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George D. Cashman

Marquette University, george.cashman@marquette.edu

David M. Harrison

University of Central Florida - Orlando

Christine A. Panasian

Saint Mary's University - Canada

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George D. Cashman

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Abstract

Using a sample of 195 unique real estate investment trusts (REITs), we examine factors related to the adoption of clawback provisions within managerial compensation contracts. In general, we find strong and consistent empirical evidence that clawback provisions are directly related to firm size, complexity, leverage, growth options, monitoring incentives, and CEO performance incentives. We also find that clawbacks are associated with enhanced market and accounting performance, with stronger performance relations observed for adoption decisions tied directly to regulatory mandates. In sum, we conclude compensation clawback provisions represent a value-relevant, strategic governance mechanism for REITs.

Introduction

During the 1990s, a string of high-profile accounting scandals brought renewed attention to the potential agency conflicts corporate managers face with respect to disclosing a firm's true financial position. This conflict arises because investors are primarily concerned with long-run wealth maximization, whereas managers frequently focus on short-term performance (Shleifer and Vishny [38]). This misalignment is often exacerbated by performance incentives included in managerial compensation contracts. To the extent managers engage in nefarious business or accounting practices to meet short-run performance benchmarks, seemingly well-intentioned compensation plans may actually be self-defeating.[1]

One contracting mechanism designed to mitigate the short-term focus of managers is the compensation clawback provision. Such provisions allow the firm, or a related third party, to recapture a portion of executive compensation in the event ethical misconduct (such as financial misrepresentation, which results in the restatement of company financials) is subsequently discovered. Although such provisions have technically been around for decades, if not centuries, their widespread use and adoption in U.S. financial markets is a relatively recent phenomenon.[2] Notably, Equilar ([23]) reports that the adoption of clawback provisions among Fortune 100 firms has grown from less than 20% of firms in 2006 to over 80% of firms by year-end 2010.

This dramatic growth in the use of clawbacks is driven, in large part, by two major pieces of recent financial legislation that contain explicit provisions regarding the use of clawbacks. First, Section 304 of the Sarbanes–Oxley Act of 2002 (SOX) stipulates that both the chief executive officers (CEOs) and chief financial officers (CFOs) of issuing firms are subject to clawbacks of both equity- and incentive-based compensation, as well as trading profits, in the event of financial restatements resulting from misconduct and material noncompliance with existing securities laws. Second, Section 954 of the Dodd–Frank Wall Street Reform and Consumer Protection Act of 2010 (Dodd–Frank) dramatically expands the scope of such clawbacks by extending the number of executives subject to clawbacks from simply the CEO and CFO to all current and former executive officers. It also expands the relevant time frame for recapturing “erroneously awarded compensation” from 12 months (under SOX) to 36 months. Additionally, unlike the widely criticized SOX Section 304 provisions, which lack an unambiguous enforcement mechanism, Dodd–Frank Section 954 clearly stipulates that firms failing to adopt or comply with such clawback or recapture provisions will be prohibited from listing their shares on any national securities exchange.[3] As such, the majority of publicly traded firms have a direct financial incentive to comply with these mandates.

Furthermore, these incentives would appear to be particularly strong for real estate investment trusts (REITs) and the markets in which they raise capital. Specifically, REITs are subject to unique regulations that limit their ability to retain earnings while ensuring dispersed ownership. Unique regulations combined with an operating environment in which firms regularly employ substantial leverage, exhibit entrenched managerial teams, and pursue large-scale, irreversible investment projects suggests that the credibility of firm disclosures would be of unique and utmost importance within this market sector.

Given the potential importance of these new regulations to both executive compensation and firm disclosure policies, the purpose of the current article is to examine: (1) what factors lead to the adoption of a clawback provision and (2) how the market responds to the presence of a clawback provision. In line with the aforementioned arguments highlighting the importance of such provisions within REIT markets, we conduct our analyses within this industry.

Previewing our results, we find clawback provisions are more common among larger and more complex firms, as well as among those with enhanced growth prospects, increased leverage, lower cash flows, enhanced monitoring incentives, and where more of the CEO's compensation is tied to firm performance. Additionally, we find mixed results with respect to corporate-governance-related firm attributes. Of note, firms with relatively weak boards, that is, larger boards and staggered boards, are more likely to adopt clawback provisions. Firms where management appears more entrenched, that is, CEO duality or incorporation in Maryland, which is known to be both "management friendly" and a common location for REIT incorporation filings, are less likely to adopt a clawback provision. Although the link between governance and clawback adoption is mixed, we do find evidence that the presence of a clawback is associated with enhanced market and accounting performance. Moreover, this association is concentrated among firms that adopt clawbacks that simply recognize the firm's abilities to recoup compensation under the new regulations and those that have adopted a clawback relatively recently (i.e., post-2006).

Literature Review

Within the contracting literature, clawback provisions are viewed as a mechanism for aligning managerial incentives with shareholder interests, as clawbacks provide the ability to mitigate the potential gains from short-term manipulations. However, until very recently the academic literature has given only scant attention to the determinants, implications, and effectiveness of clawbacks. Following the regulatory mandates resulting from SOX and Dodd–Frank, this is beginning to change. Of note, Addy, Chu, and Yoder ([1]) provide one of the earliest empirical investigations into the determinants of clawback adoptions. Examining S&P 500 firms between 2006 and 2008, they find less than 30% of firms studied employ such provisions.[4] They also report clawback adoptions are directly related to both recent accounting restatements by the firm and the presence of more independent monitoring, but inversely related to measures of managerial influence over board decisions. Building on this foundation, Addy and Yoder ([2]) argue compensation clawbacks are more likely to be observed among firms with recent financial restatements and/or weak internal governance control mechanisms. Moreover, they argue that such provisions should be less commonly observed among firms with relatively strong top management. Additional evidence on the determinants of clawback adoption is provided by Brown, Davis-Friday, and Guler (2011). They also examine S&P 500 firms and again find that clawback adoptions are related to both a firm's observable operating characteristics and corporate governance environment. Specifically, they conclude clawback adoption is inversely related to CEO tenure and positively related to firm size, board size, recent goodwill impairment, equity issuance, and in some model specifications the ratio of bonus to cash compensation for the firm's CEO.

In perhaps the most detailed analysis of clawback provisions, Babenko et al. ([4]) collect information on the presence and characteristics of clawback provisions among S&P 1500 firms from 2000 to 2012. They first document the marked increase in the use of such provisions over the past decade, from less than 1% of S&P 1500 firms in 2000 to nearly 50% of S&P 1500 firms by the end of the sample period.[5] The authors then proceed to outline and formally document the characteristics most frequently contained within these policies, and provide empirical evidence that compensation clawback provision adoptions are more likely (1) in the presence of prior financial malfeasance by the organization, (2) when potential malfeasance is harder to detect, and (3) when managers have compensation-based incentives that potentially reward misreporting. The authors

also find clawback adoptions are associated with both increased compensation and increased equity-based compensation for the firm's managers. Finally, on an ex post basis, firms adopting clawbacks are found to reduce overall firm risk, increase cash holdings, and decrease R&D expenditures.

Continuing, Chan et al. ([13]) employ a sample of Russell 3000 nonfinancial firms from 2000 to 2009 and conclude that allowing firms to recoup erroneously awarded compensation from managers enhances earnings quality and reduces audit risk. DeHaan, Hodge, and Shevlin ([21]) provide related evidence that the presence of a voluntarily adopted clawback provision improves both the actual and perceived quality of a firm's financial disclosures.[6] In a similar study, Pyzoha ([37]) examines the link between clawback adoption and the observed reduction in restatements. He reports that in the presence of a lower (higher) quality auditor, executives are less (more) likely to amend prior financial statements, especially when a higher proportion of their pay is incentive based. These results are all in line with the predictions and arguments in support of Dodd–Frank with respect to improvements in financial reporting.[7]

In contrast, Davis-Friday, Fried, and Jenkins ([19]) provide somewhat conflicting evidence. Although they find the market reaction to earnings surprises for Troubled Asset Relief Program (TARP) firms increases after the adoption of (nonvoluntary) clawbacks, for non-TARP (voluntary adopter) firms, this relation does not hold.[8] In fact, the authors document a significant decline in the market's response to earnings surprises at non-TARP firms that voluntarily adopt clawback provisions. Along this same line of reasoning, Chen, Greene, and Owers ([15]) report that although clawbacks decrease managerial incentives to misreport, and thus are associated with enhanced reporting quality, making executive compensation subject to recoupment also increases the risks undertaken by firm managers. This increased risk could undermine the purpose of such initiatives and, at a minimum, should be associated with increased required compensation levels to offset the higher risks borne by managers. Thus, Davis-Friday, Fried, and Jenkins conclude clawback provisions offer both potential costs and benefits that must be jointly analyzed in determining whether the adoption of such provisions will enhance overall firm performance. Similar results are reported by both Chan, Chen, and Chen ([12]) and Chan et al. ([14]), who find that although clawback provisions offer potential advantages in terms of reducing accruals-based accounting manipulation, they may engender the unintended consequence of real transactions management. Furthermore, the authors contend this phenomena is likely to be particularly prevalent for firms with strong incentives to achieve short-term earnings targets, such as those with high growth prospects.

