From Restatement Risk to Reporting Rigor: Evidence from the SEC's Clawback Mandate

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Abstract: In October 2022, the U.S. Securities and Exchange Commission adopted Exchange Rule 10D-1 requiring all firms listed on major stock exchanges to have a written policy in place to recover compensation awarded to executive officers in the event of an accounting restatement (clawback provision). We examine whether firms respond to the clawback mandate by altering their investments in the financial reporting function. Consistent with a mandatory compensation clawback encouraging firms to improve the financial reporting function to limit the potential for restatements, we find that firms increase their hiring of employees in accounting positions in the immediate aftermath of the SEC's rule adoption. We also find evidence that clawback-adopting firms pay higher audit fees and that earnings are announced on a timelier basis in the initial period in which compensation will be eligible for a clawback. In contrast to concerns regarding clawbacks, we do not observe evidence of an increase in executive compensation or a shift away from performance-based executive pay for new adopters. In fact, we find some evidence that firms newly subject to a mandatory clawback *increase* the number performance metrics in CEO compensation contracts that require a clawback in the event of a restatement. Consistent with stakeholder recognition of an improvement in the quality of reported numbers, we find that firms experience an increase in analyst coverage following mandatory clawback rule adoption.

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1. Introduction

Tying executive compensation to firm financial performance is a key mechanism for reducing agency frictions (Jensen and Meckling 1979). While such incentive structures are theoretically sound, the revelation of several major accounting frauds in the 2000s raised concerns among policymakers that incentive-based compensation can lead executives to distort accounting performance and take excessive risks. The Financial Crisis Inquiry Commission argued that formulaic incentive compensation without appropriate safeguards was one of the determining factors in the 2007-09 financial crisis (FCICR 2011). In response, Congress passed the Dodd-Frank Act in 2010, which directed the SEC to put in place a mandate that publicly-listed firms have a clawback provision for their executive compensation contracts. Clawback provisions allow employers to recoup compensation awarded to executives based on financial performance that is later found to be erroneous.

Advocates argue that clawback provisions refocus executives' attention towards financial statement quality and align incentives with those of investors (e.g., Stein 2015; Gensler 2022). In contrast, clawback opponents contend that such provisions will only serve to increase executive compensation and drive compensation contracts away from incentive-based pay (Piwowar 2015; Sorkin 2015). Consistent with the contentiousness of clawback policies, the SEC did not finalize its clawback mandate until October 2022, twelve years after the original Dodd-Frank rule. Under the SEC's mandate, executive compensation contracts covering periods ending in December 2023 and later are subject to a required clawback.

In this study, we investigate the effects of mandating clawback provisions in executive compensation contracts. In doing so, we build on prior literature that examines *voluntary* adoption of clawback provisions. On balance, existing evidence shows that voluntary clawback adoptions

are associated with increased financial reporting quality (deHaan, Hodge, and Shevlin 2013; Chan, Chen, Chen, and Yu 2012; 2015; Chen, Greene, and Owers 2015), increased CEO compensation (deHaan et al. 2013; Chan et al. 2015), and reduced managerial effort (Chen et al. 2015; Babenko et al. 2017). However, these studies face the empirical challenge that voluntarily adopting a clawback provision is an endogenous decision that is influenced by firm circumstances (e.g., recent accounting issues, such as restatements). Consider a firm that is concerned about financial restatement risk and simultaneously hires a new executive team, expands its internal audit function, and voluntarily adopts new compensation provisions. In this scenario, it is empirically difficult to determine the distinct causal effect of a clawback provision separate from these simultaneous governance changes. Indeed, existing research documents contradictory evidence that voluntary clawback adopters: display limited changes to executive compensation levels (Iskandar-Datta and Jia 2013) and are more likely to engage in real earnings management (Chan et al. 2015).

In addition to concerns regarding the ability to distinguish the distinct effect of a clawback provision on firm outcomes and executive compensation, voluntarily adopted clawbacks vary substantially in their specific policies (e.g., whether the clawback provision is limited to fraud/malfeasance or covers other financial reporting errors) and in their coverage (e.g., the CEO and CFO only or a wider executive team) (Asante-Appiah and Sharma 2022). Variation in these features leads to potentially heterogeneous treatment effects for voluntarily adopted clawbacks.

We examine the effect of mandatory clawback adoption by studying the firms *required* to adopt clawback provisions in 2023 under SEC Exchange Rule 10D-1 (hereafter, Rule 10D-1). Focusing on mandatory adoption ensures a core set of common features across clawback provisions. In contrast to research on voluntary clawback adoptions, mandatory adoption under Rule 10D-1 also alleviates concerns that recent firm events led to the adoption of a clawback (along

with a correlated set of governance changes). As part of our analysis, we include firm- and year-fixed effects in our empirical design to mitigate concerns with unobservable heterogeneity across firms and over time. We begin with a simple pre- versus post-rule model to observe whether and how firms respond to the mandated clawback provision. Then, we introduce a difference-in-differences (DiD) model, using firms with a voluntary clawback provision in place prior to the adoption of Rule 10D-1 as a control sample that is relatively unaffected by the clawback mandate.

In our DiD design, we face two challenges with our available control sample. First, control firms may face partial treatment if they need to modify their clawback provisions to comply with the rule (e.g., the voluntary clawback provision was limited to restatements involving fraud). This issue will bias against finding results by generating a lower bound estimate of the treatment effect for the mandatory clawback provision. Second, our control firms self-select (into the control sample) by voluntarily adopting a clawback prior to Rule 10D-1. To account for differences in the characteristics of firms subject to mandatory clawback adoption under Rule 10D-1 (treatment firms) and firms that voluntarily adopted a clawback prior to the rule, we rely on coarsened exact matching (CEM) and a variety of control variables in our DiD specification. Firms that voluntarily adopted a clawback provision prior to Rule 10D-1 tend to be larger and display greater institutional ownership (e.g., deHaan et al. 2013). We use CEM to identify treatment and control firms with similar resources available to support financial reporting and compensation contracting and with a similar degree of scrutiny from institutional owners.[1] In addition, we match treatment and control firms within industry to ensure similar financial reporting determinants and incentive structures.

Following the literature on voluntary clawbacks, we examine the economic consequences of mandatory clawback adoption on financial reporting quality (FRQ) and the structure of

[1] This ensures that firms are observationally similar immediately prior to the clawback mandate and helps mitigate concerns regarding the validity of the parallel trends assumption in our DiD design.

executive compensation contracts. Rule 10D-1 requires firms to recoup erroneously awarded compensation in the event of accounting restatements, regardless of whether the misstatement was intentional or due to underlying fraud. Further, the policy applies to both "big R" restatements (i.e., those that require reissuing financial statements) and "little r" restatements (i.e., errors that do not meet the materiality threshold for reissuing prior period financials but require a correction in current financial statements). In light of this, we expect a mandatory clawback provision will increase executives' perceived costs of financial misreporting because compensation that is awarded based on restated financials will now be clawed back.

We expect managers and firms have two primary options to mitigate the expected cost to both the firm and its executives under the mandatory clawback provision. On the one hand, the imposition of a mandatory clawback may induce managers to improve FRQ. While a manager receives the same total payout if they (1) improve FRQ to avoid a restatement or (2) receive extra compensation based on a restatement that is then clawed back, loss aversion theory suggests that individuals perceive the second alternative as costlier. As a result, we expect managers will increase their investment in financial reporting systems to improve FRQ, thereby reducing the potential for a restatement that triggers a costly clawback. We refer to this conjecture as the accounting investment hypothesis. Alternatively, the board of directors may offset the increased costs of financial misstatements by either increasing executive compensation or rebalancing executive compensation away from financial-performance-based awards. This response would blunt the potential cost of a mandatory clawback on the executive's take-home pay. We refer to this conjecture as the costly contracting hypothesis.

We begin our analyses by examining whether firms subject to a mandatory clawback provision under Rule 10D-1 increase their investment in the financial reporting function. To test

the accounting investment hypothesis, we examine three primary outcome variables. First, we attempt to measure increased investment to support FRQ via direct expenses incurred to produce external financial reports. Specifically, we examine whether firms subject to a mandatory clawback increase their investment in the financial audit. Consistent with firms expanding the financial audit, we find firms newly-subject to a mandatory clawback increase their annual audit fees by 4.3% – 7.0% relative to a matched control sample in the year following the adoption of Rule 10D-1.

Second, using employment data from *Revelio*, we explore whether firms subject to mandatory clawback adoption hire additional accounting staff relative to control firms with a pre-existing clawback. We expect higher employment of accounting professionals will increase FRQ for firms subject to the clawback mandate. Consistent with a mandatory clawback encouraging firms to invest in the financial reporting function, mandatory adopters increase employment of accounting staff following the October 2022 adoption of Rule 10D-1. In addition, DiD tests for the matched sample show a relatively larger increase in accounting employment for mandatory adopters relative to our control sample over the six months following Rule 10D-1. Examination of employment differences by month shows a significant increase in employment in the second month after the rule change that persists through the following six months, consistent with firms responding to the mandatory clawback by hiring for new, permanent accounting positions. Examining results by month also validates an assumption of parallel pre-trends in accounting hiring across our matched samples of treatment and control observations.

Third, we examine the timeliness of firms' financial reporting to assess the extent of internal investments in financial reporting systems. Gallemore and Labro (2015) argue that higher-quality accounting systems eliminate manual intervention, increase accuracy, and shorten the financial closing period. Consistent with the clawback mandate encouraging firms to invest in

higher-quality reporting systems, we find a significant decline in the quarterly earnings reporting lag in the three quarters following the adoption of Rule 10D-1, both in absolute terms and relative to our voluntary adoption control sample. Our evidence that mandatory clawbacks are associated with higher audit fees, increased accounting employment, and timelier financial reporting supports the accounting investment hypothesis.

Our next set of tests examine the costly contracting hypothesis. We consider several channels through which a mandatory clawback provision may influence executive compensation contract design. First, to the extent clawback provisions impose additional risk on executives due to a potential recoupment of compensation in the event of a restatement, executives could demand an additional risk premium resulting in higher compensation (deHaan et al. 2013; Chen et al. 2015). Second, concerns about risk of recoupment could be addressed by granting relatively more compensation in forms that are not subject to clawback provisions (Piwowar 2015; Sorkin 2015).[2]

Inconsistent with firms increasing executive compensation to incorporate an additional risk premium (and with associations documented in prior literature on voluntary clawback adoptions), we find no significant difference (in both statistical and economic terms) in the level of reported CEO compensation for firms subject to a mandatory clawback in the year following the adoption of Rule 10D-1 relative to our control group. Second, we investigate whether firms shift their pay packages away from incentive-based compensation to avoid clawback triggers and the litigation risk stemming from a required clawback (Murphy and Jensen 2018). Again, we find no evidence to support a differential shift toward forms of compensation that are not subject to a compensation clawback for our treatment group of firms subject to mandatory clawback adoption.

[2] Compensation subject to mandatory clawbacks includes cash or performance-linked equity compensation that is awarded based on financial statement (e.g., EPS, revenue) or stock price (e.g., relative TSR) metrics, including non-GAAP metrics. Time-vested equity awards and cash or equity compensation that is awarded based on non-accounting metrics (e.g., customer satisfaction) or subjective evaluation are not subject to recoupment.

Alternatively, clawback provisions could impact compensation contract design through their influence on the performance metrics used to award incentive-based compensation. In particular, firms subject to a mandatory clawback could effectively blunt the impact of a clawback by shifting away from performance metrics that require a clawback (e.g., earnings, revenue, and stock return measures), and toward performance metrics outside of the financial reporting system, such as customer satisfaction. Inconsistent with the costly contracting hypothesis, we find evidence of *increases* in the use of clawback-eligible performance metrics among the matched sample of firms affected by the mandatory clawback rule. However, we caveat that the statistical significance of an increase in the use of clawback-eligible metrics varies based on the regression specification and matching approach.

In our final set of tests, we explore whether increased investment in financial reporting systems leads to improved FRQ outcomes for firms subject to mandatory clawback adoption. We start by examining whether increased investment in FRQ is associated with a shift in the firm's reporting reputation with market participants. For these tests, we rely on sell-side equity analysts as a key information intermediary and a proxy for sophisticated investors. Consistent with analysts perceiving improvements in FRQ among firms subject to a mandatory clawback, we find analyst following increases by 5.9% - 7.3% in the three quarters after the adoption of the SEC rule among the sample of matched firms subject to the clawback rule. In addition, we find some evidence to support a within-firm decline in analyst earnings forecast dispersion in specifications that include firm-fixed effects. However, this result does not extend to our matched sample research design. Further consistent with an improvement in FRQ by firms subject to a clawback, we find no evidence to support an increase in the likelihood that firms subject to a clawback just meet or beat analysts' consensus earnings forecasts. Collectively, this evidence that analyst coverage increased

without a deterioration in FRQ is consistent with an improvement in the financial reporting function, rather than simply an improvement in communication with external market participants, or with managers simply refraining from manipulating reported numbers.

Our research should be of interest to scholars, practitioners, and regulators. In the academic literature, prior studies focus on the consequences of *voluntary* clawback adoptions and document conflicting evidence of their associations with executive compensation and FRQ (e.g., deHaan et al. 2013; Chan et al. 2012; Iskandar-Datta and Jia 2013; Chan et al. 2015; Chen et al. 2015). For these voluntary clawback provisions adopted prior to Rule 10D-1, there was significant heterogeneity in adopted provisions across firms (Asante-Appiah and Sharma 2022) and the endogenous decision to adopt these provisions (along with other governance updates) limits the ability to draw clear causal inferences. In contrast, we examine the implications of a consistently applied mandatory clawback provision (i.e., Rule 10D-1). Our evidence suggests firms subject to the new clawback policy increased their investment in financial reporting quality, leading to more timely financial reports with broader analyst coverage.

From a practitioner perspective, we offer consistent evidence that mandatory clawback provisions do not distort executive compensation contracts away from their goal of incentive alignment. As such, our study deviates from existing compensation literature which finds that SEC mandated disclosure and governance reforms lead to higher managerial pay as a compensating differential (e.g., Hermalin and Weisbach 2012; Iliev and Vitanova 2019; Gipper 2021). In fact, we find some evidence that treated firms (subject to mandatory clawback adoption) rely on more financial performance-based metrics in their executive compensation contracts. As a result, we provide new evidence of a complementary relation between the quality of firms' financial reporting functions and the reliance on financial metrics in executive compensation contracts (e.g.,

Bushman, Engel, and Smith 2006; Carter, Lynch, and Zechman 2009).

From a regulatory perspective, we offer the first academic evidence that mandated clawback provisions led to higher FRQ, and *did not* lead to an unintended consequence of either higher pay or a shift away from incentive-linked pay. These findings are important in the executive compensation setting given the contentiousness of SEC Exchange Rule 10D-1 and clawback provisions (Peirce 2022) and given concerns from regulators and the popular press that a mandatory clawback provision would exacerbate agency frictions (Sorkin 2015). On this point, our study directly speaks to recent calls from regulators for evidence on the consequences of Rule 10D-1 and how the regulation can be improved (Atkins 2025). More broadly, evidence on the implications of the mandatory clawback rule informs the SEC's recent concerns with excessive regulation surrounding executive compensation (Beyoud 2025).

2. Exchange Rule 10D-1 and hypothesis development

2.1. Background: SEC Exchange Rule 10D-1

Clawback provisions require an employee to reimburse their employer for some portion of compensation under certain conditions. Interest in clawback provisions has followed periods of financial misconduct in which investors and other stakeholders perceive that managers reaped rewards from nefarious behavior. The Sarbanes-Oxley act of 2002, which followed accounting scandals of the early 2000s, included a provision for compensation recoupment, but this provision was generally not enforced (Prescott and Vann 2018).

