Do Clawbacks have Claws?
The Value Implications of Mandatory Clawback Provisions*

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Abstract

On July 1, 2015 the SEC proposed Rule 10D-1 mandating companies to adopt a clawback provision, which requires the recoupment of erroneously awarded performance-based compensation from executives. We study the value implications of having a clawback provision by examining the stock market's reaction to the proposal of Rule 10D-1. We find that relative to firms that had voluntarily adopted a clawback provision prior to the SEC's announcement, firms that did not have a clawback provision experienced positive abnormal returns, suggesting that clawback provisions are value-enhancing. Moreover, the value of a clawback provision is increasing in the portion of executive pay consisting of bonus payments and the value of a clawback provision is highest when CEOs have greater power over the board.

PRELIMINARY AND INCOMPLETE

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1. Introduction

Principal-agent models (e.g., Holmstrom, 1979) advocate awarding firm managers performance-based compensation to align their interests with those of shareholders. However, as managers are also responsible for reporting performance, they have an incentive to misreport financial information (Burns and Kedia, 2006, Efendi, Srivastava and Swanson, 2007). This incentive can be mitigated by a clawback, which allows a firm to recoup previously awarded performance-based compensation from executives when a misstatement discovered in the firm's financial reports implies that the compensation should not have been paid out.

Clawbacks have been the focus of regulatory actions taken by SEC, first being written into Section 304 of the Sarbanes Oxley Act (SOX) in 2002. Although the SEC has rarely enforced SOX 304, since its writing, an increasing number of firms have voluntarily adopted a clawback provision in some form, sometimes as a result of pressure from investors, according to whom clawbacks "will increase transparency, encourage executive pay-for-performance and discourage senior executives from engaging in behavior that could cause significant financial harm to the company." (Silverman, 2013).

While the adoption of clawback provisions may be associated with improvements in financial reporting (e.g. Chan, Chen, Chen and Yu (2012)), it may also lead to undesirable outcomes such as an increase in compensation (e.g. (Babenko, Bennett, Bizjak and Coles, 2015). Therefore, although clawback provisions have been advocated by some market participants, it remains unclear whether their potential benefits outweigh their costs. Furthermore, drawing inferences about the impact of clawbacks by examining the voluntary adoption of clawback provisions that has taken place to date presents significant challenges (Denis, 2012). The ultimate question of whether clawback provisions are value-enhancing is therefore yet to be satisfactorily answered and is the subject of our paper.

On July 1, 2015, the SEC announced proposed Rule 10D-1 to implement section 954 of the Dodd Frank Act. Rule 10D-1 would require U.S. stock exchanges to create listing standards requiring listed firms to enforce policies which direct the board to claw back erroneously awarded incentive pay from executive officers. The objective of the proposal was summarized by the Chair of the SEC, Mary Jo White, who stated that "executive officers should not be permitted to retain incentive-based compensation that they should not have received in the first instance, but did receive because of material errors in their companies' publicly reported financial statements."

The proposed rule would require the recoupment of any incentive-based compensation paid to any executive officer during the preceding three fiscal years should an accounting restatement take place. The amount clawed back would be the amount received by the executive in excess of what they would have

received based on the restated information. Finally, the proposed rule would leave the board with little discretion over whether or not to claw back erroneously awarded incentive based pay. In particular, the rule would require a clawback to take place regardless of whether the executive was at fault for the accounting restatement. Only in the event that the costs of recovering the pay exceed the amount to be recovered, would the board have the choice to not claw back pay from the executive. Lastly, the proposed rules require detailed disclosure of not only the firm's clawback policy, but also details regarding when and how the policy was applied.

We argue that the announcement of proposed Rule 10D-1 provides a source of exogenous variation in clawback policies and can thus be used to study the impact of clawback provisions on firm value. In particular, the proposal by the SEC constitutes an increase in the strength of clawback provisions for the great majority of firms and resolved uncertainty that existed about the implementation of section 954 of the Dodd-Frank act. Furthermore, to the extent that existing clawback provisions that were voluntarily adopted by many firms were effective, we argue that firms without a clawback provision are likely to be affected more by the SEC's announcement of 10D-1 than firms with an existing clawback provision.

We focus on firms that constituted the S&P 1500 index at the time of the announcement and identify voluntary adopters of clawback provisions by searching through SEC proxy filings (DEF 14A), annual reports (10-K) and current event filings (8-K) for disclosure on the existence of a clawback provision. 76% of firms in our sample disclose that they have a clawback provision in place prior to the announcement of Rule 10D-1.

We examine the market reaction to the SEC announcement and compare the cumulative abnormal returns (CARs) for firms that did not have a clawback provision at the time of the announcement and those that did. We find that firms without an existing clawback provision on average experience positive and statistically significant abnormal returns around the SEC announcement and that firms with a clawback provision do not. Furthermore, the difference between the average CARs of the firms without a clawback provision and those with a clawback provision is statistically significant. Therefore, relative to firms with an existing clawback provision, the market reacted positively to the SEC announcement for firms that did not have a clawback provision. Our results therefore suggest that while clawback provisions may have undesirable consequences that destroy value, on average the net impact of a clawback provision on shareholder value is positive.

We also find however, that there are statistically significant differences in observable firm characteristics between firms that have an existing clawback provision and those that do not. For instance, voluntary adopters of clawback provisions tend to be significantly larger on average than non-adopters.

To ensure that such differences do not explain our results, we construct a matched sample. Specifically, we match every firm that does not have a clawback provision to a firm in the same 2-digit SIC industry that has a clawback provision and is closest in size. This approach results in samples of firms without and with a clawback provision that are on average comparable in observable firm characteristics. Examining the CARs for our matched sample confirms our main result that clawback provisions have a positive impact on shareholder value.

Our results are also confirmed by regression analysis that allows us to control for observable characteristics, such as size and firm performance, which may be associated with abnormal returns. We regress the abnormal returns around the SEC announcement on an indicator for firms that did not have a clawback provision and find that after controlling for observable characteristics, firms without a clawback provision experienced higher abnormal returns than those that did.

While our results indicate that clawback provisions are value-enhancing on average, it is important to note that given heterogeneity in firm characteristics, the magnitudes of the various costs and benefits of clawback provisions could vary across firms. Moreover, as noted by Larcker, Ormazabal and Taylor (2011), the reaction to the introduction of corporate governance regulations is expected to be greatest for firms that are impacted the most by the regulations. Accordingly, we examine other characteristics of firms that indicate they are more likely to be affected by the introduction of the proposed Rule 10D-1, and are therefore expected to exhibit a greater reaction the SEC's announcement of the proposed rule.

Clawback provisions specifically provide for the recoupment of incentive-based compensation, such as bonuses. As bonuses are contingent on measures of performance such as earnings, determining the amount of bonus compensation to be recouped following a restatement is relatively straightforward. In contrast, it is more challenging to determine the amount of stock-based compensation to be recouped as this would require assessing what the firm's stock price would have been in the absence of errors in its financial statements. Moreover, executives who receive higher bonus payments relative to their overall pay have a greater proportion of their compensation subject to recoupment in the event of a clawback. We therefore expect firms that pay a larger portion of their compensation as bonuses to be more impacted by the adoption of a clawback provision. Consistent with this we find some evidence that the market reaction to the SEC announcement of 10D-1 is increasing in the fraction of the CEOs total pay consisting of bonus payments. This suggests that clawbacks are more value-enhancing in firms where the potential to recoup compensation from executives is greatest.

Firms where agency problems are greater may benefit the most from having a clawback provision because opportunistic misreporting may be more likely (e.g. Efendi, Srivastava and Swanson (2007)). In

these firms, managers may also be able to discourage the board from adopting a clawback policy, persuade the board to adopt a weak clawback policy or use their influence to prevent the board from enforcing an existing clawback policy. We therefore expect that firms where agency problems are greater to experience a larger positive value effect from the adoption of a clawback provision. To test this we focus on two measures of CEO power: (i) if the CEO is also the chair of the board (e.g. Adams, Almeida and Ferreira (2005)) and (ii) if the board is co-opted (Coles, Daniel and Naveen, 2015). We find some evidence that among firms without a clawback provision, only firms with powerful CEOs experienced a positive market reaction to the SEC announcement relative to firms with a clawback provision. Overall this result suggests that clawback provisions are most valuable when CEOs have more power, and that they may be beneficial in limiting rent extraction by powerful managers.

Existing research has mainly focused on the voluntary adoption of clawback provisions, which have been associated with benefits such as improvements in financial reporting practices (Chan et al., 2012, Chan, Chen, Chen, 2013, Dehaan, Hodge and Shevlin, 2013) as well as unintended consequences such as higher pay and real activity management (Chen, Greene and Owers, 2015, Chan, Chen, Chen and Yu, 2015, Babenko et al., 2015). Our study contributes to the discussion on the benefits and costs of mandatory clawback provisions (e.g. Fried (2016)) by showing that mandatory clawbacks are value-enhancing on average. Furthermore, by showing that the value of a clawback is increasing in the portion of compensation subject to recoupment and the extent of managerial power, our study also sheds light on how clawbacks enhance value.

Iskandar-Datta and Jia (2012) and Chen et al. (2015) both document that the market reacts positively to the voluntary adoption of clawback provisions by individual firms. Denis (2012) however points out that the inferences one can draw from examining voluntary adoptions are limited. For instance, one concern is that a positive market reaction to the voluntary adoption of a clawback may by a response to more general improvements in governance and reporting practices rather than the value created by a clawback provision specifically. Another concern is that a positive market response to voluntary adoptions does not imply that clawbacks are value-enhancing in general, but instead that clawbacks are voluntarily adopted only by firms for whom they are value-enhancing. A key departure of our study from existing research on clawback provisions is that we focus on the introduction of a proposed rule by the SEC, which we argue conveyed new information to the market about mandatory clawback provisions. By showing that firms without a clawback provision exhibited a positive market reaction to this event relative to a control group of firms which had already adopted a clawback provision, we are able to better identify the impact of adopting a clawback provision and address potential endogeneity concerns.

Our study fits into a large literature that examines the impact of corporate governance practices on firm value (e.g. Gompers, Ishii and Metrick (2003); Cuñat, Gine and Guadalupe (2012)). More specifically, our study contributes to a debate on the value impact of regulatory actions on executive compensation practices and corporate governance practices in general. Cai and Walking (2011), for instance, find that mandatory say-on-pay votes create value for some companies and destroy value for others. Larcker et al. (2011) also examine market reactions to various corporate governance regulatory actions and find that firms whose existing governance practices are most inconsistent with the proposed regulations exhibit negative market reactions. This is consistent with the view that existing governance choices of firms reflect optimal contracts between shareholders and management and that government-imposed governance choices are value-destroying. In contrast, we find that firms whose existing governance practices are most inconsistent with the proposed rules on clawbacks, i.e. those without a clawback provision, those that pay relatively larger bonuses, and those where CEOs have more power, exhibit more positive market reactions. This is consistent with the view that existing governance choices may be sub-optimal and that government-imposed governance practices can enhance value. This view is also supported by recent work by Cohn, Gillan and Hartzell (2016) who examine events related to the SEC's rulings on proxy access and show that greater shareholder control is value-enhancing.

