Protecting Wall Street or Main Street: SEC monitoring and enforcement of retail-owned firms

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Abstract

This study examines whether retail ownership of a firm is associated with the likelihood that the firm is subject to monitoring and enforcement by the two largest divisions of the SEC. Monitoring is a form of ex ante or preventative regulatory oversight, while enforcement is a form of ex post or punitive oversight. We find a *negative* association between retail ownership and SEC monitoring. In contrast, we find a *positive* association between retail ownership and SEC enforcement. These results suggest that the SEC is less likely to monitor firms with high retail ownership, potentially leaving current retail investors more vulnerable to unresolved financial reporting issues. Additionally, the SEC is more likely to issue enforcement actions against firms with high retail ownership, imposing costs on current retail investors when the firm is accused of egregious cases of perceived financial misreporting.

1 Introduction

The mission of the Securities and Exchange Commission (SEC) is to protect investors; maintain fair, orderly, and efficient markets; and facilitate capital formation. This includes addressing information asymmetry problems between firms and investors, to which individual investors are particularly vulnerable. The former SEC Chairman Jay Clayton even said, "Serving and protecting Main Street investors is my main priority at the SEC." The SEC pursues this objective through a variety of ex ante policies and programs that include, but are not limited to, extensive disclosure requirements, Regulation Fair Disclosure, the formation of the SEC's Office of Investor Education and Advocacy, and the free public dissemination of corporate filings through the EDGAR database. An additional aspect of protecting investors involves direct contact with corporate registrants. This contact includes both intervention via ex ante monitoring of firm disclosures and deterrence via ex post enforcement of financial reporting misconduct. The SEC has separated these two roles, charging the Division of Corporation Finance (DCF) with monitoring responsibilities and the Division of Enforcement (DOE) with enforcement responsibilities. Building on the literature on crime prevention (e.g., Becker 1968), it is likely that some mixture of these two mechanisms represents the optimal resource allocation by the SEC. However, these two divisions operate at least partially independently of one another; balance their own unique, competing priorities; and face binding budget constraints. Thus, it is an empirical question whether the selection criteria employed by both DCF and DOE result in resource allocations that are associated with the ownership base of the firms they oversee.

The primary role of DCF is to ensure that firms provide investors with material information to make informed investment decisions. This is a monitoring role that is largely accomplished through periodic reviews of firms' public filings to ensure they are prepared in compliance with

disclosure and accounting requirements. Through this review process, DCF often issues advisory comment letters to firms, which recommend specific changes to the firms' disclosures to help ensure conformity with SEC regulatory standards. DCF does not publicly disclose its priorities that determine which companies will undergo the filing review process each year. However, SOX 408 lists prior restatements, stock price volatility, market capitalization, emerging companies, and material operations to a sector of the economy as explicit criteria for prioritizing these reviews. While none of these criteria are explicitly related to ownership characteristics, it is possible that these same characteristics are associated with the presence of retail investors.

The primary role of DOE is to investigate possible violations of securities laws and to prosecute fraud. If a firm becomes the subject of a DOE investigation, the role of the SEC is no longer advisory (as is the case with a comment letter from DCF) and will shift to punitive should wrongdoing be discovered.[1] Actions by the DOE are intended not only to punish offending firms but also to deter noncompliance by other firms. In contrast to the opacity surrounding the selection of firms for review by DCF, the SEC publicly discloses nine priorities for DOE in its Enforcement Manual (SEC 2017). The priority that most clearly points towards focusing on retail investors is the consideration of whether the matter involves a substantial number of potential victims or *particularly vulnerable victims*. However, in the face of the eight other priorities, it remains an open question whether attention from DOE is associated with ownership characteristics.

This distinction between the DCF's and DOE's roles in protecting investors makes it important to examine the outcomes of both divisions to understand the association between the SEC's interaction with corporate registrants and its stated preference of protecting retail investors.

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[1] While referrals from DCF to DOE for potential enforcement do happen, they represent a small fraction of all DOE investigations (Boone et al. 2013). This is evidence that these two divisions do operate at least partially independently and might identify target firms using different decision rules.

In line with this distinction, prior literature finds that while receipt of a comment letter imposes costs on the firm to remediate (Cassell, Dreher, and Myers 2013), it also tends to improve the firm's information environment and generally does not result in a significant negative market reaction (Johnston and Petacchi 2017; Bozanic, Dietrich, and Johnson 2017).[2] On the other hand, attention from DOE in the form of an investigation (Blackburne, Bozanic, Johnson, and Roulstone 2020) or an Accounting and Auditing Enforcement Release (AAER) (Dechow et al. 1996; Correia 2014; Nichols 2016; Heese, Khan, and Ramanna 2017; Heese 2019) is unambiguously negative for current shareholders.

Unfortunately, beyond the high-level SEC budget, resource allocation decisions within divisions are unobservable. However, we do observe multiple outcomes that are associated with the resource allocation decisions of both DCF and DOE. We measure monitoring decisions of DCF with three separate proxies. First, we examine SEC-initiated downloads of the firm's disclosure filings on EDGAR. This measure of SEC attention does not require any potential wrongdoing on the part of the firm. Although these downloads likely capture a mixture of attention from both DCF and DOE, we posit that they predominantly represent a DCF monitoring role due to the relative infrequency of DOE investigations.[3] Next, we examine the initiation of periodic filing reviews by DCF, which is directly attributable to DCF. Finally, we examine the likelihood that a firm receives a comment letter from DCF as a visible outcome of SEC monitoring. Even though this final proxy (comment letter receipt) is the most observable, one disadvantage is that it requires that there exists

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[2] We acknowledge that Dechow, Lawrence, and Ryans (2016) do find a delayed but negative reaction to SEC comment letters that address revenue recognition issues, particularly when there was insider selling ahead of the comment letter release, but this is a specific subset of comment letters.

[3] Downloads of disclosure filings from EDGAR have been used as a measure of regulatory oversight of several different agencies, including the IRS (Bozanic, Hoopes, Thornock, and Williams 2017) and the SEC itself (Stice-Lawrence 2021; Holzman, Marshall, and Schmidt 2022). See Stice-Lawrence (2021) for a discussion of this measure as it relates specifically to SEC monitoring along with evidence of its association with the work of DCF (e.g., SOX 408 review priorities and SEC comment letters).

some form of potential deficiency in the firm's filings.

To identify the enforcement decisions of DOE, we rely on two different proxies. We examine the likelihood that a firm undergoes a DOE investigation and the likelihood that a firm receives an AAER. These measures both explicitly represent enforcement by DOE, but, unlike DCF reviews, they suffer from the critique that the opening of an investigation and the issuance of an AAER require some initial perceived or actual wrongdoing on the part of the firm. To address this shortcoming, we condition on the presence of perceived wrongdoing in the form of a financial statement restatement and examine the likelihood of DOE action in the wake of this wrongdoing.

The SEC focuses on "Main Street" investors because they are at an informational disadvantage when it comes to making investment decisions. We identify retail ownership as the percentage of all shares outstanding that are not owned by either institutions or insiders, and we present this measure as both a continuous and binary (top quartile) variable. We intentionally exclude ownership by pension funds and mutual funds where the ultimate stakeholders are often individuals, for two reasons. First, when individuals invest through a mutual fund or pension fund, the fund managers make the ultimate asset allocation decisions. These fund managers have experience, expertise, and ample resources to evaluate different investment opportunities that retail investors who directly choose their own investments often lack. Second, when retail owners invest through a mutual fund or a pension fund, it is highly unlikely that they are researching the SEC filings of all the individual firms that the fund owns. They are more likely to be investing based on metrics such as the fund's past returns, expense ratios and other fees, investment style, or risk tolerance. For these reasons, we argue that the retail owners that are most affected by the quality of information in SEC filings are those who directly invest in individual equities.

Before we examine the association between SEC actions and retail ownership, we first

examine firm characteristics that are associated with retail ownership. We realize that institutions and retail owners both have preferences for certain types of firms (i.e., the clientele effects documented in Hartzell and Starks (2003) and Graham and Kumar (2006), among others), and we want to understand these preferences. We also want to ensure that we are controlling for any of these preferences to the best of our ability in our main analyses, to mitigate the concern that the SEC might systematically choose a different mix of ex ante monitoring and ex post enforcement for different types of firms that might be associated with the presence of retail investors. We find that retail ownership is negatively associated with current and prior year restatements, M&A or restructuring activity, and the presence of other monitors such as analysts or Big 4 auditors. We also find a positive association between retail ownership and firm age, visibility (Fortune 500 membership and media coverage), bankruptcy risk, stock price volatility, and growth. Many of these determinants of retail ownership are also associated with monitoring by DCF or enforcement by DOE, which highlights the difficulty the SEC faces in reducing all its competing priorities into a single decision framework to identify target firms for monitoring or enforcement.

We then move on to examine the association between retail ownership and both DCF and DOE outcomes. Consistently, across all three proxies for monitoring by DCF (SEC-initiated EDGAR downloads, filing reviews, and comment letters), our evidence suggests that DCF tends to allocate *fewer* resources to monitor firms with a larger presence of retail owners. On the other hand, across both proxies for enforcement (investigations and AAERs), we find that DOE tends to allocate *more* resources to investigate and bring enforcement actions against these same firms.

Together, these results suggest that the actions of DCF and DOE—the two largest divisions within the SEC and the two primary points of contact with corporate registrants—tend to result in less protective ex ante monitoring and more punitive ex post enforcement of firms with higher

retail ownership. We acknowledge that DCF and DOE both have a myriad of objectives to consider when making resource allocation decisions, and *we do not contend* that either division intentionally allocates resources in this manner with current retail ownership in mind. However, the evidence suggests that in weighing these different objectives, the ultimate resource allocation decisions of these two divisions are consistent with trading off preventative ex ante regulatory oversight in favor of costly ex post regulatory oversight for Main Street investors.[4]

These results are subject to several caveats. First, we examine only two regulatory roles of the SEC: monitoring by DCF and enforcement by DOE. We do not consider the SEC's regulatory efforts within the functions of other SEC divisions or offices, such as the Office of Investor Education and Advocacy or other regulatory mechanisms. We readily admit that these other divisions and offices have instituted programs that are specifically designed to protect retail investors. Second, our empirical tests only show an association between retail ownership and monitoring and enforcement. We do not claim a causal relationship, and in fact believe that a more likely case is that these associations are inadvertent rather than intentional and result from the SEC's attempts to balance many competing priorities. Third, even though we, like prior papers in this area, employ multiple measures of SEC monitoring and enforcement, all our proxies are subject to a partial observability problem. We cannot fully know which firms were considered for a review or an investigation or what factors went into the ultimate decisions of which firms to pursue. Finally, SEC comment letters and restatements do not necessarily imply financial misreporting on the part of the firm; however, we do our best to control for other determinants of comment letters and restatement characteristics to identify the association between retail

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[4] One plausible mechanism, discussed in Duro, Heese, and Ormazabal (2019), is that the presence of institutional investors increases reputation costs for the SEC staff and incentivizes them to exert more monitoring effort in what the authors call a "supervisory discipline" governance mechanism.

ownership and regulatory monitoring and enforcement.

