the target's abnormal return is 3.39% with a t-statistic of 7.62 on day (0). The acquirer's return, however, is significantly negative over a wider window period and represents a cumulative drop of -1.40% over the

(0,2) window. This seems to indicate that the market is either slower to access the impact on the acquirer or the announcement date is not as sharp for acquirers.

7. Multivariate Analyses

In this section, two separate models are developed to explain the cross-sectional variation of the abnormal returns based on the two REIT portfolios developed. In all models, the regressand is the cumulative abnormal return windows associated with the market model value weighted index on day (0) and day (0,2). Independent variables include structural, governance, and firm performance characteristics.

The first models in Panel A of Table 16 consist of public targets that are targeted by public acquirers. Model one and two show the targeted REIT's specific characteristics and indicate that all are significant. In models two and three, governance characteristics are added in order to test whether insider ownership has an effect on REIT takeovers. As can be seen, although insider holdings are insignificant, the beneficial block holdings are negative and significant (p-value .034 and .024 respectively). This finding could indicate that block holders exert pressure on management in a control contest.

Finally, models five and six show the full model and add board of director specific variables. While model six shows an increase in adjusted R^2 , model five shows a decrease. In fact, in this cross-section, the variable for block holders is the only significant variable beyond those of the firm characteristics. This could be because in an M&A transaction, the market is more concerned with a corrective action to remove poor performing managers and thus indicating the market for corporate control is working efficiently.

The second group of models in Panel B of Table 4 consists of public acquirers that are targeting public targets. In panel B, the same cross-sectional analyses are performed with the exception of replacing the fraction of inside directors with that of outsiders. This was done to show the significance of outside directors in acquiring firms.

For acquiring REITs, the model one and two are similar but weaker than that of Panel A. The coefficient has changed signs for the debt to market value variable and it is significant at .001. This shows that the acquiring firms are run more efficiently than targets. Model three and four adds insider stock holdings and beneficial block holdings. This has very little effect on the model but insider holdings are close to significance. Model five and six add variables on board structure and institutional holdings. Here, the coefficient for the fraction of outside directors is significant at .032. This seems to indicate that outsiders play a more important role in acquiring firms.

6. Summary

While previous research has put forth that a competitive market for corporate control effectively limits managerial divergence from shareholder wealth maximization, this previous research implies that corporate takeovers are beneficial to shareholders of both firms involved in the transaction. However, while there is substantial evidence that on average shareholders of target firms realize large capital gains from these takeovers, the evidence on the profitability of takeovers for shareholders of bidder firms is mixed. Studies measuring abnormal stock price behavior around takeover events in the U.S. report average bidder firm performance that ranges from significantly positive to significantly negative. While merger and acquisition transactions involving public REITs have much in common

with M&A transactions involving other public companies, the role of governance has not been explored in REITs for these transactions. This paper finds that while firm specific variables can differentiate between targets and acquirers, the role of the governance structure appears to be quite limited. In fact, REITs seem to be driven by firm level performance. In addition, the division between target and acquirer shareholder announcement day returns generally follows that of corporate announcements of similar events. REIT acquirer returns, however, are less negative when compared to corporate M&As while there is a significantly positive stock price reaction for targets. This could best be explained by the environment in which REITs operate. Given the dividend distribution requirements of REITs, their ability to undertake mergers which do not maximize shareholder value are more limited.

Endnotes

¹ Jensen and Meckling (1976) argue that as inside ownership increases, insiders interests converge with those of outside shareholders and their propensity to pursue non-value maximizing behavior declines.

² Fama and Jensen (1983) point out those managers with significant holdings can engage in non-value maximizing behavior with less fear of dismissal.

³ For a description of the qualifying provisions for a REIT, see Internal Revenue Code, Sections 856-858.

⁴ Sections 541-71 of Pub. L. No. 106-170, the Ticket to Work and Work Incentives Improvement Act of 1999. See H.R. Rep. No 478, 106th Cong., 1st Sess. 175-81 (1999); S. Rep. No. 201, 106th Cong., 1st Sess. 55-65 (1999). These provisions are substantially similar to the sections of the Taxpayer Refund and Relief Act of 1999, which President Clinton vetoed on September 23, 1999. See H.R. Rep. No. 289, 106th Cong., Sess. 375-80, 518-20 and 534-35 (1999). For more background information, see the Government Relations section of www.nareit.com.

⁵ The RMA will prohibit a REIT from owning (at the end of each quarter) more than 10% of the vote or value of the securities of a non-REIT C corporation. However, there will be four exceptions to this prohibition: 1) the 10% rule does not apply to any TRS securities. 2) the 10% test will not apply to “straight debt” securities a REIT owns in another corporation. 3) the 10% test will not apply to mortgages from a REIT to its TRS. 4) the 10% test will not apply to certain arrangements in place on July 12, 1999.

⁶ See Bradley 1980.

CHAPTER IV

CONCLUSIONS

The first part of this study provided a comprehensive examination of shareholder rights plans and their effect on mergers and acquisitions by Real Estate Investment Trusts between 1988 and 1999. In general, it is found that the adoption of poison pills by REITs is associated with a sizeable decrease in shareholder wealth. Also it is found that the adoption of pills by REITs does not deter takeovers but instead is associated with increased takeover activity. Contrary to a number of previous studies, this research finds that governance structure does not effect pill adoption and that these characteristics have no discernable impact on the wealth affects surrounding pill adoptions. These results are not surprising for REITs which are required to payout 95% of their income in dividends. High dividends are a well accepted devise to reduce agency problems and as such reduce the importance of other governance devises like ownership and board structure. This research finds that poison pills have not been a deterrent to the market for corporate control.

Chapter III then examined the proposition that a competitive market for corporate control effectively limits managerial divergence from shareholder wealth maximization and this implies that corporate takeovers are beneficial to shareholders of both firms involved in the transaction. However, while there is substantial evidence that shareholders of target firms realize large gains from these takeovers on average, the evidence on the profitability of takeovers for shareholders of bidder firms is mixed. Studies measuring abnormal stock price behavior around takeover events in the U.S. report average bidder firm performance that ranges from significantly positive to significantly negative. While merger and acquisition

(M&A) transactions involving public REITs have much in common with M&A transactions involving other public companies, the special tax rules applicable to REITs and other peculiarities tend to complicate REIT transactions. This paper found that while firm specific variables can differentiate between targets and acquirers, the role of the governance structure appears to be quite limited. In fact, REITs seem to be driven by firm level performance. In addition, the division between target and acquirer shareholder announcement day returns generally follows that of corporate announcements of similar events. REIT acquirer returns, however, are less negative when compared to corporate M&As while there is a significantly positive stock price reaction for targets. This could best be explained by the environment in which REITs operate. Given the dividend distribution requirements of REITs, their ability to undertake mergers that do not maximize shareholder value is more limited.

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APPENDIX A
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TABLE 1
Summary Statistics

Poison pill adoption frequency and characteristics for all equity REITs during the years 1988 to 1999. Panel A identifies the number of REITs that adopted poison pills using the meeting date and provides the underlying distribution across years. In addition, all REIT IPOs with pills, revision announcements and redemptions or expirations are identified during the sample period. The poison pill sample consists of 82 REITs that adopted poison pills after the IPO. Panel B summarizes the information on the structure of the shareholders rights plan adopted in panel A and includes only those equity REITs that adopted pills after the IPO. Data on the shareholder rights plans comes from SEC filings, D.J.N.R. and Lexis-Nexis covering the period 1988 to 1999.

PANEL A.
Distribution of Poison Pill Adoptions

YEAR	Pill Adoption Date	Pill Amendments	Pill Redemptions or Expirations ¹	REIT IPOs w/ Pills
1988	2	0	0	0
1989	9	0	0	0
1990	7	1	0	0
1991	0	0	0	0
1992	0	0	1	0
1993	0	0	0	0
1994	3	0	1	2
1995	0	0	0	0
1996	3	0	1	1
1997	8	0	0	1
1998	35	1	2	0
1999	19	0	0	0
TOTAL	82	2	5	4

PANEL B.
Anti-takeover Characteristics Summary

ANTI-TAKEOVER CHARACTERISTICS:<i>N=82</i>	MEAN	MEDIAN	STD	MIN	MAX
Number of years until pill expirations ²	9.16	10.0	2.33	0.005	10.00
Fraction of REITs with flip-over plans ³	98.78%				
Flip-in percentage for the rights plan	15.56%	15.00%	5.48%	10.00%	50.00%
Average adjusted exercise price	\$76.89	\$70.50	\$34.80	\$14.00	\$200.00
Fraction of REITs with excess share provisions	100.00%				
Excess share provision trigger	8.70%	9.80%	1.75%	4.00%	9.99%
REITs with classified boards	55				
Total UP-REITs	48				
Number of different states of incorporation	17				

¹ Redemptions typically occurred when a merger took place between two REITs with poison pills. The two REITs then redeemed one of the pills in the process of merging. Expirations occurred when the poison pill reached its ten-year life.