Subsequent to the financial crisis, the Dodd-Frank Act was passed in 2010 and included an amendment to the Securities Exchange Act of 1934 in Section 10D "Recovery of Erroneously Awarded Compensation." This section requires the SEC to prohibit a firm's securities from being listed on a U.S. stock exchange if the firm does not comply with its provisions. In 2015, the SEC

proposed the original version of the clawback rule required under the amended Section 10D. Upon its proposal, advocates lauded the passage of clawback rules as a tool to better align the interests of managers and shareholders, to mitigate improper compensation to managers, and to refocus managers' attention toward improving FRQ (e.g., Aguilar 2015; Stein 2015). However, detractors of mandated clawback provisions were concerned about unintended consequences, such as a movement away from incentive-based compensation and an increase in total executive pay (Piwowar 2015; Sorkin 2015). The opposition both within the SEC and more generally with corporate America led the SEC proposal to stagnate through various presidential regimes.

After a long-period of dormancy, the SEC reopened comments to the proposed rule in 2021 and announced the adoption of the final rule on October 26, 2022 (SEC 2022). The rule instructed securities exchanges to implement policies that companies must adopt to be eligible for listing; NYSE and NASDAQ released policies on February 22, 2023. Under these policies, companies must adopt a clawback provision applicable to executive officers no later than December 1, 2023 (applicable to any restatements related to conduct on or after October 2, 2023). In Figure 1, we present a timeline for the adoption process and key dates for Exchange Rule 10D-1.

Rule 10D-1 details what compensation clawback provisions firms must include to be compliant.[3] Policies must trigger recoupment in the case of either "big R" or "little r" restatements.[4] Further, recoupment must cover all executive officers and must occur regardless of whether the restatement was due to executive misconduct.[5] Policies require recovery of any erroneously awarded incentive-based compensation over the three-year period prior to the restatement date;

[3] For a complete description of the clawback and disclosure requirements under Section 240.10D-1, please refer to: https://www.law.cornell.edu/cfr/text/17/240.10D-1

[4] This contrasts with the original 2015 SEC proposed rule, in which clawback provisions were only required to be in place for big R restatements.

[5] Executive officers include the company president, any vice president in charge of a principal business unit, division or function (such as sales or finance), and any other officer who performs a policy-making function.

erroneously awarded pay is the difference between pay received and what would have been received based on the restated financial statements. Further, firms are not allowed to reimburse executives for recoupment payments incurred in response to a restatement.

Incentive-based compensation is defined as "any compensation that is granted, earned, or vested based wholly or in part on attainment of any financial reporting measures" and includes both cash and equity-based awards (SEC 2022). The rule further clarifies that financial reporting measures include both GAAP and non-GAAP metrics and ratios (e.g., revenues, earnings, financial ratios, segment profitability), as well as stock price or total shareholder returns (TSR) and applies to both absolute and relative metrics.[6] Compensation not subject to clawback includes salary, cash awards based on non-financial metrics (e.g., customer satisfaction, safety, individual ratings), and time-vested equity.

The twelve-year delay between the proposal of the clawback provision in 2010 and its adoption by the SEC in October 2022 reflects the significant concerns regarding the economic consequences of mandating clawback provisions. On its final approval, a dissenting SEC commissioner lamented that the broad coverage requiring clawbacks for any restatement, for both cash and equity-based awards, for all publicly listed firms, and for executive officers beyond the core executive team increases costs to shareholders and leads to less incentive alignment within a firm (Peirce 2022). In contrast, proxy advisory firms including ISS and Glass Lewis voiced support for more stringent voluntary clawback policies that go beyond the mandatory clawback rule to permit recovery of compensation when there is evidence of problematic decisions or actions, such as material misconduct or operational failures, that are not directly associated with a financial

[6] In the case of stock price or TSR-based awards, estimating the amount of compensation to be recouped will require "reasonable estimates" as to how restated financial statements impacted stock price.

restatement (Boehmke, Sawyer, and Lindsay 2024).[7] The current regulatory regime intends to revisit the clawback provision rule and assess whether it should be modified (Beyoud 2025). In light of mixed views on the extent to which mandatory clawbacks are desirable and the boundaries of these clawbacks, we consider the economic consequences to mandating executive compensation clawback policies under the SEC rule to be an empirical question.

2.2. Hypothesis development

We expect firms required to adopt a mandatory clawback provision under the revised listing standards may be influenced by this adoption in several ways. To examine the consequences of mandatory clawback adoption, we focus on the subset of firms who did not have a voluntary clawback policy in place prior to the passage of the new rule. On this point, 92% of S&P 500 firms had some form of voluntary clawback provision in place in 2016 (Prescott and Vann 2018). However, because this adoption was voluntary, these provisions vary across several dimensions including (1) the circumstances that trigger a clawback, (2) the types of compensation subject to clawback, and (3) how the amount of compensation to be recouped is determined. Thus, there is substantial heterogeneity in voluntarily adopted clawback provisions (Asante-Appiah and Sharma 2022). Further, voluntary clawback provisions were substantially less likely among smaller firms prior to the adoption of Rule 10D-1.

Optimally, a firm required to adopt a mandatory compensation clawback policy would prefer the executive to balance the costs of preventing restatement (e.g., investment in accounting infrastructure) with the potential direct and indirect costs of restatement, likely leading to a

[7] Along these same lines, the Federal Deposit Insurance Corporation, the Office of the Comptroller of the Currency, the Federal Housing Finance Agency and the National Credit Union Administration proposed a joint rule targeting incentive-based compensation at certain financial institutions with at least $1 billion in assets. The proposed rule would subject a covered executives' incentive compensation to recovery for at least seven years after vesting if s/he engaged in misconduct that resulted in significant financial or reputational harm to the institution.

situation where there is a non-zero probability of restatement. The adoption of a clawback provision also introduces additional costs related to a restatement for the executive. Directly, the executive will have to repay compensation resulting from the restatement. Moreover, loss aversion theory suggests that having to pay money back is perceived as more costly than not receiving money in the first place, and individuals are willing to exert extra effort to avoid such losses (e.g, Novemsky and Kahneman 2005; Imas, Sadoff, and Samek 2017).

We expect that executives who perceive additional costs for both the firm and the executive's own pay under the mandatory clawback regime will respond in one of two ways to the adoption of the new clawback policy. First, we expect executives can seek to improve financial reporting quality (FRQ) to reduce the likelihood of a restatement by increasing their investment in accounting infrastructure (the *accounting investment hypothesis*). SEC Commissioner Stein, in her statement regarding her approval of the original proposal, argued that the clawback provisions under Dodd-Frank are "aimed at focusing executives on quality of earnings" (Stein 2015). Under this line of reasoning, we expect managers to commit financial resources to improving FRQ in several ways. Prior literature suggests that the magnitude of audit fees reflects firms' intent to improve FRQ (e.g., deHaan et al. 2013; Hribar, Kravet, and Wilson 2014; Bronson, Ghosh, and Hogan 2017). Increasing (decreasing) the size of the accounting workforce in various settings has also been shown to improve (lower) FRQ (Lee and Yu 2021; Renschler et al. 2023; Dambra et al. 2025). We also attempt to measure accounting investment by examining the timeliness of financial reports. Prior literature argues that investment in higher-quality accounting systems eliminate manual intervention, increase accuracy, and shorten the financial closing period (Gallemore and Labro 2015). The accounting investment hypothesis predicts that firms forced to adopt clawback provisions in their executive compensation contracts increase their commitment to FRQ in terms

of capital, labor, and timeliness following Rule 10D-1.

Second, we expect executives can also seek to limit the expected personal cost of a compensation clawback in the event a restatement occurs. On this point, a risk-averse executive can demand higher pay to compensate for the additional risk imposed by a potential compensation clawback (Prendergast 1999) or can request a shift away from components of pay that are subject to the risk of a clawback (the *costly contracting hypothesis*). Prior theory argues that mandating enhanced disclosure or governance that imposes additional monitoring will lead to higher managerial pay as a compensating differential (e.g., Prendergast 1999; Hermalin and Weisbach 2012). SEC regulations on additional executive compensation disclosure (Gipper 2021) and approval of say-on-pay packages (Iliev and Vitanova 2019) support this prediction. The potential for an increase in executive pay in response to the mandated clawback provision was a central concern of regulators and practitioners, which significantly delayed the mandate to enforce the clawback provision under Dodd-Frank. On this point, extant literature provides mixed evidence of an association between executive compensation changes and *voluntary* clawback adoptions. Chan et al. (2015) and deHaan et al (2013) find evidence that total executive compensation increases for voluntary clawback adopters, while Iskandar-Datta and Jia (2013) find no evidence of changes in total pay. One challenge with this mixed prior evidence is that studies utilize different matching procedures to mitigate concerns regarding endogenous choices to adopt voluntary clawback provisions. In this regard, our setting allows for cleaner inferences to test the costly contracting hypothesis, as clawbacks are imposed upon firms simultaneously and in a uniform fashion.

As an alternative to compensating executives for the increased risk of the clawback policy, a firm could instead shift compensation towards pay types not subject to a clawback. For example, following the CEO pay ratio reform, Chang, Dambra, Schonberger, and Suk (2023) find no

evidence that total compensation increases in response to the SEC mandate, but document that boards altered incentive-linked pay to reduce the amount of compensation "at-risk" from poor performance.[8] Salary and time-vested equity (stock and options) are not classified as incentive-based pay under the rule and thus not subject to clawback. Further, within incentive-based pay, the portion of pay that is awarded based on non-financial metrics (e.g., environmental scores, subjective evaluations) is not subject to a clawback.

3. Empirical design and matched sample construction

3.1. Empirical design

To investigate the economic consequences of Exchange Rule 10D-1, we estimate the following regression models:

$$[Outcome]_{it} = \beta_0 + \beta_1 Post_t + \sum \boldsymbol{B_n Controls} + \psi_i + \varepsilon_{it} \quad (1)$$

$$[Outcome]_{it} = \beta_0 + \beta_1 Treat_i + \beta_2 Post_t + \beta_3 Treat_i \times Post_t + \sum \boldsymbol{B_n Controls} + \psi_i + \phi_t + \varepsilon_{it} \quad (2)$$

We examine several dependent variables as *Outcomes* in Eqs. (1) and (2), where the time-series measurement of *t* in Eqs. (1) and (2) varies across outcomes based on measurement frequency, from the most coarse (annual) to the most granular (monthly).[9] For details on the timing of the passage of SEC Exchange Rule 10D-1 and the timing of our empirical design, please see Figure 1. To examine the accounting investment hypothesis, we begin by examining the natural logarithm of annual audit fees (*Ln(Audit Fees)*) for a given calendar year *t* for firm *i* as the dependent variable, with the model estimated via ordinary least squares (OLS).[10] The annual sample spans December

[8] In the voluntary clawback setting, Chen et al. (2015) find that base compensation declines while incentive-based compensation increased. Chen et al. (2015) argues that since the incentives for "honest reporting" increase, boards may be more inclined to shift executive's compensation structures towards more incentive-based pay. Again, the endogenous choice of selecting a voluntary clawback in previous literature complicates inferences.

[9] Refer to the summary statistics in Tables 2 - 5 for sample coverage for each regression and sample period.

[10] Given recent evidence that using the residual as the dependent variable can induce bias (e.g., Chen, Hribar, and

fiscal year-ends for 2019 – 2023, where 2023 is the first year in which executive compensation is eligible for a clawback under Exchange Rule 10D-1. Next, we estimate a Poisson model for a count-based dependent variable, where the dependent variable is the number of full-time accountants (*Accountants*) employed by the firm in a given month *t* estimated for the monthly sample of observations spanning April:2022 to April:2023 (6 months pre- and post-adoption of Rule 10D-1 in October 2022). Accounting employees are identified using "accountant", "auditor", or "financial controller" job roles, as classified by *Revelio Labs* (role_k150). Third, *EA Release Lag* equals the number of calendar days between the fiscal quarter-end date and the earnings announcement date, measured for the quarterly sample of observations spanning Q1:2022 to Q3:2023 (3 quarters pre- and post-adoption of Rule 10D-1 in October 2022), with Q4:2022 dropped as the transition period.

In estimating Eq. (1), we focus on the effect of Rule 10D-1 within affected firms using a pre-post design, where we restrict the sample to firms without any prior clawback provision in place prior to the passage of Rule 10D-1 (i.e., *TREAT* = 1, treatment firms subject to mandatory clawback adoption). *Post* is an indicator variable equal to one for fiscal periods (years, quarters, or months) following the October 2022 adoption of Exchange Rule 10D-1, and to zero otherwise. For annual outcome variables, we assign the December 2022 fiscal year to the pre-clawback period, given the relatively limited time following the October 2022 adoption for the full yearly period. Our coefficient of interest in Eq. (1) is β_1. To the extent that firms subject to the mandatory adoption of a clawback policy invest more in their financial reporting systems following Rule 10D-1, we expect $\beta_1 > 0$ when *Accounting* and *Ln(Audit Fees)* are the outcome variables, and $\beta_1 < 0$ when *EA Release Lag* is the outcome variable.

Melessa 2018), we do not rely on abnormal audit fees as a dependent variable as in deHaan et al. (2013).

In estimating Eq. (2), we include firms with a voluntary compensation clawback policy in place at any point over the 2019 – 2021 period prior to Exchange Rule 10D-1 (as a control group that is less affected by the mandatory clawback requirement) in a difference-in-differences (DiD) specification. In estimating the DiD model, we acknowledge that our control group is not endogenously determined, as firms voluntarily elect to adopt a compensation clawback policy prior to Rule 10D-1 (i.e., firms self-select into the control sample). For this reason, we rely on coarsened exact matching (CEM) to ensure our treatment and control groups are similar on observable determinants of clawback adoption (see Section 3.2 for details). In addition, to the extent voluntary clawback provisions are more limited than the new requirements under Rule 10D-1, firms in our control sample will also be affected (to a lesser degree) by the mandatory provision. That said, we believe newly adopting firms (without any prior clawback provision) are subject to a more substantial treatment effect. In addition, any partial treatment of the control sample will bias our DiD results toward zero. In estimating Eq. (2), *Treat* is an indicator variable equal to one for firms that do not have a clawback policy in place for executive bonus compensation during the three-year (2019 – 2021) fiscal period prior to the October 2022 adoption of Rule 10D-1 and equal to zero otherwise. Our coefficient of interest in Eq. (2) is β_3 on the interaction between *Treat* and *Post*. The accounting investment hypothesis predicts that mandatory adopting firms will invest more in their financial reporting systems post Rule 10D-1. As such, we expect $\beta_3 > 0$ ($\beta_3 < 0$) when *Ln(Audit Fees)* and *Accounting* (*EA Release Lag*) appear as dependent variables in Eq. (2).

Turning to tests of the costly contracting hypothesis, we examine various components of executive compensation. We examine the natural logarithm of the level of CEO compensation reported in the annual proxy statement (*Ln(Total Compensation)*) and the proportion of CEO compensation that is awarded in the form of performance-linked equity for a given CEO of firm *i*

in year *t* (*Performance-Based Equity (% of Total)*) via OLS.[11] We also examine the number of distinct performance metrics included in the CEO's compensation contract that are eligible for a compensation clawback (in the event of a restatement) under Rule 10D-1 (*Clawback-Likely Metrics*) for each CEO in year *t.*

To the extent that clawback provisions impose additional costs on the CEO, the costly contracting hypothesis predicts that total compensation will increase for firms newly required to include clawback provisions in their executive compensation contracts after Rule 10D-1 in Eq. (1) ($\beta_1 > 0$), and that total compensation will increase for mandatory adopters relative to the control sample after Rule 10-D-1 in Eq. (2) ($\beta_3 > 0$). On this point, we expect firms can also shift executive compensation away from performance-based components that are 'at-risk' of a clawback in the event of a restatement. In the latter case, when *Performance-Based Equity (% of Total)* or *Clawback-Likely Metrics* are dependent variables in Eq. 1 (Eq. 2), we would expect β_1 (β_3) < 0.