These caveats notwithstanding, our paper makes two primary contributions. First, it investigates the association between the *level* of retail ownership and several different firm characteristics. Prior papers that study retail investors primarily examine trading behavior, which captures *changes* in retail ownership (Asthana et al. 2004; Kumar and Lee 2006; Barber and Odean 2008; Boehmer et al. 2021; Farrell et al. 2022).[5]

Second, our paper adds to the academic literature on financial regulation by examining the extent to which the resource allocation decisions of the two largest divisions of the SEC protect Main Street investors. This examination helps shed light on the black box of how the SEC fulfills its investor protection mandate by providing evidence on *which investors* are the focus of its monitoring and enforcement initiatives. This focus on ownership characteristics also contributes to the literature that examines the determinants of SEC comment letters and DOE investigations and AAERs, which generally focus on firm characteristics (Cassell et al. 2013; Kedia and Rajgopal 2011; Files 2012; Peterson 2012). We find that ex ante monitoring by DCF, which can mitigate minor reporting deficiencies and improve a firm's information environment, is negatively associated with retail ownership, while ex post investigations and AAERs issued by DOE, which are punitive and costly to current owners, are positively associated with retail ownership. We do not believe these are causal relations, but to the extent that the SEC is interested in "serving and protecting Main Street investors," DCF and DOE should consider the evidence presented in this study in evaluating the menu of available regulatory tools when making resource allocation

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[5] One recent exception is Campbell et al. (2019), who study self-reported stock positions by individual investors on the website SeekingAlpha.com. However, they do not examine determinants of the level of retail ownership.

decisions to explicitly address ownership characteristics.[6]

2 Background, literature review, and hypothesis development

2.1 Background and literature review

The first priority of the SEC's mission statement is to protect investors. One of the primary tools the SEC uses to fulfill this priority is requiring disclosure by public firms. These disclosures include the requirement to file quarterly financial statements in 10-Ks and 10-Qs; the requirement to file a Form 8-K whenever a material event happens; the requirement to file a Form 4 whenever an insider transacts in the company's own stock; and the requirement to file a registration statement before issuing new securities. Each of these disclosure requirements is aimed at improving the transparency of public companies and protecting investors and the capital markets as a whole. Figure 1 provides an illustration of the relative timing of these disclosures as well as other SEC regulatory activities and tools aimed at protecting investors.

Examples of these other SEC tools include 1) issuing interpretive guidance to help registrants comply with Generally Accepted Accounting Principles (GAAP) along with the myriad required disclosure standards (examples of interpretive guidance include Staff Accounting Bulletins (SABs), Compliance and Disclosure Interpretations (C&DIs), and speeches or other public statements by the commissioners or other SEC staff); 2) encouraging public companies and their auditors to consult with the Commission's accounting staff on unusual or complex accounting issues for guidance, even before a transaction is completed; and 3) providing free access to registrants' financial disclosures on its online EDGAR system.

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[6] We acknowledge the possibility that the SEC is already aware of the associations we document and that they represent an optimal mix of monitoring and enforcement for different types of firms. However, in private communications with several SEC staff, no one has suggested that this is the case.

Once the corporate disclosures are filed, the SEC has the responsibility to monitor (on an ongoing basis) the compliance with disclosure requirements and enforce its financial reporting regulations when there is suspected wrongdoing. Although all the various functions of the SEC are designed to protect investors, it is important to note that some regulatory roles are more ex ante (advisory and preventative) approaches and others are more ex post (disciplinary and punitive) approaches. These distinct approaches are inherent to how the SEC is organized.

The SEC is organized into six larger functional units called divisions and 25 smaller functional units called offices, each with distinct regulatory roles and functions. The six divisions are DCF, DOE, the Division of Economic and Risk Analysis, the Division of Examinations, the Division of Investment Management, and the Division of Trading and Markets.[7] In addition to the Division of Investment Management, which regulates investment companies and investment advisors, two SEC offices that are directly involved in protecting retail investors are the Office of the Investor Advocate and the Office of Investor Education and Advocacy. We acknowledge that these offices explicitly consider retail investors in their regulatory efforts; however, we focus solely on DCF and DOE because they are the largest divisions, making up about 40% of the SEC's total budget in terms of both full-time employees and dollars appropriated, and because they represent the SEC's primary points of contact with corporate registrants.

The regulatory roles of these two divisions have been the subject of several academic studies. These papers tend to focus on the primary outputs of DCF and DOE: the DCF's issuance of SEC comment letters and the DOE's Accounting and Auditing Enforcement Releases (AAERs). Many of these papers study firm characteristics that are associated with these outcomes. Cassell et

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[7] See Appendix A for a diagram of the SEC Organizational Chart. Note that the Division of Examinations was called the Office of Compliance Inspections and Examinations (OCIE) prior to growing its staff to the point of reaching division status in December 2020 (https://www.sec.gov/news/public-statement/joint-statement-division-examinations).

al. (2013) find that previous restatements or material weaknesses, stock volatility, low profitability, size, high complexity, and weak governance are all positively associated with the probability of receiving a comment letter. Kedia and Rajgopal (2011) find that firms located closer to SEC offices are more likely to be subject to enforcement actions. Files (2012) finds that firms that cooperate with the SEC are more likely to be sanctioned via an enforcement action but are also subject to smaller monetary penalties. Peterson (2012) finds that firms with more complex accounting are more likely to restate reported revenue; however, the accounting complexity mitigates the likelihood of receiving an AAER. In contrast to these studies that focus on firm characteristics, we investigate whether ownership characteristics (i.e., the percentage of retail ownership) of a firm are associated with the likelihood of being subject to SEC monitoring or enforcement.

Some papers examine the association between aspects of other individuals' involvement with firms and SEC activity. Specifically, both Correia (2014) and Yu and Yu (2011) find evidence of a negative association between political connections of top management and enforcement actions issued by DOE. However, as it relates to comment letters coming from DCF, Heese et al. (2017) discuss the tradeoff between the functions of DCF and DOE relating to regulatory capture. They find that, in contrast to the prior literature on DOE, political connections *positively* predict SEC comment letters from DCF. They suggest that the most likely explanation for the apparently contrasting findings is that political connectedness might be a useful heuristic for the issues DCF seeks to address through comment letters, and that comment letters help resolve issues before they rise to the level where they draw enforcement attention by DOE. Similar to the broader call for more research on the interaction between various regulatory roles in Leuz and Wysocki (2016), Heese et al. (2017) encourage researchers to further examine the interaction between the regulatory roles of these two primary SEC divisions.

2.2 Hypothesis development

As previously stated, former SEC Chairman Jay Clayton is quoted as saying, "Serving and protecting Main Street investors is my main priority at the SEC." Many other speeches and public documents of the SEC echo this sentiment. This focus on Main Street or retail investors potentially serves to level the playing field and reduce the variation in information asymmetry that exists between investors and firms. Reducing information asymmetry allows these investors to participate more confidently in the capital markets. The SEC engages in many activities that are clearly in line with the goal of serving and protecting retail investors. Thus, it is also plausible that this focus on retail investors is associated with the resource allocation decisions of DCF and DOE. Building on the literature on crime prevention (e.g., Becker 1968), it is likely that some mixture of the two mechanisms of ex ante monitoring and ex post enforcement represents the optimal resource allocation by the SEC. However, these two divisions operate at least partially independently of one another; balance their own unique, competing priorities; and face binding budget constraints. Thus, it is unclear whether the selection criteria employed by both DCF and DOE result in resource allocations that are associated with the ownership of the firms they oversee.

Even though the SEC as a whole is quite vocal about the desired focus on retail investors, DCF does not publicly disclose its priorities as to which companies it will select as a target for the filing review process each year. The SEC website states, "To preserve the integrity of the selective review process, the Division does not publicly disclose the criteria it uses to identify companies and filings for review" (SEC 2019). Companies do know, however, that under SOX 408, their periodic filings will be subject to review at least once every three years, and although there are

five explicit criteria for prioritizing these reviews, none of them are directly related to ownership characteristics.[8]

If the weighted priorities of DCF are consistent with public statements and other policies focused on retail investors, then we would expect to observe a positive association between retail ownership and SEC monitoring. However, there may be offsetting or competing priorities (e.g., the SOX 408 criteria) such that retail ownership does not play a primary role, which could manifest in either a negative association or no association. For this reason, we state our first hypothesis in the null as follows:

H1: *The level of retail ownership of the firm is not associated with the likelihood that the firm is subject to regulatory **monitoring** by the Division of Corporation Finance.*

In contrast to the opacity surrounding the selection of firms for review by DCF, the SEC publicly discloses the priorities for DOE in its Enforcement Manual (SEC 2017). However, it is unclear whether and how most of these priorities relate to retail investors.[9] For example, when determining the priority for a potential investigation, the SEC Enforcement Manual states that the staff should consider whether the matter involves potentially widespread and extensive harm to investors. However, it is unclear whether the SEC staff would consider a firm with highly dispersed

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[8] The five SOX 408 criteria are prior restatements, stock price volatility, market capitalization, emerging companies, and material operations to a sector of the economy.

[9] The nine criteria explicitly stated in the Enforcement Manual are as follows: 1) whether the matter presents an opportunity to send a particularly strong and effective message of deterrence, including with respect to markets, products and transactions that are newly developing, or that are long established but which by their nature present limited opportunities to detect wrongdoing and thus to deter misconduct; 2) whether the matter involves particularly egregious or extensive misconduct; 3) whether the matter involves potentially widespread and extensive harm to investors; 4) whether the matter involves misconduct by persons occupying positions of substantial authority or responsibility, or who owe fiduciary or other enhanced duties and obligations to a broad group of investors or others; 5) whether the matter involves potential wrongdoing as prohibited under newly enacted legislation or regulatory rules; 6) whether the potential misconduct occurred in connection with products, markets, transactions, or practices that pose particularly significant risks for investors or a systemically important sector of the market; 7) whether the matter involves a substantial number of potential victims and/or particularly vulnerable victims; 8) whether the matter involves products, markets, transactions, or practices that [DOE] has identified as priority areas; and 9) whether the matter provides an opportunity to pursue priority interests shared by other law enforcement agencies on a coordinated basis.

retail ownership or a firm with highly concentrated institutional ownership (where many of the shareholders are pensions or mutual funds that are investing on behalf of tens of thousands of individuals) as having a widespread impact. Of all the priorities listed in the SEC Enforcement Manual, the one that most clearly points towards focusing on retail investors is the consideration of whether the matter involves a substantial number of potential victims or *particularly vulnerable victims*.

The above discussion highlights the possibility that retail ownership characteristics might play a role in the decision process of whether or not to pursue an investigation or issue an enforcement action against a firm. However, it also addresses reasons why those characteristics might not enter the decision process and why some of the differing priorities are likely to conflict with one another. For this reason, we state our second hypothesis in the null as follows:

> **H2**: *The level of retail ownership of the firm is not associated with the likelihood that the firm is subject to regulatory **enforcement** by the Division of Enforcement.*

3 Research design

Before we examine the primary associations of interest—between retail ownership and both SEC monitoring and enforcement—we first investigate which characteristics are associated with higher levels of retail ownership. We define two variables to capture the extent of retail ownership. First, *Retail%* is the total percentage of retail ownership of the firm. We compute *Retail%* by adding total institutional ownership and total insider ownership and assuming the remaining ownership is composed of retail owners (i.e., *Retail%* = 1 – (*Inst%* + *Insider%*)). *Inst%* is measured using the Thomson S13 database, and *Insider%* is measured using the Execucomp database. Second, we create an indicator variable, *HighRetail*, that is equal to one if *Retail%* is in

the top quartile for that year in our sample. We calculate the top quartile yearly to account for time trends in the overall level of ownership distribution.