² All pills in the sample had a ten-year life upon adoption. The numbers in this row pertain to their remaining life as of 12/31/99.

³ One of the earliest pills adopted in the sample (1988) was an option style pill similar to those adopted by corporations in the early 1980s.

TABLE 2
Equity REIT Univariate Analysis

Comparison of financial performance and governance characteristics for equity REITs adopting a poison pill and a matched sample of REITs without pills. REITs are matched by SIC code, year-end total assets, UP/Down REIT structure status and investment focus according to the National Association of Real Estate Investment Trusts (NAREIT)¹. Control REITs are identified by COMPUSTAT and SEC filings. Data on the shareholder rights plans comes from SEC filings, D.J.N.R. and Lexis-Nexis covering the period 1988 to 1999. The sample consists of 82 equity REITs that adopted poison pills after the IPO. The t-statistic (p-value) is for a difference of means test between the pill and matched samples.

	<i>Mean for poison pill sample</i>	<i>Mean for matched sample</i>	<i>t-statistic (p-value) for differences</i>
Structural Characteristics:			
Total assets (\$millions)	973.48	901.76	-0.23 (.816)
Debt/total assets	43.82%	46.67%	0.75 (.454)
Debt/market value	38.21%	40.44%	0.57 (.303)
Up/Down REITs	48/34	48/34	N/A
Performance Characteristics:			
Market value of equity (\$millions)	534.83	549.61	0.11 (.914)
Prior year end return on equity ²	10.52%	13.80%	0.72 (.474)
Prior year end return on equity relative to NAREIT equity index	1.65%	5.14%	1.04 (.302) ^a
Market value/total assets	1.13	1.20	1.54 (.127)
FFO growth rate 1 year prior	13.07%	8.62%	-0.28 (.783)
FFO/Revenue (2 years prior)	46.52%	48.89%	0.29 (.773)
FFO/Revenue (1 year prior)	47.13	42.82%	-0.66 (.520)
Governance Characteristics:			
Board size	7.79	7.53	-0.68 (.498)
Internally advised	86.59%	83.58%	-0.51 (.613)
Self managed	79.27%	70.59%	-1.21 (.228)
Percentage of outside directors	48.09%	47.07%	-0.38 (.708)
Percentage of inside directors	36.48%	35.01%	-0.77 (.442)
Fraction of REITs with majority of outside directors	38.75%	41.79%	0.37 (.711)
Excess share provision trigger percentage	8.70%	8.14%	-1.51 (.133)
Fraction of firms with multiple voting classes	6.10%	2.94%	-0.94 (.350)
Fraction of REITs where CEO holds the title of Chairman of the Board	48.78%	59.70%	1.33 (.185)
Staggered Board of Directors	68.75%	62.69%	-0.77 (.445)
Stock ownership by executives and directors	6.78%	7.70%	0.30 (.764)
Stock ownership by affiliated block holders	2.28%	3.45%	0.84 (.401)
Stock ownership by unaffiliated block holders	15.71%	18.09%	0.85 (.399)
Total number of institutional investors ³	75.90	61.60	-1.84 (.069) ^a
Institutional investment by top five investors ³	25.47%	22.57%	-1.17 (.246)
Total of all institutional stock holding ³	48.84%	42.86%	-1.47 (.146)

****, ***, **, * indicate significance at the .001, .01, .05, and .10 levels respectively.

¹ All 1987 to 1998 public REITs were identified via SIC code and then three matching criteria were systematically applied according to the following process. First, starting in 1987, each REIT was matched by year-end total assets. Next, the structure of the match was compared to the pill adopting REIT and if they were the same, the process continued on to the next criteria and checked the investment focus. In those cases where the structure was not a match, the matching process then examined the next closest total asset match and checked its structure until a match was found. A strict 20% cutoff was applied to this process. If the investment focus, the third criteria, was not a match, the entire process was started again using the same 20% total asset cutoff. For all UPREITs (N=48) and Down (N=34), all three criteria were matched successfully.

² In those cases where a REIT did not have one full year of data in which to generate the return on equity, the data available was annualized.

³ Institutional stock information was available during 1994-1999 and represents a total of N=64 REITs for each of the pill and matched samples.

^a Non-parametric Kruskal-Wallis tests were run on all comparisons and in those cases where it was significant at a 10% alpha it is foot noted.

TABLE 3
Logistic Analysis

Logistic regressions of the probability of equity REITs adopting a poison pill. Dependent variable is one for REITs that adopted a poison pill and zero for the matched sample. Firms are matched by SIC code, total assets, and UP/Down REIT status. Independent variables capture firm performance and governance characteristics. Control REITs are identified by COMPUSTAT and SEC filings. Data on the shareholder rights plans comes from SEC filings, D.J.N.R. and Lexis-Nexis covering the period 1988 to 1999. The full sample consists of 82 REITs that adopted poison pills after the IPO.

<u>DATA DESCRIPTION:</u>	Data Set: 1988-1999 (N=82) Includes all equity REITs		
<i>Model Specification Number:</i>	(1)	(2)	(3)
Dependent Variables:	Dependent variable equals 1 for pill REITs and 0 otherwise		
Explanatory Variables:			
Constant	-5.281 (.101)	-3.960 (.280)	-0.402 (.916)
Time dummy variable equals 1 if: 1 st time segment 1988-93	0.328 (.670)	0.022 (.979)	0.545 (.492)
Log of total assets	1.186 (.034)**	1.096 (.094)*	0.643 (.266)
Performance Variables:			
Market value/total assets	-1.984 (.024)**	-2.535 (.010)***	-2.246 (.026)**
Governance Characteristics:			
Dummy variable equal to one if CEO is also the chairman of the board	-0.661 (.080)*	-0.621 (.123)	-0.613 (.116)
Fraction of inside directors on board of directors	3.606 (.052)*	3.778 (.055)*	-5.672 (.286)
Percentage of stock held by executives and directors	—————	-1.442 (.493)	-1.756 (.389)
Percent of stock held by affiliated block holders	—————	-2.143 (.374)	—————
Dummy variable equal to one if the firm has a staggered board of directors	—————	0.443 (.313)	0.187 (.660)
Institutional ownership percentage ²	—————	1.171 (.295)	1.293 (.244)
Organizational Structure:			
Dummy variable equal to one if the firm is structured as an UPREIT	-1.053 (.062)*	-1.352 (.033)**	-0.706 (.217)
Dummy variable equal to one if internally advised	1.001 (.133)	0.480 (.535)	-2.663 (.219)
Internally advised x fraction of inside directors on board of directors	—————	—————	11.093 (.055)*
Number of Observations	137	130	136
Log-likelihood	-84.19 ^{1%}	-77.28 ^{5%}	-81.84 ^{5%}

****, ***, **, * indicate significance at the .001, .01, .05, and .10 levels respectively.

¹ This time segment represents two events during the sample period. First, the change in REIT regulation that allowed large scale investment in REITs by institutions and second, the effect of pill adoptions through time.

² Prior to the Omnibus Reconciliation Act of 1993 (OBRA, 1993), the number of beneficial owners must typically exceed one hundred, with the five largest shareholders owning no more than 50% of the outstanding shares of a REIT. However, after OBRA 1993, this “five or fewer” ownership constraint imposed on REITs was lifted and opened the door to institutional investment. Therefore, institutional investment data is available for all post 1993 REITs and unaffiliated ownership (block holders) is used as a proxy for institutional ownership for pre 1993 REITs.

TABLE 4
Equity REIT Pill Adoption CAR Analysis

Cumulative abnormal returns associated with the adoption of poison pills by equity REITs during the period 1988 to 1999 using the first date available which includes either the meeting date or announcement date¹. Panel A provides the daily returns over the (-3,+3) period on which panel B is based. Panel B presents the abnormal returns surrounding the pill adoption date. Summary statistics regarding the event date and various windows are provided for the panels and all CAR windows. CARs are obtained using Eventus and CRSP with a value weighted index market model estimated over a -220 to -31 period². The sample consists of 82 equity REITs that adopted poison pills after the IPO.