Although the studies mentioned above suggest the existence of competing costs and benefits associated with clawback adoption, Gao, Iskandar-Daata, and Jia ([29]) find positive wealth effects accruing to shareholders of firms that adopt clawback provisions. As such, although the existing literature recognizes both the potential costs and benefits of clawback adoption, the marketplace appears to welcome such provisions within executive compensation contracts.

Empirical Hypothesis Development

As alluded to throughout the above discussion, clawback adoption has been shown to be related to a variety of firm-level attributes, characteristics, and activities. In this article, we explicitly investigate whether clawback adoption is related to: (1) organizational characteristics, (2) external monitoring, (3) compensation characteristics, and (4) governance mechanisms.

First, the characteristics of an individual organization, including its complexity, performance, and relationships with creditors, are all likely to influence clawback adoption. For example, Coles, Daniel, and Naveen ([16]) posit that as complexity increases, investors will find it harder to effectively monitor managerial actions. As a result, stockholders of larger and more complex firms will have an economic incentive to proactively embrace contractual elements (e.g., clawbacks), which align managerial incentives with those of the firm owners. As such,

throughout our empirical specifications that follow, we employ firm size (measured as the natural log of Total Assets) as one key measure of firm complexity. Measures of additional firm-specific attributes directly related to increased organizational complexity and valuation difficulty, including a firm's growth prospects, financial leverage, and prior market performance and volatility, are also included throughout our empirical models. Each measure is expected to exhibit a positive relation with the firm's propensity to employ a compensation clawback provision. Conversely, firms that are generating relatively large cash flows, and/or undertaking large capital investment expenditures involving real, tangible assets, may be more financially transparent and have less need to buttress the credibility of their disclosures with clawback provisions.[9]

The unique regulatory and operating environment of REITs highlights the potential importance of controlling for firm characteristics. For example, REITs are required to distribute 90% of their taxable income to shareholders in the form of dividends to retain their tax-advantaged status. As a result, it often becomes difficult (if not impossible) for firms within this industry to retain sufficient internally generated cash flows to fund their desired expansion and acquisition activities. Growth firms, in turn, are thus forced to become frequent issuers in the capital market. As such, we expect growth options (Tobin's Q) to be a uniquely important determinant of clawback adoptions within REIT markets. Similarly, Feng, Ghosh, and Sirmans (2007), Boudry, Kallberg, and Liu ([9]), and Harrison, Panasian, and Seiler ([33]) all document the extensive use of debt within REIT capital structures. Given the aforementioned internal capital constraints, we would thus also expect debt usage (Leverage) to be strongly associated with clawback adoption.

Finally, with regard to creditor relationships, firms with a history of financial obfuscation and/or malfeasance, as evidenced by recently restated financial statements, may benefit from enhancing the credibility of their financial disclosures. Danielsen et al. ([17] , [18]) find REITs that increase the transparency of their financial market disclosures are rewarded with reduced transactions costs and capital acquisition costs in the marketplace. Furthermore, with respect to the current investigation, they document that REITs exhibit a high proclivity to restate earnings or assets for reasons other than methodological or accounting rules changes, with 50% of their sample firms undertaking such actions. As such, we postulate restatements may be a uniquely important determinant of clawback adoptions within REIT markets. Similarly, firms with investment-grade debt outstanding have already subjected themselves to relatively intense market scrutiny and thus may have relatively little to gain from additional certification along this dimension. Thus, we anticipate clawback adoptions will be positively associated with recent financial restatements and negatively associated with the presence of investment-grade debt within the firm's capital structure. More formally, these expected relations between firm characteristics and clawback adoption may be summarized as follows:

Hypothesis 1 (Firm Characteristics) The propensity of a firm to adopt a clawback provision is directly related to contemporaneous firm complexity and inversely related to both the tangibility of existing cash flows and investment opportunities, as well as the perceived credibility of the firm's financial disclosures.

Second, we view the relation between clawback adoption and external monitoring as an open empirical question. If the presence of external monitors reduces a manager's ability to engage in the type of short-term financial manipulation that is likely to trigger a clawback provision, the benefit of a clawback is reduced, potentially making clawback adoption less likely. Conversely, the presence of external monitors may increase the effectiveness of a clawback provision, as they are potentially more likely to detect and prosecute financial misconduct, thereby making firms more likely to adopt a clawback provision. Thus, we view the effect of monitoring as an open empirical question. With respect to the current investigation, we measure monitoring by the presence of active financial analysts, the proportion of total shares held by institutional investors, and the proportion of total shares held by blockholders (entities with at least a 5% ownership stake in the firm).[10] We

also note that REIT markets are subject to dispersed ownership regulations under which the top five (i.e., largest) shareholders are prohibited from owning more than 50% of the firm's outstanding shares. As a result, it is possible that monitoring effects along the ownership dimension (both Institutional Ownership and Blockholdings) may be muted. Formalizing these expected relations:

Hypothesis 2 (Monitoring/Oversight) The propensity of a firm to adopt a clawback provision is significantly related to the degree of external monitoring/oversight of the firm.

Third, a firm's compensation policies may materially affect clawback adoption proclivities. As noted above, Chen, Greene, and Owers ([15]) and Babenko et al. ([4]) report that firms with clawback provisions are characterized by both higher levels of executive compensation and more incentive-based compensation.[11] Additionally, Brink and Rankin ([10]) contend that because of loss aversion and endowment effects, employees dislike "penalty" provisions within their compensation contracts. Thus, as clawback provisions are designed to recapture incentive-based income and performance bonuses, to maintain constant levels of managerial utility such provisions within executive compensation contracts must be offset by higher total compensation levels. To the extent these findings are generalizable to REIT firms, we anticipate a positive association between clawback adoptions and both total and (equity) incentive-based compensation. More formally:

Hypothesis 3 (Compensation) The propensity of a firm to adopt a clawback provision is positively related to both executive compensation levels and the percentage of executive compensation that is performance incentive based.

Fourth, the influence of the firm's internal governance characteristics on its probability of adopting a clawback is also an open empirical question. For example, at firms where management is entrenched or exerts considerable power, influence, and control over the board of directors, the effectiveness of clawback provisions may be reduced, as such provisions are typically exercised at the discretion of the board (Babenko et al. [4]).[12] Therefore, managers may willingly adopt a clawback when they believe it is unlikely to be enforced, whereas investors may demand additional protections in the presence of weaker internal governance structures. To proxy for the level of managerial entrenchment, we include: a State of Maryland incorporation indicator, a CEO duality indicator, the percentage of the company owned by insiders, and a poison pill indicator. Hartzell, Kallberg, and Liu ([34]) suggest Maryland is characterized by a "management-friendly" regulatory environment, which thereby increases the probability of managerial entrenchment for investment firms and trusts incorporated within the state.[13] CEO duality is consistent with enhanced managerial power and control, as the CEO is also the board chair.[14] Although increased ownership by company insiders could align management incentives with those of broader shareholders, it may also insulate the existing management team from external pressures. Both of these potential influences should reduce the likelihood that a firm implements a compensation clawback provision.[15] Lastly, we include an indicator variable for whether the REIT has a poison pill takeover deterrent in place. As such provisions are generally regarded inconsistent with management accountability, we anticipate a positive association between our poison pill indicator and the likelihood a firm will adopt a compensation clawback.

In addition to these measures of managerial entrenchment, we include measures of the quality of the board of directors, board size, independence, and whether the board is staggered.[16] Following Brown, Davis-Friday, and Guler ([11]), we expect a positive relation between board size and clawback adoptions. As Addy, Chu, and Yoder (2009) find that independent monitoring is positively associated with clawback adoption, we expect to find a positive relation between board independence and clawback adoption. Finally, we include an indicator for whether the board is staggered. As the need to win director appointments over multiple years shields

management from their actions, this type of board is generally viewed as weaker (Faleye [24]). Therefore, we expect staggered boards to be more likely to adopt a clawback provision, given the findings in the literature that weaker boards are more likely to adopt clawback provisions. With respect to internal governance metrics, our main conjectures may be summarized as follows:

Hypothesis 4 (Governance) The propensity of a firm to adopt a clawback provision is inversely related to managerial power and entrenchment, and the strength of the firm's board.