We are interested in the potential determinants of retail ownership not only in their own right but also in an effort to understand whether there might be characteristics associated with both retail ownership and SEC activity. For this reason, we examine variables that are suspected determinants of retail ownership as well as variables that are documented or discussed determinants of SEC activity. We run the following OLS regression:

$Retail_{t+1} = \delta_0 + \delta_1 Insider\%_t + \delta_2 Restate_t + \delta_3 Lag\ Restate_t + \delta_4 Size_t + \delta_5 High\ Volatility_t + \delta_6 MTB_t + \delta_7 Low\ MTB_t + \delta_8 Sales\ Growth_t + \delta_9 Loss_t + \delta_{10} ZScore_t + \delta_{11} M\&A_t + \delta_{12} Restructuring_t + \delta_{13} External\ Financing_t + \delta_{14} Lit\ Industry_t + \delta_{15} BIG4_t + \delta_{16} Firm\ Age_t + \delta_{17} CEO\ Chair_t + \delta_{18} CEO\ Tenure_t + \delta_{19} Analysts_t + \delta_{20} Fortune\ 500_t + \delta_{21} Advertising_t + \delta_{22} Press\ Articles_t + \gamma_t + \alpha_j + \varepsilon$ (1)

Retail is either *Retail%* or *HighRetail*. We include the following lagged control variables in the model, many of which are known determinants of SEC monitoring (Cassell et al. 2013; Heese et al. 2017). Given that we are studying monitoring and enforcement of reporting quality, we include two separate binary variables that equal one if the firm restated its financial statements during the year (*Restate*) or the prior year (*Lag Restate*). We include the log of the firm's market capitalization (*Size*), as larger firms may be more visible to retail investors but also may be more likely to attract institutional investment as part of benchmark portfolios. We include a binary variable that equals one if the volatility of the abnormal monthly stock returns for the firm over the prior year is in the top quartile for that year (*High Volatility*), as there may be more or less interest in volatile stocks by different investors. These are all also criteria that SOX 408 explicitly requires DCF to consider in prioritizing the periodic filing reviews. We include the firm's market-to-book ratio (*MTB*) and a binary variable that is equal to one when that ratio is less than one (*Low MTB)* to control for a nonlinear effect of the firm's growth expectations. We also include the year-to-year sales growth (*Sales Growth*) as an additional measure of firm growth.

Retail investors may have a different reaction to firms reporting losses, so we include a binary variable that equals one when the company reports a net loss (*Loss*). To control for the firm's level of financial distress, we include Altman's Z-Score (*ZScore*). The complexity of a company may make a company less attractive to retail investors and is positively associated with the likelihood of a review (Cassell et al. 2013). As a result, we include a binary variable that equals one when the firm engaged in a merger or acquisition (*M&A*) and a binary variable that equals one if the firm underwent restructuring (*Restructuring*). We include a firm's debt and equity issuance (*External Financing*) because firms with external financing needs are more likely to comply with mandatory disclosure standards (Ettredge, Johnstone, Stone, and Wang 2011). We include the litigious industry variable (*Lit Industry*) developed by Francis, Philbrick, and Schipper (1994) to control for industries that are subject to high scrutiny. Because clients of Big 4 auditors might commit fraud at a lower rate (DeFond 1992), we include a binary variable that equals one if the firm is audited by a Big 4 auditor (*BIG4*). We include the log of the firm's age (*Firm Age*), as younger firms may be less well known to retail investors and also have a higher tendency to misreport (Beneish 1997). To control for differences in corporate governance structures, we include a binary variable that is equal to one if the CEO is the board chair (*CEO Chair*) and a variable measuring the length of the CEO's tenure (*CEO Tenure*).

The final three control variables represent explicit proxies for firm visibility, which could be associated with attracting attention from both retail investors and the SEC (Drake, Johnson, Roulstone, and Thornock 2020). Specifically, we include variables to capture a firm's presence on the Fortune 500 index (*Fortune 500*, measured as a binary variable that equals one if the firm is a member of the Fortune 500 index), the firm's advertising intensity (*Advertising,* measured as annual advertising expense scaled by total sales), and the firm's coverage in the popular press

(*Press Articles*, measured as the average monthly number of press articles written about a firm in the Dow Jones news archives). Miller (2006) finds that press coverage is associated with attention from the SEC, which motivates inclusion of this final variable.[10] Lastly, γ_t represents year fixed effects to control for any macro trends in ownership, and α_j represents SEC office fixed effects. SEC offices are divided up based on industry group, and they align very closely with industry breakdowns. We include these fixed effects rather than SIC or FF industry fixed effects because they control both for issues related to a specific industry and for issues related to a specific SEC office.

Next, we examine our first hypothesis (H1), which investigates the association between SEC monitoring and retail ownership using the following regression. We include all the same control variables to orthogonalize our estimated effects from any association between retail ownership and the firm characteristics examined in the determinants model.

DCF Monitoring$_t$ = β$_0$ + β$_1$Retail$_{t-1}$ + β$_2$Insider%$_{t-1}$ + β$_3$Restate$_{t-1}$ + β$_4$Lag Restate$_{t-1}$ + β$_5$Size$_{t-1}$ + β$_6$High Volatility$_{t-1}$ + β$_7$MTB$_{t-1}$ + β$_8$Low MTB$_{t-1}$ + β$_9$Sales Growth$_{t-1}$ + β$_{10}$Loss$_{t-1}$ + β$_{11}$ZScore$_{t-1}$ + β$_{12}$M&A$_{t-1}$ + β$_{13}$Restructuring$_{t-1}$ + β$_{14}$External Financing$_{t-1}$ + β$_{15}$Lit Industry$_{t-1}$ + β$_{16}$BIG4$_{t-1}$ + β$_{17}$Firm Age$_{t-1}$ + β$_{18}$CEO Chair$_{t-1}$ + β$_{19}$CEO Tenure$_{t-1}$ + β$_{20}$Analysts$_{t-1}$ + β$_{21}$Fortune 500$_{t-1}$ + β$_{22}$Advertising$_{t-1}$ + β$_{23}$Press Articles$_{t-1}$ + γ$_t$ + α$_j$ + ε   (2)

Retail is either the continuous variable *Retail%* or the indicator variable *HighRetail*. Because we also include *Insider%* in the regression, we are able to interpret the coefficient estimate on *Retail%* as the change in the likelihood of monitoring as the result of a shift from institutional ownership to retail ownership.[11]

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[10] We formally define all variables in detail in Appendix B.

[11] We cluster standard errors by firm as we only have 10 years of data, which is an insufficient number of clusters and can result in erroneous inferences (Petersen 2009). Note also that we estimate an OLS regression when *Downloads* is the dependent variable and a probit regression when *Review* or *10K Comment* is the dependent variable.

As stated previously, we use multiple measures of *DCF Monitoring*. First, we investigate

SEC initiated downloads from the EDGAR database. A primary mechanism that DCF employees

use to obtain information about the firms they oversee is the publicly available EDGAR

database. We measure this access by identifying blocks of IP addresses owned by the SEC and

examining when those IP addresses access specific filings on the EDGAR database using the

EDGAR log files made public by the SEC. This acquisition of information about firms

represents an ex ante measure of SEC scrutiny, and prior literature documents a correlation

between downloads and measures of monitoring, such as the SOX 408 review criteria and SEC

comment letters (Stice-Lawrence 2021). One disadvantage of examining these SEC-initiated

downloads of disclosure filings on EDGAR is that we are unable to link them directly to either

DCF or DOE; however, we posit that they predominantly represent a DCF monitoring role due to

the relative infrequency of DOE investigations.[12]

We use three different variations of SEC-initiated downloads. First, *Downloads* is the log

of one plus the total number of SEC-initiated downloads of the firm's disclosure filings on EDGAR

during the year. This captures SEC access to any filing made by the firm at any point in the firm's

history. Next, we use the log of downloads of only 10-K filings, *10K Downloads*. Finally, we use

the log of downloads of only the most recently issued 10-K filing, *10K Downloads CY*.[13]

The next two dependent variables that we investigate represent more explicit monitoring

by DCF, namely *Review* and *10K Comment*. *Review* is a binary variable that equals one if a firm

undergoes a periodic filing review (including Form 10-K) and zero otherwise. To construct this

variable, we obtain a comprehensive listing of all DCF reviews within our sample period via a

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[12] Holzman et al. (2022) use these data as a proxy of attention by DOE, but only after conditioning on the presence
of an open investigation, which is much less common than a DCF review.
[13] SOX 408 explicitly requires the SEC to review Form 10-K as part of its periodic reviews.

FOIA request, regardless of whether a comment letter was issued.[14] *Review* is an ex ante measure of monitoring and is directly attributable to DCF decisions.

10K Comment is a binary variable that equals one if a firm received a comment letter referencing its 10-K in the given year and zero otherwise. This proxy for DCF monitoring is an ex post measure and relies on some potential reporting deficiency on the part of the firm. Ideally, we would condition on the presence of these perceived deficiencies to mitigate this source of endogeneity; however, we are unable to observe these deficiencies. Thus, in an effort to provide comfort in the inferences from this analysis we examine a specific characteristic of the comment review process. Conditional on issuing a comment letter, there is variation in the number of back-and-forth iterations between the SEC and the registrant needed to satisfy the SEC's inquiry, which we call rounds. If there is a true underlying association between retail ownership and the likelihood of receiving a comment letter, then we would expect that, conditional on receiving a comment letter, there would be a similar association between retail ownership and the severity or significance of the comment letter, as measured by the number of rounds needed to resolve the issue. To test this association, we use *Rounds* as our final dependent variable. *Rounds* is the number of letters from the SEC, from the first letter to the "completion of review" letter.[15]

We then move on to our second hypothesis (H2), which investigates the association between retail ownership and the likelihood of DOE enforcement. We realize that differences in the extent of retail versus institutional ownership may affect the likelihood of a firm committing wrongdoing that would warrant DOE enforcement in the first place. For example, if institutional

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[14] In the absence of an SEC comment letter, there is no public disclosure that a review occurred. However, Henry Laurion from the University of Colorado obtained a comprehensive listing of all DCF reviews in our sample period (regardless of whether a comment letter was issued) via a Freedom of Information Act (FOIA) request and graciously shared this data with us.

[15] In this analysis we add two comment letter–specific controls: the number of filings reviewed (*Filings*) and the number of issues (*Issues*) referenced in the comment letter. More filings and more issues being reviewed likely result in a larger number of rounds needed to resolve the issues.

investors are effective monitors of firm behavior, then firms where institutions own a large stake may be less likely to misreport. This would result in differences in the observable enforcement actions even though it does not represent differences in DOE's allocation of resources. In an effort to mitigate this endogeneity concern, we condition our sample on the presence of a financial statement restatement as a proxy for alleged misreporting.

After conditioning on the presence of a restatement, we estimate the following regression to assess H2:

$$DOE\ Enforcement_t = \beta_0 + \beta_1 Retail_{t-1} + \beta_2 Insider\%_{t-1} + \beta_3 Restate\ Magnitude_{t-1} + \beta_4 Restate\ Revenue_{t-1} + \beta_5 Restate\ Count_{t-1} + \beta_6 Restate\ Years_{t-1} + \beta_7 CAR_{t-1} + \beta_8 Previous\ Return_{t-1} + \beta_9 Share\ Turnover_{t-1} + \beta_{10} Size_{t-1} + \beta_{11} Sales\ Growth_{t-1} + \beta_{12} CEO\ Tenure_{t-1} + \beta_{13} CEO\ Chair_{t-1} + \beta_{14} Analysts_{t-1} + \beta_{15} Fortune\ 500_{t-1} + \beta_{16} Advertising_{t-1} + \beta_{17} Press\ Articles_{t-1} + \gamma_t + \varepsilon \qquad (3)$$

Similar to the DCF analyses, *Retail* is either the continuous variable *Retail%* or the indicator variable *HighRetail*. The dependent variable, *DOE Enforcement*, is one of two proxies: *Investigation* or *AAER*. *Investigation* is a binary variable that is equal to one if a firm undergoes an investigation by DOE in the year after a restatement, and zero otherwise. To construct this variable, we obtain a comprehensive listing of all DOE investigations within our sample period via a FOIA request.[16]

AAER is a binary variable that is equal to one if a firm receives an AAER that is specifically related to financial misreporting within the three years after a restatement, and zero otherwise. We choose the timing window for DOE investigations and AAERs after considering two competing requirements. First, we need a short enough period so that it is likely that the investigation or AAER is related to the restatement. This ensures that the restatement severity controls in the regression are relevant in predicting DOE enforcement. Second, we need a long enough period so

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[16] We thank Terrence Blackburne for sharing the dataset of all DOE investigations during our sample period, which he obtained from the SEC via FOIA. This data is also used in Blackburne et al. (2020), Blackburne, Kepler, Quinn, and Taylor (2021), and Blackburne and Quinn (2023).

that the SEC is able to open a formal investigation of the firm's alleged misreporting and issue an AAER, if applicable. We believe the one-year (three-year) period is best able to capture both of these requirements for investigations (AAERs) based on Blackburne et al. (2020), who document that the average duration for an SEC investigation is approximately 2.5 years. All results are robust to using a two-year post-restatement window to identify DOE investigations and AAERs.