Panel A.
Daily Average Abnormal Returns Using the First Date Available

Day	Mean Abnormal Return	Median Abnormal Return	t-statistic for mean abnormal return = 0	Positive: Negative	Z-statistic for generalized sign test
-3	0.12%	0.07%	0.64	44:38	1.00
-2	-0.40%	-0.14%	-2.14 ^{5%}	35:47	-0.99
-1	-0.01%	0.03%	0.08	41:41	0.34
0	-0.55%	-0.14%	-2.96 ^{1%}	36:46	-0.77
+1	-0.39%	-0.10%	-2.12 ^{5%}	34:48	-1.21
+2	-0.27%	-0.14%	-1.43	35:47	-0.99
+3	0.02%	0.02%	0.11	42:40	0.56

Panel B.
CAR Windows Using the First Date Available

N = 82		Mean Market Value @ Day -3			\$577,213,434	
Abnormal Return Interval	Mean Cumulative Abnormal Return	Median Cumulative Abnormal Return	t-statistic for mean CAR = 0	Positive: Negative	Mean Dollar Value Impact (\$ Value Δ)	Z-statistic for generalized sign test
(0,0)	-0.55%	-0.13%	-2.96 ^{1%}	36:46	-\$4,454,091	-0.77
(0,1)	-0.94%	-0.16%	-3.59 ^{01%}	37:45	-\$9,198,787	-0.55
(0,2)	-1.20%	-0.33%	-3.76 ^{1%}	31:51	-\$10,990,123	-1.87 ^{10%}
(-1,1)	-0.92%	0.15%	-2.89 ^{1%}	37:45	-\$10,466,184	-0.55
(-2,2)	-1.59%	-0.63%	-3.49 ^{01%}	35:47	-\$15,201,819	-0.99
(-3,3)	-1.45%	-0.44%	-2.95 ^{5%}	38:44	-\$14,678,782	-0.33

^{1%}, ^{5%}, and ^{10%} indicate significance at the 1%, 5%, and 10% levels, respectively.

¹ Extensive event study analyses and tests were performed using event date segmentations and combinations including announcement dates, pill meeting dates, SEC filing dates, and the SEC record dates. All combinations produced similar results with the first date available to the market producing the most theoretically correct and highest significance across CAR windows. See Brown and Warner (1980,1985) for a more detailed description of event methodologies and tests.

² Tests were ran using various estimation periods up to one year and the results and significance were consistent across all periods.

TABLE 5
Pill Adoption CAR Segmentation Analysis

Cumulative abnormal returns associated with the adoption of poison pills for two portfolios of equity REITs segmented based on the REIT generation type, institutional investment, and merger waves in the REIT industry during the period 1988 to 1999 using the meeting date¹. Panel A consists of all pill adopting equity REITs during 1988-1993 (N=18)². Panel B consists of all pill adopting equity REITs during 1994-1999 (N=64)³. CARs are obtained using Eventus and CRSP with a value weighted index market model estimated over a -220 to -31 period. The total sample consists of 82 REITs that adopted poison pills after the IPO.

Panel A.

1988-1993 Daily Average Abnormal Returns for Equity Pill adopting REITs

Day	Mean Abnormal Return	Median Abnormal Return	t-statistic for mean abnormal return = 0	Positive: Negative	Z-statistic for generalized sign test	
-3	-0.35%	-0.06%	-0.91	7:11	-0.67	
-2	0.09%	0.26%	0.24	10:8	0.75	
-1	0.54%	0.58%	1.43	12:6	1.69 ^{10%}	
0	-1.27%	0.05%	-3.32 ^{1%}	10:8	0.75	
+1	-1.00%	-0.02%	-2.62 ^{1%}	8:10	-0.20	
+2	-0.42%	0.05%	-1.10	9:9	0.27	
+3	-0.08%	-0.06%	-0.21	8:10	-0.20	
N = 18		Mean Market Value @ Day -3		\$159,022,410		
Abnormal Return Interval	Mean Cumulative Abnormal Return	Median Cumulative Abnormal Return	t-statistic for mean CAR = 0	Positive: Negative	Mean Dollar Value Impact (\$ Value Δ)	Z-statistic for generalized sign test
(0,0)	-1.26%	0.05%	-3.32 ^{.01%}	10:08	-\$1,371,535	0.75
(0,1)	-2.26%	-0.03%	-4.21 ^{.01%}	08:10	-\$2,710,299	-0.20
(0,2)	-2.68%	-0.15%	-4.07 ^{.01%}	07:11	-\$2,667,431	-0.67
(-2,2)	-2.05%	0.76%	-2.41 ^{5%}	12:06	-\$2,115,340	1.69 ^{10%}
(-3,3)	-2.48%	0.24%	-2.46 ^{10%}	10:08	-\$3,239,188	0.75

Panel B.

1994-1999 Daily Average Abnormal Returns for Equity Pill adopting REITs

Day	Mean Abnormal Return	Median Abnormal Return	t-statistic for mean abnormal return = 0	Positive: Negative	Z-statistic for generalized sign test	
-3	0.25%	0.12%	1.22	37:27	1.49	
-2	-0.53%	-0.26%	-2.61 ^{1%}	25:39	-1.51	
-1	0.13%	-0.17%	-0.65	29:35	-0.51	
0	-0.35%	-0.23%	-1.70 ^{10%}	26:38	-1.26	
+1	-0.22%	-0.19%	-1.09	26:38	-1.26	
+2	-0.22%	-0.17%	-1.08	26:38	-1.26	
+3	0.05%	0.07%	0.24	34:30	0.74	
N = 64		Mean Market Value @ Day -3		\$694,829,659		
Abnormal Return Interval	Mean Cumulative Abnormal Return	Median Cumulative Abnormal Return	t-statistic for mean CAR = 0	Positive: Negative	Mean Dollar Value Impact (\$ Value Δ)	Z-statistic for generalized sign test
(0,0)	-0.34%	-0.22%	-1.70 ^{10%}	26:38	-\$5,321,060	-1.26
(0,1)	-0.57%	-0.23%	-1.97 ^{5%}	29:35	-\$9,400,052	-0.51
(0,2)	-0.79%	-0.48%	-2.23 ^{5%}	24:40	-\$11,023,674	-1.76 ^{10%}
(-2,2)	-1.46%	-0.90%	-3.19 ^{1%}	23:41	-\$18,882,391	-2.01 ^{10%}
(-3,3)	-1.16%	-0.53%	-2.14 ^{10%}	28:36	-\$17,897,449	-0.76

^{1%}, ^{5%}, and ^{10%} indicate significance at the 1%, 5%, and 10% levels, respectively.

¹ Extensive event study analyses and tests were performed using event date segmentations and combinations including announcement dates, pill meeting dates, SEC filing dates, and the SEC record dates. All combinations produced similar results with the first date available to the market producing the most theoretically correct and highest significance across CAR windows. See Brown and Warner (1980,1985) for a more detailed description of event methodologies and tests.

² The pre-1993 cut represents the third generation REITs, the earliest merger cycle in the sample, and before large scale institutional investment was allowed by the 1993 Revenue Reconciliation Act.

³ Post-1994 REITs represent fourth generation REITs, the second merger wave (N=92), and the time that allowed institutional investment.

TABLE 6
Cross-Sectional Analysis

Cross-sectional analysis of abnormal returns following the adoption of a poison pill by REITs. The dependent variable is the cumulative abnormal returns associated with the first date available and is calculated over different windows using the market model value weighted method. Independent variables include control variables, governance characteristics, anti-takeover characteristics, and organizational structure. Data on the shareholder rights plans comes from SEC filings, D.J.N.R. and Lexis-Nexis covering the period 1988 to 1999. The sample consists of 82 equity REITs that adopted poison pills after the IPO.