2. SEC's Proposed Clawback Rules (Rule 10D-1)

In this section we first provide details on the SEC's July 1, 2015 proposal to impose clawback policies. Second, we discuss how the newly proposed clawback rules compare to both (i) existing clawback rules and (ii) voluntary clawbacks adopted by firms.

On July 1, 2015 the SEC proposed new clawback rules (rule 10D-1; hereafter also referred to as 'the proposal' or 'the proposed clawback rules') as mandated under section 954 of the Dodd Frank Wall Street Reform and Consumer Protection Act. The proposed rules require that stock exchanges impose listing standards which oblige firms listed on the exchanges to develop and enforce policies which direct the board to claw back erroneously awarded incentive pay from executive officers. As summarized by the SEC Chairman Mary Jo White the proposal sought that "executive officers should not be permitted to retain incentive-based compensation that they should not have received."

The specifics of the proposed clawback rules are as follows. First, the clawback would be triggered by an accounting restatement. Second, the clawback policy would apply to incentive based compensation received by an executive officer during the three fiscal years preceding the date the accounting restatement is triggered. Incentive based compensation is defined as any compensation that is granted, earned or vested based wholly or in part upon attainment of any financial reporting measure, including

stock price and total shareholder return (TSR). The executive officer definition is broad and includes not only NEOs but also any vice president in charge of a principal business unit and any other person who performs policymaking functions for the company.

Third, the amount clawed back would be the amount received by the executive in excess of what the executive should have received based on the restatement. Fourth, the clawback would apply regardless of whether the executive was at fault for the accounting restatement. Fifth, boards have little discretion with regard to when to claw back erroneously awarded incentive based pay. It is only in cases in which the costs of recovering the pay exceed the amount to be recovered that boards can use their discretion to not claw back pay from the executive. Lastly, the proposed rules require detailed disclosure of not only the firm's clawback policy, but also details regarding when and how the policy was applied (or not applied).

Prior to the SEC's proposal, existing clawback policies were of two forms: (i) clawbacks as mandated by section 304 of the Sarbanes-Oxley Act (SOX) and (ii) voluntary clawback policies adopted by firms. Next we discuss how the SEC 2015 clawback proposal compares to (i) and (ii). Section 304 of SOX requires firm to claw back any bonus, incentive or equity based compensation received by the CEO or CFO in the 12 months following an accounting restatement that results from material noncompliance with financial reporting requirements.

The proposal reaches significantly further than section 304 and therefore results in stronger clawback policies. First, while section 304 requires the accounting statement to be due to misconduct on the part of the officer from whom pay will be clawed back, the proposal applies to all officers covered by the proposal regardless of fault. As misconduct is not only difficult to discover, but can also be difficult to prove in court (Fried 2016), this change results in considerably stronger clawback provisions. Second, section 304 was enforced by the SEC which pursued few enforcement actions due to limited resources. Unlike section 304, the proposed clawback rules are enforced by the boards with limited discretion and the firm would be subject to delisting if the board does not comply with the 10D-1 clawback rules. This difference between 10D-1 and Section 304 also suggests that the proposed clawback rules are likely to have significantly more potency than section 304.

Another type of clawback policy that was in place prior to the proposal were voluntary clawbacks. These have become increasingly popular and had been adopted by 90% of Fortune 100 companies and 1000 out of 4800 issuers that will be affected by 10D-1. In our sample 76% of S&P 1500 companies have adopted clawback policies. How do the voluntary clawback provisions compare to the 10D-1 rules?

Babenko et.al (2015) analyze the details of voluntary clawbacks policies. They find significant heterogeneity in voluntary clawback policies. Some general themes of voluntary clawback provisions are as follow: Relative to the proposal, voluntary clawback policies often have more triggers (i.e., not just accounting restatements) and cover more pay (i.e., often up to full amount compared to only the portion associated with the clawback event for the proposal). However, voluntary clawbacks tend to only cover executives that were directly responsible for the clawback event and offer the board significant discretion with regard to whether to trigger the clawback. In contrast, 10D-1 applies to all executives regardless of responsibility and provides the board with very little discretion.

In fact, a closer examination of the evidence suggests that existing voluntary clawback policies were not that robust. Fried (2016) finds that 81% of voluntary clawbacks adopted by S&P 500 firms provided discretion to the board as to whether or not to claw back pay from executives. Moreover, 86% of firms would only claw back pay in the event of misconduct by the executive. Finally, Babenko et al. (2015) show that none of the 232 firms in the S&P 500 that had a voluntary clawback in place and experienced an accounting restatement, used the clawback provision to recoup pay from executives. Thus, not only do most voluntary clawback provisions offer significant discretion to the board, but in practice the board makes use of this discretion to avoid activating the clawback policy. For this reason, the newly proposed clawback rules (10D-1) are for almost all firms stronger than the existing voluntarily clawback policies that firms had put in place before the announcement of 10D-1.

3. Value Implications of Clawback Provisions

Here we lay out the advantages and disadvantages for shareholders of mandatory clawback provisions and how they are likely to affect firm value. We start with the advantages. The main rationale for clawback provisions is to deter the manipulation of earning and misreporting of financial statements. Because a clawback provision enables boards to recoup erroneously awarded pay ex-post, it can provide a deterrent for managers to misreport financial information. This deterrent to misreporting is due to both (i) the recoupment of managers' erroneously awarded incentive pay ex-post and (ii) the reputational cost associated with public disclosure of the enforcement of clawback provisions which in turn could lead to reduced employment prospects for managers (Desai et al. 2006). By this rationale, clawback policies should lead to more accurate financial statements, less manipulation of financial reports and fewer accounting restatements. This is beneficial for investors as more accurate financial reporting is expected to lower the asymmetric information between managers and outside investors and lead to a favorable impact on the firm's cost of capital and stock liquidity (Diamond and Verrecchia (1991)). Moreover, the reduction in the probability of accounting restatements strengthens investor confidence in the veracity of

the financial information disseminated by the firms. In turn this can decrease the perceived uncertainty associated with the firm securities and increase firm value.

Bebchuk and Fried (2003) argue that powerful CEOs can influence the terms of their own compensation contracts at the cost of shareholders. Thus, another advantage of mandatory clawbacks regulation, similar to other mandatory governance regulation, is that it may restrain the behavior of powerful managers. Due to their power and influence over the board, these managers may be able to dissuade the board from imposing a clawback policy, convince the board to implement a weak clawback policy or use their influence to prevent the board from enforcing an existing clawback policy. Worse, these managers are also more likely to get away with manipulation of financial statements and therefore arguably their firms would derive more benefits from an effective clawback policy relative to the average firm. By making strong clawbacks mandatory 10D-1 counteracts the power of such managers which in turn increases shareholder wealth.

There are several potential disadvantages to shareholders that are associated with mandatory clawback provisions. First, mandatory clawback provisions may lead to higher levels of executive compensation. This is because clawback policies may increase the managers' perceived risk of compensation contracts. To counteract this, optimal contracting theory suggests that boards may offer compensation contracts with higher levels of pay (Chen, Greene and Owers 2014). Consistent with this Babenko et al (2014) and Dehaan et al. (2011) find that voluntary adopters of clawback policies have higher total pay following adoptions; however, Iskandar-Datta and Jia (20113) do not find any changes in compensation contracts following voluntary adoption of clawback policies.

Second, clawbacks have two counteracting effects on pay-performance sensitivity. On the one hand, the higher perceived risk imposed on the executive by the clawback policy (due to the potential for ex-post recoupment of paid compensation), increases the risk premium of the compensation contract which could result in a lower optimal pay-performance sensitivity. On the other hand, more accurate reporting should enhance optimal pay-performance sensitivities in executive compensation contracts (Goldman and Slezak (2006), Fried and Shilon (2011)). In sum, the net effect of clawback provisions on pay-performance sensitivity depends on the relative magnitude of these two effects. If the former effect outweighs the latter, firms may end up with lower pay-performance sensitivity which can lead to a potential reduction in shareholder wealth (Bhagat and Romano, 2009). Iskandar-Datta and Jia (2013) find no association between performance-based compensation (including bonus pay) and voluntary adoption of clawback policies; however, Babenko et al (2014) find that adoptions of such clawback policies increase equity-based compensation.

Third, mandatory clawback imposes the same required minimum clawback policy on all firms (firms can choose to have more stringent clawbacks). In the absence of regulation, firms can voluntarily adopt of clawback provisions that are optimally tailored to their needs. That is, they would only adopt clawback provisions for which the benefits outweigh the costs. Therefore, if voluntary adoption is done optimally, shareholders should experience an increase in wealth when firms adopt clawback provisions. However, this may not be true in the case of a mandatory clawback regulation such as 10D-1 (Denis 2012). This is because for some firms the costs of mandatory clawback provisions may be higher than the benefits, making mandatory clawback provisions value-destroying for these firms.

Moreover, firms that had stronger clawback policies relative to the 10D-1 mandate may revert to the required minimum level instead of having a unique yet optimal clawback policy (Denis 2012). This is a concern for any regulatory prescription as it could be replacing a superior precautionary policy or a more appropriate disciplinary course of actions. For example, in the context of mandatory clawback provisions a board that might otherwise have imposed harsher penalties for a particularly atrocious financial misstatement could instead settle for the sub-optimal government-mandated disciplinary action.

Fourth, mandatory clawback provisions could create the illusion regarding the quality of disclosed financial information. Consequently, auditors may scrutinize financial statements less which potentially lowers the reporting quality of financial statements. Chan, Chen, Chen and Yu (2012) find that voluntary adopters of clawback policies issue more credible earnings statements and are less likely to restate earnings, but auditors spend less time auditing their financial statements. Although these findings are consistent with clawbacks leading to higher quality financial statements (Chan et.al 2014), they are also consistent with more lenient and insufficient audits (induced by the perception that financial statements are more accurate) reducing the likelihood of detecting misstatements. Thus, the lower number of restatements and the less time spent by auditors for voluntary adopters of clawbacks could be a sign of destruction of shareholder value as opposed to the value- increasing explanation provided by Chan et al (2012).

Fifth, mandatory regulations such as 10D-1 have compliance costs. As 10D-1 applies to all listed firms such compliance costs may be significant for smaller issuers who unlike larger issuers are less likely to be able to cover the fixed costs of compliance.

The disadvantages discussed above are broad and apply to the imposition of mandatory clawback policies in general. Next we discuss some unintended consequences of the specific mandatory clawback provisions (10D-1) we study in this paper. One such unintended consequence of 10D-1 is that it could make it less likely that boards issue financial restatements. This is because under the proposed rules,

clawback policies are only triggered if a firm issues a financial restatement. Interestingly, the board retains significant discretion in regard to whether and when to issue a financial restatement. Thus, boards may choose not to restate an erroneous financial statement in order to avoid triggering the clawback. Consider the case in which an executive manipulates the firm's performance by a small amount to beat a discontinuous or kinked performance threshold in that executive's bonus contract. Here boards may be tempted to let the manipulation slide as triggering the clawback would force them to claw back earnings from all of the executives covered by 10D-1. These tendencies may be even more pronounced if the CEO is powerful. This unintended consequence comes at the cost of shareholders as it reduces the accuracy of disclosed financial information.