Data and Methodology

Because of the unique regulatory environment in which REITs operate, the REIT market offers a compelling natural laboratory for the examination of the determinants of clawback adoption. Additionally, by focusing on this single industry we can control for potential extraneous influences that could hide the relations we are examining. One key factor that makes the REIT market such a compelling laboratory for this examination is the requirement that REITs must distribute 90% of their taxable income as dividends.[17] A consequence of this is that REITs often find it difficult to accumulate sufficient retained profits to fund acquisitions and/or development activities. This limited ability to retain profits, combined with both the scale of the typical real estate investment projects and the limited range of investment activities available to REITs, forces them to return frequently to the capital markets. Given the nature of these markets, it is not surprising that Han ([32]) and Ooi ([36]) both show REIT performance is sensitive to the alignment of interests between managers and shareholders, and Danielsen et al. (2009, 2014) demonstrate that the market both values and rewards REIT actions that enhance the credibility of firm financial disclosures. Therefore, by focusing on the real estate industry we can concentrate on a focused sample of firms for which clawbacks may be of particular importance.[18]

As such, we begin our empirical analysis by identifying all REITs tracked by SNL, with corresponding data available in both the Center for Research in Security Prices (CRSP) and Compustat databases, from 1994 to 2011. We begin our sample in 1994 to correspond with the beginning of the modern REIT era.[19] Next, we identify whether each firm within our sample has a compensation clawback provision, and the date (year) when the presence of such a provision was first publicly disclosed. More specifically, following Babenko et al. ([4]), we first examine all REIT Annual Reports (10-K), Proxy Statements (Def 14A), and Current Reports (8-K) filed with the Securities and Exchange Commission (SEC). Using the Morningstar Document Research search engine, each of these filings were searched for the terms “clawbacks,” “recoupment,” and “recovery policies.”[20] Across our 18-year sample period, this process allowed us to identify 48 unique firms disclosing the possible presence of a clawback or compensation recoupment policy. Flagged records were then examined to ensure the noted provisions were indeed clawbacks. This secondary screening procedure was particularly beneficial in properly identifying firms with active clawback provisions, as approximately 15% of (i.e., 7) flagged records provided boilerplate language explicitly indicating the company did not have such a provision in place for one or more sample years.[21] To illustrate the nature of the provisions identified as being a clawback, we offer three examples of current REIT recoupment policies:

AvalonBay Communities Inc. Policy on Recoupment of Incentive Compensation (Clawback Policy): The Board has adopted a Policy for Recoupment of Incentive Compensation (i.e., a compensation clawback policy), which applies to senior officers (generally senior vice presidents and above). Pursuant to this policy, in the event the Company is required to prepare an accounting restatement due to the material non-compliance of the Company with any financial reporting requirement, then an independent committee of the Board of Directors may require any covered officer to repay to the Company all or part of any “Excess Compensation” that such

officer had previously received. Excess Compensation is defined as that part of the incentive compensation received by a covered officer during the 3-year period preceding the publication of the restated financial statement that was in excess of the amount that such officer would have received had such incentive compensation been calculated based on the financial results reported in the restated financial statement.

Brandywine Realty Trust Clawback: Our clawback agreement with each of our executive officers provides that in the event of an accounting restatement due to material non-compliance with federal securities laws, and without regard to misconduct, we have the right to recover incentive-based compensation that was computed on the basis of erroneous data during the three-year period preceding the accounting restatement and that exceeded what should have been paid on the basis of the corrected data.

Howard Hughes Corporation Executive Compensation Recoupment Policy: The Board has adopted a policy regarding recovery of incentive awards for fiscal years for which financial results are later restated. In the event of a material restatement of the Company's financial results due to misconduct, the compensation committee shall review the facts and circumstances and take the actions it considers appropriate with respect to any executive officer whose fraud or willful misconduct contributed to the need for such restatement. Such actions may include, without limitation, (a) seeking reimbursement of any bonus paid to such officer exceeding the amount that, in the judgment of the compensation committee, would have been paid had the financial results been properly reported and (b) seeking to recover profits received by such officer during the 12 months after the restated period under any equity compensation awards. All determinations by the compensation committee with respect to this policy shall be final and binding on all interested parties.

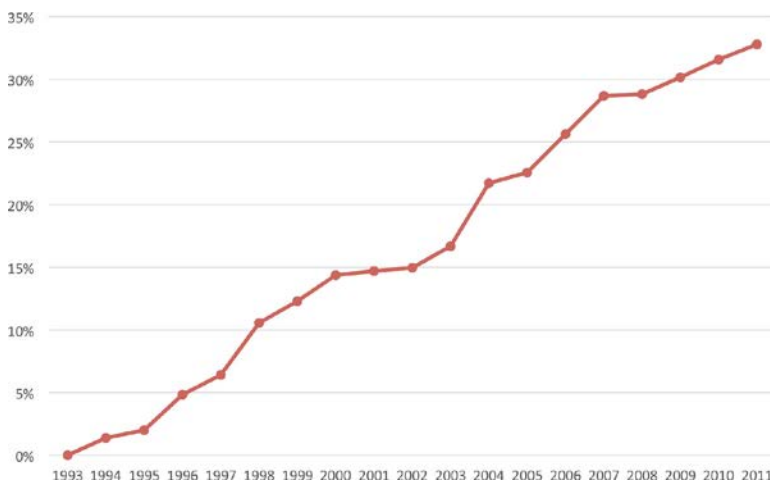


Figure I. Percentage of Real Estate Investment Trusts with a Clawback.

As firms rarely, if ever, retract compensation clawback provisions, for the purposes of the current investigation once a firm discloses the adoption of a clawback we assume that policy remains in effect until evidence is provided to the contrary. Using this identification strategy, we classify 392 out of a potential 2,029 firm year observations as being characterized by the firm having an executive compensation clawback provision. As illustrated in Figure 1, the frequency of such clawbacks increased steadily over our sample period. At the beginning of our sample period, very few REITs employed such provisions. By the passage of the REIT Modernization Act of 1999, slightly over 10% of firms had adopted such provisions. This number basically

doubled, to slightly over 20%, by the time the regulatory reforms brought about by SOX were instituted. SOX implementation further spurred the widespread adoption of these provisions, which achieved market penetration of approximately 30% by the passage of Dodd–Frank. Given the regulatory mandates under Dodd–Frank, we fully anticipate the prevalence of such provisions to continue growing throughout the near future.

After constructing our clawback indicator, we next extract balance sheet, income statement, and market performance data for each firm within our sample from either: Compustat, CRSP, or SNL Financial. To complete our data-collection process, compensation data are extracted from ExecuComp, and our governance metrics are compiled from a variety of sources including AuditAnalytics, Thompson Reuters Institutional Holdings, and direct tabulation from individual company corporate disclosures such as proxy statements and annual reports. A complete list of the firm-specific metrics employed throughout our empirical analysis, along with variable definitions, is provided in the Appendix. Table 1 presents descriptive statistics for each of these variables. To highlight a few key observations, consistent with Danielsen et al. (2009) we first note that REITs are far more likely than non-REIT firms to materially restate their financials. Specifically, over 62% of our sample observations come from firms that filed amended reports within the previous three years. The average REIT in our sample has total assets of slightly over \$1.9 billion, market leverage values of approximately 46%, and a Tobin's Q slightly greater than 1.0.[22]

Table 1. Summary Statistics

Variable	N	Mean	Min	Max
Firm characteristics				
log(Total Assets)	2,029	6.945	1.151	10.294
Tobin's Q	2,029	1.154	0.196	11.760
Cash Flow	2,029	0.058	-0.608	1.330
Stock Performance	2,029	0.003	-3.343	2.790
Return Volatility	2,029	0.085	0.003	0.938
Leverage	2,029	0.459	0	1.000
Investment (%)	2,029	1.300	0	51.600
Credit Rating	2,029	0.259	0	1
Restatement	2,029	0.621	0	1
External monitors				
Analyst Coverage	2,029	0.093	0	1
Institutional Ownership	2,029	0.523	0.005	0.879
Blockholdings	2,029	0.287	0	0.991
Compensation				
Total Compensation	2,029	2.415	0	81.869
Performance %	2,029	0.644	0.018	0.960
Governance				
Maryland	2,029	0.596	0	1
Board Size	2,029	8.164	3	19
CEO Duality	2,029	0.281	0	1
Staggered Board	2,029	0.218	0	1
Insider Ownership	2,029	0.154	0	0.926
Board Independence	2,029	0.709	0.250	0.842
Poison Pill	2,029	0.064	0	1

¹ Note: This table provides descriptive statistics for all of the key variables employed throughout this investigation. Our sample spans 1994–2011 and represents all real estate investment trusts tracked by SNL, which also have data available in CRSP and Compustat. This results in 2,029 firm-year observations. In addition to these databases, several variables are pulled directly from firm proxy statements. The Appendix provides definitions for all variables.

With respect to external monitoring attributes, less than 10% of sample firm-year observations come from REITs with current, active analyst coverage. Additionally, slightly over one-half of the typical sample REIT's outstanding shares are owned by institutional investors. Consistent with broader market trends, untabulated results indicate this proportion has grown steadily over time, with current averages exceeding 70%. Blockholders control nearly 30% of the outstanding shares of the average sample REIT, though this number shows considerable variation across firms, ranging from 0 to over 99% of shares outstanding. Turning to compensation characteristics, we see the typical REIT CEO earns over \$2.4 million annually, with performance-based incentives accounting for nearly two-thirds of that total. Finally, with respect to our governance characteristics, nearly 60% of sample firms are incorporated in Maryland. Additionally, nearly 30% of sample REIT CEOs also serve as chairman of their respective firm's board of directors. Slightly more than 20% of such boards are staggered, and inside directors and firm officers control just over 15% of the total shares outstanding on average. The typical REIT board is slightly smaller than those found in non-REIT firms (8 vs. 10), more than 70% of board positions are held by independent directors, and only 6% of sample firms have poison pill takeover defenses.