The control variables in Eqs. (1) and (2) ($\sum \boldsymbol{B_n Controls}$) account for firm heterogeneity in terms of size, investment opportunities, and other characteristics that are associated with either financial reporting quality metrics or CEO compensation. Our control matrix generally follows the determinants from prior literature on voluntary clawback adoptions (e.g., deHaan et al. 2013). All continuous (non-logged) control variables are winsorized at the top/bottom 1% levels separately by fiscal period (year, quarter, or month). Appendix A presents detailed variable definitions and data sources for variables used in our tests. When estimating Eq. 1 [Eq. 2], we include firm- (ψ_i) [firm- (ψ_i) and time-fixed effects (ϕ_t)] to mitigate unobservable heterogeneity across firms [and over time].[12] In each specification, we cluster standard errors by firm and report all t-statistics

[11] In additional analysis, we examine log-adjusted components of annual CEO compensation (such as performance-linked stock or option awards). Inferences are unchanged for this alternative approach.

[12] In specifications of Eqs. (1) and (2) where firm-fixed (time-fixed) effects are included, the individual coefficients on *Treat* (*Post*) are subsumed.

based on two-tailed significance tests.

3.2. Matched sample construction

To construct our sample for the analysis, we require observations to have a U.S. home country identified by ISS in their Executive Compensation Analytics (ECA) database to focus on firms in which the SEC's mandatory compensation clawback rule change is binding. To measure key control variables, we require a valid link to both Compustat and CRSP based on the GVKEY identifier included in the ECA database. We exclude any observations with a CEO turnover during the year to avoid issues with partial-year compensation packages and require a single CEO during the year to avoid capturing interim or co-CEO observations. We also restrict our sample to firms with a December fiscal year-end to align firms in calendar time and ensure that the requirement to adopt a compensation clawback policy by the end of the 2023 calendar year affects treatment firms in the 2023 fiscal period. Our final annual sample covers firms with fiscal years ending between December 2019 and December 2023 (comprising the 2020 – 2024 proxy seasons), while our quarterly and monthly analysis examines sub-periods that are centered on the October 2022 adoption of Exchange Rule 10D-1 to identify pre- and post-treatment periods.

To identify treatment firms that are most affected by the SEC's requirement to have in place a mandatory clawback policy for executive compensation, we identify firms without a clawback during the 2019 – 2021 pre-rule period, which are forced to adopt a clawback under Rule 10D-1. As a control sample, we rely on firms with a voluntary compensation clawback provision covering executive bonuses at any point over the 2019-2021 pre-rule period based on data available from the ISS' Executive Compensation Analytics database. ISS constructs this data based on a scrape and analysis of compensation disclosures in annual proxy filings. To avoid capturing firms that implement a clawback in anticipation of the rule change, we identify firms with a clawback based

on their language in proxy filings during the 2019-2021 period, which ends in 2021 when the SEC reopened comments on its clawback rule. We use a three-year window to identify pre-existing clawbacks to capture firms that mention a clawback only when presenting full details of the executive compensation contract or in which ECA fails to identify a clawback in a particular year.[13]

Table 1 presents summary statistics in Panel A (B) for our annual sample of observations based on data available for the 2021 pre-period for the 821 (1,266) distinct firms in our treatment (control) samples prior to matching. Comparing across Panels A and B in Table 1 shows that on average, treatment firms that are required to adopt a mandatory compensation clawback provision under Rule 10D-1 tend to be smaller, with relatively poorer operating performance, with more volatility in equity returns and return on assets, with fewer institutional owners, and lower analyst coverage relative to control firms with a voluntary clawback policy in place prior to Rule 10D-1.

Because firms in our control sample voluntarily elect to adopt a clawback policy for executive compensation prior to the rule change (i.e., firms self-select into the control sample), we rely on coarsened exact matching (CEM, Iacus, King, and Porro 2012) to identify treatment and control sample observations that are similar on observable determinants of the decision to voluntarily adopt a clawback. CEM "coarsens" firms into bins based on covariates before identifying treatment firms with a valid match in the control sample in the same bin. In addition, CEM identifies observational weights for control sample observations based on the number of observations within each bin. This matching approach allows us to restrict attention to firms that are similar along observable determinants of voluntary clawback adoption (firm size, institutional

[13] Based on a hand-review of 100 proxy filings (50 that that ISS codes as having a voluntary clawback policy for executive bonuses and 50 coded as having no policy), the research team noted several instances in which ISS coded a firm as having no clawback policy for an annual period. The most common issues were due to firms presenting compensation information as graphics (rather than in tabular format) and referring to more detailed compensation policies on the firm's website or in the 10-K. The research team found that using a three-year window eliminated all instances in which a firm was coded as not having a clawback policy due to these recording issues.

owners, and industry), while excluding unmatched observations that display limited overlap in particular covariate bins. These unmatched firms are those that display limited distributional overlap in key covariates, essentially representing the "never treated" or "always treated" groups of observations in the Rubin causal inference framework.[14]

We use CEM to match treatment and control sample firms in the final pre-period year (2021) within bins identified for: the natural logarithm of the average market value of equity over the 2019 – 2021 period (*Size*, roughly 30 bins identified using the Freedman-Diaconis rule), the natural logarithm of the number of institutional owners holding a stake of at least 1% of the outstanding common equity of the firm in 2021 (*Ln(InstOwners)*, roughly 15 bins identified using Sturges' rule), and Fama-French 12 industry (exact match required). Based on this CEM program, we identify treatment and control firms with a valid match within each bin (where matched firms remain in the sample, with an equal weight assigned to all matched observations) and identify a weight assigned by the CEM program to the observation's stratum, where the weight equals zero if the observation is unmatched, one if the observation is treated, and a continuous value for matched control observations based on the number of control observations in each stratum.[15] Figure 2 presents summary statistics for covariate imbalance before and after implementing this CEM program. Panel A of Figure 2 shows that prior to CEM, treatment firms that are subject to mandatory clawback adoption under Rule 10D-1 display large standardized differences in means relative to control firms based on firm size and the number of institutional owners with large stakes.

[14] CEM also address an issue with entropy balancing as an alternative approach to assigning observational weights to control sample observations to ensure covariate balance. Entropy balancing does not exclude any treatment sample observations, resulting in the potential for large weights assigned to a handful of control sample observations in cases with limited distributional overlap (see McMullin and Schonberger 2020; 2022 for a discussion). In our clawback setting, large firms (e.g., in the S&P 500 Index) are much more likely to have a voluntary clawback provision in place prior to the SEC's rule change, resulting in entropy balancing assigning large weights to smaller firms with a voluntary clawback provision in place prior to the 2022 rule adoption (untabulated for brevity).

[15] Under this weighting approach, the maximum weight assigned to a single control observation by the CEM program is 29.7.

After using CEM to identify matched treatment and control observations, standardized differences in both size and institutional ownership move substantially toward zero, with standardized differences in means that are roughly zero (and are consistent with balanced covariates) after applying weights identified by the CEM program to control sample observations. In Panel B, we present variance ratios as a means of assessing covariate balance based on the second moment of the distributions for firm size and institutional owners. Panel B similarly indicates balance covariates after applying CEM weights to the treatment and control samples of observations. In Panels C – F of Figure 2, we also present histograms for *Size* and *Ln(InstOwners)* before and after CEM. These panels show CEM effectively eliminates observations in the extremes of each distribution from the matched sample, consistent with limited overlap in these bins.

4. Results

4.1. Accounting investment hypothesis

Under the accounting investment hypothesis, we conjecture that loss aversion leads executives to invest more in their financial reporting function in response to the requirement for a compensation clawback policy applied to the compensation of all executive officers. We start our empirical analysis of this hypothesis by investigating whether executives invest more in ensuring the quality of their financial reporting via higher external audit fees.

Prior literature (e.g., deHaan et al. 2013) argues that increased expenditures in audit fees are representative of a commitment to enhanced financial reporting quality (FRQ). Panel A of Table 2 shows that the average (median) firm pays $3.2 million ($1.5 million) of audit fees. We start our empirical analysis in Panel B of Table 2 by estimating Eq. (1) for *Ln(Audit Fees)* as the dependent variable. In model (1), we find that audit fees increase for newly adopting firms following the imposition of Rule 10 10D-1 (coeff. = 0.198, p-value < 0.01). One limitation of the

within-treatment firm analysis is that the increase in audit fees could simply reflect an over-time growth in audit fees that is unrelated to the adoption of Rule 10D-1. Thus, remaining models in Panel B rely on the control sample of firms with a pre-existing voluntary clawback in DiD specifications (i.e., Eq. 2). In model (2) we estimate a baseline DiD specification that omits firm- and time-fixed effects. This model shows that, relative to control firms, firms subject to mandatory clawback adoption incur 8.3% higher audit fees following the passage of Rule 10D-1 (coeff. = 0.080, *p*-value < 0.01). As expected, audit fees increase over time with a positive *Post* coefficient, and the coefficient on *Treat* is smaller given the differential size of our raw treatment and control groups. Our findings are relatively unchanged in model (3) when we introduce firm- and year-fixed effects, which subsumes the individual coefficients on *Post* and *Treat.*

In model (4), we rely on CEM to identify treatment and control observations that are similar on dimensions of firm size, institutional ownership, and industry. The CEM procedure reduces our sample size in model (4) by over half. Even with the loss in statistical power, we continue to observe a 7% increase in audit fees for clawback adopters, relative to our control group (coeff. = 0.068, *p*-value < 0.01). Figure 3 presents annual DiD estimates for the CEM sample of observations where we decompose the *Post* into years (with the 2019 base year omitted). This figure provides evidence of no statistical differences in audit fees between treatment and control groups prior to Rule 10D-1, consistent with a valid parallel pre-trends assumption. Subsequent to Rule 10D-1, we observe significant variation in audit fees between our mandatory clawback adopting (treatment) firms and our control sample of voluntary clawback adopters. Turning to model (5) in Panel B of Table 2 shows that using observational weights identified by our CEM program to estimate a weighted OLS model continues to show differential in variation in audit fees following Rule 10D-1, though the magnitude and economic significance weaken (*TREAT*POST* coeff. = 0.042, *p*-value

< 0.10). These models provide initial evidence supporting the accounting investment hypothesis.

Our next measure of investment in the financial reporting function is accounting personnel, as captured by *Revelio*. Table 3A shows that the average (median) firm in our sample employ 49 (10) accountants. Given the skewness of this count-based data, we use a Poisson model to estimate Eqs. (1) and (2) for monthly accounting employment. In addition, we include firm-fixed effects in all models for the number of *Accountants* employed each month, to account for systematic differences in firm size and resulting employment. Model (1) of Table 3B examines the within-treatment-sample change in accounting employment following Rule 10D-1. We observe a 3.1% increase in accounting employment for adopting firms following the imposition of Rule 10D-1 (coeff. = 0.030, *p*-value < 0.01). In model (2), we introduce a DiD model for the full sample of (unmatched) observations. We continue to observe a positive, but statistically insignificant DiD coefficient. After using CEM to address systematic differences in firm size (and employment) between the treatment and control samples, our CEM sample in model (3) shows a statistically significant increase in *Accountants* following Rule 10D-1 for newly adopting firms (coeff. = 0.014, *p*-value < 0.05). Figure 4 plots the monthly DiD estimates for our CEM treatment and control samples based on the estimation of model (3) for the twelve months (six months pre- and post-rule adoption) surrounding the SEC's final rule adoption in October 2022. Figure 4 suggests that there was no differential trend in accounting employment prior to the enactment of Rule 10D-1 for our matched sample of observations. We also observe a relative increase in accounting employment for newly adopting firms within two months, and this difference in the level of employment sustains throughout the post period. Finally, model (4) of Table 3B estimated using weights identified by the CEM program shows that for our most rigorous specification, newly adopting firms experience a 1.8% increase in accounting employment subsequent to Rule 10D-1 relative to

control firms (p-value < 0.05).

Our final outcome variable related to the accounting investment hypotheses attempts to capture the delay in releasing interim (quarterly) earnings to the market. Prior research argues that earnings announcement speed reflects investment into the firm's financial reporting system (Gallemore and Labro 2015). Table 4A shows that the average (median) firm in our sample reports earnings 39 (35) days following the end of the fiscal quarter.[16] Our within-treatment-sample specification estimated in model (1) of Table 4B suggests that newly adopting firms report their earnings more rapidly following the enactment of Rule 10D-1 (coeff. = -0.011, p-value < 0.01). Models (2) and (3) of Table 4B show that this relation holds in our DiD specification for the full sample, both with and without firm- and quarter-fixed effects. Given that the *TREAT*POST* coefficient is approximately triple the size of the *POST* coefficient, improved timeliness appears concentrated among firms most affected by the mandatory clawback provision. Our results are qualitatively similar in our CEM specification models in (4) and (5). Results in model (5) (our most rigorous specification) show that quarterly earnings are announced roughly 2/3 of a day earlier (1.7% of the mean *EA Release Lag* of 39 days) for treatment firms following Rule 10D-1 (p-value < 0.01).

Collectively, results in Tables 2 – 4 support the accounting investment hypothesis, based on evidence that firms subject to mandatory clawback adoption spend more on their financial statement audits, increase the size of their accounting department, and report timelier earnings relative to firms with a pre-existing voluntary clawback policy in place.

4.2. Costly contracting hypothesis

Under the costly contracting hypothesis, we conjecture that managers may demand at least

[16] We examine reporting lag for interim (non-annual) earnings announcements surrounding Rule 10D-1 to ensure that the financial closing process and audit procedures are comparable for each reporting period.

partial protection from additional risk introduced by the clawback provision in their compensation. This protection could come in the form of a risk premium (reflected in the level of executive compensation) or by way of shifting compensation away from components that are subject to a clawback in the event of a financial restatement.

Table 5A presents summary statistics for the level of CEO compensation reported in the annual proxy statement, along with the proportion of equity compensation that is performance-linked. In Table 5B, we evaluate whether managers receive a risk premium related to clawback adoption using the natural log of total compensation (*Ln(Total Compensation)*) as the dependent variable. If managers receive a risk premium, we expect total compensation to increase at firms subject to the mandatory clawback policy adoption. Model (1) of Table 5B examines the within-treatment-sample change in compensation; in this model we see a 6.9% increase in total compensation after clawback adoption (*POST* coeff. = 0.067, *p*-value < 0.10). However, once control observations are introduced in models (2) – (5), the coefficient on *TREAT*POST* becomes in significant, for both full sample and CEM specifications. Collectively, these results suggest model (1) captures a general increasing trend in executive compensation, which is similar across samples of firms more and less affected by the adoption of Rule 10D-1.[17] These results suggest managers do not receive an additional risk premium related to mandatory clawback adoption.

An alternative means to protect managers from the risk of a clawback provision is to shift compensation toward types that are not subject to clawback provisions. We construct two tests to evaluate this prediction. First, we consider the percentage of equity grants that include performance-vesting provisions (*Performance-Based Equity (% of Total)*). While performance-based equity may be subject to clawback depending on the specific performance conditions, time-

[17] Consistent with evidence for the level of CEO pay, we find an insignificant *TREAT*POST* coefficient in models in which log-adjusted CEO base salary appears as the dependent variable (results untabulated for brevity).

vested equity is not subject to a clawback in the event of a restatement under Rule 10D-1. Thus, to the extent that compensation design is changing to insulate executives from risk, we expect the percentage of performance-linked equity to decrease following adoption of Rule 10D-1. The results of this analysis are found in Table 5C. We do not find results supportive of this prediction in any specification. In model (1) (within-treatment-sample change), the coefficient is positive (*p*-value < 0.01), inconsistent with CEOs demanding less performance-based pay under the mandatory clawback regime. Again, this result likely reflects general trends in compensation towards performance-vested equity, as we document insignificant coefficients for the *TREAT*POST* term in model (2) – (5) that include control sample observations.

We conduct a second test to assess whether firms are shifting compensation towards components that are not eligible for a clawback. For this test, we classify each metric used in performance-based compensation (i.e., non-equity incentives and performance equity) as to whether it is likely subject to a clawback under Exchange Rule 10D-1. Metrics related to accounting or stock price (e.g., earnings, revenue, stock price, TSR) are subject to a clawback, while those not directly related to financial performance (e.g., customer satisfaction, ESG) are not.[18] We then calculate the percentage clawback-eligible performance metrics as a percentage of the total number of performance metrics appearing in the CEO's compensation contract (*Clawback-Likely Metrics (% of Total)*); a decrease in this percentage after the adoption of Rule 10D-1 would be consistent with managers protecting compensation from a potential clawback.