Another unintended consequence is that 10D-1 may give firms an incentive to tilt compensation away from incentive compensation that is tied to financial performance metrics towards incentive compensation that is tied to more subjective metrics. Specifically, the clawback requirements could lead to firms substituting compensation that is awarded contingent on financial measures such as earnings or stock return (these are subject to being clawed back under 10D-1) towards compensation that is tied to more subjective or operational metrics (i.e., metrics that are not reported in financial statements) in order to avoid clawbacks. This could have adverse incentive effects and potentially reduce pay-performance sensitivity.

A final unintended consequence of rule 10D-1 is that it could give firms incentives to substitute earnings management (which could trigger clawbacks) with potentially much costlier real activity management (Fried 2016). Consistent, with this Chen et.al (2015) find evidence that some firms that voluntarily adopted clawback policies, engaged in less accrual management, but more real transactions management such as cutting selling, general and administrative expenses (SGA), advertising expenses or research and development expenditure (R&D).

Given the benefits and costs of mandatory clawback requirements, whether or not clawback policies increase or decrease firm value is an empirical question. Next, we argue that the announcement of 10D-1 can be used to help answer this question.

4. Identification Strategy

In this section we argue why the announcement of the SEC's proposed clawback rules constitutes a nice setting for studying the effects of clawbacks provisions on firm value. Identifying how clawbacks affect firm value necessitates a source of exogenous variation in clawback policy. Absent such variation it is tricky to untangle the impact of clawback policies from other factors that affect firm value. For instance, any positive association between voluntary adoption of clawback policies and firm value could

be explained by a selection effect. That is, firms adopt clawbacks only if they believe they are value enhancing. Alternatively, the positive association could be due to a signaling story. Boards adopt clawbacks as part of a broader strategy designed to improve governance through better monitoring and reporting quality. Thus, the positive association may be due to expected improvements in governance or reporting quality rather than the adoption of the clawback.

We argue that the SEC's July 1, 2015 announcement of the proposed clawback rules (rule 10D-1) provides a source of exogenous variation in clawback policies that can be used to identify the impact of clawback provisions on firm value. As we contend in Section 2 above, rule 10D-1 represents a stronger clawback policy than existing rules (Section 304 spawned by SOX) as well as the great majority of voluntary clawback policies. In other words, the proposal by the SEC constitutes an increase in the strength of clawback provisions for the great majority of firms.

Although the new clawback rules represent broader and more stringent clawback policies, to be able to use the announcement of the proposal on July 1 to identify to impact of stronger clawbacks on firm value, it is critical to consider how much new information was released on July 1. It is certainly possible that much of the information contained in the proposal was already priced. First, the broad strokes of the likely clawback legislation were specified in Section 954 of the Dodd-Frank financial reform of 2010. Section 954 set forth that all listed companies adopt clawbacks policies that would claw back incentive based compensation from executive officers that was awarded erroneously and received during the 3 year period prior to the accounting restatement. The language in Section 954 was also consistent with, but did not explicitly state, that pay would be clawed back even in the event of no fault by the executive and that the board would have limited discretion to determine if pay should be clawed back. In addition, a June 2 article in the Wall Street Journal leaked some key information regarding the upcoming clawback rules. The article states that according to insiders, the proposal will be unveiled July 1 and also sheds light on some of the likely contents of the proposal.

Nonetheless, significant uncertainly remained regarding important details of the legislation. First, many key terms in Section 954 need to be elaborated further. For instance, how many executive officers are covered by the clawback, when do clawback-triggering financial restatements have to be issued and how much discretion does the board have in regards to this, what parts of incentive-based compensation can be clawed back, what type of actions constitutes material noncompliance and trigger clawbacks, how much discretion would the board have in regard to whether or not to trigger the clawback etc. Clarifying these details is vital for determining the strength of the clawback rules as well as whether the proposed clawbacks were stronger than the voluntary clawbacks that many firms already had in place. Second,

statements by key players suggest that much of this uncertainly was resolved late in the process. SEC Commissioner Michael Piwowar states in a dissent to the proposal that "up until two weeks ago, I was fully prepared to vote in favor of the proposal until significant changes were made that, in my opinion, were unsupportable." This suggests that late changes were significant enough to change the mind of at least one of the five voting members.

Another important point is how the proposal announced on July 1 compared to market expectations. Did the market expect the proposal to be stronger or weaker than what was announced? The final vote in favor of the proposal was close at three votes in favor and two against (the vote was along party lines with democrats voting in favor and republicans against). In his dissenting opinion Michael Piwowar suggests that he voted against as the proposal was too broad and too stringent and allowed firms too little discretion. In a second dissenting opinion, SEC Commissioner Michael Gallagher puts forward the view that changes in the proposal to (i) expand the definition of executive officer and (ii) to include strong language such as that the clawback would apply "without regard to fault", motivated his decision to vote against. Both dissenters state that they are not against clawback rules per se, but that the proposal as issued was too prescriptive, too broad and too strong. This evidence is suggestive that the late changes to the proposal made the clawback rules stronger. Given the evidence above we therefore posit that the July 1 announcement of the proposed mandatory clawback rules constitutes an exogenous shock to the strength of clawback provisions (i.e., a positive shock to clawback provisions).

We argue that firms that had adopted a voluntary clawbacks prior to July 1st are less likely to be affected by the shock to clawback provisions. As discussed in the previous section, there was significant heterogeneity in voluntary clawback policies. Nevertheless, most voluntary clawbacks contained at least some of the provisions that were made mandatory with 10D-1. In fact, some voluntary clawbacks contained provisions that were stronger than the respective provisions in the proposed clawback rules. Thus, it is likely that firms with voluntary clawback policies were less affect by the SEC's announcement of 10D-1 than firms without clawback policies. In this sense, voluntary adopters can be considered the control group while firms without clawbacks are the treated group. We use this framework to test whether the firms in the treated group were differentially affected by the shock to clawbacks relative to the firms in the control group. This setup helps rule out common trends that could bias our results. That is, if there is another event that leads to abnormal returns and coincides with our event windows, it would have to affect our treated and control group differentially to contaminate our findings.

5. Data and Sample Construction

Our sample consists of firms that constituted the S&P 1500 index as of June 2015. Imposing the requirement of data availability from Compustat, Execucomp and CRSP to construct our variables of interest (see Table A1 for definitions), results in a sample of 1475 firms.

Identifying Firms with Clawback Provisions

To identify whether our sample firms have a clawback provision, we follow the procedure detailed by Babenko et al. (2015). We use a script to search through all form 8-K's, 10-K's and proxy filings filed with the SEC between January 2014 and June 2015 to determine if the firm discloses having a clawback provision. We flag filings which describe a clawback provision by searching for the expressions used by Babenko et al. (2015).[4] Next, we read through each filing that our script flags as describing a clawback policy to verify that the firm indeed has a clawback policy. This step is necessary because our also script flags some firms that did not have a clawback provision as having one.[5]

1123 firms disclose that they have a clawback policy in place. The remaining 352 firms either explicitly declare that they do not have a clawback provision in place or do not disclose that they have a clawback provision. Like Babenko et al. (2015) and others, we assume that firms that do not disclose having a clawback provision do not have one in place. The details of voluntary clawback policies that firms have in place vary in terms of the employees that the policy is applicable to, the length of time over which the clawback applies, the type of compensation covered. Two examples of excerpts from firms' SEC filings that describe clawback policies are as follows:

Excerpt 1

> *"Under our Annual Incentive Plan and long-term incentive plan, in the event of a restatement of financial results to correct a material error or other factors as described in the long-term incentive plan, the Committee is authorized to reduce or recoup an executive officer's award, as applicable, to the extent that the Committee determines such*

[4] The Boolean search expressions are; clawback!; claw! w/4 back!; compensat! w/6 recover!; compensat! w/6 recoup!; recoup! w/6 provision!; recoup! w/6 polic!; recoup! w/6 award!; recover! w/6 award!.

[5] An example of such an occurrence would be when a firm explicitly mentions that they do not have a clawback provision. Another example is, as Babenko et al. (2015) point out, when the term clawback refers to a provision of a lending agreement rather than a compensation clawback policy.

executive officer's fraud or intentional misconduct was a significant contributing factor to the need for a restatement."

Excerpt 2

"In 2012 the Company's Board adopted a Clawback Policy. All equity and non-equity incentive plan compensation granted by the Company in 2013 and thereafter will be subject to this Clawback Policy. The policy provides that if an accounting restatement is required due to the Company's material non-compliance with any accounting requirements, then all of the Company's executive officers, regardless of whether they were at fault or not in the circumstances leading to the restatement, will be subject to forfeiting any excess in the incentive compensation they earned over the prior three years over what they would have earned if there had not been a material non-compliance in the financial statements."

The first excerpt is more typical of the firms in our sample that have a clawback policy. A typical policy covers all NEOs and applies to any incentive-based compensation paid up to 3 years before any restatement. These are features shared by the version of the clawback proposed in rule 10D-1. As in excerpt 1 ("…the Committee is authorized to…"), many firms maintain that the board reserves discretion to exercise the clawback. Some firms elaborate that the clawback will be exercised if the board deems the restatement to be a result of misconduct or negligence by the executive in question. In contrast, the proposed rule limits the discretion of the board in exercising the clawback, as it explicitly states that recovery of compensation would be triggered on a "no fault" basis. That is, regardless of whether the executives are responsible for the error or not.[6] The second excerpt from a voluntary clawback adopter is less typical in that it appears not confer discretion on the board and is thus more similar to the terms of the proposed rule.

Firm Characteristics

Table 1 compares the characteristics of firms that disclose having a clawback provision to firms that do not. All variables are measured for the fiscal year 2014. The table reports the means and medians of the firm characteristics between firms that did not have and had clawback provisions and the respective differences with p-values. The table indicates that there are statistically significant differences in the means and medians of several firm characteristics. Relative to firms that had a clawback provision, firms

[6] The terms of proposed rule 10D-1 does permit discretion to the board in the event that the cost of recovering erroneously awarded compensation exceeds the amount recoverable.

that did not have a clawback provision are on average substantially smaller as measured by total assets, market capitalization or sales, hold more cash (mean only), are less levered, and have lower Tobin's Q. They also have more tangible assets on average and pay their CEOs less.

As our goal is to examine the difference in the market reaction to the proposed rule between firms without and with a clawback provision, the differences noted in observable firm characteristics may be of concern if they are also correlated with cumulative abnormal returns (CARs) around July 1st.