DATA DESCRIPTION:	Full Data Set: 1988-1999 Includes all Equity REITs (N=82)								
<i>Model Specification Number:</i>	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Dependent Variable (CAR Windows):	(0,0)	(0,0)	(0,0)	(0,0)	(0,0)	(0,0)	(0,0)	(0,0)	(0,0)
Firm Characteristics									
Time dummy variable equals one if 1988-93 ¹	-0.018 (.023)	-0.020 (.031)	-0.020 (.033)	-0.077 (.000)	-0.075 (.000)	-0.065 (.000)	-0.038 (.001)	-0.062 (.000)	-0.066 (.000)
Log of total assets	-0.003 (.022)	-0.003 (.082)	-0.004 (.149)	-0.013 (.016)	-0.019 (.002)	-0.020 (.000)	-0.013 (.007)	-0.021 (.000)	-0.020 (.003)
Return in year prior to the pill ²	0.017 (.185)	0.018 (.209)	0.015 (.316)	0.049 (.008)	0.045 (.010)	0.038 (.012)	0.032 (.039)	0.036 (.020)	0.037 (.028)
Debt/Market Value of firm	0.035 (.060)	0.036 (.083)	0.038 (.075)	0.064 (.009)	0.065 (.006)	0.057 (.009)	0.041 (.047)	0.060 (.008)	0.072 (.004)
Governance Characteristics:									
Percentage of stock held by executives and directors	—	-0.002 (.958)	-0.014 (.735)	-0.025 (.573)	-0.036 (.406)	—	—	—	-0.041 (.359)
Affiliated block holders	—	-0.041 (.376)	-0.035 (.479)	-0.012 (.845)	-0.036 (.550)	—	—	—	-0.048 (.431)
Unaffiliated block holders	—	-0.009 (.640)	-0.004 (.856)	-0.027 (.253)	-0.026 (.243)	—	—	—	—
Staggered Board	—	—	0.011 (.132)	-0.001 (.920)	-0.005 (.608)	—	—	—	-0.004 (.672)
Dummy variable equal to one if CEO is also the chairman of the board	—	—	-0.001 (.911)	0.004 (.625)	0.006 (.340)	—	—	—	0.006 (.382)
Fraction of outside directors on board	—	—	-0.009 (.690)	-0.030 (.299)	-0.035 (.207)	—	—	—	-0.043 (.122)
Dummy variable equals one if multiple voting stock issues	—	—	0.017 (.227)	0.005 (.818)	0.015 (.600)	—	—	—	0.010 (.634)
Total percentage of institutional investors ³	—	—	—	—	—	—	—	0.010 (.563)	0.015 (.426)
Anti-takeover Characteristics:									
Flip-in trigger percentage for the rights plan	—	—	—	0.462 (.029)	0.499 (.016)	0.404 (.022)	0.129 (.402)	0.415 (.020)	0.451 (.024)
Excess share provision trigger percentage relative to match sample	—	—	—	0.200 (.096)	0.173 (.136)	0.141 (.177)	—	0.146 (.167)	0.149 (.194)
Excess share trigger ⁴	—	—	—	—	—	—	0.137 (.424)	—	—
Organizational Structure:									
Dummy variable equals one if internally advised	—	—	—	—	0.034 (.043)	0.029 (.058)	0.024 (.066)	0.029 (.063)	0.034 (.041)
Number of Observations	76	73	73	57	57	57	64	57	57
Adjusted R ²	.1057	.0890	.0815	.3520	.3980	.4291	.2322	.4214	.3876
F-statistic	3.25 (.017)	2.02 (.066)	1.59 (.124)	3.38 (.001)	3.69 (.001)	7.12 (.000)	3.77 (.002)	6.19 (.000)	3.58 (.001)

¹ This time segment represents two events in the sample. First, the change in REIT regulation that allowed large scale investment in REITs by institutional investment and second, the effect of pill adoption through time.

² Models were run with a NAREIT equity index adjusted annual return and the results were consistent.

³ Prior to the Omnibus Reconciliation Act of 1993 the number of beneficial owners must typically exceed one hundred, with the five largest shareholders owning no more than 50% of the outstanding shares of a REIT. However, after OBRA 1993, this "five or fewer" ownership constraint imposed on REITs was lifted and opened the door to institutional investment. Therefore, institutional investment data is available for all post 1993 REITs and we used unaffiliated ownership (block holders) as a proxy for institutional ownership for pre 1993 REITs.

⁴ This particular model was run to show a comparison to the match adjusted excess return and to test the robustness of the model.

TABLE 7
REIT M&A Distribution

This table presents details on the underlying distribution of all mergers and acquisitions in the REIT industry from 1986 to 2000 and whether the REITs had a poison pill at the time. The M&As are divided into targets or acquirers and further segregated by whether the entity was public or private. The sample consists of 95 announcements of an arm's length M&A transaction in which a REIT is involved using the first definitive announcement date available to the market.¹ Data on M&As comes from SEC filings, D.J.N.R. and Lexis-Nexis covering the period 1986 to 2000.

Distribution of Mergers and Acquisitions by Type

N=95 YEAR	TARGET Announcement Dates			ACQUIROR Announcement Dates			Total Unsuccessful bidders			M&As involving a non-REIT	Total Completed M&As
	Public Target	Private Target	N/A	Public Acquirer	Private Acquirer	N/A	Public Bidder	Private Bidder	N/A		
Poison PILL	Yes	No	N/A	Yes	No	N/A	Yes	No	N/A	N/A	N/A
1986	0	1	0	0	1	0	0	0	0	0	1
1987	0	1	0	0	1	0	0	0	0	0	1
1988	0	1	0	0	1	0	0	0	0	0	1
1989	0	0	0	0	0	0	0	0	0	0	0
1990	0	0	0	0	0	0	0	0	0	0	0
1991	0	0	0	0	0	0	0	0	0	0	0
1992	0	0	0	0	0	0	0	0	0	0	0
1993	0	0	0	0	0	0	0	0	0	0	0
1994	0	5	2	1	5	1	0	0	0	2	7
1995	1	5	1	1	5	1	0	0	0	2	7
1996	2	10	1	0	12	1	0	4	0	2	13
1997	3	11	6	1	19	0	0	5	1	6	20
1998	8	10	12	9	19	2	0	1	0	12	30
1999	5	4	1	5	5	0	0	1	0	2	10
2000	0	5	0	0	4	1	0	0	0	1	5
TOTAL	19	54	22	17	72	6	0	11	1	27	95

¹ This analysis includes all arms-length M&A attempts in which the target has over 50 million dollars in total assets. In addition, those announcements that occurred less than 15 minutes prior to the close of the market were shifted to the next trading day.

TABLE 8
Takeover Frequency

Takeover activity frequency surrounding the adoption of poison pills by REITs.¹ Panel A shows the total number and percentage of the full sample of pill adopting REITs and their matches that were the target of at least one takeover attempt both before and after the pill adoption. Panel B shows the total and percentage of the pill and matched REITs that were the target of multiple takeover attempts both before and after the pill adoption. Panel C examines the frequency of pill adopting REITs and their matches involved as bidders in at least one takeover attempt of another firm. The frequency of takeover activity in all panels is examined for one month, six months and one year both before and after the pill adoption board meeting date. The sample consists of 82 REITs that adopted poison pills before the IPO and a total of 86 REITs that had pills afterwards². Data on shareholder rights plans and mergers and acquisitions comes from SEC filings, D.J.N.R., Lexis-Nexis and SDC Mergers and Acquisitions covering the period 1987 to 2000. A difference of means test and t-statistic (p-value) are provided.

PANEL A.

Occurrence of pill and match REITs involved as a target in at least one takeover attempt

Single Bidder	Before Pill Adoption (N=82)		T-test (p-value)	After Pill Adoption (N=86)		T-test (p-value)	T-test (p-value)	T-test (p-value)
	Pill	Match	Before	Pill	Match	After	Pills	Matches
One month prior/post	0 (0.00%)	1 (1.22%)	-1.00 (.319)	1 (1.16%)	1 (1.16%)	0.00	-0.98 (.330)	0.34 (.973)
Six Months prior/post	0 (0.00%)	1 (1.22%)	-1.00 (.319)	4 (4.65%)	3 (3.49%)	0.38 (.702)	-1.99 (.048)**	-0.96 (.338)
One year prior/post	0 (0.00%)	3 (3.66%)	-1.75 (.083)*	6 (6.98%)	4 (4.65%)	0.65 (.517)	-2.47 (.015)**	-1.31 (.193)

PANEL B.

Occurrence of pill and match REITs involved as a target in takeovers with multiple bidders

Multiple Bidders	Before Pill Adoption (N=82)		T-test (p-value)	After Pill Adoption (N=86)		T-test (p-value)	T-test (p-value)	T-test (p-value)
	Pill	Match	Before	Pill	Match	After	Pills	Matches
One month prior/post	0 (0.00%)	0 (0.00%)	0.00	0 (0.00%)	0 (0.00%)	0.00	0.00	0.00
Six Months prior/post	1 (1.22%)	0 (0.00%)	1.00 (.319)	0 (0.00%)	0 (0.00%)	0.00	1.02 (.307)	0.00
One year prior/post	1 (1.22%)	0 (0.00%)	1.00 (.319)	0 (0.00%)	0 (0.00%)	0.00	1.02 (.307)	0.00

PANEL C.