Analysis

Determinants of Clawback Adoption

Table 2 presents the results of univariate comparisons between REITs that report the existence of a compensation clawback provision and REITs that do not. Consistent with a priori expectations, we find that both more complex firms and firms with worse performance are more likely to have a clawback provision. Specifically, larger firms, firms with more volatile returns, firms employing higher leverage, and firms that recently issued an accounting restatement are all more likely to have a clawback. Conversely, firms with better performance, enhanced growth options and prospects, higher cash flows, and more tangible investments are all less likely to have a clawback provision. With respect to external monitors, we find firms actively covered by analysts, firms with more institutional ownership, and firms with increased block ownership are all more likely to employ clawback provisions. Although consistent with our expectations regarding compensation, we find that firms with clawback provisions exhibit both higher overall levels of executive compensation and a higher proportion of incentive-based compensation.

Table 2 Univariate Analysis of Clawback Adoption Determinants

Variable	Firms with Clawback	Firms without Clawback	Obs.	Mean	Difference of Means
	Obs.	Mean			
Firm characteristics					
log(Total Assets)	583	7.480	1,446	6.741	10.70
Tobin's Q	583	1.069	1,446	1.187	-4.10
Cash Flow	583	0.047	1,446	0.063	-5.63
Stock Performance	583	-0.013	1,446	0.009	-0.99
Return Volatility	583	0.096	1,446	0.081	4.26
Leverage	583	0.518	1,446	0.436	8.63
Investment	583	0.200	1,446	1.800	-7.27
Credit Rating	583	0.184	1,446	0.288	-4.92

Restatement	583	0.789	1,446	0.557	10.06
External monitors					
Analyst Coverage	583	0.189	1,446	0.056	9.61
Institutional Ownership	583	0.629	1,446	0.483	11.10
Blockholdings	583	0.317	1,446	0.276	4.02
Compensation					
Total Compensation	583	3.204	1,446	2.115	3.75
Performance %	583	0.719	1,446	0.616	8.00
Governance					
Maryland	583	0.692	1,446	0.559	5.60
Board Size	583	8.041	1,446	8.212	-1.59
CEO Duality	583	0.315	1,446	0.268	2.16
Staggered Board	583	0.215	1,446	0.219	-0.23
Insider Ownership	583	0.139	1,446	0.159	-2.65
Board Independence	583	0.707	1,446	0.710	-0.68
Poison Pill	583	0.063	1,446	0.064	-0.10

2 Note: This table presents a univariate analysis of differences in means between firm-year observations associated with the presence of a clawback and those without a clawback. The Appendix provides a detailed description of each variable employed.

3 ***Significant at the 1% level.

4 **Significant at the 5% level.

Turning to governance attributes, we find some evidence that when management is more powerful and/or entrenched (Maryland incorporation and CEO duality) the firm is more likely to have a clawback provision. This finding is consistent with the notion that managers may not fear clawbacks when they are entrenched in the firm, as they may have the ability to thwart or mitigate the negative consequences of enforcement actions. Additionally, we note that the fraction of the firm controlled by insiders is higher at firms without a clawback provision. This is consistent with inside ownership aligning management's interests with shareholders, reducing the need for a clawback, or with inside ownership helping to insulate managers from outsider's demands for a clawback provision. Contrary to the prior literature, in these univariate comparisons we find no evidence of a relation between board strength and the adoption of a clawback.

Although meaningful insight may often be gained from simple univariate comparisons, multivariate techniques typically provide broader, more generalizable intuition. As such, we continue our empirical analysis by estimating probit regressions of the following general form to assess the underlying determinants of clawback adoption: [23]

$$\text{Clawback Adoption} = f(\text{Firm Characteristics, External Monitoring, Compensation Characteristics, Corporate Governance, } \varepsilon). \quad (1)$$

The results of these regressions are presented in Table 1 . In column 1, our compensation clawback indicator variable is regressed exclusively against our set of firm-specific characteristics to form a base model specification. Consistent with expectations, we find robust evidence in support of Hypothesis 1. More specifically, the positive coefficient estimates on our firm size, growth options, prior stock performance, and financial leverage metrics are all consistent with increased firm complexity being directly related to the propensity of a firm to have a clawback. Similarly, the negative coefficient estimates on our cash flow and

investments metrics suggest enhanced financial transparency decreases the need to employ clawback provisions in an attempt to add certification credibility to firm disclosures. The positive coefficient estimate on the recent financial restatements indicator variable lends itself to this same interpretation. The only unexpected result we find is the positive and (marginally) significant relation between clawback adoptions and investment-grade debt outstanding. As this result is not robust across more complete model specifications, we simply acknowledge the result is inconsistent with our a priori expectations. Taken together, these results in column 1 provide relatively strong support for the hypothesis that clawback adoptions are directly related to both a firm's operational complexity and financial opacity.

Table 3 Probit Analysis of Clawback Adoption Determinants

	(1)	(2)	(3)	(4)	(5)	(6)
Constant	-3.824 (-17.07)	-3.453 (-14.43)	-4.222 (-15.76)	-3.874 (-16.54)	-4.309 (-12.54)	-3.780 (-9.48)
Firm characteristics						
log(Total Assets)	0.242 (7.03)	0.126 (4.86)	0.114 (2.08)	0.203 (5.29)	-0.005 (-0.10)	0.021 (0.35)
Tobin's Q	0.427 (5.44)	0.341 (4.10)	0.397 (5.26)	0.448 (4.78)	0.355 (3.37)	0.380 (3.40)
Cash Flow	-2.746 (-4.91)	-1.085 (-1.74)	-2.878 (-4.03)	-2.727 (-4.64)	-1.485 (-1.89)	-1.409 (-2.13)
Stock Performance	0.180 (2.58)	0.082 (1.19)	0.197 (2.93)	0.176 (2.68)	0.094 (1.33)	0.024 (0.30)
Return Volatility	0.616 (1.07)	0.030 (0.04)	0.569 (1.05)	0.499 (0.90)	-0.150 (-0.21)	-0.817 (-1.58)
Leverage	1.209 (6.26)	1.459 (6.36)	1.569 (6.65)	1.323 (6.27)	1.802 (5.92)	1.324 (4.72)
Investment	-1.077 (-2.69)	-0.940 (-2.72)	-1.073 (-2.83)	-1.099 (-2.64)	-1.066 (-2.67)	-1.118 (-2.58)
Credit Rating	0.083 (1.73)	0.157 (3.24)	0.041 (0.80)	0.031 (0.64)	-0.032 (-0.58)	-0.009 (-0.31)
Restatement	0.334 (2.32)	0.416 (5.08)	0.366 (2.36)	0.325 (2.34)	0.463 (4.78)	0.467 (4.59)
Monitoring						
Analyst Coverage		0.511 (3.32)			0.556 (3.11)	0.572 (3.24)
Institutional Ownership		0.863 (8.12)			0.443 (4.18)	0.036 (0.32)
Blockholdings		-0.405 (-2.00)			-0.253 (-0.97)	-0.301 (-1.25)
Compensation						
Total Compensation			-0.001 (-0.14)		0.000 (0.05)	0.010 (1.98)
Performance %			1.664 (10.61)		1.677 (8.00)	1.492 (7.01)
Governance						
Maryland				0.007 (0.17)	-0.082 (-2.00)	-0.145 (-4.21)
Board Size				0.041	0.062	0.079

				(3.01)	(3.84)	(4.60)
CEO Duality				0.045	-0.135	-0.150
				(1.11)	(-3.68)	(-5.06)
Staggered Board				0.229	0.288	0.260
				(3.75)	(3.78)	(2.95)
Insider Ownership				-0.935	-0.490	-0.419
				(-3.86)	(-1.54)	(-1.10)
Board Independence				0.043	0.211	-0.235
				(0.16)	(0.64)	(-0.55)
Poison Pill				0.190	-0.032	-0.211
				(3.18)	(-0.37)	(-3.50)
Property type fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
No. obs.	2,029	2,029	2,029	2,029	2,029	2,029
Pseudo R ² (%)	0.2013	0.2232	0.2365	0.2099	0.2581	0.2418

⁵ Note: This table presents the results of our multivariate probit analysis investigating the presence of a clawback provision. Specifically, in columns 1–5 we regress an indicator variables capturing the presence of a clawback provision against firm characteristics, external monitoring proxies, compensation attributes, and corporate governance metrics. In column 6, the dependent variable is a firm-specific clawback indicator that equals 1 if the firm has a clawback provision uniquely tailored to the firm, as opposed to a clawback that simply explicitly affirms the real estate investment trust's regulatory rights to recoup unfairly awarded compensation. The Appendix provides a detailed description of each variable employed.