To address this issue we construct a matched sample of firms with clawback provisions for the sample of firms without a clawback provision. In particular, we match each firm that does not have a clawback provision to a firm that has a clawback provision within the same 2-digit SIC industry that is closest in size (natural log of total assets). We exclude 7 firms that do not have a clawback provision which belong to 2-digit SIC industries for which we are unable to obtain a match. In total we are therefore able to obtain matches for 345 firms that do not have a clawback provision. We allow a firm with a clawback provision to serve as a match for multiple firms that do not have a clawback provision (i.e. we match with replacement). Table 2 compares characteristics of the 345 firms that do not have a clawback provision to the matched sample of firms that did not have a clawback provision and shows that our simple matching progress results in a matched sample of firms with clawback provisions that are more comparable in observable characteristics to firms without a clawback provision. After matching, there are no statistically significant differences in the means and medians of the firm characteristics, except for total CEO pay (median only) and the portion of total CEO pay consisting of bonus payments (median only). Finally, a greater proportion of firms without a clawback provision have a CEO-Chair than firms with a clawback (39% vs. 46%).

6. Empirical Results

In this section, we examine the cumulative abnormal returns (CARs) around SEC's announcement of proposed rule 10D-1. We compute the CARs using standard event study methodology and employ a 4-factor return model (Fama and French, 1993, Carhart, 1997).

Figure 1 plots the CARs around the SEC announcement on July 1, 2015, starting 5 days before and continuing for 20 days after the announcement. Separate graphs are plotted for the firms without a clawback provision, the firms with a clawback provision, and the two samples combined. The graph illustrates that a difference in the CARs between firms without a clawback and those with appears to begin about 2 days before the SEC announcement. Firms without a clawback have higher CARs and the difference continues to increase 4 days after the announcement and persists over the 20 days after the announcement. As noted from Table 1 however, significant differences in observable characteristics are

observed between firms without and with a clawback provision. To ensure that the two groups of firms are comparable in observable firm characteristics, in Figure 2 we plot a similar graph for the matched sample described in the previous section and summarized in Table 2.

The graph shows that the average announcement return for the combined sample begins to increase 2 days (day -2) before the announcement, decreases on day -1 and continues to increase until day +4 where it peaks at about 0.7%. Separately examining the firms without a clawback provision and the matched sample shows that the average CAR for the firms without clawback provisions increased relative to the matched sample between day -2 and day +2. In fact, after day -2, the average CAR for the matched sample decreased slightly until day +2 before increasing. This pattern is consistent with a positive value impact around the July 1 announcement for firms without clawback provisions relative to firms in comprising the matched sample. However, given that the reaction begins 2 days before the announcement, this suggests that anticipation and potential leakage of information may have taken place prior to the announcement.

Event study tests

We further examine the CARs around the SEC announcement illustrated in Figures 1 and 2 by testing whether the CARs are statistically significant, as well as by comparing the differences in CARs between firms with and without clawback provisions.

As Kolari and Pynnonen (2010) point out, because all the firms in our sample are subject to the same event date, a concern that applies to our setting is that cross-sectional correlation between firms can lead to over-rejection of the hypothesis the average abnormal returns around the event date are zero. Another concern relevant to our setting, discussed by Boehmer, Musumeci and Poulsen (1991), is that increases in return variance induced by events such as the SEC announcement can also result in over-rejection of the hypothesis of zero-average abnormal event returns. Therefore, in our subsequent analysis where we evaluate whether CARs are statistically different from zero, we employ a test-statistic proposed by Kolari and Pynnonen (2010), which they show overcomes these two issues.

Table 3 reports the CARs for three different windows relative to the SEC announcement date ((-1,0), (-1,+3) and (-2,+2)) for our full sample and also separately for firms without and with a clawback provision in this sample. The table also reports the Kolari and Pynnonen (2010) Adjusted-BMP t-statistic and the appropriate statistical significance of the CARs. In the combined sample, the average CARs are positive, ranging from 0.12% to 0.28%, but are not statistically different from zero. The average CARs for the firms without a clawback provision are positive, ranging from 0.23% to 0.64% and the (-1,+3) and

(-2,+2) window CARs are statistically different from zero. In contrast, the average CARs for the firms with a clawback provision are not statistically different from zero, ranging from 0.09% to 0.12%. Furthermore, the differences between the average CARs for firms with and without clawback provisions are statistically significant for the (-1,+3) and (-2,+2) windows and are about 0.47%.

As illustrated in Table 1, there are statistically significant differences in observable characteristics between firms without and with a clawback provision that may be correlated with the event CARs. To ensure that these differences are not driving our results, we examine the CARs for firms without a clawback provision relative to the matched sample of firms with a clawback provision, which Table 2 showed to be comparable in observable characteristics. The results are presented in Table 4. Similar results are observed for the combined sample ("All"), firms without a clawback provision ("Clawback = 0") and firms with a clawback provision ("Clawback = 1). The average CARs for the combined sample range from 0.07% to 0.38% and are not statistically different from zero. The average CARs for the firms without a clawback provision are also positive, ranging from 0.21% to 0.64% and the (-1,+3) and (-2,+2) window CARs are once again statistically different from zero. The average CARs for the firms with a clawback provision are not statistically different from zero, ranging from -0.10% to 0.16%. The differences between the average CARs for firms are positive and statistically significant for (-2,+2) window with a value of about 0.7%. This suggests that the differences in the CARs between firms without and with clawback provisions are unlikely to be entirely explained by other observable firm characteristics. In subsequent analysis, we focus on differences relative to the matched sample but continue to report and briefly comment on the results for the full sample.

Our results therefore suggest that the market reacted positively to the SEC announcement for firms without a clawback provision, relative to firms with an existing clawback provision. As discussed in section 3, while the market was aware of the SEC's development of a proposal mandating clawback policies, based on our reading of press articles leading up to and following the announcement (see section 4 for details), the details of the mandatory clawback provisions proposed by the SEC was the subject of uncertainty. Furthermore, the ultimate terms of the proposed rule appear to have been stronger than what was expected and advised by some commentators (e.g. see Ackerman (2015); Romanek (2015); SEC (2015)). Thus, to the extent that our results capture a positive reaction to stronger-than-expected clawback provisions, our estimates suggest that clawback provisions are value-enhancing in general.[7]

[7] Note that to the extent that some of the strength of the clawback provisions was anticipated and already priced by the market, our estimates underestimate the value of clawbacks.

Examining the abnormal returns in a univariate setting allows us to test the significance of the CARs around the SEC announcement and account for issues such as cross-correlation and event-induced variance. Although we construct a match sample to mitigate the possibility that observable firm characteristics explain differences in CARs between firms with and without clawbacks, this may not fully account for any cross-sectional relationship between the firm characteristics and abnormal returns. We therefore also run OLS regressions of the CARs on an indicator of whether or not a firm had a clawback, and also include firm characteristics as control variables. The results are reported Table 9 (Panel A for the Matched Sample and Panel B for the Full Sample).

The dependent variable in models (1)-(2), (3)-(4) and (5)-(6) are the CARs for the (-1,0), (-1,+3) and (-2,+2) windows relative to the SEC announcement. All models include industry fixed effects at the SIC division ("1-digit SIC") level and *t*-statistics computed from heteroscedasticity-consistent standard errors. Firm size (Log(Total Assets), Tobin's Q, Return on Assets, Leverage (Debt/Total Assets), Cash (Cash/Total Assets) are included as control variables in models (2), (4) and (6).

In each model, the coefficients are positive, ranging from 0.00287 to 0.00702. The coefficients are statistically significant in models (2), (4), (5) and (6). Consistent with the univariate analysis in Tables 3 and 4, these results imply that relative to firms with a clawback provision already in place, firms without a clawback provision experienced positive abnormal returns around the SEC announcement. This suggests that SEC announcement elicited a positive reaction from the market for firms without a clawback provision, relative to firms with a clawback provision. We find broadly similar results when we repeat the analysis for the full sample (Table 9 Panel B).

Restatement Likelihood

The adoption of a clawback provision is expected to have a greater impact on a firm that is more likely to make a restatement in the future.[8] Accordingly, in this section, we test whether firms that have a history of restatements experience greater abnormal returns around the SEC announcement. To the extent that firms with a history of restatements are more likely to make restatements in the future, we expect firms with a history of restatements to exhibit a greater, more positive reaction the SEC announcement.

[8] Iskandar-Datta and Jia (2013) indeed find that the market reaction to the voluntary adoption of clawback provisions is greater for firms that have previously made restatements.

We obtain restatement data from Auditanalytics and identify firms in our sample that made did and did not make at least one restatement within the preceding 5 fiscal years.[9] We group firms according to whether or not they had an existing clawback provision and whether or not they made a restatement in the last five years, and then compute average CARs for each group. The results are reported in Table 5.

Our results indicate that among firms with clawback provisions, average CARs are positive and statistically significant for both firms that did and did not make a restatement in the past five years, with the exception of the (-1,0) window for firms that made no restatements. The CARs for firms with a clawback provision are not statistically significant.

We also examine the impact of past restatements using regression analysis. We run regressions similar to model (6) of Table 9, with the inclusion of the number of restatements per year in the last 5 years and interaction of this variable with the indicator for firms that did not have a clawback. The results are reported in Panel A of Table 9 (models (7) and (8)). The regression coefficient in models (7) and (8) on the restatement variable is positive but not statistically significant (model 7). The coefficient on the interaction term in model (8) is negative and not statistically significant. This implies that firms without clawbacks that had more restatements historically do not exhibit a greater market reaction than firms without clawbacks that had fewer restatements. Lastly, in both models, the coefficients on the indicator for firms without a clawback are positive and statistically significant. We find similar results when examining the full sample (Panel B of Table 9).

Overall, the results suggest that firms with a history of restatements in the last five years do not experience higher abnormal returns to the SEC announcement that those that did not make restatements. However, a significant caveat of this analysis is that historical restatements are arguably an imperfect proxy for the likelihood of making restatements in the future. In fact it may be argued that at least some firms that have made restatements in the past are likely to become more meticulous in their financial reporting and therefore be less likely to make restatements in the future.

Bonus Payments

The payment of bonuses is usually tied directly to measures of performance such as earnings. Consequently, in the event that an error is discovered in a firm's financial statements, it is usually straightforward to determine what the bonus payment should have been in the absence of the error, and

[9] In untabulated analysis, we also use an alternate definition of restatements that is restricted to restatements associated with fraud or an SEC investigation and find results that are similar to what we find using the basic measure of restatements.

thus the amount to be recouped. In contrast, the recoupment of stock-based compensation would require a firm to establish what its stock price would have been in the absence of errors in its financial statements, which is much more challenging to determine in practice. Furthermore, awarding executives a higher portion of their overall pay in the form of bonuses payments relative to their overall pay makes more of their compensation subject to a clawback. We therefore expect firms that pay a larger portion of their compensation paid out as bonuses to be more impacted by the adoption of a clawback provision. Accordingly, we expect the market reaction to the introduction of clawback provisions to be more positive for such firms.