Results are presented in Table 6. Collectively, we do not find results consistent with CEO compensation reflecting lower-weight on clawback-eligible performance metrics following Rule

[18] We identify clawback-likely metrics using the "overall_metric_type" and "disclosed_metric_name" fields in the ISS' ECA database, where the disclosed performance metric is a variant of income, cash flow, economic value added, total stock return (TSR), sales, or is listed as an absolute or market-based performance metric.

10D-1. In fact, in four of five specifications, we find the percent of clawback-likely metrics *increases* after adoption of Rule 10D-1. A potential explanation for this result comes through the increased investment in financial reporting documented in Section 4.1; if the ratio of signal-to-noise increases for financial metrics, these metrics are more informative and should be used more heavily in compensation (e.g., Lambert and Larcker 1987).

In summary, we generally do not find support for the costly contracting hypothesis, as we do not document changes to CEO compensation that are likely to protect (or compensate) managers from the risk introduced by a clawback provision, either in the form of a risk premium or in a shift away from clawback-eligible compensation components.

4.3. Mandated clawback provisions and market perceptions of financial reporting quality

Our results in Sections 4.1 and 4.2 are largely consistent with the accounting investment hypothesis. Firms forced to include a clawback provision in the executive compensation contracts appear to invest in improving FRQ rather than significantly modifying executive pay structures to blunt the impact of a clawback. A natural extension of our research question is to further explore whether FRQ improves for newly adopting firms. We utilize several FRQ outcomes.

Drawing on prior literature examining voluntary clawback adoptions (i.e., deHaan et al. 2013; Chen et al. 2012), we examine an indicator variable for just meeting or beating analyst expectations as a proxy for external FRQ. We also explore whether FRQ is associated with a shift in the firm's reporting reputation. For these tests, we rely on sell-side equity analysts as a key information intermediary and a proxy for sophisticated investors. Finally, following Iskandar-Datta and Jia (2013), we explore how the introduction of a clawback mandate influences analyst forecast dispersion.

We present results of these tests in Table 7.[19] Beginning with evidence for sell-side analyst following, we use a Poisson model for the number of distinct analysts providing quarterly earnings per share forecasts for firm *i* during quarter *t* (*Analysts*) in the periods surrounding the adoption of Rule 10D-1. In model (1) of Table 7A, our within-treatment-sample results suggest that analyst following increases by 2.2% subsequent to adoption of Rule 10D-1 (coeff. = 0.022, *p*-value < 0.01). Turning to our DiD specifications in models (2) – (5) shows that the coefficient on *TREAT*POST* is significantly positive in models (2) through (5) (*p*-values < 0.01) after incorporating firm- and year-quarter-fixed effects and for estimates that employ CEM. In the DiD models, the relative uptick in analyst coverage for new adopters appears economically significant, with analyst coverage increases ranging from 3.4% to 7.3% across models (2) – (5). The results in Table 7A are consistent with an increase in visibility with capital market intermediaries subsequent to firms' incorporating mandatory clawback provisions into executive compensation contracts.

While financial visibility improves, it is unclear how executives will respond to the increased capital market attention. To shed light on executive responses, we investigate whether managers' propensity to "just" achieve analysts' earnings expectation changes for firms subject to mandatory clawback policies following Rule 10D-1. In Table 7B, our outcome of interest is *MeetBeat*, an indicator variable equal to one for quarter *t* in which firm *i* reports an earnings surprise in the [0,1] cent interval and equal to zero otherwise. Using a similar model structure as in Table 7A, we fail to find any statistical evidence in Table 7B that newly adopting clawback firms change their propensity to meet or just beat the analyst consensus forecast. Thus, we find no evidence that managers exploit their enhanced communication with capital market participants to walk-down analysts' forecasts to a beatable level each quarter.

[19] Consistent with our quarterly tests in Table 4, we utilize a sample of observations spanning Q1:2022 to Q3:2023 (3 quarters pre- and post-adoption of Rule 10D-1 in October 2022), with Q4:2022 dropped as the transition period.

Our final set of FRQ tests explore the relation between adopting a mandatory clawback provision and analyst forecast dispersion. In Table 7C, the outcome variable is *Forecast Dispersion*, measured using the standard deviation of quarterly analyst earnings per share forecasts included in the last available consensus forecast in the I/B/E/S summary file for firm *i* in quarter *t*. Our within-treatment-sample tests in model (1) show that analyst forecast dispersion declines following Rule 10D-1 for newly adopting clawback firms. In model (2), we incorporate our control sample of firms with a voluntary clawback policy prior to Rule 10D-1. We find in model (2), that relative to the full control group, our mandatory adopters experience a reduction in analyst forecast dispersion following the imposition of Rule 10D-1. Our results are similar in model (3), when we incorporate firm- and year-quarter-fixed effects. However, these results become statistically and economically insignificant in our CEM specifications in models (4) and (5). It is worth noting however, that the CEM procedure reduces our statistical power, as the sample size declines by over 40%. Thus, we cannot say for certain whether the decline in *Forecast Dispersion* observed in models (1) – (3) for the full sample is driven by a difference in trends that is associated with the decision to voluntarily adopt a clawback. On balance, our results in this section provide some support for an improvement in investor recognition subsequent to the mandatory adoption of an executive compensation clawback provision, with no evidence of a discernable decline in FRQ.

5. Conclusion

The mandate to require clawback provisions in executive compensation contracts is a contentious regulatory policy. Following the passage of the Dodd-Frank Act in 2010, it took twelve years for the SEC to finalize its mandatory executive compensation clawback rule. We are the first empirical study to investigate the consequences of this Exchange Rule 10D-1. On this point, we expect that inferences from prior literature examining voluntary clawback adoptions provides

relatively limited insight into the consequences of mandatory clawback adoption, given the mixed evidence across voluntary clawback studies, the endogeneity of the voluntary adoption decision, and the heterogeneity of voluntary clawback provisions (Asante-Appiah and Sharma 2022).[20]

We focus on firms with no prior clawback provisions in place for executive compensation. These firms are forced to adopt new, uniform clawback provisions in their executive compensation contracts. We benchmark the response of these mandatory clawback adopters against a matched subset of firms who had previously voluntarily adopted clawback provisions prior to Rule 10D-1. We find that, relative to voluntary adopters, newly adopting firms invest more in their financial reporting systems. We find little evidence that boards increased CEO pay or shifted pay to components that are insulated from a clawback as a compensating differential for additional risk to these executives under the mandatory clawback regime. If anything, we find some evidence that boards utilize *more* clawback-eligible performance metrics to incentivize and reward executives following Rule 10D-1. Finally, we find that firms subject to mandatory clawback provisions provide more timely financial statements that elicit more attention from financial analysts.

As the SEC is currently in the process of re-evaluating its rules regarding executive compensation and mandatory clawbacks (Atkins 2025), our paper provides timely and important evidence on the consequences for firms following the enactment of mandatory clawback provisions. While we document evidence consistent with benefits of the mandatory clawback provision for firms' financial reporting quality and performance-linked compensation, we caveat that we do not conduct a welfare analysis of the benefits of improved FRQ netted against the required capital and labor costs to produce financial statements of higher quality. We leave this important question to future research.

[20] See Prescott and Vann (2018) for a recent survey discussing the mixed evidence on the effects of voluntary clawback adoptions.

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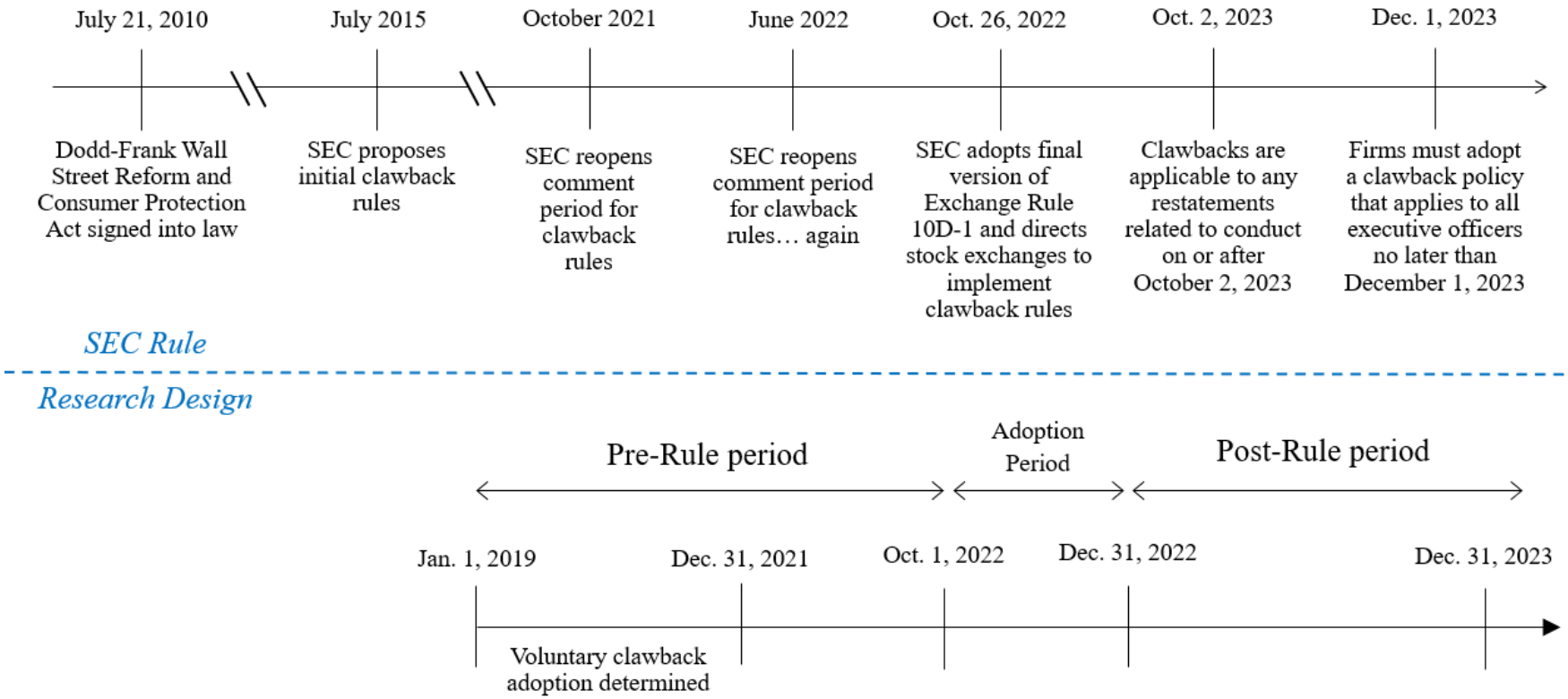
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Appendix A
Variable definitions and data sources

Variable	Description	Data Source
Independent variables and determinants:		
TREAT	An indicator variable equal to one for firms that do not have a clawback policy in place for executive bonus compensation during the three-year (2019 – 2021) fiscal period prior to the October 2022 adoption of Exchange Act Rule 10D-1 by the U.S. Securities and Exchange Commission (SEC) and equal to zero otherwise. Firms without a clawback policy are required under Rule 10D-1 to develop and implement a written policy for the recovery of erroneously awarded incentive-based compensation received by current and former executive officers in the event of a required accounting restatement.	ISS Executive Compensation Analytics (ECA)
POST	An indicator variable equal to one for fiscal years ending on or after December 15, 2023 or fiscal quarters ending on or after January 31, 2023 and equal to zero otherwise. The post-period reflects the period following the SEC's October 2022 adoption of Rule 10D-1 that directs stock exchanges to implement rules requiring a clawback of incentive compensation.	Compustat
Size	The natural logarithm of the average fiscal year-end market value of common equity (PRCC_F * CSHO) over the three-year period ending in year *t*.	Compustat
B/M	Average fiscal year-end book-to-market ratio measured as the book value of common equity (CEQ) scaled by the market value of common equity ending in year *t*.	Compustat
ROA	Average return on assets calculated as income before extraordinary items (IB) scaled by the average of beginning and ending book value of total assets (AT) for the three-year period ending in year *t*.	Compustat
Leverage	Average leverage ratio calculated as the sum of short-term and long-term debt (DLC+DLTT) scaled by the year-end book value of total assets (AT) for the three-year period ending in year *t*.	Compustat
Restatement	An indicator variable equal to one for firms that disclosed one or more financial restatements during the three-year period ending in year *t*, and to zero otherwise. Data for restatements is based on the financial restatements file downloaded from the Audit Analytics website on July 8, 2024.	AuditAnalytics
σ(ROA)	The standard deviation of quarterly return on assets (ROA), where ROA is calculated as quarterly income before extraordinary items (IBQ) scaled by the average of beginning and ending book value of total assets (ATQ) for all fiscal quarters during the three-year period ending in year *t*.	Compustat
σ(RET)	The standard deviation of monthly equity returns measured over the two fiscal years ending in year *t*, following the approach by dehaan, Hodge, and Shevlin (2013).	CRSP
ShareTurnover	Average monthly equity share turnover measured by the ratio of trading volume to shares outstanding over the two fiscal years ending in year *t*.	CRSP
InstOwners	The number of institutions holding an ownership stake exceeding 1% of the firm's outstanding common equity year *t*.	Thomson Reuters Inst. Holdings
Analysts	The number of distinct analysts reporting a quarterly earnings forecast based on the last available consensus forecast prior to the earnings announcement in the I/B/E/S unadjusted summary file.	I/B/E/S
CEO Tenure	The natural logarithm of the tenure of the chief executive officer (CEO) in years as of the end of year *t*. We require observations to have a single CEO during the year and drop any partial-year observations in which the CEO assumes the role during the fiscal year.	ISS ECA
Consensus Lag	The number of calendar days between the final consensus analyst earnings forecast tracked in I/B/E/S and the earnings announcement date.	I/B/E/S
Outcome variables:		
Ln(Audit Fees)	The natural logarithm of annual audit fees.	AuditAnalytics
Accountants	The number of full-time accountants employed by the firm in a given month. Accounting employees are identified using "accountant", "auditor", or "financial controller" job roles,	Revelio

	as classified by the data provider (*role_k150*). Firms are linked from *Revelio* to Compustat via CUSIP.	
EA Release Lag	The number of calendar days between the fiscal quarter-end date and the earnings announcement date reported in Compustat (RDQ).	Compustat
Total Compensation	Annual CEO compensation as disclosed in the proxy statement.	ISS ECA
Performance-Based Equity (% of Total)	The dollar value of performance-linked equity awards disclosed in the proxy statement for the current year scaled by the dollar value of all current-year equity awards.	ISS ECA
Comp Metrics	The number of distinct performance metrics included in the CEO's compensation contract.	ISS ECA
Clawback-Likely Metrics	The number of distinct performance metrics included in the CEO's compensation contract that are likely to require a clawback under Exchange Rule 10D-1. We identify clawback-likely metrics using the "overall_metric_type" and "disclosed_metric_name" fields in the ECA database, where the disclosed performance metric is a variant of income, cash flow, economic value added, total stock return (TSR), sales, or is listed as an absolute or market-based performance metric.	ISS ECA
Analysts	The number of distinct analysts reporting a quarterly earnings forecast based on the last available consensus forecast prior to the earnings announcement in the I/B/E/S unadjusted summary file.	I/B/E/S
Ind(MeetBeat = 1)	An indicator variable set equal to one for quarters in which a firm's reported actual earnings per share just meets or beats the last available consensus analyst forecast in the I/B/E/S unadjusted summary file, measured as earnings surprises that fall in the [0,1] cent range after rounding and equal to zero otherwise .	I/B/E/S
Forecast Dispersion	The standard deviation of quarterly analyst earnings per share forecasts included in the last available consensus analyst forecast in the I/B/E/S unadjusted summary file.	I/B/E/S