⁶ ***Significant at the 1% level.

⁷ ** Significant at the 5% level.

⁸ Significant at the 10% level.

Column 2 of Table 3 extends the base case analysis to include three measures of the firm's external monitoring environment. With the exception of prior stock performance, which is no longer statistically significant, all previous measures retain both their previously observed signs and significance patterns. Examining our three new variables, both analyst coverage and institutional ownership exhibit positive and statistically significant associations with clawback adoptions. These results are consistent with the notion that external monitors may increase the effectiveness of clawback provisions, whereas the negative relation between blockholdings and clawbacks is consistent with the notion that the presence of a strong external monitor, with significant capital at risk, reduces the ability of managers to engage in short-term manipulations.

Column 3 of Table 3 presents the results of extending our base analysis to examine compensation metrics. Relative to column 1, coefficient estimates for all firm characteristics except the presence of an investment-grade credit rating retain their previously reported signs and statistical significance. Our credit rating variable, though retaining an unexpected positive sign, is no longer statistically significant at conventional levels. Turning to our new compensation attributes, although clawback provisions do not appear to be related to total executive compensation, we do find evidence that the likelihood that a firm has a clawback provision is positively related to the proportion of CEO compensation that is performance based. This is consistent with both our Hypothesis 3 and the previously noted findings of Chen, Greene, and Owers ([15]) and Babenko et al. ([4]).

Column 4 of Table 3 presents the results for the model including our governance metrics and baseline firm characteristics. As with the findings in column 3, all firm characteristics except the presence of an investment-grade credit rating (which is again positive but insignificant) are qualitatively identical to our column 1 base model results. Four of the seven governance metrics exhibit statistically significant relations with clawback adoptions, with all exhibiting the generally anticipated sign pattern. More specifically, the positive coefficient

estimates on our board size, staggered board, and poison pill indicator variables, as well as the negative coefficient estimate on the proportion of stock holdings owned by company officers and directors, are all consistent with Hypothesis 4 and the logic that clawback provisions are more prevalent among firms with weaker boards and firms owned by a higher proportion of insiders.

Column 5 of Table 3 provides the results of simultaneously including all of our monitoring, compensation, and governance metrics in the base model (firm characteristics) specification. The results observed when we simultaneously include all four categories of variables at once are generally consistent with those observed when each category is added in isolation. This finding is particularly true with respect to the attributes previously identified as being uniquely important in REIT markets. Specifically, our growth options (*Tobin's Q*), debt usage (*Leverage*), and disclosure transparency (Restatement) measures of firm complexity all exhibit positive and strongly significant coefficient estimates. These findings are consistent with the notion that capital constraints engendered by regulatory payout requirements incentivize REITs to enhance the transparency of their disclosures. For example, firms with abundant growth opportunities may benefit from improved disclosure credibility through reduced transactions costs on future capital acquisitions and/or recontracting opportunities. Similarly, clawback adoption may be particularly useful in reducing uncertainty for REIT firms in the immediate aftermath of accounting restatements, thereby facilitating continued access to capital markets on attractive terms. [24] We interpret the general strength and consistency of these results as reflecting positively on the robustness of the underlying relations.

Exploring the results in column 5 of Table 3 in more detail, relative to our previously reported results across columns 1 through 4, we note three key changes. First, our state of Maryland incorporation indicator variable now exhibits a negative and significant coefficient. Second, our CEO duality indicator, another potential measure of managerial power and entrenchment, also exhibits a negative coefficient. As Hartzell, Kallberg, and Liu (2008) suggest incorporating in Maryland (as the majority of REITs do) is associated with stronger, more entrenched management, these new results are consistent with our earlier finding that firms with weaker governance, weaker boards, and poison pills are more likely to have a clawback. We also note that both the percentage of the firm held by blockholders and the poison pill indicator are no longer statistically significant at conventional levels. Taken together, we view the results presented in column 5 as generally supporting and reinforcing our previous findings.

Although significant care was put into ensuring the proper identification of firms exhibiting clawback provisions in their executive compensation contracts, the degree of disclosure relating to both the scope and enforcement intensity of such provisions varied markedly across sample firms. And although the previously noted examples of clawback policies for AvalonBay Communities, Brandywine Realty Trust, and Howard Hughes Corporation are relatively complete and explicit, other firms simply affirm their recoupment rights with direct references to regulatory statutes. For example, consider the following passage from the 2007 proxy statement filed by Equity One Inc.:

Recovery of Performance-Based Awards: We do not have a policy regarding the recovery of performance-based awards in the event of a financial statement restatement beyond the requirements of Section 304 of the Sarbanes-Oxley Act of 2002. That statute requires the chief executive and chief financial officers of a publicly-held company to repay certain amounts if the company restates its financial statements as a result of financial reporting misconduct. The amounts to be repaid consist of (1) any bonus or other incentive-based or equity-based compensation received from the company during a twelve month period following the filing of the financial document in question; and (2) any profits realized from the sale of securities of the company during that period.

As the firm explicitly espouses its regulatory rights to recoup unjust awards, throughout the model specifications in columns 1 through 5 of Table 3 we code these firms as possessing a clawback. That said, we acknowledge the possibility that the determinants of employing clawbacks driven by regulatory mandates may diverge from those driving the voluntary adoption of uniquely tailored declarations and provisions. As such, we construct a new “firm-specific” clawback indicator variable that excludes observations that are simply explicit references to the rights and responsibilities outlined in existing SOX and/or Dodd–Frank regulations. This firm-specific clawback indicator, which identifies only organizations with uniquely tailored, company-specific policies, serves as the dependent variable for column 6 in Table 3. [25]

Once again, our results remain consistent and stable. Relative to our full model results presented in column 5 of Table 3, determinants of the adoption for these more uniquely tailored, voluntary provisions are similar. More specifically, we observe only three material differences. First, our institutional ownership metric, though retaining a notionally positive coefficient estimate, now fails to attain statistical significance. Second, consistent with the aforementioned literature, within this more restrictive identification set of clawbacks we now observe a positive association between the presence of such a provision and total executive compensation levels. Third, we find the presence of a poison pill is negatively associated with the presence of a firm-specific clawback provision. Potentially, although these firms recognize the need for a clawback provision, management may be sufficiently powerful to prevent any clawback beyond that required by the new regulation. Given the relative consistency of our findings, we conclude the determinants of firm-specific clawback adoptions are generally similar to those found for the broader cross-section of such provisions, and therefore we retain our broader definition metric for use throughout our remaining empirical tests. [26]

The Impact of Firm Growth Prospects on Clawback Adoption

One of the often-cited benefits associated with the adoption of clawback provisions is that they enhance the (perceived) reporting quality of a firm's financial disclosures (see, e.g., Chen, Greene, and Owers [15]; DeHaan, Hodge, and Shevlin [21]; Chan et al. [13]). Such implicit certification effects are likely to be particularly important to firms during the capital acquisition process. Hence, clawback policies are likely of unique relevance to cash-constrained firms with growth ambitions. One of the expressed advantages associated with our focus on the REIT industry is that firms in this industry are frequently capital constrained. As outlined above, the high regulatory-mandated payout requirement (i.e., 90% of taxable income) for REIT firms effectively limits their ability to fund growth through internally generated profit and cash-flow retention. As such, the greater the growth and expansion plans of the REIT, the more binding these payout restrictions become, the higher the need to continually access external capital markets, and therefore, the greater the benefits of enhanced financial reporting quality through implicit certification mechanisms such as compensation clawback provisions.

We explore the impact of a firm's growth options on the presence of a clawback provision in Table 4. Specifically, we split our sample into high-growth (high market-to-book) and low-growth (low market-to-book) subsamples based on the prior year's market-to-book ratio. [27] Columns 1 and 2 of Table 4 present the results of reestimating column 5 of Table 3 for the high- and low-growth subsamples, respectively. Several of the relations observed in the full sample appear consistent across these two subsamples. Specifically, the relations between the presence of a clawback and leverage, investments, prior restatements, the percentage of CEO compensation tied to performance, and whether the board is staggered are all directionally and statistically similar across the two subsamples. However, simply looking at the results from these two subsamples does not allow us to test for differences in the relation between the two subsamples. Additionally, several characteristics seem to have opposite relations with the presence of a clawback provision. For example, examining our proxies for external monitoring, we find that institutional ownership appears to be negatively related to clawbacks in the high-growth subsample, but monitoring metrics (analyst coverage and institutional ownership) are positively related to clawbacks in the low-growth subsample.