We obtain data on the compensation of CEOs of our sample firms from Execucomp and identify firms in our sample which awarded over 20% of total CEO pay in the form of bonuses (roughly equal to the sample median) in the previous fiscal year. We group firms according to whether or not they had an existing clawback provision and whether or not they paid over 20% of total CEO compensation as bonuses, and then compute average CARs for each group. The results are reported in Table 6.

In Panel A of Table 6, the average CARs are positive and statistically significant for firms without a clawback provision, at the (-1,+3) and (-2,+2) windows regardless of whether they have a low bonus component (bonus/total pay <20%) or high bonus component (≥20%). CARs are not statistically significant for firms with a clawback provision whether they have a low bonus component or high bonus component. The results are similar for the sample (Panel B).

Like the previous section, we also conduct similar tests using regression analysis. We add to the specification in model (6) of Table 9, the portion of the CEOs total compensation for the most recent fiscal year that consisted of bonus payments (Bonus/Total Pay), and an interaction of this variable with the indicator for firms without a clawback provision. The results are presented in Panel A of Table 9 (models (9) and (10)). The regression coefficient on the bonus component (bonus/total pay) is positive and statistically significant in model (9). In model (10), the coefficient on the bonus component is also positive and statistically significant. The coefficient on the interaction term is negative and not statistically significant. Lastly, in both models, the coefficients on the indicator for firms without a clawback are positive and statistically significant. These results suggests that firms with a higher bonus component benefit from mandatory clawback provisions regardless of whether or not they had a clawback provision to begin with. We also find similar results when examining the full sample (Panel B).

Taken together our evidence suggests that for both firms with and without clawbacks, the reaction to the news of the proposed rule was increasing in the portion of bonus compensation (regression analysis). This suggests that clawback provisions are most valuable for firms that pay more bonus compensation.

Furthermore, it also suggests that the proposed rule 10D-1 also had an impact on firms that had existing clawback provisions.

Managerial Power

Firms where agency problems are greatest may benefit the most from having a clawback provision because the clawback can mitigate executives' incentives to opportunistically misreport financial information, and the probability of such behavior is likely to be higher where agency costs are greater. We thus expect firms without clawback provisions that have greater agency problems to exhibit a greater reaction to the mandatory adoption of a clawback provision. It is also to be noted however, that most voluntary adopters of clawback provisions permitted discretion to their board in exercising their clawback provisions. It is possible therefore that the boards of voluntary adopters with greater agency problems were less likely to enforce their existing clawback provisions prior to the proposed rule. Furthermore, because the proposed rule permitted less discretion to the board than was the case before for a typical voluntary adopter (and possibly less discretion than anticipated), voluntary adopters with greater agency problems may also benefit from the new proposed rule which may effectively facilitate greater enforcement of clawback provisions.

To test this, we identify firms where the CEO has greater power over the board, as we expect agency problems to be greater in such firms. We use two measure of CEO power. The first is whether the CEO is also the Chair of the board (e.g. Adams et al. (2005)). We obtain data on whether or not the CEO is also the Chair of the board from Execucomp and RiskMetrics. We group firms according to whether or not they had an existing clawback provision and whether or not they separate the roles of CEO and Chair, and then compute average CARs for each group. The results are reported in Table 7.

Panel A of Table 7 shows that the CARs are statistically significant for firms without a clawback provision for firms which have separate CEOs and Chairs for the (-1,+3) and (-2,+2) windows as well as for firms that have a CEO-Chair for all three windows. CARs are not statistically significant for firms with a clawback provision which have separate CEOs and Chairs as well as firms that have a CEO-Chair. Furthermore, the differences between the CARs for firms without and with clawback provisions are statistically significant at the (-1,+3) and (-2,+2) for firms that had CEO-Chair. This is not the case for firms that had a separate CEO and Chair. These results suggest that firms without a clawback provision that had a CEO-Chair exhibited a greater reaction to the proposed rule relative to firms with a clawback provision, compared to firms without a CEO-Chair. However, the results do not indicate that voluntary adopters with a CEO-Chair exhibited a positive reaction to the proposed rule.

As before we also conduct regression analysis. We add to the specification in model (6) an indicator for firms with a CEO-Chair and an interaction of this indicator with the indicator for firms without a clawback. The results are reported in Panel A of Table 9 (models (11) and (12)). The regression coefficient on the CEO-Chair indicator in model (11) is positive but not statistically significant. The coefficient on the interaction term in model (12) is not statistically significant. Finally, the coefficient on the indicator for firms without a clawback is positive and statistically significant in model (11) but not in model (12). The results for the full sample (Panel B) are similar with the exception that the coefficient on the CEO-Chair indicator in model (11) is positive.

The univariate results therefore suggest that firms without clawbacks with CEO-Chairs experience a higher value impact relative to firms with clawbacks from the SEC proposal compared to firms with separate CEOs and Chairs. However, this is not supported by the regression analysis. Furthermore, with the exception of the regression analysis for the full sample, the results do not indicate that voluntary adopters of clawback provisions with CEO-Chairs also experienced a positive reaction the proposed rule.

As a second measure of CEO power, we focus on the composition of the board. Coles, Daniel and Naveen (2014) quantify the extent to which the board is captured by a firm's CEO using the fraction of the firm's board that was appointed after the firm's CEO took office. They find evidence of weaker monitoring by boards that consist of a greater fraction of directors "co-opted" by the current CEO. We obtain data on the fraction of directors appointed after the current CEO took office from Lalitha Naveen's website for firms in our sample for which the data is available. Using these data, we classify firms according to whether a majority of the board (i.e. ≥50%) was "co-opted".[10] We group firms according to whether they had or did not have a clawback and whether or not they had a majority co-opted board, and then compute average CARs for each group. The results are reported in Panel A of Table 8.

The results show that the CARs are not statistically significant for firms without a clawback provision for firms that have less than a majority of their board co-opted by CEO. In contrast, for firms without a clawback provision, the CARs are positive and statistically significant for all three windows for firms without a clawback that have a majority of their board co-opted by the CEO. CARs are not statistically significant for firms with a clawback provision that do not have or have a majority of their board co-opted by CEO. Furthermore, the differences between the CARs for firms without and with

[10] Data on director co-option are available for 1055 out 1475 firms in our final sample. This includes 235 firms without a clawback provision. We construct a different matched sample for our analysis on co-opted boards using the same matching procedure as before, but restrict our choices of matches to firms with clawback provisions for which we are also able to obtain data on board co-option. We obtain matches for 229 firms without a clawback provision. Table B1 presents summary statistics for this matched sample.

clawback provisions are statistically significant at all three windows for firms that have a co-opted board. This is not the case for firms that do not have a co-opted board. The results are also similar for the full sample.

We also conduct regression analysis where we add to the specifications in model (6) an indicator for firms with a majority co-opted board and an interaction of this indicator with the indicator for firms without a clawback. The results are reported in Panel A of Table 9 (models (13) and (14)). The coefficient on the co-opted board indicator is not statistically significant in models (13) or (14). In model (14), the interaction term with the co-opted board indicator is positive and statistically significant. Furthermore, the coefficient on the indicator for firms without a clawback provision is positive and statistically significant in model (13) but not in model (14). When we examine the full sample (Panel B), we do not find that the coefficient on the interaction term is statistically significant.

Taken together, the results from both the univariate and regression analysis (with the exception of the full sample) suggest that firms without a clawback provision with a majority co-opted board exhibit the greatest reaction to the proposed rule. This is also consistent with the results from the univariate analysis using CEO-Chair separation as a measure of CEO-power. Therefore the results overall support the view that clawback provisions are most-value enhancing for firms where CEO power is greatest.

7. Conclusion

We examine the market reaction around the SEC's announcement of proposed Rule 10D-1. The proposed rule clarified how section 954 of the 2010 Dodd–Frank Wall Street Reform and Consumer Protection Act, which mandates the adoption of clawback provisions for listed firms, would be implemented. We find that the market reaction to the announcement of the proposed rule is positive for firms that did not have a clawback provision at the time of the announcement, and higher than the reaction for firms that had a clawback provision. Our findings therefore suggest that clawback provisions enhance value. We exploit the announcement to examine the value impact because it conveyed new information to the market about the implementation of mandatory clawback provisions however, because the market was at least partially aware that clawback provisions were impending, our analysis precludes us from quantifying the total value created by adopting a clawback provision. That is, the value effect that we do observe is likely to be an underestimate of the extent to which clawbacks create value. Furthermore, we show that the value associated with a clawback policy is increasing in the portion of compensation that takes the form of bonuses, and that clawbacks are more valuable when CEOs are more powerful. This suggests that despite their potential costs, the benefits of clawback provisions, such as

limiting executives' incentives to opportunistically misreport information, outweigh the costs and overall create value for shareholders.

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Figure 1 – Full Sample CARs

This graph plots mean cumulative abnormal returns (CARs) around SEC's announcement of its proposed new Rule 10D-1 on July 1 2015, computed using standard event study methodology with the 4-factor return model. The sample consists of 1475 firms that constituted the S&P 1500 index in June 2015, for which required data were available (see Table A1 for variable descriptions). Clawback = 0 and Clawback = 1 denote firms that did not and did have a clawback provision in place at the time of the announcement.

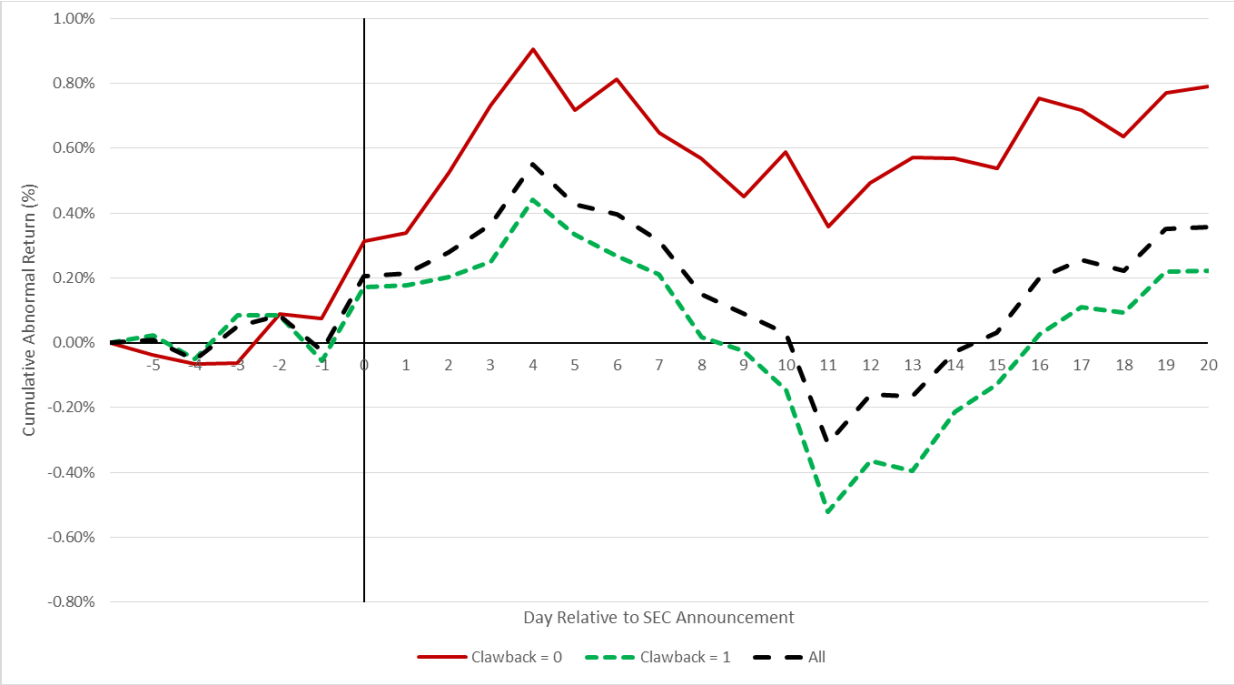

Figure 2 – Matched Sample CARs

This graph plots mean cumulative abnormal returns (CARs) around SEC's announcement of its proposed new Rule 10D-1 on July 1 2015, computed using standard event study methodology with the 4-factor return model. The sample consists of 690 constituents of the S&P 1500 index in June 2015, for which required data were available (see Table A1 for variable descriptions). This includes 345 firms that did not have a clawback provision (Clawback = 0) and a matched sample of 345 firms that had a clawback provision (Clawback = 1).