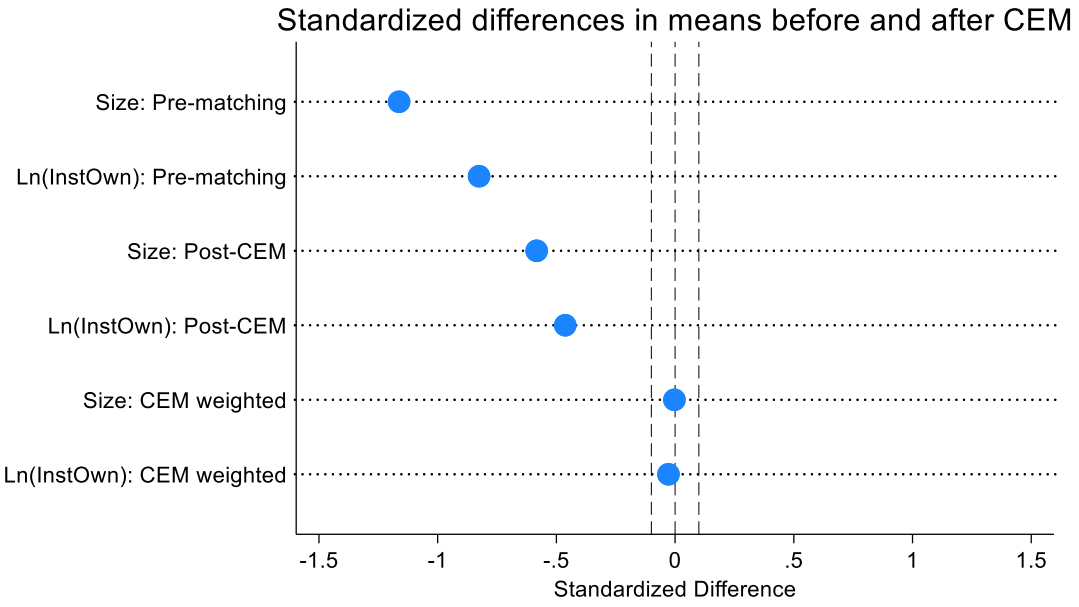
Figure 1
Timeline of the SEC's adoption of Exchange Rule 10D-1 and research design



This figure presents a timeline (top) of the adoption of the Dodd-Frank Act that includes a requirement for a mandatory executive compensation clawback provision and the adoption of SEC Exchange Rule 10D-1 in October 2022. The figure also depicts the timing of our empirical design (bottom). In this portion of the figure, the *Pre-Rule Period* is used to identify firms with a voluntary executive compensation clawback provision in place over the 2019 – 2021 pre-adoption period (based on data available on executive bonus compensation clawback provisions from ISS' Executive Compensation Analytics database). The rule adoption period is classified as October 2022 (for tests relying on monthly measurement of outcome variables) and Q4:2022 (for tests relying on quarterly measurement). We assign the fiscal year ending December 2022 to the pre-adoption period, given the relatively short period following the October 26, 2022 adoption of the final version of Exchange Rule 10D-1 for the annual reporting period. Please refer to Appendix A for detailed variable definitions and data sources.

Figure 2
Covariate imbalance before and after coarsened exact matching firms subject to mandatory clawback policy adoption (treatment firms) and those with a voluntary compensation clawback policy (control firms) prior to the adoption of SEC Exchange Rule 10D-1

Panel A: Standardized differences in means before and after coarsened exact matching (CEM)



Panel B: Variance ratios before and after coarsened exact matching (CEM)

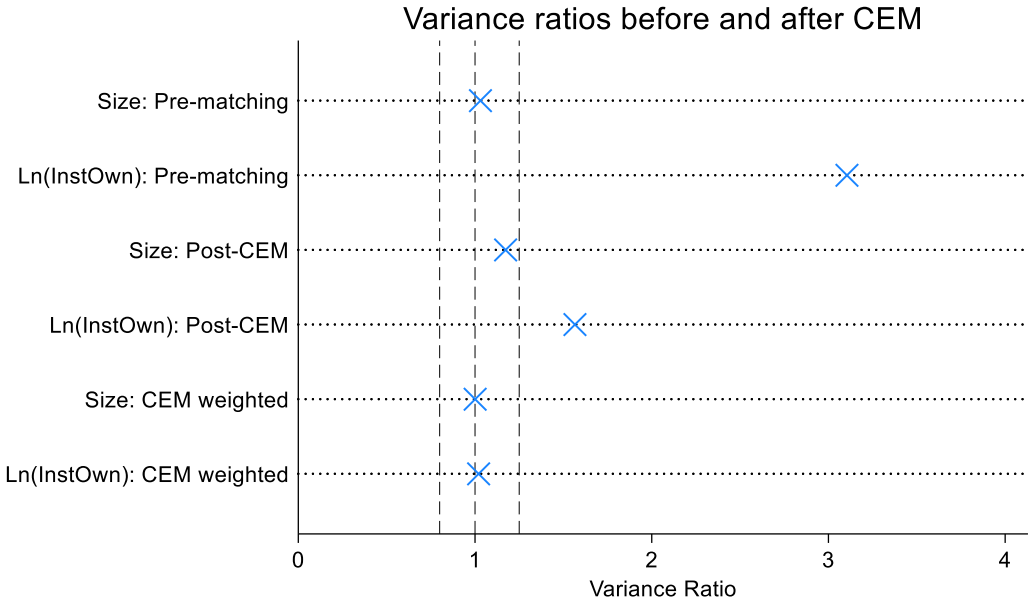
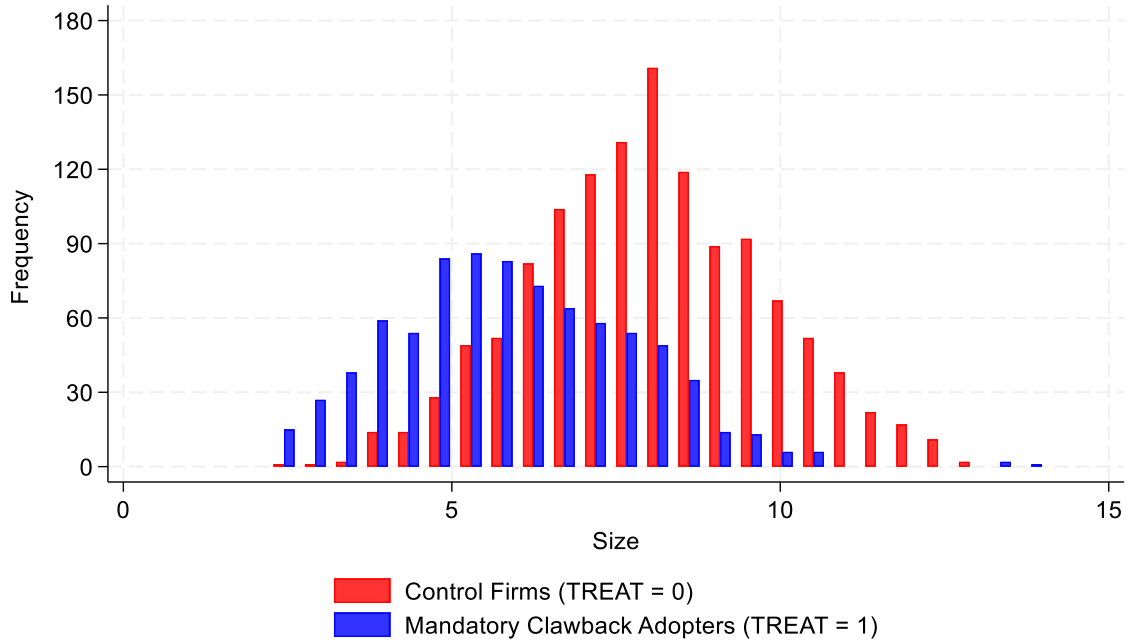


Figure 2, continued
Panel C: Distribution of firm size prior to coarsened exact matching (CEM)



Panel D: Distribution of firm size after CEM

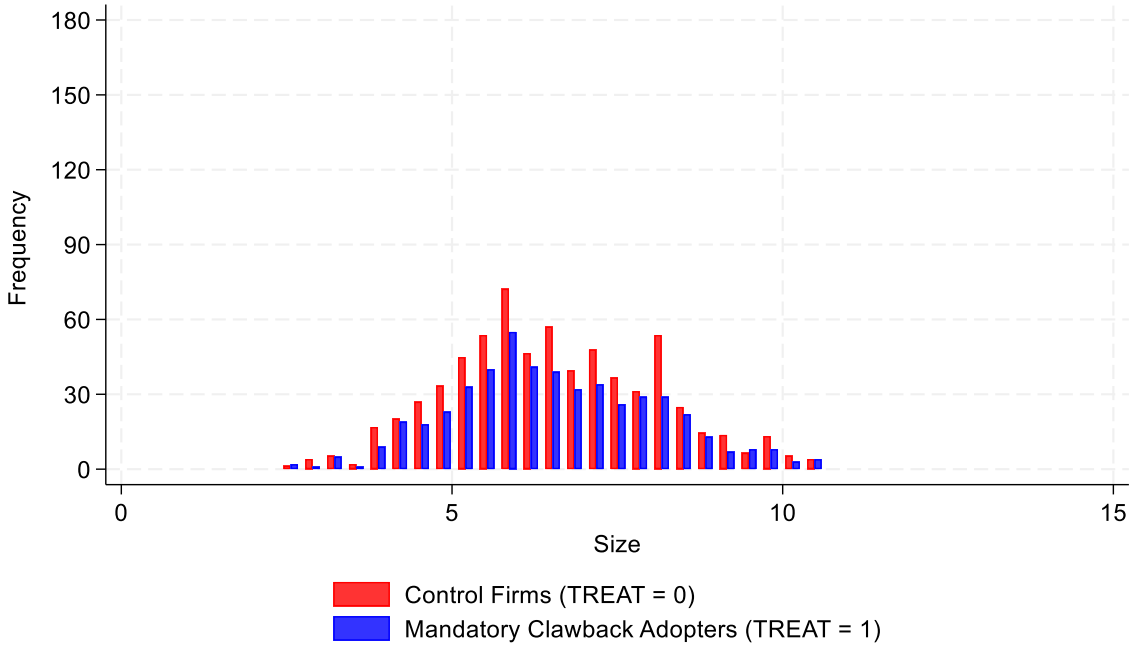
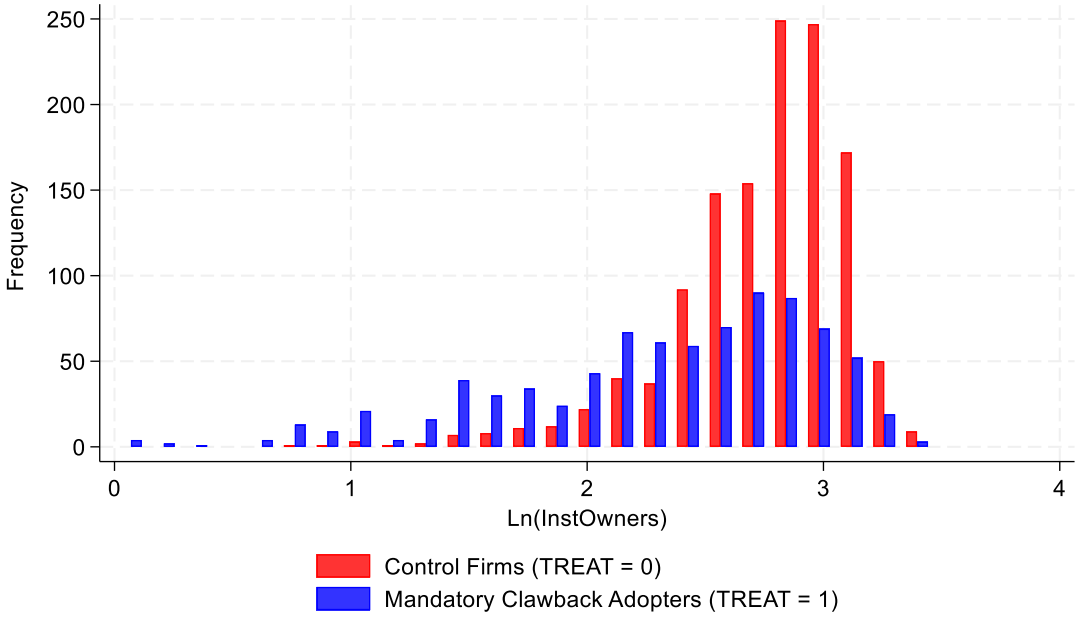
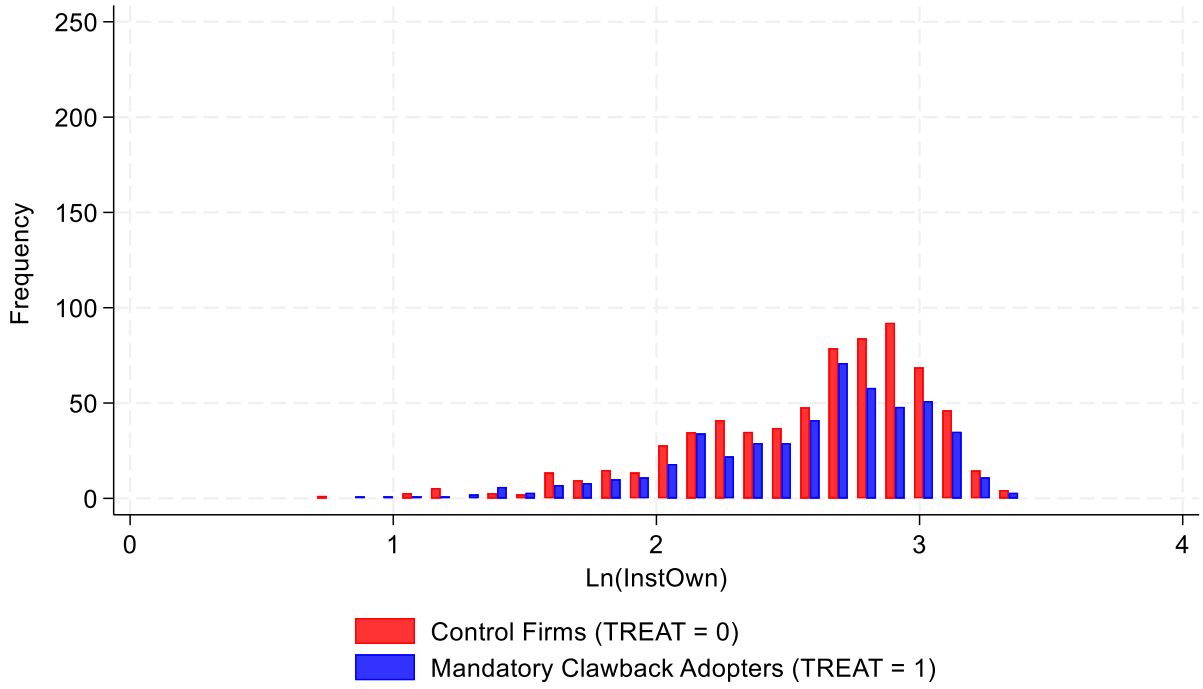


Figure 2, continued

Panel E: Distribution of institutional owners prior to coarsened exact matching (CEM)