Occurrence of pill and match REITs involved as a bidder in at least one takeover attempt

Number (Frequency)	Before Pill Adoption (N=82)		T-test (p-value)	After Pill Adoption (N=86)		T-test (p-value)	T-test (p-value)	T-test (p-value)
	Pill	Match	Before	Pill	Match	After	Pills	Matches
One month prior/post	0 (0.00%)	2 (2.44%)	-1.42 (.157)	1 (1.16%)	1 (1.16%)	0.00	-0.98 (.330)	0.62 (.535)
Six Months prior/post	1 (1.22%)	6 (7.32%)	-1.94 (.054)*	2 (2.33%)	4 (4.65%)	-0.83 (.409)	-0.54 (.591)	0.73 (.468)
One year prior/post	4 (4.88%)	9 (10.98%)	-1.45 (.150)	4 (4.65%)	7 (8.14%)	-0.93 (.353)	0.07 (.945)	0.62 (.534)

****, ***, **, * indicate significance at the .001, .01, .05, and .10 levels respectively.

¹ The takeover frequency analysis includes all arms-length M&A attempts in which the target has over 50 million dollars in total assets.

² 82 REITs adopted pills after IPOing and 4 REITs IPOed with a pill for a total of 86 in the post pill adoption analysis. For statistical accuracy, those 4 REITs and their matches were only included in the post pill adoption analysis.

TABLE 9
M&A CAR Analysis

Cumulative abnormal returns associated with the announcement of an arm's length merger and acquisition in which a REIT is involved during 1988 to 1999 using the first definitive announcement date available to the market in which a target has over 50 million in total assets¹. Panel A provides the daily returns over the -3,+3 day period for all public REIT M&A targets in both the pill and matched samples (N=23). Panel B provides the daily returns over the -3,+3 day period for all public REIT M&A acquirers in both the pill and matched samples (N=57). Data on M&As comes from SDC Mergers & Acquisitions, SEC filings, D.J.N.R. and Lexis-Nexis. CARs are obtained using Eventus and CRSP with a value weighted index market model estimated over a 220 to -31 period².

Panel A.

Daily Average Abnormal Returns for all Public REIT Targets in a M&A

Day	Mean Abnormal Return	Median Abnormal Return	t-statistic for mean abnormal return	Positive: Negative	Z-statistic for generalized sign test	
-3	0.22%	0.00%	0.50	10:09	0.68	
-2	0.02%	-0.05%	0.04	08:11	-0.24	
-1	0.05%	-0.15%	0.10	08:11	-0.24	
0	3.39%	3.89%	7.62 ^{.1%}	15:04	2.99 ^{1%}	
+1	0.41%	0.67%	0.93	12:07	1.61	
+2	0.48%	-0.23%	1.09	09:10	0.22	
+3	-0.29%	-0.37%	-0.65	07:12	-0.70	
N = 23		Mean Market Value @ Day -3		\$402,713,421		
Abnormal Return Interval	Mean Cumulative Abnormal Return	Median Cumulative Abnormal Return	t-statistic for mean CAR = 0	Positive: Negative	Mean Dollar Value Impact (\$ Value Δ)	Z-statistic for generalized sign test
(0,1)	3.80%	5.27%	6.09 ^{.1%}	16:03	\$6,786,617	3.45 ^{.1%}
(0,2)	4.29%	5.36%	5.56 ^{.1%}	15:04	\$6,383,448	2.99 ^{1%}
(-2,2)	4.35%	4.62%	4.37 ^{.1%}	14:05	\$10,157,008	2.53 ^{5%}
(-3,3)	4.28%	3.37%	3.64 ^{.1%}	15:04	\$12,289,973	2.99 ^{1%}

Panel B.

Daily Average Abnormal Returns for all Public REIT Acquirers in a M&A

Day	Mean Abnormal Return	Median Abnormal Return	t-statistic for mean abnormal return	Positive: Negative	Z-statistic for generalized sign test	
-3	-0.13%	-0.25%	-0.67	26:36	-0.76	
-2	-0.29%	-0.19%	-1.46	23:39	-1.52	
-1	-0.01%	-0.10%	-0.05	26:36	-0.76	
0	-0.17%	-0.63%	-0.87	26:35	-0.64	
+1	-0.50%	-0.34%	-2.56 ^{5%}	20:42	-2.38 ^{5%}	
+2	-0.73%	-0.59%	-3.73 ^{.1%}	15:47	-3.56 ^{.1%}	
+3	-0.30%	-0.22%	-1.53	24:38	-1.27	
N = 57		Mean Market Value @ Day -3		\$1,079,254,105		
Abnormal Return Interval	Mean Cumulative Abnormal Return	Median Cumulative Abnormal Return	t-statistic for mean CAR = 0	Positive: Negative	Mean Dollar Value Impact (\$ Value Δ)	Z-statistic for generalized sign test
(0,1)	-0.67%	-0.66%	-2.43 ^{5%}	23:39	-\$16,091,683	-1.52
(0,2)	-1.40%	-1.54%	-4.14 ^{.1%}	20:42	-\$17,747,412	-2.28 ^{10%}
(-2,2)	-1.69%	-1.10%	-3.88 ^{.1%}	24:38	-\$16,573,139	-1.27
(-3,3)	-2.12%	-2.19%	-4.11 ^{.1%}	22:40	-\$15,894,975	-1.78 ^{10%}

^{.1%}, ^{1%}, ^{5%}, and ^{10%} indicate significance at the .1%, 1%, 5%, and 10% levels, respectively.

¹ Extensive event study analyses and tests were performed using event date segmentations and combinations including announcement dates, rumor dates and the SEC record dates. Those announcements that occurred less than 15 minutes prior to the close of the market were shifted to the next trading day. The first definitive announcement date available to the market produced the most theoretically correct and highest significance across CAR windows. See Brown and Warner (1980,1985) for a more detailed description of event methodologies and tests.

² Tests were ran using various estimation periods up to one year and the results and significance were consistent across all periods.

TABLE 10
CAR Market Value Impact of M&A Announcements

Magnitude of the change in market value for takeover activity both before and after the adoption date of poison pills by REITs (N=82)¹. Panel A examines the CARs of REITs that were targets of takeover attempts for both the pill adopting sample and their matches for dates preceding and following the pill adoption date. Panel B examines the CARs of REITs that were bidding on other firms for both the pill adopting sample and their matches for dates preceding and following the adoption date. CARs for both panels are calculated as of the first definitive announcement of an arm's length M&A transaction in which the takeover was valued at over 50 million dollars. The sample in panel A consists of 23 individual occurrences of pill adopting REITs or their matches being targets of a takeover attempt. The sample in panel B consists of 57 individual occurrences of pill adopting REITs or their matches targeting another firm for takeover². Data on M&As comes from SEC filings, D.J.N.R. and Lexis-Nexis covering the period 1988 to 1999. CARs are obtained using Eventus and CRSP with a value weighted index market model estimated over a -220 to -31 period. A difference of means test and t-statistic (p-value) are provided in addition to individual sample difference from zero t-test p-values.

PANEL A.

CARs associated with all announcements of takeover attempts when pill and matched REITs are targets

Mean Market Value N=23	Pill Adopting REITs (n=14)	Matched Sample REITs (n=9)	T-test (p-value)
@ Day -3	\$446,922,656	\$333,943,500	0.72 (.482)
CAR (0,0) N=23	Pill Adopting REITs (n=14)	Matched Sample REITs (n=09)	T-test (p-value)
Before Pill Adoption (n=03)	4.186% (n=01)	5.116% (n=02)	. (.)
After Pill Adoption (n=20)	3.992% (n=13)	-2.074% (n=07)	2.53 (.021)**
T-test (p-value)	(.)	1.38 (.209)	
CAR (0,2) N=23	Pill Adopting REITs (n=14)	Matched Sample REITs (n=09)	T-test (p-value)
Before Pill Adoption (n=03)	4.985% (n=01)	4.584% (n=02)	. (.)
After Pill Adoption (n=20)	5.363% (n=13)	-1.548% (n=07)	1.53 (.144)
T-test (p-value)	(.)	0.97 (.363)	
CAR (-2,2) N=23	Pill Adopting REITs (n=14)	Matched Sample REITs (n=03)	T-test (p-value)
Before Pill Adoption (n=03)	3.049% (n=01)	5.222% (n=02)	. (.)
After Pill Adoption (n=20)	5.623% (n=13)	1.523% (n=07)	0.96 (.352)
T-test (p-value)	(.)	1.01 (.349)	

PANEL B.