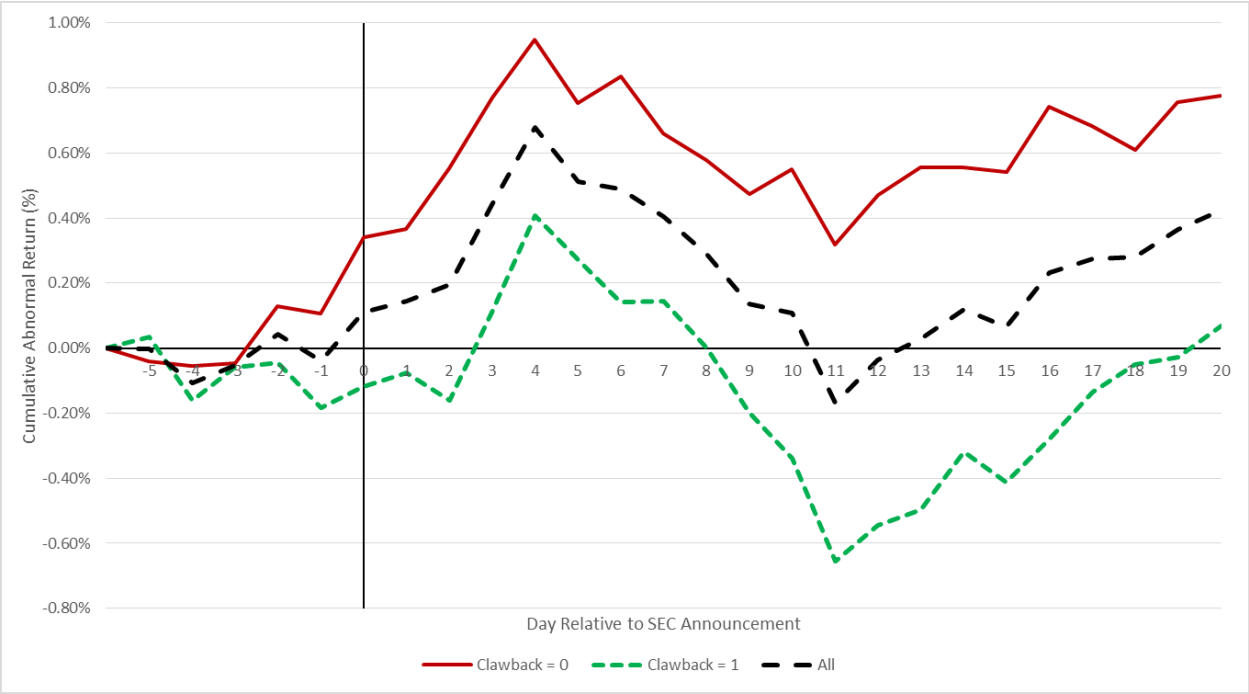

Table 1 – Full Sample Summary Statistics

This table reports summary statistics for firm characteristics. The sample consists of 1475 firms that constituted the S&P 1500 index in June 2015, for which required data were available (see Table A1 for variable descriptions). Clawback = 0 and Clawback = 1 denote firms that did not and did have a clawback provision in place at the time of the announcement. *, ** and *** indicate statistical significance at the 10%, 5% and 1% levels respectively.

	All		Clawback = 0		Clawback = 1		Differences	
	N=1475		N=352		N=1123			
Variable	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Total Assets	23562.890	3633.100	6664.108	1825.429	28859.746	4643.354	-22195.639***	-2817.926***
Log(Total Assets)	8.294	8.198	7.529	7.510	8.534	8.443	-1.005***	-0.934***
Market Capitalization	14284.280	3180.708	7453.607	1943.272	16425.328	3783.998	-8971.721***	-1840.726***
Sales	8665.888	2057.472	3675.309	1053.722	10230.165	2510.900	-6554.856***	-1457.178***
Cash/Total Assets	0.135	0.081	0.159	0.095	0.128	0.079	0.031***	0.016
Debt/Total Assets	0.239	0.218	0.220	0.182	0.245	0.227	-0.026**	-0.045***
Tobin's Q	1.966	1.560	2.131	1.638	1.915	1.534	0.217***	0.103**
Return on Assets	0.126	0.117	0.133	0.122	0.124	0.115	0.009	0.006
PPENT/Total Assets	0.222	0.128	0.242	0.154	0.216	0.123	0.026*	0.031*
Restatements	0.097	0.000	0.104	0.000	0.094	0.000	0.009	0.000
Total Pay	6873.453	5094.338	4860.650	3537.513	7504.358	5774.680	-2643.708***	-2237.167***
Bonus/Total Pay	0.230	0.188	0.230	0.184	0.230	0.189	0.000	-0.005
CEO-Chair	0.447	0.000	0.455	0.000	0.444	0.000	0.010	0.000
Co-opted Board	0.451	0.000	0.481	0.000	0.443	0.000	0.038	0.000

Table 2 – Matched Sample Summary Statistics

This table reports summary statistics for firm characteristics. The sample consists of 690 constituents of the S&P 1500 index in June 2015, for which required data were available (see Table A1 for variable descriptions). This includes 345 firms that did not have a clawback provision (Clawback = 0) and a matched sample of 345 firms that had a clawback provision (Clawback = 1). *, ** and *** indicate statistical significance at the 10%, 5% and 1% levels respectively.

	All		Clawback = 0		Clawback = 1		Differences	
	N=690		N=345		N=345			
Variable	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Total Assets	5181.719	1810.624	5227.535	1822.300	5135.904	1783.100	91.632	39.200
Log(Total Assets)	7.531	7.501	7.512	7.508	7.550	7.486	-0.038	0.022
Market Capitalization	5840.373	1943.463	6443.797	1942.600	5236.950	1953.068	1206.847	-10.468
Sales	3523.965	1092.082	3149.685	1021.615	3898.244	1126.890	-748.560	-105.275
Cash/Total Assets	0.164	0.107	0.159	0.092	0.168	0.119	-0.008	-0.028
Debt/Total Assets	0.219	0.195	0.219	0.182	0.219	0.202	-0.001	-0.020
Tobin's Q	2.131	1.726	2.136	1.644	2.126	1.790	0.010	-0.146
Return on Assets	0.138	0.126	0.132	0.122	0.143	0.131	-0.010	-0.008
PPENT/Total Assets	0.231	0.135	0.240	0.153	0.223	0.123	0.017	0.030
Restatements	0.097	0.000	0.104	0.000	0.090	0.000	0.014	0.000
Total Pay	4935.756	3779.750	4872.651	3588.724	4998.861	3907.450	-126.210	-318.726**
Bonus/Total Pay	0.236	0.193	0.229	0.184	0.243	0.202	-0.014	-0.018*
CEO-Chair	0.420	0.000	0.455	0.000	0.386	0.000	0.070*	0.000*
Co-opted Board	0.508	1.000	0.478	0.000	0.537	1.000	-0.059	-1.000

Table 3 – Full Sample CARs

This table reports mean cumulative abnormal returns (CARs) around SEC's announcement of its proposed new Rule 10D-1 on July 1 2015, computed using standard event study methodology with the 4-factor return model. The sample consists of 1475 firms that constituted the S&P 1500 index in June 2015, for which required data were available (see Table A1 for variable descriptions). Clawback = 0 and Clawback = 1 denote firms that did not and did have a clawback provision in place at the time of the announcement. *t*-statistics for CARs are computed following Kolari and Pynnönen (2010). *, ** and *** indicate statistical significance at the 10%, 5% and 1% levels respectively.

	All			Clawback = 0			Clawback = 1			
Window	Mean	N	t-stat	Mean	N	t-stat	Mean	N	t-stat	Difference
(-1,0)	0.00121	1475	1.168	0.00226	352	1.532	0.00088	1123	1.012	0.00138
(-1,+3)	0.0028	1475	1.486	0.00644**	352	2.293	0.00166	1123	1.143	0.00479**
(-2,+2)	0.0023	1475	1.104	0.00587**	352	2.346	0.00118	1123	0.705	0.0047**

Table 4 – Matched Sample CARs

This table reports mean cumulative abnormal returns (CARs) around SEC's announcement of its proposed new Rule 10D-1 on July 1 2015, computed using standard event study methodology with the 4-factor return model. The sample consists of 690 constituents of the S&P 1500 index in June 2015, for which required data were available (see Table A1 for variable descriptions). This includes 345 firms that did not have a clawback provision (Clawback = 0) and a matched sample of 345 firms that had a clawback provision (Clawback = 1). *t*-statistics for CARs are computed following Kolari and Pynnönen (2010). *, ** and *** indicate statistical significance at the 10%, 5% and 1% levels respectively.

	All			Clawback = 0			Clawback = 1			
Window	Mean	N	*t*-stat	Mean	N	*t* -stat	Mean	N	*t* -stat	Difference
(-1,0)	0.00069	690	0.774	0.00213	345	1.504	-0.00074	345	0.008	0.00287
(-1,+3)	0.00398	690	1.519	0.0064**	345	2.262	0.00155	345	0.702	0.00485
(-2,+2)	0.00248	690	1.008	0.00599**	345	2.414	-0.00103	345	-0.11	0.00702**

Table 5 – Restatements

This table reports mean cumulative abnormal returns (CARs) around SEC's announcement of its proposed new Rule 10D-1 on July 1 2015, computed using standard event study methodology with the 4-factor return model. The sample in Panel A consists of 690 constituents of the S&P 1500 index in June 2015, for which required data were available (see Table A1 for variable descriptions). This includes 345 firms that did not have a clawback provision (Clawback = 0) and a matched sample of 345 firms that had a clawback provision (Clawback = 1). The sample in Panel B consists of 1475 firms that constituted the S&P 1500 index in June 2015, for which required data were available. *t*-statistics for CARs are computed following Kolari and Pynnönen (2010). *, ** and *** indicate statistical significance at the 10%, 5% and 1% levels respectively.