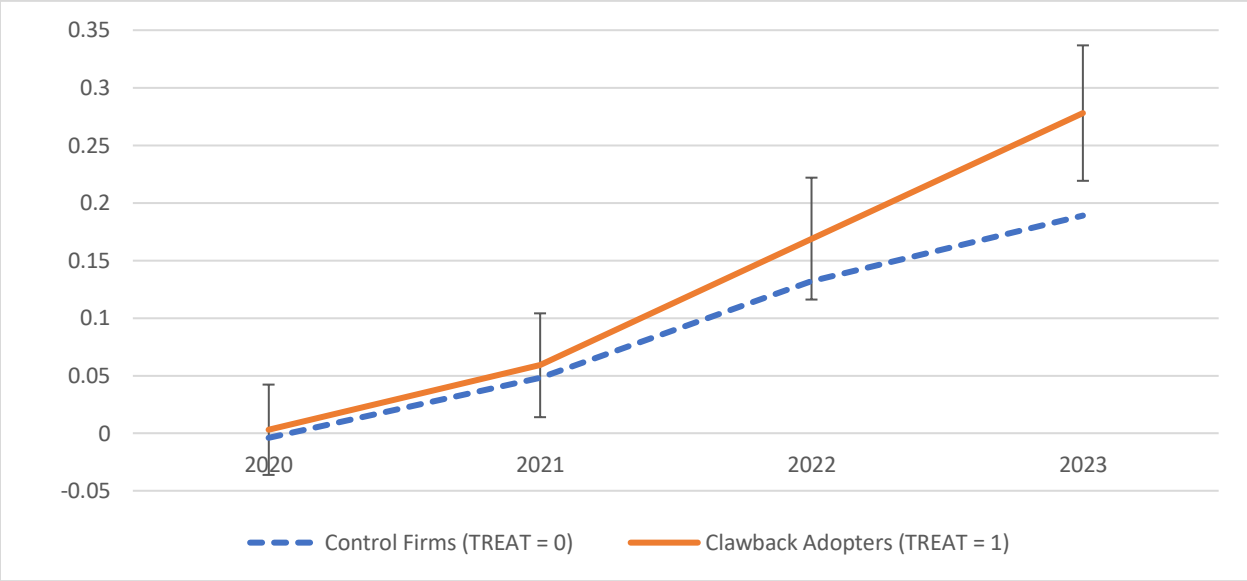
Panel F: Distribution of institutional owners after CEM



This figure presents summary statistics for covariate imbalance before and after using coarsened exact matching (CEM) to match the sample of firms subject to the mandatory adoption of a compensation clawback policy (treatment firms) to the control sample of firms with a voluntary compensation clawback policy in place prior to the October 2022 adoption by the SEC of Exchange Rule 10D-1 that requires a clawback policy for executive officers. We present standardized differences in means (Panel A), variance ratios (Panel B), and histograms (Panels C – F) for the

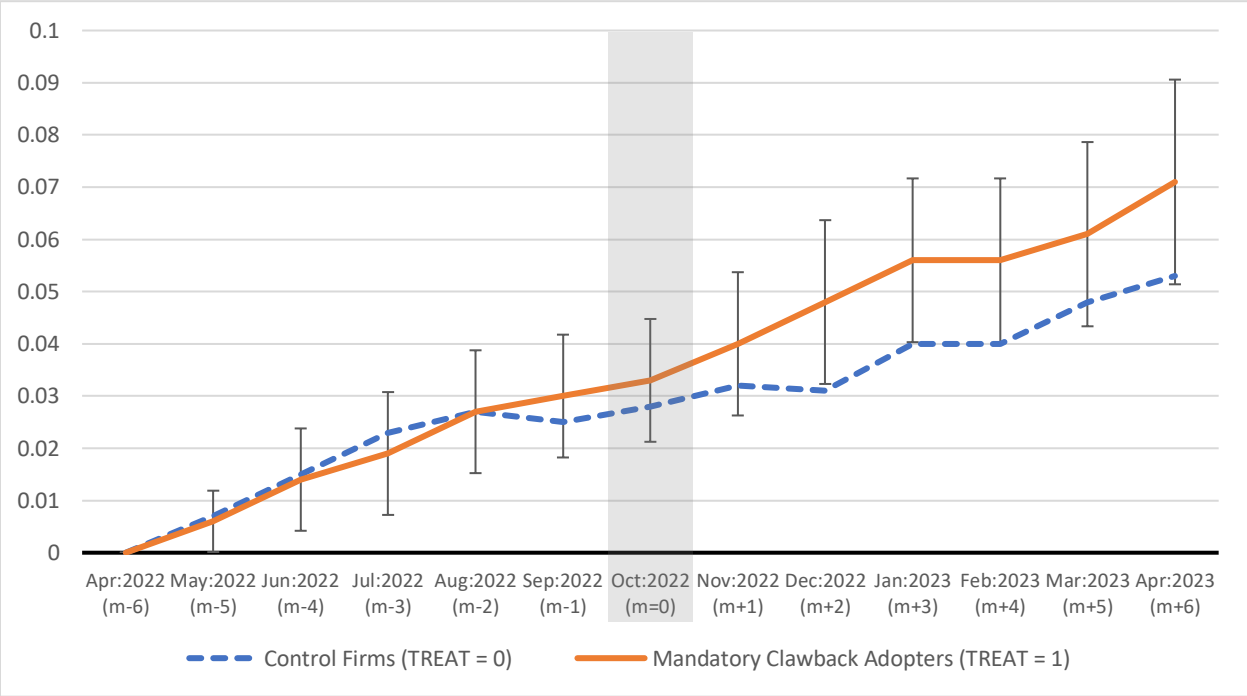
distribution of key determinants of voluntary clawback adoption measured over the 2019 – 2021 period prior to the adoption of SEC Exchange Rule 10D-1. We use CEM to match firms within bins identified for the natural logarithm of the average market value of equity over the 2019 – 2021 period (*Size*, roughly 30 bins identified using the Freedman-Diaconis rule), the natural logarithm of the number of institutional owners holding a stake of at least 1% of the outstanding common equity of the firm in 2021 (*Ln(InstOwners)*, roughly 15 bins identified using Sturges' rule), and Fama-French 12 industry (12 bins, exact match required). Based on this CEM program, we identify treatment and control firms with a valid match within each bin (where matched firms remain in the sample, with an equal weight assigned to all matched observations) and identify a weight assigned by the CEM program to the observation's stratum, where the weight equals zero if the observation is unmatched, one if the observation is treated, and a continuous value for matched control observations based on the number of control observations in each stratum. The maximum weight assigned to a single control observation by the CEM program is 29.7. In Panel A, standardized differences are calculated as the difference in means between the treatment and control samples divided by the square root of the average variance in the treatment and control samples for each covariate. The standardized difference will approach zero when the first moment of the distribution for a particular covariate is balanced across treatment and (weighted) control samples. In Panel B, variance ratios for each covariate are calculated as the ratio of the covariate's variance for the treatment sample scaled by variance for the control sample. Standardized differences and variance ratios outside of the vertical bands in each panel denote differences that indicate significantly imbalanced covariates following the guidance of Rubin (2001) and Austin (2011). In Panels C – F, we present histograms for *Size* (Panels C and D) and for the natural log of the number of institutional owners with significant equity stakes (Panels E and F). Bars in red (blue) represent firms in the control (treatment) sample, identified as firms with (without) a pre-existing clawback policy over the three-year period (2019 – 2021) preceding the rule adoption. Panels C and E present distributions for the full sample of observations in the final pre-period year, while Panels D and F present distributions after coarsened exact matching. Please refer to Appendix A for variable definitions and data sources.

Figure 3
Parallel pre-trends in financial reporting quality: Annual difference-in-differences estimates for coarsened exact matched (CEM) regression specification for log-adjusted audit fees



This figure presents annual difference-in-differences estimates for the coarsened exact matched (CEM) sample of observations matched on firm size, log-adjusted institutional owners, and industry. The figure presents estimates for log-adjusted annual audit fees (see model 4 of Table 2, Panel B). Annual regression estimates (with 2019 omitted as the pre-period baseline) are presented for the treatment sample of firms required to adopt a compensation clawback policy for executive officers under SEC Exchange Rule 10D-1 (treatment firms) and for the control sample of firms with a pre-existing clawback policy (control firms). Each regression includes control variables consistent with those in Eq. (1) and firm-fixed effects. Bars representing 95% confidence intervals appear along with each regression estimate for the treatment sample of clawback adopting firms. Refer to Appendix A for detailed variable definitions and data sources.

Figure 4
Parallel pre-trends in financial reporting quality: Monthly difference-in-differences estimates for coarsened exact matched (CEM) regression for accounting employment



This figure presents monthly difference-in-differences estimates for the coarsened exact matched (CEM) sample of observations matched on firm size, log-adjusted institutional owners, and industry. Estimates are from a Poisson regression specification for the number of full-time accountants employed in each month based on data available from Revelio (see model 3 of Table 3, Panel B). Estimates (with April:2022 omitted as the pre-period baseline) are presented separately for each month for the treatment sample of firms required to adopt a compensation clawback policy for executive officers under SEC Exchange Rule 10D-1 (treatment firms) and for the control sample of firms with a pre-existing clawback policy (control firms). The sample period spans April:2022 through April:2023, with October:2022 as the adoption period for SEC Exchange Rule 10D-1. Bars representing 95% confidence intervals appear along with each monthly regression estimate for the treatment sample of clawback adopting firms. Refer to Appendix A for detailed variable definitions and data sources.

Table 1
Summary statistics for the annual sample spanning 2019 – 2023

Panel A: Summary statistics for determinants of clawback adoption for the sample of firms subject to mandatory clawback policy adoption (TREAT = 1, treatment firms)

Variable	Mean	Std. Dev.	Min	Q1	Median	Q3	Max	N
Size	5.940	1.809	2.209	4.654	5.849	7.206	14.062	821
Restatement	0.140	0.347	0	0	0	0	1	821
ROA	-0.061	0.115	-1.338	-0.109	-0.013	0.005	0.112	821
B/M	0.520	0.621	-4.195	0.185	0.407	0.763	4.929	821
Leverage	0.260	0.309	0.000	0.051	0.157	0.385	4.252	821
σ(ROA)	0.055	0.103	0.000	0.010	0.026	0.060	1.158	821
σ(RET)	0.221	0.163	0.041	0.124	0.184	0.259	1.270	821
ShareTurnover	0.781	1.198	-2.732	0.017	0.660	1.397	5.286	821
InstOwners	11.025	6.240	0	6	11	16	30	821
Analysts	4.585	4.385	0	2	4	6	39	821
Tenure	9.375	8.228	1	4	6	13	52	821

Panel B: Summary statistics for determinants for firms with a pre-existing clawback policy (TREAT = 0, control firms)

Variable	Mean	Std. Dev.	Min	Q1	Median	Q3	Max	N
Size	8.028	1.782	2.627	6.851	8.001	9.206	12.964	1,266
Restatement	0.123	0.329	0	0	0	0	1	1,266
ROA	-0.002	0.058	-1.213	-0.001	0.005	0.015	0.109	1,266
B/M	0.511	0.553	-4.607	0.202	0.415	0.771	4.929	1,266
Leverage	0.324	0.307	0.000	0.106	0.302	0.444	4.971	1,266
σ(ROA)	0.022	0.059	0.000	0.004	0.010	0.022	1.084	1,266
σ(RET)	0.147	0.113	0.030	0.089	0.117	0.169	1.823	1,266
ShareTurnover	0.528	0.724	-2.036	0.123	0.452	0.868	3.710	1,266
InstOwners	15.539	5.022	1	12	16	19	31	1,266
Analysts	8.362	6.278	0	4	7	12	37	1,266
Tenure	8.379	7.624	1	3	6	11	54	1,266

This table presents summary statistics for determinants of voluntary clawback adoption measured for calendar year 2021, the last fiscal reporting period prior to the October 2022 adoption by the SEC of Exchange Rule 10D-1 that requires a clawback policy for executive officers. Observations are restricted to December fiscal year-end firms to align firms in calendar time and hiring cycle. Panel A (B) presents summary statistics for the sample of treatment (control) firms that are required to adopt a compensation clawback policy covering executive officers under SEC Exchange Rule 10D-1 (firms with a voluntary compensation clawback policy in place at some point during the 2019 – 2021 period preceding the adoption of Rule 10D-1). Refer to Appendix A for variable definitions and data sources.

Table 2
Investments in the financial reporting function: Annual difference-in-differences tests of forced clawback policy adoption under Exchange Rule 10D-1

Panel A: Summary statistics for variables used in tests of annual financial reporting outcomes (full sample of 10,014 firm-year observations spanning 2019 – 2023)

Variable	Mean	Std. Dev.	Min	Q1	Median	Q3	Max
TREAT	0.402	0.490	0	0	0	1	1
POST	0.213	0.409	0	0	0	0	1
Audit Fees	3,247,156	6,060,671	29,844	680,000	1,509,970	3,231,000	82,400,000

Panel B: Log-adjusted annual audit fees

	(1)	(2)	(3)	(4)	(5)
Dependent Variable:			*Ln(Audit Fees)*		
Specification:	OLS	OLS	OLS	OLS	CEM-weighted OLS
Sample:	Treatment Only	Full Sample	Full Sample	Matched Sample	Matched Sample
POST	**0.198*** **	0.110***			
	(15.64)	(8.75)			
TREAT		-0.196***			
		(-6.46)			
TREAT*POST		**0.080*** **	**0.083*** **	**0.068*** **	**0.042***
		(3.76)	**(5.97)**	**(3.54)**	**(1.82)**
Size	0.125***	0.444***	0.115***	0.114***	0.106***
	(6.10)	(36.37)	(7.90)	(5.64)	(3.60)
Restatement	0.021	0.259***	0.024	0.012	0.050
	(0.79)	(9.44)	(1.63)	(0.61)	(1.41)
ROA	0.232	0.478**	0.164	0.415*	0.385*
	(1.17)	(2.28)	(0.91)	(1.75)	(1.71)
B/M	0.047**	0.192***	0.033***	0.032	0.012
	(2.37)	(6.43)	(2.63)	(1.49)	(0.68)
Leverage	0.067	0.431***	0.093**	0.060	0.060
	(1.33)	(5.36)	(2.01)	(1.10)	(1.30)
σ(ROA)	0.046	-0.095	0.002	0.045	-0.011
	(0.27)	(-0.55)	(0.01)	(0.29)	(-0.07)
σ(RET)	-0.097	0.348***	-0.056	-0.057	-0.030
	(-1.30)	(3.19)	(-1.03)	(-0.88)	(-0.36)
ShareTurnover	0.039**	0.106***	0.036***	0.022	0.006
	(2.53)	(7.18)	(3.02)	(1.20)	(0.36)
Ln(InstOwners)	0.016	0.033	0.020	0.042	0.042
	(0.53)	(1.31)	(0.86)	(1.33)	(1.20)

Ln(Analysts)	0.039	0.044*	0.045**	0.040	0.025
	(1.31)	(1.71)	(2.25)	(1.53)	(0.78)
Ln(Tenure)	0.008	-0.102***	-0.004	-0.044*	-0.039
	(0.54)	(-7.73)	(-0.59)	(-1.66)	(-1.35)
Constant		10.764***			
		(105.78)			
Fixed Effects	Firm	None	Firm, Year	Firm, Year	Firm, Year
Observations	4,027	10,014	10,014	4,533	4,533
Adjusted R^2	0.956	0.711	0.977	0.971	0.970

This table presents summary statistics (Panel A) and results of difference-in-differences models for log-adjusted annual audit fees (*Ln(Audit Fees)*, Panel B) based on the sample of observations spanning 2019 to 2023. Independent variables of interest include an indicator variable set equal to one for the 2023 period following the adoption in October 2022 by the SEC of Exchange Rule 10D-1 and to zero for the 2019 – 2022 period (*POST*); and an indicator variable set equal to one for firms newly required to adopt a compensation clawback policy for executive officers under Exchange Rule 10D-1 and to zero for firms with a pre-existing clawback policy (*TREAT*). Our difference-in-differences estimate is captured by the interaction between *TREAT*POST*. Observations are restricted to December fiscal year-end firms to align firms in calendar time. Model (1) is estimated via ordinary least squares (OLS) regression on the sample of treatment observations that are subject to the mandatory adoption of a compensation clawback policy under Exchange Rule 10D-1 (see Table 1). Models (2) – (3) are estimated via OLS on the full sample of observations, including both treatment and control sample observations. Models (4) – (5) are estimated using OLS on the subsample of observations matched via coarsened exact matching (CEM) used to identify treatment and control observations that are comparable on firm size, log-adjusted institutional owners, and Fama-French 12 industry based on data available for the 2021 fiscal year. In model (5), we estimate a weighted OLS regression using weights assigned by the CEM program to each firm's matching stratum, where the weight equals zero if the observation is unmatched, one if the observation is treated, and a continuous value for matched control observations based on the number of control observations in each stratum. Models include fixed effects for calendar year and firm where indicated. t-statistics clustered by firm appear in parentheses below regression coefficients. *, **, and *** denote two-tailed *p*-values significant at a 10%, 5%, and 1% level, respectively. Refer to Appendix A for detailed variable definitions and data sources.