CARs associated with all announcements of takeover attempts when pill and matched REITs are bidders

Mean Market Value N=57	Pill Adopting REITs (n=26)	Matched Sample REITs (n=31)	T-test (p-value)
@ Day -3	\$751,216,894	\$1,354,382,089	-1.96 (.055)*
CAR (0,0) N=57	Pill Adopting REITs (n=26)	Matched Sample REITs (n=31)	T-test (p-value)
Before Pill Adoption (n=33)	0.125% (n=16)	-0.445% (n=17)	0.54 (.597)
After Pill Adoption (n=24)	0.119% (n=10)	-0.796% (n=14)	0.52 (.607)
T-test (p-value)	0.01 (.997)	0.30 (.768)	
CAR (0,2) N=57	Pill Adopting REITs (n=26)	Matched Sample REITs (n=31)	T-test (p-value)
Before Pill Adoption (n=33)	-1.388% (n=16)	-2.355% (n=17)	0.74 (.464)
After Pill Adoption (n=24)	0.705% (n=10)	-1.916% (n=14)	1.83 (.080)*
T-test (p-value)	-1.35 (.190)	-0.36 (.725)	
CAR (-2,2) N=57	Pill Adopting REITs (n=26)	Matched Sample REITs (n=31)	T-test (p-value)
Before Pill Adoption (n=33)	-1.800% (n=16)	-2.213% (n=17)	0.30 (.769)
After Pill Adoption (n=24)	-0.358% (n=10)	-1.476% (n=14)	0.66 (.525)
T-test (p-value)	-0.82 (.421)	-0.54 (.597)	

****, ***, **, * indicate significance at the .001, .01, .05, and .10 levels respectively.

¹ 82 REITs adopted pills after IPOing and 4 REITs IPOed with a pill for a total of 86 in the post pill adoption analysis. For statistical accuracy, those 4 REITs and their matches were only included in the post pill adoption analysis.

² Three REITs were dropped from this analysis because they redeemed their pills before they went on to become either targets or acquirers.

TABLE 11
Dollar Value Impact Comparison of M&A Announcement Day Windows

Dollar value change in the market value of takeover activity in millions before and after the adoption date of poison pills by REITs (N=86)¹. Panel A examines the dollar value impact of M&As on REITs that were targets of takeover attempts for both pill adopting REITs and their matches for dates preceding and following the pill adoption date and is calculated as of the first definitive announcement of a takeover. Panel B examines the dollar value of M&As impact on REITs that were bidding on other firms for both pill adopting REITs and their matches for dates preceding and following the adoption date. The sample in panel A consists of 23 individual occurrences of pill adopting REITs or their matches being targets of a takeover attempt. The sample in panel B consists of 57 individual occurrences of pill adopting REITs or their matches targeting another firm for takeover. The market value of equity and shares outstanding are from the quarter previous to the M&A and form the basis for the dollar value impact change and percentage comparisons. Data on shareholder rights plans and mergers and acquisitions comes from SEC filings, D.J.N.R., Lexis-Nexis and SDC Mergers and Acquisitions for the period 1988 to 1999. A difference of means test and t-statistic (p-value) are provided for dollar value percentage changes.

PANEL A.

Dollar value impact of all announcements of takeover attempts when pill and matched REITs are targets

Mean Market Value N=23 @ Day -3	Pill Adopting REITs (n=14)	Matched Sample REITs (n=9)	T-test (p-value)		
	\$446,922,656	\$333,943,500	0.72 (.482)		
WIN (0,1) N=23	\$ Value of Δ	\$ % Δ	\$ Value of Δ	\$ % Δ	T-test (p-value)
Before Pill Adoption (n=03)	\$15,530,000 (n=01)	5.49%	\$34,972,938 (n=02)	7.49%	. (.)
After Pill Adoption (n=20)	\$ 4,251,654 (n=13)	3.68%	\$ 1,263,813 (n=07)	-1.36%	0.21 (.850)
T-test (p-value)	. (.)		. (.)		
WIN (0,2) N=23	\$ Value of Δ	\$ % Δ	\$ Value of Δ	\$ % Δ	T-test (p-value)
Before Pill Adoption (n=03)	\$13,977,000 (n=01)	4.95%	\$30,411,250 (n=02)	6.51%	. (.)
After Pill Adoption (n=20)	\$ 5,953,263 (n=13)	5.31%	\$ 321,156 (n=07)	-2.14%	0.38 (.727)
T-test (p-value)	. (.)		. (.)		
WIN (-2,2) N=23	\$ Value of Δ	\$ % Δ	\$ Value of Δ	\$ % Δ	T-test (p-value)
Before Pill Adoption (n=03)	\$ 9,318,000 (n=01)	3.30%	\$34,972,938 (n=02)	7.49%	. (.)
After Pill Adoption (n=20)	\$ 9,393,033 (n=13)	6.10%	\$ -666,156 (n=07)	-2.51%	0.78 (.471)
T-test (p-value)	. (.)		. (.)		

PANEL B.

Dollar value impact of all announcements of takeover attempts when pill and matched REITs are bidders

Mean Market Value N=57 @ Day -3	Pill Adopting REITs (n=26)	Matched Sample REITs (n=31)	T-test (p-value)		
	\$751,216,894	\$1,354,382,089	-1.96 (.055) [*]		
WIN (0,1) N=57	\$ Value of Δ	\$ % Δ	\$ Value of Δ	\$ % Δ	T-test (p-value)
Before Pill Adoption (n=33)	\$ -2,984,170 (n=16)	-0.41%	\$-37,850,000 (n=17)	-1.25%	1.55 (.138)
After Pill Adoption (n=24)	\$ -5,502,726 (n=10)	0.34%	\$ -9,863,745 (n=14)	-1.00%	0.47 (.641)
T-test (p-value)	0.27 (.792)		1.25 (.227)		
WIN (0,2) N=57	\$ Value of Δ	\$ % Δ	\$ Value of Δ	\$ % Δ	T-test (p-value)
Before Pill Adoption (n=33)	\$ -9,409,625 (n=16)	-1.13%	\$-41,090,000 (n=17)	-2.27%	1.37 (.187)
After Pill Adoption (n=24)	\$ 4,371,813 (n=10)	0.77%	\$ 16,120,000 (n=14)	-1.82%	1.75 (.095) [*]
T-test (p-value)	-1.39 (.175)		-1.04 (.310)		
WIN (-2,2) N=57	\$ Value of Δ	\$ % Δ	\$ Value of Δ	\$ % Δ	T-test (p-value)
Before Pill Adoption (n=33)	\$ -9,472,465 (n=16)	-1.41%	\$-38,120,000 (n=17)	-2.30%	1.37 (.184)
After Pill Adoption (n=24)	\$ -5,185,769 (n=10)	0.07%	\$-11,230,000 (n=14)	-1.13%	-0.47 (.647)
T-test (p-value)	-0.31 (.760)		-1.13 (.218)		

****, ***, **, * indicate significance at the .001, .01, .05, and .10 levels respectively.

¹ 82 REITs adopted pills after IPOing and 4 REITs IPOed with a pill for a total of 86 in the post pill adoption analysis. For statistical accuracy, those four REITs and their matches were only included in the post pill adoption analysis.

TABLE 12
Dollar Value Impact of M&As:
Announcement to Completion Windows

Total M&A dollar value impact change from announcement day to completion date for takeover activity involving pill adopting REITs or their matches. Panel A examines the dollar value impact of M&As on REITs that were targets of takeover attempts for both pill adopting REITs and their matches for dates before and after the pill adoption date and is calculated over a window from the first definitive announcement to the date the M&A was either completed or withdrawn ($n=23$)¹. Panel B examines the dollar value impact of M&As on REITs that were acquirers in a takeover attempt for both pill adopting REITs and their matches for dates before and after the pill adoption date and is calculated over a window from the first definitive announcement to the date the M&A was either completed or withdrawn ($n=57$). The daily share prices and shares outstanding are from the quarter previous to the M&A announcement. Data on shareholder rights plans and mergers and acquisitions comes from SEC filings, D.J.N.R., CRSP, Lexis-Nexis and SDC Mergers and Acquisitions for the period 1988 to 1999. A difference of means test and t-statistic (p-value) are provided for dollar value changes.^{2,3,4}

PANEL A.