We use a slightly different set of control variables that is more specific to the restatement/enforcement decisions because DOE and DCF have different stated priorities. These controls largely follow Rice, Weber, and Wu (2015) and include several restatement-specific control variables. Many of these controls attempt to control for the severity of the restatement, to ensure that any differences in monitoring do not spill over and mechanically lead to more (or less) severe restatements which then lead to a lower (or higher) likelihood of enforcement.

Specifically, these control variables include the cumulative change in net income as a result of the restatement (*Restate Magnitude*), a binary variable equal to one if revenue is restated (*Restate Revenue*), the number of accounts that are restated (*Restate Count*), the number of years which are being restated (*Restate Years*), and the two-day abnormal market reaction to the restatement announcement (*CAR*). Next, we include the firm's returns in the lead-up to the restatement to control for the magnitude of losses incurred by stockholders (*Previous Return*). We include the log of the firm's market capitalization at the end of the restatement period (*Size*) to control for the tendency of large firms to be enforcement targets. We include the share turnover in the lead up to the restatement (*Share Turnover*) and the sales growth in the last misstated year (*Sales Growth*). Also consistent with the DCF monitoring model in Equation (2), we include

controls for corporate governance structures (*CEO Chair* and *CEO Tenure*) and firm visibility (*Analyst*, *Fortune 500*, *Advertising*, and *Press Articles*).[17]

Each dependent variable that we examine has unique strengths and weaknesses. We use multiple proxies for both DCF monitoring and DOE enforcement to triangulate our inferences. Even though newly available SEC data sources for DCF reviews and DOE investigations allow us to observe companies that are subject to a DCF review that does not result in the issuance of a comment letter or a DOE investigation that does not result in an AAER, we are still unable to observe the specific factors that triggered these reviews and investigations and the resulting comment letters and AAERs. We are also unable to observe the cases where the SEC may have considered pursuing a review or investigation but opted not to, such as in the case of a preliminary review or screening by DCF or a matter under inquiry (MUI) by DOE. In addition, we are not able to observe the specific resource allocations to the monitoring or enforcement of specific firms. However, by examining multiple dimensions of monitoring and enforcement, we hope to provide sufficient evidence to mitigate some of these weaknesses.

4 Data and results

4.1 Sample selection

The sample period for the monitoring analyses is 2005 to 2014. We begin the sample in 2005 because that is when the SEC began making comment letter data publicly available, and we end the sample in 2014 to be consistent with the end of the enforcement sample period. The subsample used to investigate SEC-initiated EDGAR downloads has missing data between 2008 and 2013, as an issue with internal web traffic routing during that period resulted in no observable

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[17] We do not include SEC office fixed effects for the enforcement tests because DOE is not broken down into industry based offices. Additionally, if we include SIC or FF industry fixed effects in these tests we lose many observations and statistical power given the relatively small sample size.

downloads by SEC-owned IP addresses (consistent with Stice-Lawrence (2021)). We begin with the Compustat universe of firm-year observations. We then merge in data from CRSP, Thomsen-Reuters, and Execucomp in both the monitoring and enforcement samples. We eliminate observations with non-positive assets or missing values for any of the variables in our analyses. Finally, we eliminate financial firms (SIC 6000-6999) due to their unique regulatory structure. The requirement to have Execucomp data is rather restrictive, but insider ownership is a key aspect to constructing our main variable of interest, *Retail%*. Our monitoring samples contain 4,902 (12,598) [5,532] firm-year observations for the EDGAR download (comment letters) [rounds] analyses. Our analysis of determinants of retail ownership uses the largest sample which is the full comment letter sample.

The conditional enforcement sample begins with the universe of restatements from Audit Analytics with filing dates from January 1, 2001, through September 30, 2014. The sample period begins in 2001, as that is the first year for which we have reliable restatement data from Audit Analytics. The sample period ends in 2014 to allow for sufficient time for an AAER to be issued and show up in the Center for Financial Reporting and Management database (which goes through September 30, 2016).[18] We eliminate restatement observations with Audit Analytics filing dates that are prior to the end of the misstatement period and observations with non-positive assets. The final enforcement sample contains 1,357 restatement observations for both the investigations analyses and 1,114 observations for the AAER analyses.[19] Table 1 summarizes the sample selection process for both sets of analyses.

4.2 Determinants of retail ownership

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[18] Dechow, Ge, Larson, and Sloan (2011) originally collected the data provided by the CFRM.
[19] There are fewer observations in the AAER sample than in the investigations sample because there are two years in our sample (2012 and 2014) when the restatement observations did not result in any AAERs, and the year fixed effects subsume all variation of observations from those years.

Before we examine the main associations of interest, we first offer an exploratory analysis to investigate the characteristics of firms that tend to have higher levels of retail ownership. We primarily investigate characteristics that prior literature has documented as being important in monitoring and enforcement decisions by the SEC. This is because we want to assess whether any of these characteristics are also associated with retail ownership, which could affect the association between SEC resource allocation and retail ownership.

Table 2 presents the results of the determinants analysis. Column 1 presents the results for the continuous measure of retail ownership (*Retail%*), and column 2 presents the results for the indicator variable (*HighRetail*). We draw four main conclusions from this analysis. First, the presence of retail investors is positively associated with firm visibility, as indicated by the significant coefficient estimates on *Press Articles* and *Fortune 500*. This is consistent with the findings about retail trading behavior documented in Barber et al. (2008). Second, the presence of retail investors is negatively associated with complex financial reporting or financial reporting problems, as indicated by the significant coefficient estimates on *M&A*, *Restructuring*, *Restate*, and *Lag Restate*. Third, the presence of retail investors is negatively associated with the presence of other outside monitors, as indicated by the significant coefficient estimates on *Big4* and *Analysts*. The analyst result is in line with Kumar and Lee (2006), who find that changes in analysts' forecasts are not significant drivers of retail trading activity. And fourth, there is some evidence that the presence of retail investors is positively associated with firm risk, as indicated by the significant coefficient estimates on *High Volatility*, *ZScore*, and *Sales Growth*.[20] Overall,

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[20] Untabulated coefficient estimates on the SEC office fixed effects suggest the only industry group that is significantly related to retail ownership is the Transportation and Leisure industry which tends to have less retail ownership.

the results generally line up with studies that examine retail trading activity explicitly, but they also offer new insights into characteristics that attract retail ownership.

4.3 DCF monitoring results

Panel A of Table 3 presents means, medians, and standard deviations for each of the three monitoring samples. It shows that the average retail ownership for all three samples is around 20% of outstanding shares. In terms of SEC monitoring outcomes, the average (median) firm is the subject of 325 (47) SEC-initiated downloads per year, of which 92 (9) are 10-K downloads. The SEC conducts a periodic filing review in about 33% of the years and issues a comment letter referencing Form 10-K in 44% of the firm-year observations. This clearly highlights a potential issue with the DCF reviews' data, as it should not be the case that a firm receives a comment letter without undergoing a review. We have no reason to believe that any incompleteness of the DCF reviews' data is related in any way to retail ownership, and our results are robust to an alternative specification that recodes the review variable equal to one if the firm received a comment letter in that year. Finally, conditional on issuing a comment letter, there is an average of 1.6 rounds of communication after the initial letter to resolve the issues identified.

Panel B of Table 3 presents Pearson correlation coefficients between both outcome variables and retail ownership and all other variables used in the analyses. It shows that retail ownership is negatively correlated with all the SEC monitoring variables. It also largely confirms the multivariate associations between retail ownership and firm characteristics in Table 2.

We formally test H1 and investigate the association between retail ownership and SEC monitoring by estimating Equation 1. Table 4 presents the results when SEC-initiated EDGAR downloads are our proxy for DCF monitoring. Regardless of whether the measure of SEC downloads includes all filings, only 10-K filings, or the current fiscal year's 10-K filings, and

regardless of whether we measure retail ownership using *Retail%* or *HighRetail*, we find a consistently negative and significant association at the 1% level across all six columns. The results demonstrate that a higher percentage of retail ownership is associated with a lower level of DCF monitoring in terms of SEC downloads of the firm's filings. In terms of economic magnitude, a one standard deviation increase in *Retail%* is associated with a 9.33% (7.04%) [7.07%] decrease in total (10-K) [current fiscal year's 10-K] downloads per year. As a benchmark, a one standard deviation increase in firm size is associated with a 10.31% (3.66%) [.96%] increase in total (10-K) [current fiscal year's 10-K] downloads per year.

Table 5 presents the results when we proxy for DCF monitoring with the likelihood of undergoing a periodic filing review. The coefficient estimates on both *Retail%* in column 1 and *HighRetail* in column 2 are negative and significant at the 5% level. In terms of economic magnitude, a one standard deviation increase in *Retail%* is associated with a 0.85 percentage point decrease in the probability of undergoing a DCF review, which corresponds to a 2.61% decrease relative to the sample mean. As a benchmark, a one standard deviation increase in firm size is associated with a 5.66 percentage point increase in the probability of undergoing a DCF review, which corresponds to a 17.36% increase relative to the sample mean.[21]

Finally, Table 6 presents the results when we proxy for DCF monitoring with the likelihood of receiving a 10-K comment letter in Panel A and with the number of rounds needed to satisfy a 10-K comment letter in Panel B. Panel A shows that the coefficient estimate on *Retail%* and *HighRetail* are both negative and significant at the 1% level. This result suggests that a higher percentage of retail ownership is associated with a lower likelihood of receiving an SEC comment letter. In terms of economic magnitude, a one standard deviation increase in *Retail%* is associated

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[21] Our results are robust to including all DCF reviews, not only 10-K reviews.

with a 1.19 percentage point decrease in the probability of receiving a comment letter, which corresponds to a 2.71% decrease relative to the sample mean. As a benchmark, a one standard deviation increase in firm size is associated with an 8.78 percentage point increase in the probability of receiving a comment letter, which corresponds to a 20.00% increase relative to the sample mean.

Table 6 Panel B presents the results when the dependent variable is the number of rounds needed to resolve the DCF comments, conditional on the issuance of a comment letter. We again find a negative and significant association at the 10% level or better. In terms of economic magnitude, a one standard deviation increase in *Retail%* is associated with a 2.57% decrease in the number of rounds needed to resolve the comments. As a benchmark, a one standard deviation increase in firm size is associated with a 2.33% increase in the number of rounds needed to resolve the comments.