Table 3
Accounting employment: Monthly difference-in-differences tests of forced clawback policy adoption under Exchange Rule 10D-1

Panel A: Summary statistics for sample of firm-month observations with a valid link to Revelio and employing at least one accountant (33,140 firm-month observations)

Variable	Mean	Std. Dev.	Min	Q1	Median	Q3	Max
TREAT	0.463	0.499	0	0	0	1	1
POST	0.533	0.499	0	0	1	1	1
Size	7.658	2.315	1.388	6.063	7.757	9.216	15.203
ROA	-0.033	0.093	-0.504	-0.053	0.002	0.013	0.104
B/M	0.625	0.680	-1.193	0.228	0.491	0.885	3.023
Leverage	0.299	0.259	0.000	0.075	0.256	0.446	1.242
InstOwners	13.076	6.449	0	8	14	18	40
Analysts	6.766	5.955	0	2	5	10	39
Accountants	48.703	188.174	1	4	10	30	4748

Panel B: Difference-in-differences tests of the relation between mandatory clawback adoption and monthly accounting employment

	(1)	(2)	(3)	(4)
Dependent Variable:		*Accountants*		
Specification:	Poisson	Poisson	Poisson	CEM-weighted Poisson
Sample:	Treatment Only	Full Sample	Matched Sample	Matched Sample
POST	**0.030*** **			
	(5.60)			
TREAT*POST		**0.004**	**0.014****	**0.018****
		(0.74)	**(2.12)**	**(2.54)**
Size	0.023*	0.021***	0.011	0.019
	(1.87)	(2.67)	(1.01)	(1.44)
Ln(InstOwners)	0.033***	-0.011	0.006	0.014
	(2.81)	(-1.26)	(0.44)	(0.89)
Ln(Analysts)	0.027***	0.019***	0.024**	0.020**
	(2.66)	(3.28)	(2.41)	(1.99)
ROA	-0.012	0.050*	0.077*	0.058
	(-0.30)	(1.89)	(1.80)	(1.12)
Fixed Effects	Firm	Firm, Month	Firm, Month	Firm, Month
Observations	15,346	33,137	13,088	13,088
Log-likelihood	-27682	-72874	-27745	-26138

This table presents summary statistics (Panel A) and results of difference-in-differences models (Panel B) for the monthly sample of observations spanning April:2022 to April:2023 (6 months pre- and post-announcement of Exchange Rule 10D-1 in October 2022). In Panel B, the dependent variable is the number of full-time accounting

positions employed by the firm in a given calendar month based on data available from Revelio (*Accountants*). Independent variables of interest include an indicator variable set equal to one for calendar months starting with the October 2022 adoption by the SEC of Exchange Rule 10D-1 (October 2022 – April 2023) and to zero for quarters prior to the rule adoption (April 2022 – September 2022) (*POST*); and an indicator variable set equal to one for firms required to adopt a compensation clawback policy for executive officers under Exchange Rule 10D-1 and to zero for firms with a pre-existing clawback policy (*TREAT*). Our difference-in-differences estimate is captured by the interaction between *TREAT*POST*. Observations are restricted to December fiscal year-end firms to align firms in calendar time and in their hiring cycle. Model (1) is estimated via a Poisson model for a count-based dependent variable for the sample of treatment observations that are subject to the mandatory adoption of a compensation clawback policy under Exchange Rule 10D-1 (see Table 1). Model (2) is estimated via a Poisson regression on the full sample of observations, including both treatment and control sample observations. Models (3) – (4) are estimated via a Poisson regression on the subsample of observations matched via coarsened exact matching (CEM) used to identify treatment and control observations that are comparable on firm size, log-adjusted institutional owners, and Fama-French 12 industry based on data available for the Q4:2022 calendar quarter in which Exchange Rule 10D-1 is adopted. In model (4), we estimate a weighted Poisson regression using weights assigned by the CEM program to each firm's matching stratum, where the weight equals zero if the observation is unmatched, one if the observation is treated, and a continuous value for matched control observations based on the number of control observations in each stratum. Models include fixed effects for firm and calendar year-month where indicated. t-statistics clustered by firm appear in parentheses below regression coefficients. *, **, and *** denote two-tailed *p*-values significant at a 10%, 5%, and 1% level, respectively. Refer to Appendix A for detailed variable definitions and data sources.

Table 4
Investments in the financial reporting function: Quarterly difference-in-differences tests of forced clawback policy adoption under Exchange Rule 10D-1

Panel A: Summary statistics for sample of firm-quarter observations

Variable	Mean	Std. Dev.	Min	Q1	Median	Q3	Max	N
TREAT	0.460	0.498	0	0	0	1	1	22,222
POST	0.485	0.500	0	0	0	1	1	22,222
Size	7.845	2.188	1.051	6.377	7.972	9.277	15.227	22,222
ROA	-0.029	0.088	-0.649	-0.045	0.002	0.013	0.144	22,222
B/M	0.585	0.684	-5.054	0.216	0.463	0.858	4.178	22,222
Leverage	0.294	0.266	0.000	0.065	0.246	0.441	1.554	22,222
InstOwners	13.247	6.230	0	9	14	18	43	22,222
Analysts	7.010	5.621	1.000	3.000	5.000	9.000	40.000	22,222
EA Release Lag	38.627	14.001	16	31	35	42	106	22,222
Ind(MeetBeat = 1)	0.067	0.250	0.000	0.000	0.000	0.000	1.000	22,222
Forecast Dispersion	0.154	0.347	0	0	0	0	3	20,056
Consensus Lag	16.503	7.784	0	12	15	21	35	22,222

Panel B: Difference-in-differences tests of the relation between mandatory clawback adoption and quarterly earnings announcement release lag

	(1)	(2)	(3)	(4)	(5)
Dependent Variable:			*EA Release Lag*		
Specification:	Poisson	Poisson	Poisson	Poisson	CEM-weighted Poisson
Sample:	Treatment Only	Full Sample	Full Sample	Matched Sample	Matched Sample
POST	**-0.011*** **	-0.004*			
	(-3.99)	(-1.71)			
TREAT		0.049***			
		(7.49)			
TREAT*POST		**-0.014*** **	**-0.011*** **	**-0.008***	**-0.017*** **
		(-3.72)	**(-3.07)**	**(-1.70)**	**(-2.76)**
Size	-0.008*	-0.056***	-0.008*	-0.010*	-0.022***
	(-1.65)	(-23.92)	(-1.94)	(-1.77)	(-3.01)
ROA	-0.073***	-0.112***	-0.082***	-0.119***	-0.088**
	(-2.75)	(-4.12)	(-3.67)	(-2.78)	(-2.18)
B/M	-0.004	-0.009**	-0.001	-0.000	-0.005
	(-0.91)	(-2.54)	(-0.26)	(-0.00)	(-0.71)
Leverage	0.019	0.097***	0.039***	0.012	0.028
	(1.31)	(10.17)	(3.04)	(0.60)	(1.35)
Ln(InstOwners)	-0.021***	-0.020***	-0.017**	-0.011	-0.008

	(-2.79)	(-4.30)	(-2.56)	(-1.24)	(-0.77)
Ln(Analysts)	-0.019**	0.035***	-0.020***	-0.023***	-0.013
	(-2.18)	(6.42)	(-3.23)	(-3.26)	(-1.18)
Constant		3.894***			
		(227.88)			
Fixed Effects	Firm	None	Firm, Year-Qtr	Firm, Year-Qtr	Firm, Year-Qtr
Observations	7,709	16,728	16,691	9,162	9,162
Log-likelihood	-24384	-52428	-52414	-28358	-28024

This table presents summary statistics (Panel A) and results of difference-in-differences models for the number of calendar days between the fiscal quarter-end date and the earnings announcement date reported in Compustat (*EA Release Lag*, Panel B) for the quarterly sample of observations spanning Q1:2022 to Q3:2023 (3 quarters pre- and post-adoption of SEC Exchange Rule 10D-1 in October 2022, with Q4:2022 dropped as the adoption/transition period). Independent variables of interest in each panel include an indicator variable set equal to one for quarters in calendar year 2023 (Q1:2023 – Q3:2023) following the adoption in October 2022 by the SEC of Exchange Rule 10D-1 and to zero for quarters in calendar year 2022 (Q1:2022 – Q3:2022), with the Q4:2022 adoption period omitted (*POST*); and an indicator variable set equal to one for firms required to adopt a compensation clawback policy for executive officers under Exchange Rule 10D-1 and to zero for firms with a pre-existing clawback policy (*TREAT*). Our difference-in-differences estimate is captured by the interaction between *TREAT*POST*. Observations are restricted to December fiscal year-end firms to align firms in calendar time. Model (1) is estimated via a Poisson regression for a count-based dependent variable on the sample of treatment observations that are subject to the mandatory adoption of a compensation clawback policy under Exchange Rule 10D-1 (see Table 1). Models (2) – (3) are estimated via a Poisson regression on the full sample of observations, including both treatment and control sample observations. Models (4) – (5) are estimated via a Poisson regression on the subsample of observations matched via coarsened exact matching (CEM) used to identify treatment and control observations that are comparable on firm size, log-adjusted institutional owners, and Fama-French 12 industry based on data available for the 2021 fiscal year. In model (5), we estimate a weighted OLS regression using weights assigned by the CEM program to each firm's matching stratum, where the weight equals zero if the observation is unmatched, one if the observation is treated, and a continuous value for matched control observations based on the number of control observations in each stratum. Models include fixed effects for calendar year and calendar year-quarter where indicated. t-statistics clustered by firm appear in parentheses below regression coefficients. *, **, and *** denote two-tailed *p*-values significant at a 10%, 5%, and 1% level, respectively. Refer to Appendix A for detailed variable definitions and data sources.

Table 5
CEO compensation and components: Difference-in-differences test of forced clawback policy adoption under Exchange Rule 10D-1

Panel A: Summary statistics for compensation variables (full sample of 10,014 firm-year observations spanning 2019 – 2023)

Variable	Mean	Std. Dev.	Min	Q1	Median	Q3	Max	N
Total Compensation	6,797,607	12,500,000	1	1,763,910	4,582,275	8,728,710	835,000,000	10,014
Performance-Based Equity (% of Total)	0.403	0.337	0.000	0.000	0.500	0.643	1.000	8,947
Comp Metrics	4.935	4.353	0	2	4	7	47	10,014
Clawback-Likely Metrics	2.683	2.354	0	0	3	4	42	10,014
Clawback-Likely Metrics (% of Total)	0.585	0.343	0.000	0.333	0.636	1.000	1.000	8,616

Panel B: Difference-in-differences models for log-adjusted total CEO compensation

	(1)	(2)	(3)	(4)	(5)
Dependent Variable:			*Ln(Total Compensation)*		
Specification:	OLS	OLS	OLS	OLS	CEM-weighted OLS
Sample:	Treatment Only	Full Sample	Full Sample	Matched Sample	Matched Sample
POST	**0.067***	0.088***			
	(1.70)	(4.56)			
TREAT		-0.172***			
		(-4.31)			
TREAT*POST		**-0.009**	**-0.008**	**-0.020**	**-0.025**
		(-0.23)	**(-0.20)**	**(-0.47)**	**(-0.45)**
Size	0.400***	0.345***	0.297***	0.363***	0.369***
	(8.97)	(20.97)	(10.26)	(9.43)	(6.46)
Restatement	-0.014	0.019	0.001	-0.007	-0.051
	(-0.17)	(0.49)	(0.02)	(-0.16)	(-0.76)
ROA	-0.158	-0.900***	0.006	0.586	0.540
	(-0.41)	(-4.05)	(0.01)	(1.09)	(0.88)
B/M	-0.069	0.049*	-0.062**	-0.111**	-0.077**
	(-1.41)	(1.89)	(-2.09)	(-2.46)	(-1.98)
Leverage	0.105	0.222***	0.063	0.108	0.105
	(0.86)	(3.45)	(0.68)	(0.83)	(0.97)
σ(ROA)	-0.157	-0.451*	-0.141	-0.058	0.143
	(-0.50)	(-1.95)	(-0.52)	(-0.11)	(0.25)
σ(RET)	0.078	0.600***	0.145	0.410**	0.430*
	(0.44)	(3.98)	(0.91)	(2.10)	(1.86)

ShareTurnover	0.111***	0.104***	0.071***	0.012	0.035
	(3.61)	(4.87)	(2.78)	(0.42)	(0.99)
Ln(InstOwners)	0.056	0.249***	0.082*	0.055	0.071
	(0.91)	(7.04)	(1.70)	(0.84)	(0.92)
Ln(Analysts)	0.019	0.053	0.019	-0.002	0.029
	(0.31)	(1.43)	(0.51)	(-0.03)	(0.40)
Ln(Tenure)	0.026	-0.015	0.062***	0.150***	0.115*
	(0.66)	(-0.72)	(3.62)	(2.85)	(1.67)
Constant		11.774***			
		(100.29)			
Fixed Effects	Firm	None	Firm, Year	Firm, Year	Firm, Year
Observations	4,027	10,014	10,014	4,533	4,533
Adjusted R^2	0.749	0.445	0.846	0.863	0.804

Table 5, continued
Panel C: Difference-in-differences models for the percent of CEO equity compensation that is performance-linked

	(1)	(2)	(3)	(4)	(5)
Dependent Variable:		*Performance-Based Equity (% of Total)*			
Specification:	OLS	OLS	OLS	OLS	CEM-weighted OLS
Sample:	Treatment Only	Full Sample	Full Sample	Matched Sample	Matched Sample
POST	**0.035*** **	0.025***			
	(2.66)	(3.95)			
TREAT		-0.183***			
		(-12.27)			
TREAT*POST		**-0.011**	**0.005**	**0.022**	**-0.001**
		(-0.96)	**(0.37)**	**(1.19)**	**(-0.02)**
Size	0.024	0.049***	0.017	0.017	0.044*
	(1.53)	(10.66)	(1.49)	(1.15)	(1.70)
Restatement	0.026	0.017	0.008	-0.004	-0.026
	(1.12)	(1.47)	(0.64)	(-0.22)	(-0.72)
ROA	-0.163	0.394***	-0.101	-0.136	0.204
	(-1.25)	(4.71)	(-0.88)	(-0.72)	(0.80)
B/M	0.001	0.055***	0.022	0.029*	0.019
	(0.05)	(6.75)	(1.29)	(1.85)	(1.00)
Leverage	-0.014	0.069***	0.010	0.025	0.126
	(-0.40)	(3.55)	(0.32)	(0.59)	(1.23)
σ(ROA)	-0.079	0.138**	-0.059	0.148	0.139
	(-0.69)	(2.00)	(-0.57)	(0.55)	(0.48)
σ(RET)	-0.026	-0.176***	-0.008	-0.021	0.101

	(-0.39)	(-3.77)	(-0.16)	(-0.34)	(0.70)
ShareTurnover	0.012	0.009	-0.000	-0.002	0.010
	(0.84)	(1.42)	(-0.04)	(-0.12)	(0.47)
Ln(InstOwners)	-0.029	0.035***	-0.009	-0.028	-0.055
	(-0.94)	(3.20)	(-0.45)	(-0.94)	(-1.41)
Ln(Analysts)	0.019	-0.039***	0.011	-0.009	-0.056
	(0.59)	(-3.82)	(0.62)	(-0.41)	(-1.33)
Ln(Tenure)	0.006	-0.006	0.001	0.009	-0.017
	(0.37)	(-1.03)	(0.15)	(0.39)	(-0.29)
Constant		0.077*			
		(1.94)			
Fixed Effects	Firm	None	Firm, Year	Firm, Year	Firm, Year
Observations	3,277	8,947	8,947	4,133	4,133
Adjusted R^2	0.631	0.295	0.756	0.754	0.702

This table presents summary statistics for CEO compensation amounts and performance metrics (Panel A) and results of difference-in-differences tests (Panels B – D) of CEO compensation outcomes for the annual sample of observations spanning 2019 to 2023. We examine the following measures of CEO compensation as dependent variables: log-adjusted total compensation disclosed in the proxy statement (*Total Compensation*, Panel B); and the percentage of total equity, stock, or option compensation that is performance-based as identified by the ISS Executive Compensation Analytics (ECA) database (Panel C). Independent variables of interest include an indicator variable set equal to one for the 2023 period following the adoption in October 2022 by the SEC of Exchange Rule 10D-1 and to zero for the 2019 – 2022 period (*POST*); and an indicator variable set equal to one for firms newly required to adopt a compensation clawback policy for executive officers under Exchange Rule 10D-1 and to zero for firms with a pre-existing clawback policy (*TREAT*). Our difference-in-differences estimate is captured by the interaction between *TREAT***POST*. Observations are restricted to December fiscal year-end firms to align firms in calendar time. Model (1) in each panel is estimated via ordinary least squares (OLS) regression on the sample of treatment observations that are subject to the mandatory adoption of a compensation clawback policy under Exchange Rule 10D-1 (see Table 1). Models (2) – (3) in each panel are estimated via OLS on the full sample of observations, including both treatment and control sample observations. Models (4) – (5) in each panel are estimated using OLS on the subsample of observations matched via coarsened exact matching (CEM) used to identify treatment and control observations that are comparable on firm size, log-adjusted institutional owners, and Fama-French 12 industry based on data available for the 2021 fiscal year. In model (5), we estimate a weighted OLS regression using weights assigned by the CEM program to each firm's matching stratum, where the weight equals zero if the observation is unmatched, one if the observation is treated, and a continuous value for matched control observations based on the number of control observations in each stratum. Models include fixed effects for calendar year and firm where indicated. t-statistics clustered by firm appear in parentheses below regression coefficients. *, **, and *** denote two-tailed *p*-values significant at a 10%, 5%, and 1% level, respectively. Refer to Appendix A for detailed variable definitions and data sources.