Table 4 Market-to-Book Subsample Analysis

	High	Low	High M-to-B Interactions
Constant	-4.627	-5.814	-5.690
	(-10.33)	(-7.47)	(-7.72)
High M-to-B dummy			0.865
			(1.04)
Firm characteristics			
log(Total Assets)	0.162	-0.004	0.212
	(2.55)	(-0.05)	(2.29)
Tobin's Q	0.786	0.174	0.446
	(6.74)	(0.49)	(1.55)
Cash Flow	-1.988	-0.628	-0.804
	(-1.39)	(-0.30)	(-0.35)
Stock Performance	0.064	-0.005	0.166
	(0.26)	(-0.04)	(0.64)
Return Volatility	0.454	-0.163	0.804
	(0.42)	(-0.14)	(0.73)
Leverage	2.462	1.217	1.437
	(6.24)	(2.25)	(2.75)
Investment	-0.801	-4.271	3.949
	(-3.34)	(-3.05)	(2.35)
Credit Rating	-0.391	0.227	-0.483
	(-3.11)	(1.71)	(-3.66)
Restatement	0.453	0.692	-0.307
	(3.66)	(5.02)	(-3.36)
Monitoring			
Analyst Coverage	0.482	0.819	-0.500
	(1.63)	(4.04)	(-2.73)
Institutional Ownership	-0.625	0.916	-1.256
	(-2.92)	(3.07)	(-3.06)
Blockholdings	-0.411	-0.596	0.176
	(-1.04)	(-1.72)	(0.43)
Compensation			
Total Compensation	0.009	-0.012	0.019
	(1.32)	(-0.92)	(1.21)
Performance %	2.181	1.873	0.072
	(4.03)	(6.42)	(0.15)
Governance			
Maryland	-0.574	0.476	-1.015
	(-5.43)	(4.01)	(-9.18)
Board Size	0.002	0.053	-0.055
	(0.06)	(1.88)	(-1.36)
CEO Duality	-0.025	-0.555	0.594
	(-0.27)	(-7.86)	(3.93)
Staggered Board	0.429	0.352	-0.031
	(2.76)	(2.88)	(-0.17)
Insider Ownership	-0.956	-0.139	-1.623
	(-1.35)	(-0.24)	(-1.52)

Board Independence	-0.807	2.120	-2.366
	(-2.13)	(3.27)	(-3.38)
Poison Pill	-0.113	0.445	-0.766
	(-0.49)	(2.14)	(-2.64)
Property type fixed effects	Yes	Yes	Yes
No. obs.	1,016	1,013	2,029
Pseudo R ² (%)	0.3099	0.3551	0.3121

⁹ Note: This table presents the results of regressing an indicator variable capturing the presence of a clawback provision against firm characteristics, external monitoring proxies, compensation, and corporate governance metrics, across high- and low-growth subsamples. Specifically, for column 1, our regression sample contains only high-growth real estate investment trusts (REITs), defined as those exhibiting a market-to-book ratio for the previous year that is above the industry median. Similarly, for column 2, our regression sample contains only low-growth REITs, defined as those exhibiting a market-to-book ratio for the previous year this is below the industry median. In column 3, we employ the full sample and estimate the impact of firm growth prospects by interacting our firm characteristics, external monitoring proxies, compensation, and corporate governance metrics with our high-growth indicator. The coefficients reported in column 3 are directly from these interaction terms. M-to-B stands for market-to-book ratio. The Appendix provides a detailed description of each variable employed.

¹⁰ ***Significant at the 1% level.

¹¹ **Significant at the 5% level.

¹² * Significant at the 10% level.

Therefore, to test for differences between these two groups, we retain all sample observations and interact a dummy variable identifying high-growth firm-year observations with every previously employed clawback determinant examined. The reported coefficient estimates in column 3 of Table 4 correspond to these interaction terms and measure the incremental effect of each characteristic within growth-intensive firms. [28] We note that for high-growth firms, the relation between clawbacks and firm complexity (size and leverage), as well as investment activity, is stronger than for low-growth firms. Conversely, the effect of recent financial restatements, as well as having investment-grade debt outstanding, appears stronger for low-growth firms. Additionally, and consistent with the observed differences between the high- and low-growth groups, the influence of external monitors appears concentrated within the low-growth subsample. Continuing, we find no evidence of differences in the relation between compensation and clawbacks across the two groups. Finally, with respect to our governance measures, we observe four key differences across our growth classifications. These differences reveal the previously observed negative relation between clawback adoption propensities and Maryland incorporation status (one proxy for managerial entrenchment) is driven by the subset of high-growth firms within our sample. Conversely, the negative relation observed for CEO duality is driven by low-growth firms. The impact of poison pills and board independence are also stronger among firms with low growth potential. The results presented in Table 4 illustrate the importance of controlling for a firm's likely growth prospects when examining clawbacks, as growth prospects appear to exert a significant impact on many of the observed relations.

The Impact of Clawback Provisions

Having presented evidence regarding the characteristics of REITs that influence the probability of adopting a clawback, we next turn to the potential effect of clawback provisions on firm performance. Although conceptually measuring the market's response to clawback adoption decisions should be relatively straightforward, in practice the clean identification of an actual event date becomes problematic. For example, clawback adoptions are often the result of extensive discussions and negotiations between managers and company stakeholders over an extended period or, alternatively, are implemented in response to either regulatory mandates or perceptions of suboptimal managerial performance. In the former case, how should the event date be defined if the ongoing discussions were public knowledge, and the resulting adoption of the policy

was a foregone conclusion by the time of official implementation and disclosure in the firm's proxy statement? In the latter case, the confounding influences of regulatory and competitive market pressures make isolation of the wealth effects attributable to clawback adoption difficult. Further complicating this process, public disclosure of the adoption of clawback provisions typically occurs through corporate regulatory filings (e.g., annual reports, proxy statements) rather than through specially convened press conferences or independent news releases. As such, the information disclosure is typically not timely and is almost always accompanied by potentially confounding information disclosures.[29] Recognizing these limitations, to gain some insight into the market relevance of REIT clawback adoptions, in Table 5 we compare both monthly raw returns and abnormal returns from a traditional four-factor Fama–French–Carhart model across firms with and without compensation clawback provisions. To be clear, these returns are not designed to measure the market's response to the adoption of such provisions, but rather provide one indication of the firm's relative market performance after such adoptions. To the extent clawbacks serve as a disciplining mechanism that helps align performance incentives between managers and shareholders, firms characterized by the presence of such provisions may outperform their counterparts without such policies.

Table 5 Analysis of Clawbacks and Monthly Market Performance

	With Clawback	Without Clawback			
	Obs.	Mean	Obs.	Mean	Difference of Means
Monthly raw returns (%)	4,089	1.37	13,065	1.14	2.03
Monthly four-factor residual	4,089	0.24	13,065	-0.08	3.15
Low market-to-book					
Monthly raw returns (%)	2,214	1.08	5,933	0.77	1.83
Monthly four-factor residual	2,214	-0.08	5,933	-0.47	2.58
High market-to-book					
Monthly raw returns (%)	1,875	1.71	7,132	1.44	1.73
Monthly four-factor residual	1,875	0.62	7,132	0.25	2.74

¹³ Note: This table presents a univariate analysis of the difference in means for both monthly raw returns and Fama–French–Carhart four-factor return residuals, between firm-month observations in which the firm has a clawback provision and those in which the firm does not have a clawback provision. As we are not attempting to predict abnormal returns, we use the entire return history to determine residual returns. The Appendix provides a detailed description of each variable examined.

¹⁴ ***Significant at the 1% level.

¹⁵ **Significant at the 5% level.

¹⁶ * Significant at the 10% level.

Examining the results in Table 5, we find evidence of positive performance externalities associated with clawback provisions. More specifically, within the full sample of firms, both monthly raw returns and abnormal returns (four-factor residuals) are significantly higher for firms with active clawback provisions.[30] Similar results are also found across both high- and low-growth subsamples. With respect to low-growth firms, raw returns for REITs with clawbacks are again significantly higher than those observed for firms without such provisions, and risk-adjusted abnormal returns are significantly less negative among low-growth REITs with clawback protections. Turning to the high-growth subsample, firms with clawbacks again enjoy both higher raw returns and risk-adjusted abnormal returns. Taken together, the results in Table 5 suggest REITs with compensation clawback provisions tend to outperform those without such provisions.

Although the previous results suggest firms with clawback provisions enjoy enhanced market performance, Chan et al. ([14]) note that the presence of a clawback can engender unintended consequences. Managers may switch from short-term financial manipulation to manipulating real transactions to meet their short-term

performance goals. To the extent firm managers alter the timing, payment, or receipt of real investment cash flows to meet short-term performance benchmarks, firm performance and shareholder utility may be affected. Our final analysis seeks to ascertain whether the fundamental operating performance of REIT organizations differs across firms with and without clawback provisions. Following Chan et al., we examine changes in firm operating performance as a function of both the presence of a compensation clawback provision and changes in key firm attribute levels. More formally, we seek to examine the following economic relation:

$$\Delta Performance = \alpha + \beta_1 Clawback + \beta_2 \Delta Size + \beta_3 \Delta MTB + \beta_4 \Delta Leverage + \delta + \epsilon, (2)$$

where δ represents time (year) fixed effects. Within the REIT industry, funds from operations (FFO) is widely regarded as the cornerstone measure of firm operating performance. [31] Therefore, in operationalizing the above test, we measure changes in a firm's operating performance as the annual percentage change in FFO. As with our market performance analysis, to the extent clawback provisions act as disciplining devices to better align the incentives of managers and shareholders, we would expect the presence of a clawback provision to be associated with positive changes in firm performance levels.