Taken together, the results of our monitoring analyses consistently suggest that retail ownership is associated with lower DCF monitoring, whether in the form of SEC-initiated EDGAR downloads, the likelihood of a DCF review or comment letter receipt, or the effort to resolve the comments (conditional on the issuance of an SEC comment letter). Contrary to public statements about protecting Main Street investors, our analyses suggest that after considering the myriad competing objectives, DCF's resource allocation decisions appear to result in less preventative monitoring of firms that currently have larger concentrations of retail ownership.

4.4 DOE enforcement results

Panel A of Table 7 presents means, medians, and standard deviations for each of the two enforcement samples. It shows that the average retail ownership is again around 20% of outstanding shares. In terms of SEC enforcement outcomes, 14.7% of restatements in our sample

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are followed by an investigation and 5.3% are followed by an AAER. Panel B of Table 7 presents Pearson correlation coefficients between both outcome variables and retail ownership and all other variables used in the analyses. It shows a small positive correlation between retail ownership and both enforcement variables.

We present the results of our tests of H2 in Tables 8 and 9, which investigate the association between retail ownership and DOE enforcement. First, Table 8 presents results when we proxy for DOE enforcement with the likelihood of undergoing an investigation. The coefficient estimates on both *Retail%* and *HighRetail* are positive and significant at the 10% level. This result demonstrates that a higher percentage of retail ownership is associated with a higher likelihood of undergoing a DOE investigation within the year following a restatement. In terms of economic magnitude, a one standard deviation increase in *Retail%* is associated with a 1.59 percentage point increase in the probability of undergoing a DOE investigation, which corresponds to a 10.77% increase relative to the sample mean. As a benchmark, a one standard deviation increase in firm size is associated with a 2.20 percentage point increase in the probability of undergoing a DOE investigation, which corresponds to a 14.95% increase relative to the sample mean.

Table 9 presents the results when we proxy for DOE enforcement with the likelihood of receiving an AAER. The coefficient estimates on both *Retail%* and *HighRetail* are again positive and significant, this time at the 5% level or better. This result demonstrates that a higher percentage of retail ownership is associated with a higher likelihood of receiving an AAER within the three years following a restatement. In terms of economic magnitude, a one standard deviation increase in *Retail%* is associated with a 1.03 percentage point increase in the probability of receiving an AAER, which corresponds to a 19.47% increase relative to the sample mean. As a benchmark, a one standard deviation increase in firm size is associated with a 1.46 percentage point increase in

the probability of receiving an AAER, which corresponds to a 27.60% increase relative to the sample mean.

Together, these results suggest that the SEC—specifically the DOE—is more likely to open a formal investigation and pursue enforcement actions against firms that have a higher percentage of retail investors. Prior research demonstrates that these investigations and enforcement actions are costly to current investors in terms of monetary and reputational penalties, disruption to operations, and significant declines in firm value (Dechow et al. 1996; Correia 2014; Nichols 2016; Heese, Khan, and Ramanna 2017; Heese, 2019). Contrary to public statements about protecting Main Street investors, our analyses suggest that after considering the multitude of competing objectives, DOE's resource allocation decisions appear to be consistent with more punitive enforcement of firms with larger concentrations of retail ownership. [22]

5 Conclusion

This paper studies the association between retail ownership and the likelihood that a firm is subject to SEC monitoring in the form of SEC-initiated EDGAR downloads, DCF reviews, or comment letters and to SEC enforcement in the form of a DOE investigation or an AAER. The SEC claims to focus its efforts on protecting Main Street investors, and in many of its initiatives it does just that. Examples include ex ante disclosure requirements, Regulation Fair Disclosure, and investor education initiatives. However, what is less clear is whether that focus on retail investors is also shared by the two primary divisions of the SEC: DCF and DOE. These divisions comprise the largest allocation of resources in terms of both budget and full-time employees and are the primary points of contact with the SEC for corporate registrants.

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[22] A separate concern is that institutional investors are more able to foresee problems and sell off shares in firms that will likely be subject to an investigation or an AAER prior to these events. This could lead to similar results to what we document; however, we observe no differential trend in ownership characteristics between firms subject to an investigation or an AAER and firms not subject to these events in the five years prior to the restatement.

We first explore characteristics associated with higher levels of retail ownership. We find that firms with more visibility, fewer outside monitors, less complicated legal and accounting structures, and more volatility tend to be associated with greater retail ownership. In our main analyses we find that retail ownership is *negatively* associated with SEC-initiated downloads, the likelihood of undergoing a periodic filing review, and the likelihood of receiving a comment letter from DCF. Further, conditional on a restatement, we find that retail ownership is *positively* associated with the firm's likelihood of undergoing a DOE investigation and receiving an AAER. Taken together, these results provide evidence that ownership characteristics are associated with the SEC staff's monitoring and enforcement decisions. The results suggest that the resource allocation decisions of the SEC's two primary divisions tend to result in less protective monitoring and more punitive enforcement of firms with higher retail ownership. We acknowledge that DCF and DOE both have a myriad of objectives to consider when making resource allocation decisions, and we do not suggest that either division intentionally devotes fewer resources to firms with larger concentrations of retail ownership. However, the evidence suggests that in weighing these different objectives, the ultimate resource allocation decisions of these two divisions are consistent with trading off preventative ex ante regulatory oversight with costly ex post regulatory oversight for Main Street investors.

Prior literature on the determinants of SEC monitoring and enforcement almost exclusively focuses on firm-level characteristics. We contribute to this literature by expanding the scope of potential determinants to include the effect of ownership characteristics on the likelihood of these two regulatory roles. Our study helps shed light on the black box of how the SEC fulfills its investor protection mandate by providing evidence on *which investors* are the focus of its monitoring and enforcement initiatives and helps answer the call of Leuz and Wysocki (2016) to

examine the interaction of various regulatory roles. We document that investor type is associated with SEC monitoring but that, contrary to many public statements, retail ownership is associated with less monitoring. Further, DOE is more likely to pursue retail-owned firms, as evidenced by the increased likelihood of opening an investigation and issuing an AAER, which is a more severe and costly form of regulatory oversight for firms with the most egregious cases of perceived financial misreporting. We hope that future research will continue to consider the relative tradeoffs among differing regulatory roles and further investigate the extent to which ownership characteristics play a role in decision making at the SEC.

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Appendix A: SEC Organizational Chart

Source: https://www.sec.gov/about/secorg.pdf
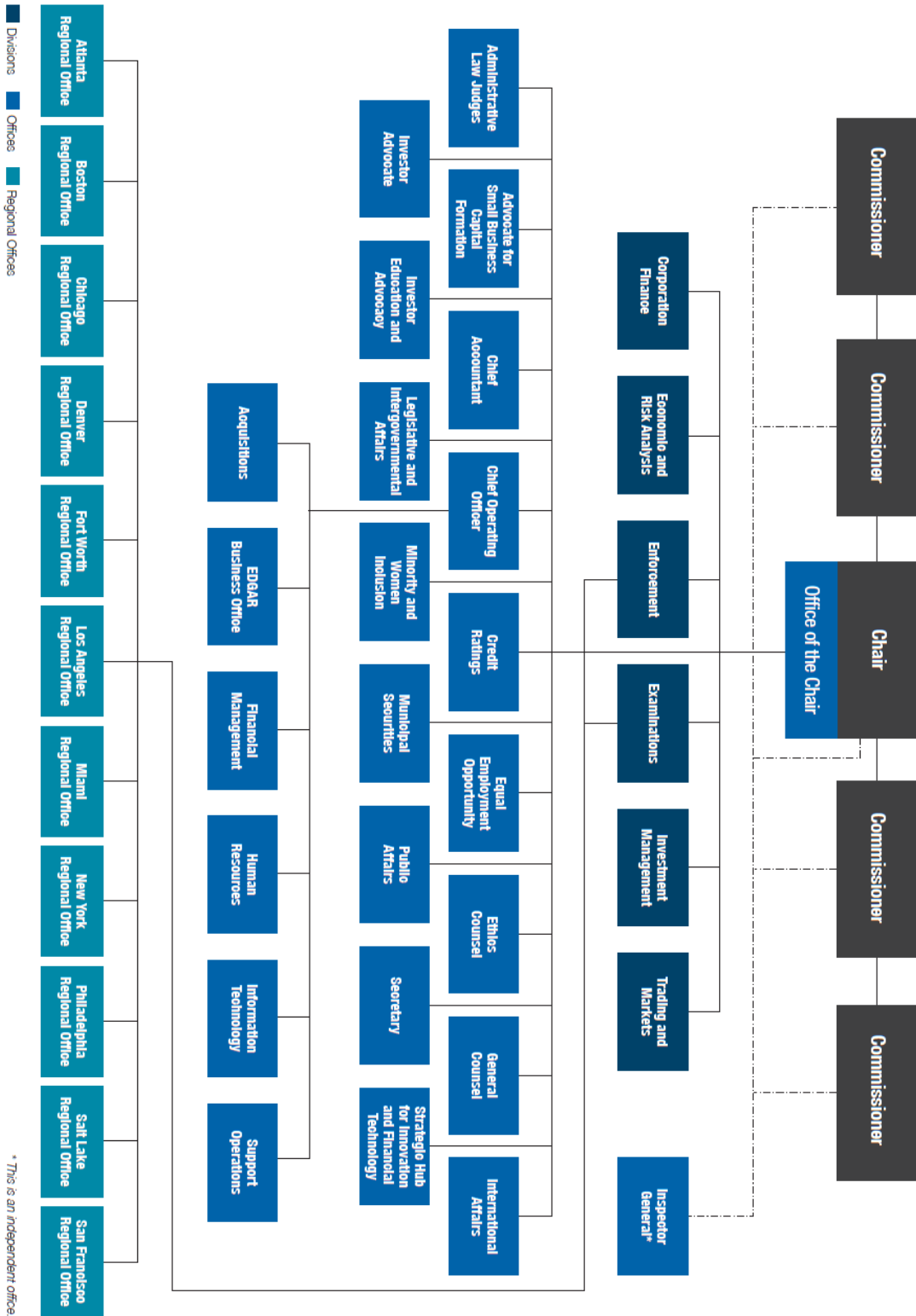
Appendix B: Variable Definitions

10K Comment	A binary variable that equals one if a firm received a comment letter related to a 10-K during the fiscal year and zero otherwise.
10K Downloads	The log of one plus the number of 10-K downloads by the SEC in the year.
10K Downloads CY	The log of one plus the number of the current fiscal year's 10-K downloads by the SEC in the year.
AAER	Binary variable that equals one if a firm was subject to an Accounting and Auditing Enforcement Release within the three years following a restatement, and zero otherwise.
Advertising	Advertising expense scaled by total sales.
#Analysts	The number of analysts following the firm.
BIG4	A binary variable that equals one if a firm was audited by Deloitte, PriceWaterhouseCoopers, EY, or KPMG.
CAR	The cumulative abnormal return over the (0,1) period relative to the restatement announcement. Calculated as firm return minus the return on the CRSP equal-weight market index.
CEO Chair	A binary variable that equals one if the CEO is also the chairman of the board of directors.
CEO Tenure	The number of years the CEO has served in their current role.
Downloads	The log of one plus the total number of downloads by the SEC in the year.
External Financing	The sum of equity financing and debt financing scaled by total assets, measured in fiscal year t+1.
Filings	The number of filings referenced in the comment letter.
Firm Age	The number of years between the first appearance of the firm in Compustat and the current year.
Fortune 500	A binary variable that equals one if the firm is listed in the Fortune 500, and zero otherwise.
HighRetail	A binary variable that equals one if the firm was in the top quartile of *Retail %* within a given year, and zero otherwise.
High Volatility	A binary variable that equals one if the volatility of abnormal monthly stock returns within a firm's fiscal year is in the top quartile of that fiscal year.