Table 6
Clawback-eligible performance metrics in the CEO's compensation contract: Difference-in-differences tests of forced clawback policy adoption under Exchange Rule 10D-1

	(1)	(2)	(3)	(4)	(5)
Dependent Variable:		*Clawback-Likely Metrics (% of Total)*			
Specification:	OLS	OLS	OLS	OLS	CEM-weighted OLS
Sample:	Treatment Only	Full Sample	Full Sample	Matched Sample	Matched Sample
POST	**0.048*** **	-0.031***			
	(3.48)	(-4.65)			
TREAT		-0.113***			
		(-7.05)			
TREAT*POST		**0.154*** **	**0.069*** **	**0.042** **	**0.022**
		(9.62)	**(4.74)**	**(2.09)**	**(0.70)**
Size	-0.002	0.001	-0.003	0.007	-0.028
	(-0.10)	(0.24)	(-0.19)	(0.31)	(-0.77)
Restatement	0.021	0.063***	0.016	0.027*	0.038*
	(0.78)	(4.66)	(1.23)	(1.66)	(1.91)
ROA	0.058	1.713***	0.361**	0.407	0.482
	(0.32)	(7.99)	(2.11)	(1.58)	(1.10)
B/M	-0.040	-0.022**	0.016	0.030	0.056
	(-1.00)	(-2.07)	(0.68)	(0.80)	(1.01)
Leverage	-0.018	0.093***	0.066	0.077	0.110**
	(-0.23)	(3.86)	(1.29)	(1.09)	(2.04)
σ(ROA)	-0.089	0.315**	-0.050	-0.393	-0.414
	(-0.97)	(2.12)	(-0.56)	(-1.51)	(-1.22)
σ(RET)	0.065	-0.050	-0.003	0.055	0.089
	(1.04)	(-0.91)	(-0.06)	(0.67)	(1.30)
ShareTurnover	0.002	-0.043***	0.013	0.015	-0.004
	(0.13)	(-5.07)	(1.08)	(0.92)	(-0.13)
Ln(InstOwners)	0.041	0.049***	0.050**	0.073**	0.113**
	(1.19)	(3.39)	(2.25)	(2.17)	(2.33)
Ln(Analysts)	0.008	0.011	0.030	0.011	0.001
	(0.20)	(0.98)	(1.42)	(0.38)	(0.03)
Ln(Tenure)	0.007	0.002	0.007	-0.003	-0.005
	(0.38)	(0.38)	(0.89)	(-0.12)	(-0.16)
Constant		0.472***			
		(8.28)			
Fixed Effects	Firm	None	Firm, Year	Firm, Year	Firm, Year
Observations	2,855	8,616	8,616	3,988	3,988
Adjusted R^2	0.792	0.206	0.783	0.796	0.794

This table presents results of difference-in-differences models where the dependent variable is the number of performance metrics included in the CEO's compensation contract that are likely to trigger a clawback scaled by the total number of performance metrics in the contract (*Clawback-Likely Metrics (% of Total)*). We identify clawback-likely metrics using the "overall_metric_type" and "disclosed_metric_name" fields in the ISS Executive Compensation Analytics (ECA) database, where the disclosed performance metric is a variant of income, cash flow, economic value added, total stock return (TSR), sales, or is listed as an absolute (not relative) or market-based performance metric. The analysis uses the annual sample of observations spanning 2019 to 2023. Independent variables of interest include an indicator variable set equal to one for the 2023 period following the adoption in October 2022 by the SEC of Exchange Rule 10D-1 and to zero for the 2019 – 2022 period (*POST*); and an indicator variable set equal to one for firms newly required to adopt a compensation clawback policy for executive officers under Exchange Rule 10D-1 and to zero for firms with a pre-existing clawback policy (*TREAT*). Our difference-in-differences estimate is captured by the interaction between *TREAT*POST*. Observations are restricted to December fiscal year-end firms to align firms in calendar time. Model (1) in each panel is estimated via ordinary least squares (OLS) regression on the sample of treatment observations that are subject to the mandatory adoption of a compensation clawback policy under Exchange Rule 10D-1 (see Table 1). Models (2) – (3) in each panel are estimated via OLS on the full sample of observations, including both treatment and control sample observations. Models (4) – (5) in each panel are estimated using OLS on the subsample of observations matched via coarsened exact matching (CEM) used to identify treatment and control observations that are comparable on firm size, log-adjusted institutional owners, and Fama-French 12 industry based on data available for the 2021 fiscal year. In model (5), we estimate a weighted OLS regression using weights assigned by the CEM program to each firm's matching stratum, where the weight equals zero if the observation is unmatched, one if the observation is treated, and a continuous value for matched control observations based on the number of control observations in each stratum. Models include fixed effects for calendar year and firm where indicated. t-statistics clustered by firm appear in parentheses below regression coefficients. *, **, and *** denote two-tailed *p*-values significant at a 10%, 5%, and 1% level, respectively. Refer to Appendix A for detailed variable definitions and data sources.

Table 7
Market responses to financial reporting: Quarterly difference-in-differences tests of forced clawback policy adoption under Exchange Rule 10D-1

Panel A: Difference-in-differences tests of the relation between mandatory clawback adoption and analyst following

	(1)	(2)	(3)	(4)	(5)
Dependent Variable:			*Analysts*		
Specification:	Poisson	Poisson	Poisson	Poisson	CEM-weighted Poisson
Sample:	Treatment Only	Full Sample	Full Sample	Matched Sample	Matched Sample
POST	**0.022*** **	-0.008			
	(2.76)	(-1.48)			
TREAT		0.102***			
		(4.03)			
TREAT*POST		**0.033*** **	**0.036*** **	**0.057*** **	**0.070*** **
		(3.00)	**(4.08)**	**(4.99)**	**(4.72)**
Size	0.099***	0.252***	0.095***	0.073***	0.093***
	(6.53)	(41.53)	(7.92)	(4.88)	(5.61)
ROA	-0.032	-1.364***	-0.028	-0.021	-0.143
	(-0.43)	(-11.07)	(-0.48)	(-0.27)	(-1.55)
B/M	0.058***	-0.171***	0.042***	0.028**	0.033**
	(3.99)	(-10.39)	(4.11)	(2.39)	(2.30)
Leverage	0.086	-0.081**	-0.014	0.006	0.003
	(1.55)	(-2.00)	(-0.34)	(0.10)	(0.04)
Ln(InstOwners)	0.203***	0.296***	0.155***	0.156***	0.162***
	(8.50)	(14.03)	(9.18)	(6.36)	(5.19)
Constant		-0.899***			
		(-11.59)			
Fixed Effects	Firm	None	Firm, Year-Qtr	Firm, Year-Qtr	Firm, Year-Qtr
Observations	7,709	16,728	16,691	9,162	9,162
Log-likelihood	-18424	-45104	-45077	-24653	-23295

Table 7, continued
Panel B: Difference-in-differences tests of the relation between mandatory clawback adoption and an indicator for just meeting/beating analysts' consensus earnings forecast

	(1)	(2)	(3)	(4)	(5)
Dependent Variable:			*Ind(MeetBeat = 1)*		
Specification:	OLS	OLS	OLS	OLS	CEM-weighted OLS
Sample:	Treatment Only	Full Sample	Full Sample	Matched Sample	Matched Sample
POST	**0.004**	0.005			
	(0.53)	(1.00)			
TREAT		0.008			
		(1.19)			
TREAT*POST		**-0.001**	**0.001**	**-0.003**	**-0.003**
		(-0.07)	**(0.15)**	**(-0.24)**	**(-0.26)**
Size	-0.017	-0.004**	-0.007	-0.005	-0.006
	(-1.32)	(-2.32)	(-0.66)	(-0.29)	(-0.34)
ROA	0.096**	0.066**	0.125***	0.104*	0.069
	(2.15)	(2.20)	(3.35)	(1.95)	(1.00)
B/M	-0.011	-0.011***	-0.005	0.007	0.013
	(-1.52)	(-3.60)	(-0.77)	(0.63)	(1.00)
Leverage	-0.045	-0.047***	-0.010	-0.038	-0.032
	(-1.20)	(-5.39)	(-0.31)	(-0.79)	(-0.59)
Ln(InstOwners)	0.014	-0.013**	0.008	0.005	0.036
	(0.82)	(-2.44)	(0.59)	(0.23)	(1.17)
Ln(Analysts)	0.012	-0.006	0.003	-0.003	-0.038
	(0.65)	(-1.24)	(0.23)	(-0.18)	(-1.58)
Consensus Lag	-0.001	-0.001*	-0.000	-0.000	-0.001
	(-0.91)	(-1.73)	(-0.41)	(-0.06)	(-1.07)
Constant		0.173***			
		(8.40)			
Fixed Effects	Firm	None	Firm, Year-Qtr	Firm, Year-Qtr	Firm, Year-Qtr
Observations	7,727	16,728	16,728	9,163	9,163
Adjusted R^2	0.124	0.006	0.125	0.105	0.115

Table 7, continued
Panel C: Difference-in-differences tests of the relation between mandatory clawback adoption and analyst forecast dispersion

	(1)	(2)	(3)	(4)	(5)
Dependent Variable:			*Forecast Dispersion*		
Specification:	OLS	OLS	OLS	OLS	CEM-weighted OLS
Sample:	Treatment Only	Full Sample	Full Sample	Matched Sample	Matched Sample
POST	**-0.044*** **	-0.024***			
	(-5.96)	(-6.55)			
TREAT		0.022*			
		(1.67)			
TREAT*POST		**-0.046*** **	**-0.023*** **	**-0.001**	**0.006**
		(-5.18)	**(-2.92)**	**(-0.13)**	**(0.54)**
Size	0.044***	-0.001	0.043***	0.034**	0.060***
	(2.81)	(-0.27)	(3.42)	(2.51)	(2.92)
ROA	0.270***	-0.710***	0.245***	0.127	0.089
	(2.78)	(-7.43)	(2.98)	(1.40)	(0.69)
B/M	0.020	0.036***	0.024**	0.027**	0.050*
	(1.38)	(4.24)	(2.20)	(1.98)	(1.87)
Leverage	0.004	0.048***	0.002	-0.024	-0.060
	(0.07)	(2.71)	(0.04)	(-0.52)	(-1.02)
Ln(InstOwners)	0.038	-0.066***	0.035*	0.014	-0.002
	(1.37)	(-5.69)	(1.76)	(0.62)	(-0.06)
Ln(Analysts)	0.048**	0.026**	0.022	0.016	0.037
	(2.11)	(2.58)	(1.56)	(0.91)	(1.59)
Consensus Lag	0.001	0.002***	0.000	0.000	0.001
	(0.79)	(4.16)	(1.54)	(1.53)	(1.18)
Constant		0.202***			
		(4.75)			
Fixed Effects	Firm	None	Firm, Year-Qtr	Firm, Year-Qtr	Firm, Year-Qtr
Observations	6,627	15,065	15,065	8,513	8,513
Adjusted R^2	0.743	0.079	0.740	0.712	0.703

This table presents results of difference-in-differences models for measures of equity market outcomes related to the mandatory adoption of a compensation clawback policy for the quarterly sample of observations spanning Q1:2022 to Q3:2023 (3 quarters pre- and post-adoption of SEC Exchange Rule 10D-1 in October 2022, with Q4:2022 dropped as the adoption/transition period). We examine the following measures of the market response to financial reporting quality as dependent variables: the number of distinct analysts providing earnings per share forecasts based on the last available consensus estimate prior to the earnings announcement (*Analysts*, Panel A); an indicator variable set equal to one for quarters in which a firm's reported actual earnings per share just meets or beats the last available consensus analyst forecast in the I/B/E/S unadjusted summary file, measured as earnings surprises that fall in the [0,1] cent range after rounding (*MeetBeat*, Panel B); and the standard deviation of quarterly analyst earnings per share forecasts included in the last available consensus analyst forecast in the I/B/E/S unadjusted summary file (*Forecast Dispersion*, Panel C). Independent variables of interest in each panel include an indicator variable set equal to one for quarters in calendar year 2023 (Q1:2023 – Q3:2023) following the adoption in October 2022 by the SEC of Exchange Rule 10D-

1 and to zero for quarters in calendar year 2022 (Q1:2022 – Q3:2022), with the Q4:2022 adoption period omitted (*POST*); and an indicator variable set equal to one for firms required to adopt a compensation clawback policy for executive officers under Exchange Rule 10D-1 and to zero for firms with a pre-existing clawback policy (*TREAT*). Our difference-in-differences estimate is captured by the interaction between *TREAT*POST*. Observations are restricted to December fiscal year-end firms to align firms in calendar time. Model (1) in each panel is estimated via a Poisson or OLS regression (where indicated) for the sample of treatment observations that are subject to the mandatory adoption of a compensation clawback policy under Exchange Rule 10D-1 (see Table 1). Models (2) – (3) are estimated via a Poisson or OLS regression (where indicated) for the full sample of observations, including both treatment and control sample observations. Models (4) – (5) are estimated via a Poisson or OLS regression (where indicated) for the subsample of observations matched via coarsened exact matching (CEM) used to identify treatment and control observations that are comparable on firm size, log-adjusted institutional owners, and Fama-French 12 industry based on data available for the 2021 fiscal year. In model (5), we estimate a weighted regression using weights assigned by the CEM program to each firm's matching stratum, where the weight equals zero if the observation is unmatched, one if the observation is treated, and a continuous value for matched control observations based on the number of control observations in each stratum. Models include fixed effects for calendar year and calendar year-quarter where indicated. t-statistics clustered by firm appear in parentheses below regression coefficients. *, **, and *** denote two-tailed *p*-values significant at a 10%, 5%, and 1% level, respectively. Refer to Appendix A for detailed variable definitions and data sources.