Table 6 presents the results of this analysis. Consistent with expectations, in column 1 we observe a positive association between changes in a firm's operating performance and the existence of a clawback provision. Column 2 provides similar results using our previously described firm-specific versus regulatory-mandated clawback definitions. The results suggest uniquely crafted, firm-specific provisions have very little association with changes in firm operating performance, whereas provisions that make specific reference to the enabling regulations are associated with positive and strong improvements in REIT FFO. As clawback adoption proclivities may include a temporal component, in column 3 of Table 6 we separate our clawback indicator based on the chronological timing of the provision's adoption. More specifically, as outlined by Addy and Yoder ([2]), effective December 29, 2006, SEC Regulation S-K, Section 402(b)(viii) was amended to require disclosure of compensation clawback provisions. Furthermore, as REITs face a regulatory mandate that fiscal year-ends equate to calendar year-ends, these amendments effectively mandate public disclosure of compensation clawbacks for all REITs beginning with fiscal year 2006. Although these public disclosure requirements do not explicitly force firms to adopt clawback provisions (Section 954 of Dodd–Frank does that), relative to the earlier period they invite increased public scrutiny of firm decisions along this dimension. Thus, we identify firms that voluntarily adopted and disclosed clawback provisions before 2006 as “early adopters” and firms exhibiting initial clawback declarations in 2006 or later as “late adopters.”

Table 6 Analysis of Clawbacks and Accounting Performance

	(1)	(2)	(3)
Constant	0.382 (0.39)	0.452 (0.47)	0.791 (0.82)
Clawback	2.779 (3.18)		
Firm Specific		-0.024 (-0.02)	
Regulatory Mandated		11.797 (6.95)	
Early Adopter			-0.079 (-0.08)
Late Adopter			13.056 (7.32)

TA Change	0.546	0.505	0.583
	(1.91)	(1.79)	(2.06)
M-to-B Change	1.453	1.436	1.445
	(6.69)	(6.69)	(6.75)
Leverage Change	0.213	0.125	0.098
	(0.06)	(0.04)	(0.03)
Year fixed effects	Yes	Yes	Yes
No. obs.	1,683	1,683	1,683
R ²	0.051	0.075	0.078

¹⁷ Note: In this table we examine the influence of a clawback on accounting performance. Specifically, we examine the relation between the presence of a clawback and the percentage change in funds from operations (FFO). In addition to examining our simple clawback identifier, we also differentiate between clawbacks along two dimensions. In column 2, we examine firm-specific versus regulatory mandated clawbacks. In column 3, we examine early clawback adopters versus late clawback adopters. We follow Chan et al. ([13](#)) and model the change in a firm's accounting performance as a function of the presence of a clawback, as well as changes in total assets, market-to-book ratios, and firm leverage. Fixed effects for time (year) are also included in all model specifications. The Appendix provides a detailed description of all variables employed throughout this analysis.

¹⁸ ***Significant at the 1% level.

¹⁹ Significant at the 5% level.

²⁰ Significant at the 10% level.

Examining the results in column 3 of Table 6, we find that the positive relation between changes in operating performance (FFO) and the existence of clawback provisions is driven by late adopters. To the extent market discipline, competitive pressures, and/or regulatory foresight responses drive these late adoptions, this finding is consistent with Davis-Friday, Fried, and Jenkins (2011). They find that mandatory clawback adoptions are associated with enhanced market responses to earnings surprises, whereas voluntary clawback adoptions provide little to no certification benefit. Conversely, these findings stand in stark contrast to the predictions of Denis ([22](#)), who argues mandatory (e.g., late) adopters have different incentives from voluntary (e.g., early) adopters, and are likely to pursue relatively weak clawback provisions. Additionally, as Section 954 of Dodd–Frank charges a company's board of directors with clawback enforcement, Denis contends that late adopters will likely lack the enforcement intensity of firms that proactively and voluntarily embraced such structures. The results in column 3 of Table 6 do not support these assertions. Finally, in additional, untabulated analyses we examine the relation between clawback adoption and firm profitability (FFO) across subsamples to explore the impact of several REIT-specific characteristics. Unfortunately, because of the limited size of our subsamples, our comparison tests generally lack power. However, the positive relation between a clawback provision and FFO appears to be concentrated among REITs headquartered in Maryland. Specifically, Maryland REITs with a clawback provision report significantly higher accounting profitability (FFO) than do their in-state peers without such provisions. This is not surprising given the consensus belief that Maryland is relatively promanagement, and thus the potential benefits of constraining managerial behavior are disproportionately high for firms headquartered within the state. It is interesting that REITs not incorporated in Maryland do not report differences in FFO across clawback adoption status.

Summary and Conclusions

The unique features of REITs and REIT markets make them a compelling laboratory in which to further our understanding of the forces at play within the agency and contracting environments affecting compensation policies. In particular, the mandatory distribution requirements of REITs, though limiting their capital retention, effectively forces firms within this industry to frequently return to the capital markets to raise money to fund growth. Therefore, managers of firms within the REIT industry likely have more frequent occasions, as well as

reasons, to engage in earnings management or various other forms of financial misrepresentation in attempts to minimize their costs of capital acquisition. Similarly, the benefits of contracting provisions that mitigate such perverse incentives may be particularly strong within the industry.

Against this backdrop, the current investigation explores the determinants of compensation clawback policy adoptions for REIT organizations. The use and implementation of compensation clawback provisions has grown markedly over the past two decades, notably spurred by the regulatory reforms enacted through both SOX and Dodd–Frank.

Summarizing our core results, we find that clawback provisions are more common among larger and more complex firms, as well as those with enhanced growth prospects, increased leverage, lower cash flows, enhanced monitoring incentives, and larger CEO pay for performance incentive structures. Additionally, we report some evidence that firms with relatively weak governance structures may be more likely to adopt clawback provisions, whereas more powerful and/or entrenched managers may be able to avoid the potentially costly implementation of such provisions. We also find that a firm's growth potential has an impact on clawback adoption and, further, that the presence of a clawback is associated with both enhanced market returns and operating cash flows. These latter operating performance results appear to be driven by relatively late adopters of clawbacks and those whose provisions are more tightly linked with regulatory mandates. Taken together, these findings provide strong support for the notion that compensation clawback provisions are a value-relevant, strategic governance mechanism for firms within the REIT industry.

Appendix: Variable Definitions

Variable Name	Variable Definition
Clawback	Equals 1 if the firm exhibits a clawback in that particular year, and 0 otherwise
Firm Specific	Equals 1 if a firm has a clawback that is uniquely tailored for the firm, and 0 otherwise
Regulatory Mandated	Equals 1 if the firm's clawback provision simply and explicitly recognizes their regulatory right to recoup unjust awards, and 0 otherwise
Early Adopter	Equals 1 for firms that disclose the adoption of a clawback before 2006, and 0 otherwise
Late Adopter	Equals 1 for firms that disclose the adoption of a clawback in 2006 or later, and 0 otherwise
log(Total Assets)	Natural log of a firm's total assets
Tobin's Q	Long-term debt plus debt in current liabilities plus the equity market capitalization of the firm, all divided by total assets
Cash Flow	Earnings before interest and taxes divided by total assets
Stock Performance	Stock return of the firm during the previous year
Return Volatility	Standard deviation of the firm's daily stock returns in the previous year
Leverage	Long-term debt plus debt in current liabilities divided by the book value of debt plus market capitalization of the firm
Investment	Capital expenditures (CAPX) of the firm divided by total assets
Credit Rating	Equals 0 if the debt of the firm is anything other than investment grade (BB+ and below or not available/reported), and 1 otherwise
Restatement	Indicator variable identifying REITS that have issued a restatement in the prior three years (yes = 1), 0 otherwise
Analyst Coverage	Indicator variable identifying REITs that are being actively covered by analysts (yes = 1), 0 otherwise
Institutional Ownership	Shares held by institutions (SHROUT2 in Thomson Reuters Institutional Holdings Master File) divided by the firm's total shares outstanding (SHROUT in Compustat)

Blockholdings	Proportion of the firm held by entities with at least a 5% stake in the company, as reported on the firm's proxy statement
Total Compensation	CEO compensation divided by 1,000, Execucomp TDC1 / 1000
Performance %	Difference between the CEO's total compensation minus base compensation, divided by total compensation
Maryland	Indicator variable identifying real estate investment trusts (REITs) incorporated in Maryland (yes = 1), and 0 otherwise
Board Size	Number of directors on the REIT's board, as reported on the firm's proxy statement
CEO Duality	Indicator variable identifying REITs where the CEO also serves as the chairman of the board (yes = 1), and 0 otherwise
Staggered Board	Indicator variable identifying REITs with staggered boards (yes = 1), and 0 otherwise
Insider Ownership	Ownership of the firm's directors and officers as reported on the firm's proxy statement, as a percentage of total shares outstanding
Board Independence	Number of independent directors divided by the size of the board, as reported on the firm's proxy statement
Poison Pill	Equals 1 if the firm reports the presence of a poison pill antitakeover deterrent, and 0 otherwise