Dollar value impact change for announcements of takeover attempts when pill and matched REITs are targets

Mean Market Value $N=23$	Pill Adopting REITs ($n=14$)		Matched Sample REITs ($n=09$)		T-test ² (p-value)
@ Day -3 to Announcement	\$446,922,656		\$333,943,500		0.72 (.482)
M&A WINDOW (Day 0 to Completion) $N=23$	\$ Value of Δ	\$ % Δ	\$ Value of Δ	\$ % Δ	T-test ³ (p-value)
Before Pill Adoption ($n=03$)	\$ 48,143,000 ($n=01$)	17.61%	\$ -113,699,000 ($n=02$)	-23.97%	. (.)
After Pill Adoption ($n=19$)	\$ 28,843,879 ($n=12$)	26.80%	\$ -4,802,313 ($n=07$)	-5.61%	2.36 (.214)
Adoption During M&A ($n=01$)	\$ 2,156,250 ($n=01$)	0.66%	. ($n=00$)	.	. (.)
Before vs. After ⁴ T-test (p-value)	. (.)		-0.80 (.434)		

PANEL B.

Dollar value impact change for announcements of takeover attempts when pill and matched REITs are bidders

Mean Market Value $N=57$	Pill Adopting REITs ($n=26$)		Matched Sample REITs ($n=31$)		T-test ² (p-value)
@ Day -3 to Announcement	\$751,216,894		\$1,354,382,098		-1.96(.055) [*]
M&A WINDOW (Day 0 to Completion) $N=57$	\$ Value of Δ	\$ % Δ	\$ Value of Δ	\$ % Δ	T-test ³ (p-value)
Before Pill Adoption ($n=33$)	\$141,986,233 ($n=16$)	18.31%	\$ 46,273,965 ($n=17$)	3.10%	0.98 (.335)
After Pill Adoption ($n=24$)	\$ 30,723,188 ($n=10$)	10.06%	\$ 131,540,000 ($n=14$)	8.00%	-1.15 (.265)
Adoption During M&A ($n=00$)	. ($n=00$)	.	. ($n=00$)	.	. (.)
Before vs. After ⁴ T-test (p-value)	1.47 (.153)		-0.80 (.434)		

****, ***, **, * indicate significance at the .001, .01, .05, and .10 levels respectively.

¹In order to show the effect of a poison pill which is adopted during the M&A process, we subset the sample to show the impact.

²Difference of means test between mean dollar value of pill and matched samples.

³Difference of means test between mean dollar value percentage change of pill and matched samples.

⁴Difference of means test between dollar value percentage change for M&As before and after pill adoption for both samples.

TABLE 13
REIT M&A Summary Statistics

This table presents summary data of the REIT M&A distribution from 1994 to 2000. Panel A details the underlying distribution of mergers and acquisitions across the years. The M&As are divided into targets or acquirers and further segregated by whether the entity was public or private. Panel B provides summary information on the public M&As in panel A and is segregated into targets and acquirers. The full sample of public targets and acquirers consists of 92 announcements of an arm's length M&A transaction in which a REIT is involved during 1994 to 2000 using the first definitive announcement date available to the market.¹ Data on M&As comes from SDC Mergers and Acquisitions, SEC filings, D.J.N.R. and Lexis-Nexis covering the period 1994 to 2000.

N=92 YEAR	TARGET Announcement Dates			ACQUIROR Announcement Dates			Total Unsuccessful bidders			M&As involving a non-REIT	Total Completed M&As
	Public Target		Private Target	Public Acquirer		Private Acquirer	Public Bidder		Private Bidder		
Poison PILL	Yes	No	N/A	Yes	No	N/A	Yes	No	N/A	N/A	N/A
1994	0	5	2	1	5	1	0	0	0	2	7
1995	1	5	1	1	5	1	0	0	0	2	7
1996	2	10	1	0	12	1	0	4	0	2	13
1997	3	11	6	1	19	0	0	5	1	6	20
1998	8	10	12	9	19	2	0	1	0	12	30
1999	5	4	1	5	5	0	0	1	0	2	10
2000	0	5	0	0	4	1	0	0	0	1	5
Subtotal	19	51	22	17	69	6	0	11	1	27	92
TOTAL	70		22	86		6	11		1	27	92

PANEL B.
M&A Summary Characteristics by Type

Public M&A REIT Targets :		Public M&A REIT Acquirers :	
Equity REIT total	66	Equity REIT total	82
Hybrid REIT total	1	Hybrid REIT total	1
Mortgage REIT total	3	Mortgage REIT total	3
Total	70	Total	86

¹ This analysis includes all arms-length M&A attempts in which the target has over 50 million dollars in total assets. In addition, those announcements that occurred less than 30 minutes prior to the close of the market were shifted to the next trading day.

TABLE 14
Equity M&A REIT Univariate Analysis

Comparison of financial performance and governance characteristics between the full sample of equity REIT targets and acquirers in an M&A transaction during 1994 to 2000. Data comes from SNL Securities, SDC Mergers and Acquisitions, SEC filings, Compustat, D.J.N.R. and Lexis-Nexis covering the period 1994 to 2000. The sample consists of 70 target REITs and 86 acquirers. The t-statistic (p-value) is for a difference of means test between targets and acquirers involved in a M&A. In addition, a nonparametric Krushal-Wallis test with H-statistic and p-value are provided.

	<i>Mean for target equity sample</i>	<i>Mean for acquirer equity sample</i>	<i>t-statistic (p-value) for differences</i>	<i>Kruskal-Wallis H-statistic(p-value)</i>
<i>Governance Characteristics:</i>				
Board size	7.02	7.78	-0.99 (.498)	1.91 (.217)
Internally advised	82.78%	89.56%	-0.90 (.408)	1.49 (.471)
Self managed	85.52%	92.58%	-1.11 (.228)	1.39 (.291)
Percentage of outside directors	37.01%	40.06%	-0.52 (.608)	0.10 (.738)
Percentage of inside directors	34.78%	42.01%	-0.97 (.332)	1.20 (.203)
Fraction of firms with multiple voting classes	6.10%	2.94%	-0.94 (.350)	0.82 (.363)
Fraction of REITs where CEO holds the title of Chairman of the Board	43.68%	53.70%	1.01 (.195)	1.06 (.201)
Staggered Board of Directors	69.85%	60.70%	0.67 (.436)	0.52 (.431)
Stock ownership by executives and directors	8.79%	10.70%	0.20 (.774)	0.27 (.532)
Stock ownership by beneficial block holders	19.71%	19.05%	0.35 (.209)	0.46 (.209)
Total number of institutional investors	66.90	55.60	1.25 (.159)	2.35 (.237)
Institutional investment by top five investors	29.46%	28.52%	-1.23 (.345)	0.76 (.364)
Total of all institutional stock holding	53.84%	47.98%	-1.59 (.266)	1.99 (.180)
<i>Structural Characteristics:</i>				
Total assets (\$millions)	453.48	1010.76	2.34 (.068)**	3.35 (.023)**
<i>Financial Characteristics:</i>				
Market value of equity (\$millions)	354.83	783.61	2.11 (.045)**	2.22 (.022)**
Prior year end return on equity ¹	9.52%	14.81%	1.97 (.023)**	2.03 (.036)**
Prior year end return on equity relative to NAREIT equity index	2.55%	7.16%	2.04 (.097)*	2.32 (.077)*
Market capitalization/total assets	1.01	1.20	1.99 (.098)*	2.19 (.089)*
Debt/Market capitalization				
FFO/Revenue (1 year prior)	37.13%	44.72%	1.66 (.240)	1.69 (.333)

****, ***, **, * indicate significance at the .001, .01, .05, and .10 levels respectively.

¹In those cases where a REIT did not have one full year of data in which to generate the return on equity, the data available was annualized.

TABLE 15
M&A CAR Analysis

Cumulative abnormal returns associated with the announcement of an arm's length merger and acquisition in which a REIT is involved during 1994 to 1999 using the first definitive announcement date available to the market in which a target has over 50 million in total assets¹. Panel A provides the daily returns over the -5,+5 day period for all public REIT M&A targets in the sample (N=70). Panel B provides the daily returns over the -5,+5 day period for all public REIT M&A acquirers in the sample (N=86). Data on M&As comes from SDC Mergers & Acquisitions, SEC filings, D.J.N.R. and Lexis-Nexis. CARs are obtained using Eventus and CRSP with a value weighted index market model estimated over a 220 to -31 period². Abnormal return intervals and dollar impacts are provided.