Insider %	Total shares owned by insiders at the end of the fiscal year scaled by total shares outstanding. Insider share data are from Execucomp. Execucomp item: SHROWN_TOT. If missing SHROWN_TOT, we use SHROWN_EXCL_OPTS. These variables are summed for all insiders in the firm each year.
Institutional %	Average shares owned by institutions across the four quarters during the year scaled by total shares outstanding. Institutional share ownership data are from Thomson Reuters.
Investigation	A binary variable that equals one if an investigation into the firm was opened by the DOE within one year following a restatement and zero otherwise.
Issues	The number of issues referenced in the comment letter
Lit Industry	A binary variable that equals one if a firm is in the four-digit SIC industry 2833–2836, 3570–3577, 3600–3674, 5200–5961, or 7370–7374.
Loss	A binary variable that equals one if the firm reported negative net income.
Low MTB	A binary variable that equals one if the firm's market-to-book ratio is below one.
M&A	A binary variable that equals one if the firm engaged in any mergers or acquisitions during the fiscal year.
MTB	Common shares outstanding multiplied by price at the end of the fiscal year divided by the book value of common equity.
Press Articles	The average monthly number of press articles written about the firm, calculated over the prior year. Calculated using the Ravenpack Dow Jones news archives. To ensure we are only capturing unique and relevant articles about the firm, we require a News Relevance score of 100 and an Event Novelty Score (ENS) of 100 for each article. We remove all press releases from the sample.
Previous Return	The buy-and-hold abnormal return over the (-252, -2) window relative to the restatement announcement date. Calculated using the CRSP equal-weight market index.
Restate	A binary variable that equals one if the company filed a restatement within the past fiscal year.
Restate Count	The number of distinct account types being restated.
Restate Magnitude	The cumulative change in reported earnings due to the restatement, scaled by total market value of common equity at the end of the misstatement period.

Appendix B: Variable Definitions (continued)

Restate Revenue	A binary variable that equals one if the restatement involves revenue recognition, and zero otherwise.
Restate Years	The length of the misstatement period in years.
Restructuring	A binary variable that equals one if the firm had non-zero restructuring costs during the fiscal year.
Retail %	1 - Insider % - Institutional %.
Review	A binary variable that equals one if the firm had its 10-K reviewed by the DCF in the given year.
Rounds	The number of back-and-forth iterations between the SEC and the corporate registrant required to satisfy the SEC regarding a specific comment letter. This is measured as the number of letters from the SEC during each conversation, from the first letter to the "completion of review" letter.
Sales Growth	Change in sales during the year scaled by beginning sales.
Share Turnover	$(1 - \Pi_t (1 - \text{shares traded}_t / \text{total shares}_t))$ calculated over the (-252, -2) window relative to the restatement announcement.
Size	The log of common shares outstanding multiplied by price at the end of the fiscal year.
ZScore	Altman's Z-Score as measured in Altman (1968).