Panel A: Matched Sample

		All			Clawback = 0			Clawback = 1			
	Window	Mean	N	*t* -stat	Mean	N	*t* -stat	Mean	N	*t* -stat	Difference
No Restatements	(-1,0)	0.00045	516	0.652	0.00137	265	1.031	-0.00052	251	0.188	0.0019
	(-1,+3)	0.00346	516	1.247	0.00638*	265	1.935	0.00037	251	0.474	0.00601
	(-2,+2)	0.002	516	0.838	0.00543**	265	1.985	-0.00162	251	-0.105	0.00705*
Restatements>0	(-1,0)	0.00141	174	0.833	0.00463**	80	2.348	-0.00134	94	-0.552	0.00597
	(-1,+3)	0.00551*	174	1.771	0.00647*	80	1.937	0.0047	94	1.015	0.00177
	(-2,+2)	0.00391	174	1.104	0.00785**	80	2.299	0.00056	94	-0.062	0.0073

Panel B: Full Sample

		All			Clawback = 0			Clawback = 1			
	Window	Mean	N	*t* -stat	Mean	N	*t* -stat	Mean	N	*t* -stat	Difference
No Restatements	(-1,0)	0.00088	1141	0.959	0.00154	270	1.054	0.00068	871	0.879	0.00087
	(-1,+3)	0.00273	1141	1.393	0.00649*	270	1.966	0.00156	871	1.107	0.00492*
	(-2,+2)	0.00176	1141	0.906	0.00522*	270	1.891	0.00068	871	0.578	0.00454*
Restatements>0	(-1,0)	0.00233*	334	1.862	0.00461**	82	2.393	0.00159	252	1.336	0.00302
	(-1,+3)	0.00303	334	1.389	0.00629*	82	1.952	0.00197	252	0.905	0.00432
	(-2,+2)	0.00414*	334	1.679	0.00801**	82	2.381	0.00288	252	1.063	0.00513

Table 6 – Bonus Payments

This table reports mean cumulative abnormal returns (CARs) around SEC's announcement of its proposed new Rule 10D-1 on July 1 2015, computed using standard event study methodology with the 4-factor return model. The sample in Panel A consists of 690 constituents of the S&P 1500 index in June 2015, for which required data were available (see Table A1 for variable descriptions). This includes 345 firms that did not have a clawback provision (Clawback = 0) and a matched sample of 345 firms that had a clawback provision (Clawback = 1). The sample in Panel B consists of 1475 firms that constituted the S&P 1500 index in June 2015, for which required data were available. *t*-statistics for CARs are computed following Kolari and Pynnönen (2010). *, ** and *** indicate statistical significance at the 10%, 5% and 1% levels respectively.

Panel A: Matched Sample

		All			Clawback = 0			Clawback = 1			
	Window	Mean	N	*t* -stat	Mean	N	*t* -stat	Mean	N	*t* -stat	Difference
Bonus<20%	(-1,0)	0.00049	361	0.966	0.00169	190	1.236	-0.00084	171	0.279	0.00253
	(-1,+3)	0.00401*	361	1.782	0.00637**	190	2.01	0.00139	171	0.919	0.00498
	(-2,+2)	0.00141	361	1.103	0.0051**	190	2.017	-0.00268	171	-0.196	0.00779**
Bonus≥20%	(-1,0)	0.00091	329	0.418	0.00267	155	1.238	-0.00065	174	-0.162	0.00332
	(-1,+3)	0.00394	329	0.91	0.00644*	155	1.672	0.00171	174	0.335	0.00473
	(-2,+2)	0.00365	329	0.684	0.00708*	155	1.943	0.0006	174	-0.027	0.00648

Panel B: Full Sample

		All			Clawback = 0			Clawback = 1			
	Window	Mean	N	*t* -stat	Mean	N	*t* -stat	Mean	N	*t* -stat	Difference
Bonus<20%	(-1,0)	0.00036	803	0.723	0.00182	193	1.252	-0.0001	610	0.403	0.00192
	(-1,+3)	0.00198	803	1.255	0.0065**	193	2.05	0.00055	610	0.753	0.00594**
	(-2,+2)	0.00162	803	0.811	0.00539**	193	2.03	0.00042	610	0.241	0.00497**
Bonus≥20%	(-1,0)	0.00222	672	1.179	0.0028	159	1.285	0.00204	513	1.11	0.00075
	(-1,+3)	0.00377	672	1.298	0.00637*	159	1.701	0.00296	513	1.126	0.00341
	(-2,+2)	0.00311	672	1.049	0.00645*	159	1.825	0.00207	513	0.832	0.00438

Table 7 – Managerial Power 1

This table reports mean cumulative abnormal returns (CARs) around SEC's announcement of its proposed new Rule 10D-1 on July 1 2015, computed using standard event study methodology with the 4-factor return model. The sample in Panel A consists of 690 constituents of the S&P 1500 index in June 2015, for which required data were available (see Table A1 for variable descriptions). This includes 345 firms that did not have a clawback provision (Clawback = 0) and a matched sample of 345 firms that had a clawback provision (Clawback = 1). The sample in Panel B consists of 1475 firms that constituted the S&P 1500 index in June 2015, for which required data were available. *t*-statistics for CARs are computed following Kolari and Pynnönen (2010). *, ** and *** indicate statistical significance at the 10%, 5% and 1% levels respectively.

Panel A: Matched Sample

		All			Clawback = 0			Clawback = 1			
	Windo	Mean	N	*t* -stat	Mean	N	*t* -stat	Mean	N	*t* -stat	Differenc
CEO-Chair = 0	(-1,0)	0.00014	400	0.483	0.00116	188	0.908	-0.00077	212	0.072	0.00193
	(-1,+3)	0.00449	400	1.342	0.00583*	188	1.701	0.00331	212	0.83	0.00252
	(-2,+2)	0.00178	400	0.645	0.00423*	188	1.691	-0.00038	212	-0.097	0.00461
CEO-Chair = 1	(-1,0)	0.00146	290	1.058	0.00329*	157	1.872	-0.00071	133	-0.117	0.004
	(-1,+3)	0.00327	290	1.443	0.0071**	157	2.405	-0.00125	133	0.169	0.00834*
	(-2,+2)	0.00344	290	1.391	0.0081***	157	2.724	-0.00206	133	-0.09	0.01015*

Panel B: Full Sample

		All			Clawback = 0			Clawback = 1			
	Windo	Mean	N	*t* -stat	Mean	N	*t* -stat	Mean	N	*t* -stat	Differenc
CEO-Chair = 0	(-1,0)	0.00002	816	0.617	0.0013	192	0.936	-0.00038	624	0.447	0.00168
	(-1,+3)	0.00177	816	1.045	0.0059*	192	1.727	0.0005	624	0.661	0.00541*
	(-2,+2)	0.00123	816	0.662	0.00421*	192	1.667	0.00032	624	0.252	0.00389
CEO-Chair = 1	(-1,0)	0.00269	659	1.509	0.00341*	160	1.889	0.00245	499	1.29	0.00096
	(-1,+3)	0.00407*	659	1.751	0.00709**	160	2.427	0.0031	499	1.403	0.00398
	(-2,+2)	0.00362	659	1.41	0.00787**	160	2.603	0.00225	499	0.999	0.00562*

Table 8 – Managerial Power 2

This table reports mean cumulative abnormal returns (CARs) around SEC's announcement of its proposed new Rule 10D-1 on July 1 2015, computed using standard event study methodology with the 4-factor return model. The sample in Panel A consists of 458 constituents of the S&P 1500 index in June 2015, for which required data were available (see Table A1 for variable descriptions). This includes 229 firms that did not have a clawback provision (Clawback = 0) and a matched sample of 229 firms that had a clawback provision (Clawback = 1). The sample in Panel B consists of 1055 firms that constituted the S&P 1500 index in June 2015, for which required data were available. *t*-statistics for CARs are computed following Kolari and Pynnönen (2010). *, ** and *** indicate statistical significance at the 10%, 5% and 1% levels respectively.

Panel A: Matched Sample

		All			Clawback = 0			Clawback = 1			
	Window	Mean	N	*t* -stat	Mean	N	*t* -stat	Mean	N	*t* -stat	Difference
Co-opted < 50%	(-1,0)	0.00109	228	0.655	0.00004	120	0.370	0.00226	108	0.745	-0.00222
	(-1,+3)	0.00555*	228	1.700	0.00436	120	1.020	0.00686**	108	2.013	-0.0025
	(-2,+2)	0.00508	228	1.589	0.0051	120	1.641	0.00507	108	1.038	0.00002
Co-opted ≥ 50%	(-1,0)	0.00251**	230	2.053	0.00727***	109	4.152	-0.00178	121	-0.373	0.00905***
	(-1,+3)	0.00137	230	0.554	0.01072***	109	3.214	-0.00706	121	-1.37	0.01778***
	(-2,+2)	0.00274	230	1.088	0.01246***	109	4.619	-0.00601	121	-1.37	0.01847***

Panel B: Full Sample

		All			Clawback = 0			Clawback = 1			
	Window	Mean	N	t-stat	Mean	N	*t* -stat	Mean	N	*t* -stat	Difference
Co-opted < 50%	(-1,0)	0.00006	579	0.623	0.00019	122	0.372	0.00003	457	0.616	0.00016
	(-1,+3)	0.00122	579	0.780	0.00465	122	1.055	0.00031	457	0.516	0.00434
	(-2,+2)	0.00209	579	0.972	0.0053	122	1.640	0.00123	457	0.568	0.00407
Co-opted ≥ 50%	(-1,0)	0.00228*	476	1.768	0.00703***	113	4.023	0.0008	363	1.159	0.00623**
	(-1,+3)	0.00249	476	1.391	0.01038***	113	3.182	0.00004	363	0.774	0.01034***
	(-2,+2)	0.00417*	476	1.874	0.01223***	113	4.449	0.00166	363	1.05	0.01057***

Table 9 – Regressions Analysis

This table reports results of OLS regressions. The dependent variables are cumulative abnormal returns (CARs) around SEC's announcement of its proposed new Rule 10D-1 on July 1 2015, computed using standard event study methodology with the 4-factor return model. The sample in Panel A consists of 690 constituents of the S&P 1500 index in June 2015, for which required data were available. This includes 345 firms that did not have a clawback provision and a matched sample of 345 firms that had a clawback provision. The sample in Panel B consists of 1475 firms that constituted the S&P 1500 index in June 2015, for which required data were available. Industry fixed effects at the SIC division level ("1-digit SIC") are included. All variables are defined in Table A1. *t*-statistics are computed using heteroscedasticity-consistent standard errors. *, ** and *** indicate statistical significance at the 10%, 5% and 1% levels respectively.