Panel A.

Daily Average Abnormal Returns for all Public REIT Targets in a M&A

Day	Mean Abnormal Return	Median Abnormal Return	t-statistic for mean abnormal return	Positive: Negative	Z-statistic for generalized sign test	
-3	0.22%	0.00%	0.50	10:09	0.68	
-2	0.02%	-0.05%	0.04	08:11	-0.24	
-1	0.05%	-0.15%	0.10	08:11	-0.24	
0	3.39%	3.89%	7.62 ^{.1%}	15:04	2.99 ^{1%}	
+1	0.41%	0.67%	0.93	12:07	1.61	
+2	0.48%	-0.23%	1.09	09:10	0.22	
+3	-0.29%	-0.37%	-0.65	07:12	-0.70	
N = 70		Mean Market Value @ Day -3		\$384,511,776		
Abnormal Return Interval	Mean Cumulative Abnormal Return	Median Cumulative Abnormal Return	t-statistic for mean CAR = 0	Positive: Negative	Mean Dollar Value Impact (\$ Value Δ)	Z-statistic for generalized sign test
(0,1)	3.80%	5.27%	6.09 ^{.1%}	16:03	\$6,147,651	3.45 ^{.1%}
(0,2)	4.29%	5.36%	5.56 ^{.1%}	15:04	\$7,069,973	2.99 ^{1%}
(-2,2)	4.35%	4.62%	4.37 ^{.1%}	14:05	\$9,676,532	2.53 ^{5%}

Panel B.

Daily Average Abnormal Returns for all Public REIT Acquirers in a M&A

Day	Mean Abnormal Return	Median Abnormal Return	t-statistic for mean abnormal return	Positive: Negative	Z-statistic for generalized sign test	
-3	-0.13%	-0.25%	-0.67	26:36	-0.76	
-2	-0.29%	-0.19%	-1.46	23:39	-1.52	
-1	-0.01%	-0.10%	-0.05	26:36	-0.76	
0	-0.17%	-0.63%	-0.87	26:35	-0.64	
+1	-0.50%	-0.34%	-2.56 ^{5%}	20:42	-2.38 ^{5%}	
+2	-0.73%	-0.59%	-3.73 ^{.1%}	15:47	-3.56 ^{.1%}	
+3	-0.30%	-0.22%	-1.53	24:38	-1.27	
N = 86		Mean Market Value @ Day -3		\$1,014,866,430		
Abnormal Return Interval	Mean Cumulative Abnormal Return	Median Cumulative Abnormal Return	t-statistic for mean CAR = 0	Positive: Negative	Mean Dollar Value Impact (\$ Value Δ)	Z-statistic for generalized sign test
(0,1)	-0.67%	-0.66%	-2.43 ^{5%}	23:39	-\$15,075,899	-1.52
(0,2)	-1.40%	-1.54%	-4.14 ^{1%}	20:42	-\$17,123,725	-2.28 ^{10%}
(-2,2)	-1.69%	-1.10%	-3.88 ^{1%}	24:38	-\$17,259,894	-1.27

^{.1%}, ^{1%}, ^{5%}, and ^{10%} indicate significance at the .1%, 1%, 5%, and 10% levels, respectively.

¹ Extensive event study analyses and tests were performed using event date segmentations and combinations including announcement dates, rumor dates and the SEC record dates. Those announcements that occurred less than 30 minutes prior to the close of the market were shifted to the next trading day. The first definitive announcement date available to the market produced the most theoretically correct and highest significance across CAR windows. See Brown and Warner (1980,1985) for a more detailed description of event methodologies and tests.

² Tests were ran using various estimation periods up to one year and the results and significance were consistent across all periods.

TABLE 16
Target and Acquirer Cross-Sectional Analysis

Cross-sectional analysis of abnormal returns following the announcement of an arm's length M&A transaction within REITs. The dependent variable is the cumulative abnormal returns associated with the first date available and is calculated over two windows using the market model value weighted method. Independent variables include structural, governance, and firm performance characteristics. Panel A provides the model specifications for the full sample of targets including equity, hybrid and mortgage REITs (N=70). Panel B provides the model specifications for the full sample of acquirers including equity, hybrid and mortgage REITs (N=86). Data comes from SNL Securities, SDC Mergers and Acquisitions, SEC filings, Compustat, D.J.N.R. and Lexis-Nexis covering the period 1994 to 2000.

DATA DESCRIPTION:	PANEL A. All 1994-2000 REIT Targets (N=70)						PANEL B. All 1994-2000 REIT Acquirers (N=86)					
<i>Model Specification:</i>	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Dependent Variable (CAR Windows):	(0,0)	(0,2)	(0,0)	(0,2)	(0,0)	(0,2)	(0,0)	(0,2)	(0,0)	(0,2)	(0,0)	(0,2)
Firm Characteristics:												
Dummy variables for each year	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Log of total assets	-0.003 (.001)	-0.002 (.002)	-0.002 (.001)	-0.004 (.001)	-0.005 (.003)	-0.002 (.001)	-0.023 (.009)	-0.034 (.008)	-0.006 (.002)	-0.004 (.001)	-0.005 (.008)	-0.003 (.007)
Debt to market value	0.033 (.006)	0.022 (.002)	0.042 (.001)	0.004 (.009)	0.007 (.004)	0.033 (.111)	-0.044 (.001)	0.034 (.211)	-0.088 (.020)	-0.009 (.012)	-0.009 (.030)	-0.009 (.041)
Organizational Characteristics:												
Dummy variable equal to one if internally advised	0.033 (.001)	0.034 (.009)	0.012 (.001)	0.022 (.004)	0.045 (.007)	0.003 (.005)	0.033 (.024)	0.022 (.037)	0.042 (.234)	0.004 (.324)	0.007 (.345)	0.033 (.652)
Performance Characteristics:												
Return in year prior to the M&A	0.073 (.003)	0.064 (.010)	0.015 (.001)	0.027 (.004)	0.046 (.009)	0.003 (.015)	-0.023 (.006)	-0.034 (.007)	-0.006 (.222)	-0.004 (.022)	-0.005 (.245)	-0.003 (.004)
Governance Characteristics:												
Percentage of stock held by executives and directors	—	—	-0.142 (.244)	0.004 (.324)	-0.047 (.345)	-0.233 (.772)	—	—	0.042 (.254)	0.044 (.111)	-0.007 (.345)	0.093 (.652)
Percent of stock held by block holders	—	—	-0.062 (.034)	-0.055 (.024)	-0.008 (.115)	-0.033 (.032)	—	—	-0.042 (.188)	0.004 (.774)	0.007 (.345)	0.083 (.644)
Number of directors on board	—	—	—	—	0.007 (.345)	0.553 (.652)	—	—	—	—	0.007 (.345)	0.056 (.652)
Fraction of inside directors on board	—	—	—	—	-0.099 (.335)	0.033 (.652)	—	—	—	—	—	—
Fraction of outside directors on board	—	—	—	—	—	—	—	—	—	—	0.007 (.195)	0.032 (.099)
Staggered Board	—	—	—	—	0.037 (.325)	0.083 (.672)	—	—	—	—	0.047 (.124)	0.036 (.232)
Dummy variable equal to 1 if CEO is the chairman of the board	—	—	—	—	0.025 (.455)	0.333 (.653)	—	—	—	—	0.007 (.365)	0.033 (.652)
Top 5 Institutional Ownership Percent	—	—	—	—	0.007 (.345)	0.033 (.332)	—	—	—	—	0.088 (.775)	0.073 (.552)
Number of Observations	67	67	62	62	59	59	84	84	80	80	79	78
Adjusted R ²	.1562	.1720	.1903	.2001	.1877	.2043	.0924	.1019	.1102	.1304	.1154	.1793
F-statistic	2.31 (.066)	2.46 (.016)	2.77 (.006)	2.83 (.003)	2.70 (.051)	2.90 (.002)	2.01 (.089)	2.14 (.077)	2.30 (.060)	2.41 (.050)	2.37 (.060)	2.46 (.023)

VITA

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- Responsible for initiating development of a new investment division
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 - 1.) Bond Analyzer and Pricing Models
 - 2.) Monte Carlo Analysis of Mortgage Backed Securities Model
 - 3.) Binomial Stock Option Pricing Model
 - 4.) Term Structure of Interest Rates Forecasting Models