Figure 1: Timeline of SEC Oversight Relating to Financial Reporting Regulation

```
┌─────────────────────────┐      ┌─────────────────────────┐
│ Registrants file financial │    │ Suspected financial     │
│ disclosures on EDGAR     │      │ reporting misconduct    │
│ (SEC website)            │      │                         │
└─────────────────────────┘      └─────────────────────────┘
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┌─────────────────────────┐  ┌─────────────────────────┐  ┌─────────────────────────┐
│ Mandate disclosures and │  │ DCF monitoring (review  │  │ DOE enforcement         │
│ oversee FASB's standard │  │ filings and issue       │  │ (initiate investigations│
│ setting process         │  │ comment letters)        │  │ and issue AAERs)        │
└─────────────────────────┘  └─────────────────────────┘  └─────────────────────────┘

┌─────────────────────────┐
│ Issue interpretive      │
│ guidance (e.g., SABs,   │
│ C&DIs, staff speeches)  │
└─────────────────────────┘

┌─────────────────────────┐
│ Accounting consultations│
│ (issue pre-filing letters)│
│                         │
│                         │
└─────────────────────────┘
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Ex Ante Oversight   **Ex Post Oversight**

Notes: This figure illustrates the relative timing of certain regulatory tools across various divisions and offices of the SEC. Although these regulatory activities are not all inclusive, they illustrate the nature of some of the activities the SEC engages in while overseeing financial reporting regulation. The figure demonstrates that many activities of the SEC happen even before the registrant files financial statements, and also delineates ex ante versus ex post oversight relative to the suspected financial reporting misconduct. The two boxes in grey are the focus of this paper.

Table 1: Sample Selection

	Monitoring Sample	Enforcement Sample
Audit Analytics restatements (2001-2014)		14,199
Compustat universe (2005-2014)	112,309	
Less:		
restatement period ends after restatement date	-	(287)
require Compustat data	-	(5,102)
observations with non-positive assets	(21,989)	(369)
keep only one restatement per year	-	(747)
require CRSP data	(38,761)	(2,491)
require institutional holdings data	(11,241)	(744)
require insider holdings data	(22,537)	(2,630)
eliminate financial firms (SIC 6000 - 6999)	(2,624)	(246)
missing control variables	(2,559)	(226)
Final monitoring/ enforcement samples	**12,598**	**1,357**
missing SEC downloads from 2008-2013	(7,696)	
Final SEC-initiated downloads sample	**4,902**	
no restatements in 2012/2014 led to AAERS		(243)
Final AAER sample		**1,114**

Table 2: Determinants of Retail Ownership

VARIABLES	(1) Retail%	(2) HighRetail
Insider%	-0.096***	-0.200
	(0.026)	(0.206)
Restate	-0.016***	-0.178***
	(0.005)	(0.055)
Lag Restate	-0.011**	-0.089*
	(0.005)	(0.054)
Size	-0.010**	-0.100**
	(0.005)	(0.040)
High Volatility	0.014***	0.097**
	(0.005)	(0.046)
MTB	0.001*	0.019***
	(0.001)	(0.007)
Low MTB	-0.004	0.013
	(0.009)	(0.077)
Sales Growth	-0.015*	-0.107
	(0.009)	(0.084)
Loss	0.034***	0.178***
	(0.007)	(0.056)
ZScore	-0.004***	-0.038***
	(0.001)	(0.009)
M&A	-0.017***	-0.141***
	(0.005)	(0.052)
Restructuring	-0.025***	-0.244***
	(0.005)	(0.051)
External Financing	-0.021	-0.385**
	(0.020)	(0.167)
Lit Industry	-0.007	-0.161*
	(0.010)	(0.087)
BIG4	-0.062***	-0.391***
	(0.016)	(0.105)
Firm Age	0.002***	0.011***
	(0.000)	(0.002)
CEO Chair	-0.007	-0.062
	(0.006)	(0.057)
CEO Tenure	-0.001*	-0.008*
	(0.000)	(0.004)

#Analysts	-0.003***	-0.022***
	(0.001)	(0.005)
Fortune 500	0.023**	0.103
	(0.010)	(0.090)
Advertising	-0.062	0.101
	(0.128)	(1.111)
Press Articles	0.006***	0.053***
	(0.001)	(0.007)
Observations	10,686	10,686
R-squared	0.210	0.111
YEAR FE	YES	YES
OFFICE FE	YES	YES

Notes: Column 1 presents the results from a regression where the dependent variable is *Retail%*, which is the percentage of shares owned by retail investors during the year. Column 2 presents results from a probit regression where the dependent variable is the binary variable *HighRetail,* which equals one if the firm was in the top quartile of *Retail %* within a given year, and zero otherwise. See Appendix B for all other variable definitions. *, **, and *** indicate significance at the 10%, 5%, and 1% levels. For the *HighRetail* column, the reported R-squared is McFadden's pseudo R-squared. Standard errors are clustered by firm and presented below coefficient estimates in parentheses.

Table 3: Descriptive Statistics and Correlations for Monitoring Samples

Panel A: Descriptive Statistics

VARIABLES	Downloads Sample			Reviews and Comment Letters Sample			Rounds Sample		
	Mean	Median	S.D.	Mean	Median	S.D.	Mean	Median	S.D.
Observations		4,902			12,598			5,532	
Downloads	4.098	3.871	2.187						
10K Downloads	2.743	2.303	2.135						
10K Downloads CY	2.483	1.792	2.211						
Review				0.326	0.000	0.469			
10K Comment				0.439	0.000	0.496			
Rounds							1.618	1.000	0.910
Retail%	0.220	0.193	0.162	0.196	0.165	0.165	0.191	0.165	0.159
Insider%	0.037	0.010	0.078	0.045	0.016	0.085	0.040	0.014	0.080
Institutional%	0.745	0.776	0.174	0.764	0.799	0.180	0.774	0.803	0.170
Restate	0.125	0.000	0.331	0.086	0.000	0.280	0.084	0.000	0.278
Lag Restate	0.103	0.000	0.304	0.083	0.000	0.276	0.078	0.000	0.268
Size	7.825	7.692	1.582	7.594	7.484	1.624	7.882	7.837	1.613
High Volatility	0.247	0.000	0.432	0.250	0.000	0.433	0.221	0.000	0.415
MTB	3.343	2.571	3.736	2.900	2.175	3.531	2.930	2.180	3.595
Low MTB	0.069	0.000	0.253	0.119	0.000	0.324	0.114	0.000	0.317
Sales Growth	0.101	0.075	0.188	0.087	0.068	0.205	0.086	0.064	0.211
Loss	0.144	0.000	0.351	0.168	0.000	0.374	0.154	0.000	0.361
ZScore	4.452	3.514	4.222	4.113	3.257	3.951	3.942	3.124	3.758
M&A	0.239	0.000	0.426	0.237	0.000	0.425	0.238	0.000	0.426
Restructuring	0.414	0.000	0.493	0.419	0.000	0.493	0.441	0.000	0.497
External Financing	-0.023	-0.025	0.115	-0.021	-0.023	0.107	-0.022	-0.025	0.103
Lit Industry	0.308	0.000	0.462	0.308	0.000	0.462	0.307	0.000	0.461
BIG4	0.929	1.000	0.257	0.923	1.000	0.267	0.935	1.000	0.246
Firm Age	29.614	24.000	17.557	28.890	23.000	17.648	29.934	24.000	18.234
CEO Chair	0.518	1.000	0.500	0.517	1.000	0.500	0.535	1.000	0.499
CEO Tenure	6.846	5.000	6.937	6.859	5.000	6.933	6.746	5.000	6.801
#Analysts	13.212	11.000	9.212	12.924	11.000	8.867	14.222	12.000	9.248
Fortune 500	0.275	0.000	0.446	0.266	0.000	0.442	0.328	0.000	0.470
Advertising	0.012	0.000	0.027	0.012	0.000	0.027	0.012	0.000	0.027
Press Articles	8.768	7.833	5.733	9.113	7.500	6.464	10.015	8.167	7.034

Panel B: Correlations

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Variables	Retail%	Downloads	10K Downloads	10K Downloads CY	Review	10K Comment	Rounds
Downloads	-0.034**						
10K Downloads	-0.026*	0.882***					
10K Downloads CY	-0.023*	0.857***	0.978***				
Review	-0.048***	0.048***	-0.025*	-0.032**			
10K Comment	-0.028***	0.072***	0.047***	0.033**	0.747***		
Rounds	-0.039***	0.035	0.016	0.015	0.075***		
Insider%	-0.146***	-0.008	0.005	0.004	-0.014	-0.048***	0.022*
Institutional%	-0.905***	0.033**	0.018	0.017	0.053***	0.049***	0.032**
Restate	-0.021**	-0.016	-0.005	-0.039***	-0.016*	-0.005	0.004
Lag Restate	-0.017*	-0.008	0.014	-0.01	-0.014	-0.016*	0
Size	0.043***	0.222***	0.194***	0.183***	0.076***	0.157***	0
High Volatility	0.038***	-0.019	-0.006	-0.013	-0.040***	-0.059***	0.033**
MTB	0.027***	0.081***	0.108***	0.108***	-0.019**	0.007	-0.032**
Low MTB	-0.031***	0.003	0.02	0.017	0.005	-0.016*	0.021
Sales Growth	0.008	-0.109***	-0.111***	-0.105***	-0.009	-0.002	0.024*
Loss	0.019**	-0.012	-0.01	-0.012	-0.001	-0.032***	0.030**
ZScore	-0.071***	-0.02	-0.004	0.002	-0.052***	-0.038***	-0.037***
M&A	-0.048***	0.302***	0.329***	0.336***	0.014	0.003	0.009
Restructuring	-0.046***	0.105***	0.102***	0.099***	0.025***	0.040***	0.01
External Financing	0.035***	0.015	0.006	0.004	-0.002	-0.01	0.029**
Lit Industry	-0.028***	0.037***	0.039***	0.022	0.004	-0.003	0.030**
BIG4	-0.112***	-0.009	-0.032**	-0.029**	0.018**	0.040***	-0.015
Firm Age	0.198***	0.080***	0.055***	0.063***	0.015*	0.052***	-0.014
CEO Chair	-0.004	-0.043***	-0.062***	-0.059***	0.021**	0.033***	0.019
CEO Tenure	-0.084***	0.006	0.021	0.030**	-0.005	-0.014*	0
#Analysts	-0.084***	0.213***	0.198***	0.181***	0.086***	0.129***	0.033**
Fortune 500	0.104***	0.122***	0.087***	0.076***	0.064***	0.124***	0.038***
Advertising	-0.028***	0.025*	0.037***	0.024*	0.004	0.01	0.022*
Press Articles	0.085***	0.424***	0.378***	0.361***	0.096***	0.124***	0.046***

Notes: This table presents information pertaining to the Monitoring samples. Panel A presents descriptive statistics for the *Downloads*, *Review and Comment Letter*, and *Rounds* samples. For each sample, the mean, median, and standard deviation are reported. Panel B presents the correlations of our key variables with all other variables. Column (1) uses the *Review and Comment Letter* sample, since it is the largest. Columns (2) – (4) present correlations from the *Downloads* sample. Columns (5) and (6) present correlations from the *Reviews and Comment Letters* sample. Column (7) presents correlations from the *Rounds* sample. See Appendix B for variable definitions. *, **, and *** indicate significance at the 10%, 5%, and 1% levels.

Table 4: The Association between Retail Ownership and SEC-Initiated EDGAR Downloads

VARIABLES	(1) Downloads	(2) 10K Downloads	(3) 10K Downloads CY	(4) Downloads	(5) 10K Downloads	(6) 10K Downloads CY
Retail%	-0.577***	-0.435***	-0.437***			
	(0.129)	(0.126)	(0.126)			
HighRetail				-0.157***	-0.139***	-0.141***
				(0.049)	(0.048)	(0.049)
Insider%	-0.192	-0.168	-0.242	-0.091	-0.094	-0.167
	(0.278)	(0.273)	(0.266)	(0.278)	(0.273)	(0.266)
Restate	0.130**	0.219***	0.027	0.136**	0.223***	0.030
	(0.063)	(0.058)	(0.056)	(0.063)	(0.058)	(0.056)
Lag Restate	0.163***	0.236***	0.099	0.167***	0.237***	0.101
	(0.063)	(0.061)	(0.061)	(0.063)	(0.061)	(0.061)
Size	0.065**	0.023	0.006	0.065**	0.023	0.006
	(0.028)	(0.027)	(0.028)	(0.028)	(0.027)	(0.028)
High Volatility	0.070	0.040	0.002	0.064	0.037	-0.002
	(0.051)	(0.048)	(0.048)	(0.051)	(0.048)	(0.048)
MTB	0.008	0.020***	0.021***	0.008	0.020***	0.021***
	(0.006)	(0.005)	(0.005)	(0.006)	(0.005)	(0.005)
Low MTB	0.068	0.149	0.119	0.072	0.151	0.122
	(0.098)	(0.092)	(0.092)	(0.098)	(0.092)	(0.093)
Sales Growth	0.028	-0.011	0.100	0.033	-0.008	0.103
	(0.113)	(0.106)	(0.107)	(0.113)	(0.106)	(0.107)
Loss	-0.001	-0.050	-0.025	-0.009	-0.055	-0.030
	(0.067)	(0.064)	(0.063)	(0.067)	(0.064)	(0.063)
ZScore	0.002	0.008	0.013**	0.002	0.008	0.013**
	(0.006)	(0.005)	(0.005)	(0.006)	(0.005)	(0.005)
M&A	0.056	0.058	0.066	0.062	0.062	0.070
	(0.054)	(0.055)	(0.054)	(0.054)	(0.055)	(0.054)
Restructuring	0.139***	0.110***	0.109***	0.143***	0.112***	0.111***
	(0.044)	(0.040)	(0.040)	(0.044)	(0.040)	(0.040)
External Financing	0.227	0.142	0.063	0.218	0.137	0.059
	(0.182)	(0.164)	(0.160)	(0.181)	(0.164)	(0.160)
Lit Industry	-0.043	-0.015	-0.040	-0.048	-0.020	-0.045
	(0.060)	(0.052)	(0.052)	(0.060)	(0.052)	(0.051)
BIG4	-0.123	-0.112	-0.022	-0.104	-0.101	-0.011
	(0.083)	(0.079)	(0.078)	(0.083)	(0.079)	(0.078)

Firm Age	-0.000	-0.002*	-0.002	-0.001	-0.003**	-0.002
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
CEO Chair	-0.061	-0.057	-0.053	-0.064	-0.059	-0.054
	(0.042)	(0.039)	(0.038)	(0.042)	(0.039)	(0.038)
CEO Tenure	-0.004	-0.003	-0.001	-0.003	-0.003	-0.001
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
#Analysts	0.001	0.003	0.001	0.001	0.003	0.002
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Fortune 500	0.023	0.019	0.034	0.013	0.012	0.026
	(0.062)	(0.060)	(0.059)	(0.062)	(0.060)	(0.059)
Advertising	-0.400	0.196	-0.289	-0.365	0.223	-0.261
	(0.781)	(0.693)	(0.707)	(0.784)	(0.699)	(0.711)
Press Articles	0.065***	0.053***	0.050***	0.065***	0.054***	0.050***
	(0.006)	(0.005)	(0.005)	(0.006)	(0.005)	(0.005)
Constant	3.175***	2.154***	1.986***	3.070***	2.084***	1.919***
	(0.205)	(0.187)	(0.186)	(0.200)	(0.182)	(0.181)
Observations	4,902	4,902	4,902	4,902	4,902	4,902
Adj. R-squared	0.632	0.652	0.673	0.631	0.651	0.673
YEAR FE	YES	YES	YES	YES	YES	YES
OFFICE FE	YES	YES	YES	YES	YES	YES