Panel A: Matched Sample

	(1) (-1,0)	(2) (-1,0)	(3) (-1,+3)	(4) (-1,+3)	(5) (-2,+2)	(6) (-2,+2)	(7) (-2,+2)	(8) (-2,+2)	(9) (-2,+2)	(10) (-2,+2)	(11) (-2,+2)	(12) (-2,+2)	(13) (-2,+2)	(14) (-2,+2)
No Clawback	0.00287	0.00311*	0.00485	0.00537*	0.00702**	0.00688**	0.00679**	0.00729**	0.00703**	0.00917**	0.00673**	0.00571	0.00945***	0.00196
	(1.59)	(1.73)	(1.63)	(1.72)	(2.44)	(2.42)	(2.39)	(2.25)	(2.48)	(2.29)	(2.40)	(1.42)	(2.91)	(0.42)
Log(Total Assets)		-0.000998		-0.00144		-0.00200	-0.00199	-0.00198	-0.00187	-0.00187	-0.00207	-0.00205	-0.00110	-0.00115
		(-1.28)		(-1.15)		(-1.55)	(-1.54)	(-1.53)	(-1.46)	(-1.46)	(-1.60)	(-1.58)	(-0.59)	(-0.62)
Tobin's Q		-0.00314***		-0.00479**		-0.00328**	-0.00322**	-0.00324**	-0.00292*	-0.00291*	-0.00332**	-0.00331**	-0.00407**	-0.00421**
		(-2.93)		(-1.98)		(-2.23)	(-2.18)	(-2.20)	(-1.95)	(-1.95)	(-2.25)	(-2.25)	(-2.07)	(-2.19)
Return on Assets		0.0361**		0.0485		0.00896	0.0101	0.0106	0.00397	0.00416	0.00926	0.00952	0.0366	0.0379
		(2.28)		(1.32)		(0.38)	(0.43)	(0.45)	(0.16)	(0.17)	(0.39)	(0.40)	(1.21)	(1.29)
Debt/Total Assets		-0.00560		0.0180*		-0.00750	-0.00782	-0.00800	-0.00699	-0.00674	-0.00718	-0.00713	-0.00401	-0.00349
		(-1.01)		(1.78)		(-0.94)	(-0.98)	(-1.00)	(-0.90)	(-0.88)	(-0.89)	(-0.89)	(-0.54)	(-0.47)
Cash/Total Assets		-0.0148*		0.00117		-0.0220**	-0.0219**	-0.0219**	-0.0219**	-0.0223**	-0.0223**	-0.0221**	-0.0154	-0.0125
		(-1.83)		(0.06)		(-2.23)	(-2.22)	(-2.22)	(-2.23)	(-2.24)	(-2.28)	(-2.25)	(-1.35)	(-1.09)
Restatement							0.00687	0.0104						
							(1.24)	(0.97)						
No Clawback × Restatement								-0.00521						
								(-0.43)						
Bonus Pay/Total Pay									0.0145*	0.0194**				
									(1.90)	(2.46)				
No Clawback × Bonus Pay										-0.00905				
										(-0.66)				
CEO-Chair											0.00213	0.000877		
											(0.77)	(0.22)		
No Clawback × CEO-Chair												0.00244		
												(0.41)		
Co-opted Board													0.000318	-0.00734
													(0.10)	(-1.51)
No Clawback × Co-opted Board														0.0150**
														(2.16)
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	690	690	690	690	690	690	690	690	690	690	690	690	458	458
Adjusted R^2	0.015	0.043	0.039	0.058	0.053	0.068	0.068	0.067	0.074	0.073	0.068	0.066	0.085	0.093

Panel B: Full Sample

	(1) (-1,0)	(2) (-1,0)	(3) (-1,+3)	(4) (-1,+3)	(5) (-2,+2)	(6) (-2,+2)	(7) (-2,+2)	(8) (-2,+2)	(9) (-2,+2)	(10) (-2,+2)	(11) (-2,+2)	(12) (-2,+2)	(13) (-2,+2)	(14) (-2,+2)
No Clawback	0.00166	0.00194	0.00465*	0.00486**	0.00433**	0.00417*	0.00413*	0.00384	0.00417*	0.00365	0.00403*	0.00391	0.00704***	0.00421
	(1.11)	(1.27)	(1.94)	(2.02)	(2.04)	(1.89)	(1.88)	(1.58)	(1.90)	(1.07)	(1.84)	(1.35)	(2.75)	(1.21)
Log(Total Assets)		-0.000153		-0.000546		-0.000971*	-0.000941	-0.000950	-0.000936	-0.000935	-0.00110*	-0.00109*	-0.000306	-0.000319
		(-0.40)		(-0.94)		(-1.65)	(-1.60)	(-1.62)	(-1.61)	(-1.60)	(-1.87)	(-1.87)	(-0.43)	(-0.45)
Tobin's Q		-0.00136*		-0.00236		-0.00204*	-0.00196*	-0.00195*	-0.00188*	-0.00188*	-0.00210**	-0.00210**	-0.00124	-0.00131
		(-1.71)		(-1.45)		(-1.92)	(-1.84)	(-1.84)	(-1.77)	(-1.76)	(-1.98)	(-1.98)	(-1.01)	(-1.07)
Return on Assets		0.0177		0.0285		0.00492	0.00540	0.00540	0.00400	0.00387	0.00551	0.00552	0.00981	0.0104
		(1.59)		(1.24)		(0.31)	(0.34)	(0.34)	(0.25)	(0.24)	(0.35)	(0.35)	(0.52)	(0.55)
Debt/Total Assets		-0.00901***		0.00472		-0.0100**	-0.0103**	-0.0102**	-0.00981**	-0.00982**	-0.00963**	-0.00962**	-0.00755	-0.00771
		(-2.69)		(0.83)		(-2.16)	(-2.21)	(-2.21)	(-2.13)	(-2.14)	(-2.06)	(-2.06)	(-1.40)	(-1.44)
Cash/Total Assets		-0.0142**		-0.00794		-0.0197***	-0.0197***	-0.0197***	-0.0193***	-0.0193**	-0.0195***	-0.0195***	-0.0193**	-0.0191**
		(-2.38)		(-0.57)		(-2.64)	(-2.65)	(-2.64)	(-2.59)	(-2.57)	(-2.62)	(-2.62)	(-2.48)	(-2.47)
Restatement							0.00464	0.00384						
							(1.32)	(0.91)						
No Clawback × Restatement								0.00272						
								(0.38)						
Bonus Pay/Total Pay									0.00849*	0.00787*				
									(1.96)	(1.94)				
No Clawback × Bonus Pay										0.00227				
										(0.19)				
CEO-Chair											0.00306*	0.00299		
											(1.76)	(1.54)		
No Clawback × CEO-Chair												0.000278		
												(0.06)		
Co-opted Board													0.00253	0.00119
													(1.29)	(0.55)
No Clawback × Co-opted Board														0.00599
														(1.17)
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1475	1475	1475	1475	1475	1475	1475	1475	1475	1475	1475	1475	1055	1055
Adjusted R^2	0.034	0.046	0.035	0.040	0.041	0.053	0.053	0.053	0.055	0.055	0.054	0.054	0.070	0.071

Table A1

This table contains the definitions and descriptions of the variables used in this paper.

Variable	Definition
Bonus/Total Pay	The fraction of the CEOs Total Pay (see Total Pay) that consisted of bonus payments. Bonus payments are calculated as the sum of bonus payments and estimated future payouts under non-equity incentives following Hayes, Lemmon and Qiu (2012) (Source: Execucomp).
CAR(i,j)	The cumulative abnormal return from day i to j relative to the SEC's announcement of proposed Rule 10D-1 on July 1, 2015 (Source: CRSP).
Cash/Total Assets	Cash and Short-term Investments divided by Total Assets (Source: Compustat).
CEO-Chair	Equals 1 if the CEO is also the Chair of the board of directors (Source: Execucomp, Riskmetrics).
Clawback	Equals 1 if the firm had a policy providing for the recoupment of performance-based executive compensation when the accounting information upon which the compensation is based gets restated (Source: SEC EDGAR).
Co-opted Board	The fraction of the directors on the board that were appointed after the current CEO took office (Source: Lalitha Naveen's Website).
Debt/Total Assets	The sum of Long-term Debt and Debt in Current Liabilities divided by Total Assets (Source: Compustat).
Market Capitalization	The total value of the firm's shares outstanding at the end of the fiscal year (Source: Compustat).
PPENT/Total Assets	Property, Plant and Equipment divided by Total Assets (Source: Compustat).
Restatements	The number of restatements made for the past five fiscal years divided by five (Source: Auditanalytics).
Return on Assets	Operating Income before Depreciation divided by Total Assets (Source: Compustat).
Sales	Net Sales divided by Total Assets (Source: Compustat).
Tobin's Q	The ratio of the market value of assets to book value of assets computed following Baker and Wurgler (2002) (Source: Compustat).
Total Assets	Total Assets (Source: Compustat).
Total Pay	The CEOs total compensation (Source: Execucomp).

Table B1

This table reports summary statistics for firm characteristics. The sample in Panel A consists of 458 constituents of the S&P 1500 index in June 2015, for which required data were available (see table A1 for variable descriptions). This includes 229 firms that did not have a clawback provision (Clawback = 0) and a matched sample of 229 firms that had a clawback provision (Clawback = 1). *, ** and *** indicate statistical significance at the 10%, 5% and 1% levels respectively.

	All		Clawback = 0		Clawback = 1		Differences	
	N=458		N=229		N=229			
Variable	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Total Assets	5177.642	1925.391	5107.195	1885.705	5248.089	1997.636	-140.894	-111.931
Log(Total Assets)	7.618	7.563	0.232	0.188	0.223	0.184	0.009	0.004
Market Capitalization	5346.214	2040.381	0.157	0.097	0.171	0.125	-0.014	-0.028
Sales	3790.465	1288.519	0.467	0.000	0.415	0.000	0.052	0.000
Cash/Total Assets	0.164	0.112	0.476	0.000	0.528	1.000	-0.052	-1.000
Debt/Total Assets	0.220	0.192	0.217	0.170	0.223	0.202	-0.006	-0.031
Tobin's Q	2.076	1.652	5636.025	2129.288	5056.403	1987.455	579.622	141.833
Return on Assets	0.139	0.125	0.266	0.174	0.242	0.146	0.024	0.029
PPENT/Total Assets	0.254	0.164	2.079	1.568	2.073	1.729	0.006	-0.161
Restatements	0.098	0.000	0.107	0.000	0.089	0.000	0.018	0.000
Total Pay	4953.291	3952.761	0.134	0.123	0.143	0.126	-0.009	-0.003*
Bonus/Total Pay	0.227	0.187	3132.746	1287.060	4448.185	1288.519	-1315.439	-1.459
CEO-Chair	0.441	0.000	7.593	7.542	7.643	7.600	-0.050	-0.058
Co-opted Board	0.502	1.000	4780.222	3783.363	5126.360	4053.674	-346.138	-270.311