Footnotes

- 1 For example, consider a privately informed CEO of a firm that is preparing a capital offering. If the CEO discloses negative information, the offering will be more difficult to complete and/or the cost of capital will increase. But if the CEO conceals this information, the offering is more likely to succeed and lower the firm's short-run financing costs. However, once the obfuscation is eventually discovered the firm is likely to lose trust, credibility, and goodwill in the marketplace. Ultimately, such actions are likely to hinder or prevent the firm from being able to raise capital on attractive terms (if at all) in the future.
- 2 See, for example, Fisk (26) and Babenko et al. (4) for additional discussion and analysis of the history and background of clawback provisions.
- 3 Although passed and signed into law on July 21, 2010, final implementation rules for many provisions of Dodd–Frank are still pending.
- 4 Fried and Shilon (27) report that despite the widespread attention given to clawback mandates required by Dodd–Frank, by mid-year 2010 nearly half of all S&P 500 firms were yet to institute such recovery provisions. Furthermore, of those firms with clawbacks, the provisions were relatively weak, with 81% granting the board of directors discretion to waive enforcement mechanisms if the board determines the executive in question is not guilty of material misconduct.
- 5 The growth in clawback provision adoption has been even more pronounced among the S&P 500 subsample of firms, increasing from less than 1% of firms in 2000 to nearly 70% of firms by 2011.
- 6 Fung et al. (28) provide a similar analysis and conclude clawback adoptions are associated with reduced fraud risk, but the effects are greatly diminished in the presence of insider trading.
- 7 Support for the benefits of compensation clawback provision adoption within an international context is provided by Allen and Li (3). They demonstrate clawback adoptions are associated with reduced politically connected lending within the Chinese banking sector.
- 8 The American Recovery and Reinvestment Act of 2009 requires firms selling assets to the government through TARP to adopt clawback provisions designed to recoup bonuses and incentive-based compensation illegitimately earned under disclosures later proven to be materially incorrect.
- 9 As noted above, Chan et al. (13), Chan, Chen, and Chen (12), and Gao, Iskandar-Datta, and Jia (29) all report evidence that the quality of the financial data released by the firm increases following clawback

adoption. We also note that a negative relation between investment spending and clawback adoption could result from real transactions management on the part of managers attempting to meet short-term performance benchmarks.

- [10](#) We note that although Institutional Ownership and Blockholdings are significantly related, the correlation is below 0.25, and that our results are qualitatively similar with the inclusion of either metric in isolation.*
- [11](#) See Bettis et al. (7, 8) for additional discussion of performance vesting provisions and their effects on executive compensation.*
- [12](#) Babenko et al (4) find that the executive committee is the primary enforcer of a clawback provision (59.5%), followed by the entire board (33.5%).*
- [13](#) Much like Delaware for S&P 500 firms, Maryland serves as a nexus of incorporation within REIT markets. Of note with regard to managerial entrenchment, Maryland's Unsolicited Takeover Act (MUTA) allows for a variety of defenses against hostile takeovers including, but not limited to, empowering management to stagger or classify the board without shareholder approval.*
- [14](#) Dayha, McConnell, and Travlos (20) find evidence that CEO turnover following poor performance is higher when the CEO does not serve as the chairman of the board.*
- [15](#) Note that in the extreme, high levels of inside ownership could theoretically give a manager complete control over a company's board of directors. Under such a scenario, managers may welcome the adoption of clawback provisions to appease shareholder concerns, with the full knowledge that such provisions would likely never be enforced. Diffuse ownership regulatory requirements within REIT markets, including the 5/50 rule in which the top 5 shareholders may not combine to own more than 50% of an individual REIT's outstanding shares, effectively mitigate this concern.*
- [16](#) Bebchuk and Cohen (5) present evidence that firms with staggered boards have lower valuations.*
- [17](#) Before the REIT Modernization Act of 1999 this threshold was 95%. Given the large depreciation deductions of many REIT organizations, cash flow may dramatically exceed taxable income and thereby weaken the binding nature of this constraint. Consistent with this notion, Wang, Erickson, and Gau (41) document average payout ratios of over 100% for firms within this industry. Nevertheless, the regulation clearly imposes hurdles and constraints to cash-flow retention not faced by firms in other industries.*
- [18](#) In limiting our analysis to a single industry, we must obviously be concerned with the generalizability of our findings. Although the aforementioned mandatory payout requirements likely increase the benefits of clawback provisions for REIT firms, possibly making them more likely to adopt a clawback than similarly situated non-REITs, it should not fundamentally alter the drivers of clawback adoption beyond making them stronger and easier to empirically detect.*
- [19](#) Before the early 1990s, active participation by institutional investors within this market sector was effectively discouraged by unique regulatory provisions. This paradigm evolved rapidly following a series of Internal Revenue Service (IRS) private letter rulings in the latter 1980s and the development of umbrella partnership REIT (UPREIT) organizational forms. Although virtually all REIT market observers agree that the dynamics of the marketplace fundamentally changed during the early 1990s, pinpointing the exact date of this paradigm shift is more difficult. Although many market analysts and observers point to the Kimco Realty initial public offering in 1991 as the beginning of the modern REIT era, it was not until 1993 that the REIT markets began to experience exponential growth. As such, and consistent with several studies in the literature, we choose 1994 as our conservative estimate of the beginning of the modern REIT era and thus the beginning of our sample period. In practice, the actual start date for our analysis makes little difference, as clawback provisions were virtually nonexistent within this market sector until the mid to late 1990s.*
- [20](#) For completeness, additional search strings using variants of each of these keywords were also employed.*
- [21](#) For example, numerous corporate disclosures by Acadia Realty Trust contain the following proviso, "The Compensation Committee is considering the adoption of a policy relating to the recoupment of stock*

awards and their proceeds if an NEO's fraud or misconduct triggers a material financial restatement. No such policy currently exists." Similar language is offered across a variety of filings by Cedar Realty Trust. Their disclosures state, "The Company does not currently have any clawback or other compensation recovery policy with respect to compensation that may have been paid on the basis of incorrect financial results. The Company is considering adopting such a policy in advance of the enactment of new regulations under the Dodd-Frank Act."

- [22](#) In general, these numbers suggest our sample REITs are slightly larger than, but otherwise similar to, the broad cross-section of REITs examined in prior studies (see, e.g., Feng, Ghosh, and Sirmans 25; Boudry, Kallberg, and Liu 2010; Harrison, Panasian, and Seiler 2011).
- [23](#) As with the vast majority of empirical investigations into contracting and corporate-governance-related issues, the potential for endogeneity to significantly influence results and/or their interpretation is present throughout the current investigation. As such, we view our results as identifying previously undocumented correlations between key variables of interest rather than as unbiased evidence of deterministic causation. Further research is needed in this area.
- [24](#) Conversely, but again consistent with prior arguments, we find our ownership metrics to be insignificant. This result may be attributable (at least in part) to the disperse ownership regulations facing this industry.
- [25](#) We note that although some of the clawback provisions provide details regarding the breadth of triggers, depth of coverage, and the body charged with enforcing the provision, most of our sample does not provide details along at least one of these dimensions.
- [26](#) Employing our firm-specific clawback definition yields qualitatively similar results to those reported throughout the remaining analysis.
- [27](#) Although the reported results split our sample at the median, in untabulated tests we observe qualitatively similar results examining high and low market-to-book terciles.
- [28](#) Although not explicitly reported, to ensure completeness and econometric integrity, model specifications in column 3 of Table also include the main effect terms for each interactive variable.
- [29](#) Despite these limitations, in unreported regression results we attempt to measure the wealth effects of clawback provision adoption using standard event-study methodology techniques and employing the filing date of the company's first public disclosure containing reference to the clawback provision as the event date. These efforts met with limited success.
- [30](#) The positive alphas reported for REIT returns in Table are consistent with the findings of Kallberg, Liu, and Trzcinka (35).
- [31](#) For extended discussions of the relative dominance of FFO as a performance benchmark within REIT markets, see Gore and Stott (30), Vincent (40), Graham and Knight (31), Stunda and Typpo (39), and Ben-Shahar, Sulganik, and Tsang (6).
- [32](#) We thank Drew Winters, the editor, and an anonymous referee for valuable comments and suggestions throughout the review process. In addition, we thank Nga Nguyen, Nga Trinh, and Kyle Allen for valuable research assistance. Any remaining errors are, as always, our own.

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Graph: I Percentage of Real Estate Investment Trusts with a Clawback.

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By George D. Cashman; David M. Harrison and Christine A. Panasian

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