Notes: This table presents the results from a regression where the dependent variable is the log of one plus the number of filing downloads by the SEC in a year. *Downloads* is the log of one plus the total number of downloads by the SEC in the year. *10K Downloads* is the log of one plus the number of 10-K downloads by the SEC in the year. *10K Downloads CY* is the log of one plus the number of the current fiscal year's 10-K downloads by the SEC in the year. *Insider%* is the total shares owned by firm insiders during the prior year scaled by total shares outstanding. *Retail%* is the percentage of shares owned by retail investors during the prior year. *HighRetail* is a binary variable that equals one if the firm was in the top quartile of *Retail %* within the prior year, and zero otherwise. See Appendix B for all other variable definitions. *, **, and *** indicate significance at the 10%, 5%, and 1% levels. Standard errors are in parentheses and are clustered by firm.

Table 5: The Association between Retail Ownership and the Likelihood of a DCF Review

VARIABLES	(1) Review	(2) Review
Retail%	-0.157**	
	(0.072)	
HighRetail		-0.060**
		(0.027)
Insider%	-0.103	-0.086
	(0.127)	(0.126)
Restate	0.063	0.064
	(0.045)	(0.045)
Lag Restate	0.023	0.023
	(0.045)	(0.045)
Size	0.106***	0.106***
	(0.016)	(0.016)
High Volatility	-0.025	-0.026
	(0.032)	(0.032)
MTB	-0.002	-0.002
	(0.004)	(0.004)
Low MTB	-0.005	-0.004
	(0.044)	(0.044)
Sales Growth	0.114*	0.113*
	(0.066)	(0.066)
Loss	0.093**	0.092**
	(0.039)	(0.039)
ZScore	-0.017***	-0.017***
	(0.003)	(0.003)
M&A	0.013	0.014
	(0.031)	(0.031)
Restructuring	0.059**	0.060**
	(0.026)	(0.026)
External Financing	0.006	0.005
	(0.119)	(0.119)
Lit Industry	0.024	0.022
	(0.032)	(0.032)
BIG4	-0.134***	-0.132***
	(0.047)	(0.047)
Firm Age	-0.001	-0.001

	(0.001)	(0.001)
CEO Chair	-0.019	-0.018
	(0.025)	(0.025)
CEO Tenure	0.002	0.002
	(0.002)	(0.002)
#Analysts	0.006***	0.006***
	(0.002)	(0.002)
Fortune 500	-0.055	-0.058
	(0.036)	(0.036)
Advertising	-0.297	-0.289
	(0.431)	(0.430)
Press Articles	-0.001	-0.001
	(0.003)	(0.003)
Constant	-1.708***	-1.727***
	(0.131)	(0.130)
Observations	12,598	12,598
Pseudo R-squared	0.106	0.106
YEAR FE	YES	YES
OFFICE FE	YES	YES

Notes: This table presents the results from a probit regression where the dependent variable is a binary variable that equals one if the firm had its 10-K reviewed by the DCF in the given year and zero otherwise. *Insider%* is the total shares owned by firm insiders during the prior year scaled by total shares outstanding. *Retail%* is the percentage of shares owned by retail investors during the prior year. *HighRetail* is a binary variable that equals one if the firm was in the top quartile of *Retail %* within the prior year, and zero otherwise. See Appendix B for all other variable definitions. *, **, and *** indicate significance at the 10%, 5%, and 1% levels. The reported R-squared is McFadden's pseudo R-squared. Standard errors are in parentheses and are clustered by firm.

Table 6: The Association between Retail ownership and SEC Comment Letter Activity

Panel A: The Association between Retail ownership and the Likelihood of a Comment Letter

VARIABLES	(1) 10K Comment	(2) 10K Comment
Retail%	-0.183***	
	(0.071)	
HighRetail		-0.075***
		(0.026)
Insider%	-0.225*	-0.206
	(0.127)	(0.126)
Restate	0.075*	0.075*
	(0.042)	(0.042)
Lag Restate	-0.005	-0.006
	(0.040)	(0.040)
Size	0.137***	0.137***
	(0.016)	(0.016)
High Volatility	0.020	0.020
	(0.030)	(0.030)
MTB	-0.002	-0.001
	(0.004)	(0.004)
Low MTB	0.046	0.046
	(0.042)	(0.042)
Sales Growth	0.092	0.091
	(0.062)	(0.062)
Loss	0.018	0.017
	(0.037)	(0.037)
ZScore	-0.012***	-0.012***
	(0.003)	(0.003)
M&A	0.003	0.004
	(0.029)	(0.029)
Restructuring	0.077***	0.077***
	(0.024)	(0.024)
External Financing	0.049	0.048
	(0.111)	(0.111)
Lit Industry	-0.007	-0.010
	(0.031)	(0.031)

BIG4	-0.104**	-0.103**
	(0.042)	(0.042)
Firm Age	0.000	0.000
	(0.001)	(0.001)
CEO Chair	-0.024	-0.023
	(0.024)	(0.024)
CEO Tenure	0.003	0.003
	(0.002)	(0.002)
#Analysts	0.006***	0.006***
	(0.002)	(0.002)
Fortune 500	0.021	0.018
	(0.036)	(0.036)
Advertising	0.079	0.090
	(0.443)	(0.442)
Press Articles	-0.002	-0.001
	(0.003)	(0.003)
Constant	-1.217***	-1.236***
	(0.122)	(0.120)
Observations	12,598	12,598
Pseudo R-squared	0.044	0.044
YEAR FE	YES	YES
OFFICE FE	YES	YES

Notes: This table presents the results from a probit regression where the dependent variable is one if the firm received a comment letter related to a 10-K within the next year. *Insider%* is the total shares owned by firm insiders during the prior year scaled by total shares outstanding. *Retail%* is the percentage of shares owned by retail investors during the prior year. *HighRetail* is a binary variable that equals one if the firm was in the top quartile of *Retail %* within the prior year, and zero otherwise. See Appendix B for all other variable definitions. *, **, and *** indicate significance at the 10%, 5%, and 1% levels. The reported R-squared is McFadden's pseudo R-squared. Standard errors are in parentheses and are clustered by firm.

Panel B: The Association between Retail Ownership and the Number of Rounds in a Comment Letter Conversation

VARIABLES	(1) Rounds	(2) Rounds
Retail%	-0.162**	
	(0.075)	
HighRetail		-0.046*
		(0.027)
Insider%	0.008	0.043
	(0.144)	(0.145)
Restate	0.012	0.013
	(0.039)	(0.039)
Lag Restate	-0.038	-0.037
	(0.041)	(0.041)
Size	-0.014	-0.015
	(0.016)	(0.016)
High Volatility	0.042	0.040
	(0.031)	(0.031)
MTB	-0.002	-0.002
	(0.003)	(0.003)
Low MTB	-0.033	-0.032
	(0.042)	(0.042)
Sales Growth	0.150**	0.148**
	(0.063)	(0.063)
Loss	-0.010	-0.011
	(0.036)	(0.036)
ZScore	-0.004	-0.004
	(0.003)	(0.003)
M&A	0.039	0.041
	(0.030)	(0.030)
Restructuring	-0.007	-0.007
	(0.025)	(0.025)
External Financing	-0.015	-0.014
	(0.108)	(0.108)
Lit Industry	0.017	0.017
	(0.032)	(0.032)
BIG4	-0.025	-0.022

	(0.051)	(0.050)
Firm Age	0.001	0.001
	(0.001)	(0.001)
CEO Chair	0.018	0.020
	(0.025)	(0.025)
CEO Tenure	0.001	0.000
	(0.002)	(0.002)
#Analysts	0.004*	0.004*
	(0.002)	(0.002)
Fortune 500	0.068*	0.066*
	(0.035)	(0.035)
Advertising	0.899**	0.907**
	(0.396)	(0.396)
Press Articles	0.008***	0.008***
	(0.003)	(0.003)
Filings	0.131***	0.131***
	(0.015)	(0.015)
Issues	0.118***	0.118***
	(0.005)	(0.005)
Constant	0.554***	0.539***
	(0.116)	(0.116)
Observations	5,532	5,532
Adj. R-squared	0.203	0.202
YEAR FE	YES	YES
OFFICE FE	YES	YES

Notes: This table presents the results from a regression where the dependent variable is the number of rounds in the comment letter review. *Rounds* is the number of letters from the SEC, from the first letter to the "completion of review" letter. *Insider%* is the total shares owned by firm insiders during the prior year scaled by total shares outstanding. *Retail%* is the percentage of shares owned by retail investors during the prior year. *HighRetail* is a binary variable that equals one if the firm was in the top quartile of *Retail %* within the prior year, and zero otherwise. See Appendix B for all other variable definitions. *, **, and *** indicate significance at the 10%, 5%, and 1% levels. Standard errors are in parentheses and are clustered by firm.

Table 7: Descriptive Statistics and Correlations for Enforcement Samples

Panel A: Descriptive Statistics

VARIABLES	Mean	Median	S.D.	Mean	Median	S.D.
Observations		1,357			1,114	
Investigation	0.147	0.000	0.355			
AAER				0.053	0.000	0.224
Retail%	0.209	0.181	0.172	0.213	0.178	0.178
Insider%	0.050	0.014	0.097	0.052	0.013	0.102
Institutional%	0.744	0.775	0.189	0.739	0.772	0.195
Restate Magnitude	-0.010	0.000	0.039	-0.011	-0.000	0.040
Restate Revenue	0.169	0.000	0.375	0.179	0.000	0.383
Restate Count	2.550	2.000	1.756	2.637	2.000	1.800
Restate Years	2.379	1.997	2.028	2.475	2.000	2.125
CAR	-0.009	-0.004	0.066	-0.010	-0.005	0.067
Previous Return	-0.039	-0.079	0.466	-0.043	-0.098	0.483
Share Turnover	0.833	0.884	0.168	0.831	0.888	0.172
Size	7.125	7.006	1.471	7.052	6.943	1.461
Sales Growth	0.107	0.072	0.263	0.112	0.075	0.269
CEO Tenure	7.334	5.000	7.721	7.178	5.000	7.805
CEO Chair	0.546	1.000	0.498	0.548	1.000	0.498
#Analysts	11.652	9.000	8.580	11.382	9.000	8.554
Fortune 500	0.221	0.000	0.415	0.215	0.000	0.411
Advertising	0.014	0.000	0.030	0.013	0.000	0.029
Press Articles	7.825	6.500	5.861	7.178	5.500	5.783

Panel B: Correlations

Variables	(1) Retail%	(2) Investigation	(3) AAER
Investigation	0.034		
AAER	0.066**	0.110***	
Insider%	-0.147***	-0.011	-0.022
Institutional%	-0.865***	-0.029	-0.052*
Restate Magnitude	-0.089***	-0.187***	-0.058*
Restate Revenue	0.028	0.095***	0.141***
Restate Count	0.049*	0.135***	0.086***
Restate Years	-0.044*	0.267***	0.081***
CAR	-0.008	-0.132***	-0.113***
Previous Return	0.072***	-0.054**	-0.099***
Share Turnover	-0.369***	0.074***	0.033
Size	-0.104***	0.042	0.149***
Sales Growth	-0.025	0.068**	0.038
CEO Tenure	-0.078***	-0.021	-0.027
CEO Chair	-0.001	-0.022	0.038
#Analysts	-0.156***	0.075***	0.143***
Fortune 500	0.081***	0.004	0.139***
Advertising	-0.04	0.038	0.015
Press Articles	-0.059**	-0.021	0.106***

Notes: This table presents information pertaining to the enforcement samples. Panel A presents descriptive statistics for the *Investigation* and *AAER* samples. For each sample, the mean, median, and standard deviation are reported. Panel B presents the correlations of our key variables with all other variables. Columns (1) and (2) present correlations from the *Investigation* sample. Column (3) presents correlations from the *AAER* sample. See Appendix B for variable definitions. *, **, and *** indicate significance at the 10%, 5%, and 1% levels.

Table 8: The Association between Retail Ownership and the Likelihood of an Investigation

VARIABLES	(1) Investigation	(2) Investigation
Retail%	0.493*	
	(0.265)	
HighRetail		0.181*
		(0.108)
Insider%	0.389	0.310
	(0.485)	(0.476)
Restate Magnitude	-4.241***	-4.258***
	(0.697)	(0.715)
Restate Revenue	0.202	0.200
	(0.137)	(0.137)
Restate Count	0.042	0.041
	(0.026)	(0.026)
Restate Years	0.118***	0.119***
	(0.038)	(0.039)
CAR	-2.687***	-2.720***
	(0.768)	(0.778)
Previous Return	-0.098	-0.092
	(0.095)	(0.094)
Share Turnover	0.946***	0.904***
	(0.264)	(0.239)
Size	0.080	0.075
	(0.065)	(0.064)
Sales Growth	0.241*	0.234*
	(0.140)	(0.138)
CEO Tenure	-0.002	-0.002
	(0.004)	(0.004)
CEO Chair	-0.045	-0.046
	(0.079)	(0.080)
#Analysts	-0.000	-0.000
	(0.009)	(0.009)
Fortune 500	-0.117	-0.107
	(0.115)	(0.116)
Advertising	1.525	1.542
	(1.629)	(1.615)

Press Articles	-0.002	-0.002
	(0.013)	(0.012)
Constant	-3.984***	-3.754***
	(0.682)	(0.601)
Pseudo R-squared	0.177	0.177
Observations	1,357	1,357
YEAR FE	YES	YES

Notes: This table presents the results from a probit regression where the dependent variable is one if an investigation into the firm was opened by the DOE within one year following a restatement. *Insider%* is the total shares owned by firm insiders during the prior year scaled by total shares outstanding. *Retail%* is the percentage of shares owned by retail investors during the prior year. *HighRetail* is a binary variable that equals one if the firm was in the top quartile of *Retail %* within the prior year, and zero otherwise. See Appendix B for all other variable definitions. *, **, and *** indicate significance at the 10%, 5%, and 1% levels. The reported R-squared is McFadden's pseudo R-squared. Standard errors are in parentheses and are clustered by year.

Table 9: The Association between Retail Ownership and the Likelihood of an AAER

VARIABLES	(1) AAER	(2) AAER
Retail%	0.898** (0.387)	
HighRetail		0.390*** (0.128)
Insider%	0.392 (0.551)	0.279 (0.517)
Restate Magnitude	-1.348 (1.253)	-1.304 (1.227)
Restate Revenue	0.442*** (0.147)	0.440*** (0.151)
Restate Count	0.040 (0.036)	0.039 (0.037)
Restate Years	0.066** (0.030)	0.069** (0.031)
CAR	-2.652*** (1.018)	-2.663*** (1.001)
Previous Return	-0.436** (0.172)	-0.437*** (0.165)
Share Turnover	0.926** (0.454)	0.946* (0.489)
Size	0.155* (0.091)	0.146 (0.090)
Sales Growth	-0.111 (0.267)	-0.154 (0.256)
CEO Tenure	-0.001 (0.005)	-0.000 (0.005)
CEO Chair	0.041 (0.106)	0.046 (0.100)
#Analysts	0.005 (0.014)	0.006 (0.013)
Fortune 500	0.261* (0.150)	0.279* (0.155)
Advertising	-0.803 (2.534)	-0.930 (2.513)
Press Articles	-0.003 (0.023)	-0.002 (0.022)

Constant	-4.246***	-3.915***
	(0.793)	(0.749)
Pseudo R-squared	0.187	0.191
Observations	1,114	1,114
YEAR FE	YES	YES

Notes: This table presents the results from a probit regression where the dependent variable is one if the firm received an AAER within the three years following a restatement. *Insider%* is the total shares owned by firm insiders during the prior year scaled by total shares outstanding. *Retail%* is the percentage of shares owned by retail investors during the prior year. *HighRetail* is a binary variable that equals one if the firm was in the top quartile of *Retail %* within the prior year, and zero otherwise. See Appendix B for all other variable definitions. *, **, and *** indicate significance at the 10%, 5%, and 1% levels. The reported R-squared is McFadden's pseudo R-squared. Standard errors are in parentheses and are clustered by year.